

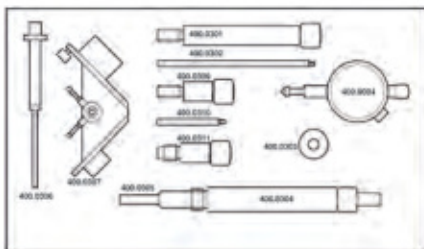
NISSAN

Diesel fuel pump timing set

- For the professional engine repair
- Precise measuring device for the upper entry hole
- For resetting the injection time on diesel engines
- Very high degree of accuracy
- In durable steel storage case

Application range: Alfa Romeo, Audi, BMW, Daihatsu, Fiat, Ford, Isuzu, Iveco, Lancia, Land Rover, Mazda, Mitsubishi, Nissan, PSA (XUD), Renault, Rover, Volkswagen vehicles with Bosch, EP/VE Rotary, Niki, Nippon Denso, CAV RotoDiesel, Top injection fuel pumps

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0300	11 pcs	Diesel fuel pump timing set	710
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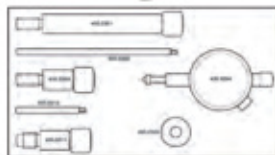
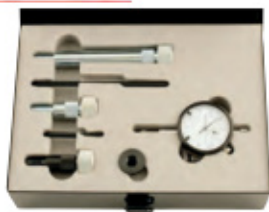
400.0301	Dial gauge adapter M8 (Bosch), long	71
400.0302	Dial gauge extension, long 99 mm	9
400.0303	Converter M8 x M12	12
400.0304	TDC determining pin / dial indicator bracket M14 x 2.0 mm	135
400.0305	Extension	460
400.0306	Dial gauge probe for Lukas-CAV-Roto	17
400.0307	Dial gauge assy for Lukas-CAV-Roto	125
400.0309	Dial gauge adapter M8 (Bosch) short, silver	37
400.0310	Dial gauge extension short	4
400.0311	Dial gauge adapter M10 (Bosch) short, black	40
400.9004	Precision-dial indicator gauge 0 - 10 mm	78

Diesel fuel pump timing set

- For the professional engine repair
- Precise measuring device
- Very high degree of accuracy
- In durable steel storage case

Application range: Alfa Romeo, Audi, BMW, Daihatsu, Fiat, Ford, Isuzu, Iveco, Lancia, Land Rover, Mazda, Mitsubishi, Nissan, Renault, Rover and Volkswagen vehicles with Bosch, Kikki, Nippon Denso injection pumps with threads of M8, M10 and M12, with new M10 Adapter in particular for Ford Transit

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0325	7 pcs	Diesel fuel pump timing set	301
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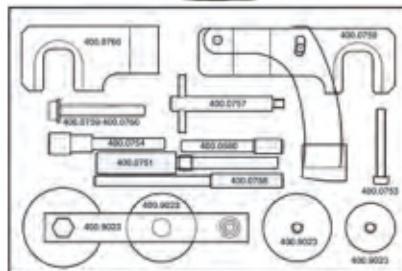
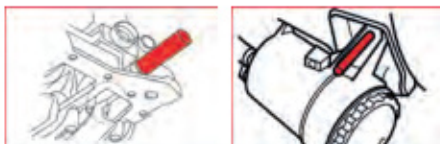
400.0301	Dial gauge adapter M8 (Bosch), long	71
400.0302	Dial gauge extension, long 99 mm	9
400.0303	Converter M8 x M12	12
400.9004	Precision-dial indicator gauge 0 - 10 mm	78
400.0309	Dial gauge adapter M8 (Bosch) short, silver	37
400.0310	Dial gauge extension short	4
400.0311	Dial gauge adapter M10 (Bosch) short, black	40

Nissan / Opel / Renault - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Renault Clio 1.5 / 1.9 / 2.3 / 2.5 dCi, Laguna II, Espace, Trafic, Master with 2.2 DTI (2000-2005) G9 engines, Opel Movano 2.2 Tdi, Nissan Kubistar, Primastar, Interstar and Micra with 1.5 / 2.2 / 2.5 dCi engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0750	13 pcs	Nissan / Opel / Renault - Engine Timing Tool Set	1.69
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consists of:

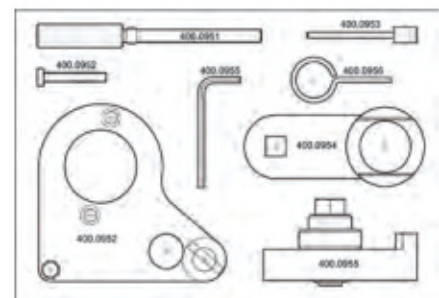
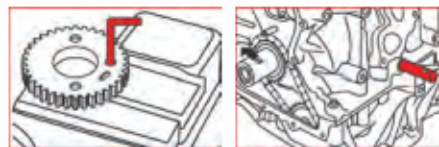
400.0580	Crankshaft locking pin Ø 8,0 mm	30
400.0751	Crankshaft locking pin	102
400.0753	Locking screw M6 x 30,0 mm	10
400.0754	Camshaft locking pin	51
400.0757	Hi-Pressure pump locking pin	43
400.0758	Flywheel locking pin	55
400.0759	Camshaft setting tool (exhaust) (2)	20
400.0760	Camshaft setting tool (inlet)	223
400.9023	Renault cam belt tensioning tool	669

Nissan / Renault - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Renault Megane, Vel Satis, Espace, Scenic, Trafic, Laguna, Koleos, Nissan Qashqai, Opel Vivaro with 2.0 dCi engine (engine code: M9R)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0950	8 pcs	Nissan / Renault - Engine Timing Tool Set	2.73
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consists of:

400.0951	Crankshaft locking pin	103
400.0952	Camshaft locking tool	398
400.0953	Auxiliary drive belt tensioning locking pin	13
400.0954	Crankshaft pulley holding tool	424
400.0955	Camshaft gear alignment tool (2)	593
400.0956	Locking pin Ø 2.96 mm	6

Nissan fixi g pin injection pump wheel

- For the professional engine repair
- Ideally suited to securing the injection pump
- Simple handling
- Special steel
- Very high degree of accuracy

Application range: Nissan Almera, Almera Tino, Cabstar, Navara, Pathfinde , Primera, X-Trail with 2.2 and 2.5 Diesel engines

Please carry out an up-to-date cross reference test for the specific ehicle on www.timingtools.de



400.9047	Nissan fixi g pin injection pump wheel	18
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Diesel pump adjustment tool

- Secure stand for the pump wheel when assembling and disassembling the high pressure pump
- exact positioning of the pump wheel
- no need to disassemble the tooth belt
- saves work of making further adjustments to the pump
- Saves a lot of time
- Special steel

Application range: Diesel engines F9Q for Opel, Renault, and Nissan vehicles



400.9051	Diesel pump adjustment tool	420
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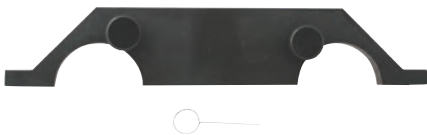
OPEL

GM / Opel - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft or chain tensioner
- Very high degree of accuracy

Application range: Opel Astra-G, Vectra-B, Vectra-C, Signum, Zafi a-A (engine code: Z22SE / Z22YH)

Please carry out an up-to-date cross reference test for the specific ehicle on www.timingtools.de



400.2325	2 pcs	GM / Opel - Engine Timing Tool Set	787
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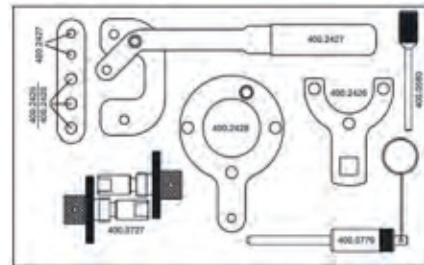
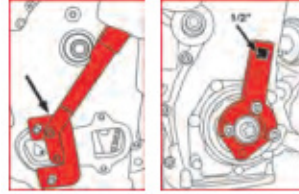
400.2326	Camshaft locking tool	786
400.2327	Timing chain tensioner locking pin	1

Fiat / Ford / Opel /Suzuki - Engine Timing Tool Set

- For the professional engine repair
- Especially for chain-driven engines
- For changing the steering chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Fiat 1.3 JTD, Opel 1.3 CDTi, Ford 1.3 TDCi, Suzuki (engine code: Z13DT)

Please carry out an up-to-date cross reference test for the specific ehicle on www.timingtools.de



400.2425	12 pcs	Fiat / Ford / Opel /Suzuki - Engine Timing Tool Set	1.12
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consists of:

400.0580	Crankshaft locking pin Ø 8,0 mm	30
400.0727	Camshaft locking tool (2)	130
400.0779	Crankshaft locking tool	80
400.2426	Cranshaft pulley fla ge holding tool (4)	88
400.2427	Timing chain tensioning tool (3)	171
400.2428	Flywheel timing position tool	398

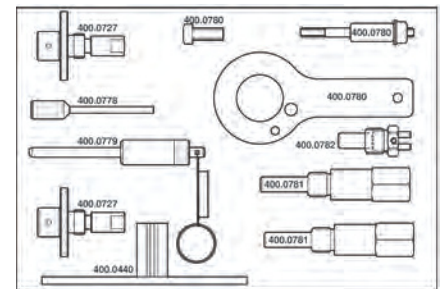
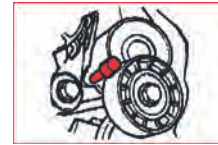
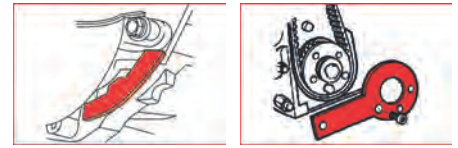


GM / Opel / Saab - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt or the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Corsa-C, Combo-C (2003-2007), Tigra-B, Meriva, Astra-H (2004-2007), Corsa-D (2006-2007) with 1.3 CDTi engines (engine code: Z13DT / Z13DTH / Z13DTJ), Opel Astra-H, Vectra-C, Signum, Zafi a-B with 1.9 CDTi engines (engine code: Z19DT / Z19DTL), Saab 9-3, 905 with 1.9 CDTi engines (engine code: Z19DT / Z19DTH)

Please carry out an up-to-date cross reference test for the specific ehicle on www.timingtools.de



400.0775	11 pcs	GM / Opel / Saab - Engine Timing Tool Set	1.29
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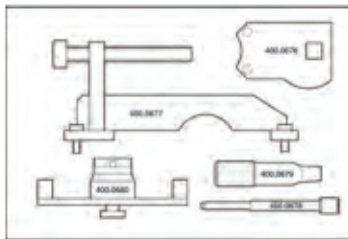
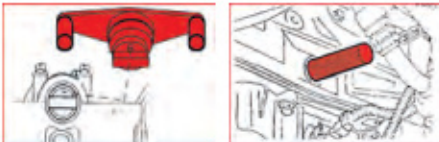
400.0440	Flywheel locking tool	136
400.0727	Camshaft locking tool (2)	130
400.0778	Locking pin	20
400.0779	Crankshaft locking tool	80
400.0780	Crankshaft pulley setting tool (3)	260
400.0781	Camshaft timing pin set (2)	180
400.0782	Camshaft alignment screw	40

GM / Opel / Saab - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt or the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Astra-G (1998-2006), Vectra-B, Vectra-C (1997 - 2005), Signum (2003-2005), Omega-B (1998-2003), Zafiro-A (1999-2005), Sintra (1998-1999), Frontera-B (1998-2004) with 2.0 / 2.2 DTi engines (engine code: Z20DTH / Z20DTL / Z22DTH / Z22DTR) and Saab 9-3 (1998-2004) with 2.2 TID, 9-5 (2002-2007) with 2.2 TID engines (engine code: D223L)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0675	5 pcs	GM / Opel / Saab - Engine Timing Tool Set	1.36
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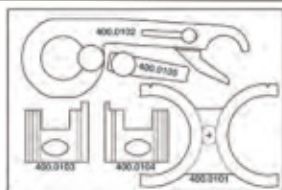
400.0676	Camshaft turning tool	7
400.0677	Bracket for timing adjustment wrench	111
400.0678	Injection pump locking pin	41
400.0679	Flywheel TDC locking pin	160
400.0680	Camshaft locking tool	322

GM / Opel / Saab - Engine Timing Tool Set

- For the professional engine repair
- For engines with bevel on the automatic pulley
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Vectra-B, Omega-B, Sintra, Calibra with 2.5 / 2.6 / 3.0 V6 engines (1998-2003) (engine code: X25XE, X30XE, Y26SE, Y32SE), Saab 9-5 with 3.0 V6 engines (engine code: B308E)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0100	5 pcs	GM / Opel / Saab - Engine Timing Tool Set	2.44
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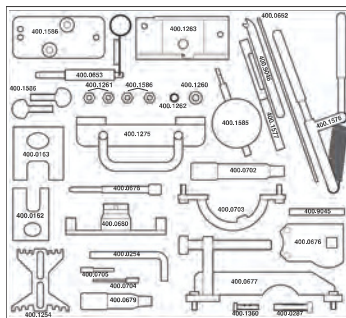
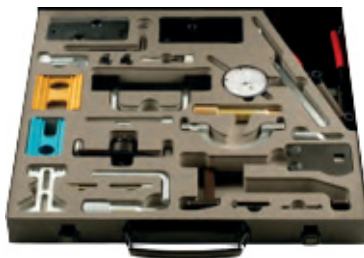
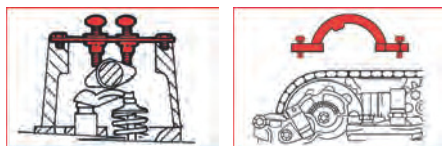
400.0101	Crankshaft locking tool	812
400.0102	Camshaft locking tool	585
400.0103	Opel Camshaft locking tool (right)	119
400.0104	Camshaft locking tool left	120
400.0105	Belt holding wedge	100

Isuzu / GM / Opel / Saab - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Ascona, Astra-F, Astra-G, Corsa-B, Corsa-C, Frontera, Kadett-E, Midi, Monterey, Omega-B, Sintra, Vectra-A, Vectra-B, Vectra-C, Zafiro and similar Isuzu and Saab vehicles

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1575	33 pcs	Isuzu / GM / Opel / Saab - Engine Timing Tool Set	3.91
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consists of:

400.0162	Opel / Saab Camshaft locking tool	186
400.0163	Camshaft locking tool	143
400.0254	Locking pin Ø 9.5 mm	60
400.0287	Screw M8 x 40,0 mm	18
400.0652	Flywheel TDC indicator	80
400.0653	Flywheel locking pin with spring on ring, 103 mm	79
400.0676	Camshaft turning tool	7
400.0677	Bracket for timing adjustment wrench	111
400.0678	Injection pump locking pin	41
400.0679	Flywheel TDC locking pin	160
400.0680	Camshaft locking tool	322
400.0702	Flywheel TDC locking pin	205
400.0703	Camshaft position (CMP) sensor disc setting tool	102
400.0704	Tensioner retaining pin, Ø2,5mm	4
400.0705	Tensioner retaining pin, Ø4,0mm	5
400.1254	Flywheel locking tool	23
400.1260	Camshaft locking tool (5)	9
400.1261	Locking screw M6 x 10,0 mm	4
400.1262	Special tip	10
400.1263	Mounting bracket assy	330
400.1275	Camshaft setting strap (TDC)	404
400.1360	Flywheel locking tool	82
400.1576	Belt tensioner adjuster	297
400.1577	Camshaft setting strap	99
400.1585	Dial gauge Ø 51 (10 x 0.01 mm)	154

consists of:

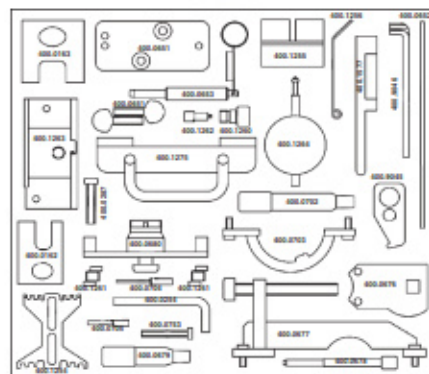
400.1586	Camshaft position locking tool (5)	170
400.9045	Flywheel locking tool	80
400.9046	Flywheel locking tool	80

GM / Isuzu / Opel / Saab - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Ascona, Astra-F, Astra-G, Astramax, Belmont, Cavalier, Corsa-B, Corsa-C, Frontera, Kadett-E, Midi, Monterey, Omega-B, Sintra, Vectra-A, Vectra-B, Vectra-C, Zafiro with petrol and diesel engines including Eco-Tec engines and similar Isuzu and Saab engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1250	36 pcs	GM / Isuzu / Opel / Saab - Engine Timing Tool Set	6.18
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consists of:

x		
400.0162	1	Opel / Saab Camshaft locking tool, blue
400.0163	1	Opel Camshaft locking tool, gold
400.0254	1	Locking pin Ø 9.5 mm
400.0287	1	Screw M8 x 40,0 mm
400.0651	1	Camshaft locking tool (3), 110 x 50 mm
400.0652	1	Flywheel TDC indicator
400.0653	1	Flywheel locking pin with spring on ring, 103 mm
400.0676	1	Camshaft turning tool
400.0677	1	Bracket for timing adjustment wrench
400.0678	1	Injection pump locking pin, Ø 5 mm, 110 mm
400.0679	1	Flywheel TDC locking pin Ø 12 mm, 86 mm
400.0680	1	Camshaft locking tool 120 mm
400.0702	1	Flywheel TDC locking pin Ø 12 mm, 113 mm
400.0703	1	Camshaft position (CMP) sensor disc setting tool
400.0704	1	Tensioner retaining pin, Ø2,5mm
400.0705	1	Tensioner retaining pin, Ø4,0mm
400.0753	1	Locking screw M6 x 30,0 mm
400.1254	1	Flywheel locking tool, 70 x 54 mm
400.1255	1	Opel Camshaft locking tool (2), red
400.1256	1	Tensioner locking pin for 400.1250
400.1260	1	Screw for 400.1263
400.1261	4	Locking screw M6 x 10,0 mm
400.1262	1	Special tip

consists of:

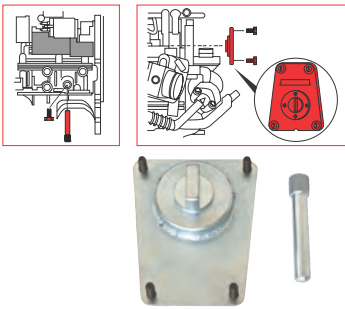
X			
400.1263	1	Mounting bracket assy	330
400.1264	1	Dial gauge Ø 51 (10 x 0.01 mm), 103 mm	161
400.1275	1	Camshaft setting strap (TDC)	404
400.9045	1	Flywheel locking tool, 62 x 30 mm	80
400.9046	1	Flywheel locking tool, 130 mm	80
400.1577	1	Camshaft setting strap 140 mm	99

GM / Opel - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Opel Antara, Chevrolet Captiva, Curze, Epica, Lacetti with 2.0 SOHC 16V Common-Rail diesel engine (engine code: Z20DM / Z20DMH / LLWZ20DMH / RA420 / Z20SI / Z20S3 / Z20S4 / Z20S5)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



X			
400.0050	6 pcs	GM / Opel - Engine Timing Tool Set	748

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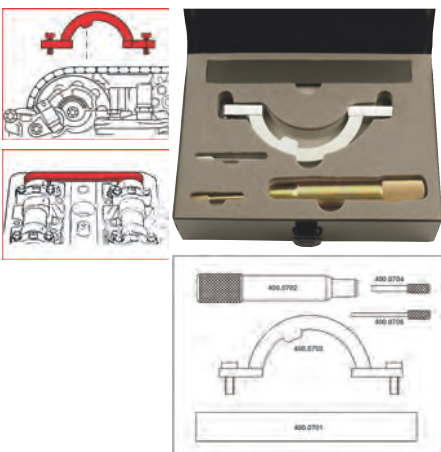
X			
400.0051	1	Crankshaft locking pin	70
400.0052	1	Camshaft locking tool	650
400.0053	4	Screw M6 x 20.0 mm	6

GM / Isuzu / Opel / Saab - Engine Timing Tool Set

- For the professional engine repair
- Especially for chain-driven vehicles
- For locking dual cam shafts
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Astra-G, Astra-H, Combo-C, Corsa-B, Corsa-C, Corsa-D, Meriva-A, Tigra-B (1993-2010) with 1.0 12V / 1.2 16V engines (engine code: X10XE / Z10XE / Z10 XEP / X12XE / Z12XE / Z12 XEP / Z14XEL / Z14XEA) and similar Isuzu- and Saab-engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



X			
400.0700	5 pcs	GM / Isuzu / Opel / Saab - Engine Timing Tool Set	446

consists of:

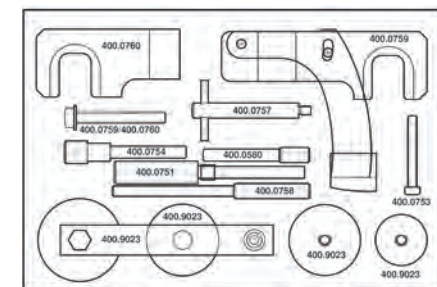
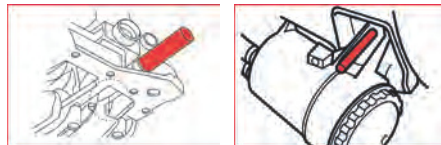
X			
400.0701	1	Camshaft timing tool	404
400.0702	1	Flywheel TDC locking pin	205
400.0703	1	Camshaft position (CMP) sensor disc setting tool	102
400.0704	1	Tensioner retaining pin	4
400.0705	1	Tensioner retaining pin	5

Nissan / Opel / Renault - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Renault Clio 1.5 / 1.9 / 2.3 / 2.5 dCi, Laguna II, Espace, Trafic, Master with 2.2 DTI (2000-2005) G9 engines, Opel Movano 2.2 Tdi, Nissan Kubistar, Primastar, Interstar and Micra with 1.5 / 2.2 / 2.5 dCi engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



X			
400.0750	13 pcs	Nissan / Opel / Renault - Engine Timing Tool Set	1,69

consists of:

X			
400.0580	1	Crankshaft locking pin Ø 8,0 mm	30
400.0751	1	Crankshaft locking pin	102
400.0753	1	Locking screw M6 x 30,0 mm	10
400.0754	1	Camshaft locking pin	51
400.0757	1	Hi-Pressure pump locking pin	43
400.0758	1	Flywheel locking pin	55
400.0759	2	Camshaft setting tool (exhaust)	20
400.0760	1	Camshaft setting tool (inlet)	223
400.9023	1	Renault cam belt tensioning tool	669

GM / Opel - Engine Timing Tool Set

- For the professional engine repair
- Expansion set
- For engines without thread attachment bore holes
- Very high degree of accuracy

Application range: Opel Astra-F, Astra-G, Cavalier, Vectra-A (1997 - 2001) with 1.7 engines (engine code: 17DR / X17DT / DTL)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



X			
400.0650	5 pcs	GM / Opel - Engine Timing Tool Set	380

consists of:

X			
400.0651	3	Camshaft locking tool	169
400.0652	1	Flywheel TDC indicator	80
400.0653	1	Flywheel locking pin	79

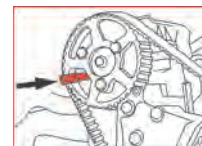


Fiat / GM / Opel / PSA / Renault - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Fiat, PSA, Renault, Opel vehicles with 2.5 / 2.8D engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



X			
400.1775	4 pcs	Fiat / GM / Opel / PSA / Renault - Engine Timing Tool Set	143

consists of:

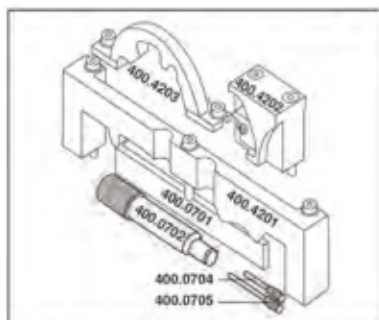
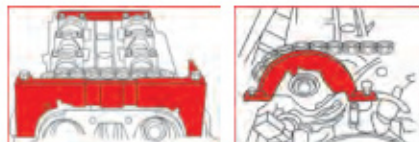
X			
400.0165	1	Camshaft locking pin 5.0 mm	19
400.0754	1	Camshaft locking pin	51
400.1388	1	Tensioner adjuster	41

GM / Opel - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft and cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Adam, Ampera, Astra-J, Aveo, Corsa-D, Insignia, Meriva-B, Mokka, Zafira-C Tourer with 1.0 / 1.2 / 1.4 engines (engine code: LWD / L2Z / LDD / LUU/A14XFL / LDD/A14XER / LDD/A14XEL / LUJ/A14NET / LUJ/A14NEL / A10XEP / A12XEL / A12XER / A14XEL / A14XER / A14NEL / LUJ/A14NET / LDD/A14XER / LUJ/A14NET / LUH/A14NET / LUJ/A14NET / LUJ/A14NET / L2Q/A12XEL / LDC/A12XER / LWD/A12XEL / LDD/A14XEL / LDD/A14XER)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.4200	7 pcs	GM / Opel - Engine Timing Tool Set	2.18
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consists of:

400.0701	Camshaft timing tool	404
400.0702	Flywheel TDC locking pin	205
400.0704	Tensioner retaining pin	4
400.0705	Tensioner retaining pin	5
400.4201	Cam shaft sensor disc adjustment tool	340
400.4202	Camshaft adjustment tool (inlet)	340
400.4203	Cam shaft sensor locking tool	180

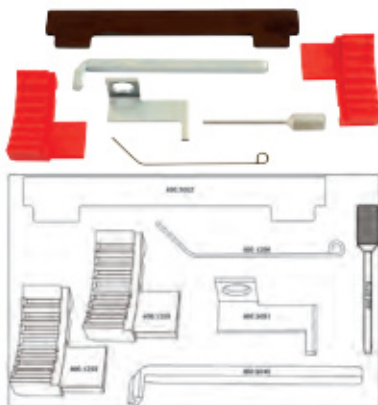


Alfa Romeo / Fiat / GM / Opel - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Chevrolet Cruze, Orlando with 1.4 / 1.6 / 1.8 engines, Opel Astra-G, Astra-H, Corsa-D, Insignia, Meriva, Signum, Vectra-C, Zafira-B, Fiat Cromia, Alfa Romeo 159 (engine code: Z / A / 939A4.000)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.3050	7 pcs	Alfa Romeo / Fiat / GM / Opel - Engine Timing Tool Set	424
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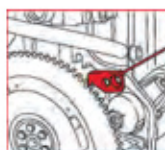
consists of:

400.0778	Locking pin	20
400.1255	Camshaft locking tool (2)	56
400.1256	Tensioner locking pin	3
400.3051	Flywheel holding tool	32
400.3052	Camshaft Locking Bar	148
400.9046	Flywheel locking tool	80

GM / Opel Fly wheel locking tool

- For locking the fly wheel
- For easily attaching to one of the small fixing pins next to the fly wheel
- Special steel

Application range: for all Opel and GM 4 and 6 cylinder CIH, 24V and OHC engines



400.9045	GM / Opel Fly wheel locking tool	80
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GM / Opel / Saab Fly wheel locking tool

- For locking the fly wheel
- Secure hold thanks to optimal positioning
- Special steel

Application range: Opel and Saab vehicles (1996 - 2005, engine code: Z18XE)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de

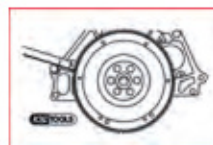


400.9046	GM / Opel / Saab Fly wheel locking tool	80
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Flywheel holding key

- To lock the flywheel
- Required for the removal and installation of disc flywheels, clutch pressure plates and belt pulleys
- Sturdy design

Application range: Opel with front-wheel drive



150.2438	Opel	255.0	26.0	26.0	500
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Universal fly wheel locking tool set

- For the professional engine repair
- For locking the fly wheel
- Secure hold thanks to optimal positioning
- Special plastic
- Very high degree of accuracy

A Fly wheel Locking device for: Citroën: Synergie 2.0/Turbo.ZX 1.9D/TD, Xantia 1.9D/TD, Berlingo 1.9D, Dispatch 1.9D/TD, Synergie 1.9D, Relay 1.9D/TD, **Fiat:** Ulysse, 2.0/Turbo Ducato 2.0, FSO: 1.9D, LDV: 200 1.9D, Pilot 1.9D, **Peugeot:** 205 1.6/1.9, 305 1.6/1.9, 309 1.6/1.9, 405 1.6/1.9, 405 1.8/2.0 (92-), 605 2.0, Boxer 2.0, c205 1.8/1.9D, 305 1.8/1.9D, 306 1.8/1.9D/TD, 309 1.8/1.9D 1.8TD, 405 1.8TD, 405 1.9D, 406 1.9D, Partner 1.9D, Talbot / Horizon / Solara 1.9D, J5/Talbot Express 1.9D, 605D/TD, 806 1.9TD, Expert 1.9D, Boxer 1.9D/TD, **Renault:** R5, 1.6D, R9 1.6D, 411 1.6D Express/Extra 1.6D-F8M diesel engines, Clio, Express/Extra, 1.9D earlier F8Q diesel engines, Espace 2.1D, R21 2.1D, R25 2.1D, Trafic Master 2.1D-J8S diesel engines, Clio 1.2/1.4, Express/Extra, R19 1.4, Megane/Scenic 1.4/1.6-E7F/E7J petrol engines, R5 1.7, Clio 1.7/1.8, R19 1.7, R21 1.7 1.7 Megane/Scenic 2.0, Laguna 1.8/2.0, Trafic 1.7-F3N/F3P/F2R petrol engines, Clio, Williams, R19, Megane 2.0 16V Twin-Cam F7P/F7R engines, Laguna/ Safrane 2.0 16V Twin-Cam N7Q/N7U engines

B Fly wheel Locking device for: Renault: Clio, Twingo, Kangoo, Megane/Scenic, 1.2/1.6 D7F + K7M Petrol engine, Megane/Scenic, Kangoo 1.9D FBQ + F9Q Diesel engine (direct injection)

C Fly wheel Locking device for: Citroën: Xsara, Xantia 1.8/2.0XU7 JP/JB petrol engines, Xsara 1.8 16V XU7 JP4 twin cam shaft engines, ZX.Xantia, XM2.0 16V XU10J4 twin cam shaft engines, Xantia 1.9D/TD XUD9BTF diesel engines, Xantia, XM2.1TD XUD 11BTE diesel engines, **Peugeot:** 406, 1.8/2.0 XU7 JP/JB Petrol engine, 406 1.8 16V XU7 JP4 Double cam shaft engines, 306, 405, 605 2.0 16V XU10J4 Double cam shaft engines, 406, 1.9D/TD XUD9BTF Diesel engines, 406, 605 2.1 TD XUD 11BTE Diesel engines

D Fly wheel Locking device for Vauxhall/Opel: 1.2, 1.4, 1.6, 1.8, 2.0 OHC Petrol engines, 1.6D & 1.7, OHC Diesel engines, 1.5 & 1.7 OHE Diesel (Isuzu)-Engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



150.3025	4 pcs	Universal fly wheel locking tool set	30
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Counter hold wrench, 39.0 mm

- For turning the water pump
- To tighten / depressurize the drive belt
- Burnished
- Special steel

Application range: Opel/Vauxhall, GM OHC engines



1/2"

	mm	Length mm	g
516.1004	39	90.0	100

Counter hold wrench, 41.0 mm

- For turning the water pump
- To tighten / depressurize the drive belt
- Burnished
- Special steel

Application range: Opel/Vauxhall, GM OHC engines 1.2, 1.3, 1.4 and 1.6 l



1/2"

	mm	Length mm	g
516.1002	41	90.0	110

Counter hold wrench, 46.0 mm

- For turning the water pump
- To tighten / depressurize the drive belt
- Burnished
- Special steel

Application range: Suitable for Opel and GM OHC engines



1/2"

	mm	Length mm	g
516.1001	46	90.0	120

GM / Isuzu / Opel / Saab - Camshaft locking tool

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Aluminium
- Very high degree of accuracy

Application range: Opel Tigra 2004 - 2008 (engine code: Z18XE) with 1.8 engines, Frontera, Frontera-B and Sintra-A, Omega-B 1995 - 2004 (engine codes: X22SE, X33XE, YEESE, Y22XE Z22XE) with 2.2 16V engines. Saab 9-3 1996 - 2005 with 1.8 engines (engine code: Z18XE) and similar Isuzu and Saab engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



	X	g
400.0162	1 GM / Isuzu / Opel / Saab - Camshaft locking tool	186

GM / Opel Camshaft locking tool (left)

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Aluminium
- Very high degree of accuracy

Application range: Opel Vectra-B, Omega-B, Sintra, Calibra (engine code: X25XE, X30XE, Y26SE, Y32SE)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



	X	g
400.0104	1 GM / Opel Camshaft locking tool (left)	120

GM / Opel Camshaft locking tool

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Aluminium
- Very high degree of accuracy

Application range: Opel Omega-B 1995 - 2004 (engine code: X22SE, X22XE, Y22SE, Y22XE, Z22XE) with 2.2 16V and Astra-G 2.0 16V and Vectra 1.8/2.0 16V 1995 - 2000 (engine code: X18XE, C20SEL, X20XE)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



	X	g
400.0163	1 GM / Opel Camshaft locking tool	143

GM / Opel Camshaft locking tool (right)

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Aluminium
- Very high degree of accuracy

Application range: Opel Vectra-B, Omega-B, Sintra, Calibra (engine code: X25XE, X30XE, Y26SE, Y32SE)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



	X	g
400.0103	1 GM / Opel Camshaft locking tool (right)	119

GM / Opel Camshaft locking tool

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Aluminium
- Very high degree of accuracy

Application range: Opel Astra G, Astra H, Meriva, Zafira 2003 - 2007 (engine code: Z16LET, Z16XEP) with 1.6 16V engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



	X	g
400.2800	2 GM / Opel Camshaft locking tool	590

GM / Opel cam shaft locking tool

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Special plastic
- Very high degree of accuracy

Application range: Opel Ecotec 1.4 - 1.6 -16V from 1993 onwards, Corsa B - Tigra - Astra F - Vectra

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



	X	g
150.3059	1 GM / Opel cam shaft locking tool	30

GM / Opel cam shaft locking tool

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Special plastic
- Very high degree of accuracy

Application range: Opel Ecotec 1.8 - 2.0 - 2.2 - 16V from 1995 onwards, Astra, Frontera, Sintra, Omega, Vectra

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



X		👤	
150.3061	1	GM / Opel cam shaft locking tool	30

GM / Opel cam shaft locking tool

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Special plastic
- Very high degree of accuracy

Application range: Opel with small cam shaft wheels 1.8 - 2.0 - 16V from 1993 onwards, Astra, Calibra, Omega 1.4 - 1.6

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



X		👤	
150.3062	1	GM / Opel cam shaft locking tool	30

GM / Opel cam shaft locking tool

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Special plastic
- Very high degree of accuracy

Application range: Opel right 2.5i - 2.0i - 16V from 1994 onwards / Vectra - Omega, Saab 900 - 9000

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



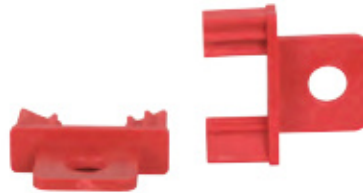
X		👤	
150.3063	1	GM / Opel cam shaft locking tool	30

GM / Opel cam shaft locking tool

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Special plastic
- Very high degree of accuracy

Application range: Opel Left 2.5i - 3.0i - 16V from 1994 onwards/ Vectra - Omega, Saab 900 - 9000

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



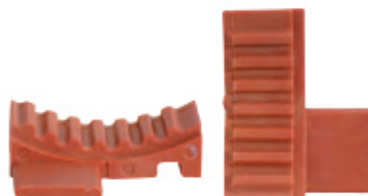
X		👤	
150.3064	1	GM / Opel cam shaft locking tool	30

GM / Opel cam shaft locking tool

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Special plastic
- Very high degree of accuracy

Application range: Opel engines Z16XEP and Z18XER Astra, Zafira, Vectra

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



X		👤	
150.3068	2	GM / Opel cam shaft locking tool	60



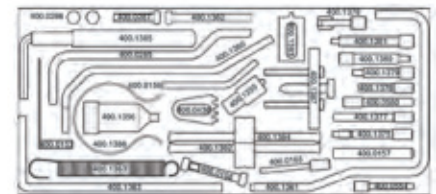
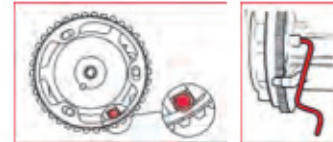
PEUGEOT

PSA - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën, Peugeot vehicles with HPI and HDi engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



X		👤	
400.1650	34 pcs	PSA - Engine Timing Tool Set	2.17

consists of:

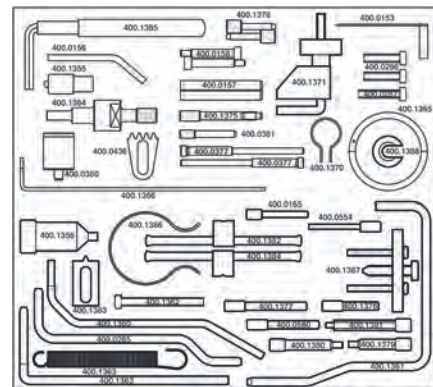
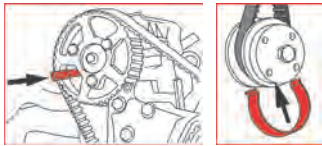
		👤	
400.0153	Tensioner adjuster, square 8.0 mm	6	
400.0156	Crankshaft timing pin Ø 6.0 mm	23	
400.0157	Crankshaft locking pin Ø 6.0 mm, short (2)	101	
400.0158	Crankshaft locking pin (2)	30	
400.0165	Camshaft locking pin 5.0 mm	19	
400.0285	Crankshaft locking pin Ø 8.0 mm	97	
400.0286	Screw M8 x 35 mm (2)	16	
400.0436	Flywheel locking tool	135	
400.0554	Locking pin Ø 6.0 mm	19	
400.0580	Crankshaft locking pin Ø 8.0 mm	30	
400.1355	Flywheel locking pin	80	
400.1356	Flywheel locking tool	252	
400.1360	Flywheel locking tool	82	
400.1361	Flywheel locking tool	146	
400.1362	Locking screw M8 x 70.0 mm	31	
400.1363	Flywheel locking pin with spring	126	
400.1375	Injection pump timing pin, M8	32	
400.1376	Camshaft locking pin	24	
400.1377	Tensioning locking pin	35	
400.1378	Camshaft locking pin (2)	21	
400.1379	Camshaft locking pin	37	
400.1380	Camshaft locking pin	43	
400.1381	Camshaft locking pin (VTC)	50	
400.1382	Tensioner adjuster	115	
400.1383	Flywheel locking tool	30	
400.1384	Tensioner adjuster	118	
400.1385	Tensioner adjuster, hex Ø 8.0 mm	177	
400.1386	Belt retaining tool	50	
400.1387	Crankshaft pulley remover	153	

PSA - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: PSA vehicles including 2nd generation with EW 16V and 2.5 / 2.7 / 2.8 diesel engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1350	45 pcs	PSA - Engine Timing Tool Set	5.93
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consists of:

X		g
400.0153	1 Tensioner adjuster, square 8.0 mm	6
400.0156	1 Crankshaft timing pin Ø 6.0 mm	23
400.0157	1 Crankshaft locking pin Ø 6.0 mm, short (2)	101
400.0158	1 Crankshaft locking pin (2)	30
400.0165	2 Camshaft locking pin 5.0 mm	19
400.0285	1 Crankshaft locking pin Ø 8.0 mm	97
400.0286	1 Screw M8 x 35 mm (2)	16
400.0287	1 Screw M8 x 40.0 mm	18
400.0377	1 Camshaft sprocket locking pin (2)	68
400.0380	1 Flywheel locking tool	222
400.0381	1 Coolant Pump tensioning locking pin	30
400.0436	1 Flywheel locking tool	135
400.0554	1 Locking pin Ø 6.0 mm	19
400.0580	1 Crankshaft locking pin Ø 8.0 mm	30
400.1355	1 Flywheel locking pin	80
400.1356	1 Flywheel locking tool	252
400.1360	1 Flywheel locking tool	82
400.1361	1 Flywheel locking tool	146
400.1362	1 Locking screw M8 x 70.0 mm	31
400.1363	1 Flywheel locking pin with spring	126
400.1364	1 Flywheel locking pin	215
400.1365	1 Tensioner pulley adjusting tool	330
400.1366	1 Tensioner adjuster, square, 6.0 mm	44
400.1370	1 Crankshaft sprocket centraliser	2
400.1371	1 Belt retaining tool	99
400.1375	1 Injection pump timing pin, M8	32

consists of:

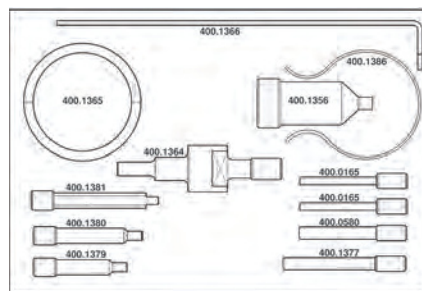
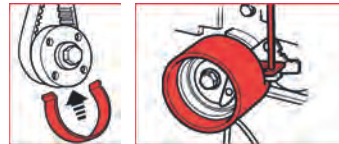
X		g
400.1376	1 Camshaft locking pin	24
400.1377	1 Tensioning locking pin	35
400.1378	1 Camshaft locking pin (2)	21
400.1379	1 Camshaft locking pin	37
400.1380	1 Camshaft locking pin	43
400.1381	1 Camshaft locking pin (VTC)	50
400.1382	1 Tensioner adjuster	115
400.1383	1 Flywheel locking tool	30
400.1384	1 Tensioner adjuster	118
400.1385	1 Tensioner adjuster, hex Ø 8.0 mm	177
400.1386	1 Belt retaining tool	50
400.1387	1 Crankshaft pulley remover	153
400.1388	1 Tensioner adjuster	41

PSA - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën Xsara, Picasso, C5, C4, Evasion, Synergie, C8, Jumpy, Dispatch, Peugeot 206, 307, 406, 607, 806, 807, Expert (engine code: EW12J4(3FC) / EW10D-HPI(RLZ) / EW10J4S(RFK) / EW10J4(RFN/RFR) / EW7J4(6FZ)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1750	12 pcs	PSA - Engine Timing Tool Set	1.26
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consists of:

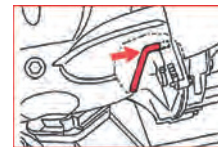
X		g
400.0165	1 Camshaft locking pin 5.0 mm	19
400.0580	1 Crankshaft locking pin Ø 8.0 mm	30
400.1356	1 Flywheel locking tool	252
400.1364	1 Flywheel locking pin	215
400.1365	1 Tensioner pulley adjusting tool	330
400.1366	1 Tensioner adjuster, square, 6.0 mm	44
400.1377	1 Tensioning locking pin	35
400.1379	1 Camshaft locking pin	37
400.1380	1 Camshaft locking pin	43
400.1381	1 Camshaft locking pin (VTC)	50
400.1386	1 Belt retaining tool	50

PSA crank shaft locking tool set

- For the professional engine repair
- For fixing the crank shaft
- Contains special square wrench for adjusting the timing belt on the automatic pulley
- For changing the timing belt
- Secure hold for changing the timing belt or engine repairs
- Very high degree of accuracy

Application range: Citroën AX with 1.0/1.1 and 1.4 engines, BX 16, BX 19, BX 16 valve, Peugeot 106, 205, 405 with 1.0/1.1 and 1.4 engines, Peugeot 205, 305, 309, 405 with 1.6 and 1.9 engines, 309 GTI, 405 Mi1,6

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0200	6 pcs	PSA crank shaft locking tool set	235
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consists of:

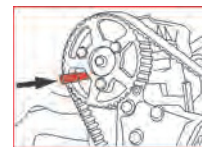
X		g
400.0153	1 Tensioner adjuster, square 8.0 mm	6
400.0156	1 Crankshaft timing pin Ø 6.0 mm	23
400.0157	1 Crankshaft locking pin Ø 6.0 mm, short (2)	101
400.0158	1 Crankshaft locking pin (2)	30

Fiat / GM / Opel / PSA / Renault - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Fiat, PSA, Renault, Opel vehicles with 2.5 / 2.8D engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1775	4 pcs	Fiat / GM / Opel / PSA / Renault - Engine Timing Tool Set	143
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consists of:

X		g
400.0165	1 Camshaft locking pin 5.0 mm	19
400.0754	1 Camshaft locking pin	51
400.1388	1 Tensioner adjuster	41

PSA - Valve spring compressor

- For the professional engine repair
- For retaining the valve springs
- Universal usage
- Includes 8 screws with pressure cone and 2 locking screws
- Chrome vanadium
- Very high degree of accuracy

Application range: Citroën Berlingo, Xsara petrol engines with 1.0, 1.1, 1.4, 1.6L, and Peugeot 106, 205, 206, 306, 307, 405 with petrol engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



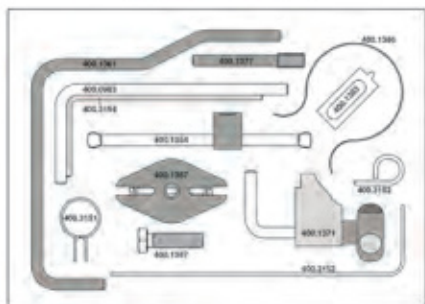
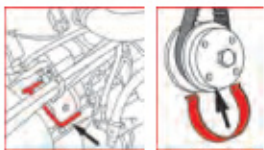
Substitutes for		Length mm	
400.9001	PSA	390.0	2.50

Fiat / PSA - Engine Timing Tool Set

- For the professional engine repair
- For adjusting the valve controls
- For twin cam shaft systems with timing belt/chain combinations
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën and Fiat with 2.0 / 2.2 SOHC and DOHC engines (engine code: DW10 / DW12)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Substitutes for		Length mm	
400.3150	Fiat / PSA		814

consists of:

400.0903 Crankshaft locking pin	85
400.1361 Flywheel locking tool	146
400.1371 Belt retaining tool	99
400.1377 Tensioning locking pin	35
400.1383 Flywheel locking tool	30
400.1384 Tensioner adjuster	118
400.1386 Belt retaining tool	50
400.1387 Crankshaft pulley remover	153
400.3102 Tensioner locking pin	4
400.3151 Crankshaft pulley centralisation tool	2
400.3152 Tensioner locking pin	7
400.3154 Auxiliary drive belt tensioner locking pin Ø 4.0 mm	18

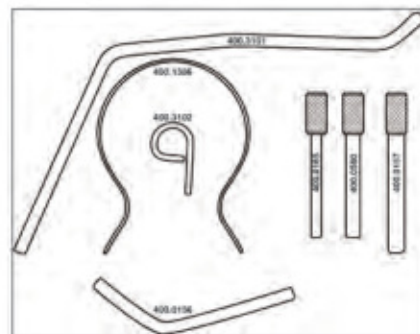
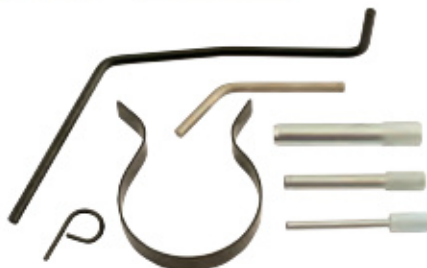


PSA - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: PSA vehicles with 1.4 8V and 16V engines (engine code: KFU)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Substitutes for		Length mm	
400.3100	9 pcs PSA		362

consists of:

400.0156 Crankshaft timing pin Ø 6.0 mm	23
400.0157 Crankshaft locking pin Ø 6.0 mm, short (2)	101
400.0165 Camshaft locking pin 5.0 mm	19
400.0580 Crankshaft locking pin Ø 8.0 mm	30
400.1386 Belt retaining tool	50
400.3101 Flywheel locking pin Ø 6.0 mm, long	58
400.3102 Tensioner locking pin	4

BMW / Mini / PSA - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy

Application range: BMW Mini with 1.4 / 1.6 Valvetronic engines (engine code: N12), Peugeot 207, 308 with 1.4 / 1.6 engines (engine code: EP3 / EP6), Citroën with 1.4 / 1.6 engines (engine code: EP3 / EP6)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Substitutes for		Length mm	
400.0850	7 pcs BMW / Mini / PSA		1.40

consists of:

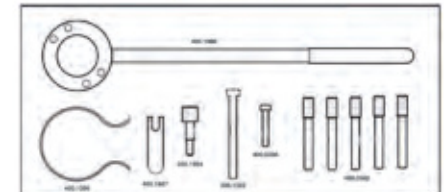
X		
400.0851	1 Crankshaft timing pin	52
400.0852	1 Camshaft locking tool inlet (2)	812
400.0853	1 Camshaft locking tool (EX)	358
400.0854	3 Screw M6 x 30.0 mm	9

PSA / Renault - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën XM, Peugeot 605, Renault Safrane, Espace (engine code: L7X 700 / 701 / 713 / 727 / 731 / XFZ / ES9J4)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Substitutes for		Length mm	
400.1900	11 pcs PSA / Renault		2.31

consists of:

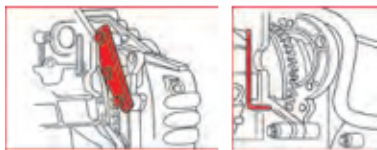
X		
400.0286	1 Screw M8 x 35 mm (2)	16
400.0580	5 Crankshaft locking pin Ø 8.0 mm	30
400.1352	1 Locking screw M8 x 70.0 mm	31
400.1386	1 Belt retaining tool	50
400.1904	1 Gauge pin	14
400.1906	1 Camshaft locking tool	896

Ford / Land Rover / PSA / Volvo - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Ford, Land Rover, PSA, Volvo vehicles with 2.0 / 2.2 DOHC Common-Rail Diesel engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1625	3 pcs	Ford / Land Rover / PSA / Volvo - Engine Timing Tool Set	473
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consists of:

400.0580	Crankshaft locking pin Ø 8.0 mm	30
400.0609	Flywheel locking tool	308
400.0903	Crankshaft locking pin	85

PSA timing belt tensoning tool

- For the professional engine repair
- 8.0 mm square
- Suitable for pre-tensioning timing belt tensioner on the automatic pulley
- Chrome vanadium
- Very high degree of accuracy

Application range: universal usage on many Peugeot vehicles

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Subable for	Length mm	
150.3014	PSA	157.0 100

PSA / Toyota timing belt tensoning tool

- For the professional engine repair
- 7.0 mm square
- Suitable for pre-tensioning timing belt tensioner on the automatic pulley
- Chrome vanadium
- Very high degree of accuracy

Application range: universal usage on many Peugeot and Toyota vehicles

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Subable for	Length mm	
150.3011	PSA, Toyota	157.0 80

Universal fly whe l locking tool set

- For the professional engine repair
- For locking the fly whe ls
- Secure hold thanks to optimal positioning
- Special plastic
- Very high degree of accuracy

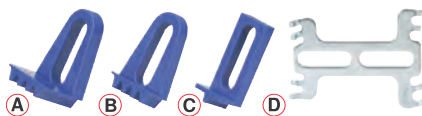
A Fly wheel Locking device for: Citroën: Synergie 2.0/ Turbo.ZX 1.9D/TD, Xantia 1.9D/TD, Berlingo 1.9D, Dispatch 1.9D/TD, Synergie 1.9D, Relay 1.9D/TD, **Fiat:** Ulysse, 2.0/Turbo Ducato 2.0, FSO: 1.9D, LDV: 200 1.9D, Pilot 1.9D, **Peugeot:** 205 1.6/1.9, 305 1.6/1.9, 309 1.6/1.9, 405 1.6/1.9, 405 1.8/2.0 (92-), 605 2.0, Boxer 2.0, c205 1.8/1.9D, 305 1.8/1.9D, 306 1.8/1.9D/TD, 309 1.8/1.9D 1.8TD, 405 1.8TD, 405 1.9D, 406 1.9D, Partner 1.9D, Talbot / Horizon / Solara 1.9D, J5/Talbot Express 1.9D, 605D/TD, 806 1.9TD, Expert 1.9D, Boxer 1.9D/ TD, **Renault:** R5, 1.6D, R9 1.6D, 411 1.6D Express/Extra 1.6D-F8M diesel engines, Clio, Express/Extra, 1.9D earlier F8Q diesel engines, Espace 2.1D, R21 2.1D, R25 2.1D, Traffic Master 2.1D-J8S diesel engines, Clio 1.2/1.4, Express/Extra, R19 1.4, Megane/Scenic 1.4/1.6-E7F/E7J petrol engines, R5 1.7, Clio 1.7/1.8, R19 1.7, R21 1.7 1.7 Megane/Scenic 2.0, Laguna 1.8/2.0, Traffic 1.7-F3N/F3P/F2R petrol engines, Clio, Williams, R19, Megane 2.0 16V Twin-Cam F7P/F7R engines, Laguna/ Safrane 2.0 16V Twin-Cam N7Q/N7U engines

B Fly wheel Locking device for: Renault: Clio, Twingo, Kangoo, Megane/Scenic, 1.2/1.6 D7F + K7M Petrol engine, Megane/Scenic, Kangoo 1.9D FBQ + F9Q Diesel engine (direct injection)

C Fly wheel Locking device for: Citroën: Xsara, Xantia 1.8/2.0XU7 JP/JB petrol engines, Xsara 1.8 16V XU7 JP4 twin cam shaft engines, ZX.Xantia, XM2.0 16V XU10J4 twin cam shaft engines, Xantia 1.9D/TD XUD9BTF diesel engines, Xantia, XM2.1TD XUD 11BTE diesel engines, **Peugeot:** 406, 1.8/2.0 XU7 JP/JB Petrol engine, 406 1.8 16V XU7 JP4 Double cam shaft engines, 306, 405, 605 2.0 16V XU10J4 Double cam shaft engines, 406, 1.9D/TD XUD9BTF Diesel engines, 406, 605 2.1 TD XUD 11BTE Diesel engines

D Fly wheel Locking device for Vauxhall/Opel: 1.2, 1.4, 1.6, 1.8, 2.0 OHC Petrol engines, 1.6D & 1.7, OHC Diesel engines, 1.5 & 1.7 OHE Diesel(Isuzu)-Engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



150.3025	4 pcs	Universal fly whe l locking tool set	30
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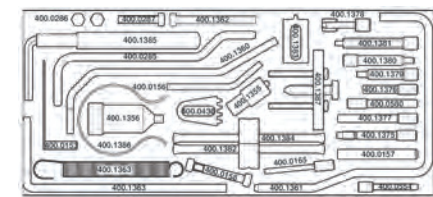
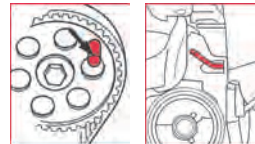
PSA

PSA - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën, Peugeot vehicles with HPI and HDi engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1650	34 pcs	PSA - Engine Timing Tool Set	2.17
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consists of:

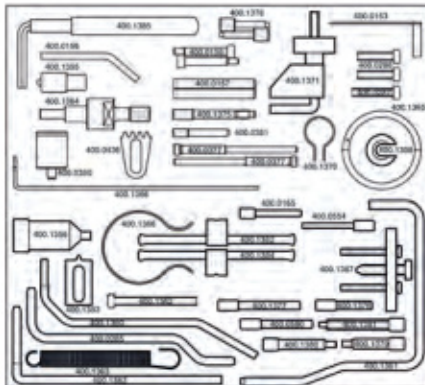
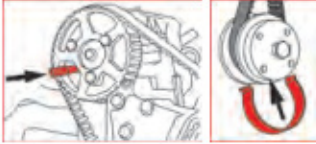
400.0153	Tensioner adjuster, square 8.0 mm	6
400.0156	Crankshaft timing pin Ø 6.0 mm	23
400.0157	Crankshaft locking pin Ø 6.0 mm, short (2)	101
400.0158	Crankshaft locking pin (2)	30
400.0165	Camshaft locking pin 5.0 mm	19
400.0285	Crankshaft locking pin Ø 8.0 mm	97
400.0286	Screw M8 x 35 mm (2)	16
400.0436	Flywheel locking tool	135
400.0554	Locking pin Ø 6.0 mm	19
400.0580	Crankshaft locking pin Ø 8.0 mm	30
400.1355	Flywheel locking pin	80
400.1356	Flywheel locking tool	252
400.1360	Flywheel locking tool	82
400.1361	Flywheel locking tool	146
400.1362	Locking screw M8 x 70.0 mm	31
400.1363	Flywheel locking pin with spring	126
400.1375	Injection pump timing pin, M8	32
400.1376	Camshaft locking pin	24
400.1377	Tensioning locking pin	35
400.1378	Camshaft locking pin (2)	21
400.1379	Camshaft locking pin	37
400.1380	Camshaft locking pin	43
400.1381	Camshaft locking pin (VTC)	50
400.1382	Tensioner adjuster	115
400.1383	Flywheel locking tool	30
400.1384	Tensioner adjuster	118
400.1385	Tensioner adjuster, hex Ø 8.0 mm	177
400.1386	Belt retaining tool	50
400.1387	Crankshaft pulley remover	153

PSA - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: PSA vehicles including 2nd generation with EW 16V and 2.5 / 2.7 / 2.8 diesel engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1350	45 pcs	PSA - Engine Timing Tool Set	5.93
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consists of:

X		Q
400.0153	1 Tensioner adjuster, square 8.0 mm	6
400.0156	1 Crankshaft timing pin Ø 6.0 mm	23
400.0157	1 Crankshaft locking pin Ø 6.0 mm, short (2)	101
400.0158	1 Crankshaft locking pin (2)	30
400.0165	2 Camshaft locking pin 5.0 mm	19
400.0285	1 Crankshaft locking pin Ø 8.0 mm	97
400.0286	1 Screw M8 x 35 mm (2)	16
400.0287	1 Screw M8 x 40.0 mm	18
400.0377	1 Camshaft sprocket locking pin (2)	68
400.0380	1 Flywheel locking tool	222
400.0381	1 Coolant Pump tensioning locking pin	30
400.0436	1 Flywheel locking tool	135
400.0554	1 Locking pin Ø 6.0 mm	19
400.0580	1 Crankshaft locking pin Ø 8.0 mm	30
400.1355	1 Flywheel locking pin	80
400.1356	1 Flywheel locking tool	252
400.1360	1 Flywheel locking tool	82

consists of:

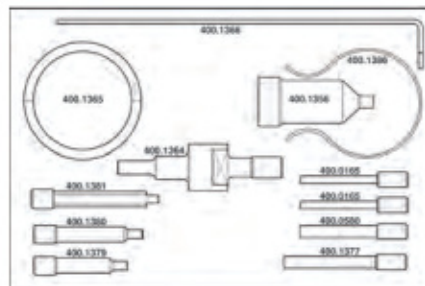
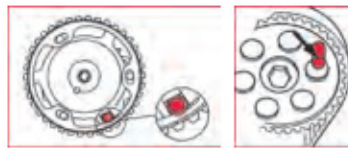
X		Q
400.1361	1 Flywheel locking tool	146
400.1362	1 Locking screw M8 x 70.0 mm	31
400.1363	1 Flywheel locking pin with spring	126
400.1364	1 Flywheel locking pin	215
400.1365	1 Tensioner pulley adjusting tool	330
400.1366	1 Tensioner adjuster, square, 6.0 mm	44
400.1370	1 Crankshaft sprocket centraliser	2
400.1371	1 Belt retaining tool	99
400.1375	1 Injection pump timing pin, M8	32
400.1376	1 Camshaft locking pin	24
400.1377	1 Tensioning locking pin	35
400.1378	1 Camshaft locking pin (2)	21
400.1379	1 Camshaft locking pin	37
400.1380	1 Camshaft locking pin	43
400.1381	1 Camshaft locking pin (VTC)	50
400.1382	1 Tensioner adjuster	115
400.1383	1 Flywheel locking tool	30
400.1384	1 Tensioner adjuster	118
400.1385	1 Tensioner adjuster, hex Ø 8.0 mm	177
400.1386	1 Belt retaining tool	50
400.1387	1 Crankshaft pulley remover	153
400.1388	1 Tensioner adjuster	41

PSA - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën Xsara, Picasso, C5, C4, Evasion, Synergie, C8, Jumpy, Dispatch, Peugeot 206, 307, 406, 607, 806, 807, Expert (engine code: EW12J4(3FC) / EW10D-HPI(RLZ) / EW10J4S(RFK) / EW10J4(RFN/RFR) / EW7J4(6FZ)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1750	12 pcs	PSA - Engine Timing Tool Set	1.26
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consists of:

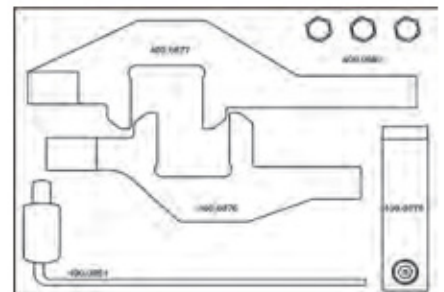
X		Q
400.0165	1 Camshaft locking pin 5.0 mm	19
400.0580	1 Crankshaft locking pin Ø 8.0 mm	30
400.1358	1 Flywheel locking tool	252
400.1364	1 Flywheel locking pin	215
400.1365	1 Tensioner pulley adjusting tool	330
400.1366	1 Tensioner adjuster, square, 6.0 mm	44
400.1377	1 Tensioning locking pin	35
400.1379	1 Camshaft locking pin	37
400.1380	1 Camshaft locking pin	43
400.1381	1 Camshaft locking pin (VTC)	50
400.1386	1 Belt retaining tool	50

BMW / Mini / PSA - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW Mini with 1.6 engines (engine code: N14 / R56), Peugeot 207, 308 with 1.6 engines (engine code: EP6 / EP6DT / DTS), Citroën with 1.6 engines (engine code: EP6 / EP6DT / DTS)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0875	7 pcs	BMW / Mini / PSA - Engine Timing Tool Set	1.49
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consists of:

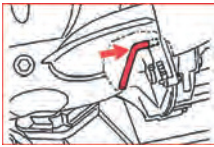
X		Q
400.0851	1 Crankshaft timing pin	52
400.0876	1 Camshaft alignment tool (inlet)	270
400.0877	1 Camshaft alignment tool (exhaust)	423
400.0878	1 Support clamp	93
400.0880	1 Screw M6 x 30.0 mm (3)	7

PSA crank shaft locking tool set

- For the professional engine repair
- For fixing the crank shaft
- Contains special square wrench for adjusting the timing belt on the automatic pulley
- For changing the timing belt
- Secure hold for changing the timing belt or engine repairs
- Very high degree of accuracy

Application range: Citroën AX with 1.0/1.1 and 1.4 engines, BX 16, BX 19, BX 16 valve, Peugeot 106, 205, 405 with 1.0/1.1 and 1.4 engines, Peugeot 205, 305, 309, 405 with 1.6 and 1.9 engines, 309 GTI, 405 Mi1,6

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



			🔑
400.0200	6 pcs	PSA crank shaft locking tool set	235

consists of:

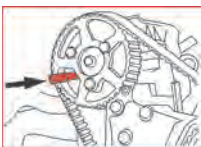
			🔑
400.0153	Tensioner adjuster, square 8,0 mm	6	
400.0156	Crankshaft timing pin Ø 6,0 mm	23	
400.0157	Crankshaft locking pin Ø 6,0 mm, short (2)	101	
400.0158	Crankshaft locking pin (2)	30	

Fiat / GM / Opel / PSA / Renault - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Fiat, PSA, Renault, Opel vehicles with 2.5 / 2.8D engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



			🔑
400.1775	4 pcs	Fiat / GM / Opel / PSA / Renault - Engine Timing Tool Set	143

consists of:

			🔑
400.0165	Camshaft locking pin 5,0 mm	19	
400.0754	Camshaft locking pin	51	
400.1388	Tensioner adjuster	41	

PSA - Valve spring compressor

- For the professional engine repair
- For retaining the valve springs
- Universal usage
- Includes 8 screws with pressure cone and 2 locking screws
- Chrome vanadium
- Very high degree of accuracy

Application range: Citroën Berlingo, Xsara petrol engines with 1.0, 1.1, 1.4, 1.6l, and Peugeot 106, 205, 206, 306, 307, 405 with petrol engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



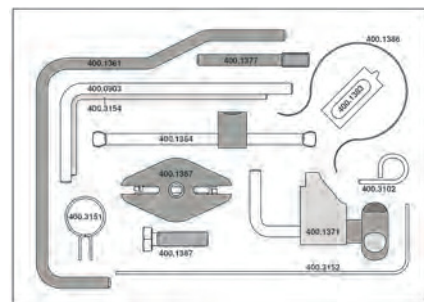
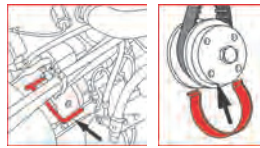
Suitable for		Length mm	🔑
400.9001	PSA	390,0	2,50

Fiat / PSA - Engine Timing Tool Set

- For the professional engine repair
- For adjusting the valve controls
- For twin cam shaft systems with timing belt/chain combinations
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën and Fiat with 2.0 / 2.2 SOHC and DOHC engines (engine code: DW10 / DW12)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



			🔑
400.3150	12 pcs	Fiat / PSA - Engine Timing Tool Set	814

consists of:

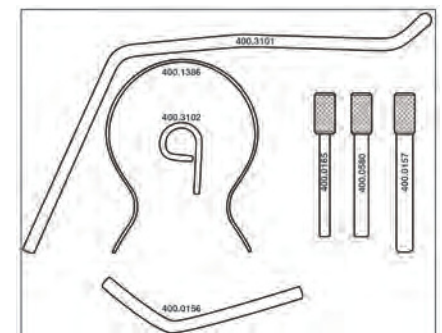
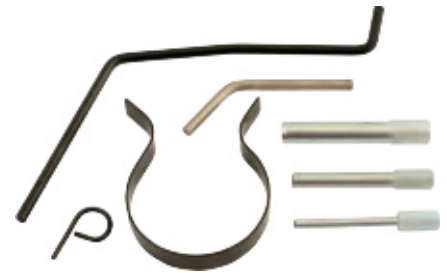
			🔑
400.0903	Crankshaft locking pin	85	
400.1361	Flywheel locking tool	146	
400.1371	Belt retaining tool	99	
400.1377	Tensioning locking pin	35	
400.1383	Flywheel locking tool	30	
400.1384	Tensioner adjuster	118	
400.1386	Belt retaining tool	50	
400.1387	Crankshaft pulley remover	153	
400.3102	Tensioner locking pin	4	
400.3151	Crankshaft pulley centralisation tool	2	
400.3152	Tensioner locking pin	7	
400.3154	Auxiliary drive belt tensioner locking pin Ø 4,0 mm	18	

PSA - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: PSA vehicles with 1.4 8V and 16V engines (engine code: KFU)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



			🔑
400.3100	9 pcs	PSA - Engine Timing Tool Set	362

consists of:

			🔑
400.0156	Crankshaft timing pin Ø 6,0 mm	23	
400.0157	Crankshaft locking pin Ø 6,0 mm, short (2)	101	
400.0165	Camshaft locking pin 5,0 mm	19	
400.0580	Crankshaft locking pin Ø 8,0 mm	30	
400.1386	Belt retaining tool	50	
400.3101	Flywheel locking pin Ø 6,0 mm, long	58	
400.3102	Tensioner locking pin	4	

BMW / Mini / PSA - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy

Application range: BMW Mini with 1.4 / 1.6 Valvetronic engines (engine code: N12), Peugeot 207, 308 with 1.4 / 1.6 engines (engine code: EP3 / EP6), Citroën with 1.4 / 1.6 engines (engine code: EP3 / EP6)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0850	7 pcs	BMW / Mini / PSA - Engine Timing Tool Set	1.40
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consists of:

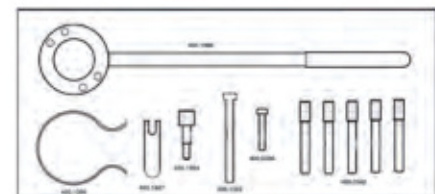
X			
400.0851	1	Crankshaft timing pin	52
400.0852	1	Camshaft locking tool inlet (2)	812
400.0853	1	Camshaft locking tool (EX)	358
400.0854	3	Screw M6 x 30,0 mm	9

PSA / Renault - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën XM, Peugeot 605, Renault Safrane, Espace (engine code: L7X 700 / 701 / 713 / 727 / 731 / XFZ / ES9J4)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1900	11 pcs	PSA / Renault - Engine Timing Tool Set	2.31
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consists of:

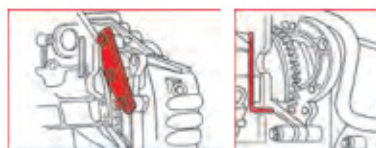
X			
400.0286	1	Screw M8 x 35 mm (2)	16
400.0580	5	Crankshaft locking pin Ø 8,0 mm	30
400.1362	1	Locking screw M5 x 70,0 mm	31
400.1386	1	Belt retaining tool	50
400.1904	1	Gauge pin	14
400.1906	1	Camshaft locking tool	896

Ford / Land Rover / PSA / Volvo - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Ford, Land Rover, PSA, Volvo vehicles with 2.0 / 2.2 DOHC Common-Rail Diesel engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1625	3 pcs	Ford / Land Rover / PSA / Volvo - Engine Timing Tool Set	473
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consists of:

X			
400.0580	5	Crankshaft locking pin Ø 8,0 mm	30
400.0609	1	Flywheel locking tool	308
400.0903	1	Crankshaft locking pin	85

PSA timing belt tensioning tool

- For the professional engine repair
- 8.0 mm square
- Suitable for pre-tensioning timing belt tensioner on the automatic pulley
- Chrome vanadium
- Very high degree of accuracy

Application range: universal usage on many Peugeot vehicles

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



150.3014	PSA	157,0	100
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PSA / Toyota timing belt tensioning tool

- For the professional engine repair
- 7.0 mm square
- Suitable for pre-tensioning timing belt tensioner on the automatic pulley
- Chrome vanadium
- Very high degree of accuracy

Application range: universal usage on many Peugeot and Toyota vehicles

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



150.3011	PSA, Toyota	157,0	80
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Universal fly wheel locking tool set

- For the professional engine repair
- For locking the fly wheel
- Secure hold thanks to optimal positioning
- Special plastic
- Very high degree of accuracy

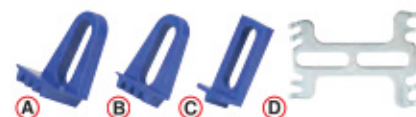
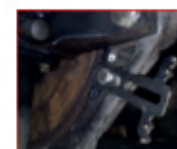
A Fly wheel Locking device for: Citroën: Synergie 2.0/ Turbo.ZX 1.9D/TD, Xantia 1.9D/TD, Berlingo 1.9D, Dispatch 1.9D/TD, Synergie 1.9D, Relay 1.9D/TD, Fiat: Ulysse, 2.0/Turbo Ducato 2.0, FSO: 1.9D, LDV: 200 1.9D, Pilot 1.9D, Peugeot: 205 1.6/1.9, 305 1.6/1.9, 309 1.6/1.9, 405 1.6/1.9, 405 1.8/2.0 (92-), 605 2.0, Boxer 2.0, c205 1.8/1.9D, 305 1.8/1.9D, 306 1.8/1.9D/TD, 309 1.8/1.9D 1.8TD, 405 1.8TD, 405 1.9D, 406 1.9D, Partner 1.9D, Talbot / Horizon / Solara 1.9D, J5/Talbot Express 1.9D, 605D/TD, 806 1.9TD, Expert 1.9D, Boxer 1.9D/ TD, Renault: R5, 1.6D, R9 1.6D, 411 1.6D Express/Extra 1.6D-F8M diesel engines, Clio, Express/Extra, 1.9D earlier F8Q diesel engines, Espace 2.1D, R21 2.1D, R25 2.1D, Traffic Master 2.1D-J8S diesel engines, Clio 1.2/1.4, Express/Extra, R19 1.4, Megane/Scenic 1.4/1.6-E7F/E7J petrol engines, R5 1.7, Clio 1.7/1.8, R19 1.7, R21 1.7 1.7 Megane/Scenic 2.0, Laguna 1.8/2.0, Traffic 1.7-F3N/F3P/F2R petrol engines, Clio, Williams, R19, Megane 2.0 16V Twin-Cam F7P/F7R engines, Laguna/ Safrane 2.0 16V Twin-Cam N7Q/N7U engines

B Fly wheel Locking device for: Renault: Clio, Twingo, Kangoo, Megane/Scenic, 1.2/1.6 D7F + K7M Petrol engine, Megane/Scenic, Kangoo 1.9D FBQ + F9Q Diesel engine (direct injection)

C Fly wheel Locking device for: Citroën: Xsara, Xantia 1.8/2.0XU7 JP/JB petrol engines, Xsara 1.8 16V XU7 JP4 twin cam shaft engines, Xantia 1.9D/TD XUD9BTF diesel engines, Xantia, XM2.1TD XUD 11BTE diesel engines, Peugeot: 406, 1.8/2.0 XU7 JP/JB Petrol engine, 406 1.8 16V XU7 JP4 Double cam shaft engines, 306, 405, 605 2.0 16V XU10J4 Double cam shaft engines, 406, 1.9D/TD XUD9BTF Diesel engines, 406, 605 2.1 TD XUD 11BTE Diesel engines

D Fly wheel Locking device for: Vauxhall/Opel: 1.2, 1.4, 1.6, 1.8, 2.0 OHC Petrol engines, 1.6D & 1.7, OHC Diesel engines, 1.5 & 1.7 OHE Diesel(Isuzu)-Engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



150.3025	4 pcs	Universal fly wheel locking tool set	30
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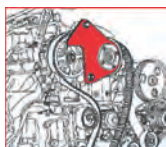
RENAULT

Renault - Engine Timing Tool Set


- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Renault with 1.2 / 1.4 / 1.6 / 1.7 / 1.8 / 2.0 16V / 2.2 8V / 2.5 20V petrol engines and 1.2 / 1.4 / 1.7 / 1.4 / 1.6 / 1.8 / 2.0 16V / 2.2 8V / 2.5 20V diesel engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



consists of:

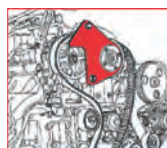
		
400.1811	Tensioner adjuster	239
400.1812	Camshaft locking tool (3)	498
400.1813	Tensioner adjuster	188
400.1814	Camshaft timing tool	897
400.1815	Tensioner adjuster	138
400.9021	Tensioner adjuster	168
400.9022	Camshaft locking tool	592

Renault - Engine Timing Tool Set


- For the professional engine repair
- Expansion set for use in connection with 400.1800
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Renault vehicles with dCi engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



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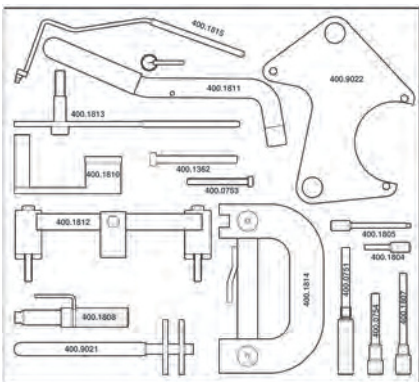
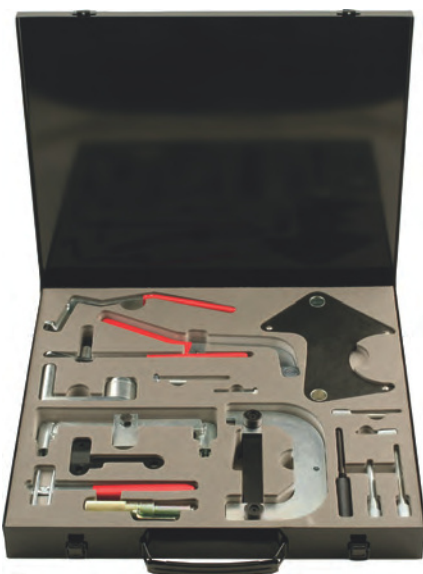
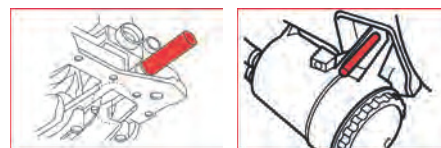
		
400.0760	Camshaft setting tool (inlet)	223
400.1925	Renault - Engine Timing Tool Set , 2 pcs	567
400.9016	Injection pump wheel fixi g tool	166
400.9023	Renault cam belt tensioning tool	669
400.9024	Tensioning device additional adapter	182
400.9025	Camshaft wheel fixi g tool	840


Nissan / Opel / Renault - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case


Application range: Renault Clio 1.5 / 1.9 / 2.3 / 2.5 dCi, Laguna II, Espace, Trafic, Master with 2.2 DTI (2000-2005) G9 engines, Opel Movano 2.2 TdI, Nissan Kubistar, Primastar, Interstar and Micra with 1.5 / 2.2 / 2.5 dCi engines

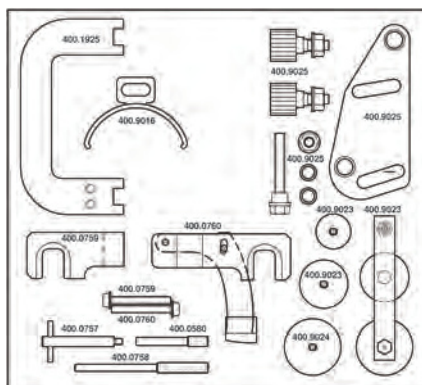
Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de




			
400.1800	18 pcs	Renault - Engine Timing Tool Set	4,01


consists of:

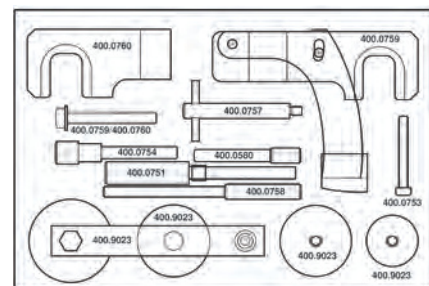
		
400.0751	Crankshaft locking pin	102
400.0753	Locking screw M6 x 30,0 mm	10
400.0754	Camshaft locking pin	51
400.1362	Locking screw M8 x 70,0 mm	31
400.1804	Flywheel locking pin	16
400.1805	Injection pump locking pin	20
400.1807	Flywheel locking pin	57
400.1808	Flywheel locking pin	225
400.1810	Tensioner adjuster	50




			
400.1450	14 pcs	Renault - Engine Timing Tool Set	5,82


consists of:

		
400.0580	Crankshaft locking pin Ø 8,0 mm	30
400.0757	Hi-Pressure pump locking pin	43
400.0758	Flywheel locking pin	55
400.0759	Camshaft setting tool (exhaust) (2)	20



			
400.0750	13 pcs	Nissan / Opel / Renault - Engine Timing Tool Set	1,69

consists of:

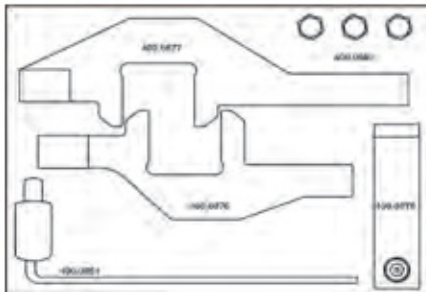
		
400.0580	Crankshaft locking pin Ø 8,0 mm	30
400.0751	Crankshaft locking pin	102
400.0753	Locking screw M6 x 30,0 mm	10
400.0754	Camshaft locking pin	51
400.0757	Hi-Pressure pump locking pin	43
400.0758	Flywheel locking pin	55
400.0759	Camshaft setting tool (exhaust) (2)	20
400.0760	Camshaft setting tool (inlet)	223
400.9023	Renault cam belt tensioning tool	669

BMW / Mini / PSA - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW Mini with 1.6 engines (engine code: N14 / R56), Peugeot 207, 308 with 1.6 engines (engine code: EP6 / EP6DT / DTS), Citroën with 1.6 engines (engine code: EP6 / EP6DT / DTS)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0875	7 pcs	BMW / Mini / PSA - Engine Timing Tool Set	1,49
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consists of:

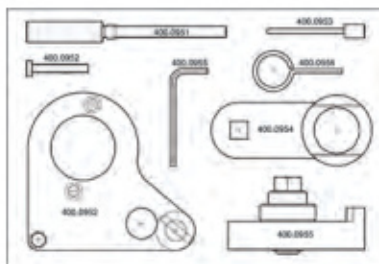
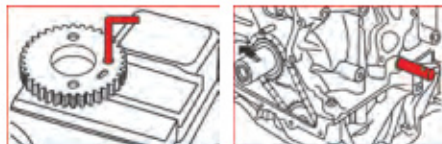
400.0851	Crankshaft timing pin	52
400.0876	Camshaft alignment tool (inlet)	270
400.0877	Camshaft alignment tool (exhaust)	423
400.0878	Support clamp	93
400.0880	Screw M5 x 30,0 mm (3)	7

Nissan / Renault - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Renault Megane, Vel Satis, Espace, Scenic, Trafic, Laguna, Koleos, Nissan Qashqai, Opel Vivaro with 2.0 dCi engine (engine code: M9R)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0950	8 pcs	Nissan / Renault - Engine Timing Tool Set	2,73
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consists of:

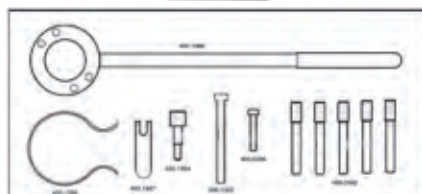
400.0951	Crankshaft locking pin	103
400.0952	Camshaft locking tool	398
400.0953	Auxiliary drive belt tensioning locking pin	13
400.0954	Crankshaft pulley holding tool	424
400.0955	Camshaft gear alignment tool (2)	593
400.0956	Locking pin Ø 2,96 mm	6

PSA / Renault - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Citroën XM, Peugeot 605, Renault Safrane, Espace (engine code: L7X 700 / 701 / 713 / 727 / 731 / XFZ / ES9J4)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1900	11 pcs	PSA / Renault - Engine Timing Tool Set	2,31
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consists of:

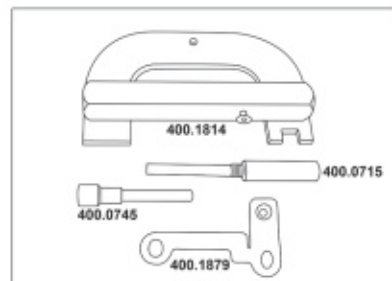
	x		
400.0286	1	Screw M8 x 35 mm (2)	16
400.0580	5	Crankshaft locking pin Ø 8,0 mm	30
400.1362	1	Locking screw M8 x 70,0 mm	31
400.1386	1	Belt retaining tool	50
400.1904	1	Gauge pin	14
400.1906	1	Camshaft locking tool	896

Renault - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Renault vehicles (engine code: K4J / K4M / F4P / F4R)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1875	4 pcs	Renault - Engine Timing Tool Set	1,20
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consists of:

400.0751	Crankshaft locking pin	102
400.0754	Camshaft locking pin	51
400.1814	Camshaft timing tool	897
400.1879	Mounting bracket	80

Renault - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- Very high degree of accuracy

Application range: Renault Laguna, Megane (engine code: F5R)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1925	2 pcs	Renault - Engine Timing Tool Set	567

consists of:

400.0754	Camshaft locking pin	51	
400.1926	Camshaft timing tool	459	

Fiat / GM / Opel / PSA / Renault - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Fiat, PSA, Renault, Opel vehicles with 2.5 / 2.8D engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1775	4 pcs	Fiat / GM / Opel / PSA / Renault - Engine Timing Tool Set	143

consists of:

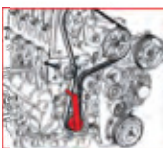
400.0165	Camshaft locking pin 5.0 mm	19	
400.0754	Camshaft locking pin	51	
400.1388	Tensioner adjuster	41	

Renault cam belt tensioning tool

- For the professional engine repair
- Contains adapter and tensioning device
- For adjusting the belt tension
- For putting on the crank shaft wheel
- Very high degree of accuracy

Application: Renault Mégane, Laguna, Laguna II and Espace with 1.9 dCi engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.9023	Renault cam belt tensioning tool	669	

Renault expansion sleeve for cam belt tensioning tool

- For the professional engine repair
- Adapter for expanding the use for the sets 400.9023 and 400.0750
- For adjusting the belt tension
- For putting on the crank shaft wheel
- Very high degree of accuracy

Application: Renault Kangoo, Clio II, Megane II, Scenic II, Laguna, Laguna II, Espace III, Espace IV, Acanthime, Trafic II, Master II (engine code: F9Q, X56, X64, X65, X66-J66, X66-J66/F9Q, X70, X74, X76, X81, X83 and X84)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.9024	Renault expansion sleeve for cam belt tensioning tool	182	

Renault - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Renault Laguna, Safrane (engine code: N7U / N7Q)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1850	5 pcs	Renault - Engine Timing Tool Set	1,41

consists of:

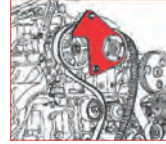
400.1808	Flywheel locking pin	225	
400.1811	Tensioner adjuster	239	
400.1812	Camshaft locking tool (3)	498	

Renault cam shaft fixing tool

- For the professional engine repair
- For locking the cam shafts
- Allows for correct engine adjustment
- Very high degree of accuracy

Application: Renault Clio II and III, Kangoo, Laguna, Mégane II, Modus, Scénic, Scénic II 2001 - 2010 with 1.4 and 1.6 16V engines (engine code: K4M)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



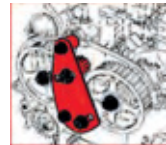
400.9022	Renault cam shaft fixing tool	592	

Renault cam shaft fixing tool

- For the professional engine repair
- For locking the cam shafts
- Allows for correct engine adjustment
- Very high degree of accuracy

Application: Renault Laguna II, Mégane II, Scénic II 2002 - 2008 with 2.0T engines (engine code: F4R770/771, F4R776, F4R784, F4R786, F4R787)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.9025	Renault cam shaft fixing tool	840	

Renault injection pump wheel fixing tool

- For the professional engine repair
- For locking the injection pump chain wheel
- Simple handling
- Very high degree of accuracy

Application: Renault Clio, Mégane, Laguna, Kangoo with 1.9 dTi engines (engine code: F9Q)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.9016	Renault injection pump wheel fixing tool	166	

Renault timing belt tensioning tool

- For the professional engine repair
- Suitable for pre-tensioning timing belt tensioner on the automatic pulley
- Chrome vanadium
- Very high degree of accuracy

Application range: Renault Twingo, Clio, Kangoo 1995 - 2006, engine code: D7F

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Substitutes for	Length mm	Weight kg
150.1259 Renault	105.0	340

Renault guide roller wrench TX T50

- Suitable for the installation and removal of the guide rollers
- Required when changing the timing belt
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: Renault 1.4 and 1.6 petrol engines (K4J, K4M), e.g. Clio III, Megane, Scenic II

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Substitutes for	Length mm	Weight kg
150.1302 2 pcs Renault guide roller wrench TX T50		460

consists of:

Part No.	Description	Weight kg
150.1227	Special wrench with 8.0 mm hexagonal drive, 450 mm	440
150.1306	Bit with 8.0 mm hexagonal drive for TX screws T50	20

Renault automatic pulley wrench

- For the professional engine repair
- Suitable for the assembly and disassembly of the timing belt
- For adjusting the timing belt tension on the automatic pulley
- With plastic-coated handle
- Chrome vanadium
- Very high degree of accuracy

Application range: universal usage on many Renault vehicles

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Substitutes for	Length mm	Weight kg
400.9021 Renault automatic pulley wrench		168

Universal fly wheel locking tool set

- For the professional engine repair
- For locking the fly wheel
- Secure hold thanks to optimal positioning
- Special plastic
- Very high degree of accuracy

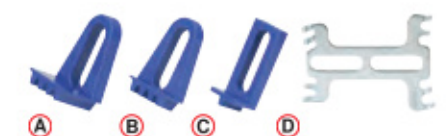
A Fly wheel Locking device for: Citroën: Synergie 2.0/ Turbo.ZX 1.9D/TD, Xantia 1.9D/TD, Berlingo 1.9D, Dispatch 1.9D/TD, Synergie 1.9D, Relay 1.9D/TD. **Fiat:** Ulysse, 2.0/Turbo Ducato 2.0, FSO: 1.9D, LDV: 200 1.9D, Pilot 1.9D. **Peugeot:** 205 1.6/1.9, 305 1.6/1.9, 309 1.6/1.9, 405 1.6/1.9, 405 1.8/2.0 (92-), 605 2.0, Boxer 2.0, c205 1.8/1.9D, 305 1.8/1.9D, 306 1.8/1.9D/TD, 309 1.8/1.9D 1.8TD, 405 1.8TD, 405 1.9D, 406 1.9D, Partner 1.9D, Talbot / Horizon / Solara 1.9D, J5/Talbot Express 1.9D, 605D/TD, 806 1.9TD, Expert 1.9D, Boxer 1.9D/TD. **Renault:** R5, 1.6D, R9 1.6D, 411 1.6D Express/Extra 1.6D-F8M diesel engines, Clio, Express/Extra, 1.9D earlier F8Q diesel engines, Espace 2.1D, R21 2.1D, R25 2.1D, Trafic Master 2.1D-J8S diesel engines, Clio 1.2/1.4, Express/Extra, R19 1.4, Megane/Scenic 1.4/1.6-E7F/E7J petrol engines, R5 1.7, Clio 1.7/1.8, R19 1.7, R21 1.7 1.7 Megane/Scenic 2.0, Laguna 1.8/2.0, Trafic 1.7-F3N/F3P/F2R petrol engines, Clio, Williams, R19, Megane 2.0 16V Twin-Cam F7P/F7R engines, Laguna/ Safrane 2.0 16V Twin-Cam N7Q/N7U engines

B Fly wheel Locking device for: Renault: Clio, Twingo, Kangoo, Megane/Scenic, 1.2/1.6 D7F + K7M Petrol engine, Megane/Scenic, Kangoo 1.9D FBQ + F9Q Diesel engine (direct injection)

C Fly wheel Locking device for: Citroën: Xsara, Xantia 1.8/2.0XU7 JP/JB petrol engines, Xsara 1.8 16V XU7 JP4 twin cam shaft engines, ZX.Xantia, XM2.0 16V XU10J4 twin cam shaft engines, Xantia 1.9D/TD XUD9BTF diesel engines, Xantia, XM2.1TD XUD 11BTE diesel engines. **Peugeot:** 406, 1.8/2.0 XU7 JP/JB Petrol engine, 406 1.8 16V XU7 JP4 Double cam shaft engines, 306, 405, 605 2.0 16V XU10J4 Double cam shaft engines, 406, 1.9D/TD XUD9BTF Diesel engines, 406, 605 2.1 TD XUD 11BTE Diesel engines

D Fly wheel Locking device for Vauxhall/Opel: 1.2, 1.4, 1.6, 1.8, 2.0 OHC Petrol engines, 1.6D & 1.7, OHC Diesel engines, 1.5 & 1.7 OHE Diesel (Isuzu)-Engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Substitutes for	Length mm	Weight kg
150.3025 4 pcs Universal fly wheel locking tool set		30



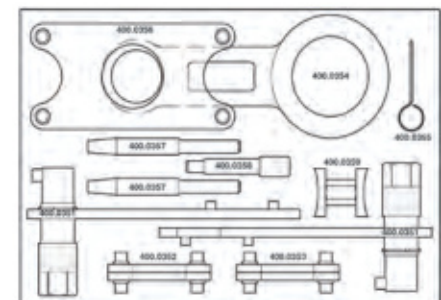
ROVER

Land Rover / MG / Rover - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft of all KV6 variants
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Rover 825, 45, 75, Land Rover Freelander 2.5, MG ZS, ZT, ZT-T 160, 180, 190 with 2.0 / 2.5 V6 Quad-Cam petrol engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Substitutes for	Length mm	Weight kg
400.0350 12 pcs Land Rover / MG / Rover - Engine Timing Tool Set		3.62

consists of:

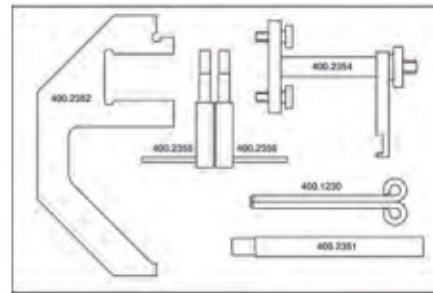
Part No.	Description	Weight kg
400.0351	Crankshaft timing tool (2)	500
400.0352	Camshaft locking adaptor set, 2.0 L (2)	76
400.0353	Camshaft locking adaptor set, 2.5 L (2)	80
400.0354	Rear camshaft sprocket setting tool	480
400.0355	Tensioner pushrod retension pin	1
400.0356	Rear camshaft sprocket setting tool	390
400.0357	Rear camshaft sprocket guide pin	50
400.0358	Crankshaft locking pin	40
400.0359	Rear cam sprocket spreader	80

BMW / Land Rover / Rover - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt or the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: BMW 1, 3, 5, X3, Land Rover Freelander, Rover 75 (engine code: M47)

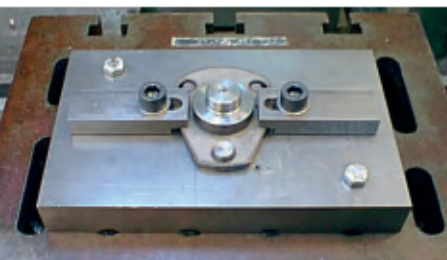
Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.2350	7 pcs	BMW / Land Rover / Rover - Engine Timing Tool Set	1,03
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consists of:

400.1230	Tensioning locking pin (2)	14
400.2351	Crankshaft TDC locking pin	108
400.2352	Camshaft locking tool	461
400.2354	Camshaft locking holding tool	240
400.2355	Crankshaft timing tool	52
400.2356	Crankshaft timing tool	55



Land Rover / Rover - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft or fly dis
- For changing the timing belt
- Very high degree of accuracy

Application range: Land Rover Freelander 1.8, Rover Metro, 214, 216, 218 16V, 414, 416 16V, 216, 416 GTi, Rover Diesel 218, 418

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.2600	3 pcs	Land Rover / Rover - Engine Timing Tool Set	1,50
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consists of:

400.2601	Flywheel locking tool	470
400.2602	Flywheel locking tool	480
400.2603	Flywheel locking tool	460

Rover Camshaft Sprocket Locking Tool

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Aluminium
- Very high degree of accuracy

Application range: Rover 214, 216, 400, 25, Streetwise, 75 and MGF Trophy with 1.6 and 1.8 K16 engines with and without PG1 transmission housing

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



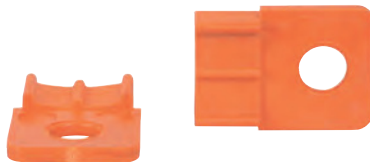
400.0151	1	Rover Camshaft Sprocket Locking Tool	125
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Rover cam shaft locking tool

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Special plastic
- Very high degree of accuracy

Application range: Rover 214 from 1995, 216 from 1995, 414 from 1990, 416 from 1995, MGF from 1995 / 75 1.8 from 1999 / 45 1.8, 1.6 from 2000 / 25 from 2000

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



150.3060	1	Rover cam shaft locking tool	20
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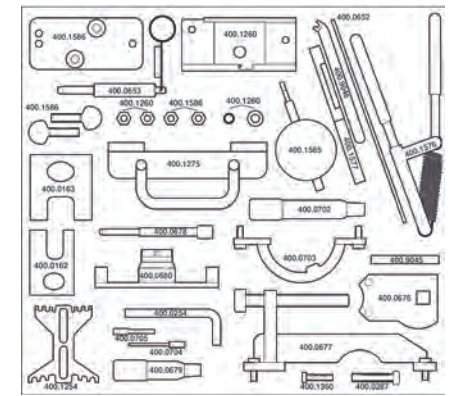
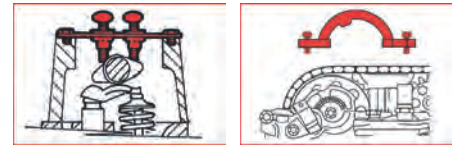
SAAB

Isuzu / GM / Opel / Saab - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Ascona, Astra-F, Astra-G, Corsa-B, Corsa-C, Frontera, Kadett-E, Midi, Monterey, Omega-B, Sintra, Vectra-A, Vectra-B, Vectra-C, Zafí a and similar Isuzu and Saab vehicles

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1575	33 pcs	Isuzu / GM / Opel / Saab - Engine Timing Tool Set	3,91
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consists of:

400.0162	Opel / Saab Camshaft locking tool	186
400.0163	Camshaft locking tool	143
400.0254	Locking pin Ø 9.5 mm	60
400.0287	Screw M8 x 40,0 mm	18
400.0652	Flywheel TDC indicator	80
400.0653	Flywheel locking pin	79
400.0676	Camshaft turning tool	7
400.0677	Bracket for timing adjustment wrench	111
400.0678	Injection pump locking pin	41
400.0679	Flywheel TDC locking pin	160
400.0680	Camshaft locking tool	322
400.0702	Flywheel TDC locking pin	205
400.0703	Camshaft position (CMP) sensor disc setting tool	102
400.0704	Tensioner retaining pin	4

consists of:

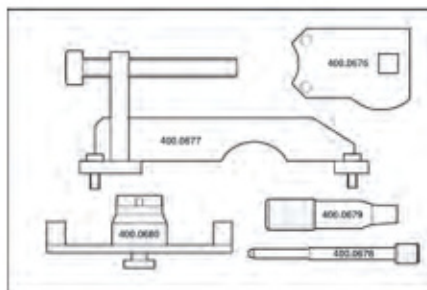
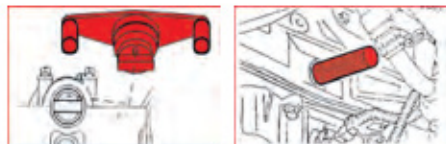
		🔑
400.0705	Tensioner retaining pin	5
400.1254	Flywheel locking tool	23
400.1260	Camshaft locking tool (5)	9
400.1275	Camshaft setting strap (TDC)	404
400.1360	Flywheel locking tool	82
400.1576	Belt tensioner adjuster	297
400.1577	Camshaft setting strap	99
400.1585	Dial gauge Ø 51 (10 x 0.01 mm)	154
400.1586	Camshaft position locking tool (5)	170
400.9045	Flywheel locking tool	80
400.9046	Flywheel locking tool	80

GM / Opel / Saab - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt or the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Astra-G (1998-2006), Vectra-B, Vectra-C (1997 - 2005), Signum (2003-2005), Omega-B (1998-2003), Zafira-A (1999-2005), Sintra (1998-1999), Frontera-B (1998-2004) with 2.0 / 2.2 DTi engines (engine code: Z20DTH / Z20DTL / Z22DTH / Z22DTR) and Saab 9-3 (1998-2004) with 2.2 TID, 9-5 (2002-2007) with 2.2 TID engines (engine code: D223L)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



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400.0675	5 pcs GM / Opel / Saab - Engine Timing Tool Set	1.36

consists of:

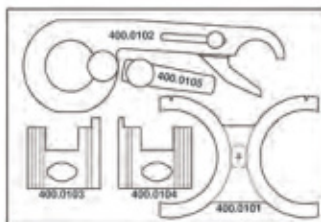
		🔑
400.0676	Camshaft timing tool	7
400.0677	Bracket for timing adjustment wrench	111
400.0678	Injection pump locking pin	41
400.0679	Flywheel TDC locking pin	160
400.0680	Camshaft locking tool	322

GM / Opel / Saab - Engine Timing Tool Set

- For the professional engine repair
- For engines with bevel on the automatic pulley
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Vectra-B, Omega-B, Sintra, Calibra with 2.5 / 2.6 / 3.0 V6 engines (1998-2003) (engine code: X25XE, X30XE, Y26SE, Y32SE), Saab 9-5 with 3.0 V6 engines (engine code: B308E)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



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400.0100	5 pcs GM / Opel / Saab - Engine Timing Tool Set	2.44

consists of:

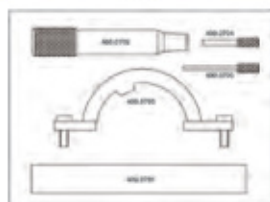
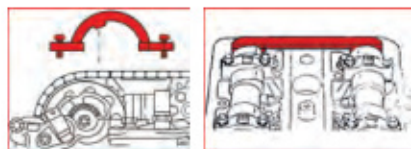
		🔑
400.0101	Crankshaft locking tool	812
400.0102	Camshaft locking tool	585
400.0103	Opel Camshaft locking tool (right)	119
400.0104	Camshaft locking tool left	120
400.0105	Belt holding wedge	100

GM / Isuzu / Opel / Saab - Engine Timing Tool Set

- For the professional engine repair
- Especially for chain-driven vehicles
- For locking dual cam shafts
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Astra-G, Astra-H, Combo-C, Corsa-B, Corsa-C, Corsa-D, Meriva-A, Tigra-B (1993-2010) with 1.0 12V / 1.2 16V engines (engine code: X10XE / Z10XE / Z10 XEP / X12XE / Z12XE / Z12 XEP / Z14XEL / Z14XEA) and similar Isuzu- and Saab-engines

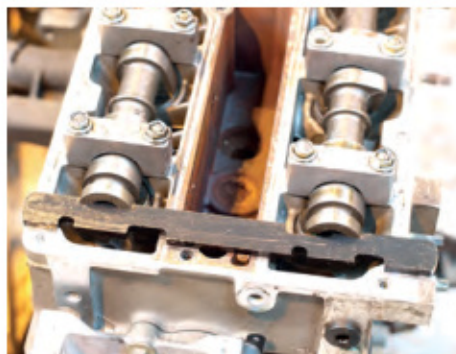
Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



		🔑
400.0700	5 pcs GM / Isuzu / Opel / Saab - Engine Timing Tool Set	4.46

consists of:

		🔑
400.0701	Camshaft timing tool	404
400.0702	Flywheel TDC locking pin	205
400.0703	Camshaft position (CMP) sensor disc setting tool	102
400.0704	Tensioner retaining pin	4
400.0705	Tensioner retaining pin	5

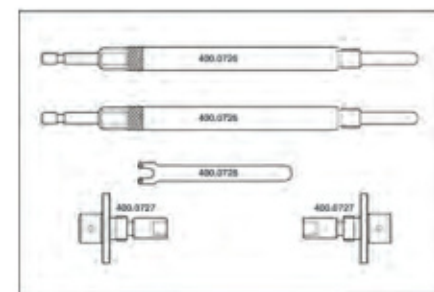


Alfa Romeo / Fiat - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- Very high degree of accuracy
- In durable steel storage case

Application range: Alfa Romeo Giulietta, Mito, Fiat 500, Brava, Bravo, Grande Punto, Marea, Marea Weekend, Marengo, Palio Weekend, Panda, Punto Classic, Ritmo, Stilo, Idea, Lancia Delta, Susa, Ypsilon with 1.2 16V engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



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400.0725	5 pcs Alfa Romeo / Fiat - Engine Timing Tool Set	9.89

consists of:

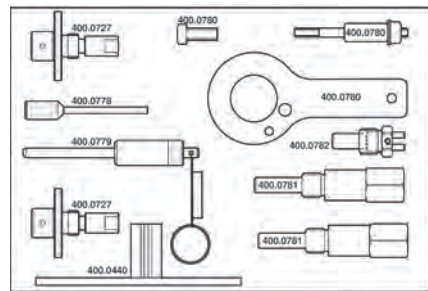
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400.0726	Piston height gauge (2)	250
400.0727	Camshaft locking tool (2)	130
400.0728	Tensioner adjusting tool	30

GM / Opel / Saab - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt or the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Corsa-C, Combo-C (2003-2007), Tigra-B, Meriva, Astra-H (2004-2007), Corsa-D (2006-2007) with 1.3 CDTi engines (engine code: Z13DT / Z13DTH / Z13DTJ), Opel Astra-H, Vectra-C, Signum, Zafira-B with 1.9 CDTi engines (engine code: Z19DT / Z19DTL), Saab 9-3, 905 with 1.9 CDTi engines (engine code: Z19DT / Z19DTH)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0775	11 pcs	GM / Opel / Saab - Engine Timing Tool Set	1,29

consists of:

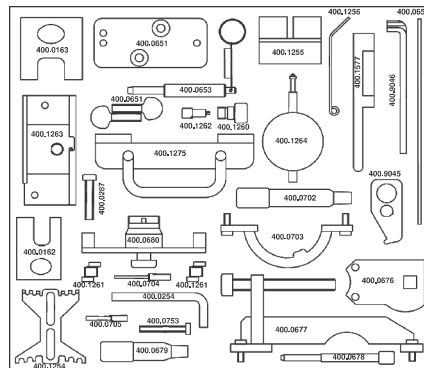
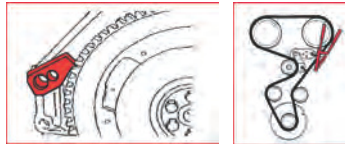
400.0440	Flywheel locking tool	136
400.0727	Camshaft locking tool (2)	130
400.0778	Locking pin	20
400.0779	Crankshaft locking tool	80
400.0780	Crankshaft pulley setting tool (3)	260
400.0781	Camshaft timing pin set (2)	180
400.0782	Camshaft alignment screw	40

GM / Isuzu / Opel / Saab - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Agila, Ascona, Astra-F, Astra-G, Astramax, Belmont, Cavalier, Corsa-B, Corsa-C, Frontera, Kadett-E, Midi, Monterey, Omega-B, Sintra, Vectra-A, Vectra-B, Vectra-C, Zafira with petrol and diesel engines including Eco-Tec engines and similar Isuzu and Saab engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1250	36 pcs	GM / Isuzu / Opel / Saab - Engine Timing Tool Set	6,18

consists of:

400.0162	1	Opel / Saab Camshaft locking tool, blue	186
400.0163	1	Opel Camshaft locking tool, gold	143
400.0254	1	Locking pin Ø 9.5 mm	60
400.0287	1	Screw M8 x 40,0 mm	18
400.0651	1	Camshaft locking tool (3), 110 x 50 mm	169
400.0652	1	Flywheel TDC indicator	80
400.0653	1	Flywheel locking pin with spring on ring, 103 mm	79
400.0676	1	Camshaft turning tool	7
400.0677	1	Bracket for timing adjustment wrench	111
400.0678	1	Injection pump locking pin, Ø 6 mm, 110 mm	41
400.0679	1	Flywheel TDC locking pin Ø 12 mm, 86 mm	160

consists of:

X			
400.0680	1	Camshaft locking tool 120 mm	322
400.0702	1	Flywheel TDC locking pin Ø 12 mm, 113 mm	205
400.0703	1	Camshaft position (CMP) sensor disc setting tool	102
400.0704	1	Tensioner retaining pin, Ø2,5mm	4
400.0705	1	Tensioner retaining pin, Ø4,0mm	5
400.0753	1	Locking screw M6 x 30,0 mm	10
400.1254	1	Flywheel locking tool, 70 x 54 mm	23
400.1255	1	Opel Camshaft locking tool (2), red	56
400.1256	1	Tensioner locking pin for 400.1250	3
400.1260	1	Screw for 400.1263	9
400.1261	4	Locking screw M6 x 10,0 mm	4
400.1262	1	Special tip	10
400.1263	1	Mounting bracket assy	330
400.1264	1	Dial gauge Ø 51 (10 x 0,01 mm), 103 mm	161
400.1275	1	Camshaft setting strap (TDC)	404
400.9045	1	Flywheel locking tool, 62 x 30 mm	80
400.9046	1	Flywheel locking tool, 130 mm	80
400.1577	1	Camshaft setting strap 140 mm	99

GM / Opel / Saab Fly wheel locking tool

- For locking the fly wheel
- Secure hold thanks to optimal positioning
- Special steel

Application range: Opel and Saab vehicles (1996 - 2005, engine code: Z18XE)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.9046	GM / Opel / Saab Fly wheel locking tool	80	

GM / Isuzu / Opel / Saab - Camshaft locking tool

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Aluminium
- Very high degree of accuracy

Application range: Opel Tigra 2004 - 2008 (engine code: Z18XE) with 1.8 engines, Frontera, Frontera-B and Sintra-A, Omega-B 1995 - 2004 (engine code: X22SE, X33XE, YE2SE, Y22XE Z22XE) with 2.2 16V engines. Saab 9-3 1996 - 2005 with 1.8 engines (engine code: Z18XE) and similar Isuzu and Saab engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0162	1	GM / Isuzu / Opel / Saab - Camshaft locking tool	186

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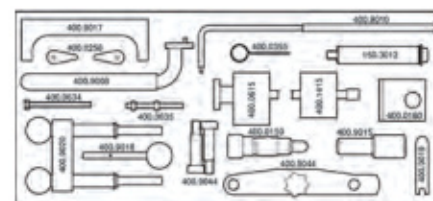
SEAT & ŠKODA

VAG - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft or cam shaft
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi, Seat, Škoda, Volkswagen with 1.4 / 1.6 / 1.8 / 2.0 Turbo / 2.2 / 2.3 / 1.8 / 2.0 16V, 2.6 / 2.8 with petrol engines and 1.0 / 1.2 / 1.3 / 1.4 / 1.9 TDi / 1.7 / 1.9 SDi / 2.5 TDi / 2.8 30V diesel engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.2225	19 pcs	VAG - Engine Timing Tool Set	2.23
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consists of:

400.0159	Crankshaft timing pin	120
400.9044	Camshaft setting strap	309
400.9020	Camshaft locking tool	340
400.9019	Tensioner locking tool	20
400.9018	Injection pump locking pin Ø 6.0 mm	20
400.9017	Camshaft setting strap	120
400.9015	Injection pump locking pin Ø 15.4 mm	126
400.9010	Automatic pulley wrench for pin-type face	230
400.9008	Automatic pulley wrench for pin-type face	206
400.1415	Crankshaft pulley setting tool	192
400.0635	Stud and nut M5 x 55.0 mm	8
400.0634	Locking screw M5 x 55.0 mm	8
400.0615	Crankshaft pulley setting tool	190
400.0355	Tensioner pushrod retension pin	1
400.0258	Shim tool (2)	3
400.0160	Camshaft timing tool (2)	118
150.3012	VAG front mask push back	170

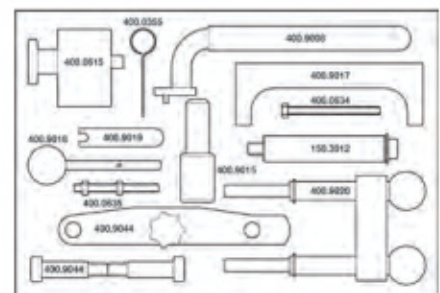
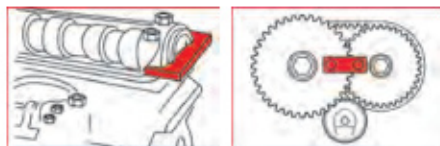


VAG - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi A2 with 1.2, 1.4 TDI engines, A3 with 1.9 TDI engines (> 1996), A3, A4, A6 with 1.9 TDI engines (>1999), Seat Toledo with 1.9 TDI engines (>1999), Škoda Octavia with 1.9 SDi/TDI engines (>1996), Volkswagen Golf, Bora with 1.9 SDi/TDI engines, New Beetle with 1.9 TDI engines (>1997), Lupo with 3L 1.2 TDI, Polo 1.4 TDI, Golf, Bora 1.9 TDI engines (>1999)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0625	12 pcs	VAG - Engine Timing Tool Set	1.73
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consists of:

400.0355	Tensioner pushrod retension pin	1
400.9044	Camshaft setting strap	309
400.9020	Camshaft locking tool	340
400.9019	Tensioner locking tool	20
400.9018	Injection pump locking pin Ø 6.0 mm	20
400.9017	Camshaft setting strap	120
400.9015	Injection pump locking pin Ø 15.4 mm	126
400.9008	Automatic pulley wrench for pin-type face	206
400.0635	Stud and nut M5 x 55.0 mm	8
400.0634	Locking screw M5 x 55.0 mm	8
400.0615	Crankshaft pulley setting tool	190
150.3012	VAG front mask push back	170

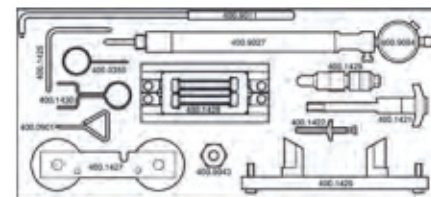


VAG - Engine Timing Tool Set

- For the professional engine repair
- Comprehensive set for locking timing chains
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi A3, A4, A6, A8, Škoda Octavia, Volkswagen Polo, Golf, Touran, Passat (engine code: AXW / AXU / BAG / BLF / BKG / BLN / BLP / BUL / BPJ / BGB / BWA / BWE)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.2300	17 pcs	VAG - Engine Timing Tool Set	2.83
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consists of:

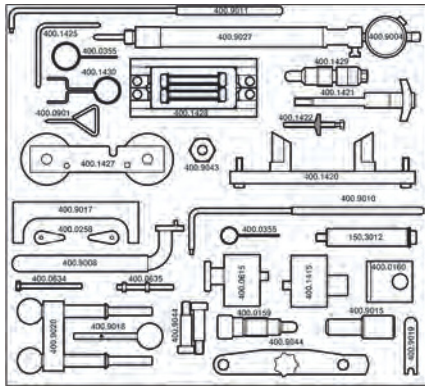
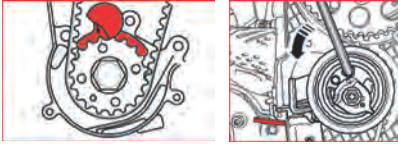
400.9011	Automatic pulley wrench for pin-type face	259
400.9004	Precision-dial indicator gauge 0 - 10 mm	78
400.9027	TDC determining pin Ø 5.0 mm / dial indicator bracket M14 x 1.25	288
400.0355	Tensioner pushrod retension pin	1
400.1427	Camshaft alignment tool	433
400.1428	Camshaft locking tool (4)	665
400.1429	Crankshaft timing pin	80
400.1430	Timing chain tensioner locking pin	10
400.1421	Chain tensioner retainer	40
400.1422	Chain tensioner retainer	17
400.1420	Camshaft alignment tool	802
400.9043	VAG Crankshaft pulley bolt adaptor	140
400.1425	Tensioning locking pin	11
400.0901	Tensioning locking pin	4

VAG - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt or the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi, Seat, Škoda, Volkswagen vehicles including FSI and TFSI engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1400	35 pcs	VAG - Engine Timing Tool Set	7.94
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consists of:

400.0159	Crankshaft timing pin	120
400.9044	Camshaft setting strap	309
400.9043	VAG Crankshaft pulley bolt adaptor	140
400.9027	TDC determining pin Ø 5.0 mm / dial indicator bracket M14 x 1.25	288
400.9020	Camshaft locking tool	340
400.9019	Tensioner locking tool	20
400.9018	Injection pump locking pin Ø 6.0 mm	20
400.9017	Camshaft setting strap	120
400.9015	Injection pump locking pin Ø 15.4 mm	126
400.9011	Automatic pulley wrench for pin-type face	259
400.9010	Automatic pulley wrench for pin-type face	230
400.9008	Automatic pulley wrench for pin-type face	206
400.9004	Precision-dial indicator gauge 0 - 10 mm	78
400.1430	Timing chain tensioner locking pin	10
400.1429	Crankshaft timing pin	80
400.1428	Camshaft locking tool (4)	665
400.1427	Camshaft alignment tool	433
400.1425	Tensioning locking pin	11
400.1422	Chain tensioner retainer	17

consists of:

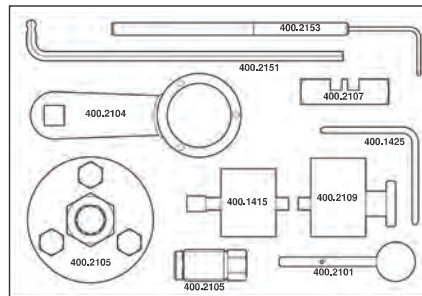
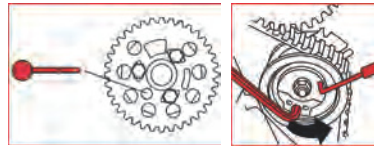
400.1421	Chain tensioner retainer	40
400.1420	Camshaft alignment tool	802
400.1415	Crankshaft pulley setting tool	192
400.0901	Tensioning locking pin	4
400.0635	Stud and nut M5 x 55,0 mm	8
400.0634	Locking screw M5 x 55,0 mm	8
400.0615	Crankshaft pulley setting tool	190
400.0355	Tensioner pushrod retension pin	1
400.0258	Shim tool (2)	3
400.0160	Camshaft timing tool (2)	118
150.3012	VAG front mask push back	170

VAG - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt or the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi A3, A4, A5, A6, Q5, Volkswagen Golf, Tiguan, Passat, Eos, Seat Exeo

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.2100	9 pcs	VAG - Engine Timing Tool Set	2.61
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consists of:

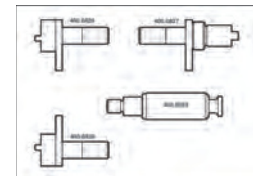
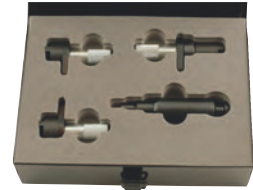
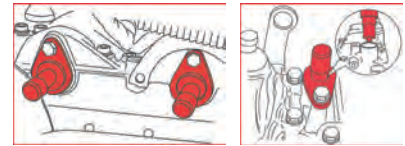
400.1415	Crankshaft pulley setting tool, 55 mm	192
400.1425	Tensioning locking pin, Ø 4 mm, 57 mm	11
400.2101	Injection pump/camshaft alignment pin	14
400.2104	Sprocket holding tool	179
400.2105	Cam sprocket hub puller	581
400.2107	Setting tool	72
400.2109	Crankshaft pulley locking tool (bored)	300
400.2153	Tensioner adjuster Ø 2.5 mm, 200 mm	70
400.2151	Tensioner adjuster 6.0 mm, 200 mm	20

VAG - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Volkswagen Lupo, Polo with 1.2 6V / 12V engines, Seat Cordoba, Ibiza with 1.2 engines (2002-2009), Škoda Fabia II, Roomster with 1.2P engines (engine code: AWY / BMD / AZQ / BME / BZG)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0825	4 pcs	VAG - Engine Timing Tool Set	747
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consists of:

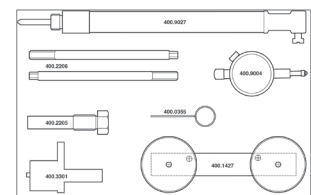
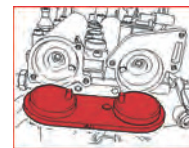
400.0826	Camshaft aligning tool 12V (2)	97
400.0827	Camshaft aligning tool 6V	113
400.0828	Crankshaft locking pin 6V/12V	115

VAG - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Volkswagen and other VW Group vehicles 1.4 / 1.6 FSI and 1.4 TSi and 1.2 TFSi / FSI engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.3300	8 pcs	VAG - Engine Timing Tool Set	2.14
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consists of:

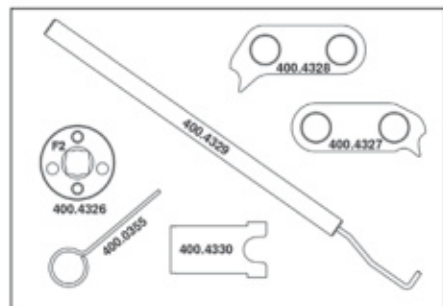
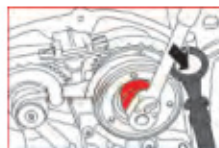
400.0355	Tensioner pushrod retention pin	1
400.9027	TDC determining pin Ø 5,0 mm / dial indicator bracket M14 x 1.25	288
400.1427	Camshaft alignment tool	433
400.2205	Crankshaft locking pin	111
400.2206	Crankshaft locking pin (2)	53
400.3301	Camshaft locking tool	174
400.9004	Precision-dial indicator gauge 0 - 10 mm	78

VAG - Engine Timing Tool Set

- For the professional engine repair
- Expansion set for use alongside 400.2300 / 400.3300
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi, Seat, Škoda, Volkswagen vehicles with 1.8 / 2.0 TFSI and FSI engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.4325	7 pcs VAG - Engine Timing Tool Set	1.87

consists of:

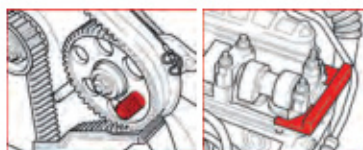
400.0355	Tensioner pushrod retention pin	1
400.4326	Cam shaft control valve removal tool	60
400.4327	Cam shaft clamp external	130
400.4328	Cam shaft clamp internal	130
400.4329	Oil pumps securing pin	160
400.4330	Timing chain wrench	30

VAG / Volvo - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Audi, Seat, Volkswagen, Volvo vehicles

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1725	2 pcs	VAG / Volvo - Engine Timing Tool Set	251

consists of:

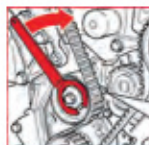
400.9015	Injection pump locking pin Ø 15.4 mm	126	
400.9017	Camshaft setting strap	120	

VAG Drive pulley wrench 32.0 mm

- For the professional engine repair
- Open 12-point
- For tightening and loosening the automatic timing belt pulley
- With plastic-coated handle
- With suspension hole
- Special steel
- Very high degree of accuracy

Application range: Audi 100, A4, A6 TDI 5 cylinder engines, Volkswagen Polo / Lupo from 1999 onwards, LT 2.5 TDI

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



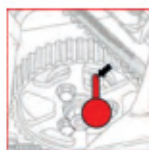
150.3016	VAG	L mm	Thickness mm		
		175,0	3,0	110	

VAG - Engine Timing Tool Set

- For the professional engine repair
- For TDI pump injection engines
- For changing the timing belt
- Secure hold for changing the timing belt or engine repairs

Application range: universal usage for many VAG group vehicles, in particular Audi A3, A4, A6, Škoda Octavia 2, Fabia, Volkswagen Golf, Golf Plus, Jetta, Touran, Lupo, Fox, Bora, Beetle, Caddy, Sharan, Passat, Seat Leon, Toledo, Althea, Alhambra with 1.4 / 1.9 / 2.0 TDi engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.2700	7 pcs	VAG - Engine Timing Tool Set	455

consists of:

400.0615	Crankshaft pulley setting tool	190
400.0901	Tensioning locking pin	4
400.1415	Crankshaft pulley setting tool	192
400.1425	Tensioning locking pin	11
400.9018	Injection pump locking pin Ø 6.0 mm	20

VAG Camshaft hub removal tool set

- For the professional engine repair
- Suitable for the simple and correct removal of the cam shaft hub
- Counter hold wrench allows for a precise release or tightening of the cam shaft hub securing screw
- Special steel
- Very high degree of accuracy

Application range: Audi, Seat, Škoda and Volkswagen with 1.6 TDI and 2.0 TDI engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.2110	2 pcs	VAG Camshaft hub removal tool set	760

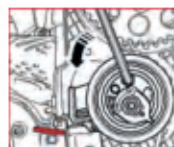
consists of:

400.2104	Sprocket holding tool	179
400.2105	Cam sprocket hub puller	581

VAG small tension plate for arresting the automatic pulley

- For the professional engine repair
- Especially designed for fixing the hydraulic timing belt spanner
- Secure hold for changing the timing belt or engine repairs
- Very high degree of accuracy

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.9019	VAG small tension plate for arresting the automatic pulley	20	

VAG Camshaft setting bracket

- For the professional engine repair
- For locking the cam shafts
- Allows for correct engine adjustment
- With central centring screw
- Removal of the valve cover and seal no longer required
- Very high degree of accuracy

Application range: Audi A4, Volkswagen Golf, Bora, New Beetle, Seat Ibiza, Cordoba, Alhambra, Inca, Škoda Octavia with 1.9 SDI or TDI engines (engine code: AHF, ALH, ASY, ASV, AGP, AGR, AQM, AHR, AYQ)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.9044	VAG Camshaft setting bracket	309
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VAG Camshaft locking device

- For the professional engine repair
- For locking both cam shaft wheels (TDC setting)
- Secure hold thanks to optimal positioning
- Very high degree of accuracy

Application range: VAG 1.4 / 1.6 L petrol engines - Volkswagen Lupo, Polo, Golf IV, Bora, Audi A2, Seat, Škoda etc.

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



150.3034	VAG Camshaft locking device	370
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VAG Crank shaft locking device

- For the professional engine repair
- For locking the oval crank shaft timing belt wheel
- Secure hold thanks to optimal positioning
- Very high degree of accuracy

Application range: VAG 4 cylinder diesel / Pump injection engines from 2005 onwards and VAG 2.0 I Common Rail diesel engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



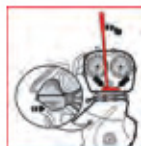
150.3067	VAG Crank shaft locking device	60
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VAG timing chain tensioning wrench

- For the professional engine repair
- For adjusting the timing chain tension
- For putting on the chain tensioner
- Very high degree of accuracy

Application: VAG Group vehicles with 4 valve engines 1.8 and 2.0 TFSI 4 cylinder from the 3rd generation (engine code: CCZA, CCZB, CCZC, CCZD, CDA, CCAB)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de

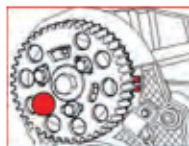


400.4350	VAG timing chain tensioning wrench	562
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VAG Injection pump locking pin

- For the professional engine repair
- Ideally suited to securing the injection pump
- With air inlet
- Simple handling
- Special steel
- Very high degree of accuracy

Application range: Volkswagen Lupo 3L, 1.2/1.4 TDi, Polo 1.4 TDi, Golf / Bora 1.9 SDi / TDi, Passat 1.9 TD (1994-1996), Beetle 1.9 TDi (>1999) and Transporter 1.9TD



Substitutes for	Ø mm	L mm	Weight	
400.9018	VAG	6.0	80.0	20

VAG Camshaft adjustment plate

- For the professional engine repair
- Device for a secure hold to change the timing belt
- For locking the cam shaft
- Secure hold thanks to optimal positioning
- Very high degree of accuracy

Application: VAG chain-driven Group vehicles with 2.3 / 2.8 and 2.9 engines, in particular Volkswagen Golf, Bora, Vento, Corrado, Passat, Sharon, Transporter, Seat Toledo

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.9040	VAG Camshaft adjustment plate	57
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VAG 4/3 way cam shaft adjustment tool

- For the professional engine repair
- For the installation and removal of the central cam shaft adjustment
- Saves removing the timing chain or removing the engine
- Very high degree of accuracy
- Serviceable from both sides

Application range: VAG Group vehicles 1.8 and 2.0 litre TFSI / TSI engines with timing chains (engine codes: BYT / BZB / CABA / CABB / CABD / CAWB / CBFA / CCTA / CCZA / CCZB / CCZC / CDA / CDHA / CDHB / CDN / CDNC / CDND / CDND / CFKA / CGYA / CCZA / CCZB / CCZD / CDA / CDABBYT / BZB / CABA / CABB / CABD / CAWB / CBFA / CCTA / CCZA / CCZB / CCZC / CDA / CDHA / CDHB / CDN / CDNC / CDND / CFKA / CGYA / CCZA / CCZB / CCZD / CDA / CDABBYT)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.9094	VAG 4/3 way cam shaft adjustment tool	63
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VAG automatic pulley wrench for pin-type face

- For tightening and relaxing the timing belt on VAG vehicles
- For pin spacers with driver bores (pin-type face)
- Cranked shape
- With plastic-coated handle

Application range: Audi, Volkswagen, Seat, Škoda 4 and 5 cylinder TDI engines, also Volkswagen T4 power steering pumps

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Substitutes for	L mm	Weight	
400.9008	VAG	140.0	206
400.9009	VAG	210.0	263

VAG automatic pulley wrench for pin-type face

- For the professional engine repair
- For tightening and relaxing the timing belt on VAG vehicles
- For pin spacers with driver bores (pin-type face)
- Angled shape
- With plastic-coated handle
- Very high degree of accuracy

Application range: Audi, Volkswagen, Seat, Škoda 4 and 5 cylinder TDI engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.9010	VAG automatic pulley wrench for pin-type face	230
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VAG automatic pulley wrench for pin-type face

- For tightening and relaxing the timing belt on VAG vehicles
- For pin spacers with driver bores (pin-type face)
- 15° angled
- With plastic-coated handle

Application range: Audi, Volkswagen, Seat, Škoda 2.0 FSI/ TDI engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de

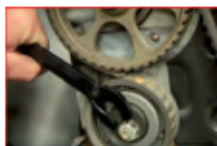


Part No.	Description	Weight (kg)
400.9011	VAG automatic pulley wrench for pin-type face	259

VAG Pin wrench 3 mm, adjustable

- Universal usage
- For the actuation of belt tensioners in VAG
- Phosphate
- Special steel

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Part No.	Substrate for	Ø mm	L mm	Weight (kg)
150.3018	VAG	9.0-45.0	150.0	100

VAG automatic pulley wrench for pin-type face

- For tightening and relaxing the timing belt on VAG vehicles
- 180° adjustable handle
- For pin spacers with tappet tolerances
- Normal and extra II t ideal for hard to access areas
- With plastic coated handle

Application range: VAG 4 and 5 cylinder TDI-Model, T4 Servo pump



Part No.	Substrate for	L mm	Ø mm	For key mm	Weight (kg)
500.4315	VAG	180.0	3.0	18.0	95
150.3017	VAG	185.0	3.0	18.0	105

VAG V belt and timing belt wrench

- For loosening the automatic clamping device
- Problem free changing of the belt
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: Audi, Seat, Škoda and Volkswagen with 2.0 TDI and 1.4 TSI engines

Volkswagen Beetle (2011-2013), Eos (2007-2013), Golf (2003-2008), Golf (>2008), Golf Estate (2007-2009), Golf Estate (>2009), Gold Plus (2005-2009), Golf Plus (>2009), Golf VI Cabrio (>2011), Jetta (2005-2011), Jetta (>2011), Scirocco (>2008), Passat (2005-2011), Passat (>2011), Tiguan (2010-2013), Polo (>2009), Touran (2007-2013), **Audi** A1 (2010-2013), **Škoda** Octavia (>2004), Yeti (2010-2013), engine code: CAVD, CAXA, CAVB, CAVC



Part No.	Substrate for	Ø mm	Length mm	Weight (kg)
400.4300	VAG	16	380.0	501

VAG Engine support socket set, extra short

- 12-point
- For the assembly and removal of the aluminium engine support (hard to reach sites)
- Ideal for timing belt change
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra-short design
- For manual operation
- Matt finish
- Chrome vanadium

Application range: For timing belt change on Volkswagen Golf IV, Audi, Škoda, Seat etc.



Part No.	Quantity	Description	Weight (kg)
911.1295	2 pcs	VAG Engine support socket set, extra short	110

consists of:

Part No.	Description	Weight (kg)
911.1293	12 point socket, 16.0 mm short	40
911.1294	12 point socket, 16.0 mm long	67

Hexagon socket, long for pulley wheel

- Suited for the assembly and disassembly of the pulley wheel vibration damper, e.g. when changing the timing belt
- 6-point
- Flank Traction-Profil
- In accordance with DIN 3124 / ISO 2725
- Internal square to DIN 3120 / ISO 1174 with ball reception
- Long design
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Audi, Seat, Škoda and Volkswagen

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Part No.	Substrate for	D1 mm	D2 mm	L mm	T mm	Weight (kg)
917.1254		27.0	34.0	36.0	76.0	19.0

Bit socket for spline (XZN®) screws, long

- Ideal for releasing and tightening of the securing screws of the high-pressure pumps, timing belt wheels, e.g. when changing timing belt
- Spline (XZN®)
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Long design
- With press fitted nickel plated insert bit
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Audi, Seat, Škoda and Volkswagen with TDI Common Rail engines, engine code: CAAA, CAAB, CAAC, CAYB, CBAA, CBAB, CBBB etc.

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Part No.	Substrate for	D mm	L mm	T mm	Weight (kg)
911.1353	M10	22.0	110.0	72.0	112

VAG Bit socket for hexagon screws, extra long

- Hexagon socket with ball head
- For releasing and tightening the TDC sensor
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra-long design
- For manual operation
- Matt finish
- Chrome vanadium

Application range: VAG models from 2005, 4-cylinder 2.0l diesel engines



Part No.	Substrate for	D mm	L mm	Weight (kg)
911.1598		4.0	11.0	300.0



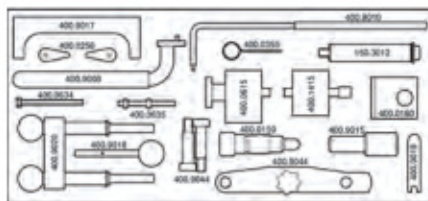
VOLKSWAGEN

VAG - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft or cam shaft
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi, Seat, Škoda, Volkswagen with 1.4 / 1.6 / 1.8 / 2.0 Turbo / 2.2 / 2.3 / 1.8 / 2.0 16V, 2.6 / 2.8 with petrol engines and 1.0 / 1.2 / 1.3 / 1.4 / 1.9 TDi / 1.7 / 1.9 SDi / 2.5 TDi / 2.8 30V diesel engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.2225	19 pcs VAG - Engine Timing Tool Set	2.23
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consists of:

400.0159	Crankshaft timing pin	120
400.9044	Camshaft setting strap	309
400.9020	Camshaft locking tool	340
400.9019	Tensioner locking tool	20
400.9018	Injection pump locking pin Ø 6.0 mm	20
400.9017	Camshaft setting strap	120
400.9015	Injection pump locking pin Ø 15.4 mm	126
400.9010	Automatic pulley wrench for pin-type face	230
400.9008	Automatic pulley wrench for pin-type face	206
400.1415	Crankshaft pulley setting tool	192
400.0635	Stud and nut M5 x 55.0 mm	8
400.0634	Locking screw M5 x 55.0 mm	8
400.0615	Crankshaft pulley setting tool	190
400.0355	Tensioner pushrod retension pin	1
400.0258	Shim tool (2)	3
400.0160	Camshaft timing tool (2)	118
150.3012	VAG front mask push back	170

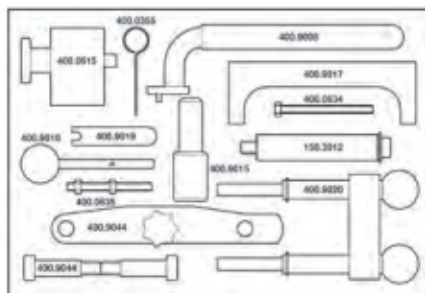
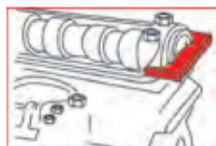


VAG - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi A2 with 1.2, 1.4 TDi engines, A3 with 1.9 TDi engines (> 1996), A3, A4, A6 with 1.9TDI engines (>1999), Seat Toledo with 1.9 TDi engines (>1999), Škoda Octavia with 1.9 SDi/TDi engines (>1996), Volkswagen Golf, Bora with 1.9 SDi/TDi engines, New Beetle with 1.9 TDi engines (>1997), Lupo with 3L 1.2 TDi, Polo 1.4 TDi, Golf, Bora 1.9 TDi engines (>1999)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0625	12 pcs VAG - Engine Timing Tool Set	1.73
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consists of:

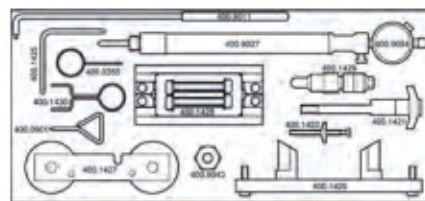
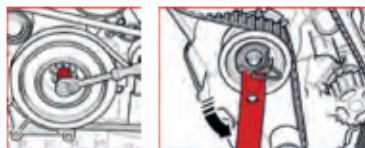
400.0355	Tensioner pushrod retension pin	1
400.9044	Camshaft setting strap	309
400.9020	Camshaft locking tool	340
400.9019	Tensioner locking tool	20
400.9018	Injection pump locking pin Ø 6.0 mm	20
400.9017	Camshaft setting strap	120
400.9015	Injection pump locking pin Ø 15.4 mm	126
400.9008	Automatic pulley wrench for pin-type face	206
400.0635	Stud and nut M5 x 55.0 mm	8
400.0634	Locking screw M5 x 55.0 mm	8
400.0615	Crankshaft pulley setting tool	190
150.3012	VAG front mask push back	170

VAG - Engine Timing Tool Set

- For the professional engine repair
- Comprehensive set for locking timing chains
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi A3, A4, A6, A8, Škoda Octavia, Volkswagen Polo, Golf, Touran, Passat (engine code: AXW / AXU / BAG / BLF / BKG / BLN / BLP / BUL / BPU / BGB / BWA / BWE)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.2300	17 pcs VAG - Engine Timing Tool Set	2.83
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consists of:

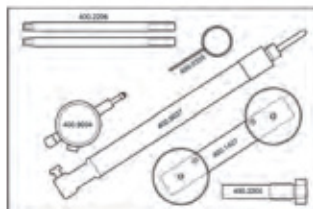
400.0355	Tensioner pushrod retension pin	1
400.0901	Tensioning locking pin	4
400.1420	Camshaft alignment tool	802
400.1421	Chain tensioner retainer	40
400.1422	Chain tensioner retainer	17
400.1425	Tensioning locking pin	11
400.1427	Camshaft alignment tool	433
400.1428	Camshaft locking tool (4)	665
400.1429	Crankshaft timing pin	80
400.1430	Timing chain tensioner locking pin	10
400.9004	Precision-dial indicator gauge 0 - 10 mm	78
400.9011	Automatic pulley wrench for pin-type face	259
400.9027	TDC determining pin Ø 5.0 mm / dial indicator bracket M14 x 1.25	288
400.9043	VAG Crankshaft pulley bolt adaptor	140

VAG - Engine Timing Tool Set

- For the professional engine repair
- For chain-driven engines
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi A3, Volkswagen Polo, Golf, Jetta, Passat, Eos, Tiguan, Touran (engine code: AXU / BAG / BKG / BLF / BLN / BLP / BMY / BWK / CAXA)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.2200	7 pcs	VAG - Engine Timing Tool Set	2.11
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consists of:

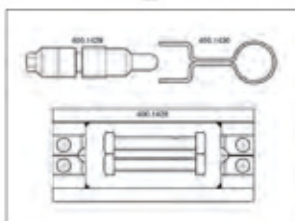
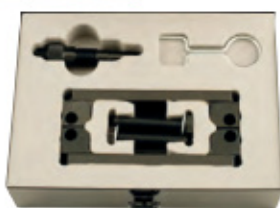
400.1427	Camshaft alignment tool	433
400.9027	TDC determining pin Ø 5.0 mm / dial indicator bracket M14 x 1.25	288
400.9004	Precision-dial indicator gauge 0 - 10 mm	78
400.2206	Crankshaft locking pin (2)	53
400.2205	Crankshaft locking pin	111
400.0355	Tensioner pushrod retension pin	1

VAG - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft or cam shaft
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi vehicles with V6, V8, V10 FSI engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.2250	6 pcs	VAG - Engine Timing Tool Set	899
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consists of:

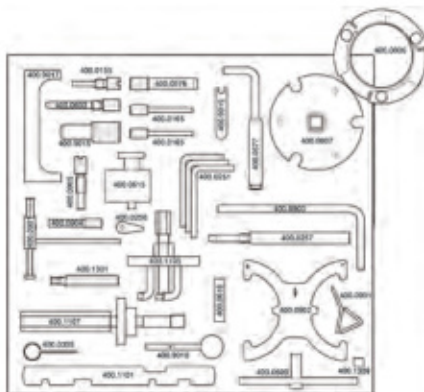
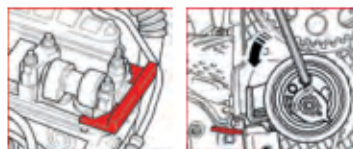
400.1428	Camshaft locking tool (4)	665
400.1429	Crankshaft timing pin	80
400.1430	Timing chain tensioner locking pin	10

Ford / VAG - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt or the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Ford vehicles with TDDi / TDCi and Duratorq engines and Ford Galaxy with similar engines to Volkswagen

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1300	31 pcs	Ford / VAG - Engine Timing Tool Set	6.68
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consists of:

400.0155	Crankshaft timing pin	240
400.0165	Camshaft locking pin 5.0 mm	19
400.0251	Injection pump locking pin Ø 6.0 mm	30
400.0257	Crankshaft TDC locking pin	124
400.0258	Shim tool (2)	3
400.0355	Tensioner pushrod retension pin	1
400.0576	Flywheel locking pin	64
400.0577	Flywheel locking tool	124
400.0503	Crankshaft timing pin	51
400.0609	Flywheel locking tool	308
400.0615	Crankshaft pulley setting tool	190
400.0616	Flywheel locking adaptor	74
400.0806	Locking tool	45

consists of:

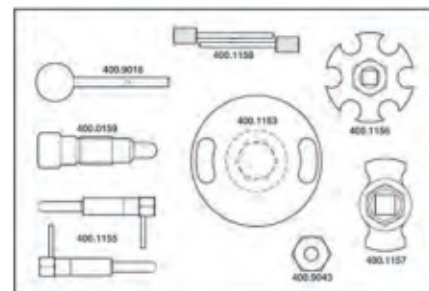
400.0807	Pump cover locking tool	2
400.0901	Tensioning locking pin	4
400.0902	Camshaft locking tool	384
400.0903	Crankshaft locking pin	85
400.0904	Camshaft/injection pump locking pin	26
400.0905	Crankshaft locking pin	33
400.1101	Camshaft setting strap	140
400.1105	Camshaft sprocket puller	552
400.1106	Fuel sprocket remover	80
400.1107	Chain cover alignment tool	497
400.1301	TX T45 bit	31
400.1309	Flywheel locking adaptor	13
400.9015	Injection pump locking pin Ø 15.4 mm	126
400.9017	Camshaft setting strap	120
400.9018	Injection pump locking pin Ø 6.0 mm	20
400.9019	Tensioner locking tool	20

VAG - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi A4 (2005-2009) with 2.7 TDI engine, A4 Quattro (2005-2006) with 2.0 TDI engine, Q7 with 3.0 TDI engine, Volkswagen Touareg (>2008), Phaeton (>2006) with 3.0 TDI V6 engine (engine code: BPP / BMZ / BUG / BUN)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de




400.1150	10 pcs	VAG - Engine Timing Tool Set	2.41
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consists of:

400.0159	Crankshaft timing pin	120
400.1153	Crankshaft timing tool	354
400.1155	Camshaft locking pin (2)	47
400.1156	Camshaft alignment/locking tool	366

consists of:

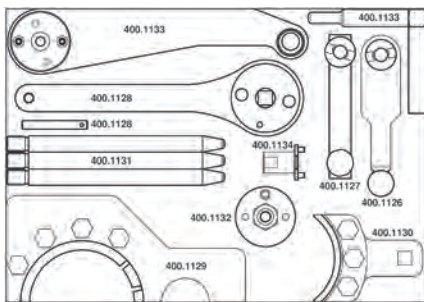
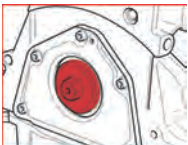
		
400.1157	Camshaft sprocket holding tool	120
400.1158	Timing pin Ø 3,3 mm (2)	12
400.9018	Injection pump locking pin Ø 6,0 mm	20
400.9043	VAG Crankshaft pulley bolt adaptor	140


VAG - Engine Timing Tool Set

- For the professional engine repair
- Especially for timing wheel-driven vehicles
- For adjusting the injection adjuster via the cam shaft follower
- Very high degree of accuracy
- In durable steel storage case


Application range: Volkswagen Touareg, Transporter (> 2003) with 2.5 TDI engines (engine code: BAC / BLK / BPD / AXD / AXE / BLJ / BNZ / BPC) and 4.9D / TDI (engine code: AYH)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



		
400.1125	12 pcs VAG - Engine Timing Tool Set	9,45

consists of:

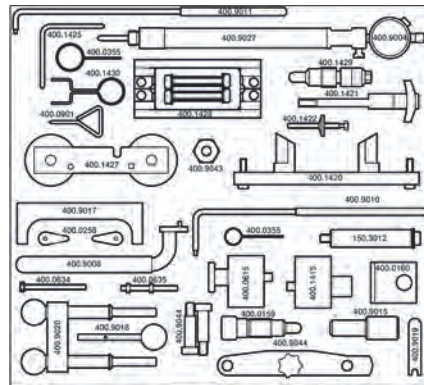
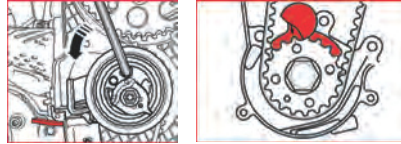
		
400.1126	Camshaft locking tool	226
400.1127	Camshaft locking tool	174
400.1128	Crankshaft timing tool (2)	1194
400.1129	Camshaft gear retaining tool (big)	2769
400.1130	Camshaft gear retaining tool (small)	677
400.1131	Guide pin set (3)	769
400.1132	Crankshaft turning tool (TDC-cylinder 1)	141
400.1133	Crankshaft alignment tool (TDC-cylinder 1)	998
400.1134	Camshaft compensation gear pre-tensioning tool	75


VAG - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt or the timing chain
- Very high degree of accuracy
- In durable steel storage case


Application range: Audi, Seat, Škoda, Volkswagen vehicles including FSI and TFSI engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de




		
400.1400	35 pcs VAG - Engine Timing Tool Set	7,94

consists of:

		
400.0159	Crankshaft timing pin	120
400.9044	Camshaft setting strap	309
400.9043	VAG Crankshaft pulley bolt adaptor	140
400.9027	TDC determining pin Ø 5,0 mm / dial indicator bracket M14 x 1,25	288
400.9020	Camshaft locking tool	340
400.9019	Tensioner locking tool	20
400.9018	Injection pump locking pin Ø 6,0 mm	20
400.9017	Camshaft setting strap	120
400.9015	Injection pump locking pin Ø 15,4 mm	126
400.9011	Automatic pulley wrench for pin-type face	259
400.9010	Automatic pulley wrench for pin-type face	230
400.9008	Automatic pulley wrench for pin-type face	206
400.9004	Precision-dial indicator gauge 0 - 10 mm	78
400.1430	Timing chain tensioner locking pin	10
400.1429	Crankshaft timing pin	80
400.1428	Camshaft locking tool (4)	665
400.1427	Camshaft alignment tool	433
400.1425	Tensioning locking pin	11

consists of:

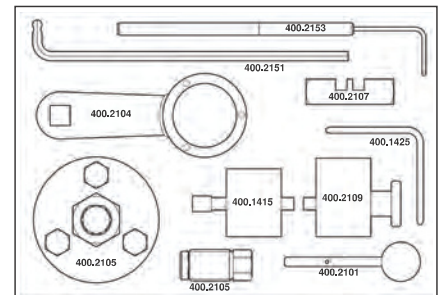
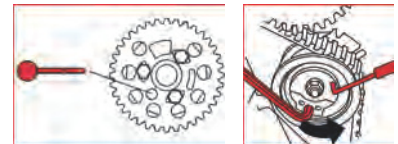
		
400.1422	Chain tensioner retainer	17
400.1421	Chain tensioner retainer	40
400.1420	Camshaft alignment tool	802
400.1415	Crankshaft pulley setting tool	192
400.0901	Tensioning locking pin	4
400.0635	Stud and nut M5 x 55,0 mm	8
400.0634	Locking screw M5 x 55,0 mm	8
400.0615	Crankshaft pulley setting tool	190
400.0355	Tensioner pushrod retension pin	1
400.0258	Shim tool (2)	3
400.0160	Camshaft timing tool (2)	118
150.3012	VAG front mask push back	170


VAG - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt or the chain
- Very high degree of accuracy
- In durable steel storage case


Application range: Audi A3, A4, A5, A6, Q5, Volkswagen Golf, Tiguan, Passat, Eos, Seat Exeo

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



		
400.2100	9 pcs VAG - Engine Timing Tool Set	2,61

consists of:

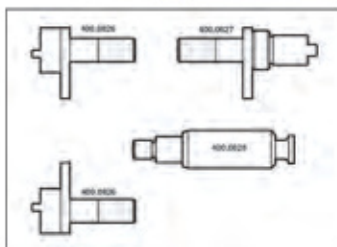
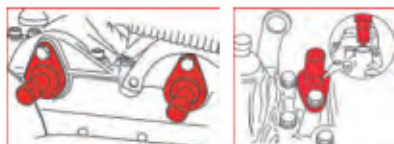
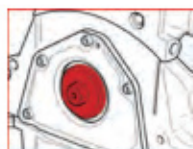
		
400.1415	Crankshaft pulley setting tool, 55 mm	192
400.1425	Tensioning locking pin, Ø 4 mm, 57 mm	11
400.2101	Injection pump/camshaft alignment pin	14
400.2104	Sprocket holding tool	179
400.2105	Cam sprocket hub puller	581
400.2107	Setting tool	72
400.2109	Crankshaft pulley locking tool (bored)	300
400.2153	Tensioner adjuster Ø 2,5 mm, 200 mm	70
400.2151	Tensioner adjuster 6,0 mm, 200 mm	20

VAG - Engine Timing Tool Set

- For the professional engine repair
- For timing wheel-driven engines
- Very high degree of accuracy
- In durable steel storage case

Application range: Volkswagen Touareg, Transporter (engine code: AXE / AXD / BAC / BLK / BLJ / BNZ / BPC / BPE / BPD)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0825	4 pcs	VAG - Engine Timing Tool Set	747

consists of:

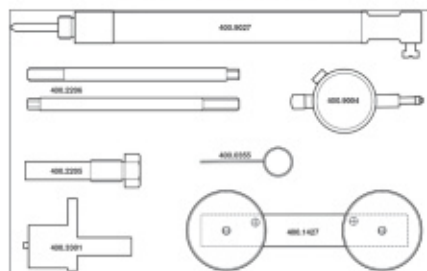
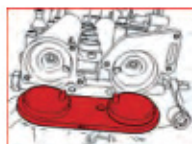
400.0826	Camshaft aligning tool 12V (2)	97
400.0827	Camshaft aligning tool 6V	113
400.0828	Crankshaft locking pin 6V/12V	115

VAG - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Volkswagen and other VW Group vehicles 1.4 / 1.6 FSi and 1.4 TSi and 1.2 TFSi / FSi engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.3300	8 pcs	VAG - Engine Timing Tool Set	2.14

consists of:

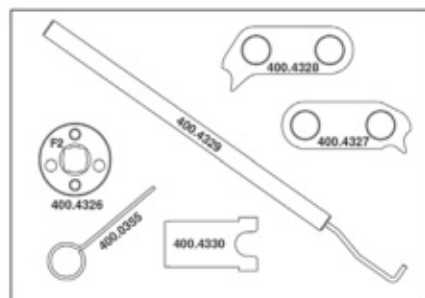
400.0355	Tensioner pushrod retention pin	1
400.9027	TDC determining pin Ø 5,0 mm / dial indicator bracket M14 x 1.25	288
400.1427	Camshaft alignment tool	433
400.2205	Crankshaft locking pin	111
400.2206	Crankshaft locking pin (2)	53
400.3301	Camshaft locking tool	174
400.9004	Precision-dial indicator gauge 0 - 10 mm	78

VAG - Engine Timing Tool Set

- For the professional engine repair
- Expansion set for use alongside 400.2300 / 400.3300
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi, Seat, Škoda, Volkswagen vehicles with 1.8 / 2.0 TFSI and FSI engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.4325	7 pcs	VAG - Engine Timing Tool Set	1.87

consists of:

400.0355	Tensioner pushrod retention pin	1
400.4326	Cam shaft control valve removal tool	60
400.4327	Cam shaft clamp external	130
400.4328	Cam shaft clamp internal	130
400.4329	Oil pumps securing pin	160
400.4330	Timing chain wrench	30

400.2500	6 pcs	VAG - Engine Timing Tool Set	6.50

consists of:

400.1126	Camshaft locking tool	226
400.1129	Camshaft gear retaining tool (big)	2769
400.1130	Camshaft gear retaining tool (small)	677
400.1132	Crankshaft turning tool (TDC-cylinder 1)	141
400.1133	Crankshaft alignment tool (TDC-cylinder 1)	998
400.1134	Camshaft compensation gear pre-tensioning tool	75

VAG - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Volkswagen Lupo, Polo with 1.2 6V / 12V engines, Seat Cordoba, Ibiza with 1.2 engines (2002-2009), Škoda Fabia II, Roomster with 1.2P engines (engine code: AWY / BMD / AZQ / BME / BZG)

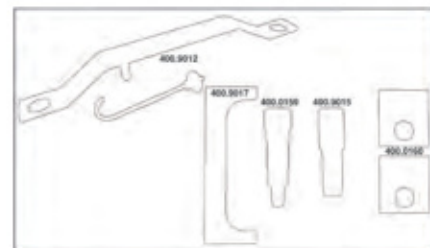
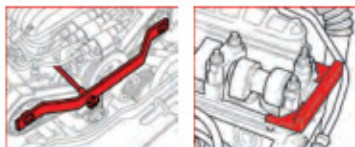
Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de

VAG - Engine Timing Tool Set

- For the professional engine repair
- Necessary to separate the V6 2 valve engine cam shafts from each other
- Very high degree of accuracy

Application range: Audi 80 (1991-2002) with 2.6 / 2.8 engines, A4 with 2.6 / 2.8 engines, 100 with 2.6 / 2.8 engines, A8 with 2.8 engines, Cabrio, Coupe with 2.6 / 2.8 engines (engine code: AAH, ABC)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0225	6 pcs	VAG - Engine Timing Tool Set	3.02
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consists of:

400.0159	Crankshaft timing pin	120
400.0160	Camshaft timing tool (2)	118
400.9012	Camshaft locking tool	2012
400.9015	Injection pump locking pin Ø 15.4 mm	126
400.9017	Camshaft setting strap	120

VAG Camshaft fixing tool

- For the professional engine repair
- For locking the cam shafts
- Allows for correct engine adjustment
- Very high degree of accuracy

Application range: Audi 80, 90, A4, A6, A8 with 2.6 V6 12V engines (engine code: ABC, ACZ) and with 2.8 V6 12V engines (AAH, AEJ)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.9012	VAG Camshaft fixing tool	2.01
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VAG Camshaft fixing tool

- For the professional engine repair
- For locking the cam shafts
- Allows for correct engine adjustment
- Very high degree of accuracy

Application range: Audi A4 2.4 and 2.8 1997-2002, A6 2.4 1997-2002, A6 2.8 1997-2002, A8 2.8 1997-2002, S4 2.7 Turbo 1997-2001 and Volkswagen Passat 2.4 1996-2002, Passat 2.8 30V 1996-2001 (engine code: ACK, ALG, APR, AOD)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



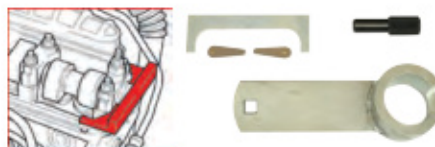
400.9013	VAG Camshaft fixing tool	2.41
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VAG - Engine Timing Tool Set

- For the professional engine repair
- Range for changing timing belts or for working on timing devices
- Very high degree of accuracy
- In durable steel storage case

Application range: VAG group vehicles with 2.4 engines, in particular Volkswagen T2, T3, T4 Transporter, LT, Golf, Passat and Audi (engine code: AAB, AJA, ADG, ABL, 1X, 1Y, 1W, 1V, CS, CW, KY, JR, JX, JD, JP, 1Z, AAT, AEL, AAZ, AHU, AFN, AEY, AVG, ALE, AFF, AHH, ACV, AHY, AJT, AUF, AXG, AXL, AYC)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.2125	5 pcs	VAG - Engine Timing Tool Set	951
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consists of:

400.0258	Shim tool (2)	3
400.9015	Injection pump locking pin Ø 15.4 mm	126
400.9017	Camshaft setting strap	120
400.9042	Pulley wheel counter hold wrench	714

VAG pulley wheel counter hold wrench

- For the professional engine repair
- Simple assembly and disassembly of the crank shaft pulley wheel or vibration dampers
- Special profile allows for counter holding when releasing or securing the crank shaft central screw
- The handle can be lengthened via the 3/4" internal square
- Very high degree of accuracy

Application range: VAG group vehicles with 2.4 engines, in particular Volkswagen T2, T3, T4 Transporter, LT, Golf, Passat and Audi (engine code: AAB, AJA, ADG, ABL, 1X, 1Y, 1W, 1V, CS, CW, KY, JR, JX, JD, JP, 1Z, AAT, AEL, AAZ, AHU, AFN, AEY, AVG, ALE, AFF, AHH, ACV, AHY, AJT, AUF, AXG, AXL, AYC)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.9042	VAG pulley wheel counter hold wrench	714
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VAG Camshaft ruler

- For the professional engine repair
- Ideally suited to fixing the cam shaft
- Simple handling
- Special steel
- Very high degree of accuracy

Application range: VAG group vehicles with diesel engines, in particular Volkswagen T2, T3, T4, LT, Golf, Passat, Audi with 2.4D 6 cylinder and 2.4 TD 5 cylinder TDI engines, as well as all older diesel engines such as 1.6 D and 1.7 D GTD (engine code: CS, CW, JD, JX, JP, JR, 1X, 1Y, 1Z, KY, AAZ, AAT, AEL, AFN, AFF, AHU, AHH, AVG, AAB, AJA, AHY)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



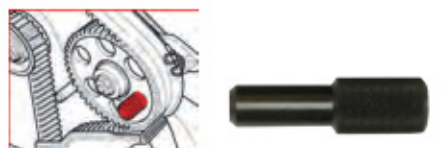
400.9017	VAG Camshaft ruler	120
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VAG fixing pin injection pump wheel

- For the professional engine repair
- Ideally suited to securing the injection pump
- Simple handling
- Special steel
- Very high degree of accuracy

Application range: VAG group vehicles with diesel engines, in particular Volkswagen T2, T3, T4, LT, Golf, Passat, Audi with 2.4D 6 cylinder and 2.4 TD 5 cylinder TDI engines, as well as all older diesel engines such as 1.6 D and 1.7 D GTD (engine code: CS, CW, JD, JX, JP, JR, 1X, 1Y, 1Z, KY, AAZ, AAT, AEL, AFN, AFF, AHU, AHH, AVG, AAB, AJA, AHY)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



	Suitable for	Ø (mm)	Length (mm)	Weight (g)
400.9015	VAG	15.4	67.0	126

VAG / Volvo - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Audi, Seat, Volkswagen, Volvo vehicles

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1725	2 pcs	VAG / Volvo - Engine Timing Tool Set	251
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consists of:

400.9015	Injection pump locking pin Ø 15.4 mm	126
400.9017	Camshaft setting strap	120

VAG - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Volkswagen Crafter (2006-2009) with 2.5 TDi engine (engine code: BJJ / BJK / BJL / BJM)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0975	5 pcs.	VAG - Engine Timing Tool Set	255
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consists of:

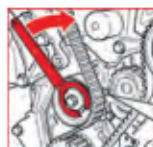
150.3016	Drive pulley wrench, 32, 175mm	110
400.0258	Shim tool (2)	3
400.0978	Crankshaft timing pin	103
400.9017	Camshaft setting strap	120

VAG Drive pulley wrench 32.0 mm

- For the professional engine repair
- Open 12-point
- For tightening and loosening the automatic timing belt pulley
- With plastic-coated handle
- With suspension hole
- Special steel
- Very high degree of accuracy

Application range: Audi 100, A4, A6 TDi 5 cylinder engines, Volkswagen Polo / Lupo from 1999 onwards, LT 2.5 TDi

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



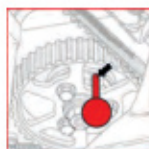
Subtle for	W	L	Thickness	
	mm	mm	mm	
150.3016	VAG	32.0	175.0	3.0 110

VAG - Engine Timing Tool Set

- For the professional engine repair
- For TDi pump injection engines
- For changing the timing belt
- Secure hold for changing the timing belt or engine repairs

Application range: universal usage for many VAG group vehicles, in particular Audi A3, A4, A6, Škoda Octavia 2, Fabia, Volkswagen Golf, Golf Plus, Jetta, Touran, Lupo, Fox, Bora, Beetle, Caddy, Sharan, Passat, Seat Leon, Toledo, Althea, Alhambra with 1.4 / 1.9 / 2.0 TDi engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.2700	7 pcs.	VAG - Engine Timing Tool Set	455
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consists of:

400.0615	Crankshaft pulley setting tool	190
400.0901	Tensioning locking pin	4
400.1415	Crankshaft pulley setting tool	192
400.1425	Tensioning locking pin	11
400.9018	Injection pump locking pin Ø 6.0 mm	20

VAG Camshaft hub removal tool set

- For the professional engine repair
- Suitable for the simple and correct removal of the cam shaft hub
- Counter hold wrench allows for a precise release or tightening of the cam shaft hub securing screw
- Special steel
- Very high degree of accuracy

Application range: Audi, Seat, Škoda and Volkswagen with 1.6 TDi and 2.0 TDi engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.2110	2 pcs.	VAG Camshaft hub removal tool set	760
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consists of:

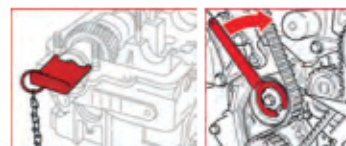
400.2104	Sprocket holding tool	179
400.2105	Cam sprocket hub puller	581

VAG - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Audi A4, A6, A8 with 2.5 TDi engines, Volkswagen Passat, Sharan with 2.5 TDi engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1550	5 pcs.	VAG - Engine Timing Tool Set	560
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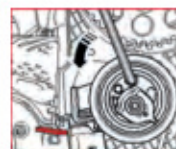
consists of:

150.3012	2	VAG front mask push back	170
400.0159	1	Crankshaft timing pin	120
400.0160	1	Camshaft timing tool (2)	118

VAG small tension plate for arresting the automatic pulley

- For the professional engine repair
- Especially designed for fixing the hydraulic timing belt spanner
- Secure hold for changing the timing belt or engine repairs
- Very high degree of accuracy

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



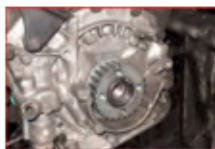
400.9019	VAG small tension plate for arresting the automatic pulley	20
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VAG crank shaft timing belt puller

- For the professional engine repair
- For damage-free removal of crank shaft timing belt wheels
- Less space requirement through compact method of building
- Suited for work on engines in the vehicle or removed
- Special steel
- Very high degree of accuracy

Application range: Audi and Volkswagen with 4 and 5 cylinder engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



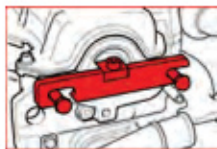
Subtle for	Ø mm	Height mm	Weight
150.3154	VAG	65,0	75,0 440

VAG Camshaft setting bracket

- For the professional engine repair
- For locking the cam shafts
- Allows for correct engine adjustment
- With central centring screw
- Removal of the valve cover and seal no longer required
- Very high degree of accuracy

Application range: Audi A4, Volkswagen Golf, Bora, New Beetle, Seat Ibiza, Cordoba, Alhambra, Inca, Škoda Octavia with 1.9 SDI or TDI engines (engine code: AHF, ALH, ASY, ASV, AGP, AGR, AQM, AHR, AYQ)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



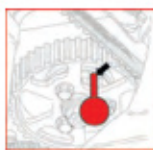
Subtle for	Weight
400.9044	VAG Camshaft setting bracket 309

VAG Crank and camshaft locking tool set

- For the professional engine repair
- For TDI pump injection engines
- For changing the timing belt
- Secure hold for changing the timing belt or during engine repairs
- Special plastic
- Very high degree of accuracy

Application range: Volkswagen Golf, Passat, Lupo / Audi A2 and A3 from 2000 onwards

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Subtle for	Weight
150.3066	2 pcs VAG Crank and camshaft locking tool set 370

VAG Camshaft locking device

- For the professional engine repair
- For locking both cam shaft wheels (TDC setting)
- Secure hold thanks to optimal positioning
- Very high degree of accuracy

Application range: VAG 1.4 / 1.6 L petrol engines - Volkswagen Lupo, Polo, Golf IV, Bora, Audi A2, Seat, Škoda etc.

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Subtle for	Weight
150.3034	VAG Camshaft locking device 370

VAG Crank shaft locking device

- For the professional engine repair
- For locking the oval crank shaft timing belt wheel
- Secure hold thanks to optimal positioning
- Very high degree of accuracy

Application range: VAG 4 cylinder diesel / Pump injection engines from 2005 onwards and VAG 2.0 l Common Rail diesel engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



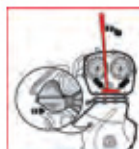
Subtle for	Weight
150.3067	VAG Crank shaft locking device 60

VAG timing chain tensioning wrench

- For the professional engine repair
- For adjusting the timing chain tension
- For putting on the chain tensioner
- Very high degree of accuracy

Application: VAG Group vehicles with 4 valve engines 1.8 and 2.0 TFSI 4 cylinder from the 3rd generation (engine code: CCZA, CCZB, CCZC, CCZD, CDAA, CCAB)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de

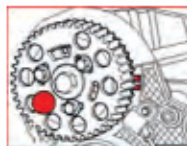


Subtle for	Weight
400.4350	VAG timing chain tensioning wrench 562

VAG Injection pump locking pin

- For the professional engine repair
- Ideally suited to securing the injection pump
- With air inlet
- Simple handling
- Special steel
- Very high degree of accuracy

Application range: Volkswagen Lupo 3L, 1.2/1.4 TDi, Polo 1.4 TDi, Golf / Bora 1.9 SDi / TDi, Passat 1.9 TD (1994-1996), Beetle 1.9 TDi (>1999) and Transporter 1.9TD



Subtle for	Ø mm	L mm	Weight
400.9018	VAG	6,0	80,0 20

VAG Camshaft adjustment plate

- For the professional engine repair
- Device for a secure hold to change the timing belt
- For locking the cam shaft
- Secure hold thanks to optimal positioning
- Very high degree of accuracy

Application: VAG chain-driven Group vehicles with 2.3 / 2.8 and 2.9 engines, in particular Volkswagen Golf, Bora, Vento, Corrado, Passat, Sharan, Transporter, Seat Toledo

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Subtle for	Weight
400.9040	VAG Camshaft adjustment plate 57

VAG 4/3 way cam shaft adjustment tool

- For the professional engine repair
- For the installation and removal of the central cam shaft adjustment
- Saves removing the timing chain or removing the engine
- Very high degree of accuracy
- Serviceable from both sides

Application range: VAG Group vehicles 1.8 and 2.0 litre TFSI / TSI engines with timing chains (engine codes: BYT / BZB / CABA / CABB / CABD / CAWB / CBFA / CCTA / CCZA / CCZB / CCZC / CDAA / CDHA / CDHB / CDNB / CDNC / CDND / CFKA / CGYA / CCZA / CCZB / CCZD / CDAA / CDABBYT / BZB / CABA / CABB / CABD / CAWB / CBFA / CCTA / CCZA / CCZB / CCZC / CDAA / CDHA / CDHB / CDNB / CDNC / CDND / CFKA / CGYA / CCZA / CCZB / CCZD / CDAA / CDABBYT)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Subtle for	Weight
400.9094	VAG 4/3 way cam shaft adjustment tool 63

VAG automatic pulley wrench for pin-type face

- For tightening and relaxing the timing belt on VAG vehicles
- For pin spacers with driver bores (pin-type face)
- Cranked shape
- With plastic-coated handle

Application range: Audi, Volkswagen, Seat, Škoda 4 and 5 cylinder TDI engines, also Volkswagen T4 power steering pumps

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Suitable for		L mm	Weight kg
400.9008	VAG	140.0	206
400.9009	VAG	210.0	263

VAG automatic pulley wrench for pin-type face

- For the professional engine repair
- For tightening and relaxing the timing belt on VAG vehicles
- For pin spacers with driver bores (pin-type face)
- Angled shape
- With plastic-coated handle
- Very high degree of accuracy

Application range: Audi, Volkswagen, Seat, Škoda 4 and 5 cylinder TDI engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Suitable for		Weight kg
400.9010	VAG automatic pulley wrench for pin-type face	230

VAG automatic pulley wrench for pin-type face

- For tightening and relaxing the timing belt on VAG vehicles
- For pin spacers with driver bores (pin-type face)
- 15° angled
- With plastic-coated handle

Application range: Audi, Volkswagen, Seat, Škoda 2.0 FSI/ TDI engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Suitable for		Pin hole mm	Stub Ø mm	Weight kg
400.9011	VAG	18.0	3.0	259

VAG Pin wrench 3 mm, adjustable

- Universal usage
- For the actuation of belt tensioners in VAG
- Phosphate
- Special steel

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Suitable for		Ø mm	L mm	Weight kg
150.3018	VAG	9.0-45.0	150.0	100

VAG automatic pulley wrench for pin-type face

- For tightening and relaxing the timing belt on VAG vehicles
- 180° adjustable handle
- For pin spacers with tappet tolerances
- Normal and extra flange ideal for hard to access areas
- With plastic coated handle

Application range: VAG 4 and 5 cylinder TDI-Model, T4 Servo pump



Suitable for		L mm	Stub Ø mm	Pin hole mm	Weight kg
500.4315	VAG	180.0	3.0	18.0	95
150.3017	VAG	185.0	3.0	18.0	105



VAG automatic pulley wrench set for 2.0 RDI PD engines

- Suitable for the assembly and disassembly of the timing belt
- For hard-to-reach places due to the modified support frame screws
- Chrome vanadium

Application range: Audi A3 2.0 TDI PD DPHC (05-08) with the engine ID codes AZU, BKD, BHN, BUY and Volkswagen Caddy, Caddy Maxi 2.0 SDI (09-) with BDJ, BST with engines with hydraulic spanners and Transporter 1.9 TDI Pd (06-09)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Suitable for		Weight kg
400.2150	3 pcs VAG automatic pulley wrench set for 2.0 RDI PD engines	160

consists of:

Suitable for		Weight kg
400.2151	Tensioner adjuster Ø 6.0 mm	20
400.2152	Tensioner adjuster Ø 3.9 mm	70
400.2153	Tensioner adjuster Ø 2.5 mm	70

VAG front mask stub rod

- For moving the front mask (radiator support) forward in order to carry out service work
- Allows for timing belt changes or the renewal of the water pump
- Removes the need for the adjustment of the bonnet lock and the gap measurements

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de

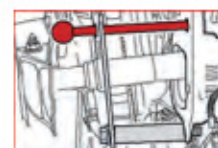


Suitable for		Weight kg
150.3012	VAG M8	170

VAG front mask guiding rods

- For moving the front mask (radiator support) forward in order to carry out service work
- Allows for timing belt changes or the renewal of the water pump
- Removes the need for the adjustment of the bonnet lock and the gap measurements

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de

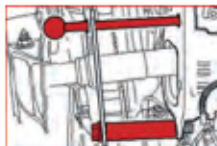


Suitable for		Weight kg
400.2077	VAG M8	80
400.2078	VAG M10	120

VAG front mask guiding and stub rods set

- For moving the front mask (radiator support) forward in order to carry out service work
- Allows for timing belt changes or the renewal of the water pump
- Removes the need for the adjustment of the bonnet lock and the gap measurements

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Part No.	Quantity	Description	Weight (kg)
400.2075	6 pcs	VAG front mask guiding and stub rods set	749

consists of:

X	Quantity	Description	Weight (kg)
150.3012	2	VAG front mask push back	170
400.2077	1	Front mask removal aid (2)	80
400.2078	1	VAG front mask removal aid (2)	120



VAG V belt and timing belt wrench

- For loosening the automatic clamping device
- Problem free changing of the belt
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: Audi, Seat, Škoda and Volkswagen with 2.0 TDI and 1.4 TSI engines

Volkswagen Beetle (2011-2013), Eos (2007-2013), Golf (2003-2008), Golf (>2008), Golf Estate (2007-2009), Golf Estate (>2009), Golf Plus (2005-2009), Golf Plus (>2009), Golf VI Cabrio (>2011), Jetta (2005-2011), Jetta (>2011), Scirocco (>2008), Passat (2005-2011), Passat (>2011), Tiguan (2010-2013), Polo (>2009), Touran (2007-2013), Audi A1 (2010-2013), Škoda Octavia (>2004), Yeti (2010-2013), engine code: CAVD, CAXA, CAVB, CAVC



Substit. for	Length (mm)	Weight (kg)
400.4300	VAG 16	380.0 501

VAG Engine support socket set, extra short

- 12-point
- For the assembly and removal of the aluminium engine support (hard to reach sites)
- Ideal for timing belt change
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra-short design
- For manual operation
- Matt finish
- Chrome vanadium

Application range: For timing belt change on Volkswagen Golf IV, Audi, Škoda, Seat etc.



Part No.	Quantity	Description	Weight (kg)
911.1295	2 pcs	VAG Engine support socket set, extra short	110

consists of:

Part No.	Description	Weight (kg)
911.1293	12 point socket, 16.0 mm short	40
911.1294	12 point socket, 16.0 mm long	67

Hexagon socket, long for pulley wheel

- Suited for the assembly and disassembly of the pulley wheel vibration damper, e.g. when changing the timing belt
- 6-point
- FlankTraction-Profil
- In accordance with DIN 3124 / ISO 2725
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Long design
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Audi, Seat, Škoda and Volkswagen

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Part No.	D1 (mm)	D2 (mm)	L (mm)	T (mm)	Weight (kg)
917.1254	27.0	34.0 36.0	76.0	19.0	280



Bit socket for spline (XZN®) screws, long

- Ideal for releasing and tightening of the securing screws of the high-pressure pumps, timing belt wheels, e.g. when changing timing belt
- Spline (XZN®)
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Long design
- With press fitted nickel plated insert bit
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Audi, Seat, Škoda and Volkswagen with TDI Common Rail engines, engine code: CAAA, CAAB, CAAC, CAYB, CBAA, CBAB, CBBB etc.

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Part No.	Thread	D (mm)	L (mm)	T (mm)	Weight (kg)
911.1353	M10	22.0	110.0	72.0	112

VAG Bit socket for hexagon screws, extra long

- Hexagon socket with ball head
- For releasing and tightening the TDC sensor
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra-long design
- For manual operation
- Matt finish
- Chrome vanadium

Application range: VAG models from 2005, 4-cylinder 2.0l diesel engines



Part No.	Thread	D (mm)	L (mm)	T (mm)	Weight (kg)
911.1598	M6	4.0	11.0	300.0	80

Impact bit socket for spline (XZN®) screws, long

- Ideally suited to releasing and tightening the securing screws on the cam shaft wheel
- Spline (XZN®)
- Internal square in accordance with DIN 3121 / ISO 1174
- Long design
- For machinery usage
- Phosphate
- Chrome molybdenum

Application range: Volkswagen Transporter >2004 with 2.5 TDI engines and Touareg >2003 with 2.5 TDI engines, engine code: AXD, BNZ, BAC and BPE

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Part No.	Thread	L (mm)	D (mm)	T (mm)	Weight (kg)
911.0953	M16	75.0	25.0	45.0	150

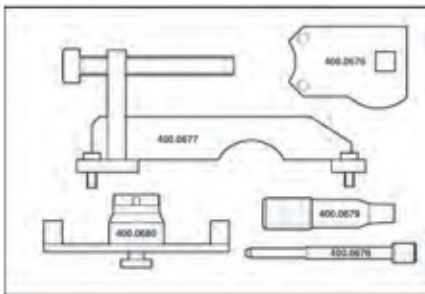
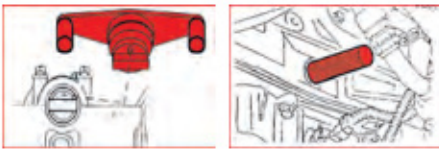
VOLVO

GM / Opel / Saab - Engine Timing Tool Set

- For the professional engine repair
- For locking the cam shaft
- For changing the timing belt or the chain
- Very high degree of accuracy
- In durable steel storage case

Application range: Opel Astra-G (1998-2006), Vectra-B, Vectra-C (1997 - 2005), Signum (2003-2005), Omega-B (1998-2003), Zafira-A (1999-2005), Sintra (1998-1999), Frontera-B (1998-2004) with 2.0 / 2.2 DTi engines (engine code: Z20DTH / Z20DTL / Z22DTH / Z22DTR) and Saab 9-3 (1998-2004) with 2.2 TID, 9-5 (2002-2007) with 2.2 TID engines (engine code: D223L)

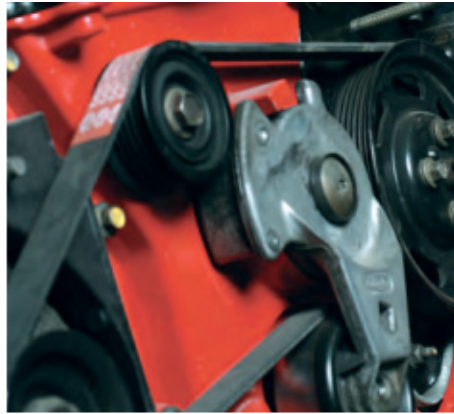
Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0675	5 pcs	GM / Opel / Saab - Engine Timing Tool Set	1.36

consists of:

400.0676	Camshaft timing tool	7
400.0677	Bracket for timing adjustment wrench	111
400.0678	Injection pump locking pin	41
400.0679	Flywheel TDC locking pin	160
400.0680	Camshaft locking tool	322

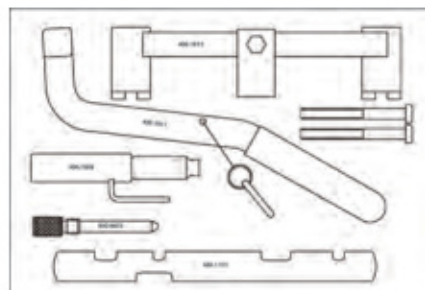


Volvo - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy
- In durable steel storage case

Application range: Volvo C30, S40, V50, S60, S70, S80, V70

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1825	7 pcs	Volvo - Engine Timing Tool Set	1.28

consists of:

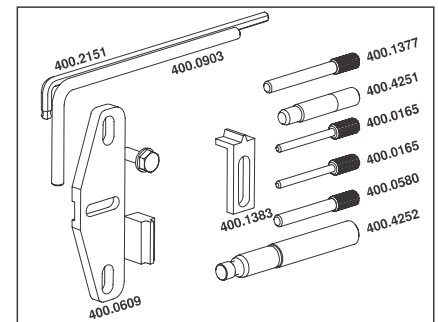
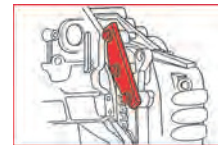
400.0603	Crankshaft timing pin	51
400.1101	Camshaft setting strap	140
400.1808	Flywheel locking pin	225
400.1811	Tensioner adjuster	239
400.1812	Camshaft locking tool (3)	498

Volvo - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft or cam shaft
- Very high degree of accuracy
- In durable steel storage case

Application range: Volvo C70 (>2006), S40 (>2004), S60 (>2005), S80 (>2006), V50 (>2004), V60 (>2010), V70 (>2008), V70 XC (>2001), XC60 (>2008), XC70 (>2008), XC90 (>2002), C30 (>2006) (engine code: D5204T2 / D5204T3 / D5204T5 / D5244T / D5244T10 / D5244T11 / D5244T13 / T5244T14 / D5244T15 / D5244T16 / D5244T17 / D5244T18 / D5244T19 / D5244T2 / D5244T3 / D5244T4 / D5244T5 / D5244T6 / D5244T7 / D5244T8 / D5244T9 / D5204T / D4164T / D4162T / D4164T2 / D4192T3 / D4192T4 / D4204T / D4204T2 / D4164T)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.4250	13 pcs	Volvo - Engine Timing Tool Set	1.14

consists of:

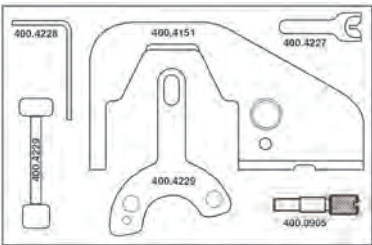
X			
400.0165	2	Camshaft locking pin 5.0 mm	19
400.0580	1	Crankshaft locking pin Ø 8.0 mm, 70 mm	30
400.0609	1	Flywheel locking tool 133 x 40 mm (4)	308
400.0903	1	Crankshaft locking pin	85
400.1377	1	Tensioning locking pin Ø 8 mm	35
400.1383	1	Flywheel locking tool 50 mm	30
400.2151	1	Tensioner adjuster 6.0 mm, 200 mm	20
400.4251	1	Crankshaft locking pin 65 mm	102
400.4252	1	Cam shaft locking pin	160

Volvo - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft
- Very high degree of accuracy
- In durable steel storage case

Application range: Volvo C70 (>2006), S40 (>2004), S60 (>2005), S80 (>2006), V50 (>2004), V60 (>2010), V70 (>2008), V70 XC (>2001), XC60 (>2008), XC70 (>2008), XC90 (>2002), C30 (>2006) with 2.0 GTDi engines (engine code: D5204T2 / D5204T3 / D5204T5 / D5244T / D5244T10 / D5244T11 / D5244T13 / D5244T14 / D5244T15 / D5244T16 / D5244T17 / D5244T18 / D5244T19 / D5244T2 / D5244T3 / D5244T4 / D5244T5 / D5244T6 / D5244T7 / D5244T8 / D5244T9 / D5204T / D4164T / D4162T / D4164T2 / D4192T3 / D4192T4 / D4204T / D4204T2 / D4164T)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.4225	8 pcs	Volvo - Engine Timing Tool Set	1,14
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consists of:

400.0905	Crankshaft locking pin	33
400.4151	Cam shaft alignment plate	700
400.4227	Crank shaft sensor alignment tool	30
400.4228	Tension pin 3.0 mm	10
400.4229	Crank shaft pulley wheel adjustment tool (2)	290

Ford / Volvo - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft and cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Ford B-Max (2012), C-Max (2010), Focus (2011), Galaxy (2010), Grand-C-Max (2010-2011), Mondeo (2010), S-Max (2010), Volvo S60 (2001), S80 (2010-2011), V60 (2011), V70 (2010-2011) with 1.6 Ti-VCT, 2.0 TDCI engines (engine code: IQJA / JQDA / JQDB / JQDA / JTDB / JQDA / JQDB / JTWA / JTWB / JQDA / JTDA / JTDB / JTBA / JTBB / B4164T3 / B4164T / B4164T2)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.4125	4 pcs	Ford / Volvo - Engine Timing Tool Set	498
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consists of:

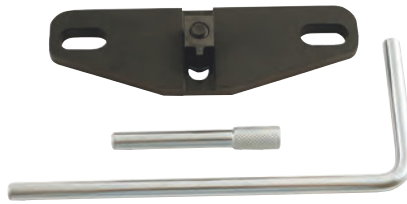
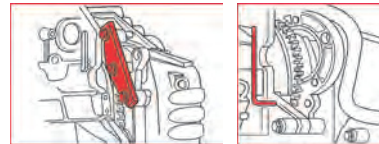
400.0902	Camshaft locking tool	384
400.0905	Crankshaft locking pin	33
400.4126	Crank shaft discs adjustment tool	50
400.4127	Pin for chain tensioner	10

Ford / Land Rover / PSA / Volvo - Engine Timing Tool Set

- For the professional engine repair
- For changing the timing belt
- Very high degree of accuracy

Application range: Ford, Land Rover, PSA, Volvo vehicles with 2.0 / 2.2 DOHC Common-Rail Diesel engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1625	3 pcs	Ford / Land Rover / PSA / Volvo - Engine Timing Tool Set	473
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consists of:

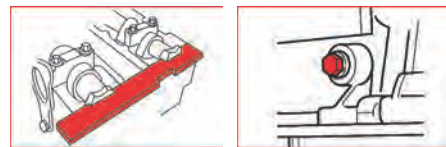
400.0580	Crankshaft locking pin Ø 8,0 mm	30
400.0609	Flywheel locking tool	308
400.0903	Crankshaft locking pin	85

Ford / Volvo - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Very high degree of accuracy

Application range: Ford, Volvo with petrol engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1525	4 pcs	Ford / Volvo - Engine Timing Tool Set	291
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consists of:

400.0155	Crankshaft timing pin	240
400.0603	Crankshaft timing pin	51
400.0905	Crankshaft locking pin	33
400.1101	Camshaft setting strap	140

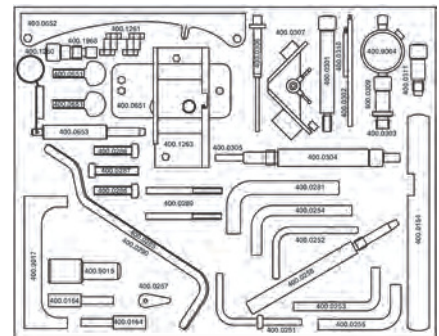
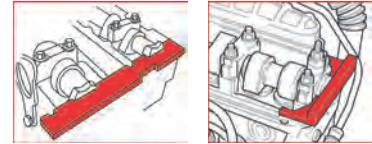
UNIVERSAL

Universal - Engine Timing Tool Set for diesel engines

- For the professional engine repair
- Special set for adjusting and locking diesel engines
- Very high degree of accuracy
- In durable steel storage case

Application range: Audi, Citroën, Ford, Opel, Peugeot, Renault, Rover, Volvo, Volkswagen vehicles with diesel engines

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.1950	40 pcs	Universal - Engine Timing Tool Set for diesel engines	4,74
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consists of:

400.0154	Camshaft setting strap	150
400.0164	Timing pin Ø 6,6 mm (2)	74
400.0251	Injection pump locking pin Ø 6,0 mm	30
400.0252	Camshaft locking pin 6,0 mm	26
400.0253	Locking pin Ø 8,0 mm	41
400.0254	Locking pin Ø 9,5 mm	60
400.0255	Locking pin Ø 10,0 mm	60
400.0257	Crankshaft TDC locking pin	124
400.0258	Shim tool (2)	3
400.0281	Timing pin Ø 12,7 mm	569
400.0285	Crankshaft locking pin Ø 8,0 mm	97
400.0286	Screw M8 x 35 mm (2)	16
400.0287	Screw M8 x 40,0 mm	18
400.0289	Injector pump locking pin (2)	14
400.0290	Crankshaft setting pin Ø 6,0 mm	55
400.0301	Dial gauge adapter M8 (Bosch), long	71
400.0302	Dial gauge extension, long 99 mm	9
400.0303	Converter M8 x M12	12
400.0304	TDC determining pin / dial indicator bracket M14 x 2,0 mm	135

consists of:

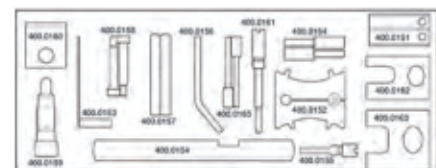
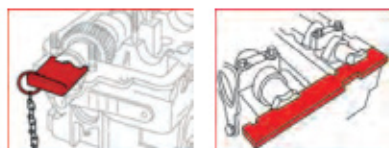
400.0305	Extension	460	
400.0306	Dial gauge probe for Lukas-CAV-Roto	17	
400.0307	Dial gauge assy for Lukas-CAV-Roto	125	
400.0309	Dial gauge adapter M8 (Bosch) short, silver	37	
400.0310	Dial gauge extension short	4	
400.0311	Dial gauge adapter M10 (Bosch) short, black	40	
400.0651	Camshaft locking tool (3)	169	
400.0652	Flywheel TDC indicator	80	
400.0653	Flywheel locking pin	79	
400.1260	Camshaft locking tool (5)	9	
400.1261	Locking screw M6 x 10.0 mm	4	
400.1263	Mounting bracket assy	330	
400.1968	Special tip	16	
400.9004	Precision-dial indicator gauge 0 - 10 mm	78	
400.9015	Injection pump locking pin Ø 15.4 mm	126	
400.9017	Camshaft setting strap	120	

Universal - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Also for locking twin-cam, dual cam shaft
- Very high degree of accuracy
- In durable steel storage case

Application range: universal usage on many vehicles, in particular **Audi, Citroën, Ford, Honda, Land Rover, Mazda, MG, Peugeot, Rover, Opel** with petrol and diesel engines with single or twin cams

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0150	19 pcs	Universal - Engine Timing Tool Set	1.38

consists of:

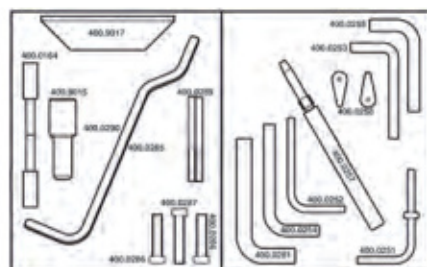
X			
400.0151	1	Camshaft locking tool	125
400.0152	1	Camshaft locking tool	150
400.0153	1	Tensioner adjuster, square 8.0 mm	6
400.0154	1	Camshaft setting strap	150
400.0155	1	Crankshaft timing pin	240
400.0156	1	Crankshaft timing pin Ø 6.0 mm	23
400.0157	1	Crankshaft locking pin Ø 6.0 mm, short (2)	101
400.0158	1	Crankshaft locking pin (2)	30
400.0159	1	Crankshaft timing pin	120
400.0160	1	Camshaft timing tool (2)	118
400.0161	1	Crankshaft TDC locking pin	75
400.0162	1	Opel / Saab Camshaft locking tool	186
400.0163	1	Camshaft locking tool	143
400.0164	1	Timing pin Ø 6.6 mm (2)	74
400.0165	2	Camshaft locking pin 5.0 mm	19

Universal - Engine Timing Tool Set

- For the professional engine repair
- For locking the crank shaft or cam shaft
- For changing the timing belt
- Also for servicing the injector pump
- Very high degree of accuracy
- In durable steel storage case

Application range: universal usage on many **Audi, Citroën, Ford, Peugeot, Renault, Rover, Volvo, Volkswagen** vehicles

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0275	19 pcs	Universal - Engine Timing Tool Set	1.84

consists of:

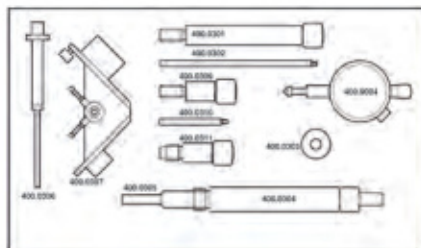
400.0164	Timing pin Ø 6.6 mm (2)	74	
400.0251	Injection pump locking pin Ø 6.0 mm	30	
400.0252	Camshaft locking pin 6.0 mm	26	
400.0253	Locking pin Ø 8.0 mm	41	
400.0254	Locking pin Ø 9.5 mm	60	
400.0255	Locking pin Ø 10.0 mm	60	
400.0257	Crankshaft TDC locking pin	124	
400.0258	Shim tool (2)	3	
400.0281	Timing pin Ø 12.7 mm	569	
400.0285	Crankshaft locking pin Ø 8.0 mm	97	
400.0286	Screw M8 x 35 mm (2)	16	
400.0287	Screw M8 x 40.0 mm	18	
400.0289	Injector pump locking pin (2)	14	
400.0290	Crankshaft setting pin Ø 6.0 mm	55	
400.9015	Injection pump locking pin Ø 15.4 mm	126	
400.9017	Camshaft setting strap	120	

Diesel fuel pump timing set

- For the professional engine repair
- Precise measuring device for the upper entry hole
- For resetting the injection time on diesel engines
- Very high degree of accuracy
- In durable steel storage case

Application range: Alfa Romeo, Audi, BMW, Daihatsu, Fiat, Ford, Isuzu, Iveco, Lancia, Land Rover, Mazda, Mitsubishi, Nissan, PSA (XUD), Renault, Rover, Volkswagen vehicles with Bosch, EP/VE Rotary, Niki, Nippon Denso, CAV RotoDiesel, Top injection fuel pumps

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



400.0300	11 pcs	Diesel fuel pump timing set	710

consists of:

400.0301	Dial gauge adapter M8 (Bosch), long	71	
400.0302	Dial gauge extension, long 99 mm	9	
400.0303	Converter M8 x M12	12	
400.0304	TDC determining pin / dial indicator bracket M14 x 2.0 mm	135	
400.0305	Extension	460	
400.0306	Dial gauge probe for Lukas-CAV-Roto	17	
400.0307	Dial gauge assy for Lukas-CAV-Roto	125	
400.0309	Dial gauge adapter M8 (Bosch) short, silver	37	
400.0310	Dial gauge extension short	4	
400.0311	Dial gauge adapter M10 (Bosch) short, black	40	
400.9004	Precision-dial indicator gauge 0 - 10 mm	78	

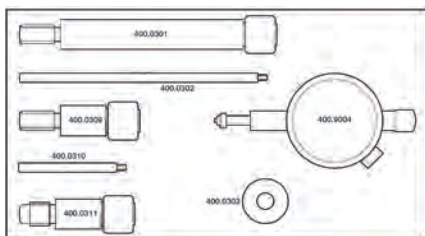
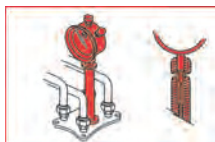


Diesel fuel pump timing set

- For the professional engine repair
- Precise measuring device
- Very high degree of accuracy
- In durable steel storage case

Application range: Alfa Romeo, Audi, BMW, Daihatsu, Fiat, Ford, Isuzu, Iveco, Lancia, Land Rover, Mazda, Mitsubishi, Nissan, Renault, Rover and Volkswagen vehicles with Bosch, Kikki, Nippon Denso injection pumps with threads of M8, M10 and M12, with new M10 Adapter in particular for Ford Transit

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



				9
400.0325	7 pcs	Diesel fuel pump timing set	301	

consists of:

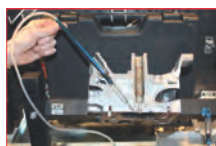
				9
400.0301	Dial gauge adapter M8 (Bosch), long	71		
400.0302	Dial gauge extension, long 99 mm	9		
400.0303	Converter M8 x M12	12		
400.9004	Precision-dial indicator gauge 0 - 10 mm	78		
400.0309	Dial gauge adapter M8 (Bosch) short, silver	37		
400.0310	Dial gauge extension short	4		
400.0311	Dial gauge adapter M10 (Bosch) short, black	40		



TDC finder set

- For quickly establishing the TDC point
- Suitable for both petrol and diesel engines
- Is used e.g. when changing the timing belt or when disassembling the cylinder head (seal change)
- Display unit with measuring tube, piston and magnet bracket
- Connection hose with ignition or glow plug thread adapters and universal cone adaptor
- Aluminium lengthener for deep ignition chambers
- In durable plastic storage case

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



				9
152.2055	11 pcs	TDC finder set	180	

consists of:

				9
152.2056	Hose	31		
152.2057	Hooks with magnet	5		
152.2058	Measuring pipe	13		
152.2059	Lengthener with connection pipe	26		
152.2062	Adapter set, 6 pcs, Ø 8-10-12-14-18 mm and cone adaptor	13		

TDC determining pin / dial indicator bracket M14 x 1.25

- For the professional engine repair
- For adjusting the crank shaft to the top dead centre (TDC) point
- Used in place of spark plugs
- To be used alongside dial indicator 400.9004
- Special steel
- Very high degree of accuracy

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



	mm	mm	mm	9
400.9026	M14 x 1,25	2,0	262,0	288

TDC determining pin / dial indicator bracket M14 x 1.25

- For the professional engine repair
- For adjusting the crank shaft to the top dead centre (TDC) point
- Used in place of spark plugs
- To be used alongside dial indicator 400.9004
- Special steel
- Very high degree of accuracy

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



	mm	mm	mm	9
400.9027	M14 x 1,25	5,0	262,0	288

TDC determining pin M14 x 1,25

- For the professional engine repair
- For adjusting the crank shaft to the top dead centre (TDC) point
- Used in place of spark plugs
- Grooves indicate when the piston is at the TDC point
- Special steel
- Very high degree of accuracy

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



	mm	mm	mm	9
400.9006	M14 x 1,25	2,0	262,0	288

TDC determining pin / dial indicator bracket M14 x 2.0

- For adjusting the crank shaft to the top dead centre (TDC) point
- Used in place of spark plugs
- To be used alongside dial indicator 400.9004
- Special steel

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



	mm	mm	mm	9
400.0304	M14 x 2,0	16,0	130,0	135

Precision-dial indicator gauge 0 - 10 mm

- For the professional engine repair
- In accordance with DIN 878
- With securing screw and turnable dial face
- Shockproof
- Splashproof
- For use alongside with TDC determining pins
- For adjusting the crank shaft to the top dead centre (TDC) point
- Measuring bolt and tensioning shaft made from rust-proof steel
- Very high degree of accuracy

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



	mm	mm	mm	9
400.9004	0 - 10	+/- 0,01	1,0	78

Universal - Engine Timing Tool Set

- For the professional engine repair
- Ideal range of common locking tools
- For locking the fly wheel
- For locking of the crank shaft
- For locking the cam shaft
- Secure hold thanks to optimal positioning
- Aluminium
- Very high degree of accuracy

Application range: Audi, Citroën, Peugeot, Fiat, Isuzu, Peugeot, Rover, Saab, Seat, Škoda, Opel, Volkswagen vehicles

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Anwendung für			
400.2650	9 pcs	Universal - Engine Timing Tool Set	1.46

consists of:

Anwendung für		
400.0103	Opel Camshaft locking tool (right)	119
400.0104	Camshaft locking tool left	120
400.0151	Camshaft locking tool	125
400.0162	Opel / Saab Camshaft locking tool	186
400.0163	Camshaft locking tool	143
400.0436	Flywheel locking tool	135
400.0615	Crankshaft pulley setting tool	190
400.1254	Flywheel locking tool	23

Camshaft locking tool

- For the professional engine repair
- Clamping device for a secure hold to change the timing belt
- Special plastic
- Very high degree of accuracy

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Anwendung für			
150.3059	1 pcs	Opel Ecotec 1.4 - 1.6 - 16V after 1993 - Corsa B - Tigra - Astra F - Vectra	30
150.3061	1 pcs	Opel Ecotec 1.8 - 2.0 - 2.2 - 16V after 1995 - Astra - Frontera - Sintra - Omega - Vectra	30
150.3062	1 pcs	Opel with small camshaft wheels 1.8 - 2.0 - 16V af- ter 1993 - Astra - Calibra - Omega 1.4 - 1.6	30
150.3063	1 pcs	Opel Right hand drive 2.5i - 2.0 - 16V ab 1994 / Vectra - Omega, Saab 900 - 9000	30
150.3064	1 pcs	Opel left hand drive 2.5i - 3.0 - 16V after 1994 / Vectra - Omega, Saab 900 - 9000	30
150.3068	2 pcs	Opel Engine Z16XEP and Z18XER Astra, Zafira, Vectra	60
150.3050	1 pcs	Mazda 626 after 1992/ 323 after 1998, Premacy after 1999	50
150.3056	1 pcs	Kia Carnival Diesel after 1998	80
150.3055	1 pcs	Kia Ciarus 1.6 - 1.8 after 1997	40
150.3058	1 pcs	Hyundai Soutana after 1999	30
150.3060	1 pcs	Rover 214 after 1995 - 216 after 1995 - 414 after 1990 - 416 after 1995 - MGF after 1995 / 75 1.8 after 1999 / 45 1.8 - 1.6 after 2000 / 25 after 2000	20
150.3051	1 pcs	Mitsubishi Space Wagon after 1997	30
150.3053	2 pcs	Mitsubishi 24V Galant 2.5 after 1997 - 24V Sigma 3.0 after 1991 - Galant 4x4 after 1991	60
150.3054	2 pcs	Mitsubishi Pajero 3500 after 1998	70
150.3052	2 pcs	Mitsubishi Carisma after 1996 1997 - Space Star after 1997 - Galant 2.0GTi after 1991	60

Universal twin Camshaft Sprocket Locking Tool

- For the professional engine repair
- For locking cam shafts that are next to each other
- Universal usage for engines with 1, 2 or 4 cam shafts
- Also suitable for chain wheels with flanges
- Enables cam belt change with mounted locking tool
- Ideal for locking of diesel injection pump wheels
- The distance of the timing wheels to each other make no difference
- Also usable in gear cam wheels with different tooth form
- Prevents the timing belt being altered
- Universal tooth profile fits on all current camshafts
- Special metal
- Very high degree of accuracy
- In durable plastic storage case

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Anwendung für			
150.3190	5 pcs	Universal twin Camshaft Sprocket Locking Tool	1.20

consists of:

Anwendung für		
150.3171	Cam shaft locking tool	110
150.3172	Long bridges	70
150.3196	Cornet screws (2)	40
150.3197	Cam shaft marking device	95

Universal locking pin and marking pin set

- For the professional engine repair
- Versatile usage
- For safe locking of the tensioning element
- Very high degree of accuracy

Application range: Alfa Romeo, Audi, Chrysler, Ford, Honda, Hyundai, Lexus, Mazda, Mitsubishi, Peugeot, Renault, Seat, Škoda, Toyota, Volkswagen, Volvo etc.

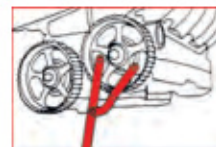
Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de



Ø mm		
150.3019	0,8 - 1,25 - 1,4 - 1,5 - 1,7 - 1,9	20

Pulley wheel counter hold wrench

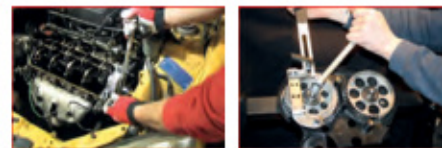
- Suitable for counter holding the timing belt wheel on the cam shaft
- Hole distance can be varied
- Adjustable, universal usage
- With plastic-coated handle
- Chrome vanadium



Substanz für		Length mm	
400.9007	universal	410.0	525

Universal locking tool / counter tool for crank shaft wheels

- Ideally suited to almost all vehicle types
- For working areas with gear diameters 45 - 190 mm
- With quick adjustment for setting the working area
- Universally used tool for locking, turning and securing locked pulley wheels
- Allows the crank shaft drive wheels to turn or for releasing the securing screws on the pulley wheel
- Ideal leverage thanks to 390 mm total length
- Very narrow tool for maximum access
- Quick and easy usage
- Maximum holding force
- With plastic-coated handle
- Special steel



Ø mm		L mm	
150.2990	45-190	390.0	500

Universal timing gear holder set

- Ideally suited for almost all vehicle types
- Universal usable tool for locking, turning and fastening for stepped timing belts
- The overall length of 520 mm guarantees an optimal lever for loosening the timing belts reinforcement screws
- Stepless adjustment of Ø 40 - 220 mm - pin height: 35 mm
- Includes 4 pairs of screw on plugs
- With plastic coated handle
- Special steel

Application range: Timing belt wheels on camshafts and Injection pumps bleeding of wheels and couplings etc.



150.3000	11 pcs	Universal timing gear holder set	2.20

consists of:

150.3001	Adjustable lever f.150.3000, 520mm	1120	
150.3002	Locking pin f.150.3000, 2pcs, 6-10mm	100	
150.3003	Locking pin f.150.3000, 2pcs, 8-11mm	50	
150.3004	Locking pin f.150.3000, 2pcs, 10-12mm	40	
150.3005	Locking pin f.150.3000, 2pcs, 11-16mm	40	
150.3006	Knurled nut f.locking pin, 150.3000, 2pcs	20	

Pin-type face wrench set, seamlessly adjustable with interchangeable pins

- Universal application for common two-hole nuts
- With interchangeable pins
- Each double pin wrench is replacing 4 single key sizes
- Adjustable in diameter
- Phosphate finish
- Special steel
- In durable plastic storage case



150.3205	19 pcs	Pin-type face wrench set, seamlessly adjustable with interchangeable pins	1.56

consists of:

150.3206	Pin-type face wrench, adjustable, length 263 mm	485
150.3207	Pin-type face wrench, adjustable, length 215 mm	293
150.3208	Pin-type face wrench, adjustable, length 161 mm	155
150.3209	Pin-type face wrench, adjustable, length 115 mm	57
150.3210	Pin pair, Ø 2.37 mm	2
150.3211	Pin pair, Ø 2.90 mm	2
150.3212	Pin pair, Ø 4.87 mm	5
150.3213	Pin pair, Ø 5.91 mm	7
150.3214	Pin pair, Ø 6.87 mm	13
150.3215	Pin pair, Ø 7.92 mm	15
150.3216	Pin pair, Ø 9.87 mm	28
150.3217	Pin pair, Ø 11.90 mm	37

V-belt and tooth belt wrenches

- 12-point
- For loosening the automatic clamping device
- Problem free changing of the belt
- Saves the cooling unit service on VAG
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium

Application range: Audi A4, Volkswagen Passat > 97 with TDI or pump injector engines Opel, DOHC 4- / 6 cylinder (e.g. Astra F with cooling), Saab V6 engines, Mitsubishi



		L mm	
150.1206	10	460.0	320
150.1207	11	460.0	320
150.1208	12	460.0	320
150.1201	13	460.0	320
150.1209	14	460.0	320
150.1202	15	460.0	320
150.1203	16	460.0	320
150.1204	17	460.0	320
150.1213	18	460.0	320
150.1205	19	460.0	320

Universal V-belt and tooth belt wrenches

- TX-E-Profil
- For loosening the automatic clamping device
- Problem free changing of the belt
- For hard to reach places
- With plastic-coated handle
- Chrome vanadium



		L mm	
150.1214	E8	460.0	320
150.1216	E10	460.0	320
150.1217	E12	460.0	320
150.1218	E14	460.0	320
150.1219	E16	460.0	320
150.1221	E18	460.0	320
150.1222	E20	460.0	320
150.1223	E22	460.0	320

BELT TENSION CHECKER

Timing belt tensions test instrument

- For inspection of the timing post tensioning
- For the timing belt on the combustion engine
- With mm scale
- 10N (~1kp corresponds a revolution)
- Special steel

Application range: Can be used everywhere there is the technical data for the allowable through bend of the timing belt in mm in a certain power in N or kp revolutions



Technical data:

Scale division: in mm
 Measurement mode: mechanical (spring)
 Adjusting nut revolution around 360°: 1.0
 Adjusting nut pitch: 1,0/10,0 mm

150.3015	L mm	0,0-20,0 mm	260

Electronic timing belt tension tester

- For testing the tension of toothed belts and V-ribbed belts
- Measurement using the latest method = frequency measurement in Hertz
- With data log, setting values and correct position of the measuring sensor on the belt drive
- One man operation, easy to use
- LED display and acoustic measuring signal
- Automatic shutdown after 120 seconds
- In durable plastic storage case

Application range: Maintenance of vehicles, replacement of belts, suitable for passenger cars up to LCV



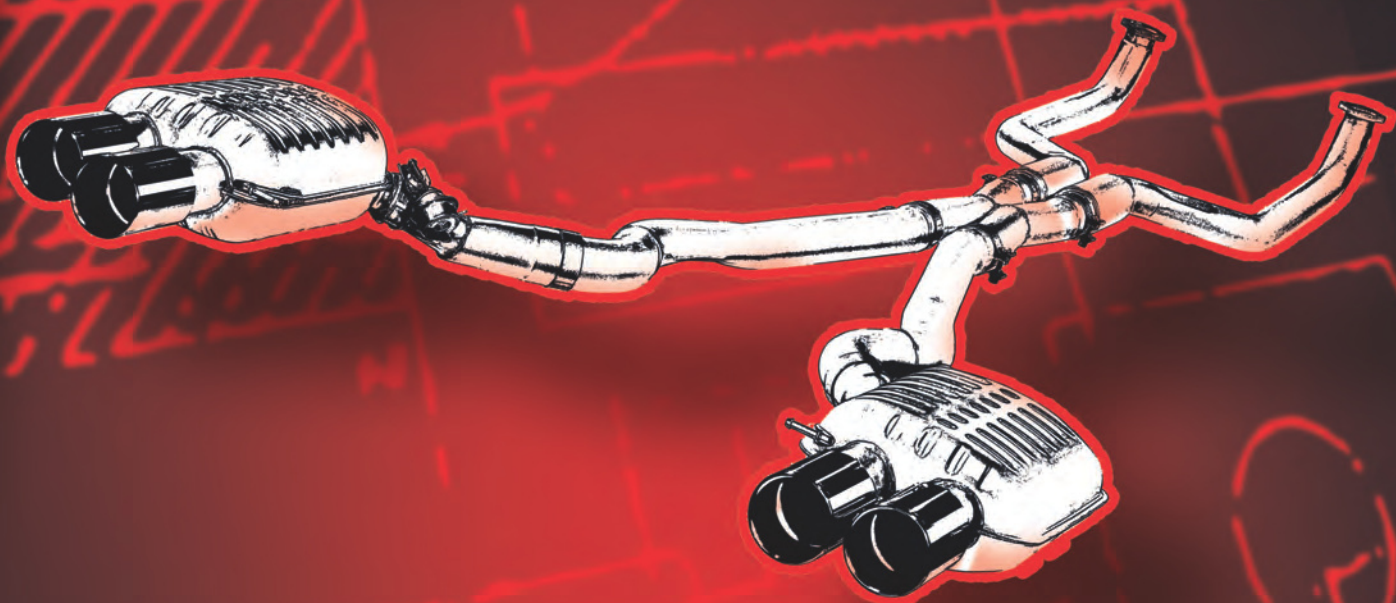
Technical data:

Power requirement: 9V block battery
 Working range: 30-520 Hz
 Cable length: 1.2 m

150.3165	8 pcs	Electronic timing belt tension tester	1.11

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EXHAUST SYSTEM / CATALYSERS



Innovation is
our mission!



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TOOLS FOR EXHAUST SENSORS

Lambda sensor socket 17,0 mm, long

- 6 point
- Special socket for the assembly and dismantling of Lambda sensors that are difficult to access
- For almost all vehicle types
- Time-saving to work with, even for hard-to-reach Lambda sensors
- Prevents disassembly and assembly of protective shield
- Long and narrowly-opened design
- For professional and damage-free use
- Universal application and highly durable
- Internal square drive to DIN 3120/ISO 1174 with ball stop groove
- Chrome molybdenum



	mm	L mm	g
150.2095	17,0	78,0	220

Lambda sensor socket 22.0 mm, long

- 6 point
- Special socket for the assembly and dismantling of Lambda sensors that are difficult to access
- For almost all vehicle types
- Time-saving to work with, even for hard-to-reach Lambda sensors
- Prevents disassembly and assembly of protective shield
- Long and narrowly-opened design
- For professional and damage-free use
- Universal application and highly durable
- Internal square drive to DIN 3120/ISO 1174 with ball stop groove
- Chrome molybdenum



	mm	L mm	g
150.2127	22,0	81,0	260



Lambda sensor socket 22.0 mm, long

- 6 point
- Special socket for the assembly and dismantling of Lambda sensors that are difficult to access
- For almost all vehicle types
- Time-saving to work with, even for hard-to-reach Lambda sensors
- Prevents disassembly and assembly of protective shield
- Long and half-opened design
- For professional and damage-free use
- Universal application and highly durable
- Internal square drive to DIN 3120/ISO 1174 with ball stop groove
- Chrome molybdenum



	mm	L mm	g
150.2128	22,0	90,0	240

Lambda sensor socket 22.0 mm, extra-long

- 6 point
- Special socket for the assembly and dismantling of Lambda sensors that are difficult to access
- For almost all vehicle types
- Time-saving to work with, even for hard-to-reach Lambda sensors
- Prevents disassembly and assembly of protective shield
- Extra-long and half-opened design
- For professional and damage-free use
- Universal application and highly durable
- Internal square drive to DIN 3120/ISO 1174 with ball stop groove
- Chrome molybdenum



	mm	L mm	g
150.2101	22,0	150,0	354

Lambda sensor socket 22.0 mm, flat

- 6 point
- Special socket for the assembly and dismantling of Lambda sensors that are difficult to access
- For almost all vehicle types
- Time-saving to work with, even for hard-to-reach Lambda sensors
- Prevents disassembly and assembly of protective shield
- Flat and half-opened design
- For professional and damage-free use
- Universal application and highly durable
- Internal square drive to DIN 3120/ISO 1174 with ball stop groove
- Chrome molybdenum



	mm	L mm	g
150.2125	22,0	48,0	170

Lambda sensor socket 22.0 mm, extra flat

- 6 point
- Special socket for the assembly and dismantling of Lambda sensors that are difficult to access
- For almost all vehicle types
- Time-saving to work with, even for hard-to-reach Lambda sensors
- Prevents disassembly and assembly of protective shield
- Extra-flat and half-opened design
- For professional and damage-free use
- Universal application and highly durable
- Internal square drive to DIN 3120/ISO 1174 with ball stop groove
- Chrome molybdenum



	mm	L mm	g
150.2126	22,0	31,0	220



Articulated lever Lambda sensor socket 22.0 mm, flat

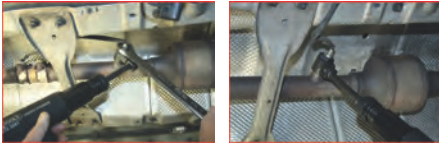
- Optional 6 and 12 point (duplicate socket)
- Special socket for assembling and dismantling of stuck Lambda sensors that are difficult to access
- For almost all vehicle types
- 180° freely-revolving joint
- Time-saving to work with, even for hard-to-reach Lambda sensors
- Prevents disassembly and assembly of protective shield
- Flat and half-opened design
- For professional and damage-free use
- Universal application and highly durable
- Chrome vanadium



	mm	L mm	g
150.2121	22,0	240,0	540

Impact lambda sensor hinged wrench 22.0 mm

- 6 point
- Specialist loosening tool for the simple assembly and dismantling of stuck Lambda sensors
- Enables highly-corroded Lambda sensors to be released easily
- Industry standard percussion hammer (10.0 mm holder) creates a strong impact impulse with a high frequency
- The vibration increases the release torque and increases the effectiveness of rust-remover products
- For almost all vehicle types
- Time-saving to work with
- Avoids costs resulting from damaged threads
- Prevents disassembly and assembly of protective shield
- Flat and half-opened design
- For professional and damage-free use
- Universal application and highly durable
- External hexagon drive 30.0 mm
- Chrome molybdenum



	mm	L mm	kg
150.2113	22.0	200.0	540

Lambda sensors/temperature switches/injection nozzles and socket set

- For most current vehicle types
- Special socket set for assembling and dismantling Lambda sensors, oil pressure switches, temperature switches and injection nozzles in all installation positions
- Time-saving to work with, even for hard-to-reach sensors
- For professional and damage-free use
- Prevents damage of the fuel return pipe
- Universal application and highly durable
- Internal square drive to DIN 3120/ISO 1174 with ball stop groove
- Chrome molybdenum
- In durable plastic storage case



	kg
150.2100 7 pcs Lambda sensors/temperature switches/injection nozzles and socket set	2.16

consists of:

	kg
150.2122 Oil pressure switch socket, 1+1.1/16"	220
150.2123 Thermal switch socket, 29mm, 1/2"	500
150.2124 Fuel injection socket, 27mm, 1/2"	220
150.2125 3/8" Lambda sensor socket, slotted, 6 point, 22 mm	170
150.2126 Lambda sensor socket, 22mm, fl t, 3/8"	220
150.2127 Lambda sensor socket, 22mm, deep 3/8"	260
150.2128 Lambda sensor socket, 22mm, extra deep	240

THREAD REPAIR

Stainless steel repair set M12 x 1.5 for lambda sensors

- Unique range of products for repairing worn or damaged threads
- Ideal for Lambda sensors
- Simple handling and professional repair
- Guaranteed securely fitted gas-tight lining
- Very thin lining made from stainless steel
- Includes screw tap and assembly tool
- Enables fast repairs without expensive component storage
- In durable steel storage case



	kg
150.6120 14 pcs Stainless steel repair set M12 x 1.5 for lambda sensors	456

consists of:

	kg
150.6104 Mounting tool f.150.6100, M12	104
150.6105 Insertion pin breaker f.150.6100, M12	46
150.6121 Thread insert set f.150.6120, 5pcs	100
150.6122 Twist drill, M12, Ø 12.4mm	88
150.6123 Threaded tap f.150.6120, M12x1.5	67

Stainless steel repair set M12 x 1.0 x 17

- Unique range of products for repairing worn or damaged threads
- Simple handling and professional repair
- Guaranteed securely fitted gas-tight lining
- Very thin lining made from stainless steel
- Includes screw tap and assembly tool
- Enables fast repairs without expensive component storage
- In durable steel storage case



	kg
150.6100 14 pcs Stainless steel repair set M12 x 1,0 x 17	445

consists of:

	kg
150.6101 Thread insert set f.150.6100, 5pcs	67
150.6102 Twist drill, M12, Ø 12.3mm	84
150.6103 Threaded tap f.150.6100, M12x1.0	69
150.6104 Mounting tool f.150.6100, M12	104
150.6105 Insertion pin breaker f.150.6100, M12	46

THREADfix repair set M12 x 1.5 for lambda sensors

- Unique range of products for repairing worn or damaged threads
- Ideal for Lambda sensors
- Simple handling and professional repair
- Guaranteed securely fitted gas-tight lining
- Very thin-walled lining with rustproofing protection
- Includes screw tap and assembly tool
- Enables fast repairs without expensive component storage
- In durable plastic storage case

M12 x 1.5 x 115 mm



	kg
150.5070 9 pcs THREADfix repair set M12 x 1.5 for lambda sensors	710

consists of:

	kg
150.5071 Threaded tap M12 x 1.5 L= 50 mm	33
150.5072 Threaded tap M14 x 1.5 L= 50 mm	36
150.5073 Reamer L=50 mm	35
150.5074 Screw for Bushes L= 93 mm, M12 x 1.5, GL= 108 mm	235
150.5076 Threaded bush L=9 mm, IG= M12x1,5 / AG=M14x1,5 (5 per Pack)	20



Cleaning tool and repair tool for lambda sensor threads

- For recutting edges and cleaning of damaged outside threads on lambda sensor threads
- Especially short execution
- Ideal for confined spaces
- Special steel



	mm	mm	L mm	kg
150.2129 M18x1,5	21,0	3/8"	50,0	95

THREADfix repair set M18 x 1.5 for lambda sensors

- Unique range of products for repairing worn or damaged threads
- Ideal for Lambda sensors
- Simple handling and professional repair
- Guaranteed securely fit ed gas-tight lining
- Very thin-walled lining with rustproofing protection
- Includes screw tap and assembly tool
- Enables fast repairs without expensive component storage
- In durable plastic storage case

M18 x 1.5 x 110 mm



150.5090	9 pcs	THREADfix repair set M18 x 1.5 for lambda sensors	760
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consists of:

150.5091	Threaded tap M18 x 1.5 L=50 mm	75
150.5092	Threaded tap M20 x 1.5 L=50 mm	77
150.5093	Reamer L= 50 mm	76
150.5094	Screw for Bushes L= 81 mm, M18 x 1.5, GL= 102 mm	443
150.5096	Threaded bush L=9 mm, IG= M18x1.5 / AG=M20x1.5 (5 per Pack)	20

Lambda sensors thread repair set

- For the repair of internal and external threads
- Ideal for drive shafts, lambda probes, wheel bolts, etc.
- Correct thread repair for damaged or sliced threads
- Suitable for a wide range of applications
- Drive optional with T-handle or external hexagon drive
- In durable plastic storage case



150.1470	9 pcs	Lambda sensors thread repair set	1.37
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consists of:

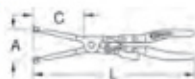
150.1466	T bar, 8x80mm	30
150.1471	Thread chaser for M14 x 1.5 for male and female threads	150
150.1472	Thread chaser for M16 x 1.5 for male and female threads	80
150.1473	Thread chaser for M18 x 1.5 for male and female threads	90
150.1474	Thread chaser for M20 x 1.5 for male and female threads	120
150.1475	Thread chaser for M22 x 1.5 for male and female threads	150
150.1476	Thread chaser for M24 x 1.5 for male and female threads	170
150.1477	Thread chaser for M27 x 2.0 for male and female threads	180
150.1478	Thread chaser for M28 x 1.5 for male and female threads	200

PLIERS FOR EXHAUST SYSTEMS

Exhaust clamp pliers

- For assembling and dismantling re-usable exhaust clamps with a board
- With PVC dipped handle
- Includes locking mechanism
- With self-opening mechanism
- Plier tip guide-jackets prevent slippage
- No loss of tension when stopping, thanks to a 4-stage locking mechanism
- Chrome molybdenum

Area of application: Citroën, Peugeot, Renault, Nissan, Opel, etc.

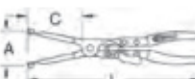


	A mm	C mm	L mm	G
150.1535	0-55	95.0	310.0	430

Exhaust clamp pliers

- For the assembly and dismantling of reusable exhaust clamps
- Includes locking mechanism
- With self-opening mechanism
- Special plier tips prevent slippage
- No loss of tension when stopping, thanks to several locking mechanism stages
- Chrome molybdenum

Area of application: Citroën, Peugeot, Renault, Nissan, Opel, etc.



	A mm	C mm	L mm	G
150.1560	0-50	70.0	310.0	400

Exhaust rubber dismantling tool

- Easy and professional dismantling of thick exhaust suspension rubbers
- Even for rusted and hard-to-access clamps
- With self-centralsing pressure bolts
- No injuries from the slippage of lifting tools
- The undamaged rubber can be used again
- At a 25° angle
- For almost all vehicle types
- With PVC dipped handle
- Chrome vanadium

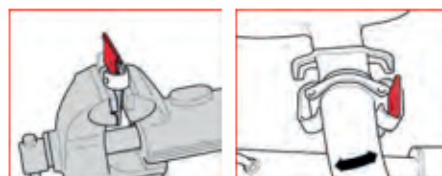


	L mm	G
150.1245	280.0	345

Sound absorber tensioning wedge set for Volkswagen

- For assembling and dismantling steel clamps with and without location bore
- For steel clamps on the swivel of Volkswagen exhaust systems
- Easy handling
- Special tool steel

Area of application: all Volkswagen diesel engines with steel clamps



115.1360	3 pcs	Sound absorber tensioning wedge set for Volkswagen	750
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consists of:

115.1366	1	Sound absorber tensioning wedge, large	300
115.1367	2	Sound absorber tensioning wedge, small	150

Spring compressor for VAG exhaust steel clamps

- For the dismantling and assembly of the steel clamps at exhaust ball flange connections
- Chrome vanadium

Application range: VAG Vehicles



	mm	L mm	G
150.1540	17.0	145.0	440

Spring compressor for VAG exhaust steel clamps, long execution

- Especially for T4 with 5 cylinder diesel engines
- For the assembly and dismantling of the steel clamps at exhaust ball flange connections
- Extra-long for easily reaching steel clamps via the gearbox bearing
- Very time-saving, unlike other methods
- Very safe; the steel clamps will not spring away
- Easy handling
- Special steel

Area of application: Volkswagen, Audi, Seat, Škoda, particularly Volkswagen Transporter T4



	L mm	G
500.8220	790.0	2.00

EXHAUST PIPE SEPARATING AND CUTTING TOOLS

Exhaust pipe former

- When using the exhaust pipe former, the original shape can be re-formed
- When the exhaust pipe former is inserted into the exhaust, the shaft drives into the flaring unit, expanding it to re-forming the exhaust pipe to its original shape



	Ø mm	L mm	kg
150.1520	28,0-44,0	130,0	390
150.1525	38,0-62,0	160,0	720
150.1530	54,0-87,0	215,0	1510

Exhaust pipe separating tool

- For separated inserted, tight fitting exhaust pipes
- Broad pipe clamping jaws (40 mm) of solid cast steel
- Ribbed inner surfaces - secure attachment to pipe outer wall
- In durable plastic storage case
- 6 point drive



Technical data:

Ø:	35-56 mm
Gripping width max:	120 mm
Threaded spindles:	M12x1,75
Spanner width:	17 mm

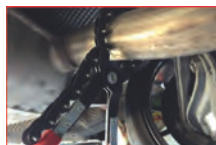
	kg
150.1545 8 pcs Exhaust pipe separating tool	4.91

consists of:

	kg
150.1546 Flange puller	1772
150.1547 Flange holder	1825
150.1548 Spindle set, 2 pcs	276
150.1549 Reducing adaptor set, 4 pcs	280

Exhaust chain pipe cutter

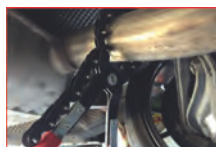
- Small working angle through forward and backward movements
- Plastic coated handles
- Easily operated
- Special steel



	Ø mm	Chain length	Replacement chain	kg
150.1500	19,0-83,0	330,0	150.1501	600

Exhaust chain pipe cutter for stainless steel pipes

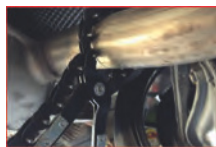
- For stainless steel (Inox) of exhaust pipes
- Small working angle through forward and backward movements
- Plastic coated handles
- Easily operated
- Special steel



	Ø mm	Chain length	Replacement chain	kg
150.1505	19,0-83,0	330,0	150.1502	600

Grip exhaust chain pipe cutter

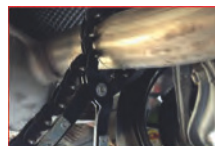
- With the possibility to adjust the tension through wing nut
- Small working angle through forward and backward movements
- Easily operated
- Special steel



	Ø mm	Chain length	Replacement chain	kg
150.1510	19,0-83,0	330,0	150.1501	800

Grip exhaust chain pipe cutter for stainless steel pipes

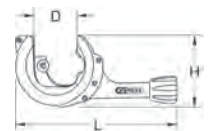
- For stainless steel (Inox) of exhaust pipes
- With the possibility to adjust the tension through wing nut
- Small working angle through forward and backward movements
- Easily operated
- Special steel



	Ø mm	Chain length	Replacement chain	kg
150.1515	19,0-83,0	330,0	150.1502	800

Ratchet pipe cutter

- For the fast and problem free cutting off of exhaust pipes with 2 support rolls and 3 blade ratchet mechanism
- Very good parallel cutting due to the width - accurate cutting is guaranteed
- Ideal for confined spaces
- Cutting depth max. 3 mm
- V²A Cutting edge wheel optional retrofit
- Robust ratchet mechanism
- With large operating knob
- Plastic housing
- Ratchet mechanism from special steel



	D mm	H mm	L mm	Metl	V²A	Plastic	kg
104.5050	28,0	67,0	110,0	250,0	104.5052	104.5052	104.5051 1.00



SlimPOWER mini-pneumatic long-disc cutter

- Air exhaust through the handle rear end
- For cutting wheels up to Ø 75.0 x 1.35 x 9.56 mm
- Ideal for loosening worn down and/or rusted connections
- Fixed sparkguard
- For working in inaccessible places
- Long service life
- Secure operation lever with locking device
- With stepless speed regulation
- Vibration dampened
- Very compact construction
- Includes 1/4" coupling connector
- Robust housing



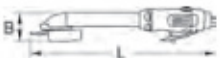
Technical data:

Tool holder:	9.56 mm
Capacity:	230 Watt
No load current:	19000 r.p.m.
Vibration:	< 1.5 ms ²
Noise performance level:	99.9 dbA
Noise pressure level:	81 dbA
Air consumption:	319.93 l/min
Operating pressure:	max. 6.2 bar (90 psi)
Min. tube diameter:	1/4" - 6.4 mm
Connection thread:	1/4"

	B mm	L mm	kg
515.5055	50.0	230.0	500

SlimPOWER mini-pneumatic disc cutter, long

- Air exhaust through the handle rear end
- For cutting wheels up to Ø 75.0 x 1.35 x 9.56 mm
- Ideal for loosening worn down and/or rusted connections
- Fixed sparkguard
- For working in inaccessible places
- Long service life
- Secure operation lever with locking device
- With stepless speed regulation
- Vibration dampened
- Very compact construction
- Includes 1/4" coupling connector
- Robust housing



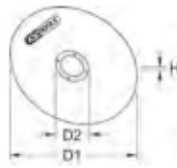
Technical data:

Tool holder:	9.56 mm
Capacity:	230 Watt
No load current:	19000 r.p.m.
Vibration:	< 1.5 ms ²
Noise performance level:	99.9 dbA
Noise pressure level:	86 dbA
Air consumption:	319.93 l/min
Operating pressure:	max. 6.2 (90 psi)
Min. tube diameter:	1/4" - 6.4 mm
Connection thread:	1/4"

	B mm	L mm	kg
515.5060	50.0	275.0	700

High performances thin cutting disk

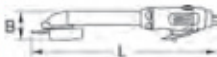
- Exact and clean cut
- No deburring necessary
- Very short cutting times
- Machine load reduced
- Inox stainless steel



SPR max	D1 mm	D2 mm	H mm	Count	kg	
515.5057	20100	75.0	10	1.5	50	710

Long disc cutter

- Air exhaust through the handle rear end
- With practical clockwise and anticlockwise switch
- For cutting wheels up to Ø 100 x 1.0 x 10 mm
- Ideal for loosening worn down and/or rusted connections
- Adjustable sparkguard
- For working in inaccessible places
- Long service life
- Secure operation lever with locking device
- With stepless speed regulation
- Number of revolutions adjustable through regulating wheel
- Vibration dampened
- Cold insulated handle
- Includes 1/4" coupling connector
- Ultra light robust housing special plastic
- Grease nipple for maintenance on striking mechanism ensures long life (KS grease gun 980.1070)



Technical data:

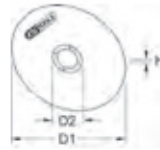
No load current:	12000 r.p.m.
Vibration:	< 2.0 ms ²
Noise performance level:	100 dbA
Noise pressure level:	90 dbA
Air consumption:	142 l/min
Operating pressure:	max. 6.3 bar (90 psi)
Drive:	16 mm / M10 x 1.0 mm
Min. tube diameter:	1/4" - 6.35 mm
Connection thread:	1/4"PT

	B mm	L mm	Replacement set of disks	kg
515.3075	60.0	400.0	337.2010	1.80

High performances thin cutting disk

- Exact and clean cut
- No deburring necessary
- Very short cutting times
- Machine load reduced
- Inox stainless steel

Ideal for use in very thin materials until 2.5 mm, tool steel, sheet metal, thin walled pipes and profile s all type suited for locksmiths, car body building, sanitary and heating fitting, plumbing, sheet metal processing, carpentry, joinery, roof g. metal processing and all motor vehicles businesses.



SPR max	D1 mm	D2 mm	H mm	Count	kg	
337.2010	15250	100.0	16.0	1.6	25	1.20

Pneumatic chisel hammer

- With non-slip soft-grip handle
- Air exhaust system controlled by the handle below
- Ergonomically designed handle
- Universal application for work on exhaust systems
- With step-free impact regulation
- Vibration dampened
- Cold insulated handle
- Ultra-light casing from robust two component plastic



Technical data:

Chisel holder:	10.2 mm
Number of blows:	2200 strokes/min
Vibration:	2.9 ms ²
Noise performance level:	100 dbA
Noise pressure level:	100 dbA
Air consumption:	114 l/min
Operating pressure:	max. 6.3 bar (90 psi)
Min. tube diameter:	3/8"
Connection thread:	1/4"NPT

	L mm	kg
515.3881	292.0	2.17



Impact exhaust slitting chisel

- Suitable for use with industry-standard percussion hammers (10.0 mm holder)
- Universal application for work on exhaust systems
- Specially designed sounds enable the exhaust pipe (inner or outer) to be replaced to be correctly separated from the remaining one, without damaging it.
- Rotatable
- Expansion of the area of application
- Exploits the vibration and impact impulses of the vibro-impact air pressure hammer
- Robust chisel, made from one single piece
- Special steel



	Substr. for	Width mm	Length mm	kg
515.3962	Internal pipe	23.0	215.0	190
515.3963	External pipe	23.0	215.0	190

Pneumatic chisel set

- Non slip soft grip handle
- Air exhaust through the handle
- Ultra light housing from two component plastic
- Ergonomic designed handle
- For ripping out car body sheet metal with pneumatic air
- Ideal for industry
- Also suitable for loosening firmly rusted fittings
- Stepless impact regulation
- Vibration dampened
- Cold insulated handle
- Includes 1/4" coupling connector
- In durable plastic case



Technical data:

Chisel holder:	10 mm
Number of blows:	3000 blows/min
No load current:	3200 r.p.m.
Vibration:	8,5 ms ²
Noise performance level:	99.2 dbA
Noise pressure level:	110.9 dbA
Air consumption:	270 l/min
Operating pressure:	max. 6.3 bar (90 psi)
Min. tube diameter:	3/8" - 10 mm
Connection thread:	1/4"PT

515.3810	7 pcs	Pneumatic chisel set	1,70
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consists of:

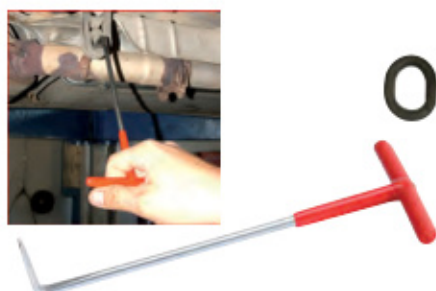
515.3801	Pointed chisel	137
515.3802	Sheet metal cutting chisel	147
515.3803	Rivet cutting chisel, curved	146
515.3804	Flat chisel 19 mm	150
515.3805	Curved cutting chisel	146
515.3806	Pneumatic chisel with 1/4" connector	1550
515.3815	Holder for air chisel set	126

EXHAUST PIPE HOOK TOOLS

Specially exhaust hook tool for exhaust rubber mountings

- T handle with plastic cover
- Hook has a 100° angle
- For the dismantling and assembly of exhaust rubber stop ring
- For vehicles with rubber ring mountings
- Chrome vanadium

Application range: Volkswagen, Opel, etc.

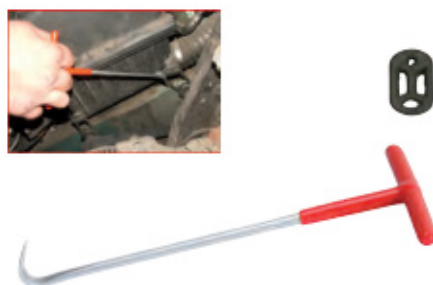


150.1241	90°	L mm	200.0	80
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Specially exhaust hook tool for exhaust profile rubber mountings

- T handle with plastic cover
- Hook has a 100° angle
- For the dismantling and assembly of exhaust rubber stop ring
- For vehicles with profile rubber mountings
- Chrome vanadium

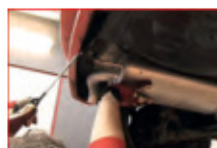
Application range: Ford, BMW, etc.



150.1242	100°	L mm	200.0	80
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Specially exhaust hook tool for exhaust rubbers

- T handle with plastic cover
- For the dismantling and assembly of exhaust rubber stop ring
- For all types of exhaust rubbers
- Grasps two rings and presses this towards the top
- Chrome vanadium



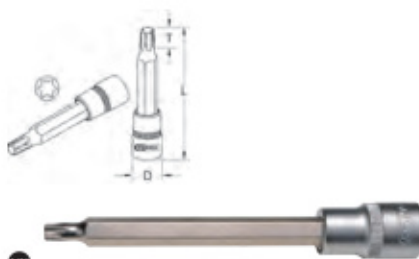
150.1240	L mm	200.0	230
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SPECIAL TOOL EGR/PRESSURE SENSOR

Exhaust regulation valve socket for Opel

- For assembling and dismantling the EGR valve on the linear exhaust return system
- Extra-long execution
- With press-fitted nickel-plated bit lining
- Internal square drive to DIN 3120/ISO 1174 with ball stop groove
- For manual operation
- Matt finish
- Chrome vanadium

Areas of application: Opel 1.4/1.8 16V DOHC engines



911.1938	T45	D mm	22	L mm	140.0	T mm	72.0	125
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Cleaning tool for Mercedes Benz exhaust return systems casing

- Ideal for cost-efficient cleaning of drilled holes in the exhaust gas back pressure sensor
- Custom-fit drill with drilling guide
- Includes spacer for further engines
- Makes it possible to repair the exhaust return system casing, instead of replacing it
- Avoids considerable work assembling and dismantling the exhaust return system casing
- Enables the complete and damage-free removal of burnt-on deposits
- Special tool steel

Area of application: Mercedes Benz Common-Rail engines OM 651, 646, etc.



150.1522	4 pcs	L mm	120.0	Ø mm	24.0	140
----------	-------	------	-------	------	------	-----

consists of:

150.1524	Special drill	5
150.1528	Drilling guide	60
150.1529	Spacer sleeve	8
150.1531	Drive head	43

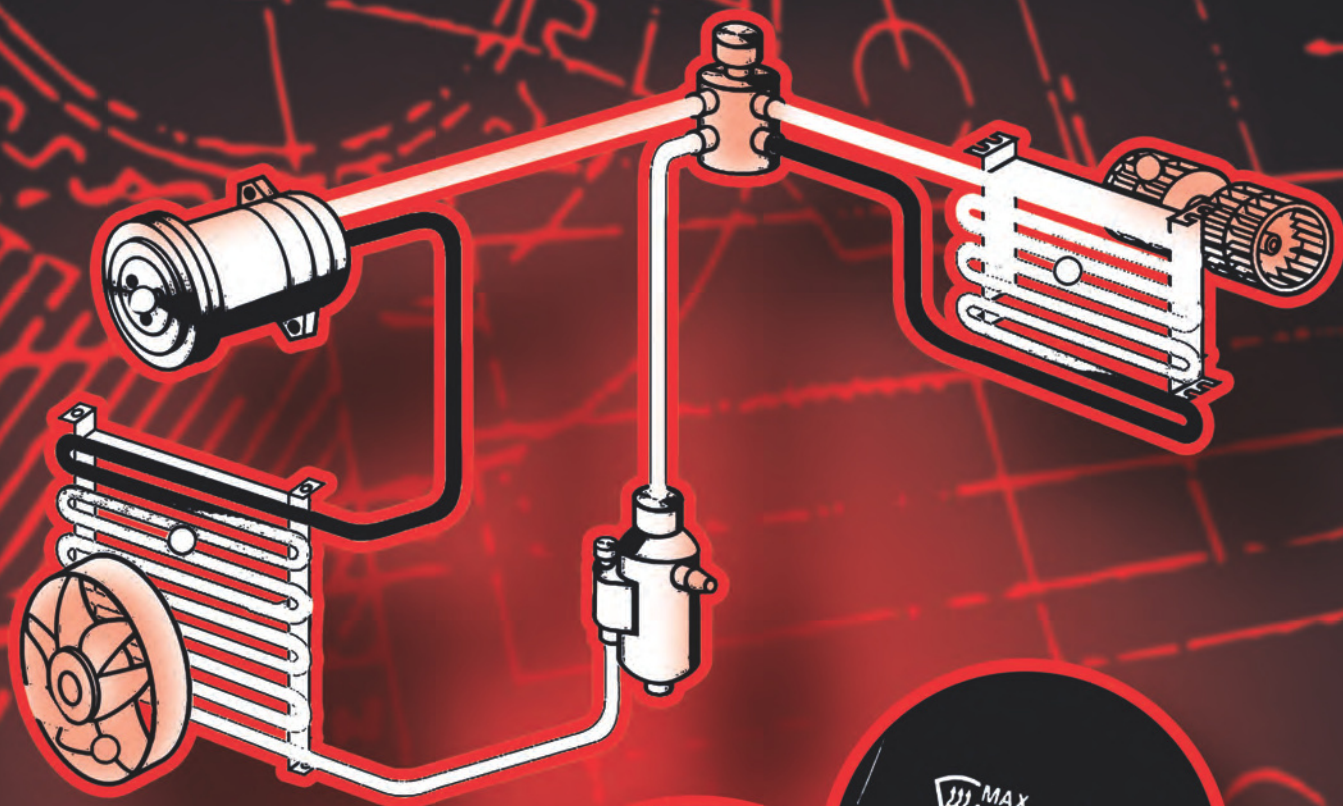
EXHAUST PRESSURE DETECTOR

Exhaust pressure detector -1 to +3 bar

- Quick and easy catalyst diagnosis
- Used in place of Lambda sensors
- Precise testing of exhaust pressure
- Professional troubleshooting
- Universal application
- In durable plastic storage case



150.1523	Connection thread mm	M18x1.5	Diameter	Ø 63 mm	Tube length mm	300	1.90
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Innovation is
our mission!



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WIRE CONNECTOR UNLOCKING DEVICE

Pipe connection release clip set for CLIC spring closing pipe coupling

- For the assembly and disassembly of hard to open CLIC spring closure pipe coupling for fuel, air-conditioning, air and hydraulic pipes
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the pipes
- Ideally suited to passenger cars, transporters and MPVs
- Suitable for metric couplings
- Special plastic

Application range: Mitsubishi, Honda, Volvo, Nissan



	Ø mm	Weight
115.1095	6 - 8 - 10 - 12 - 15 - 16	60

Pipe connection release clip set for CLIC spring closing pipe coupling

- For the assembly and disassembly of hard to open CLIC spring closure pipe coupling for fuel, air-conditioning, air and hydraulic pipes
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the pipes
- Ideally suited to passenger cars, transporters, MPVs, commercial vehicles, tractors, agricultural and construction machinery
- For almost all pipe connections on European, Asian and American vehicle types
- Suitable for metric and imperial couplings
- Special plastic

Application range: Chrysler, Ford, GM, Daihatsu, Honda, Mercedes, Mitsubishi, Nissan, Opel, Saab, Scania, Volvo, Volkswagen, etc.



	Ø mm	Weight
115.1089	6,35 (1/4") - 7,9 (5/16") - 9,5 (3/8") - 12,7 (1/2") - 15,9 (5/8") - 19,0 (3/4") - 22,2 (7/8")	90

Disassembly tool set for CLIC spring closure pipe coupling

- For the disassembly of hard to open CLIC spring closure pipe coupling for fuel, air-conditioning, air and hydraulic pipes
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the pipes
- Ideally suited to passenger cars, transporters, MPVs, commercial vehicles, tractors, agricultural and construction machinery
- For almost all pipe connections on European, Asian and American vehicle types
- Suitable for metric and imperial couplings
- Aluminium

Application range: Chrysler, Ford, GM, Daihatsu, Honda, Mercedes, Mitsubishi, Nissan, Opel, Saab, Scania, Volvo, Volkswagen, etc.



	Ø mm	Weight
115.1285	7,9 (5/16") - 9,5 (3/8") - 12,7 (1/2") - 15,9 (5/8") - 19,0 (3/4") - 22,2 (7/8")	250

consists of:

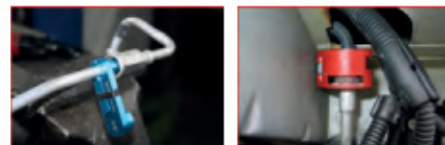
	Description	Weight
115.1274	Unlocking-Ring, 5/16", aluminum gold, oil and fuel lines, etc	35
115.1275	Unlocking-Ring, 3/8", aluminum blue, oil and fuel lines, etc	36
115.1276	Unlocking-Ring, 1/2", aluminum yellow, oil and fuel lines, etc	36
115.1277	Unlocking-Ring, 5/8", aluminum green, oil and fuel lines, etc	41
115.1278	Unlocking-Ring, 3/4", aluminum black, oil and fuel lines, etc	42
115.1279	Unlocking-Ring, 7/8", aluminum red, oil and fuel lines, etc	43
115.1282	Replacement-Rubber ring-Set, 6- pcs for Unlocking-Rings	1



MASTER pipe connector release clip set for CLIC spring clamp pipe coupling

- For the assembly and disassembly of hard to open CLIC spring closure pipe coupling for fuel, air-conditioning, air and hydraulic pipes
- No damage to the compression coupling, fuel pipes and fuel hoses
- Quick and easy separation of the fuel pipes
- Ideally suited to passenger cars, transporters, MPVs, commercial vehicles, tractors, agricultural and construction machinery
- For almost all pipe connections on European, Asian and American vehicle types
- Suitable for metric and imperial couplings
- Special plastic

Application range: Air-conditioning, fuel and air lines as well as hydraulics lines



	Description	Weight
115.1260	MASTER pipe connector release clip set for CLIC spring clamp pipe coupling	1.00

consists of:

	Description	Weight
115.1261	Unlocking clip 1/4", plastic white, for air conditioning and fuel lines	1
115.1262	Unlocking clip 5/16", plastic white, for air conditioning and fuel lines	1
115.1263	Unlocking clip 3/8", plastic white, for air conditioning and fuel lines	1
115.1264	Unlocking clip 1/2", plastic white, for air conditioning and fuel lines	5
115.1265	Unlocking clip 5/8", plastic white, for air conditioning and fuel lines	7
115.1266	Unlocking clip 3/4", plastic white, for air conditioning and fuel lines	8
115.1267	Unlocking clip 7/8", plastic white, for air conditioning and fuel lines	9
115.1268	Unlocking clip open 5/16", steel black, hydraulic lines	37
115.1269	Barrel-Unlocking with spring, red 3/4", Air conditioning lines 3/8" Nominal size: 6er	12
115.1270	Barrel-Unlocking with spring, blue 1/2", Air conditioning lines 3/8" Nominal size: 8er	13
115.1271	Barrel-Unlocking with spring, black 5/8", Air conditioning lines 3/8" Nominal size: 10	12
115.1272	Barrel-Unlocking with spring, white 3/4", Air conditioning lines 3/8" Nominal size: 12	12
115.1273	Double Unlocking Ring, 5/16"x3/8", for use on air conditioning lines	54
115.1274	Unlocking-Ring, 5/16", aluminum gold, oil and fuel lines, etc	35
115.1275	Unlocking-Ring, 3/8", aluminum blue, oil and fuel lines, etc	36
115.1276	Unlocking-Ring, 1/2", aluminum yellow, oil and fuel lines, etc	36
115.1277	Unlocking-Ring, 5/8", aluminum green, oil and fuel lines, etc	41
115.1278	Unlocking-Ring, 3/4", aluminum black, oil and fuel lines, etc	42
115.1279	Unlocking-Ring, 7/8", aluminum red, oil and fuel lines, etc	43
115.1280	Lever-Release open 5/16", Steel black	84
115.1281	Fork plug-Unlocking, metal black	15
115.1282	Replacement-Rubber ring-Set, 6- pcs for Unlocking-Rings	1

THERMOMETER

Rod thermometer

- Controls temperature of air streams through air channels
- Controls the water temperature
- With long and narrow measuring instruments
- Scale with °C and °F measurements



	L mm	Working range °C	Working range °F	Icon
150.1963	210.0	0 - 200	0 - 400	27



Digital rod thermometer

- Controls temperature of air streams through air channels
- Controls the water temperature
- With long, narrow measuring instruments
- Good readability
- Includes 9V block battery
- Includes hold function
- Includes LCD display



	Length mm	Working range °C	Icon
150.1968	125.5	-50 - 150	145

Infrared thermometer

- Laser pistol for non contact temperature measurement
- Ideally suited for the automotive sector, industrial, and construction usage
- Chemical and foodstuffs industry
- Laser measuring beam with a red measuring point
- Illuminating Display
- LCD Digital display
- Automatic switching off
- Includes 9V block battery
- Stable plastic housing

Application range: In turning motors, difficult to access places, fluid, under current line directions, in heating appliances, gas and, air-conditioning, coolant systems, brake discs aggressive chemicals and groceries



Technical data:
 Switchable: °C / °F
 Working range: -50° - 500 °C
 Emission factor: adjust to 0.95
 Power output max: 1mW
 Power requirement: 9V block battery

	Icon
150.3040	Infrared thermometer 250

UV LEAK DETECTION LAMPS

Flexible UV inspection lamp

- LED UV lamp
- Flexible shaft
- Localizes leaks in air conditioning systems
- Clip for the breast pocket
- Approx. 60 hours lamp duration
- Includes 3 x AAAA batteries
- Impact proof housing



	L mm	D mm	Score tube	Icon
550.1165	450.0	7.5	550.1167	150

Cordless UV leak detection light set

- Wireless design
- LED UV lamp
- Extremely high light power
- Ideal for locating leaks in air conditioning pipes
- Great for detecting leaks at close range
- With long cable for flexible use
- Includes UV glasses
- Compatible with all industry-standard leak detection additives
- Includes 3 x AAA batteries
- Impact-proof casing



	Icon
550.1190	2 pcs Cordless UV leak detection light set 400

consists of:

	Icon
550.1191	Battery-powered UV leak detection lamp 150
550.1182	UV glasses 42

UV leak detection light set

- UV lamp
- Extremely high light power
- Ideal for locating leaks in air conditioning pipes
- Great for detecting leaks at close range
- Revolving head
- Self-powering by attaching crocodile clips to a 12V battery
- With long cable for flexible use
- Includes UV glasses
- Compatible with all industry-standard leak detection additives
- Impact-proof casing



	Icon
550.1180	2 pcs UV leak detection light set 460

consists of:

	Icon
550.1181	UV leak detection lamp 360
550.1182	UV glasses 42

A/C Diagnostic sight glass

- Ideal for rapid diagnosis and the almost complete replacement of the a/c oil
- Easy to use
- Easy adaption of a/c diagnostic tool
- Built-in filter keeps debris back in the glass
- Diagnosis at rest, visually check for any water, debris and quality of a/c oil
- Emptying the greenhouse gas on the low pressure side
- In durable plastic storage case



	Icon
550.1195	3 pcs A/C Diagnostic sight glass 3,00

consists of:

	Icon
550.1196	Main unit with transparent sight glass 1100
550.1197	Low pressure hose 560
550.1198	High pressure hose 270

LEAK DETECTION DEVICES

Air condition leak detector

- Ideal for locating leaks in air conditioning pipes
- Detects cooling agent concentration in the surrounding air
- Reacts to R134a, R12, R11, R500, R503, R22, R123, R124, R502, R404a, R125, AZ-50, HP62 and MP39
- No cross-sensitivity in the presence of carrier gas and air movement
- With flexible stainless steel tube neck (355 mm) for places that are hard to access
- Visual and aural signal upon detection of a leak
- Adjustable sensitivity
- Leak detection rate up to 5 g/year
- Approximately 10 seconds waiting time
- Service life of the sensor is approximately 100 hours
- Impact-proof casing
- Includes 2 x D batteries
- Includes replacement sensor
- In durable plastic storage case



	Length mm	Height mm	Width mm	Replacement sensor	Weight
550.1192	229.0	65.0	65.0	550.1194	560

AIR CONDITIONING SYSTEM TOOLS

4in1 Air conditioning ratchet spanner, reversing

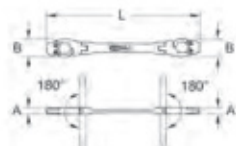
- For 3/16", 1/4", 5/16" + 3/8"
- Clockwise and anticlockwise switch
- Special steel



	H1 mm	H2 mm	L mm	Weight
130.0122	22.0	22.0	140.0	120

CHROMEplus® ratchet spanner with revolving head

- 6 point
- Straight form
- 180° revolving head
- Ratchet function
- Suitable for force fit applications
- Chrome plated and mirror polished
- Chrome vanadium



	mm	A mm	B mm	L mm	Weight
518.0332	8x9	8.5	14.8	123.0	56
518.0334	10x11	10.0	18.4	156.0	116
518.0336	12x13	11.2	21.1	179.0	170
518.0338	14x15	12.1	24.6	208.0	240

CHROMEplus® ratchet spanner set with revolving head

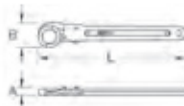
- 6 point
- Straight form
- 180° revolving head
- Ratchet function
- Suitable for force fit applications
- Chrome plated and mirror polished
- Chrome vanadium



	Weight
518.0330	4 pcs 8x9 - 10x11 - 12x13 - 14x15 mm 600

Ratchet ring spanner, clamp head

- 12 point
- Straight form
- Hanging hole
- From 27 mm with rubber handle
- Chrome plated handle
- Head phosphate finish
- Chrome vanadium

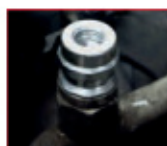


	mm	A mm	B mm	L mm	Weight
500.5007	7	7.0	21.0	137.0	81
500.5008	8	7.0	21.0	137.0	83
500.5009	9	7.0	22.0	137.0	83
500.5010	10	7.0	22.0	137.0	82
500.5011	11	7.0	24.0	139.0	200
500.5012	12	7.0	28.0	140.0	88
500.5013	13	7.0	28.0	140.0	200
500.5014	14	7.0	28.0	140.0	88

Air condition service socket set

- 8 edge
- Ideally suited for assembly of 8-edge service valves (R 134a) for low and high pressure
- Can be used for factory-fitted air conditioning systems
- Extra-thin
- Internal square in accordance with DIN 3120/ISO 1174
- For manual operation
- Chrome-plated and mirror-polished
- Chrome vanadium

Areas of application: Audi, BMW, DaimlerChrysler, Porsche, Volkswagen, etc.



	Weight
550.1170	2 pcs Air condition service socket set 116

consists of:

		Weight
550.1171	Air conditioning system low pressure valve socket, 12 mm	50
550.1172	Air conditioning system high pressure valve socket, 15 mm	67

Air conditions valve bit socket set

- Ideally suited for the assembly and dismantling of the throttle valve for low pressure and high pressure
- Can be used for factory-fitted air conditioning systems
- Extra-thin
- Female square in accordance with DIN 3120/ISO 1174
- For manual operation
- Phosphated
- Chrome molybdenum

Areas of application: Audi, BMW, DaimlerChrysler, Porsche, Volkswagen, etc.



	Weight
550.1175	2 pcs Air conditions valve bit socket set 46

consists of:

		Weight
550.1176	Throttle valve bit socket, 2.2 mm	22
550.1177	Throttle valve bit socket, 3.2 mm	23

Torque valve screwdriver 0.25 Ncm, long

- Ideal for short or long rubber sealing valve usage (VG5)
- Prevents the over tightening and damage of the rubber seal
- When torques is achieved, skips and can also be held audably
- Also suitable for use as a socket cap driver
- With single component handle



	mm	L mm	Weight
150.2025	0.25	120.0	50

Slide hammer puller for dryer cores

- Ideally suited for removing sealing plugs for dryer cores
- Necessary tool for new capacitor constructions
- Due to strong oxidation, it is not possible to disassemble the dryer
- Therefore, the entire capacitor must be dismantled
- Universally applicable for sealing plugs with 5,0 mm internal threads
- Enormous time and cost savings
- Special steel

Areas of application: Audi, Seat, Škoda, Opel, Ford, Volkswagen, etc.



	Length mm	Ø mm	
550.1178	370,0	5,0	500

Bit socket set for tamperproof five star screws

- Five star with front drill holes
- For the assembly and disassembly of safety bolts on temperature sensors and air volume measuring instruments
- For modern diesel injection systems (pump-nozzle device, pump and electricity nozzle, common rail), e.g. Bosch injection systems
- Internal square drive to DIN 3120/ISO 1174 with ball stop groove
- For manual operation
- Matt finish
- Chrome vanadium
- Includes storage rail



	7 pcs	TS10 - TS15 - TS20 - TS25 - TS27 - TS30 - TS40	
911.1470	7 pcs	TS10 - TS15 - TS20 - TS25 - TS27 - TS30 - TS40	160

CLASSIC Bit set for tamperproof five star screws

- Five star with front drill holes
- For the assembly and disassembly of safety bolts on temperature sensors and air volume measuring instruments
- For modern diesel injection systems (pump-nozzle device, pump and electricity nozzle, common rail), e.g. Bosch injection systems
- With external hexagon drive to DIN 3126/ISO 1173 - E 6.3
- For manual operation and electric screwdriver
- With a 1/4" bit adaptor socket
- Ideally suited for fittings in trade and industry
- Nickel-plated
- Special steel



	8 pcs	TS10 - TS15 - TS20 - TS25 - TS27 - TS30 - TS40	
911.1480	8 pcs	TS10 - TS15 - TS20 - TS25 - TS27 - TS30 - TS40	50

Special socket for expansion valves

- Ideally suited for the assembly and dismantling of expansion valves
- Can be used for factory-fitted air conditioning systems
- TX
- Internal square drive to DIN 3120/ISO 1174 with ball stop groove
- With press-fitted nickel-plated bit lining
- For manual operation
- Matt finish
- Chrome vanadium

Areas of application: Audi, Volkswagen, etc.



	D mm	L mm	T mm		
911.3885	T45	18,0	50,0	24,0	50

SEALING RINGS

O-rings assortment for HNBR air-conditioning

- In accordance with DIN 3771
- Made from HNBR: Specially for use on air conditioning lines
- In plastic storage case



	225 pcs	O-rings assortment for HNBR air-conditioning	
20 x		3,0x1,0 mm / DIN 3771	120
20 x		4,0x1,0 mm / DIN 3771	
20 x		4,5x2,0 mm / DIN 3771	
20 x		5,0x2,0 mm / DIN 3771	
20 x		6,0x2,0 mm / DIN 3771	
20 x		6,0x2,5 mm / DIN 3771	
20 x		6,0x3,0 mm / DIN 3771	
20 x		7,0x2,0 mm / DIN 3771	
20 x		8,0x2,0 mm / DIN 3771	
5 x		9,0x2,0 mm / DIN 3771	
5 x		10,0x2,0 mm / DIN 3771	
5 x		12,0x3,0 mm / DIN 3771	
5 x		13,0x3,0 mm / DIN 3771	
5 x		14,0x2,5 mm / DIN 3771	
5 x		17,0x2,5 mm / DIN 3771	
5 x		18,0x4,0 mm / DIN 3771	
5 x		20,0x2,0 mm / DIN 3771	
5 x		22,0x2,0 mm / DIN 3771	

O-rings assortment for HNBR air conditioning

- Made from HNBR: Specially for use in air conditioning lines
- In plastic storage case

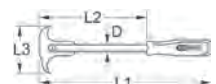


	270 pcs	O-rings assortment for HNBR air conditioning	
20 x		5,29x1,78 mm	150
20 x		6,07x1,78 mm	
20 x		6,80x1,90 mm	
20 x		7,65x1,78 mm	
40 x		7,80x1,90 mm	
20 x		8,80x1,90 mm	
20 x		10,00x2,00 mm	
15 x		10,70x2,62 mm	
15 x		11,00x2,00 mm	
15 x		11,00x1,78 mm	
15 x		12,90x2,00 mm	
10 x		13,90x1,78 mm	
10 x		14,00x2,00 mm	
10 x		17,00x1,78 mm	
10 x		17,00x2,00 mm	
10 x		17,00x3,53 mm	

SEALING RING HOOK TOOLS

Gasket ring dismantling tool

- Burnished
- Chrome vanadium



	L1 mm	L2 mm	L3 mm	D mm	
550.1060	300,0	195,0	85,0	12,0	380

Hook tool set

- Ideal for removing and use of O rings and seals
- Special steel



550.1040	2 pcs	Hook tool set	30
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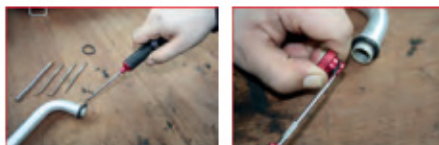
consists of:

550.1041	Hook tool with double blade 90° short/ 180° short angled	11
550.1042	Hook tool with double blade 45° long / 90° long	11



Magnet and hook tool set

- Ideal for removing and inserting O-rings and seals
- With telescopic magnet attachment and replaceable hook
- Storage compartment in the handle for the various attachments
- Special steel



550.1080	6 pcs	Magnet and hook tool set	70
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consists of:

550.1081	Basic unit	35
550.1082	Telescopic magnet attachment, 90 - 390 mm	13
550.1083	Hook attachment, straight, 75 mm	5
550.1084	Hook attachment, 90°, 75 mm	5
550.1085	Hook attachment, 120°, 75 mm	5
550.1086	Hook attachment, lateral bend, 75 mm	5

Hook tool set

- Ideal for removing and use of O rings and seals
- With one component handle
- With hanging hole
- Special steel



550.1045	4 pcs	Hook tool set	120
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consists of:

550.1046	Hook tool 120mm blade, straight version	27
550.1047	Hook tool 120mm blade, 45° angled version	27
550.1048	Hook tool 120mm blade, 90° angled version	27
550.1049	Hook tool 120mm blade, 135° angled version	27

Master hook tool set

- Ideal for removing and use of O rings and seals
- With hanging hole
- Special steel



550.1070	9 pcs	Master hook tool set	680
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consists of:

550.1046	Hook tool 120mm blade, straight version	27
550.1047	Hook tool 120mm blade, 45° angled version	27
550.1048	Hook tool 120mm blade, 90° angled version	27
550.1049	Hook tool 120mm blade, 135° angled version	27
550.1071	Hook tool large, straight	91
550.1072	Hook tool large, 90° offset	105
550.1073	Hook tool large, sickle form	88
550.1074	T-handle hook tool, S-form small	42
550.1075	T-handle hook tool, S-form big	96

CLEANING DEVICES

Plasma air-cleaner with ionisator technology

- Eliminates odours and disinfects the interior of the vehicle
- Compact, lightweight, and high ozone emission
- For use in closed passenger compartments
- In odour elimination mode, it switches off automatically after 60 minutes
- In disinfection mode, it automatically switches off after 30 minutes and immediately switches to odour elimination mode for 30 minutes
- Works without chemical additives, guaranteed to leave no residue
- It leaves no traces, even on sensitive surfaces
- Removes mould, bacteria, fungus and mites
- Includes an active carbon HEPA technology replacement filter
- Simple operation



Technical data:

Dimensions:	173x122x49 mm
Battery type:	Lithium-ion
Rechargeable battery:	850 mAh
Operational voltage:	DC 12-24V / AC 100-240V / 50/60 Hz
Power consumption:	5 W
Ozone transformation:	5 mg/h
Negative Ion concentration:	3000 pcs/cm ³
Covering scope:	15m ²

	Replacement filter	Serial no.	
550.1183	550.1199	550.1189	360



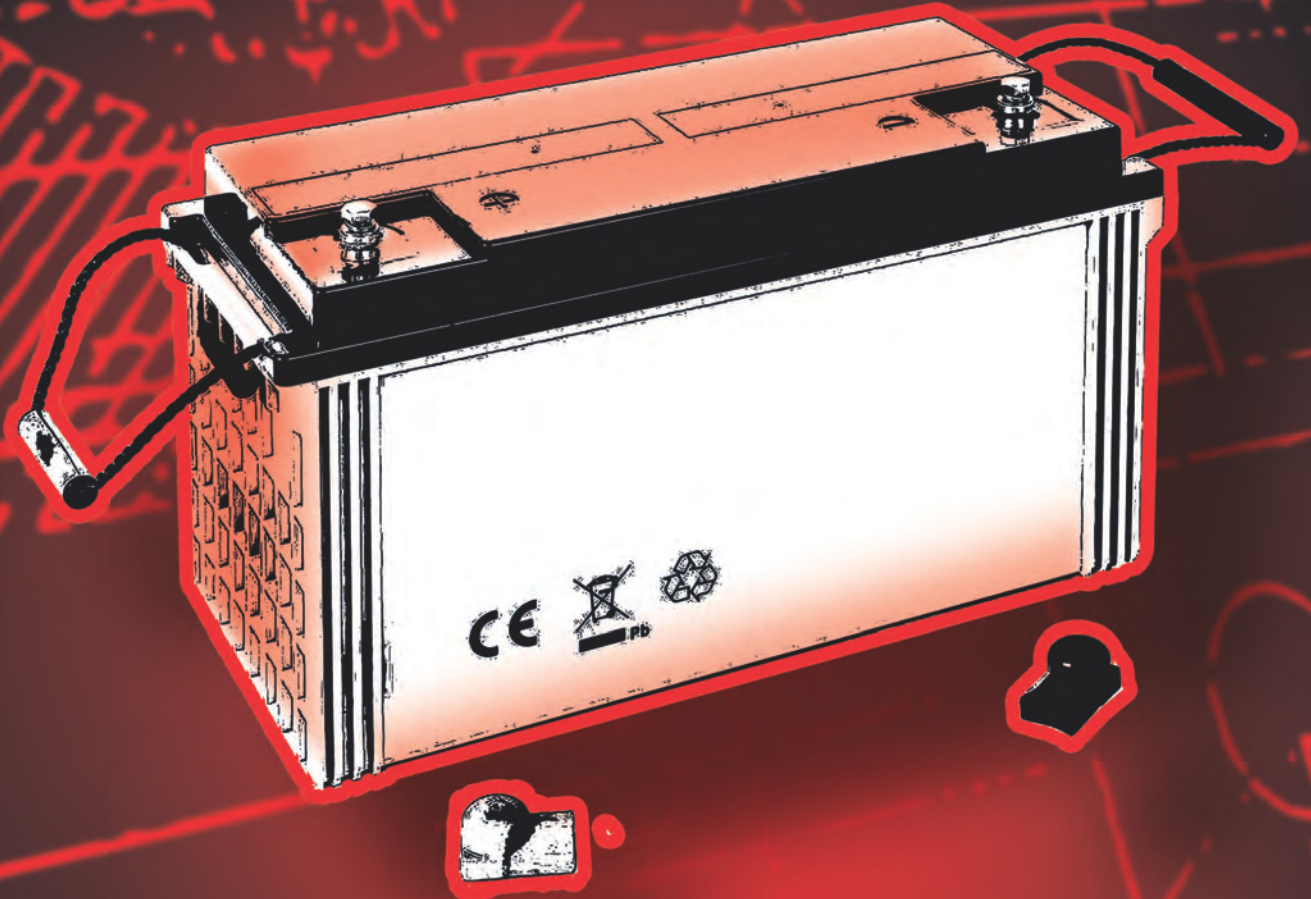
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Innovation is
our mission!



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POLE TERMINAL EXTRACTOR

QuickGrip 2-jaw pole terminal extractor with t-bar

- 2-jaw
- Ideally suited for removing the battery pole terminal
- With t-bar
- With conical tensioning screw for proportional distribution of the clamping force
- Self-centring extraction hook
- Extremely robust spindle with inductively hardened thread
- Special steel



	A	B	max	mm	D	E	F	G	
	mm	mm	t	mm	mm	mm	mm	mm	mm
700.1190	15	32	1,2	M8 x 50	2,5	9	10,5	11	300

Pole clamp 2-jaw puller

- 2-jaw
- Ideally suited for removing the battery pole terminal
- Independent pressure of the hook
- Extremely robust spindle with inductively hardened thread
- Screwed
- Sturdy hook
- Special steel



	A	B	max	mm	D	E	F	G	
	mm	mm	t	mm	mm	mm	mm	mm	mm
620.3101	10-60	40	1	M8x85	10	1	5	12	8
620.3102	10-70	44/74	1,2	M8x85	10	1	5	12	8
620.3103	10-90	84	2	M10x105	12	1,8	10	20	12

2-jaw pole terminal extractor with t-bar

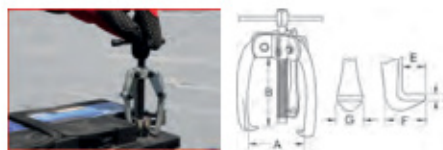
- 2-jaw
- Ideally suited for removing the battery pole terminal
- With t-bar
- Independent pressure of the hook
- Extremely robust spindle with inductively hardened thread
- Screwed
- Sturdy hook
- Special steel



	A	B	max	mm	D	E	F	G	
	mm	mm	t	mm	mm	mm	mm	mm	mm
700.1164	10-60	40	0,5	M10 x 60	2,6	5,5	12,8	10,0	145
700.1165	10-60	60	0,5	M10 x 80	3,7	5,8	12,4	10,1	173
700.1166	10-70	80	0,5	M10 x 100	4,0	9,2	16,8	14,0	245

3-jaw pole terminal extractor with t-bar

- 3-jaw
- Ideally suited for removing the battery pole terminal
- With t-bar
- Independent pressure of the hook
- Extremely robust spindle with inductively hardened thread
- Screwed
- Sturdy hook
- Special steel

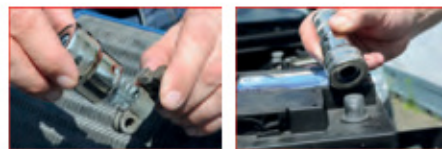


	A	B	max	mm	D	E	F	G	
	mm	mm	t	mm	mm	mm	mm	mm	mm
700.1167	10-60	40	0,75	M10 x 60	2,3	5,5	12,3	10,0	181
700.1168	10-60	60	1,0	M10 x 80	3,0	5,5	12,5	10,0	215
700.1169	10-70	80	1,0	M10 x 100	3,0	8,0	15,2	14,1	323

POLE TERMINAL CLEANING

Battery pole and clamp cleaning brush

- For the removal of contact corrosion and acid deposits on battery poles and pole terminals
- Can be used for internal and external cleaning of the poles
- Improves contacts
- Reduces the susceptibility of start-up difficulties
- External brush diameter equates to 20 mm
- Internal brush diameter equates to 18 mm
- Bristles made of metal
- Plastic housing



	Length	
	mm	mm
700.1197	120,0	64



Battery pole and terminal cleaning mill cross

- For milling contact corrosion and acid deposits on battery poles and pole terminals
- Can be used for internal and external cleaning of the poles
- Improves contacts
- Reduces the susceptibility of start-up difficulties
- Conical milling insert made of steel
- Cast light alloy body material



700.1195	Battery pole and terminal cleaning mill cross	150

BATTERY PLUG TOOLS

Battery plug turner

- For the damage-free screwing in and out of battery plugs
- Special slot profile for battery plug
- Universal application also with short overall height
- With dual component handle
- Chrome plated and mirror polished
- Chrome vanadium



	mm	L mm	W
550.1681	14,5 x 1,7	95,0	72

Battery plug turner with T-handle

- For the damage-free screwing in and out of battery plugs
- Special slot profile for battery plug
- Universal application also with short overall height
- With T-handle
- Chrome plated and mirror polished
- Chrome vanadium



	mm	L mm	W
550.1682	14,5 x 1,7	95,0	62

Battery plug turner with t-bar

- For the damage-free screwing in and out of battery plugs
- Special cross profile
- Universal application also with short overall height
- With t-bar
- Chrome plated and mirror polished
- Chrome vanadium



	Blade thickness mm	shank Ø mm	Blade height mm	Length mm	W
550.1686	1.3	12.0	13.0	90.0	87

Battery plug turner with t-bar

- For the damage-free screwing in and out of battery plugs
- Special cross profile
- Universal application also with short overall height
- With t-bar
- Chrome plated and mirror polished
- Chrome vanadium



	Blade thickness mm	shank Ø mm	Blade height mm	Length mm	W
550.1687	1.8	12.0	13.0	90.0	87

BATTERY CELL FILLING

Measuring cup set

- Configuration of practical measuring cup sizes
- Versatile application possibilities
- Transparent
- Break-proof
- Red primed scale division
- Resistant to oil, petrol and acid
- With handle and spout
- PE (polyethylene)

Scales: L/ml, cups, Oz, quart



		W
150.9205	3 pcs 250 - 500 - 1.000 ml	227

Funnel set

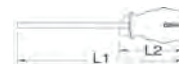
- Configuration of practical funnel sizes
- Versatile application possibilities
- Red
- Break-proof
- Resistant to oil, petrol and acid
- Grip strap for convenient use
- HDPE (high density polyethylene)



		W
150.9240	5 pcs Ø 50 - Ø 75 - Ø 95 - Ø 115 - Ø 150 mm	251

Battery cell filler

- Ideal aid for the drip-free filling or aspiration of battery acid
- Suitable for battery acid and distilled water
- With rubber ball and rubber tube
- Special plastic
- Resistant to oil, petrol and acid



	L1 mm	L2 mm	W
160.0738	245.0	130.0	92

Battery filler bottle

- Ideal aid for drip-free filling
- Suitable for battery acid and distilled water
- Acid-resistant
- With flexible rubber tube
- Special plastic



	W	W
550.1701	1 l	300

Automatic battery cell filler, 2 litres

- Ideal aid for drip-free filling
- Stops automatically if the optimal filling level is reached
- With automatic closure
- The built-in special valve in the cylinder head automatically stops the flow when the fill level is reached
- Suitable for battery acid and distilled water
- Acid-resistant
- Special plastic



	W	W
550.1683	2 l	300

Mini transfer pump

- Ideal aid for transferring in emergencies
- Suitable for battery acid, fuels, oils and distilled water
- The hoses are attached to the balloon holder using supplied hose clamps
- Acid-resistant
- Special plastic



	Tube inner Ø mm	tube length mm	
150.1665	8.0	2 x 900	320

Transfer pump

- Ideal aid for easy transferring and pumping
- Suitable for battery acid, fuels, oils and distilled water
- Acid-resistant
- With high quality pump body and reinforced pump handle
- Special plastic



	Tube inner Ø mm	tube length mm	
150.1660	12.0	2 x 1.300	465

BATTERY CARRYING HANDLES

Battery carrying handle

- Allows for the easy removal and carrying of all batteries
- With rubber-coated clamping jaws
- Size adjustable clamp
- Ergonomic weight distribution
- With rubber grip



	Open width mm	
700.1196	120 - 190	560

VEHICLE POWER SUPPLY VOLTAGE RETAINER

12V OBD II Electrical system suspense keeper

- Supplies the vehicle with voltage while replacing the battery so that various settings, such as radio codes, seat memory, etc., are preserved
- Prevents data loss in the on-board electronics while replacing the battery
- Connection takes place via the OBD II bushing and cigarette lighter connection of a battery-powered start-up aid
- Readiness indicator checks and indicates safe connection establishment



	Cable length mm	
550.1705	2300	200

12V OBD II Electrical system suspense keeper

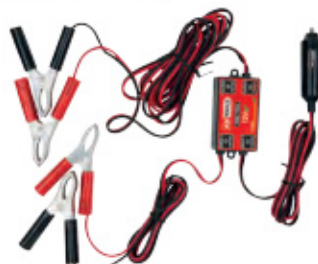
- Supplies the vehicle with voltage while replacing the battery so that various settings, such as radio codes, seat memory, etc., are preserved
- Prevents data loss in the on-board electronics while replacing the battery
- The connection takes place via the OBD II bushing and crocodile pole clamps of an external battery
- Readiness indicator checks and indicates safe connection establishment



	Cable length mm	
550.1706	5000	350

12V vehicle power supply voltage retainer

- Supplies the vehicle with voltage while replacing the battery so that various settings, such as radio codes, seat memory, etc., are preserved
- Prevents data loss in the on-board electronics while replacing the battery
- Dual connection option via cigarette lighter connection or battery terminals
- Includes surge protection at the outlet
- Audible voltage spike indicator
- Display in the event of polarity confusion
- Readiness indicator checks and indicates safe connection establishment



	Cable length mm	
550.1723	3600	540

BATTERY TESTER

Acidimeter for battery fluid

- For the inspection of the acidity of the battery fluid
- Easy to use: Suction, read, release
- Glass cylinder length is 11 cm
- With suction bellows
- Acid density can be read directly with a hydrometer



	L mm	
550.1680	280.0	107

Refractometer - optical tester for battery fluid and antifreeze

- For the quick and accurate testing of acidity in the battery fluid and the antifreeze content
- Can also be used for coolant and windscreen wiper fluid
- Adjustable eye piece with rubber viewing rest
- With automatic temperature compensation (ATC)
- Also suitable in ambient temperatures of less than 10°C
- Reading correction function by means of bimetallic measurement
- High quality design made from aluminium
- Good readability due to defined dividing lines
- Recalibration possible
- Includes calibration screwdriver and pipette
- In practical plastic case



Technical data:

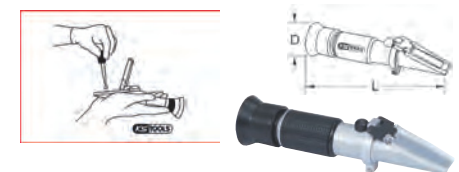
Battery acid:	acid density (measuring range 1.1 to 1.4 kg/l)
Coolant water Propylene:	temperature resistance (measuring range 0° to -50°C)
Coolant water Ethylene:	temperature resistance (measuring range 0° to -50°C)
Windscreen water:	antifreeze (measuring range 0° to -40° C)

	D mm	L mm	Glass face mm	
550.1290	40.0	149.0	40 x 13	630

Refractometer - optical tester for battery fluid , antifreeze and AdBlue® addit ives

- For the quick and accurate testing of the acidity of the battery fluid , the antifreeze content and the AdBlue® addit ives
- Can also be used for coolant and windscreen wiper fluid
- Adjustable eye piece with rubber viewing rest
- With automatic temperature compensation (ATC)
- Also suitable in ambient temperatures of less than 10°C
- Reading correction function by means of bimetallic measurement
- High quality design made from aluminium
- Good readability due to defined dividing lines
- Recalibration possible
- Includes calibration screwdriver and pipette
- In practical plastic case

*AdBlue® is a registered trademark of the Verband der Automobilindustrie e.V (VDA).



Technical data:

Battery acid:	acid density (measuring range 1.1 to 1.3 kg/l)
Coolant water Propylene:	temperature resistance (measuring range -25° to -50°C)
Coolant water Ethylene:	temperature resistance (measuring range -25° to -50°C)
Windscreen water:	antifreeze (measuring range -10° to -40° C)
for AdBlue® addit ives (VRA):	urea content (measuring range 30% - 35%)

	D mm	L mm	Glass face mm	
550.1285	40.0	160.0	40 x 13	480

Digital Multimeter incl. test probes

- Specially developed professional multimeter for automotive and commercial electrics and electronics
- With enhanced function for rpm measurement
- Dual LCD display with digital display and bar diagram display (32 segment bar graph)
- With automatic overfl w and polarity indication
- With safety mechanism for V, $\mu\text{A}/\text{mA}/\text{A}$, therefore incorrect connection is impossible
- Central 23-digit rotary switch
- Large LCD display with 3.1/2-digit, high-contrast display with background lighting
- With integrated glass fuse 250V (500 mA) – 20 x 5 mm to protect the circuits
- Includes measuring line set with test prods, crocodile clamps, inductive clamp and temperature probe
- With on/off switch and automatic temperature shutdown
- With fold-out, two-way adjustable pedestal
- Sturdy plastic housing
- With rubber protective capping

Functions:

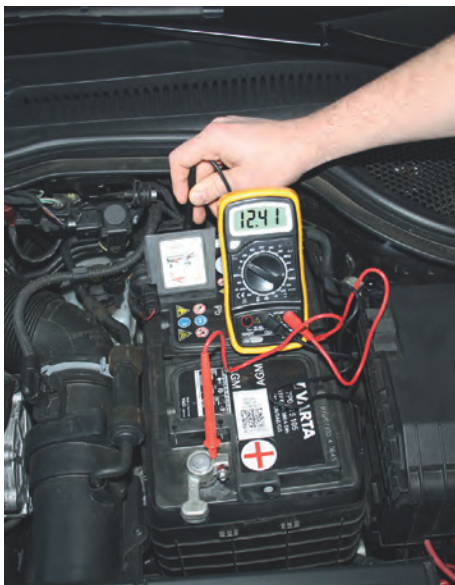
- DC and AC voltage measurement
- DC and AC current measurement
- Resistance measurement
- Dwell
- Diode test (with acoustic signal)
- RPM measurement
- Frequency measurement
- Battery check indicator



Technical data:

Co-current fl w:	200 mA - 10 A
DC voltage:	200 mV - 600 V
AC voltage:	200 V - 600 V
Resistance measurement:	200 - 2000 ohm
Temperature accuracy :	23° C \pm 5° C
Power requirement:	9V block battery
Fuse protection S1 (fine flow):	200mA/250V (20x5mm)
Storage temperature:	-10° to +50° C (14° to 122° F)
Working temperature:	0° to +40° C (32° to 104° F)

	B mm	L mm	Depth mm	g
150.1495	69.0	138.0	31	342



Digital multimeter, including test prods and crocodile clamps

- Specially developed high quality multimeter for automotive and commercial electrics and electronics
- Dual LCD display with digital display and bar diagram display (32 segment bar graph)
- With automatic overfl w and polarity indication
- With safety mechanism for V, $\mu\text{A}/\text{mA}/\text{A}$, therefore incorrect connection is impossible
- Central 11-digit rotary switch
- With automatic area selection
- Large LCD display with 3.1/2-digit, high-contrast display with background lighting
- With integrated glass fuse 250V (500 mA) – 20 x 5 mm to protect the circuits
- Includes double measuring line set with test prods and crocodile clamps
- With fold-out, two-way adjustable pedestal
- Sturdy plastic housing
- With rubber protective capping

Functions:

- DC and AC voltage measurement
- DC and AC current measurement
- Resistance measurement
- Continuity test (with acoustic signal)
- Transistor measurement
- Diode test (with acoustic signal)
- Capacity measurement
- Frequency measurement
- Data hold function
- Automatic measurement range selection



Technical data:

Co-current fl w:	326 μA - 10 A
Alternating current :	326 μA - 10 A
DC voltage:	326 mV - 1000 V
AC voltage:	3,26 V - 750 V
Resistance measurement:	32 - 32000 ohm
Capacity measurement:	326 nF - 32,6 μF
Frequency measurement:	32,60 - 200kHz
Temperature accuracy :	23° C \pm 5° C
Power requirement:	9V block battery
Fuse protection S1 (fine flow):	300mA/250V (20x5mm)
Fuse protection S2 (power-test socket) :	10A/250V (30x5mm)
Storage temperature:	-10° to +50° C (14° to 122° F)
Working temperature:	0° to +40° C (32° to 104° F)

	B mm	L mm	Depth mm	g
150.1480	91.0	189.0	31.5	834



Multimeter, including test prods, crocodile clamps, inductive clamp and temperature probe

- Specially developed high quality multimeter for automotive and commercial electrics and electronics
- Dual LCD display with digital display and bar diagram display (32 segment bar graph)
- With automatic overfl w and polarity indication
- With safety mechanism for V, $\mu\text{A}/\text{mA}/\text{A}$, therefore incorrect connection is impossible
- Central 11-digit rotary switch
- With automatic area selection
- Large LCD display with 3.1/2-digit, high-contrast display with background lighting
- With integrated glass fuse 250V (500 mA) – 20 x 5 mm to protect the circuits
- Includes double measuring line set with test prods and crocodile clamps
- With fold-out, two-way adjustable pedestal
- Sturdy plastic housing
- With rubber protective capping

Functions:

- DC and AC voltage measurement
- DC and AC current measurement
- Resistance measurement
- Dwell
- Diode test (with acoustic signal)
- RPM measurement
- Frequency measurement
- Battery check indicator



Technical data:

Co-current fl w:	326 μA - 10 A
Alternating current :	326 μA - 10 A
DC voltage:	326 mV - 1000 V
AC voltage:	3,26 V - 750 V
Resistance measurement:	32 - 32000 ohm
Frequency measurement:	32,60 - 200 kHz
Speed measurement:	300 - 12000 rpm
Temperature accuracy :	23° C \pm 5° C
Power requirement:	9V block battery
Fuse protection S1 (fine flow):	500mA/350V (20x5mm)
Fuse protection S2 (power-test socket) :	10A/250V (30x5mm)
Storage temperature:	-10° to +50° C (14° to 122° F)
Working temperature:	0° to +40° C (32° to 104° F)
Temperature measurement:	-20° C - 760° C (-4° F - 1400° F)

	B mm	L mm	Depth mm	g
150.2040	91.0	189.0	31.5	500

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6 + 12V Battery tester

- Suitable for 6 and 12 volt batteries (lead acid, gel, wet cell, MF, VRLA, calcium, AGM and deep cycle batteries)
- For the quick and simple determination of battery efficiency
- With verification function for the starter battery, starter and load circuit measurement
- With on/off toggle switch
- Connection to the battery takes place via two plastic-coated crocodile pole clamps
- Verification possible, even with prevailing load
- Measurement results are displayed via a precise analogue measuring element
- Scale for various battery sizes and types
- Analogue display 0-16 volts
- Suitable for starter batteries from 30 Ah (12 V) and 15 Ah (6 V)
- Support for pole terminals on the device
- Sturdy steel plate housing



	Load current 12 V	Load current 6 V	
550.1690	100 Ampere	50 Ampere	500

12V Digital battery tester

- Suitable for 12 volt batteries (lead acid, gel, wet cell, MF, VRLA, calcium, AGM and deep cycle batteries)
- For the quick and simple determination of battery efficiency
- Automatic control of the entire testing process after one-time actuation of the start button
- The connection to the battery takes place via two plastic-coated crocodile pole clamps
- With verification function for the starter battery, starter and load circuit measurement
- A verification is possible, even with prevailing load
- The measurement results are shown via an accurate 3-digit LCD display
- The result can be read via the digital LCD display after 10 seconds
- Suitable for starter batteries from 30 Ah (12 V)
- Support for crocodile pole terminals on the device
- Sturdy steel plate housing



	Load current 12 V	
550.1685	100 Ampere	500



12V Digital Battery-Analyzer

- Suitable for 12 volt batteries (lead acid, gel, wet cell, MF, VRLA, calcium, AGM and deep cycle batteries)
- Automatic control of the entire test procedure through menu navigation
- For the quick and simple determination of battery efficiency while taking the temperature compensation into account
- Checks the battery condition, charge status, internal resistance, cold start current value
- With verification function for the starter battery
- The measurement results are shown via an accurate LCD display
- The connection to the battery takes place via two plastic-coated crocodile pole clamps
- Avoidance of an overload of the battery through too long of a measurement time
- Illuminated and very easy to read LCD display
- 0.45 metre long cable allows for flexible work
- Resistant rubber cup casing



- Technical data:**
- SAE operation range: 200-900 CCA
 - DIN operation range: 120-550 CCA
 - IEC operation range: 120-550 CCA
 - EN operation range: 200-900 CCA
 - CCA operation range: 200-850 CCA
 - Voltage range: 7,6-17 V
 - Operating temperature: -18°C up to 55°C
 - Display accuracy: +/- 0,5 mΩ
 - Frequency range: 100

	Measuring range	
550.1648	7,6-17 V	1,00

12V Battery-, Charging- and Starting System Analyzer

- Suitable for 12 volt batteries (lead acid, gel, wet cell, MF, VRLA, calcium, AGM and deep cycle batteries)
- Automatic control of the entire test procedure through menu navigation
- For the quick and simple determination of battery efficiency while taking the temperature compensation into account
- Checks the battery condition, charge status, internal resistance, cold start current value
- With verification function for the starter battery, starter and load circuit measurement
- The measurement results are shown via an accurate 5-digit LCD display
- In addition, the measurement results are displayed via colored symbols: OK, OK and charge and poor
- The connection to the battery takes place via two plastic-coated crocodile pole clamps
- Avoidance of an overload of the battery through too long of a measurement time
- Illuminated and very easy to read LCD display
- 0.45 metre long cable allows for flexible work
- Resistant rubber cup casing



- Technical data:**
- SAE operation range: 100-1.400 CCA
 - DIN operation range: 100-800 CCA
 - IEC operation range: 100-800 CCA
 - EN operation range: 100-1.400 CCA
 - CCA operation range: 100-1.400 CCA
 - Voltage range: 7,6-17 V
 - Operating temperature: -18°C up to 55°C
 - Display accuracy: +/- 0,5 mΩ
 - Frequency range: 100

	Measuring range	
550.1645	7,6-17 V	1,00



12V Battery-, Charging- and Starting System Analyzer with integrated printer

- Suitable for 12 volt batteries (lead acid, gel, wet cell, MF, VRLA, calcium, AGM and deep cycle batteries)
- Menu-driven, intuitive operation
- With integrated thermal printer
- Automatic control of the entire test procedure through menu navigation
- For the quick and simple determination of battery efficiency while taking the temperature compensation into account
- Checks the battery condition, charge status, internal resistance, cold start current value
- Battery selection takes place quickly and precisely via printing protocol
- With verification function for the starter battery, starter and load circuit measurement
- Printing protocol supports the argumentation for workshop customers
- The connection to the battery takes place via two plastic-coated crocodile pole clamps
- Avoidance of an overload of the battery through too long of a measurement time
- Illuminated and very easy to read digital display
- 0.43 metre long cable allows for flexible work
- Includes thermal paper roll
- Resistant rubber cup casing



- Technical data:**
- SAE operation range: 50-1.400 CCA
 - DIN operation range: 50-800 CCA
 - IEC operation range: 50-800 CCA
 - EN operation range: 50-1.400 CCA
 - CCA operation range: 50-1.400 CCA
 - Voltage range: 1,5-17 V
 - Operating temperature: -18°C up to 55°C
 - Display accuracy: +/- 0,5 mΩ
 - Frequency range: 100 Hz

Measuring range	Order Part no.	Weight
550.1646	550.1647	1,50



SURGE PROTECTION

Electronic surge protection

- Constantly suppresses emerging voltage peaks to safe levels and therefore protects the vehicle power supply against overvoltages
- Prevents damage to the on-board electronics when charging the built-in battery or even during welding work
- Maximum load 200 A (8/20 μs)
- With fuse protection
- Visibility and tone signal in the event of voltages peaks
- With reverse polarity protection
- The connection to the battery takes place via two plastic-coated crocodile pole clamps
- Sturdy workshop design



	Voltage	Cable length mm	Weight g
150.3080	12 V	195	480
150.3045	12/24V	195	480

BATTERY CHARGERS

12V SMARTcharger high-frequency battery charger 2A

- Designed for continuous long-term use, even with built-in battery
- For lead acid, gel, wet cell, MF, VRLA, calcium, AGM and deep cycle batteries
- Fully automatic 3-stage charging cycle
- With integrated overload and reverse polarity protection against misuse
- Pulse charge preservation
- Splash water protected according to IP44
- Includes 3 connection cables (cigarette lighter, M6 ring eyelet contact, crocodile pole terminals)
- Connection cable can be changed via plug connection
- LED display
- The latest technology for the highest demands
- Impact resistant polyethylene housing

Application areas: Motorcycles, passenger cars, vans and boats



- Technical data:**
- Voltage range: 220-240V AC, 50/60HZ
 - Charging voltage: 14,4V - 2A (12V)
 - Battery capacity: 3 - 40 Ah
 - Cable: H03VVH2-F 2x0,5mm²

Length mm	Width mm	Height mm	Weight g
550.1730	134,5	74,4	40,1

6V + 12V High-Frequency Battery charger 4A

- Can be switched between 6 and 12 volts
- Designed for continuous long-term use, even with built-in battery
- For lead acid, gel, wet cell, MF, VRLA, calcium, AGM and deep cycle batteries
- Precise load control with microprocessor prevents overcharging and automatically switches to preservation mode after a completed charge process and prevents a "swelling" or even "explosion" of the battery
- Allows regeneration and recovery of deeply discharged batteries
- Fully automatic 9-stage charging cycle
- With integrated overload and reverse polarity protection against misuse
- Pulse charge preservation
- Splash water protected according to IP44
- Includes 3 connection cables (cigarette lighter, M6 ring eyelet contact, crocodile pole terminals)
- Connection cable can be changed via plug connection
- LED display
- The latest technology for the highest demands
- Impact resistant polyethylene housing

Application areas: Motorcycles, passenger cars, vans and boats



- Technical data:**
- Voltage range: 220-240V AC, 50/60HZ
 - Charging voltage: 7,2V - 4A / 14,4V - 1A / 14,4V - 4A / 14,7V - 4A (6V/12V)
 - Battery capacity: 3 - 80 Ah
 - Cable: H03VVH2-F 2x0,5mm²

Length mm	Width mm	Height mm	Weight g
550.1735	165,5	74,4	40,1

SMARTcharger quick contact cable with crocodile pole terminals

- With plug connection
- With 2 crocodile pole terminals for a quick connection



Length mm	Weight g
550.1730-1	375,0

SMARTcharger quick contact cable with 2 ring eyelets

- With plug connection
- With M6 ring eyelets



Length mm	Weight g
550.1730-2	325,0

SMARTcharger quick contact cable with cigarette lighter plug

- With plug connection
- With cigarette lighter plug
- Only in function if the cigarette lighter is switched to steady plus



	Length mm	W mm	H mm	Weight kg
550.1730-3	415.0		40	

12V + 24V SMARTcharger High frequency battery charger 25A/12.5A

- Can be switched between 12 and 24 volts
- Designed for continuous long-term use, even with built-in battery
- For lead acid, gel, wet cell, MF, VRLA, calcium, AGM and deep cycle batteries
- Precise load control with microprocessor prevents overcharging and automatically switches to preservation mode after a completed charge process and prevents a "swelling" or even "explosion" of the battery
- With integrated supply function for the power supply when the battery is removed
- Perfect charging and charge preservation
- Allows regeneration and recovery of deeply discharged batteries
- Fully automatic 9-stage charging cycle
- With integrated overload and reverse polarity protection against misuse
- Pulse charge preservation
- Splash water protected according to IP20
- With crocodile pole terminals
- With temperature sensor to take the temperature compensation into consideration
- 3-digit LED display
- The latest technology for the highest demands
- Impact resistant polyethylene housing

Application areas: Motorcycles, passenger cars, vans, caravans, boats, forklifts, commercial vehicles and agricultural machinery



- Technical data:**
- Voltage range: 220-240V AC, 50/60HZ
 - Charging voltage: 14.4V - 25A (12V), 28.8V - 12.5A (24V)
 - Battery capacity: 12V: 75-500Ah - 24V: 45-250Ah
 - Cable: H03RN-F 2x1,0 mm²

	Length mm	Width mm	Height mm	Weight kg
550.1745	250.0	170.0	75.0	2.00

12V + 24V SMARTcharger Dual high frequency battery charger 10A/5A

- 2-channel charger for application on one or two batteries simultaneously
- Applicable with 2 x 12V independently or 1 x 24V with series connection
- Also ideal for simultaneous use with the starter and service battery
- Designed for continuous long-term use, even with built-in battery
- For lead acid, gel, wet cell, MF, VRLA, calcium, AGM and deep cycle batteries
- Precise load control with microprocessor prevents overcharging and automatically switches to preservation mode after a completed charge process and prevents a "swelling" or even "explosion" of the battery
- Perfect charging and charge preservation
- Fully automatic 9-stage charging cycle
- With integrated overload and reverse polarity protection against misuse
- Pulse charge preservation
- Splash water protected according to IP65
- With crocodile pole terminals
- LED display
- The latest technology for the highest demands
- Impact resistant polyethylene housing

Application areas: Motorcycles, passenger cars, vans, caravans, boats, forklifts, commercial vehicles and agricultural machinery



- Technical data:**
- Voltage range: 220-240V AC, 50/60HZ
 - Charging voltage: 14.7V - 10A (12V), 29.4V - 5A (24V)
 - Battery capacity: 12V: 75-500Ah - 24V: 45-250Ah
 - Cable: H03VVH2-F 2x0.5mm²

	Length mm	Width mm	Height mm	Weight kg
550.1750	230.0	160.0	65.0	2.16



JUMP LEADS

Jump leads set

- High quality design for tough daily use in a workshop
- Suitable for 12 and 24 volts
- Ideal for petrol and diesel engines in passenger cars and commercial cars
- With insulated stable battery terminals for optimal conductivity
- CCA (copper-coated aluminium)
- The handy carrying case allows for easy storage after use

Application areas: Motorcycles, passenger cars, vans, caravans, boats, forklifts, commercial vehicles and agricultural machinery



	Cross section mm ²	Cable length ft	Max. surge 30 sec.	20V (12V)	Peak (Max. 12V)	Dist. Max. (2V)	Weight kg
550.1751	16.0	3.0	220 A	72553	2500	2000	1.40
550.1752	25.0	3.5	350 A	72553	5500	3000	2.10
550.1753	35.0	4.5	480 A	72553	7000	4000	3.40
550.1754	25.0	4.0	350 A	-	5500	3000	2.40
550.1755	35.0	4.5	490 A	-	7000	4000	3.40
550.1756	50.0	5.0	1.000 A	-	10000	5500	5.30

Jump leads set with surge protection

- The surge protection constantly suppresses emerging voltage peaks to safe levels and therefore protects the vehicle power supply against overvoltages
- High quality design for tough daily use in a workshop
- Suitable for 12 and 24 volts
- Ideal for petrol and diesel engines in passenger cars and commercial cars
- With insulated stable battery terminals for optimal conductivity
- CCA (copper-coated aluminium)
- The handy carrying case allows for easy storage after use

Application areas: Motorcycles, passenger cars, vans, caravans, boats, forklifts, commercial vehicles and agricultural machinery

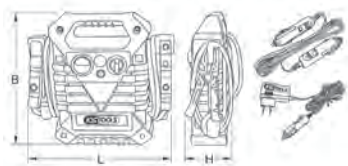


	Cross section mm ²	Cable length ft	Max. surge 30 sec.	20V (12V)	Peak (Max. 12V)	Dist. Max. (2V)	Weight kg
550.1757	16.0	3.0	220 A	72553	2500	2000	1.60
550.1758	25.0	3.5	350 A	72553	5500	3000	2.30
550.1759	35.0	4.5	480 A	72553	7000	4000	3.60

BOOSTER

12 V battery booster - mobile starting aid 700 A

- Ideal for IC and diesel engines from passenger cars to transporters
- Fully insulated terminal clamps (1000 A)
- Integrated electronics protection
- Charge control indicator at press of button
- Acoustic warning if polarity is reversed
- 1.6 m cable length
- With sturdy 35 mm² cable cross section
- Current-free cable connection to the vehicle battery
- Charger and cable set included in scope of supply
- Cable can be conveniently stored on the housing
- Impact-resistant housing with rubberised base area



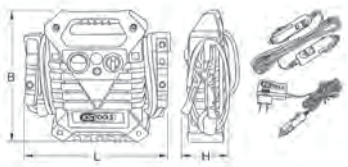
Technical data:

Battery: 12 Volt / 22 Ah
 Starting current: 700 A
 Peak voltage: 2200 A
 Cable cross section: 35 mm²
 Battery charger: 12V DC / 4 A

	L mm	B mm	H mm	Charger space	Charging cable	kg
550.1710	405,0	380,0	120,0	550.1711	550.1712	10,00

12 V + 24 V battery booster - mobile starting aid 1400 A

- Ideal for IC and diesel engines from passenger cars to HGV < 12 t
- Fully insulated terminal clamps (1000 A)
- Integrated electronics protection
- Charge control indicator at press of button
- Acoustic warning if polarity is reversed
- 1.6 m cable length
- With sturdy 35 mm² cable cross section
- Current-free cable connection to the vehicle battery
- Automatic mains charger and cable set included in scope of supply
- Cable can be conveniently stored on the housing
- Impact-resistant housing with rubberised base area



Technical data:

Battery: 2 x 12 Volt / 22 Ah
 Starting current: 1400 / 700 A
 Peak voltage: 4400 / 2200 A
 Cable cross section: 35 mm²
 Battery charger: 12V DC / 4 A

	L mm	B mm	H mm	Charger space	Charging cable	kg
550.1720	405,0	380,0	180,0	550.1721	550.1712	18,00

12 V + 24 V Battery Booster - mobile starting aid 3000 A

- Ideal for petrol and diesel engines in passenger cars or commercial vehicles
- Fully insulated battery clips (1000A)
- Integral electronics protection (voltage peak protected)
- Heavy-duty copper cable, cross-section 75 mm²
- 2.0 m cable length
- Intelligent, fully-integrated 3-stage automatic charging unit
- Multi-function display with coloured LED bars
- Intelligent protective circuits
- Polarity protection optical/acoustic
- Current-free cable connection to the vehicle battery
- Robust, wheeled housing with cable storage compartments
- Delivery scope includes vehicle charging cable



Technical data:

Battery: 2 x 12 Volt / 50 Ah
 Starting current: 3000 / 1500 A
 Peak voltage: 7200 / 3400 A
 Cable cross section: 75 mm²

	L mm	B mm	H mm	kg
550.1725	450,0	300,0	750,0	47,00

ACCESSORIES FOR RECHARGEABLE BOOSTER PACKS

Battery charger for battery booster

- Designed for continuous usage
- Integrated automatic safety switching off
- Impact resistant polyethylene housing



		Input current	Output current	kg
550.1711	550.1710	220 - 240 V	12 V / 4 A	439
550.1721	550.1720	220 - 240 V	24 V / 4 A	439

Car charger lead

- For temporary charge
- No safety switching off
- 1.6 mm cable diameter
- 2.0 m cable length
- With double connector



	kg	
550.1712	550.1710 + 550.1720	62

12V OBD II Electrical system suspense keeper

- Supplies the vehicle with voltage while replacing the battery so that various settings, such as radio codes, seat memory, etc., are preserved
- Prevents data loss in the on-board electronics while replacing the battery
- Connection takes place via the OBD II bushing and cigarette lighter connection of a battery-powered start-up aid
- Readiness indicator checks and indicates safe connection establishment



	Cable length mm	kg
550.1705	2300	200

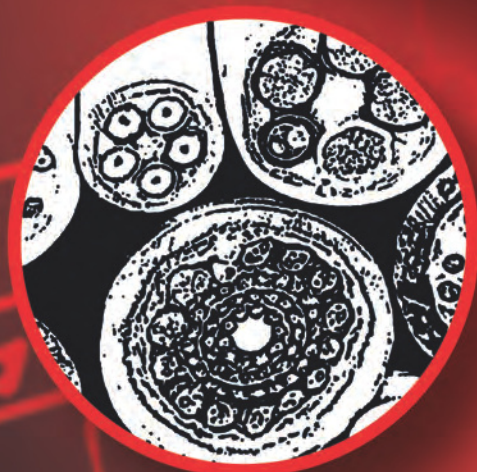
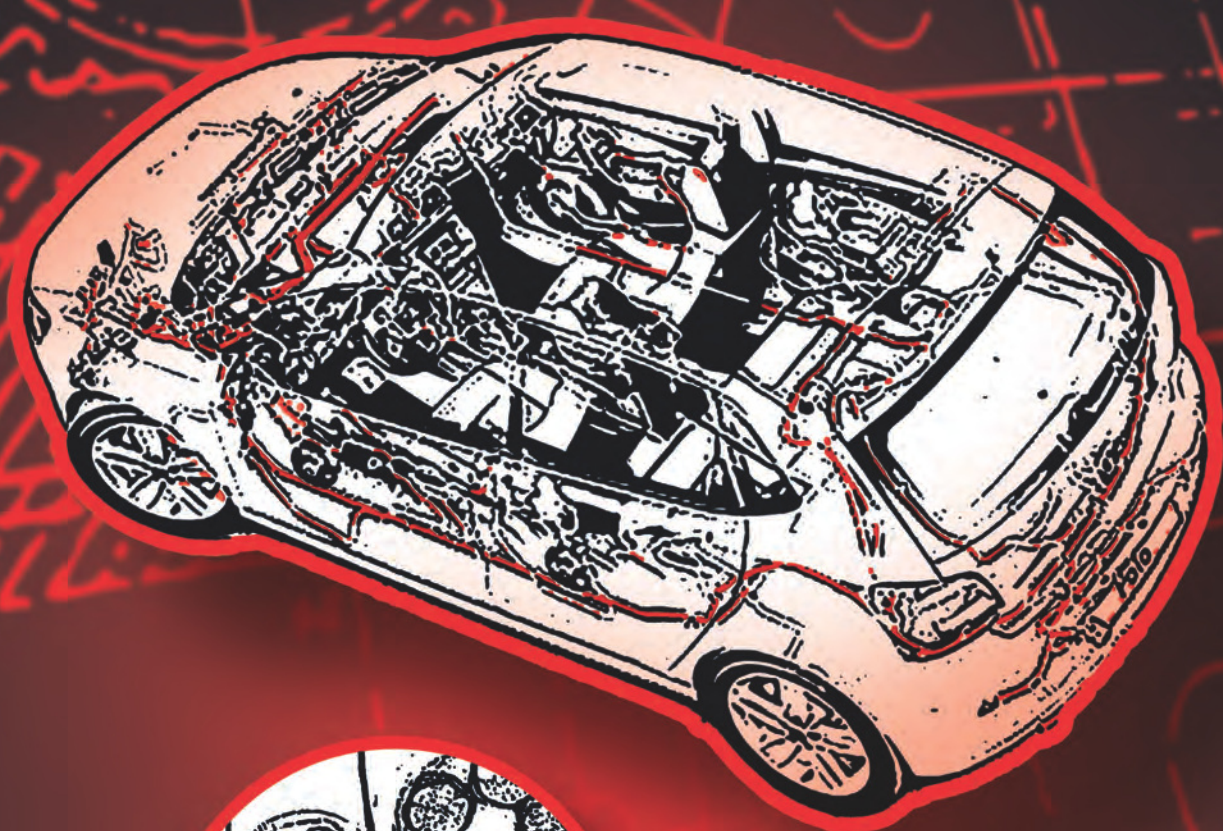
12V OBD II Electrical system suspense keeper

- Supplies the vehicle with voltage while replacing the battery so that various settings, such as radio codes, seat memory, etc., are preserved
- Prevents data loss in the on-board electronics while replacing the battery
- The connection takes place via the OBD II bushing and crocodile pole clamps of an external battery
- Readiness indicator checks and indicates safe connection establishment



	Cable length mm	kg
550.1706	5000	350

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Innovation is
our mission!



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RELAY TESTER

12 V relay tester

- Simple, quick and professional testing of vehicle relay
- Easy handling
- Detection of defective relay through fully automatic test
- The result is signalled via a red or green light
- Contact resistance of 200 milliohm/0.2 ohm
- Applicable with 12 V
- Sturdy ABS plastic



150.1755	12 V relay tester	290
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KEY TESTER

12 V infrared and high frequency key tester

- Easy, quick and professional testing of infrared and radio (433 + 868 MHz) keys
- The keys should be checked at each inspection or servicing, because a new battery or a flashing LED is no guarantee for 100% functionality
- Easy handling
- The result is signalled via a light or sound
- Applicable with 12 V
- Includes 9 V block battery
- Sturdy ABS plastic



150.0999	12 V infrared and high frequency key tester	320
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12-42 V detector for locating short circuits, cable breaks and leakage current

- For the quick, easy and proper searching for short circuits, cable faults and leakage current without having to puncture wires
- Saves a great deal of time, because removing interior lining, carpeting and trim on the vehicle can be reduced to the essentials
- Short circuiting is eliminated
- For tracking cable guides
- For locating electrical components in the vehicle
- For detecting broken circuits or cable breaks
- For locating the cause of severe battery charge losses
- For testing and detecting temporarily interrupted connections ("loose connections")
- The transmitter is connected to the circuit to be tested with the insulated crocodile clamps via the fuse box
- The output signal is received by the receiver and indicated acoustically as well as through a directional LED
- The error can be localised by following the line
- If the receiver no longer receives a signal, the short circuit has been found
- The transmitter can be optionally expanded to include headphones via the built-in port
- Can be used for circuits from 12 V to 42 V
- The detection sensitivity can be variably adjusted
- Includes 2 x 9 V block battery
- In plastic bag



150.3075	2 pcs	12-42 V detector for locating short circuits, cable breaks and leakage current	400
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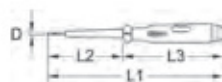
consists of:

150.3075	Receiver	200
150.3077	Transmitter with crocodile clamps	200

VOLTAGE TESTERS

Insulated voltage tester 150 - 250 V

- In accordance with DIN/ISO 0680
- Slot blade with hollow grinding
- Nickel-plated blade
- Transparent handle
- With retaining clip



D	L1	L2	L3	U	
911.2188	3.0	145.0	65.0	80.0	14

Test lamp 6 - 24 V

- Probe protected by a cap
- Ideal for helping to locate short circuits and breaks
- With shielded crocodile clamp
- Cable with shielded crocodile clamp
- Stainless steel probe
- Brass housing and cap



550.1504	L mm	125.0	30
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Voltage tester 3 - 48 V

- Universal test instrument for motor vehicle electrics and electronics
- Two light-emitting diodes indicate voltage as well as polarity
- Test tip with push mechanics to tap into the cable
- With shielded crocodile clamp



550.1503	L mm	140.0	70
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Insulated universal voltage tester 6 - 400 V

- In accordance with DIN ISO 0680
- For the professional, multi-stage voltage and polarity test
- For direct and alternating voltage
- With rotating field and phase display



Technical data:

Readout:	light-emitting diodes/LE
Power requirement:	140 mA
Allowable duty cycle:	30 s
Frequency range:	0 - 100 Hz
Protection class:	IP40
AC voltage range alternating voltage:	6 - 50 - 120 - 230 - 400 V
DC voltage range direct voltage:	6 - 50 - 120 - 230 - 400 V

550.1501	100V	180
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Insulated voltage tester double pole 12 - 1000 V

- Tested and accredited in accordance with international standard insulated to IEC IEN 61243-3 (DIN VDE 0682-401)
- Voltage class B
- DC and AC voltage shown by LED indicators
- Rotating fi ld and phase displayed on LED display
- Conscious release of a 30 mA of FI-protection switch
- With vibration alarm



Technical data:

Readout:	LED/LCD
Display level:	12 - 1000 V
Power requirement:	200 mA
Allowable duty cycle:	30 s
Frequency range:	0 - 500 Hz
Protection class:	IP64
AC voltage range alternating voltage:	12 - 24 - 50 - 120 - 230 - 400 - 690 - 1000 V
DC voltage range direct voltage:	12 - 24 - 50 - 120 - 230 - 400 - 690 - 1000 V

117.1503			210
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Insulated voltage test ball, double-pole, 50 - 1000 V

- Tested and accredited in accordance with international standard
- Insulated to IEC EN 61243-3 (DIN VDE 0682-401)
- Corresponds to EMC requirements in accordance with DIN EN 61326
- DC and AC voltage shown by LED indicators
- Rotating fi ld and phase displayed via LEDs
- With display of rotating fi ld direction (clockwise and anti-clockwise)
- Deliberate tripping of a 30 mA ELCB

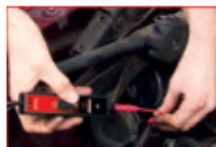


Readout:	LED/LCD
Power requirement:	300 mA
Allowable duty cycle:	30 s
Frequency range:	0 - 100 Hz
Protection class:	IP65
Overvoltage category:	CAT IV 600 V CAT III 1000 V
Test voltage:	6 kV
AC voltage range alternating voltage:	120 - 200 - 300 - 350 - 400 - 450 - 500 - 550 - 600 - 650 - 700 - 750 - 800 - 850 - 900 - 950 - 1000 V
DC voltage range direct voltage:	120 - 200 - 300 - 350 - 400 - 450 - 500 - 550 - 600 - 650 - 700 - 750 - 800 - 850 - 900 - 950 - 1000 V

117.4266	Insulated voltage test ball, double-pole, 50 - 1000 V			620
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Test probe 6-24V DC with 5 meter cable

- Ideal standard lamp with many test functions
- High-speed functional testing without removal of components
- Via toggle switches can be plus or minus given to the probe
- Built in bi-metal short circuit protection
- No protection wear for troubleshooting
- Version with replaceable probe and alligator clip
- For continuity test, self test and fault diagnosis
- Immediate polarity determination by LED display



Technical data:

Cable length:	5 m
Test probe diameter:	4 mm

Application area	Replacement test tip		
150.1670	6 - 24 V DC	150.1671	500

Electronic multifunctional tester 6 - 24 V with 25 metres of cable

- Ideal tester for passenger and commercial vehicle electrics and electronics
- With built-in lighting for optimal illumination of the test point
- With replaceable probe for the optional expansion with commercially available inspection and test components
- For the quick testing of electrical components without disassembly
- For continuity test, self-test on the power switch and fault diagnosis
- Immediate continuity test of switches, relays, diodes, fuses, wiring harnesses, etc.
- For the operation of electronic components, such as relays, fuel pumps, window motors, switches, lamps, etc.
- For determining poor ground connections
- Immediate polarity determination via red/green LED display
- Changing acoustic signals depending on the polarity
- Power can be supplied immediately at the push of a button with the tester
- Built-in bimetallic short circuit fuse (7.5 A), therefore no fuse wear during troubleshooting
- Cable with shielded crocodile clamp and pole terminals
- 25 metre cable length
- Stainless steel probe



Technical data:	
Test probe diameter:	4 mm
Replacement test tip	150.1671

Application area	Cable length in m		
150.1655	6 - 24 V DC	25 m	126

DIGITAL AMPERE METER

12V - 48V Automotive current tester 20A

- For the quick measurement of direct current through the plug contact of automotive fuses directly on the fuse box with ignition on or off
- Ideal for detecting quiescent current consumers
- The measuring circuit is protected during the current measurement, as the existing fuse is laterally inserted into the tester
- Can be used for circuits from 12 V to VIV with 0.1 to 19.9 A
- 20 A separate protection
- With large 75 mm LCD display



	Connector type	L mm	Volt max	Accuracy (%)	
150.3096	mini	900.0	48	20	70
150.3095	standard	900.0	48	20	100

Digital amp pliers 200 A

- Due to the small pliers' diameter, a high level of accuracy and safe working in previously hard-to-reach places is given
- They measure current with a resolution of 0.01 A to max. 200 A
- The built-in multimeter with a bar graph means there is no need for any additional measuring instruments
- Ideal for locating hidden consumers
- Very easy-to-read display
- Ideal for direct and alternating current tests
- Max. pliers opening of 30.0 mm
- LCD display
- Includes measuring line set with probes
- In practical storage pouch

- Functions:**
- Direct current
 - DC and AC voltage
 - Resistance
 - Diode test
 - Continuity test
 - Temperature measurement
 - Data hold function
 - Peak hold function



Technical data:	
Co-current fi w:	0,01 - 200 A
Alternating current:	0,01 - 200 A
DC voltage:	0,1 - 400 V
AC voltage:	0,1 - 400 V
Resistance measurement:	32 - 32000 ohm
Temperature accuracy:	23° C ± 5° C
Power requirement:	3x 1,5V AAA (not in the delivery)
Storage temperature:	-20° to +60° C (-4° to 140° F)
Working temperature:	0° to +40° C (32° to 104° F)

Length mm	Width mm	Depth mm		
150.1745	185.0	42.0	30	160



Digital amp pliers 600 A

- Very easy to read display
- Ideal to use for alternating current tests
- Max. pliers opening of 27,0 mm
- Max. measurable conductor diameter of 29,0 mm
- Includes automatic shutdown after about 15 min.
- LED display
- Includes probes and temperature gauge
- In practical storage pouch

Functions:

- DC and AC voltage
- Resistance
- Diode test
- Continuity test
- Temperature measurement
- Data hold function
- Peak hold function



Technical data:

Alternating current :	200 A, 600 A
DC voltage:	600 V
AC voltage:	600 V
Resistance measurement:	2 megaohm
Temperature accuracy :	23° C ± 5° C
Power requirement:	9V block battery
Storage temperature:	-10° to +50° C (14° to 122° F)
Working temperature:	0° to +40° C (32° to 104° F)

150.0925	4 pcs	Digital amp pliers 600 A	655
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consists of:

150.0926	Digital amp pliers 600 V without accessories	370
150.0927	Probe set	75
150.0928	Temperature gauge	20

CIRCUIT BREAKERS

Circuit breaker set (10 A - 15 A - 20 A)

- Ideal for easy and time-saving troubleshooting without stopping work
- No thermal load of the fuse box
- No constant replacement of blown fuses
- The search can be continued immediately by simply resetting the interrupt button
- Long extension cable (3 metres) for easy use
- Suitable for fl t and mini fuses with duo adapter
- In durable plastic storage case



Technical data:

Safety fuse:	10 - 15 - 20 A
Nominal voltage:	10 - 14 V DC
Working temperature:	0° / +40° C

150.0990	4 pcs	Circuit breaker set (10 A - 15 A - 20 A)	945
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consists of:

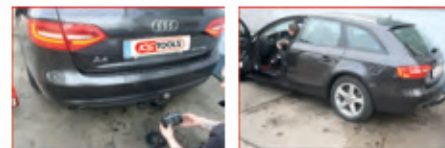
150.0991	Automatic circuit breaker 10 A	81
150.0992	Automatic circuit breaker 15 A	81
150.0993	Automatic circuit breaker 20 A	81
150.0994	Extension cable 3 m	254



TRAILER SOCKET TESTER

12 V towing vehicle tester/tester for trailer receptacle set 7 + 13-pole

- For DIN 72570 trailer receptacles
- Ideal for easy and time-saving checking of the trailer receptacle function
- The tester can also be used on vehicles without CAN BUS technology
- Suitable for vehicles with CAN BUS technology due to the integrated load resistors
- LEDs with corresponding labelling offer optimal testing properties
- A 5-metre long cable for easy handling from the driver's seat
- The tester is also suitable for vehicles with electronic trailer controllers due to the load resistors for shutting off fog lamps and for the right/left indicators, which can be activated via the rocker switch on the tester
- Brake lights, indicators, fog lamps, back-up lights, tail lamps are checked
- Function consists of a built-in load being activated with a thermal fuse
- Essential for TÜV
- Includes 13 to 7-pole adapter
- Sturdy and handy device



150.0995	2 pcs	12 V towing vehicle tester/tester for trailer receptacle set 7 + 13-pole	732
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consists of:

150.0936	12 V towing vehicle tester/tester for trailer receptacle 13-pole	648
150.0937	DIN 72570 adapter 13 to 7-pole	93

CIGARETTE LIGHTER SOCKET TESTER

12 V/24 V cigarette lighter receptacle tester

- The standardised connection ensures a quick and easy connection in the cockpit, front and boot
- This tester makes it possible to check the cigarette lighter receptacle to ensure it is short-circuit-proof
- Suitable for 12 V and 24 V
- Figure height on LED display 9.1 mm
- Safe handling
- The result of the voltage test is displayed via LED
- Sturdy ABS plastic



Technical data:

Display accuracy:	±1 %
Readout:	3 digit
DC voltage range direct voltage:	DC 8 V - 30 V
Operating temperature:	-5° C to +80° C

150.0997	8 - 30 V	40
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MULTIMETER

Digital Multimeter incl. test probes

- Solid multimeter with basic measurement functions for passenger and commercial vehicle electrics and electronics
- Compact and handy
- With automatic overfl w and polarity indication
- With safety mechanism for V, $\mu\text{A}/\text{mA}/\text{A}$, therefore incorrect connection is impossible
- Central 19-digit rotary switch
- Large LCD display with 3.1/2-digit, high-contrast display with background lighting
- With integrated glass fuse 250 V (2 A) – 20 x 5 mm to protect the circuits
- Includes measuring line set with probes
- With fold-out stand
- Sturdy plastic housing
- With rubber protective capping

Functions:

- DC and AC voltage measurement
- DC and AC current measurement
- Resistance measurement
- Diode test (with acoustic signal)
- Transistor measurement
- Continuity test (with acoustic signal)
- Data hold function



Technical data:

Co-current fl w:	200 mA - 10 A
DC voltage:	200 mV - 600 V
AC voltage:	200 V - 600 V
Resistance measurement:	200 - 2000 ohm
Temperature accuracy :	23° C \pm 5° C
Power requirement:	9V block battery
Fuse protection S1 (fine flow):	200mA/250V (20x5mm)
Storage temperature:	-10° to +50° C (14° to 122° F)
Working temperature:	0° to +40° C (32° to 104° F)

	B mm	L mm	Depth mm	Weight
150.1495	69.0	138.0	31	342



Motor vehicle multimeter

- Specially developed multimeter for working in the motor vehicle area
- Double display (digital and bar chart display)
- 4 test leads for current with test tip / crocodile clip
- Central rotary switch
- Large display
- With integrated safety fuse for the protection of the circuits
- With fold out adjustable foot in protective rubber holster
- Sturdy plastic housing

Functions:

- Continuity test (with acoustic signal)
- Transistor tester
- Diode test (with acoustic signal)
- Capacity
- Frequency measurement
- Data hold function
- Automatic measuring range selection



Technical data:

Co-current fl w:	326 μA - 10 A
Alternating current :	326 μA - 10 A
DC voltage:	326 mV - 1000 V
AC voltage:	3,26 V - 750 V
Resistance measurement:	32 - 32000 ohm
Frequency measurement:	32,60 - 200kHz
Temperature accuracy :	23° C \pm 5° C
Power requirement:	9V block battery
Fuse protection S1 (fine flow):	300mA/250V (20x5mm)
Fuse protection S2 (power-test socket) :	10A/250V (30x5mm)
Storage temperature:	-10° to +50° C (14° to 122° F)
Working temperature:	0° to +40° C (32° to 104° F)

	B mm	L mm	Depth mm	Weight
150.1480	91.0	189.0	31.5	834

Multimeter with inductive clamp

- Specially developed professional multimeter for automotive and commercial electrics and electronics
- With enhanced function for rpm measurement
- Dual LCD display with digital display and bar diagram display (32 segment bar graph)
- With automatic overfl w and polarity indication
- With safety mechanism for V, $\mu\text{A}/\text{mA}/\text{A}$, therefore incorrect connection is impossible
- Central 23-digit rotary switch
- Large LCD display with 3.1/2-digit, high-contrast display with background lighting
- With integrated glass fuse 250 V (500 mA) – 20 x 5 mm to protect the circuits
- Includes measuring line set with probes, crocodile clamps, inductive clamp and temperature probe
- With on/off switch and automatic temperature shutdown
- With fold-out, two-way adjustable pedestal
- Sturdy plastic housing
- With rubber protective capping

Functions:

- DC and AC voltage measurement
- DC and AC current measurement
- Resistance measurement
- Dwell
- Diode test (with acoustic signal)
- RPM measurement
- Frequency measurement
- Battery check indicator



Technical data:

Co-current fl w:	326 μA - 10 A
Alternating current :	326 μA - 10 A
DC voltage:	326 mV - 1000 V
AC voltage:	3,26 V - 750 V
Resistance measurement:	32 - 32000 ohm
Frequency measurement:	32,60 - 200 kHz
Speed measurement:	300 - 12000 rpm
Temperature accuracy :	23° C \pm 5° C
Power requirement:	9V block battery
Fuse protection S1 (fine flow):	500mA/350V (20x5mm)
Fuse protection S2 (power-test socket) :	10A/250V (30x5mm)
Storage temperature:	-10° to +50° C (14° to 122° F)
Working temperature:	0° to +40° C (32° to 104° F)
Temperature measurement:	-20° to 760° C (-4° to 1400° F)

	B mm	L mm	Depth mm	Weight
150.2040	91.0	189.0	31.5	500



MULTIMETER ACCESSORIES

12/24 V diagnostic testing and measuring cable set

- To use with function test lamps and multimeters on consumers and circuits
- Easy and safe signal pick-up through direct contacting
- High-quality checking and testing accessory components for different test leads, test cables and test strips for the professional mechanic
- For daily use in diagnostics and error detection
- Small set composition for versatile use, e.g. for checking poor ground connections, continuity test trials, polarity testing or for operating electrical units, such as starters, wiper motors, electrical window lifters, electrical antennas, etc.
- Includes polarity tester with duo LED for checking hall sensors, photo sensors or whether injector plus or earth are controlled. Varies depending on the direction of current I w: red for positive voltage or green for negative voltage
- Flexible silicone cable
- Extra-thin probe
- Applicable up to a maximum of 24 V (10 A)
- Bi-colour test leads for polarity indication



			P
150.1675	13 pcs	12/24 V diagnostic testing and measuring cable set	300

consists of:

			P
X	Colour code		
150.1667	1 ●	Measuring line extension with double plug and additional socket 1,100 mm	30
150.1668	1 ●	Measuring line extension with double plug and additional socket 1,100 mm	30
150.1669	1 ●	Bushing plug connection on injection probe	30
150.1672	2	Polarity tester with 4.0 mm banana plug connection and duo LED	10
150.1673	2 ●	4.0 mm input socket on needle-shaped probe	10
150.1674	2 ●	4.0 mm input socket on needle-shaped probe	10
150.1676	1 ●	4.0 mm input socket on probe	10
150.1677	1 ●	4.0 mm input socket on probe	10
150.1678	1 ●	4.0 mm input socket on narrow crocodile clamp	20
150.1679	1 ●	4.0 mm input socket on narrow crocodile clamp	20



12/24V Master diagnostic test and measurement lead set

- To use with function test lamps and multimeters on consumers and circuits
- Easy and safe signal pick-up through direct contacting
- High-quality checking and testing accessory components for different test leads, test cables and test strips for the professional mechanic
- For daily use in diagnostics and error detection
- Large set composition for versatile use, e.g. for checking poor ground connections, continuity test trials, polarity testing or for operating electrical units, such as starters, wiper motors, electrical window lifters, electrical antennas, etc.
- Includes potentiometer with adjustable resistor (0 to 5 kilohms) for testing temperature sensors or position sensors, such as in throttle valves, tank sensors, intake manifold flap actuators and air control valves of air conditioning systems
- Includes 2 ohm SRS test measuring resistor for diagnosing airbag sensors
- Includes polarity tester with duo LED for checking hall sensors, photo sensors or whether injector plus or earth are controlled. Varies depending on the direction of current I w: red for positive voltage or green for negative voltage
- Flexible silicone cable
- Extra-thin probe
- Applicable up to a maximum of 24 V (10 A)
- Bi-colour test leads for polarity indication



			P
150.0950	92 pcs	12/24V Master diagnostic test and measurement lead set	3.05

consists of:

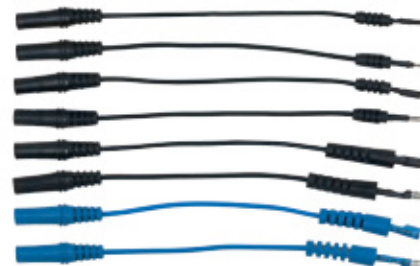
			P
X	Colour code		
150.1667	2 ●	Measuring line extension with double plug and additional socket 1,100 mm	30
150.1668	2 ●	Measuring line extension with double plug and additional socket 1,100 mm	30
150.1672	2	Polarity tester with 4.0 mm banana plug connection and duo LED	10
150.1673	2 ●	4.0 mm input socket on needle-shaped probe	10
150.1674	2 ●	4.0 mm input socket on needle-shaped probe	10
150.1676	1 ●	4.0 mm input socket on probe	10
150.1677	1 ●	4.0 mm input socket on probe	10
150.1678	1 ●	4.0 mm input socket on narrow crocodile clamp	20
150.1679	1 ●	4.0 mm input socket on narrow crocodile clamp	20
150.0951	2	Potentiometer with adjustable resistance	27
150.0952	2	SRS airbag test measuring resistor (2 ohm)	13

consists of:

			P
X	Colour code		
150.0953	2	Plug distributor with input socket on double banana plug connection	13
150.0957	3 ●	4.0 mm input socket on 1.5 mm test adapter socket, round	6
150.0974	3 ●	4.0 mm input socket on 1.5 mm test adapter plug, round	6
150.0956	3 ●	4.0 mm input socket on 2.0 mm test adapter socket, round	6
150.0975	3 ●	4.0 mm input socket on 2.0 mm test adapter plug, round	6
150.0955	3 ●	4.0 mm input socket on 3.5 mm test adapter socket, round	6
150.0976	3 ●	4.0 mm input socket on 3.5 mm test adapter plug, round	6
150.0954	3 ●	4.0 mm input socket on 4.0 mm test adapter socket, round	6
150.0977	3 ●	4.0 mm input socket on 4.0 mm test adapter plug, round	6
150.0958	3 ●	4.0 mm input socket on 0.8 mm test adapter socket, fl t	6
150.0973	3 ●	4.0 mm input socket on 0.8 mm test adapter plug, fl t	6
150.0959	4 ●	4.0 mm input socket on 1.2 mm test adapter socket, fl t	6
150.0972	4 ●	4.0 mm input socket on 1.2 mm test adapter plug, fl t	6
150.0961	4 ●	4.0 mm input socket on 2.0 mm test adapter socket, fl t	6
150.0971	4 ●	4.0 mm input socket on 2.0 mm test adapter plug, fl t	6
150.0962	3 ●	4.0 mm input socket on 2.5 mm test adapter socket, fl t	6
150.0969	3 ●	4.0 mm input socket on 2.5 mm test adapter plug, fl t	6
150.0964	4 ●	4.0 mm input socket on 3.0 mm test adapter socket, fl t	6
150.0968	4 ●	4.0 mm input socket on 3.0 mm test adapter plug, fl t	6
150.0965	3 ●	4.0 mm input socket on 5.0 mm test adapter socket, fl t	6
150.0967	3 ●	4.0 mm input socket on 5.0 mm test adapter plug, fl t	6
150.0963	3 ●	4.0 mm input socket on 6.0 mm test adapter socket, fl t	6
150.0966	3 ●	4.0 mm input socket on 6.0 mm test adapter plug, fl t	6

Circular sockets measuring line

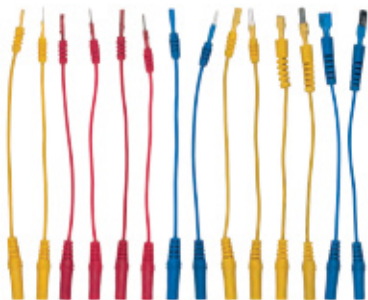
- Insulated
- Universally applicable
- Round designs
- With 4.0 mm input socket
- Flexible silicone cable
- Applicable up to a maximum of 24 V (10 A)
- Overall length 175.0 mm



			P
Colour code			
150.0957	●	4.0 mm input socket on 1.5 mm test adapter socket, round	6
150.0974	●	4.0 mm input socket on 1.5 mm test adapter plug, round	6
150.0956	●	4.0 mm input socket on 2.0 mm test adapter socket, round	6
150.0975	●	4.0 mm input socket on 2.0 mm test adapter plug, round	6
150.0955	●	4.0 mm input socket on 3.5 mm test adapter socket, round	6
150.0976	●	4.0 mm input socket on 3.5 mm test adapter plug, round	6
150.0954	●	4.0 mm input socket on 4.0 mm test adapter socket, round	6
150.0977	●	4.0 mm input socket on 4.0 mm test adapter plug, round	6

Receptacle measuring line

- Insulated
- Universally applicable
- Round designs
- With 4.0 mm input socket
- Flexible silicone cable
- Applicable up to a maximum of 24 V (10 A)
- Overall length 175.0 mm



Colour code			
150.0958	●	4.0 mm input socket on 0.8 mm test adapter socket, fl. t.	6
150.0973	●	4.0 mm input socket on 0.8 mm test adapter plug, fl. t.	6
150.0959	●	4.0 mm input socket on 1.2 mm test adapter socket, fl. t.	6
150.0972	●	4.0 mm input socket on 1.2 mm test adapter plug, fl. t.	6
150.0961	●	4.0 mm input socket on 2.0 mm test adapter socket, fl. t.	6
150.0971	●	4.0 mm input socket on 2.0 mm test adapter plug, fl. t.	6
150.0962	●	4.0 mm input socket on 2.5 mm test adapter socket, fl. t.	6
150.0969	●	4.0 mm input socket on 2.5 mm test adapter plug, fl. t.	6
150.0964	●	4.0 mm input socket on 3.0 mm test adapter socket, fl. t.	6
150.0968	●	4.0 mm input socket on 3.0 mm test adapter plug, fl. t.	6
150.0965	●	4.0 mm input socket on 5.0 mm test adapter socket, fl. t.	6
150.0967	●	4.0 mm input socket on 5.0 mm test adapter plug, fl. t.	6
150.0963	●	4.0 mm input socket on 6.0 mm test adapter socket, fl. t.	6
150.0966	●	4.0 mm input socket on 6.0 mm test adapter plug, fl. t.	6

Measuring line extension 1,100 mm

- Insulated
- Universally applicable
- Untwisted cable extension
- With double 4.0 mm banana plug connection and each additional 4.0 mm input socket
- Applicable up to a maximum of 24 V (10 A)
- Flexible silicone cable
- Overall length 1,100 mm



Colour code			
150.1667	●	Measuring line extension with double plug and additional socket 1,100 mm	30
150.1668	●	Measuring line extension with double plug and additional socket 1,100 mm	30

Duo plug distributor

- Insulated
- Universally applicable
- With double 4.0 mm banana plug connection and a 4.0 mm input socket
- Applicable up to a maximum of 24 V (10 A)
- Overall length 50.0 mm



150.0953		Plug distributor with input socket on double banana plug connection	13

SRS airbag test measuring resistor (2 ohm)

- Insulated
- For checking the voltage supply in the SRS airbag system before the installation of a new airbag and for the general diagnosis of the airbag sensors
- With double 4.0 mm banana plug connection
- Applicable up to a maximum of 24 V (10 A)
- Overall length 125.0 mm



150.0952		SRS airbag test measuring resistor (2 ohm)	13

Potentiometer with adjustable resistance

- Insulated
- Quick and easy way to adjust the resistance without a multimeter during a simulation in a circuit with resistance
- With adjustable resistor (0 to 5 kilohms) for testing temperature sensors or position sensors, such as in throttle valves, tank sensors, intake manifold flap actuators and air control valves of air conditioning systems
- With 4.0 mm banana plug connection
- Applicable up to a maximum of 24 V (10 A)
- Overall length 125.0 mm



150.0951		Potentiometer with adjustable resistance	27

Measuring line extension 6,000 mm

- Insulated
- Universally applicable and ideal as an extension
- With compact and practical Ø 143.0 mm magazine
- Easy to wind up and unwind
- Untwisted cable extension
- With straight 4.0 mm banana plug connection on angled 4.0 mm banana plug connection
- Applicable up to a maximum of 24 V (10 A)
- Flexible silicone cable
- Overall length 6,000 mm



Colour code			
150.0931	●	Measuring line extension 6,000 mm	180
150.0932	●	Measuring line extension 6,000 mm	180

Measuring line extension set

- Insulated
- Universally applicable and ideal as an extension
- With compact and practical Ø 143.0 mm magazine
- Easy to wind up and unwind
- Untwisted cable extension
- With straight 4.0 mm banana plug connection on angled 4.0 mm banana plug connection
- Applicable up to a maximum of 24 V (10 A)
- Flexible silicone cable
- Overall length 6,000 mm



150.0930	2 pcs	Measuring line extension set	360

consists of:

150.0932	Test lead extension 6m, red Ø = 143mm	180	
150.0931	Test lead extension 6m, black Ø = 143mm	180	

Measuring line extension 30,000 mm

- Insulated
- Universally applicable and ideal as an extension
- Drum with hand knob on both sides
- Easy to wind up and unwind
- Untwisted cable extension
- With angled 4.0 mm banana plug connection and 4.0 mm input socket
- Applicable up to a maximum of 24 V (10 A)
- Flexible silicone cable
- Overall length 30,000 mm



	H mm	B mm	T mm	
150.0935	260.0	195.0	115.0	1.51

Injection probe

- Insulated
- Universally applicable
- Allows for the measurement of lines without having to strip the connection at the point to be measured
- For puncturing cables up to 4.0 mm in diameter
- With 4.0 mm input socket
- Applicable up to a maximum of 24 V (10 A)
- Overall length 170.0 mm



150.1669		Injection probe	30

Crocodile clamp

- Insulated
- Universally applicable
- With 4.0 mm input socket
- Applicable up to a maximum of 24 V (10 A)
- Overall length 85.0 mm



Colour code			
150.1678	●	4.0 mm input socket on narrow crocodile clamp	20
150.1679	●	4.0 mm input socket on narrow crocodile clamp	20

Test probe

- Insulated
- Universally applicable
- Removable probes allow for easy cable extension during testing
- With 4.0 mm input socket
- Applicable up to a maximum of 24 V (10 A)
- Overall length 125.0 mm



Colour code			
150.1676	●	4.0 mm input socket on probe	10
150.1677	●	4.0 mm input socket on probe	10

Needle-shaped probe

- Insulated
- Universally applicable
- Ideal for testing narrower and thinner cables, e.g. display units
- With 4.0 mm input socket
- Applicable up to a maximum of 24 V (10 A)
- Cable length 200.0 mm



Colour code			
150.1673	●	4.0 mm input socket on needle-shaped probe	10
150.1674	●	4.0 mm input socket on needle-shaped probe	10

Polarity tester with duo LED

- Insulated
- With duo LED for checking hall sensors, photo sensors or whether injector plus or earth are controlled. Varies depending on the direction of current flow: red for positive voltage or green for negative voltage
- With 4.0 mm banana plug connection
- Applicable up to a maximum of 24 V (10 A)
- Cable length 120.0 mm



150.1672		Polarity tester with 4.0 mm banana plug connection and duo LED	10

DISASSEMBLY AND ASSEMBLY TOOLS

Central cable plug - grooved nut key

- 3-stage adjustable groove nut key
- For the disassembly and assembly of difficult to access central cable connectors on the A-pillar (installed in door frame)
- Easy to use
- Sturdy design

Application areas: Ford (Galaxy), Seat (Alhambra), Škoda and Volkswagen (Polo, Sharan)



115.1306		Central cable plug - grooved nut key	240

Relay pliers

- For the secure, straight and damage-free fitting and insertion of the relay
- Can also be used for the new shortened relay
- Easy to use
- Self-opening
- Sturdy gripper jaws
- Full plastic body



	Form	Total length mm	
115.1307	straight	200.0	130

Relay pliers bent at 45°

- Particularly suitable for closely inserted relays that are not accessible in a straight line
- For the secure and damage-free fitting and insertion of the relay
- Can also be used for the new shortened relay
- Easy to use
- Self-opening
- Sturdy gripper jaws
- Full plastic body



	Form	Total length mm	
115.1308	45° angle	200.0	130

CLEANING TOOLS

Contact cleaner tweezers set

- Ideal for professional cleaning at the corroded plug housing
- Suitable for flat and spade-shaped flat plugs as well as for flat plug sockets
- Damage to the sensitive contacts is prevented by the special tweezers shape
- No more unnecessary troubleshooting
- Avoidance of bad connections
- With three different shapes
- Diamond-coated on the tweezers tip and at the end of the tweezers
- Stainless steel
- In a practical storage case



118.0030	3 pcs	Contact cleaner tweezers set	60

consists of:

118.0031	Cleaning tweezers, pointed for small plug		20
118.0033	Cleaning tweezers, pointed/flat for medium-sized plug		20
118.0034	Cleaning tweezers, flat for large plug		20




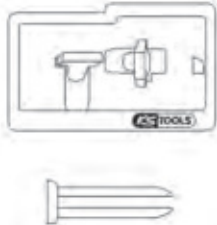
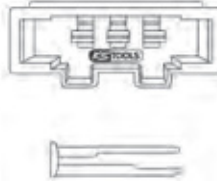
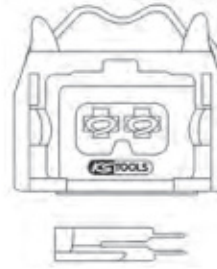
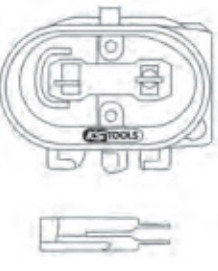


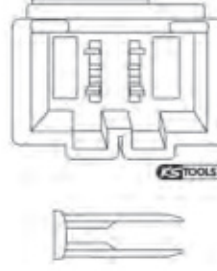


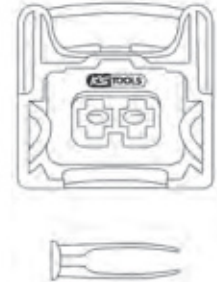
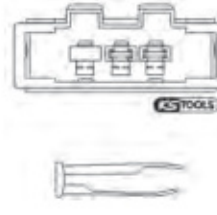
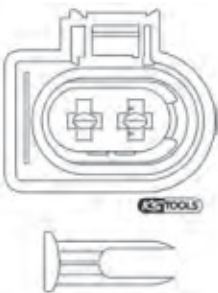
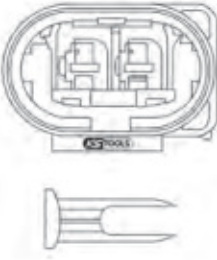
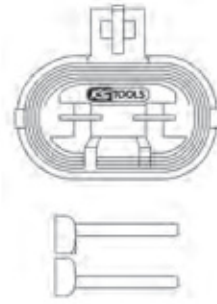
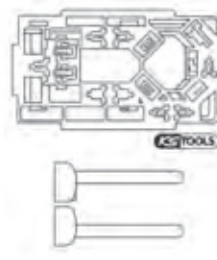
CABLE UNLOCKING TOOLS

Housing types

<p>150.1299</p> <p>Principle 5</p>	<p>150.1299</p> <p>Principle 5</p>	<p>154.0102</p> <p>Principle 5</p>	<p>154.0103</p> <p>Principle 1</p>
<p>154.0106</p> <p>Principle sidewise</p>	<p>154.0107</p> <p>Principle 2</p>	<p>154.0107</p> <p>Principle 2</p>	<p>154.0107</p> <p>Principle 2</p>
<p>154.0108</p> <p>Principle 5</p>	<p>154.0108</p> <p>Principle 5</p>	<p>150.1265</p> <p>Principle 2</p>	<p>150.1265</p> <p>Principle 2</p>
<p>150.1268</p> <p>Principle 5</p>	<p>154.0111</p> <p>Principle 2</p>	<p>154.0112</p> <p>Principle 2</p>	<p>150.1264</p> <p>Principle 5</p>

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Housing types

<p>150.1264</p>  <p>Principle 5</p>	<p>150.1288</p>  <p>Principle 2</p>	<p>150.1275</p>  <p>Principle 3</p>	<p>154.0118</p>  <p>Principle 2 primary + secondary</p>
<p>154.0118</p>  <p>Principle 2 primary + secondary</p>	<p>154.0119</p>  <p>Principle 2</p>	<p>154.0119</p>  <p>Principle 2</p>	<p>154.0121</p>  <p>Principle 2</p>
<p>154.0122</p>  <p>Principle 2</p>	<p>150.1269</p>  <p>Principle 2</p>	<p>150.1269</p>  <p>Principle 2</p>	<p>150.1276</p>  <p>Principle 3</p>
<p>154.0125</p>  <p>Principle 2</p>	<p>154.0125</p>  <p>Principle 2</p>	<p>150.1285</p>  <p>Principle 2</p>	<p>150.1285</p>  <p>Principle 2</p>

Housing types

150.1273

Principle 5

154.0128

Principle 1

154.0130

Principle 2

154.0130

Principle 2

150.1267

Principle 6

150.1267

Principle 2

154.0134

Principle 2

154.0135

Principle 2

150.1266

Principle 2

154.0138

Principle 2

150.1289

Principle 2

154.0201

Principle 1

154.0203

Principle 1

154.0205

Principle 1

154.0207


Principle 5

150.1263

Principle 1

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Housing types

<p>150.1263</p>  <p>Principle 1</p>	<p>150.1290</p>  <p>Principle 2</p>	<p>150.1290</p>  <p>Principle 2</p>	<p>150.1249</p>  <p>Principle 4</p>
<p>150.1249</p>  <p>Principle 4</p>	<p>150.1249</p>  <p>Principle 4</p>	<p>150.1249</p>  <p>Principle 4</p>	<p>150.1291</p>  <p>Principle 2</p>
<p>150.1257</p>  <p>Principle 1</p>	<p>150.1257</p>  <p>Principle 1</p>	<p>150.1262</p>  <p>Principle 1</p>	<p>150.1262</p>  <p>Principle 1</p>
<p>150.1248</p>  <p>Principle 4</p>	<p>150.1292</p>  <p>Principle 1</p>	<p>150.1292</p>  <p>Principle 1</p>	<p>150.1256</p>  <p>Principle 1</p>

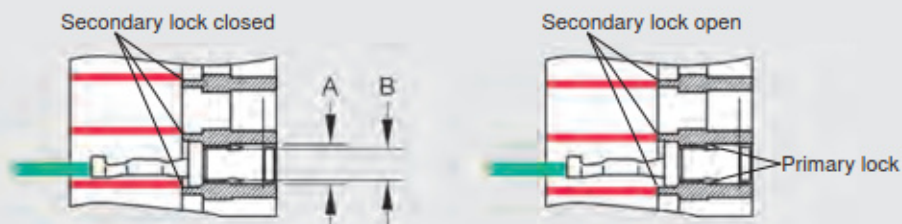
Release principle 1

Round plug systems with 2 locks

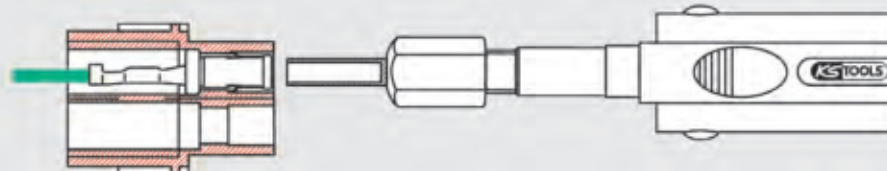
Tool selection for principle 1 according to dimension A and B

A = Outer dimension

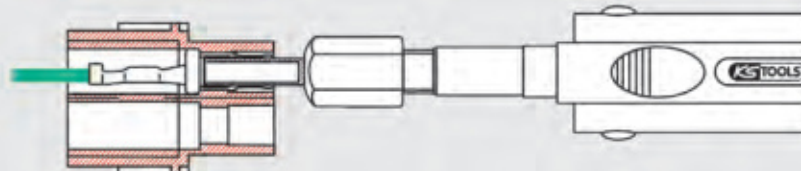
B = Inner dimension



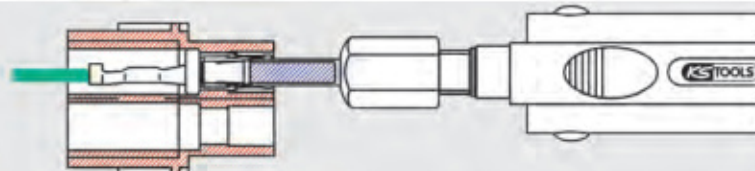
1. Insert tool into the chamber



2. Push handle through



3. Contact is ejected



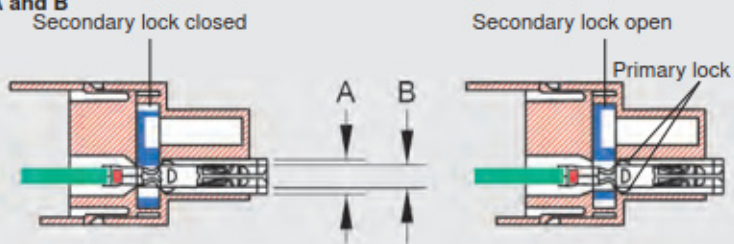
Release principle 2

Flat plug systems with secondary lock

Tool selection for principle 2 according to dimension A and B

A = Outer dimension

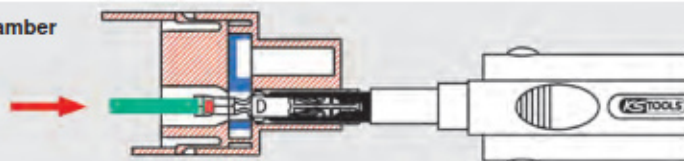
B = Inner dimension



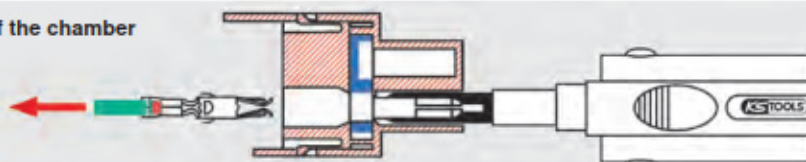
1. Insert tool into the chamber



2. At the same time, push contact into the chamber



3. Pull contact on the cable out of the chamber



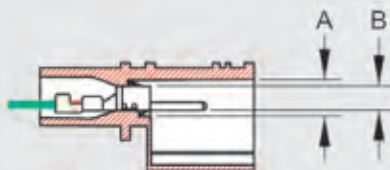
Release principle 3

Asymmetrical fitting plug systems

Unlock secondary lock (if present)

A = Outer dimension

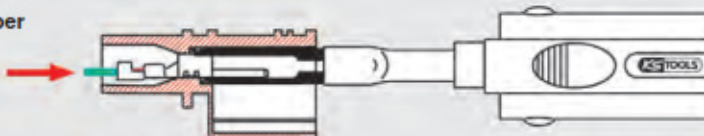
B = Inner dimension



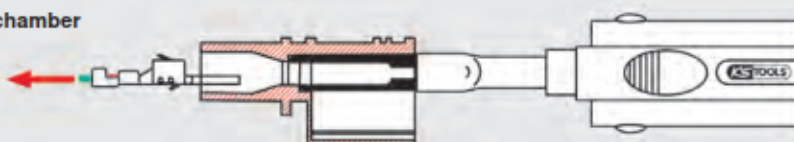
1. Insert tool into the chamber



2. At the same time, push contact into the chamber



3. Pull contact on the cable out of the chamber



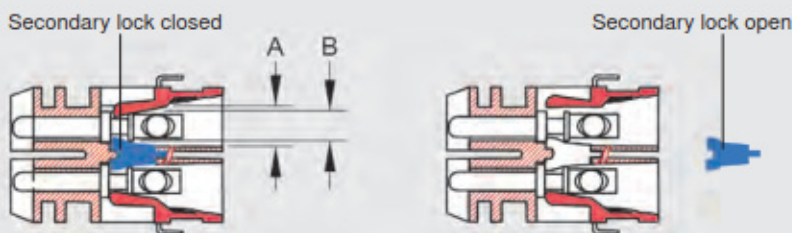
Release principle 4

Round plug systems with injected snap-in pin in the housing

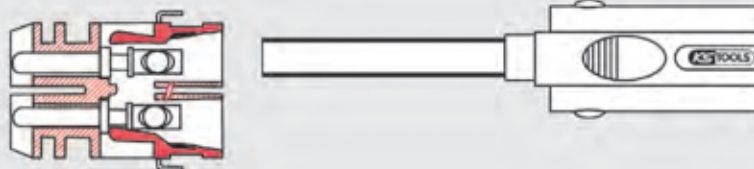
Tool selection for principle 4 according to dimension A and B

A = Outer dimension

B = Inner dimension



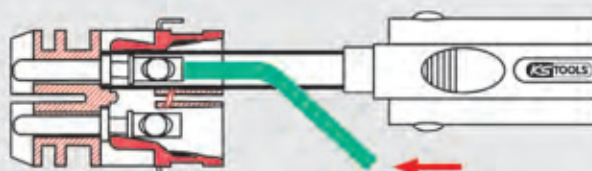
1. Insert tool into the chamber from behind



2. Push the cable into the pipe with your finger



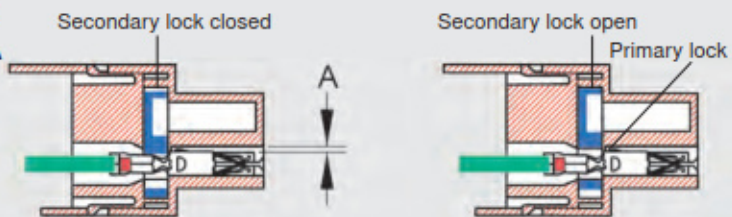
3. Pull tool with depressed the cable out of the chamber



Release principle 5

Flat plug systems with a lock

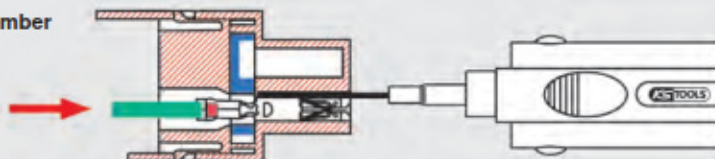
Tool selection for principle 5 according to dimension A
 A = Strength of the tool blade



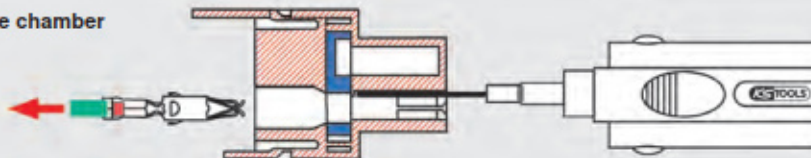
1. Insert tool into the chamber



2. At the same time, push contact into the chamber



3. Pull contact on the cable out of the chamber

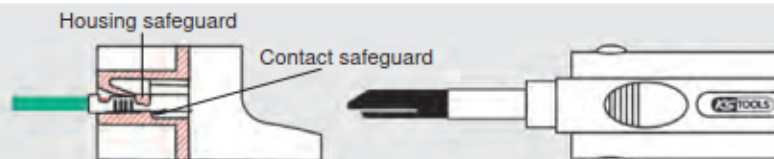


Release principle 6

Flag plug systems

This tool loosens the housing and contact safeguard.

1. Insert tool into the chamber, unlock the secondary lock (if present)



2. At the same time, push contact into the chamber



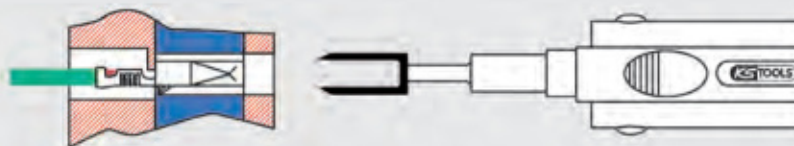
3. Pull contact on the cable out of the chamber



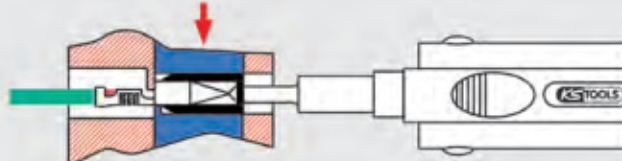
Release principle 7

Flag plug systems

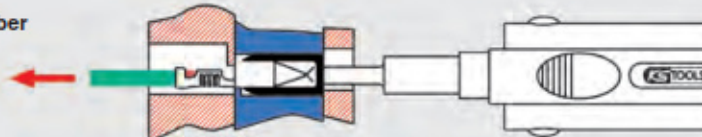
1. Insert tool into the chamber



2. Push the secondary lock laterally on the housing until it stops



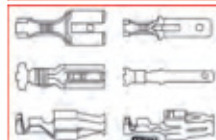
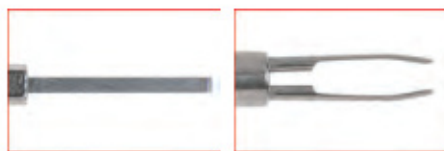
3. Pull contact on the cable out of the chamber



UNIVERSAL UNLOCKING TOOLS

Universal cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- For manufacturers **AMP Tyco JPT, AMP Tyco JT, AMP Tyco SPT, AMP Tyco ST**
- For plug design of fl t plug and receptacle
- For plug widths of 2.8 mm, 4.8 mm, 5.8 mm and 6.3 mm
- Unlocking according to principle 2+5
- Universally applicable
- With tool tips made of high-quality spring band steel



Part No.	Plug width (mm)	Plug type	Release principle	Length (mm)	Weight (g)
154.0011	2.8 / 4.8 / 5.8 / 6.3	Blade terminal / Blade terminal sleeve	2 + 5	117.0	20

Universal cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- For manufacturers **AMP Tyco MT I, AMP Tyco MT II**
- For plug design of fl t plug and receptacle
- For plug widths of 1.6 mm
- Unlocking according to principle 2+5
- Universally applicable
- With tool tips made of high-quality spring band steel



Part No.	Plug width (mm)	Plug type	Release principle	Length (mm)	Weight (g)
154.0012	1.6	Blade terminal / Blade terminal sleeve	2 + 5	117.0	18

Universal cable unlocking tool for round plugs and circular sockets

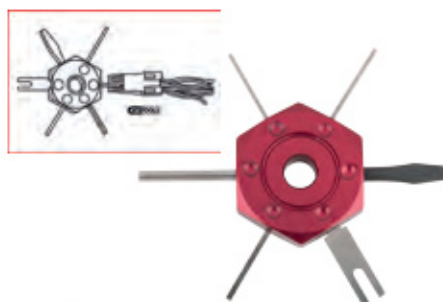
- For the professional and non-destructive release of contacts
- For manufacturers **AMP Tyco C12, AMP Tyco Mate-N-Lok, GHW RAM, GHW RSA2**
- For plug design of round plugs and circular sockets
- For plug diameters of 1.5 mm, 3.5 mm
- Unlocking according to principle 1
- Universally applicable
- With tool tips made of high-quality spring band steel



Part No.	Plug Ø (mm)	Plug type	Release principle	Length (mm)	Weight (g)
154.0013	1.5 / 3.5	Round connector / Round connector sleeve	2 + 5	107.0	16

Unlocking tool

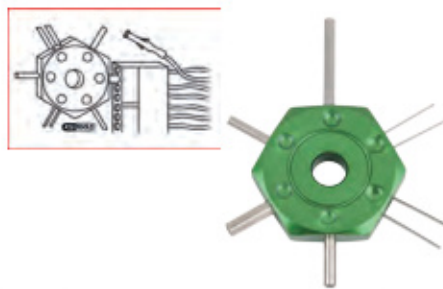
- Universal application in the field of electricians in passenger vehicles
- Precision tool to repair breakdowns or failure electrical links
- Ideal for Pack Con and Weather Pack connection terminals on GM C3 systems
- With six different unlocking connections
- Professional and non-destructive release of contacts



Part No.	Tool Name	Weight (g)
150.1231	Unlocking tool	60

Unlocking tool

- Universal application in the field of electricians in passenger vehicles
- Precision tool to repair breakdowns or failure electrical links
- The barbed hooks are pressed onto the connecting terminal via the forks of the tool during the unlocking process
- Cables with plugs can then be pulled out easily
- With six different unlocking connections
- Professional and non-destructive release of contacts



Part No.	Tool Name	Weight (g)
150.1232	Unlocking tool	60

UNLOCKING TOOLS FOR RECEPTACLES/FLAT PLUGS

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- For manufacturer **Delphi Ducon**
- For plug design of fl t plug and receptacle
- For plug widths of 0.8 mm, 1.5 mm
- Unlocking according to principle 5
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Opel, Renault, etc.

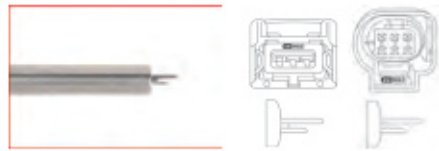


Part No.	Plug width (mm)	Plug type	Release principle	Length (mm)	Weight (g)
150.1299	0.8 / 1.5	Blade terminal / Blade terminal sleeve	5	139.0	20

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- For manufacturer **KOSTAL MLK**
- For plug design receptacle
- For plug widths of 1.2 mm
- Unlocking according to principle 5
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Mercedes, etc.

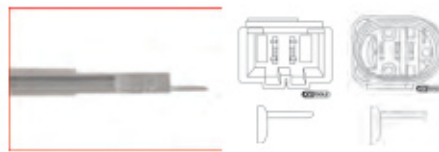


Part No.	Plug width (mm)	Plug type	Release principle	Length (mm)	Weight (g)
154.0102	1.2	Blade terminal sleeve	5	139.0	28

Cable unlocking tool for fl t plugs

- For the professional and non-destructive release of contacts
- For manufacturer **KOSTAL MLK**
- For plug design of fl t plug
- For plug widths of 1.2 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Mercedes, etc.



Part No.	Plug width (mm)	Plug type	Release principle	Length (mm)	Weight (g)
154.0103	1.2	Blade terminal	1	138.0	17

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- For manufacturers **AMP Tyco MCP**
- For plug design of fl t plug and receptacle
- For plug widths of 1.2 mm
- Unlocking according to principle 5
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Volkswagen, Audi, Seat, Škoda, Mercedes, etc.



Part No.	Plug width (mm)	Plug type	Release principle	Length (mm)	Weight (g)
154.0104	1.2	Blade terminal / Blade terminal sleeve	5	139.0	16

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturers AMP Tyco MQS**
- For plug design of fl t plug and receptacle
- For plug widths of 1.2 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Volkswagen, Audi, Seat, Mercedes, Skoda, etc.



Part no.	Plug width mm	Plug type	Release principle	Length mm	Weight g
154.0105	1,2	Blade terminal / Blade terminal sleeve	1	123,0	14

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturers AMP Tyco Superseal**
- For plug design of fl t plug and receptacle
- For plug widths of 1.5 mm
- Unlocking according to principle 5
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Ford

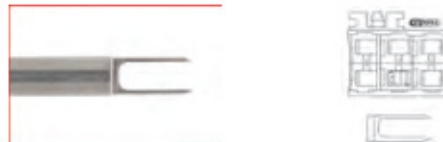


Part no.	Plug width mm	Plug type	Release principle	Length mm	Weight g
154.0108	1,5	Blade terminal / Blade terminal sleeve	5	137,0	16

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer Delphi AF2**
- For plug design receptacle
- For plug widths of 1.6 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Opel



Part no.	Plug width mm	Plug type	Release principle	Length mm	Weight g
154.0111	1,6	Blade terminal sleeve	2	139,0	35

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturers AMP Tyco MQS**
- For plug design of fl t plug and receptacle
- For plug widths of 1.2 mm
- Unlocking according to the lateral principle
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Volkswagen, Audi, Mercedes, Opel, etc.



Part no.	Plug width mm	Plug type	Release principle	Length mm	Weight g
154.0106	1,2	Blade terminal / Blade terminal sleeve	sidewise	134,0	25

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco MT II**
- For plug design of fl t plug and receptacle
- For plug widths of 1.6 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Mercedes, Opel, Volkswagen, Audi, Seat, Renault, etc.

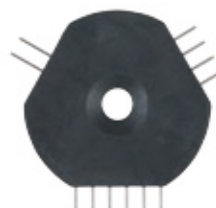


Part no.	Plug width mm	Plug type	Release principle	Length mm	Weight g
150.1265	1,6	Blade terminal / Blade terminal sleeve	2	131,0	30

Cable unlocking tool for fl t plugs

- For the professional and non-destructive release of contacts
- **For manufacturer GHW GSK**
- For plug design of fl t plug
- For plug widths of 1.6 mm
- Unlocking according to principle 2
- With tool tips made of high-quality spring band steel

Application areas: Mercedes Sprinter



Part no.	Plug width mm	Plug type	Release principle	Length mm	Weight g
154.0112	1,6	Blade terminal / Blade terminal sleeve	2	65,0	27

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturers AMP Tyco MCP**
- For plug design receptacle
- For plug widths of 1.5 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Volkswagen, Audi, Škoda, Seat, etc.



Part no.	Plug width mm	Plug type	Release principle	Length mm	Weight g
154.0107	1,5	Blade terminal sleeve	2	139,0	20

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco MT I**
- For plug design of fl t plug and receptacle
- For plug widths of 1.6 mm
- Unlocking according to principle 5
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Mercedes, Ford, Opel, Volkswagen, Audi, Renault, etc.



Part no.	Plug width mm	Plug type	Release principle	Length mm	Weight g
150.1268	1,6	Blade terminal sleeve	5	137,0	30

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco E-95**
- For plug design receptacle
- For plug widths of 1.65 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Mercedes

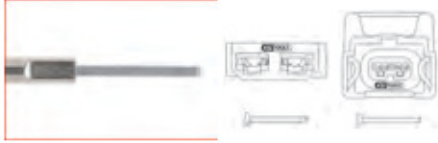


Part no.	Plug width mm	Plug type	Release principle	Length mm	Weight g
150.1289	1,65	Blade terminal sleeve	2	137,0	30

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- For manufacturers **AMP Tyco JT, AMP Tyco ST, Deutsch DT**
- For plug design of fl t plug and receptacle
- For plug widths of 2.8 mm
- Unlocking according to principle 5
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Mercedes, Opel, Volkswagen, Audi, Seat, Renault, etc.



Plug width mm	Plug type	Release principle	Length mm	Weight g
150.1264	2,8 Blade terminal / Blade terminal sleeve	5	137,0	30

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- For manufacturer **GHW MDK**
- For plug design receptacle
- For plug widths of 2.8 mm
- Unlocking according to principle 3
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Ford



Plug width mm	Plug type	Release principle	Length mm	Weight g
154.0117	2,8 Blade terminal sleeve	3	138,0	16

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- For manufacturer **KOSTAL SLK**
- For plug design of fl t plug and receptacle
- For plug widths of 2.8 mm
- Unlocking according to principle 2/primary and secondary
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Mercedes, etc.

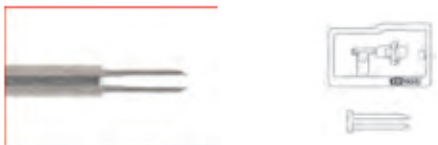


Plug width mm	Plug type	Release principle	Length mm	Weight g
154.0120	2,8 Blade terminal / Blade terminal sleeve	2 Primary and Secondary	165,0	54

Cable unlocking tool for fl t plugs

- For the professional and non-destructive release of contacts
- **Universally applicable**
- For plug design of fl t plug
- For plug widths of 2.8 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Commercial vehicles



Plug width mm	Plug type	Release principle	Length mm	Weight g
150.1288	2,8 Blade terminal	2	137,0	20

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- For manufacturer **KOSTAL SLK**
- For plug design of fl t plug and receptacle
- For plug widths of 2.8 mm
- Unlocking according to principle 2/primary and secondary
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Mercedes, etc.



Plug width mm	Plug type	Release principle	Length mm	Weight g
154.0118	2,8 Blade terminal / Blade terminal sleeve	2 Primary and Secondary	166,0	53

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- For manufacturers **AMP Tyco MCP**
- For plug design of fl t plug and receptacle
- For plug widths of 2.8 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Volkswagen, Audi, Seat, Škoda, Mercedes, etc.



Plug width mm	Plug type	Release principle	Length mm	Weight g
154.0121	2,8 Blade terminal / Blade terminal sleeve	2	139,0	20

Cable unlocking tool for fl t plugs

- For the professional and non-destructive release of contacts
- For manufacturers **AMP Tyco JT, AMP Tyco JPT asy**
- For plug design of fl t plug
- For plug widths of 2.8 mm
- Unlocking according to principle 3
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Volkswagen, Audi, Seat, Škoda, etc.



Plug width mm	Plug type	Release principle	Length mm	Weight g
150.1275	2,8 Blade terminal	3	137,0	30

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- For manufacturer **KOSTAL SLK**
- For plug design receptacle
- For plug widths of 2.8 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Mercedes, etc.



Plug width mm	Plug type	Release principle	Length mm	Weight g
154.0119	2,8 Blade terminal sleeve	2	135,0	43

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- For manufacturer **AMP Tyco SPT**
- For plug design of fl t plug and receptacle
- For plug widths of 4.8 mm, 5.8 mm, 6.3 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Volkswagen, Audi, Seat, Škoda, Mercedes, etc.

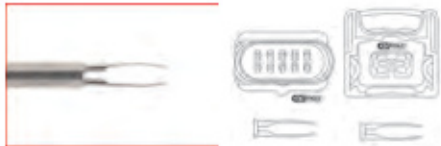


Plug width mm	Plug type	Release principle	Length mm	Weight g
154.0122	4,8 / 5,8 / 6,3 Blade terminal / Blade terminal sleeve	2	139,0	18

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- For manufacturers AMP Tyco JPT, AMP Tyco SPT, AMP Tyco TAB, Delphi HVF2, GHW DFK, GHW MDK 3
- For plug design of fl t plug and receptacle
- For plug widths of 2.8 mm, 4.8 mm, 5.8 mm, 6.3 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Mercedes, Opel, Volkswagen, Audi, Skoda, NKW, etc.

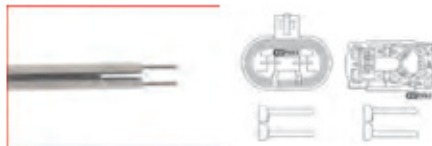


	Plug width mm	Plug type	Release principle	Length mm	Weight g
150.1269	2,8 / 4,8 / 5,8 / 6,3	Blade terminal / Blade terminal sleeve	2	139,0	30

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- For manufacturer Delphi Ducon
- For plug design of fl t plug and receptacle
- For plug widths of 4.8 mm, 6.3 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Opel, Renault, etc.



	Plug width mm	Plug type	Release principle	Length mm	Weight g
150.1285	4,8 / 6,3	Blade terminal / Blade terminal sleeve	2	139,0	30

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- For manufacturer KOSTAL SLK
- For plug design receptacle
- For plug widths of 5.8 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Audi, Volkswagen, Seat, Mercedes, Skoda, etc.

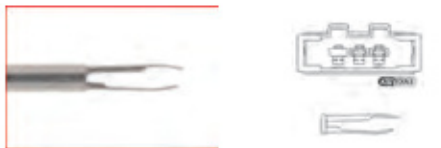


	Plug width mm	Plug type	Release principle	Length mm	Weight g
154.0129	5,8	Blade terminal sleeve	2	169,0	69

Cable unlocking tool for fl t plugs

- For the professional and non-destructive release of contacts
- For manufacturer AMP Tyco 4.8 asy
- For plug design of fl t plug
- For plug widths of 4.8 mm
- Unlocking according to principle 3
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Volkswagen, Audi, Seat, Škoda, etc.

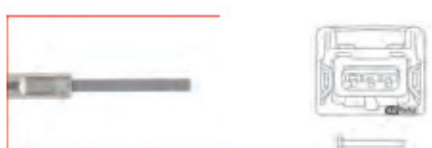


	Plug width mm	Plug type	Release principle	Length mm	Weight g
150.1276	4,8	Blade terminal	3	139,0	20

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- For manufacturer AMP Tyco ST
- For plug design of fl t plug and receptacle
- For plug widths of 5.8 mm
- Unlocking according to principle 5
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW



	Plug width mm	Plug type	Release principle	Length mm	Weight g
150.1273	5,8	Blade terminal / Blade terminal sleeve	5	137,0	30

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- For manufacturer KOSTAL LSK 8 primary
- For plug design of fl t plug and receptacle
- For plug widths of 6.3 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Mercedes, etc.



	Plug width mm	Plug type	Release principle	Length mm	Weight g
154.0130	6,3	Blade terminal / Blade terminal sleeve	2	139,0	34

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- For manufacturers AMP Tyco MCP
- For plug design of fl t plug and receptacle
- For plug widths of 4.8 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Audi, Volkswagen, Seat, Škoda, etc.



	Plug width mm	Plug type	Release principle	Length mm	Weight g
154.0125	4,8	Blade terminal / Blade terminal sleeve	2	139,0	36

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- For manufacturer KOSTAL SLK
- For plug design of fl t plug and receptacle
- For plug widths of 5.8 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Audi, Volkswagen, Seat, Mercedes, Skoda, etc.



	Plug width mm	Plug type	Release principle	Length mm	Weight g
154.0128	5,8	Blade terminal	1	167,0	71

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- For manufacturer KOSTAL LSK
- For plug design of fl t plug and receptacle
- For plug widths of 6.3 mm, 8.0 mm
- Unlocking according to principle 2/primary and secondary
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Mercedes, etc.

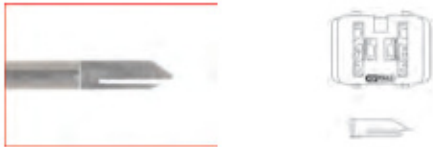


	Plug width mm	Plug type	Release principle	Length mm	Weight g
154.0131	6,3 / 8,0	Blade terminal / Blade terminal sleeve	2 Primary and Secondary	149,0	39

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer GHW 6.3**
- For plug design receptacle
- For plug widths of 6.3 mm
- Unlocking according to principle 6
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Opel, Renault, etc.

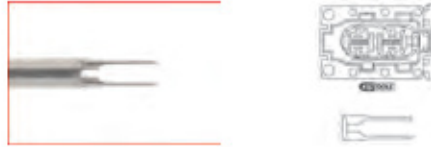


Plug width (mm)	Plug type	Release principle	Length (mm)	Weight (kg)
150.1267	6.3 Blade terminal sleeve	6	139.0	30

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco MPT**
- For plug design receptacle
- For plug widths of 9.5 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Commercial vehicles



Plug width (mm)	Plug type	Release principle	Length (mm)	Weight (kg)
154.0135	9.5 Blade terminal sleeve	2	139.0	34

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturers AMP Tyco SensorTime, Bosch BDK**
- For plug design receptacle
- For plug widths of 2.8 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Audi, Volkswagen, Seat, Mercedes, Škoda, etc. (especially for knock sensor, air mass flow meter, Bosch contact systems)

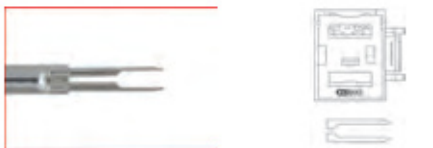


Plug width (mm)	Plug type	Release principle	Length (mm)	Weight (kg)
154.0138	2.8 Blade terminal sleeve	2	139.0	21

Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- **for manufacturer Delphi Ducon**
- For plug design of fl t plug and receptacle
- For plug widths of 9.5 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Opel

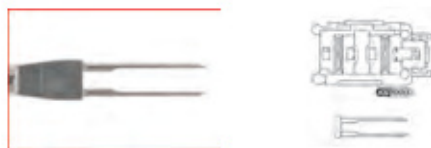


Plug width (mm)	Plug type	Release principle	Length (mm)	Weight (kg)
150.1287	9.5 Blade terminal / Blade terminal sleeve	2	143.0	30

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturers AMP Tyco MPT, GHW Maxi-DFK**
- For plug design receptacle
- For plug widths of 9.5 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Commercial vehicles



Plug width (mm)	Plug type	Release principle	Length (mm)	Weight (kg)
150.1266	9.5 Blade terminal sleeve	2	156.0	30

UNLOCKING TOOLS FOR CIRCULAR SOCKET/ROUND PLUGS

Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco 1.5**
- For plug design of round plugs and circular socket
- For plug diameters of 1.2 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

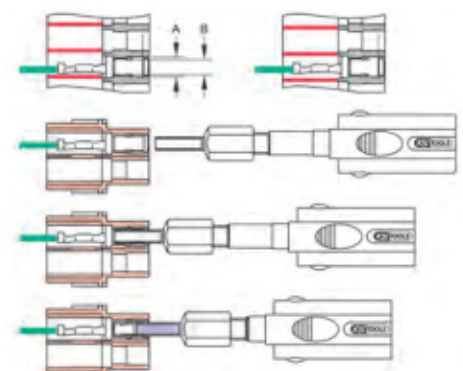
Application areas: BMW, Mercedes, Volkswagen, Audi, Seat, etc.



Plug Ø (mm)	Plug type	Release principle	Length (mm)	Weight (kg)
154.0201	1.2 Round connector / Round connector sleeve	1	155.0	51

Replacement sleeve:

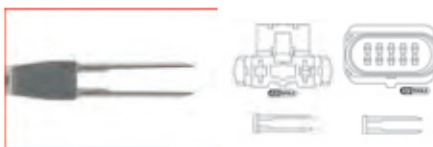
Part number	Description	Weight (kg)
154.0202	Sleeve Ø 1.2 mm (AMP Tyco 1.5)	4



Cable unlocking tool for fl t plugs and receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer AMP Tyco MPT**
- For plug design of fl t plug and receptacle
- For plug widths of 9.5 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Mercedes, Volkswagen, BMW, Renault, Audi, Škoda, Seat, etc.

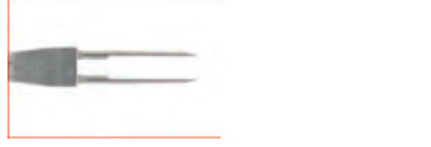


Plug width (mm)	Plug type	Release principle	Length (mm)	Weight (kg)
154.0134	9.5 Blade terminal / Blade terminal sleeve	2	135.0	16

Cable unlocking tool for receptacles

- For the professional and non-destructive release of contacts
- **For manufacturer KOSTAL PLK**
- For plug design receptacle
- For plug widths of 14.5 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Commercial vehicles



Plug width (mm)	Plug type	Release principle	Length (mm)	Weight (kg)
154.0137	14.5 Blade terminal sleeve	2	156.0	36

Cable unlocking tool for round plugs

- For the professional and non-destructive release of contacts
- For manufacturer **KOSTAL LKS**
- For plug design of round plug
- For plug diameters of 1.5 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Mercedes, etc.



Plug Ø mm	Plug type	Release principle	Length mm	Icon	
154.0203	1,5	Round connector	1	160,0	37

Replacement sleeve:

Plug Ø mm	Plug type	Release principle	Length mm	Icon	
150.1247	Sleeve Ø 1.5 mm (KOSTAL LKS)				1

Cable unlocking tool for circular sockets

- For the professional and non-destructive release of contacts
- For manufacturer **KOSTAL LKS**
- For plug design of circular socket
- For plug diameters of 1.5 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Mercedes, etc.



Plug Ø mm	Plug type	Release principle	Length mm	Icon	
154.0205	1,5	Round connector sleeve	1	152,0	36

Replacement sleeve:

Plug Ø mm	Plug type	Release principle	Length mm	Icon	
154.0206	Sleeve Ø 1.5 mm (KOSTAL LKS)				1

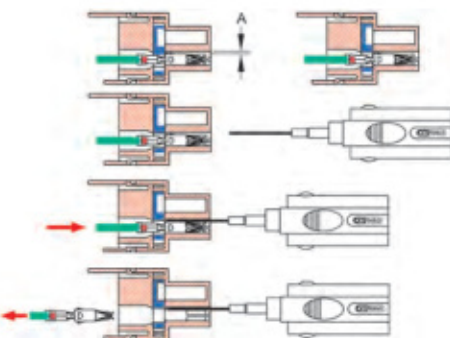
Cable unlocking tool for circular sockets

- For the professional and non-destructive release of contacts
- For manufacturer **LBK**
- For plug design of circular socket
- For plug diameters of 1.5 mm
- Unlocking according to principle 5
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Ford



Plug Ø mm	Plug type	Release principle	Length mm	Icon	
154.0207	1,5	Round connector sleeve	5	139,0	20



Cable unlocking tool for circular sockets

- For the professional and non-destructive release of contacts
- For manufacturer **AMP Tyco 1.5**
- For plug design of circular socket
- For plug diameters of 1.5 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Commercial vehicles



Plug Ø mm	Plug type	Release principle	Length mm	Icon	
154.0208	1,5	Round connector sleeve	1	157,0	36

Replacement sleeve:

Plug Ø mm	Plug type	Release principle	Length mm	Icon	
154.0209	Sleeve Ø 1.5 mm (AMP Tyco 1.5)				1

Cable unlocking tool for round plugs

- For the professional and non-destructive release of contacts
- For manufacturer **AMP Tyco 1.5**
- For plug design of round plug
- For plug diameters of 1.5 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Mercedes, Opel, Volkswagen, Audi, Skoda, Seat, NKW, etc.



Plug Ø mm	Plug type	Release principle	Length mm	Icon	
150.1263	1,5	Round connector	1	160,0	30

Replacement sleeve:

Plug Ø mm	Plug type	Release principle	Length mm	Icon	
150.1270	Sleeve Ø 1.5 mm (AMP Tyco 1.5)				10

Cable unlocking tool for circular sockets

- For the professional and non-destructive release of contacts
- For manufacturers **GHW MKS, GHW MKR**
- For plug design of circular socket
- For plug diameters of 1.5 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Commercial vehicles



Plug Ø mm	Plug type	Release principle	Length mm	Icon	
150.1290	1,5	Round connector sleeve	2	139,0	30



Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- For manufacturers **AMP Tyco 2.3, Delphi 2.3, GHW 2.3**
- For plug design of round plugs and circular socket
- For plug diameters of 2.5 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Ford, Opel, Renault, etc.



Part No.	Plug Ø mm	Plug type	Release principle	Length mm	Weight g
150.1261	2,3	Round connector / Round connector sleeve	1	164,0	30

Replacement sleeve:

Part No.	Plug Ø mm	Plug type	Release principle	Length mm	Weight g
150.1272	Sleeve Ø 2.3 mm (AMP Tyco 2.3, Delphi 2.3, GHW 2.3)				10

Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- For manufacturer **KOSTAL RK**
- For plug design of round plugs and circular socket
- For plug diameters of 2.5 mm
- Unlocking according to principle 4
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Mercedes



Part No.	Plug Ø mm	Plug type	Release principle	Length mm	Weight g
150.1249	2,5	Round connector / Round connector sleeve	4	138,0	16

Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- For manufacturer **GHW VKR Plus**
- For plug design of round plugs and circular socket
- For plug diameters of 2.5 mm
- Unlocking according to principle 2
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Commercial vehicles



Part No.	Plug Ø mm	Plug type	Release principle	Length mm	Weight g
150.1291	2,5	Round connector / Round connector sleeve	2	138,0	30

Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- For manufacturer **AMP Tyco 2.5**
- For plug design of round plugs and circular socket
- For plug diameters of 2.5 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Mercedes, etc.



Part No.	Plug Ø mm	Plug type	Release principle	Length mm	Weight g
150.1257	2,5	Round connector / Round connector sleeve	1	150,0	33

Replacement sleeve:

Part No.	Plug Ø mm	Plug type	Release principle	Length mm	Weight g
154.0218	Sleeve Ø 2.5 mm (AMP Tyco 2.5)				1

Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- For manufacturer **AMP Tyco 3.5**
- For plug design of round plugs and circular socket
- For plug diameters of 3.5 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: BMW, Mercedes, etc.



Part No.	Plug Ø mm	Plug type	Release principle	Length mm	Weight g
150.1262	3,5	Round connector / Round connector sleeve	1	150,0	30

Replacement sleeve:

Part No.	Plug Ø mm	Plug type	Release principle	Length mm	Weight g
150.1271	Sleeve Ø 3.5 mm (AMP Tyco 3.5)				10

Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- For manufacturer **KOSTAL RK**
- For plug design of round plugs and circular socket
- For plug diameters of 4.0 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Commercial vehicles



Part No.	Plug Ø mm	Plug type	Release principle	Length mm	Weight g
154.0221	4,0	Round connector / Round connector sleeve	1	156,0	70

Replacement sleeve:

Part No.	Plug Ø mm	Plug type	Release principle	Length mm	Weight g
154.0222	Sleeve Ø 4.0 mm (KOSTAL RK 4.0)				1

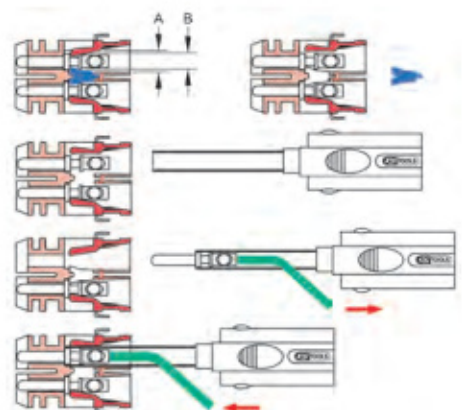
Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- For manufacturer **KOSTAL RK**
- For plug design of round plugs and circular socket
- For plug diameters of 4.0 mm
- Unlocking according to principle 4
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: Mercedes



Part No.	Plug Ø mm	Plug type	Release principle	Length mm	Weight g
150.1248	4,0	Round connector / Round connector sleeve	4	138,0	17



Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturer ABS**
- For plug design of round plugs and circular socket
- For plug diameters of 4.0 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: for unlocking ABS contacts on 5, 7, 13 and 15-pole sockets



Plug ID no.	Plug type	Release principle	Length mm	Icon
150.1292	4.0 Round connector / Round connector sleeve	1	172.0	30

Replacement sleeve:

Part No.	Description	Icon
154.0225	Sleeve Ø 4.0 mm (ABS 4.0)	3

Cable unlocking tool for round plugs and circular sockets

- For the professional and non-destructive release of contacts
- **For manufacturer ABS**
- For plug design of round plugs and circular socket
- For plug diameters of 5.5 mm
- Unlocking according to principle 1
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel

Application areas: for unlocking ABS contacts on 5, 7, 13 and 15-pole sockets



Plug ID no.	Plug type	Release principle	Length mm	Icon
150.1256	5.5 Round connector / Round connector sleeve	1	172.0	38

Replacement sleeve:

Part No.	Description	Icon
154.0227	Sleeve Ø 5.5 mm (ABS 5.5)	2

UNLOCKING TOOLS FOR HOUSING

Unlocking tool for housing

- For the professional and non-destructive release of housing
- For manufacturers AMP Tyco Superseal, Deutsch DT
- For plug design of the housing
- For secondary lock
- With safety bar to protect the blades and to avoid injuries
- With tool tips made of high-quality spring band steel



Plug width mm	Plug type	Release principle	Length mm	Icon
154.0228	1.6 Housing	2	140.0	25

UNLOCKING TOOL SETS

Passenger vehicle unlocking tool set for the new generation of vehicles

- Specially designed for BMW, Mercedes, Opel, Renault, Volkswagen, Audi, Seat, Škoda, NKW etc. plug-in contacts
- For the professional and non-destructive release of contacts
- For manufacturers AMP Tyco (JT, JPT, MCP, ST, SPT, TAB), Delphi (HVF2, Ducon), Deutsch DT, GHW (DFK, MDK3), KOSTAL (MLK, RK)
- Contains the most common unlocking tools for the new generation of vehicles



Part No.	Description	Icon
154.0140	8 pcs Passenger vehicle unlocking tool set for the new generation of vehicles	1180

consists of:

Part No.	Description	Icon
150.1264	Unlocking Tool for blade terminal/blade terminal sleeve 2.8 mm (AMP Tyco JT, AMP Tyco ST, Deutsch DT)	30

consists of:

Part No.	Description	Icon
154.0107	Unlocking Tool for blade terminal sleeve 1.5 mm (AMP Tyco MCP)	20
150.1269	Unlocking Tool for blade terminal/blade terminal sleeve 2.8 mm, 4.8 mm, 5.8 mm, 6.3 mm (AMP Tyco JPT, AMP Tyco SPT, AMP Tyco, TAB, Delphi HVF2, GHW DFK, GHW MDK 3)	30
150.1265	Unlocking Tool for blade terminal sleeve 1.5 mm (AMP Tyco MT II)	30
154.0102	Unlocking Tool for blade terminal sleeve 1.2 mm (KOSTAL MLK)	28
150.1248	Unlocking Tool for round plug/round connector sleeve 4.0 mm (KOSTAL RK)	17
150.1299	Unlocking Tool for blade terminal/blade terminal sleeve 0.8 mm, 1.5 mm (Delphi Ducon)	20
154.0104	Unlocking Tool for blade terminal/blade terminal sleeve 1.2 mm (AMP Tyco MCP)	16

Passenger vehicle unlocking tool set for the older generation of vehicles

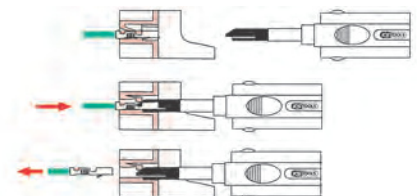
- Specially designed for BMW, Mercedes, Opel, Renault, Volkswagen, Audi, Seat, Škoda, NKW etc. plug-in contacts
- For the professional and non-destructive release of contacts
- For manufacturers AMP Tyco (MT1, MPT, Superseal, 1.5 and 3.5), GHW 6.3, KOSTAL RK
- Contains the most common unlocking tools for the new generation of vehicles



Part No.	Description	Icon
154.0145	8 pcs Passenger vehicle unlocking tool set for the older generation of vehicles	1180

consists of:

Part No.	Description	Icon
150.1263	Unlocking Tool for round plug 1.5 mm (AMP Tyco 1.5)	30
154.0203	Unlocking Tool for round plug 1.5 mm (KOSTAL LKS)	37
154.0108	Unlocking Tool for blade terminal/blade terminal sleeve 1.5 mm (AMP Tyco Superseal)	16
150.1268	Unlocking Tool for blade terminal/blade terminal sleeve 1.6 mm (AMP Tyco MT I)	30
154.0134	Unlocking Tool for blade terminal/blade terminal sleeve 9.5 mm (AMP Tyco MPT)	16
150.1267	Unlocking Tool for blade terminal sleeve 6.3 mm (GHW 6.3)	30
150.1248	Unlocking Tool for round plug/round connector sleeve 4.0 mm (KOSTAL RK)	17
150.1262	Unlocking Tool for round plug/round connector sleeve 3.5 mm (AMP Tyco 3.5)	30



Unlocking tool set for Renault/PSA plug-in contacts

- Specially designed for Renault / PSA plug-in contacts
- For the professional and non-destructive release of contacts
- For manufacturers AMP Tyco (JT, MT1, MPT, ST, 2 and 3), Delphi (Ducon, 2 and 3), Deutsch DT, GHW (2,3 and 6,3)
- Contains the most common unlocking tools for the new generation of vehicles



154.0160	7 pcs	Unlocking tool set for Renault/PSA plug-in contacts	1150
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consists of:

150.1268	Unlocking Tool for blade terminal/blade terminal sleeve 1,6 mm (AMP Tyco MT I)	30	
150.1264	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm (AMP Tyco JT, AMP Tyco ST, Deutsch DT)	30	
150.1285	Unlocking Tool for blade terminal/blade terminal sleeve 4,8 mm, 6,3 mm (Delphi Ducon)	30	
154.0134	Unlocking Tool for blade terminal/blade terminal sleeve 9,5 mm (AMP Tyco MPT)	16	
150.1267	Unlocking Tool for blade terminal sleeve 6,3 mm (GHW 6,3)	30	
150.1261	Unlocking Tool for round plug/round connector sleeve 2,5 mm (AMP Tyco 2,3, Delphi 2,3, GHW 2,3)	30	
150.1299	Unlocking Tool for blade terminal/blade terminal sleeve 0,8 mm, 1,5 mm (Delphi Ducon)	20	

Unlocking tool set for Opel/GM plug-in contacts

- Specially designed for Opel / GM plug-in contacts
- For the professional and non-destructive release of contacts
- For manufacturers AMP Tyco (JT, JPT, MT I, MT II, MQS, ST, SPT), Delphi (AF2, Ducon, HVF2), Deutsch DT, GHW (DFK, MDK3, 6,3)
- Contains the most common unlocking tools for the new generation of vehicles



154.0155	10 pcs	Unlocking tool set for Opel/GM plug-in contacts	1255
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consists of:

150.1299	Unlocking Tool for blade terminal/blade terminal sleeve 0,8 mm, 1,5 mm (Delphi Ducon)	20	
150.1268	Unlocking Tool for blade terminal/blade terminal sleeve 1,6 mm (AMP Tyco MT I)	30	
150.1265	Unlocking Tool for blade terminal sleeve 1,5 mm (AMP Tyco MT II)	30	
154.0106	Unlocking Tool for blade terminal/blade terminal sleeve 1,2 mm (AMP Tyco MQS)	25	
154.0111	Unlocking Tool for blade terminal sleeve 1,6 mm (Delphi AF2)	35	
150.1264	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm (AMP Tyco JT, AMP Tyco ST, Deutsch DT)	30	
150.1269	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm, 4,8 mm, 5,8 mm, 6,3 mm (AMP Tyco JPT, AMP Tyco SPT, AMP Tyco, TAB, Delphi HVF2, GHW DFK, GHW MDK 3)	30	
150.1285	Unlocking Tool for blade terminal/blade terminal sleeve 4,8 mm, 6,3 mm (Delphi Ducon)	30	
150.1287	Unlocking Tool for blade terminal/blade terminal sleeve 9,5 mm (Delphi Ducon)	30	
150.1267	Unlocking Tool for blade terminal sleeve 6,3 mm (GHW 6,3)	30	

Unlocking tool set for VAG plug-in contacts

- Specially designed for Volkswagen, Audi, Seat, Škoda etc. plug-in contacts
- For the professional and non-destructive release of contacts
- For manufacturers AMP Tyco (JT, JPT asy, MCP, MPT, MQS, MT I, MT II, TAB, ST, SPT, Sensortime, Superseal and 1,5) Bosch, Delphi HVF2, Deutsch DT, GHW (DFK, MDK3), KOSTAL SLK
- Contains the most common unlocking tools for the new generation of vehicles



154.0165	20 pcs	Unlocking tool set for VAG plug-in contacts	1650
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consists of:

154.0104	Unlocking Tool for blade terminal/blade terminal sleeve 1,2 mm (AMP Tyco MCP)	16	
154.0107	Unlocking Tool for blade terminal sleeve 1,5 mm (AMP Tyco MCP)	20	
150.1265	Unlocking Tool for blade terminal sleeve 1,5 mm (AMP Tyco MT II)	30	
154.0105	Unlocking Tool for blade terminal/blade terminal sleeve 1,2 mm (AMP Tyco MQS)	14	
154.0108	Unlocking Tool for blade terminal/blade terminal sleeve 1,5 mm (AMP Tyco Superseal)	16	
150.1268	Unlocking Tool for blade terminal/blade terminal sleeve 1,6 mm (AMP Tyco MT I)	30	
154.0106	Unlocking Tool for blade terminal/blade terminal sleeve 1,2 mm (AMP Tyco MQS)	25	
150.1275	Unlocking Tool for blade terminal sleeve 2,8 mm (AMP Tyco JT, AMP Tyco JPT asy)	30	
150.1264	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm (AMP Tyco JT, AMP Tyco ST, Deutsch DT)	30	
154.0121	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm (AMP Tyco MCP)	20	
150.1276	Unlocking Tool for blade terminal sleeve 4,8 mm (AMP Tyco 4,8 asy)	20	
154.0122	Unlocking Tool for blade terminal/blade terminal sleeve 4,8 mm, 5,8 mm, 6,3 mm (AMP Tyco SPT)	18	
154.0125	Unlocking Tool for blade terminal/blade terminal sleeve 4,8 mm (AMP Tyco MCP)	36	
154.0128	Unlocking Tool for blade terminal/blade terminal sleeve 5,8 mm (KOSTAL SLK)	71	
150.1269	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm, 4,8 mm, 5,8 mm, 6,3 mm (AMP Tyco JPT, AMP Tyco SPT, AMP Tyco, TAB, Delphi HVF2, GHW DFK, GHW MDK 3)	30	

consists of:

154.0129	Unlocking Tool for blade terminal sleeve 5,8 mm (KOSTAL SLK)	69	
154.0134	Unlocking Tool for blade terminal/blade terminal sleeve 9,5 mm (AMP Tyco MPT)	16	
154.0138	Unlocking Tool for blade terminal sleeve 2,8 mm (AMP Tyco SensorTime, Bosch BDK)	21	
154.0201	Unlocking Tool for round plug/round connector sleeve 1,2 mm (AMP Tyco 1,5)	51	
150.1263	Unlocking Tool for round plug 1,5 mm (AMP Tyco 1,5)	30	

Unlocking tool set for BMW/Mercedes plug-in contacts

- Specially designed for BMW / Mercedes plug-in contacts
- For the professional and non-destructive release of contacts
- For manufacturers AMP Tyco (E-95, JT, JPT, MPT, MT I, TAB, Sensortime, ST, SPT, 2,5 and 3,5), Bosch, Delphi HVF2, GHW (DFK, MDK3), KOSTAL (LSK8, MLK, RK, SLK)
- Contains the most common unlocking tools for the new generation of vehicles



154.0150	22 pcs	Unlocking tool set for BMW/Mercedes plug-in contacts	1730
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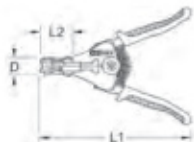
consists of:

154.0102	Unlocking Tool for blade terminal sleeve 1,2 mm (KOSTAL MLK)	28	
150.1268	Unlocking Tool for blade terminal/blade terminal sleeve 1,6 mm (AMP Tyco MT I)	30	
154.0103	Unlocking Tool for blade terminal sleeve 1,2 mm (KOSTAL MLK)	17	
150.1264	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm (AMP Tyco JT, AMP Tyco ST, Deutsch DT)	30	
150.1269	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm, 4,8 mm, 5,8 mm, 6,3 mm (AMP Tyco JPT, AMP Tyco SPT, AMP Tyco, TAB, Delphi HVF2, GHW DFK, GHW MDK 3)	30	
154.0118	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm (KOSTAL SLK)	53	
150.1289	Unlocking Tool for blade terminal sleeve 1,65 mm (AMP Tyco E-95)	30	
154.0119	Unlocking Tool for blade terminal sleeve 2,8 mm (KOSTAL SLK)	43	
154.0120	Unlocking Tool for blade terminal/blade terminal sleeve 2,8 mm (KOSTAL SLK)	54	
150.1273	Unlocking Tool for blade terminal/blade terminal sleeve 5,8 mm (AMP Tyco ST)	30	
154.0128	Unlocking Tool for blade terminal/blade terminal sleeve 5,8 mm (KOSTAL SLK)	71	
154.0129	Unlocking Tool for blade terminal sleeve 5,8 mm (KOSTAL SLK)	69	
154.0130	Unlocking Tool for blade terminal/blade terminal sleeve 6,3 mm (KOSTAL LSK 8)	34	
154.0131	Unlocking Tool for blade terminal/blade terminal sleeve 6,3 mm, 8,00 mm (KOSTAL)	39	
154.0134	Unlocking Tool for blade terminal/blade terminal sleeve 9,5 mm (AMP Tyco MPT)	16	
154.0138	Unlocking Tool for blade terminal sleeve 2,8 mm (AMP Tyco SensorTime, Bosch BDK)	21	
154.0205	Unlocking Tool for round connector sleeve 1,5 mm (KOSTAL LKS)	36	
154.0203	Unlocking Tool for round plug 1,5 mm (KOSTAL LKS)	37	
150.1249	Unlocking Tool for round plug/round connector sleeve 2,5 mm (KOSTAL RK)	16	
150.1257	Unlocking Tool for round plug/round connector sleeve 2,5 mm (AMP Tyco 2,5)	33	
150.1262	Unlocking Tool for round plug/round connector sleeve 3,5 mm (AMP Tyco 3,5)	30	
150.1248	Unlocking Tool for round plug/round connector sleeve 4,0 mm (KOSTAL RK)	17	

STRIPPING TOOLS

Automatic wire stripper

- Allows for stripping of any cable length, therefore ideal for retrofitting auxiliary heating systems, gas systems and other electrical consumers
- Automatically adjusts to the respective diameters
- For the professional and damage-free stripping of electric wires, stranded conductors and cables
- For copper and aluminium wires
- With return spring
- Smooth running mechanics
- Sturdy design

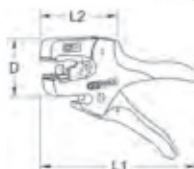


	Ø mm	AWG	D mm	L1 mm	L2 mm	Weight
115.1028	0,5-2,0	2,0-0,5	20,0	170,0	35,0	280
115.1029	1,0-3,2	3,2-1,0	20,0	170,0	35,0	280



Self regulating wire stripper

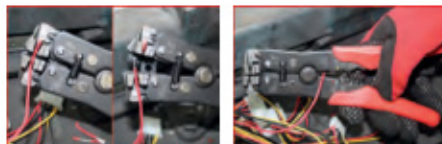
- With easily interchangeable knife modules
- Suitable for single and multi-core cable with popular standard insulation
- Exact adjustment possible for safe stripping
- For the professional and damage-free stripping of electric wires, stranded conductors and cables
- With three different length stops from 8.0 – 12.0 mm
- For copper and aluminium wires
- With cutting function
- Lightweight
- Smooth running mechanics



	mm²	AWG	D mm	L1 mm	L2 mm	Replacement blades	Weight
115.1244	0,1-4	28-12	48,0	190,0	73,0	115.1247	130
115.1245	0,02-10	34-8	48,0	190,0	73,0	115.1248	130
115.1249	4-16	12-6	48,0	190,0	73,0	115.1248	130

Automatic wire stripper

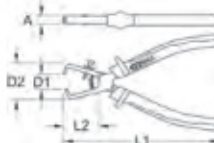
- Allows for stripping of any cable length, therefore ideal for retrofitting auxiliary heating systems, gas systems and other electrical consumers
- These wire strippers handle all common wire cross sections in passenger and commercial vehicle electrical equipment
- Automatically adjusts to the diameters 0.2 mm² - 6.0 mm²
- With crimping function for insulated and non-insulated lugs
- Suitable for single and multi-core cable with popular standard insulation
- For the professional and damage-free stripping of electric wires, stranded conductors and cables
- For copper and aluminium wires
- With wire cutting function
- With return spring
- Smooth running mechanics
- Sturdy design



	mm²	AWG	L1 mm	Weight
115.1254	0,2-6	10-24	210,0	280

Wire stripper

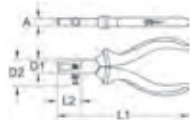
- In accordance to DIN / ISO 5232
- Locking jaw opening
- Adjusting screw and spring
- PVC dipped handle
- For wires from 0,5 - 4.0 mm²
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	Weight
115.1314	9.0	20.5	33.0	176.0	39.0	170

ERGOTORQUE® wire stripper

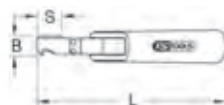
- In accordance to DIN / ISO 5232
- Locking jaw opening
- Adjusting screw and spring
- Two component handle
- For wires from 0,5 - 4.0 mm²
- Matt Chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	Weight
115.1014	9.0	20.5	33.0	179.0	39.0	300

Universal cable knife

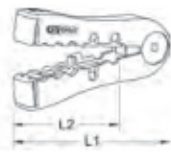
- For the slitting and stripping of round cable
- Hook blade for the stripping of insulated and flat cable
- Internal knife with adjustable cutting depth, rotating mounting



	Ø mm	B mm	L mm	S mm	Weight
907.2184	28,0	18,0	175,0	24,0	100

Stripping tool for data cable

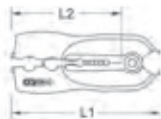
- Round cut
- For the stripping of flat and oval data cables
- Safety locking device for safe storage



	mm ²	L1 mm	L2 mm	g
115.1241	2,5-12,0	105,0	72,0	40

Multifunction stripping tool

- Round- and length cutting function
- Stripping function
- Cutting function
- For the stripping of flexible and large wire
- Safety locking device for safe storage
- Includes replacement knife set



	mm ²	AWG	L1 mm	L2 mm	g
115.1251	0,2-0,8	30-20	117,0	85,5	96
115.1252	0,8-2,6	20-10	117,0	85,5	96

Insulation stripping knife

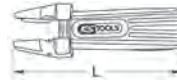
- For stripping all standard round cables
- Cutting depth can be adjusted exactly to thickness of sheath
- The knife automatically switches from round to longitudinal cutting
- Retaining bracket adjustable
- Complete stripping of insulation



	mm ²	Ø wire mm	AWG	L mm	g
115.1003	0,5-6,0	4,0-28,0	20-10	143,0	120

Insulation stripping knife

- For stripping external insulation layers
- Stripping insulation from single- and multiple-wire conductors
- Round and longitudinal cutting



	mm ²	Ø wire mm	L mm	g
115.1007	0,5-16,0	4,0-12,0	137,0	81

Insulation stripping knife

- Basic stripping of insulation from conductors
- The scanning system automatically adapts to the conductor cross-section
- The stranded conductor can then be twisted



	mm ²	AWG	L mm	g
115.1001	0,5-6,0	20-10	158,0	116

Round cable insulation stripper

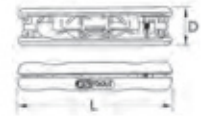
- For round cables and damp-proof cables
- Flush stripping of insulation even in areas that are hard to access, e.g. in ceilings and walls, in junction and distribution boxes and switch cabinets



	Ø wire mm	L mm	g
115.1006	8,0-13,0	125,0	43

Coaxial cable insulation strippers

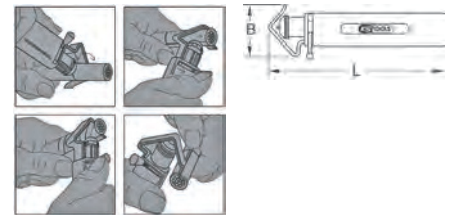
- Gradual stripping of insulation from all coaxial cables with an outer diameter of 4.8 - 7.5 mm
- Equally suitable for flexible cables and 3 x 0.75 mm², 10 mm² and 16 mm² cables



	Ø wire mm	L mm	g
115.1002	4,8-7,5	110,0	30

Universal stripping tool

- Round cut and length cutting function
- Suited for spiral cutting of hard insulation
- Variable cut depth adjustment through thumb wheel
- For a maximum insulation strength of up to 4,5 mm

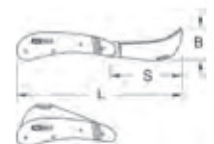


	mm ²	B mm	L mm	Replacement blades	g
115.1256	6-25	41,0	138,0	115.1257	138

CUTTING TOOLS

Electricians pen knife

- Retractable blade
- With sickle blade and downward curved tip that ensures a powerful cut
- Sturdy, practical and very sharp
- Moulded recess made out of wood
- Rust-proof
- Stainless steel



	B mm	L mm	S mm	g
907.2185	37,0	185,0	70,0	60

Electricians pen knife

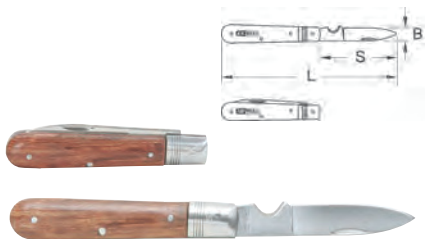
- Retractable blades
- With straight blade
- With sickle blade and downward curved tip that ensures a powerful cut
- Sturdy, practical and very sharp
- Moulded recess made out of wood
- Rust-proof
- Stainless steel



	B mm	L mm	S mm	g
907.2186	37,0	185,0	70,0	90

Electricians pen knife

- Retractable blade
- With a straight blade that ensures a powerful cut
- With stripping function for cables
- Sturdy, practical and very sharp
- Moulded recess made out of wood
- Rust-proof
- Stainless steel



	B mm	L mm	S mm	g
907.2187	15,0	195,0	85,0	60

Electricians pen knife

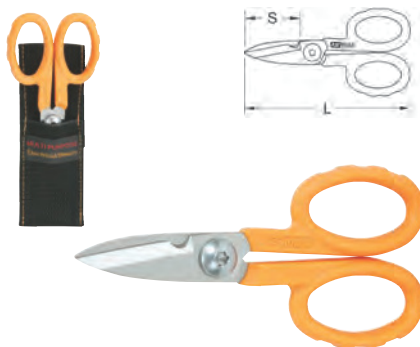
- Retractable blades
- With straight blade and extra narrow pointed blade that provides for a powerful cut
- Sturdy, practical and very sharp
- Moulded recess made out of wood
- Rust-proof
- Stainless steel



	B mm	L mm	S mm	g
907.2188	19,0	198,0	90,0	60

Universal workshop shear

- Sturdy short shears
- For various application areas
- With cable cutter
- Practical and very sharp
- Includes belt bag with cut protection



	Ø mm	L mm	S mm	g
118.0060	24,0	140,0	42,0	170

Universal shear, angled

- Self-opening
- With safety locking device
- Practical and very sharp
- offset design
- With ergonomically shaped plastic handle
- Ideal for seals and cables



	Ø mm	L mm	S mm	g
118.0072	35,0	185,0	42,0	190

Universal cable shear

- Self-opening
- With safety locking device
- Hardened blades with precision cut
- No crushing, slight deformation of the cable
- With ergonomically shaped plastic handle
- Ideal for soft cables
- Not suited for steel wire and hard-drawn copper conductors



	Ø mm	L mm	g
118.0073	10,0	165,0	180

CRIMPING PLIERS

Wire end ferrule pliers

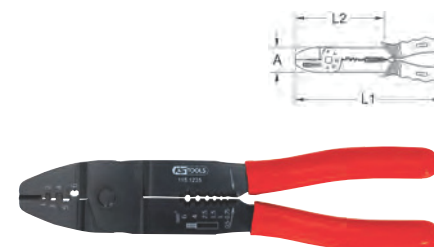
- For the proper crimping of lugs and plug connectors
- Suitable for insulated and non-insulated cable end sleeves
- Ideal leverage
- Easy solderless pressing on in one work step
- With PVC dipped handle
- Pliers' body made of fl t steel



	Ø mm	L mm	g
115.1236	0,25 - 2,5	155,0	165
115.1237	0,5 - 16,0	220,0	240

Crimp pliers for not insulated, opened cable connector

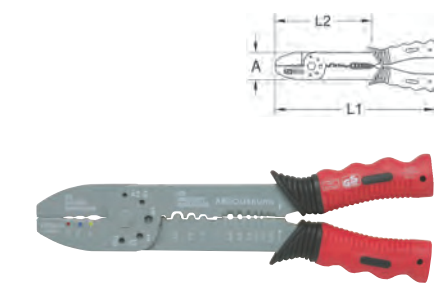
- Ideally suited for converting not insulated contacts
- For stripping of wires from 0.5 - 6.0 mm²
- Cut wires up to 6.0 mm²
- For crimping blade terminals 2.8 / 4.8 / 6.3 mm and other contacts with open crimp sleeve
- Handle dip insulated
- Plier body from special steel
- Material strength 3 mm



	A mm	L1 mm	L2 mm	g
115.1235	38,0	220,0	120,0	196

Multifunction pliers for insulated and non insulated cable terminals

- For professional cable cutting and stripping of wires from 0,75 - 6,0 mm²
- For crimping cable lugs and connectors of 1,5 - 6,0 mm²
- Cutting function
- Two component handle
- Pliers body made of fl t steel



	A mm	L1 mm	L2 mm	g
115.1231	40,0	220,0	130,0	230

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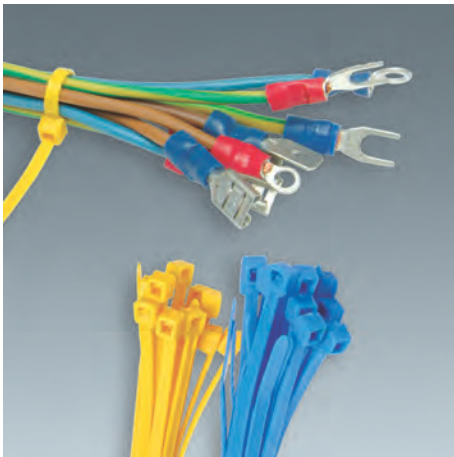
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Multifunction crimping pliers set

- For insulated and un-insulated cable terminals
- Includes 270 pcs consumables
- For professional cable cutting and stripping wires from 0,75 - 6,0 mm²
- For crimping cable terminals and connectors from 1,5 - 6,0 mm²
- Cutting function
- Two component handle
- Pliers body made of fl t steel
- In durable plastic storage case

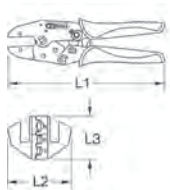


115.1230	271 pcs	Multifunction crimping pliers set	560
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Crimping pliers for non insulated terminals

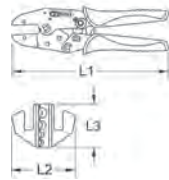
- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profil
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of fl t steel



115.1425	0,5-1,0/1,5-2,5/4,0-6,0	22-18/16-14/12-10	220,0	50,0	34,0	115.1415	491
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Crimping pliers for insulated terminals

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profil
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of fl t steel

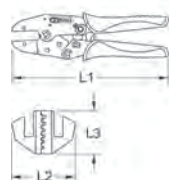


115.1430	1,5/2,5/6,0/10,0	20-18/16-14/12-10/8	220,0	50,0	34,0	115.1416	487
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Crimping pliers for pin terminals

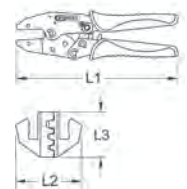
- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through Precision profil
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of fl t steel



115.1440	0,50,75/1,0/1,5/2,5/4,0	22/20/18/16/14/12-10	220,0	50,0	34,0	115.1418	499
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Crimping pliers for spade terminals

- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profil
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- Two component handle
- Burnished
- Pliers body made of fl t steel



115.1435	0,5-1,0/1,5-2,5/4,0-6,0	20-18/16-14/12-10	220,0	50,0	34,0	115.1417	499
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Electricians crimping pliers set

- Ideal configuration for electricians
- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profil
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- In durable plastic storage case
- Two component handle
- Burnished
- Pliers body made of fl t steel



115.1480	3 pcs	Electricians crimping pliers set	910
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consists of:

115.1401	Crimping tool	440
115.1415	Crimp head for insulated terminals	60
115.1416	Crimp head for non-insulated terminals	60



Net working crimping pliers set

- Ideal configuration for network cabling
- Extremely robust and reliable
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profil
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- In durable plastic storage case
- Two component handle
- Burnished
- Pliers body made of fl t steel



115.1490	5 pcs	Net working crimping pliers set	1.05
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consists of:

115.1401	Crimping tool	440
115.1421	Crimp head for non-insulated terminals for non insulated contact with open surface, Ø 0.5 - 2.5 - 8/10 mm²	60
115.1422	Crimp head for non shielded WE plugs 4P, RJ 22	60
115.1423	Crimp head for non shielded WE plugs 6P2K, 6P4K/RJ11, 6P6K/RJ12	71
115.1424	Crimp head for non shielded WE plugs 4P, RJ 22	65

Universal crimping tool set with automatic wire stripper

- Extremely robust and reliable crimping plier
- Safety lock
- Inserts lock and to they click to prevent possible misuse
- Optimal crimping through precision profil
- Ratchet function
- Adjustment of the crimping pressure
- Easy to change the crimp heads through quick locking device
- In durable plastic storage case
- Two component handle
- Burnished
- Pliers body made of fl t steel
- Includes self-closing and damage free automatic wire stripper



115.1400	8 pcs	Universal crimping tool set with automatic wire stripper	2.37
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consists of:

115.1401	Crimping tool	440
115.1029	Automatic wire stripper, red, 1-3,2mm	280
115.1402	Terminal set 271 pcs.	270
115.1415	Crimp head for insulated terminals	60
115.1416	Crimp head for non-insulated terminals	60
115.1417	Crimp head for spade terminals 4,8+6,3mm	60
115.1418	Crimp head for pin terminals	60
115.1419	Crimp head for coaxial terminals	60

DIN AND STANDARD PARTS

Automotive mini fuses assortment

- According to ISO 8820-3
- Fuses colour-coded according to ampere sizes
- In plastic storage case



970.0280	120 pcs	Automotive mini fuses assortment	190
20 x		5 A / ISO 8820-3	
20 x		10 A / ISO 8820-3	
20 x		15 A / ISO 8820-3	
20 x		20 A / ISO 8820-3	
20 x		25 A / ISO 8820-3	
20 x		30 A / ISO 8820-3	

Automotive fuses assortment

- According to ISO 8820-3
- Fuses colour-coded according to ampere sizes
- In plastic storage case



970.0250	120 pcs	Automotive fuses assortment	210
20 x		5 A / ISO 8820-3	
20 x		10 A / ISO 8820-3	
20 x		15 A / ISO 8820-3	
20 x		20 A / ISO 8820-3	
20 x		25 A / ISO 8820-3	
20 x		30 A / ISO 8820-3	

Glass fuses assortment

- Trigger characteristics: Idle
- In plastic storage case



970.0270	120 pcs	Glass fuses assortment	220
20 x		5 A	
20 x		10 A	
20 x		15 A	
20 x		20 A	
20 x		25 A	
20 x		30 A	

Crimp connectors assortment

- Suitable for wire cross sections: Red 0.5-1.5 mm², blue 1.5-2.5 mm², yellow 2.5-6.0 mm²
- In plastic storage case



970.0290	160 pcs	Crimp connectors assortment	260
12 x		0,5-1,5 mm²	
18 x		1,5-2,5 mm²	
20 x		1,5-2,5 mm²	
12 x		2,5-6,0 mm²	
8 x		0,5-1,5 mm² M4	
10 x		1,5-2,5 mm² M4	
10 x		1,5-2,5 mm² M5	
10 x		1,5-2,5 mm² M6	
4 x		2,5-6,0 mm² M5	
4 x		2,5-6,0 mm² M8	
4 x		2,5-6,0 mm² M10	
10 x		1,5-2,5 mm²	
5 x		2,5-6,0 mm²	
10 x		1,5-2,5 mm²	
5 x		2,5-6,0 mm²	
10 x		1,5-2,5 mm² M4	
4 x		0,5-1,5 mm²	
4 x		1,5-2,5 mm²	

Crimp connectors assortment

- Suitable for wire cross sections: Red 0.5-1.5 mm², blue 1.5-2.5 mm², yellow 2.5-6.0 mm²
- In plastic storage case



		970.0300		360 pcs	Crimp connectors assortment	450
10 x			0,5-1,5 mm ²			
30 x			0,5-1,5 mm ²			
30 x			1,5-2,5 mm ²			
10 x			1,5-2,5 mm ²			
15 x			2,5-6,0 mm ²			
30 x			1,5-2,5 mm ² M5			
20 x			1,5-2,5 mm ² M6			
20 x			1,5-2,5 mm ² M10			
20 x			2,5-6,0 mm ² M5			
15 x			2,5-6,0 mm ² M6			
15 x			2,5-6,0 mm ² M10			
25 x			1,5-2,5 mm ²			
25 x			1,5-2,5 mm ²			
30 x			1,5-2,5 mm ² M5			
20 x			2,5-6,0 mm ² M5			
25 x			1,5-2,5 mm ²			
10 x			1,5-2,5 mm ²			
10 x			1,5-2,5 mm ²			

Branch connectors assortment

- Suitable for wire cross sections: Red 0.5-1.5 mm², blue 1.5-2.5 mm²
- In plastic storage case



		970.0570		50 pcs	Branch connectors assortment	145
25 x			0,5-1,5 mm ²			
25 x			1,5-2,5 mm ²			

Shrink-on tubes assortment

- Shrinkage ratio 2:1
- In plastic storage case



		970.0230		127 pcs	Shrink-on tubes assortment	100
30 x			2,0x40 mm			
25 x			2,5x40 mm			
20 x			3,5x40 mm			
20 x			5,0x40 mm			
16 x			7,0x80 mm			
8 x			10,0x80 mm			
8 x			13,0x85 mm			

Shrink tubing assortment

- Shrinkage ratio 2:1
- In plastic storage case



		970.0540		100 pcs	Shrink tubing assortment	130
30 x			1,5x100 mm			
30 x			2,5x100 mm			
20 x			4,0x100 mm			
10 x			6,0x100 mm			
6 x			10,0x100 mm			
4 x			13,0x100 mm			

ELECTRICAL INSULATING TAPE

PVC insulation tape set

- Good resistance to abrasion and corrosion and/or moisture
- High di-electric strength and good mechanical protection
- Excellent ability to adapt to different forms
- Conforms to BS3924
- Temperature resistance of 0°C to +90°
- Multicoloured assortment



		141.6010		8 pcs	B mm	L m	150
			19,0		10,0		

Self welding repair tape

- Excellent weather resistance
- Easy to apply due to high elasticity
- Insulates air and water tight, due to self welding characteristics
- Temperature resistance of -40°C to +90°C
- With a tape thickness of 0,5 mm
- Made from Polyisobutylene tape
- For a range of applications in electrical, plumbing and automotive



		141.6000		100	Colour code	B mm	L m
			18,0	10,0			
			38,0	10,0	210		



Insulated adhesive tape

- For working environment of voltage of AC 1000 V and DC 1500 V
- On a roll



		117.4231		105	Colour code	B mm	L m	⚡	100
			52,0	10,0					
			102,0	10,0	190				
			102,0	10,0	190				

SOLDERING TOOLS

Soldering wire pliers

- For the secure attachment of stranded conductors
- Prevents kinking of the solder connection
- The locking device of the pliers means that these can be stored so that both hands are free for soldering
- No more burning fingers
- Slim design for hard-to-access areas
- Adjustable arm for optimal application
- With PVC dipped handle
- Chrome molybdenum



	A mm	C mm	L mm	Weight
115.1052	78.0	65.0	245.0	260

Mini pocket soldering torch

- Gas operated micro soldering device up to 1,300°C / 2,450°F
- Piezo ignition
- Optimal for light soldering
- Safety lock



	L mm	Weight
960.1110	80.0	130

Mini pocket soldering torch

- Gas operated micro soldering device up to 1,300°C / 2,450°F
- With piezo ignition
- For melting, hard soldering, small soldering jobs
- Filled with standard lighter gas/ISO butane gas
- Compact construction
- With child-proofing and switch-off function



	L1 mm	L2 mm	H mm	Weight
960.1215	75.0	50.0	110.0	112

Small soldering torch

- Gas operated micro soldering device up to 1,300°C / 2,450°F
- With piezo ignition
- Optimal for fine soldering
- Table stand



	L mm	Weight
960.1200	140.0	350

Small soldering torch with flame effector

- Gas operated micro soldering device up to 1,300°C / 2,450°F
- With piezo ignition
- Optimal for fine soldering
- Shrink / flame effector
- Table stand



	L mm	Weight
960.1210	140.0	350

Micro soldering terminal set

- Gas operated micro soldering device up to 1,300°C / 2,450°F
- With piezo ignition
- Optimal for fine soldering
- Gas supply totally adjustable
- Filled with standard lighter gas / ISO butane gas
- Includes different attachments soldering wire and soldering sponge
- In durable plastic storage box



	Weight
960.1160 10 pcs Micro soldering terminal set	370

consists of:

	Weight
960.1161 Soldering iron with piezo ignition	80
960.1162 Soldering head for screw solder tips	9
960.1163 Soldering tip 3.5 mm, chisel	3
960.1164 Soldering tip 4.5mm, diagonal	3
960.1165 Soldering tip knife	3

consists of:

		Weight
960.1166 Shrink hose attachment	3	
960.1167 Soldering sponge	12	
960.1168 Soldering wire spool	25	
960.1169 Protective cap	14	
960.1170 Housing for additional adaptors for 960.1160	7	



Micro soldering terminal set

- Gas operated micro soldering device up to 1,300°C / 2,450°F
- Optimal for fine soldering
- Gas supply totally adjustable
- Filled with standard lighter gas / ISO butane gas
- Includes different attachments soldering wire and soldering sponge
- In durable plastic storage box



	Weight
960.1150 13 pcs Micro soldering terminal set	200

consists of:

	Weight
960.1151 Gas soldering iron	110
960.1152 Bunsen burner nozzle head	20
960.1153 Soldering head including 6 different on screw solder tips	30
960.1154 Flat attachment for flame protection for Bunsen burner nozzle head	10
960.1155 Attachment for Bunsen burner nozzle head	10
960.1156 Soldering sponge	6
960.1157 Soldering wire spool	24



Our wide range of soldering tools is available in our Industrial Tools catalogue on page 726.



Innovation is
our mission!



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INDUSTRIAL SAFETY

Insulated electrical protective glove

- Dielectric latex gloves
- Insulated to DIN EN 60903
- With anatomical fit
- Anti-allergy treated
- With straight edge
- UV-resistant packaging

The use of glove liners is recommended for absorbing skin moisture and for better ventilation.

Attention: Over-gloves are necessary for mechanical protection!



	Thickness mm	Size mm	Electrotest Class	L mm	
117.1661	1,0	9	0	400,0	215
117.1662	1,0	10	0	400,0	215
117.1762	2,0	10	0	410,0	470
117.1756	1,0	9	00	410,0	168
117.1757	1,0	10	00	410,0	189

Pneumatic electrician protective glove tester

- For the testing of insulated gloves
- Always carry out before starting work



	D mm	L mm	
117.1666	110,0	140,0	800

Protection pocket for electricians gloves

- Belt pocket made out of canvas
- For the storage and protection of the electricians gloves



	B mm	H mm	
117.1665	180,0	200,0	200

Insulated electrical protective glove

- Dielectric latex gloves
- Insulated to DIN EN 60903
- With anatomical fit
- Anti-allergy treated
- With straight edge
- UV-resistant packaging

The use of glove liners is recommended for absorbing skin moisture and for better ventilation.

Attention: Over-gloves are necessary for mechanical protection!



	Thickness mm	Electrotest Class	Size mm	L mm	
117.1663	1,0	0	9	360,0	215
117.1664	1,0	0	10	360,0	215
117.1132	2,0	1	10	360,0	250
117.1133	2,0	3	10	410,0	690
117.1134	2,5	4	10	410,0	890

Pull-on gloves for electrician's protective gloves

- Waterproof
- Treated with silicone
- Leather gloves for dielectric gloves
- Velcro fastening on the back of the hand
- Split leather cuff
- For protecting against mechanical risks
- Full-grain calf leather

Caution: This insulating-glove cover is required for mechanical protection (rubbing, cuts, pricks) in conjunction with dielectric gloves!



	Size mm	L mm	
117.1560	10	320,0	175

Under gloves

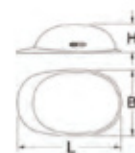
- Made out of fine mu ton cloth



	L mm	
117.1660	260,0	225

Work protective hardhat

- DIN EN 397
- Special plastic



	Colour code	L mm	B mm	H mm	
117.1608	○	290,0	225,0	175,0	370
117.1609	●	290,0	225,0	175,0	370
117.1610	●	290,0	225,0	175,0	370

Electrician's face shield

- DIN EN 397
- Fault arc tested to DGUV GS-ET-29, test level W(LBP) = 158 kJ (corresponds to prospective test short-circuit current 4 kA/0.5 s) EN 166
- Personal eye protection equipment
- Natural rendering of colours thanks to transparent, non-tinted visor
- Colour rendering index > 90%
- Light transmission: > 88%
- Suitable for standard electrician's hardhat
- Face shield for 117.1608-117.1610



	Arc fault		
117.1780	class 1	158	278

Electrician's face shield

- DIN EN 166
- Fault arc tested to DGUV GS-ET-29, test level W(LBP) = 318 kJ (corresponds to prospective test short-circuit current 7 kA/0.5 s) EN 166
- Personal eye protection equipment
- Also fault arc tested to ASTM F2178, ATPV: 7.0 cal/cm²
- Natural rendering of colours thanks to transparent, non-tinted visor
- Colour rendering index > 90%
- Light transmission > 70%
- Suitable for standard electrician's hardhat
- Anti-mist protective gel supplied



	Arc fault		
117.1796	class 2	318	525

Carrying bag for work helmet

- Made out of red leather
- With carrying strap



	B mm	H mm	Weight
117.1612	500.0	480.0	500

Insulated safety rubber boots

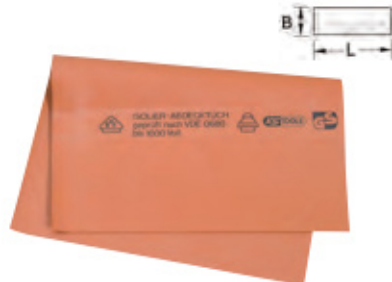
- For working environment of voltages AC 1000 V and DC 1500 V
- In accordance with new standard EN 50321
- With steel bar



	Size mm	Weight
117.1613	39	3.00
117.1614	40	3.00
117.1615	41	3.00
117.1616	42	3.00
117.1617	43	3.00
117.1618	44	3.00
117.1619	45	3.00
117.1620	46	3.00
117.1621	47	3.00

Insulated rubber protective mat

- Tested to VDE 0680/1
- Insulated to DIN EN 60903
- Extensively tear and water resistant
- Particularly suitable for external usage



	Thickness mm	B mm	L mm	Weight
117.1651	1,0	130,0	130,0	0,04
117.1652	1,0	250,0	350,0	0,21
117.1653	1,0	500,0	500,0	0,43
117.1654	1,0	600,0	600,0	0,70
117.1655	1,0	1000,0	1000,0	1,80
117.1656	1,0	1200,0	1000,0	2,95
117.1657	1,0	1000,0	10000,0	16,75
117.1658	1,0	1200,0	10000,0	20,10

Protective bag for insulating mat

- Made out of red leather
- With carrying strap



	B mm	L mm	Weight
117.1399	230.0	1000.0	900

Insulated plastic clamp, small

- Insulated to IEC 60900
- Extra small execution
- With inserted steel spring
- For clamping of uncovered cable
- Made from plastic



	A mm	L1 mm	L2 mm	L3 mm	Weight
117.1643	15.0	80.0	44.0	10.0	30

Insulated plastic clamp, large

- Insulated to IEC 60900
- In large execution
- With inserted steel spring
- For clamping of uncovered cable
- Made from plastic



	A mm	L1 mm	L2 mm	L3 mm	Weight
117.1644	16.0	160.0	94.0	27.0	70

Red/white diagonal striped foil barrier tape

- For safeguarding and indicating hazard areas
- In accordance with ASR A1.3 and BGV A8
- High tear resistance
- Block diagonal stripes in red/white
- For outdoor and indoor use
- Polyethylene
- In stable unwinding box



	B mm	L m	Weight
917.3899	80.0	500.0	2.50

Hybrid warning sign - flash for working on hybrid and electric vehicles

- Warning against hazardous voltage
- For safety in the workplace
- For outdoor and indoor use
- For company premises and workshops
- Sturdy quality with laminate coating
- Resistant to abrasion and chemicals
- Aluminium/plastic composite



	Thickness mm	L mm	Weight
917.3898	5	200.0	66

Hybrid warning sign - switch for working on hybrid and electric vehicles

- Do not switch on, work is currently in progress
- For safety in the workplace
- For outdoor and indoor use
- For company premises and workshops
- Sturdy quality with laminate coating
- Resistant to abrasion and chemicals
- Aluminium/plastic composite

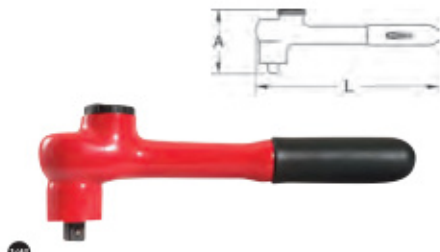


	Thickness mm	Ø mm	Weight
917.3897	5	200	84

1/4" PROGRAM

Insulated reversing ratchet

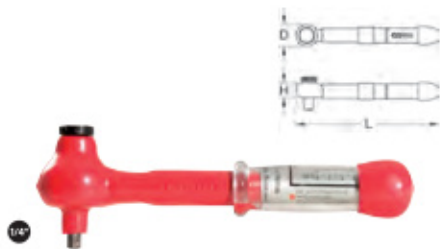
- Square drive adaptor to DIN 3120 / 1174 with ball lock
- In accordance to DIN 7449
- Insulated handle to IEC 60900
- With reversible 32-teeth ratchet head
- With frictional contact square drive with locking device
- Chrome vanadium



	■	A mm	L mm	⚡	⚙️
117.1401	1/4"	54.5	141.0	1000V	128

Insulated mini torque wrench with reversible ratchet head

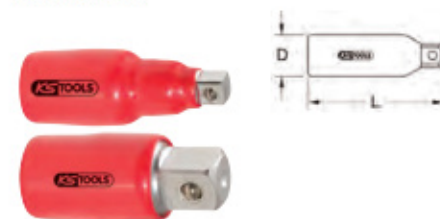
- Insulated handle to IEC 60900
- For working environment of voltages AC 1000 V and DC 1500 V
- Actuation accuracy: ±3 % tolerance of the set scale value and better
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in a clockwise direction
- Can untighten without any torque restraint thanks to the anticlockwise latch
- An audible and palpable signal when the desired torque value is achieved
- With exact gearing 30 teeth ratchet mechanism
- Ergonomic designed handle provides secure transmission of the torque
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Individually marked with serial number - unique product identification
- Includes test certificate in accordance with DIN EN ISO 6789:2003 national standard



	■	Nm	D mm	H mm	L mm	⚡	⚙️
117.1400	1/4"	2-12	40.0	41.0	200.0	1000V	400
117.1402	1/4"	5-25	40.0	41.0	200.0	1000V	420

Insulated reducing adaptor

- In accordance to DIN 3123 / ISO 3316
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Matt chrome
- Chrome vanadium



	□	■	D mm	L mm	⚡	⚙️
117.1189	1/4"	3/8"	17.0	39.0	1000V	60
117.3885	3/8"	1/2"	23.0	52.0	1000V	80
117.1190	3/8"	1/4"	22.0	86.0	1000V	60
117.1285	1/2"	3/8"	20.0	75.0	1000V	220

Insulated extension

- In accordance to DIN 7434
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- With frictional contact square drive with locking device
- Chrome vanadium



	■	L mm	⚡	⚙️
117.1451	1/4"	50.0	1000V	40
117.1452	1/4"	75.0	1000V	45
117.1453	1/4"	100.0	1000V	56
117.1454	1/4"	150.0	1000V	68

Insulated socket

- 6 point
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium



	■	D1 mm	D2 mm	L mm	⚡	⚙️
117.1404	4	16.0	10.0	37.0	1000V	14
117.1405	5	16.5	11.5	37.0	1000V	12
117.1406	6	16.5	12.0	37.0	1000V	12
117.1407	7	16.5	13.5	37.0	1000V	15
117.1408	8	16.5	15.5	37.0	1000V	15
117.1409	9	16.5	16.5	37.0	1000V	16
117.1410	10	16.5	17.5	37.0	1000V	18
117.1411	11	16.5	20.0	37.0	1000V	18
117.1412	12	16.5	21.0	37.0	1000V	24
117.1413	13	16.5	22.0	37.0	1000V	26
117.1414	14	16.5	24.0	37.0	1000V	29

Insulated bit socket for hexagon screws

- Hexagon socket
- Insulated handle to IEC 60900
- Internal square drive adaptor to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium



	■	D mm	L mm	⚡	⚙️
117.1415	3	16.5	44.0	1000V	13
117.1416	4	16.5	44.0	1000V	13
117.1417	5	16.5	44.0	1000V	14
117.1418	6	16.5	44.0	1000V	15
117.1419	8	16.5	44.0	1000V	19

Insulated bit holder

- Insulated handle to IEC 60900
- Internal square drive adaptor to DIN 3120 / ISO 1174 with ball reception
- With magnet
- For bits to DIN 3126 / C 6,3
- Chrome vanadium



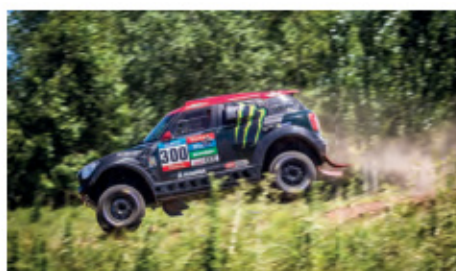
	□	○	D1 mm	D2 mm	L mm	⚡	⚙️
117.1420	1/4"	1/4"	16.0	16.5	40.0	1000V	240

Insulated socket wrench set

- Insulated handle to IEC 60900
- In durable plastic storage case
- Chrome vanadium



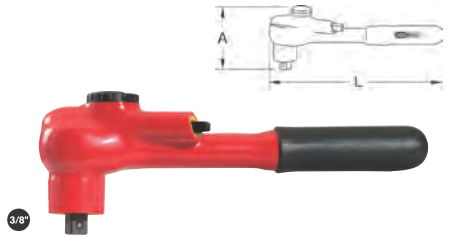
	■	⚙️	⚙️
117.1877	22 pcs	Insulated socket wrench set	1.60
1 x		1/4"	
4 x		1/4": 50 - 75 - 100 - 150 mm	
1 x		1/4"	
1 x		1/4"	
10 x		1/4": 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 mm	
5 x		1/4": 3 - 4 - 5 - 6 - 8 mm	



3/8" PROGRAM

Insulated reversing ratchet

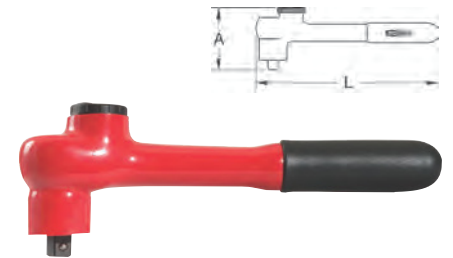
- Square drive adaptor to DIN3120 / ISO 1174 with ball lock
- In accordance to DIN 7449
- Insulated handle to IEC 60900
- With reversible 32-teeth ratchet head
- Secure locking function on the square drive
- Chrome vanadium



	■	A mm	L mm	⚡	⚖
117.3800	3/8"	78,0	205,0	1000V	370

Insulated reversing ratchet

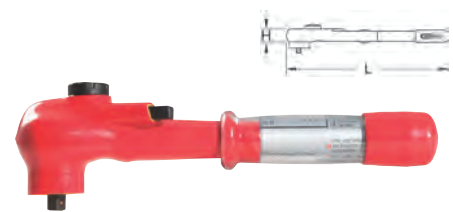
- Square drive adaptor to DIN 3120 / 1174 with ball lock
- In accordance to DIN 7449
- Insulated handle to IEC 60900
- With reversible 32-teeth ratchet head
- With frictional contact square drive with locking device
- Chrome vanadium



	■	A mm	L mm	⚡	⚖
117.3801	3/8"	73,0	200,0	1000V	350

Insulated torque wrench with reversible ratchet head

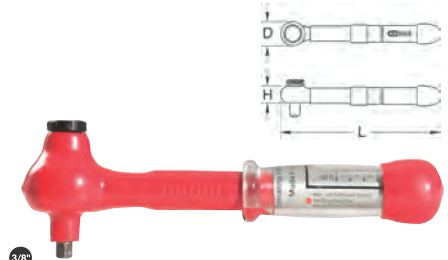
- Insulated handle to IEC 60900
- For working environment of voltages AC 1000 V and DC 1500 V
- Actuation accuracy: $\pm 3\%$ tolerance of the set scale value and better
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in a clockwise direction
- Can untighten without any torque restraint thanks to the anticlockwise latch
- Scale in N-m divisions for precise adjustment
- Large vision panel for precise adjustment
- An audible and palpable signal when the desired torque value is achieved
- With exact gearing 30 teeth ratchet mechanism
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Individually marked with serial number - unique product identification
- Includes test certificate in accordance with DIN EN ISO 6789:2003 national standard



	■	N-m	H mm	L mm	⚡	⚖
117.3805	3/8"	2-27	51,0	280,0	1000V	0,92
117.3810	3/8"	5-50	51,0	370,0	1000V	1,07

Insulated mini torque wrench with reversible ratchet head

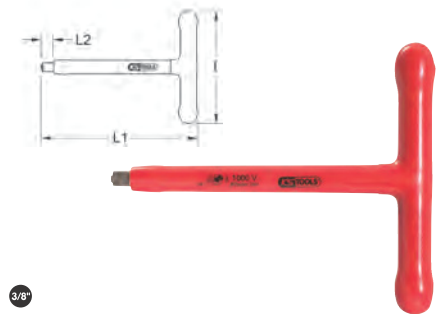
- Insulated handle to IEC 60900
- For working environment of voltages AC 1000 V and DC 1500 V
- Actuation accuracy: $\pm 3\%$ tolerance of the set scale value and better
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in a clockwise direction
- Can untighten without any torque restraint thanks to the anticlockwise latch
- An audible and palpable signal when the desired torque value is achieved
- With exact gearing 30 teeth ratchet mechanism
- Ergonomic designed handle provides secure transmission of the torque
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Individually marked with serial number - unique product identification
- Includes test certificate in accordance with DIN EN ISO 6789:2003 national standard



	■	N-m	D mm	H mm	L mm	⚡	⚖
117.1184	3/8"	5-25	40,0	42,0	200,0	1000V	440

Insulated T-grip socket spanner with screw adjustment

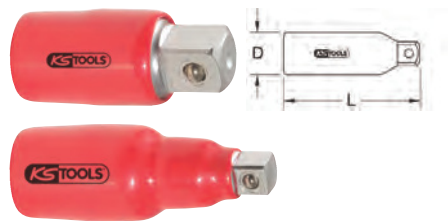
- Square drive adaptor to DIN 3120 / 1174 with ball lock
- In accordance to DIN 7436
- Insulated handle to IEC 60900
- With screw adjustment
- Chrome vanadium



	■	I mm	L1 mm	L2 mm	⚡	⚖
117.3820	3/8"	165,0	200,0	15,0	1000V	250

Insulated reducing adaptor

- In accordance to DIN 3123 / ISO 3316
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Matt chrome
- Chrome vanadium



	□	■	D mm	L mm	⚡	⚖
117.1189	1/4"	3/8"	17,0	39,0	1000V	60
117.3885	3/8"	1/2"	23,0	52,0	1000V	80
117.1190	3/8"	1/4"	22,0	86,0	1000V	60
117.1285	1/2"	3/8"	20,0	75,0	1000V	220

Insulated extension

- In accordance to DIN 7434
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- With frictional contact square drive with locking device
- Chrome vanadium



	■	L mm	⚡	⚖
117.3851	3/8"	125,0	1000V	140
117.3852	3/8"	250,0	1000V	280

Insulated extension with screw adjustment

- In accordance to DIN 7434
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- With screw adjustment on the square drive
- Chrome vanadium



	■	L mm	⚡	⚖
117.3823	3/8"	125,0	1000V	140
117.3825	3/8"	250,0	1000V	280



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Insulated socket

- 12 point
- FlankTraction profil
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium



	mm	D1 mm	D2 mm	L mm	⚡	U
117.3831	6	23.0	14.0	48.0	1000V	30
117.3832	7	23.0	15.0	48.0	1000V	30
117.3833	8	23.0	16.0	48.0	1000V	30
117.3834	9	23.0	17.0	48.0	1000V	35
117.3835	10	23.0	19.5	48.0	1000V	35
117.3836	11	23.0	19.5	48.0	1000V	35
117.3837	12	23.0	20.5	48.0	1000V	40
117.3838	13	23.0	23.0	48.0	1000V	40
117.3839	14	23.0	23.5	48.0	1000V	40
117.3840	15	23.0	26.0	48.0	1000V	45
117.3841	16	23.0	26.5	48.0	1000V	45
117.3842	17	23.0	28.0	48.0	1000V	50
117.3843	18	23.0	30.0	48.0	1000V	50
117.3844	19	23.0	30.0	48.0	1000V	60
117.3845	20	23.0	32.0	48.0	1000V	60
117.3846	21	23.0	33.5	48.0	1000V	60
117.3847	22	23.0	37.5	48.0	1000V	60
117.3813	23	22.5	34.0	48.0	1000V	91
117.3848	24	23.0	38.5	48.0	1000V	60
117.1020	1/4"	22.0	13.0	48.0	1000V	30
117.1021	5/16"	22.0	15.5	48.0	1000V	30
117.1022	3/8"	22.0	19.0	48.0	1000V	31
117.1023	7/16"	22.0	20.0	48.0	1000V	32
117.1024	1/2"	22.0	23.0	48.0	1000V	40
117.1025	9/16"	22.0	24.5	48.0	1000V	40
117.1026	5/8"	22.0	26.5	48.0	1000V	42
117.1027	11/16"	22.0	29.0	48.0	1000V	50
117.1028	3/4"	22.0	30.0	48.0	1000V	60
117.1029	13/16"	22.0	32.0	48.0	1000V	60
117.1030	7/8"	22.0	36.0	48.0	1000V	60
117.1031	15/16"	22.0	37.0	48.0	1000V	91

Insulated socket, deep

- FlankTraction profil
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium



	Profile	mm	D1 mm	D2 mm	L mm	⚡	U
117.1090	○	10	22.0	18.0	80.0	1000V	60
117.1091	○	11	22.0	19.5	80.0	1000V	60
117.1092	○	12	22.0	21.0	80.0	1000V	70
117.1093	○	13	22.0	23.0	80.0	1000V	70
117.1094	○	14	22.0	24.0	80.0	1000V	80
117.1095	○	15	22.0	26.0	80.0	1000V	80
117.1096	○	16	22.0	27.0	80.0	1000V	110
117.1097	○	17	22.0	28.0	80.0	1000V	110
117.3881	○	18	22.0	29.5	80.0	1000V	138
117.3882	○	19	22.0	30.5	80.0	1000V	180
117.3883	○	22	22.0	34.5	80.0	1000V	180
117.3884	○	24	22.0	37.5	80.0	1000V	213

Insulated socket, extra deep

- 12 point
- FlankTraction profil
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Insulated handle to IEC 60900
- Chrome vanadium



	mm	D1 mm	D2 mm	L mm	⚡	U
117.3853	10	23.0	19.0	135.0	1000V	180
117.3854	11	23.0	20.0	135.0	1000V	185
117.3855	12	23.0	22.0	135.0	1000V	200
117.3856	13	23.0	22.0	135.0	1000V	210
117.3857	14	23.0	26.0	135.0	1000V	220
117.3858	17	23.0	29.0	135.0	1000V	240
117.3859	19	23.0	31.0	135.0	1000V	260
117.3860	22	23.0	35.0	135.0	1000V	280

Insulated bit socket for hexagon screws

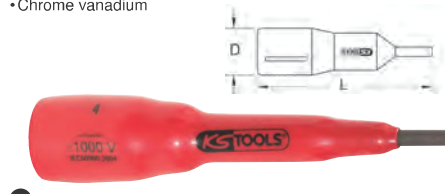
- Hexagon socket
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium



	mm	D mm	L mm	⚡	U
117.1735	4	22.0	54.0	1000V	40
117.1736	5	22.0	54.0	1000V	40
117.1737	6	22.0	54.0	1000V	40
117.1738	8	22.0	54.0	1000V	40

Insulated bit socket, long

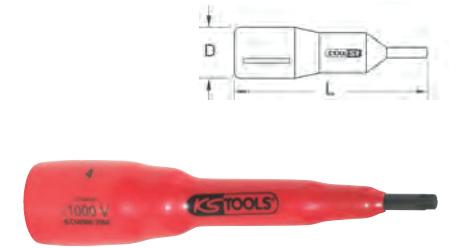
- Hexagon socket
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium



	mm	D mm	L mm	⚡	U
117.3861	4	23.0	82.0	1000V	45
117.3862	5	23.0	82.0	1000V	50
117.3863	6	23.0	82.0	1000V	50
117.3864	8	23.0	82.0	1000V	65
117.3865	10	23.0	82.0	1000V	80
117.3866	12	23.0	82.0	1000V	85
117.3867	4	23.0	116.0	1000V	70
117.3868	5	23.0	116.0	1000V	75
117.3869	6	23.0	116.0	1000V	76
117.3870	8	23.0	116.0	1000V	75
117.3871	10	23.0	116.0	1000V	80
117.3872	12	23.0	116.0	1000V	85
117.3873	5	23.0	180.0	1000V	100
117.3874	6	23.0	180.0	1000V	100
117.3875	5	23.0	270.0	1000V	115
117.3876	6	23.0	270.0	1000V	120
117.3877	8	23.0	270.0	1000V	140
117.3878	10	23.0	270.0	1000V	170

Insulated bit socket for Spline(XZN®) screws

- Spline(XZN®)
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120/ISO 1174 with ball reception
- Burnished
- Chrome vanadium



	mm	D mm	L mm	⚡	U	
117.3893	3/8"	M8	23.0	95.0	1000V	85
117.3894	3/8"	M10	23.0	95.0	1000V	90
117.3895	3/8"	M12	23.0	95.0	1000V	95

Insulated bit socket for PZ screws

- PZ
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium



		D mm	L mm	⚡	U
117.1739	PZ 1	22.0	95.0	1000V	60
117.1740	PZ 2	22.0	95.0	1000V	58
117.1741	PZ 3	22.0	95.0	1000V	70

Insulated bit holder

- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- With magnet
- For bits to DIN 3126 / C 6.3
- Chrome vanadium



	mm	D1 mm	D2 mm	L mm	⚡	U
117.3811	3/8"	1/4"	25.0	13.0	125.0	165
117.3812	3/8"	1/4"	25.0	13.0	250.0	250

Insulated socket wrench set

- Insulated handle to IEC 60900
- In durable plastic storage case
- Chrome vanadium

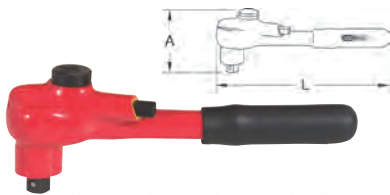


117.1888		13 pcs	Insulated socket wrench set	2.40
1 x		3/8"		
2 x		3/8": 125 - 250 mm		
1 x		3/8"		
5 x		3/8": 8 - 10 - 13 - 17 - 19 mm		
4 x		3/8": 4 - 5 - 6 - 8 mm		

1/2" PROGRAM

Insulated reversing ratchet

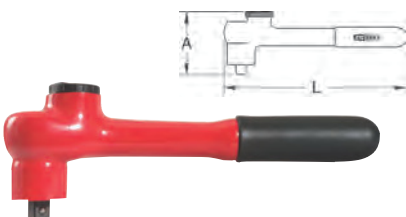
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- In accordance to DIN 7449
- Insulated handle to IEC 60900
- With reversible 32-teeth ratchet head
- Secure locking function on the square drive
- Special tool steel



117.1200		A mm	L mm	⚡	⚙️
1/2"	88.0	245.0	750	1000V	

Insulated reversing ratchet

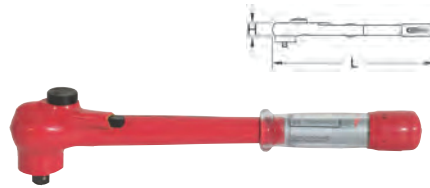
- Square drive adaptor to DIN 3120 / 1174 with ball lock
- In accordance to DIN 7449
- Insulated handle to IEC 60900
- With reversible 32-teeth ratchet head
- With frictional contact square drive with locking device
- Chrome vanadium



117.1201		A mm	L mm	⚡	⚙️
1/2"	90.0	245.0	700	1000V	

Insulated torque wrench with reversible ratchet head

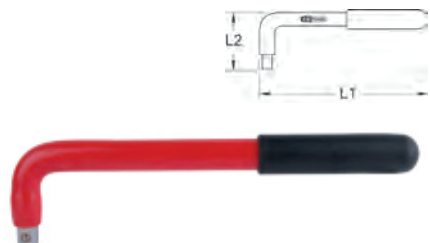
- Insulated handle to IEC 60900
- For working environment of voltages AC 1,000 V and DC 1500 V
- Actuation accuracy: $\pm 3\%$ tolerance of the set scale value and better
- Precise reading accuracy for a minimum 5.000 tightening cycles
- For controlled fastening in a clockwise direction
- Can untighten without any torque restraint thanks to the anticlockwise latch
- Scale in N·m divisions for precise adjustment
- Large vision panel for precise adjustment
- An audible and palpable signal when the desired torque value is achieved
- With exact gearing 30 teeth ratchet mechanism
- Torque setting is quick and easy using the locking knob in the handle end
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Individually marked with serial number - unique product identification
- Includes test certificate in accordance with DIN EN ISO 6789:2003 national standard



		N·m	H mm	L mm	⚡	⚙️
117.1301	1/2"	2-27	61.0	280.0	1000V	0.93
117.1300	1/2"	5-50	61.0	370.0	1000V	1.10
117.1302	1/2"	20-100	61.0	460.0	1000V	1.20
117.1303	1/2"	40-220	61.0	530.0	1000V	1.30

Insulated socket spanner

- Square drive adaptor to DIN 3120 / 1174 with ball lock
- In accordance to DIN 7436
- Insulated handle to IEC 60900
- With screw adjustment
- Chrome vanadium



117.1403		L1 mm	L2 mm	⚡	⚙️
1/2"	280.0	70.0	470	1000V	

Insulated T-grip socket spanner with screw adjustment

- Square drive adaptor to DIN 3120 / 1174 with ball lock
- In accordance to DIN 7436
- Insulated handle to IEC 60900
- With screw adjustment
- Chrome vanadium



117.1205		L1 mm	L2 mm	⚡	⚙️
1/2"	165.0	200.0	15.0	1000V	490

Insulated reducing adaptor

- In accordance to DIN 3123 / ISO 3316
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- Matt chrome
- Chrome vanadium



117.1285		D mm	L mm	⚡	⚙️
1/2"	3/8"	20.0	75.0	1000V	220

Insulated extension

- In accordance to DIN 7434
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- With frictional contact square drive with locking device
- Chrome vanadium



117.1251		L mm	⚡	⚙️	
1/2"	125.0	212	1000V		
117.1252	1/2"	250.0	395	1000V	

Insulated extension with screw adjustment

- In accordance to DIN 7434
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- 250 mm with locking screw at the outer square
- 125 mm with locking screw also for connected Hex, Torx, XZN sockets through the extension by the inner square
- With screw adjustment on the square drive
- Chrome vanadium



117.1202		L mm	⚡	⚙️	
1/2"	125.0	211	1000V		
117.1203	1/2"	250.0	406	1000V	

Insulated extension

- In accordance to DIN 7434
- Insulated handle to IEC 60900
- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- With frictional contact square drive with locking device
- Chrome vanadium



117.1229		L mm	⚡	⚙️	
1/2"	125.0	198	1000V		
117.1231	1/2"	250.0	374	1000V	

Insulated socket

- 6 point
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium



	mm	D1 mm	D2 mm	L mm	⚡	g
117.1208	8	26.0	17.0	55.0	1000V	65
117.1209	9	26.0	19.0	55.0	1000V	65
117.1210	10	26.0	20.0	55.0	1000V	70
117.1211	11	26.0	21.0	55.0	1000V	75
117.1212	12	26.0	22.0	55.0	1000V	75
117.1213	13	26.0	23.5	55.0	1000V	75
117.1214	14	26.0	25.0	55.0	1000V	80
117.1215	15	26.0	26.0	55.0	1000V	80
117.1216	16	26.0	26.5	55.0	1000V	85
117.1217	17	26.0	28.5	55.0	1000V	90
117.1218	18	26.0	31.0	55.0	1000V	85
117.1219	19	26.0	31.5	55.0	1000V	100
117.1220	20	26.0	33.0	55.0	1000V	100
117.1221	21	26.0	34.5	55.0	1000V	120
117.1222	22	26.0	35.0	55.0	1000V	120
117.1223	23	26.0	36.0	55.0	1000V	125
117.1224	24	26.0	37.0	55.0	1000V	140
117.1226	26	26.0	39.0	61.0	1000V	175
117.1227	27	26.0	41.0	61.0	1000V	195
117.1228	28	26.0	44.0	61.0	1000V	190
117.1230	30	26.0	46.0	61.0	1000V	230
117.1232	32	26.0	49.5	61.0	1000V	280

Insulated socket, long

- 6 point
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium



	mm	D1 mm	D2 mm	L mm	⚡	g
117.1333	8	26.0	19.0	94.0	1000V	105
117.1334	10	26.0	21.0	94.0	1000V	110
117.1335	11	26.0	21.0	94.0	1000V	130
117.1336	12	26.0	22.0	94.0	1000V	145
117.1337	13	26.0	23.5	94.0	1000V	145
117.1338	14	26.0	25.5	94.0	1000V	145
117.1339	15	26.0	27.0	94.0	1000V	145
117.1340	16	26.0	28.0	94.0	1000V	160
117.1341	17	26.0	29.0	94.0	1000V	180
117.1342	18	26.0	30.0	94.0	1000V	190
117.1343	19	26.0	30.5	94.0	1000V	210
117.1344	21	26.0	35.0	94.0	1000V	215
117.1345	22	26.0	35.5	94.0	1000V	230
117.1346	23	26.0	36.0	94.0	1000V	235
117.1347	24	26.0	39.0	94.0	1000V	250
117.1348	27	26.0	42.0	94.0	1000V	390
117.1349	30	26.0	46.5	94.0	1000V	420
117.1350	32	26.0	48.5	94.0	1000V	460

Insulated socket, extra deep

- 6 point
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium



	mm	D1 mm	D2 mm	L mm	⚡	g
117.1371	13	26.0	23.5	145.0	1000V	250
117.1372	14	26.0	25.5	145.0	1000V	260
117.1373	17	26.0	29.0	145.0	1000V	280
117.1374	19	26.0	30.5	145.0	1000V	295
117.1375	22	26.0	35.5	145.0	1000V	310
117.1376	24	26.0	29.0	145.0	1000V	330
117.1377	27	26.0	42.0	145.0	1000V	350
117.1378	30	26.0	46.5	145.0	1000V	380
117.1379	32	26.0	48.5	145.0	1000V	410

Insulated socket, extra deep

- 6 point
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium



	mm	D1 mm	D2 mm	L mm	⚡	g
117.1381	13	26.0	23.5	255.0	1000V	485
117.1382	14	26.0	25.5	255.0	1000V	500
117.1383	17	26.0	29.0	255.0	1000V	530
117.1384	19	26.0	30.5	255.0	1000V	550
117.1385	22	26.0	35.5	255.0	1000V	580
117.1386	24	26.0	39.0	255.0	1000V	605
117.1387	27	26.0	42.0	255.0	1000V	635
117.1388	30	26.0	46.5	255.0	1000V	660
117.1389	32	26.0	48.5	255.0	1000V	670



Insulated socket

- 12 point
- FlankTraction profil
- In accordance to DIN 7448
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium



	mm	D1 mm	D2 mm	L mm	⚡	g
117.1351	5/16"	26.0	18.0	55.0	1000V	70
117.1352	3/8"	26.0	19.5	55.0	1000V	70
117.1353	7/16"	26.0	21.0	55.0	1000V	75
117.1354	15/32"	26.0	21.5	55.0	1000V	75
117.1355	1/2"	26.0	24.5	55.0	1000V	75
117.1356	9/16"	26.0	25.0	55.0	1000V	80
117.1357	5/8"	26.0	26.5	55.0	1000V	85
117.1358	11/16"	26.0	29.0	55.0	1000V	90
117.1359	25/32"	26.0	29.5	55.0	1000V	85
117.1361	3/4"	26.0	30.0	55.0	1000V	100
117.1362	13/16"	26.0	34.5	55.0	1000V	110
117.1363	7/8"	26.0	35.5	59.0	1000V	120
117.1364	15/16"	26.0	38.0	59.0	1000V	140
117.1368	1"	26.0	39.5	59.0	1000V	175
117.1369	1.1/8"	26.0	45.0	59.0	1000V	190
117.1367	1.1/4"	26.0	49.0	59.0	1000V	280

Insulated bit socket

- Hexagon socket
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium



	mm	D mm	L mm	⚡	g
117.1151	4	26.0	95.0	1000V	80
117.1152	5	26.0	95.0	1000V	80
117.1153	6	26.0	95.0	1000V	85
117.1154	8	26.0	95.0	1000V	95
117.1155	10	26.0	95.0	1000V	105
117.1156	12	26.0	95.0	1000V	125
117.1157	14	26.0	95.0	1000V	170
117.1158	17	26.0	95.0	1000V	185
117.1159	19	26.0	95.0	1000V	195

Insulated bit socket, long

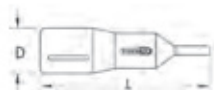
- Hexagon socket
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium



	mm	D mm	L mm	⚡	g
117.1161	4	26.0	118.0	1000V	95
117.1162	5	26.0	118.0	1000V	100
117.1163	6	26.0	118.0	1000V	100
117.1164	8	26.0	118.0	1000V	110
117.1165	10	26.0	118.0	1000V	110
117.1166	12	26.0	118.0	1000V	160

Insulated bit socket, extra long

- Hexagon socket
- Insulated handle to IEC 60900
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Burnished
- Chrome vanadium



	mm	D mm	L mm	⚡	👤
117.1171	5	26.0	156.0	1000V	110
117.1172	6	26.0	156.0	1000V	110
117.1173	5	26.0	267.0	1000V	125
117.1174	6	26.0	267.0	1000V	145
117.1175	8	26.0	267.0	1000V	155
117.1176	10	26.0	267.0	1000V	190

Insulated socket wrench set

- Insulated handle to IEC 60900
- In durable plastic storage case



	mm	A mm	B mm	L mm	⚡	👤
117.1860	16 pcs	Insulated socket wrench set		4.50		
1 x		1/2"				
2 x		1/2"	125 - 250 mm			
1 x		1/2"				
8 x		1/2"	10 - 12 - 13 - 14 - 17 - 19 - 22 - 24 mm			
3 x		1/2"	5 - 6 - 8 mm			
1 x		3.5 mm				



SPANNERS

Insulated open ended spanner

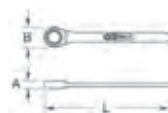
- In accordance to DIN 7446
- Insulated handle to IEC 60900
- Jaw 15° offset
- Chrome vanadium



	mm	A mm	B mm	L mm	⚡	👤
117.1506	6	12.0	23.5	70.1	1000V	30
117.1507	7	12.0	25.0	77.0	1000V	30
117.1508	8	12.5	27.2	84.0	1000V	30
117.1509	9	12.5	29.2	90.0	1000V	40
117.1510	10	13.0	31.2	97.0	1000V	40
117.1511	11	13.4	33.3	104.0	1000V	50
117.1512	12	13.5	35.2	110.0	1000V	50
117.1513	13	13.9	37.4	117.0	1000V	70
117.1514	14	14.2	39.5	124.0	1000V	80
117.1515	15	14.4	41.2	130.0	1000V	90
117.1516	16	14.7	42.7	137.0	1000V	120
117.1517	17	14.9	44.5	144.0	1000V	120
117.1518	18	15.2	46.7	150.0	1000V	120
117.1519	19	15.4	48.7	157.0	1000V	150
117.1522	22	16.2	54.9	174.0	1000V	190
117.1524	24	16.7	58.4	190.0	1000V	300
117.1527	27	17.4	63.7	210.0	1000V	390
117.1530	30	18.1	69.8	230.0	1000V	510
117.1532	32	18.4	65.8	244.0	1000V	550

Insulated ratchet ring spanner

- FlankTraction profil
- In accordance to DIN 7446
- Insulated handle to DIN 60900
- Straight form
- Exact gearing with 72 teeth
- Chrome vanadium



	mm	A mm	B mm	L mm	⚡	👤
117.4206	6	6.7	14.4	126.0	1000V	30
117.4207	7	6.9	17.2	137.0	1000V	40
117.4208	8	6.9	17.2	140.0	1000V	40
117.4209	9	7.3	19.2	150.0	1000V	40
117.4210	10	7.7	21.2	159.0	1000V	60
117.4211	11	8.1	22.2	165.0	1000V	60
117.4212	12	8.6	23.2	172.0	1000V	80
117.4213	13	9.0	25.2	178.0	1000V	90
117.4214	14	9.4	28.2	191.0	1000V	120
117.4215	15	9.8	29.2	200.0	1000V	130
117.4216	16	10.3	31.2	208.0	1000V	160
117.4217	17	10.7	32.2	226.0	1000V	190
117.4218	18	11.1	33.2	237.0	1000V	230
117.4219	19	11.6	34.2	248.0	1000V	250
117.4221	21	13.4	40.4	274.0	1000V	360
117.4222	22	13.4	40.4	290.0	1000V	340
117.4224	24	14.9	46.4	323.0	1000V	490
117.4227	27	15.9	52.4	331.0	1000V	610
117.4228	30	17.4	59.2	389.0	1000V	900
117.4229	32	17.9	62.4	415.0	1000V	1100
117.4230	34	17.9	62.4	460.0	1000V	1250

Insulated ring spanner, offset

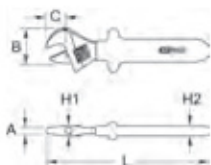
- FlankTraction profil
- In accordance to DIN 7447
- Insulated handle to IEC 60900
- Ring head 75° offset
- Chrome vanadium



	mm	A mm	B mm	L mm	⚡	👤
117.1306	6	6.1	13.6	160.0	1000V	55
117.1307	7	6.7	12.6	160.0	1000V	55
117.1308	8	7.1	14.0	170.0	1000V	60
117.1309	9	7.4	15.5	170.0	1000V	65
117.1310	10	7.8	17.0	170.0	1000V	80
117.1311	11	8.1	18.4	180.0	1000V	90
117.1312	12	10.2	19.9	190.0	1000V	100
117.1313	13	10.9	21.3	190.0	1000V	110
117.1314	14	11.3	22.8	210.0	1000V	160
117.1315	15	11.9	24.1	215.0	1000V	170
117.1316	16	12.2	25.7	220.0	1000V	200
117.1317	17	12.6	27.1	225.0	1000V	250
117.1318	18	13.2	28.6	230.0	1000V	270
117.1319	19	13.6	30.1	240.0	1000V	290
117.1322	22	13.9	34.4	260.0	1000V	320
117.1324	24	15.4	36.2	280.0	1000V	490
117.1327	27	16.4	40.4	295.0	1000V	540
117.1330	30	17.4	44.4	310.0	1000V	580
117.1332	32	18.4	47.4	330.0	1000V	590

Insulated adjustable spanner

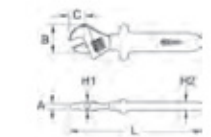
- In accordance to DIN 3117
- Insulated handle to IEC 60900
- Jaw 15° offset
- Swedish type design
- With mm scale
- Matt finish
- Chrome vanadium



	mm	A mm	B mm	C mm	H1 mm	H2 mm	L mm	⚡	👤
117.1250	24.0	12.0	55.0	30.0	8.0	14.0	200.0	1000V	310
117.1253	30.0	14.0	77.0	40.0	14.0	19.0	250.0	1000V	540
117.1254	34.0	17.5	78.0	48.0	17.5	18.0	300.0	1000V	830

Insulated adjustable spanner

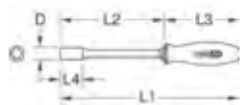
- In accordance to DIN 3117
- Insulated handle to IEC 60900
- Jaw 15° offset
- Swedish type design
- With mm scale
- Matt finish
- Burnished
- Chrome vanadium



	mm	A mm	B mm	C mm	H1 mm	H2 mm	L mm	⚡	👤
117.4270	27	13.0	57.5	20.0	13.0	18.5	210.0	1000V	329
117.4271	31	15.0	68.5	30.0	15.0	20.0	260.0	1000V	530
117.4272	34	17.5	79.0	36.0	17.5	23.0	315.0	1000V	800

Insulated Socket Screwdriver

- 6 point
- In accordance to DIN 7445
- Insulated to IEC 60900
- Chrome vanadium



	D mm	L1 mm	L2 mm	L3 mm	L4 mm	⚡	🛡️
117.1177	3	10.0	215.0	125.0	90.0	37.0	65
117.1178	3.5	10.0	215.0	125.0	90.0	37.0	70
117.1179	4	10.0	215.0	125.0	90.0	37.0	70
117.1181	4.5	10.0	215.0	125.0	90.0	37.0	70
117.1235	5	11.5	215.0	125.0	90.0	37.0	75
117.1182	5.5	15.5	215.0	125.0	90.0	37.0	70
117.1236	6	12.5	215.0	125.0	90.0	37.0	75
117.1237	7	14.5	225.0	125.0	100.0	37.0	115
117.1238	8	15.5	225.0	125.0	100.0	37.0	115
117.1239	9	16.5	225.0	125.0	100.0	37.0	155
117.1240	10	17.0	225.0	125.0	100.0	37.0	120
117.1241	11	19.5	235.0	125.0	110.0	37.0	160
117.1242	12	20.5	235.0	125.0	110.0	37.0	170
117.1243	13	21.5	235.0	125.0	110.0	37.0	170
117.1244	14	23.5	235.0	125.0	110.0	37.0	170
117.1247	17	26.5	235.0	125.0	110.0	37.0	190

Insulated T-grip socket spanner

- 6 point
- In accordance to DIN 7440
- Insulated handle to IEC 60900
- For use of especially long threaded bolts
- Made from precision steel tube
- Chrome vanadium



	D mm	I mm	L mm	⚡	🛡️
117.1771	10	17.0	165.0	200.0	320
117.1772	11	19.0	165.0	200.0	380
117.1773	12	19.0	165.0	200.0	370
117.1774	13	20.0	165.0	200.0	370
117.1775	14	24.0	165.0	200.0	370
117.1776	16	26.0	165.0	200.0	420
117.1777	17	26.0	165.0	200.0	430
117.1778	18	29.0	165.0	200.0	460
117.1779	19	30.0	165.0	200.0	440
117.1781	20	32.0	165.0	200.0	460
117.1782	22	33.0	165.0	200.0	570
117.1783	24	35.0	165.0	200.0	590



Insulated T-grip socket spanner, long

- 6 point
- In accordance to DIN 7440
- Insulated handle to IEC 60900
- For use of especially long threaded bolts
- Made from precision steel tube
- Chrome vanadium

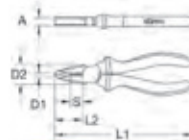


	D mm	I mm	L mm	⚡	🛡️
117.1725	8	17.0	165.0	300.0	350
117.1726	10	20.0	165.0	300.0	380
117.1727	11	20.0	165.0	300.0	430
117.1728	12	20.0	165.0	300.0	430
117.1729	13	20.0	165.0	300.0	420
117.1730	14	23.0	165.0	300.0	440
117.1731	17	28.0	165.0	300.0	520
117.1732	19	32.0	165.0	300.0	590
117.1733	22	33.0	165.0	300.0	690
117.1734	24	33.5	165.0	300.0	780

PLIERS

ERGOTORQUE® VD E combination pliers

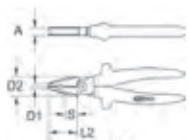
- In accordance to DIN ISO 5748
- Wrap around insulation to IEC 60900
- With two component handle
- Suitable for wire
- Inductively hardened precision cutting edges
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm	⚡	🛡️
117.1111	10.0	6.0	24.0	170.0	35.0	2.4	⚡	310
117.1112	11.0	7.0	27.0	180.0	38.5	2.5	⚡	380
117.1113	12.0	7.0	30.0	210.0	42.5	3.0	⚡	400

CLASSIC 1000V high leverage combination pliers

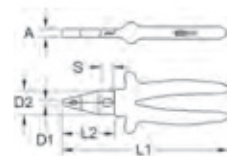
- In accordance to DIN / ISO 5746
- Insulated handle to IEC 60900
- Also suitable for hard wire
- Extra heavy execution
- Inductively hardened precision cutting edges
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm	⚡	🛡️
117.1278	8.5	6.0	25.0	160.0	36.5	13.0	⚡	230
117.1275	11.0	7.5	28.0	185.0	40.0	16.5	⚡	290
117.1276	11.5	8.0	28.0	205.0	43.0	18.0	⚡	390
117.1279	13.0	8.0	35.0	250.0	53.0	21.5	⚡	570

CLASSIC 1000V combination pliers

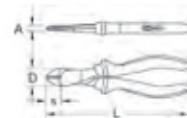
- In accordance to DIN / ISO 5244
- Insulated handle to IEC 60900
- With coated working head
- Also suitable for hard wire
- Extra heavy execution
- Inductively hardened precision cutting edges
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	S mm	⚡	🛡️
117.1711	16.0	8.0	30.0	185.0	38.0	16.0	⚡	280
117.1712	16.0	8.5	32.5	205.0	44.0	18.5	⚡	350

ERGOTORQUE® VD E high leverage side cutters

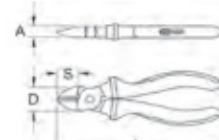
- In accordance to DIN / ISO 5749
- Wrap around insulation to IEC 60900
- With two component handle
- For all types of wire
- Requires light expenditure of energy
- Inductively hardened precision cutting edges
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm	⚡	🛡️
117.1115	12.0	30.0	185.0	22.5	⚡	330
117.1116	12.5	30.0	200.0	22.5	⚡	370

ERGOTORQUE® VD E diagonal side cutters

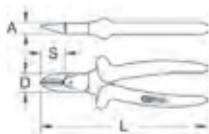
- In accordance to DIN / ISO 5749
- Wrap around insulation to IEC 60900
- With two component handle
- For soft and medium wire
- Inductively hardened precision cutting edges
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm	⚡	🛡️
117.1119	10.0	20.0	160.0	20.0	⚡	210

CLASSIC 1000V side cutters

- In accordance to DIN / ISO 5232
- Insulated handle to IEC 60900
- For soft and hard wire
- Inductively hardened precision cutting edges
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm	⚡	⚖
117.1277	11.0	21.5	160.0	24.0	1000V	270
117.1288	11.0	21.5	180.0	24.0	1000V	330

CLASSIC 1000V high leverage side cutter

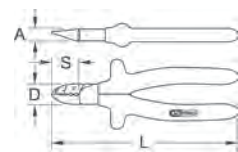
- In accordance to DIN / ISO 5749
- Insulated handle to IEC 60900
- For all types of wire
- Especially for the line construction
- Requires light expenditure of energy
- Inductively hardened precision cutting edges
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm	⚡	⚖
117.1282	12.0	26.0	180.0	21.0	1000V	320
117.1283	12.5	29.0	205.0	24.0	1000V	370
117.1284	13.5	33.0	260.0	30.0	1000V	580

CLASSIC 1000V electrical side cutters

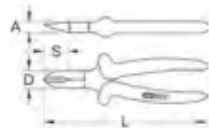
- Insulated handle to DIN / EN 60900
- For cutting, stripping and crimping
- Wire strippers for wires from 1,5 mm² + 2,5 mm²
- For crimping of insulated cable lugs with Ø 1,5 mm + 2,5 mm
- Inductively hardened precision cutting edges
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm	⚡	⚖
117.1281	10.5	22.0	175.0	27.0	1000V	320

CLASSIC 1000V side cutters

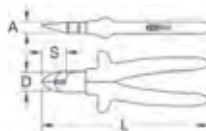
- In accordance to DIN / ISO 5232
- Insulated handle to IEC 60900
- Working head coated
- For soft and hard wire
- Inductively hardened precision cutting edges
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm	⚡	⚖
117.1721	26.0	25.5	160.0	22.0	1000V	230
117.1722	27.0	27.0	180.0	25.0	1000V	330

CLASSIC 1000V lead sealing pliers

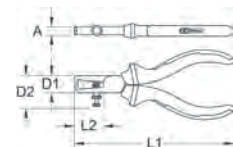
- Insulated handle to DIN / EN 60900
- With interchangeable clamping inserts
- Combined with side cutter
- Inductively hardened precision cutting edges
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm	⚡	⚖
117.1268	10.0	20.0	160.0	15.0	1000V	220

ERGOTORQUE® VDE cable stripper

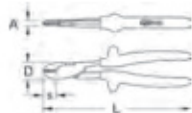
- In accordance to DIN / ISO 5232
- Wrap around insulation to IEC 60900
- Locking jaw opening
- Adjusting screw and spring
- Two component handle
- For wires from 0,8 - 6,0 mm²
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	⚡	⚖
117.1114	10.0	17.5	31.5	160.0	36.0	1000V	210

CLASSIC 1000V high leverage side cutter

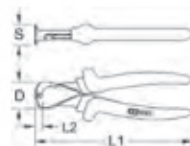
- In accordance with DIN/ISO 5749
- Insulated handle to IEC 60900
- For all types of wire
- Especially for overhead line construction
- Low energy requirement
- 40% power saving
- Inductively hardened precision cutting edges
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm	⚡	⚖
117.1234	12.0	28.5	200.0	25.0	1000V	380

CLASSIC 1000V cutting pliers

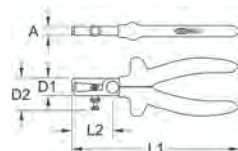
- In accordance to DIN / ISO 5748
- Insulated handle to IEC 60900
- For soft and hard wire
- Inductively hardened precision cutting edges
- Matt chrome
- Special tool steel



	D mm	L mm	L2 mm	S mm	⚡	⚖
117.1198	30.0	160.0	6.5	23.0	1000V	280

CLASSIC 1000V wire strippers

- In accordance to DIN / ISO 5232
- Insulated handle to IEC 60900
- Locking jaw opening
- Adjusting screw and spring
- For wires from 0,8 - 6,0 mm²
- Matt chrome
- Special tool steel

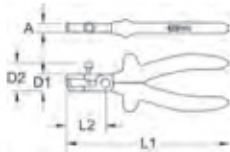


	A mm	D1 mm	D2 mm	L1 mm	L2 mm	⚡	⚖
117.1271	9.5	18.5	31.5	160.0	44.0	1000V	180

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CLASSIC 1000V wire strippers

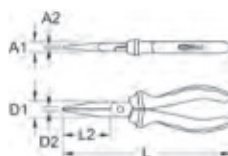
- In accordance to DIN / ISO 5232
- Insulated handle to IEC 60900
- Coated working head
- Locking jaw opening
- Adjusting screw and spring
- For wires from 0,8 - 6,0 mm²
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	⚡	⚙️
117.1713	11.0	18.5	20.0	160.0	34.0	1000V	180

ERGOTORQUE® VDE fl t pliers

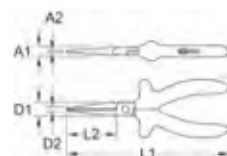
- In accordance to DIN / ISO 5745
- Wrap around insulation to IEC 60900
- With two component handle
- Serrated execution
- Matt chrome
- Special tool steel



	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm	⚡	⚙️
117.1125	9.0	3.8	18.0	3.0	165.0	49.5	1000V	210

CLASSIC 1000V fl t pliers

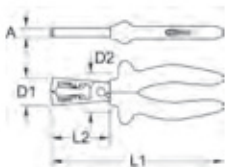
- In accordance to DIN / ISO 5745
- Insulated handle to IEC 60900
- With coated working head
- Short and powerful jaws
- Serrated execution
- Matt chrome
- Special tool steel



	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm	⚡	⚙️
117.1715	11.0	11.0	19.0	5.0	160.0	36.0	1000V	190

CLASSIC 1000V wire strippers

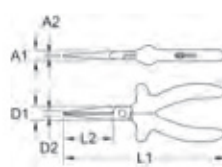
- Insulated handle to IEC 60900
- Multifunctional wire strippers
- Self-adjusting
- With replaceable knives
- For wires from 0,5 - 5,0 mm²
- With cutting holes for separating cables and wires
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	⚡	⚙️
117.1225	10.0	24.0	40.0	185.0	61.0	1000V	260

CLASSIC 1000V fl t pliers

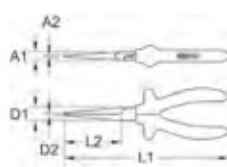
- In accordance to DIN 5745
- Insulated handle to IEC 60900
- With long jaws
- Serrated execution
- Matt chrome
- Special tool steel



	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm	⚡	⚙️
117.1289	8.5	5.5	15.0	3.5	160.0	50.0	1000V	210

CLASSIC 1000V long jaw fl t pliers

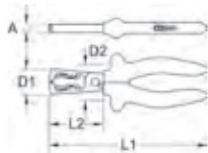
- In accordance to DIN / ISO 5745
- Insulated handle to IEC 60900
- With long jaws
- Serrated execution
- Matt chrome
- Special tool steel



	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm	⚡	⚙️
117.1299	7.0	8.5	16.0	4.0	160.0	51.0	1000V	210

CLASSIC 1000V wire strippers

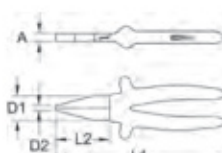
- Insulated handle to IEC 60900
- Self-adjusting
- With replaceable knives
- For wires from 0,5 - 5,0 mm²
- Cutting holes for the separation of cables and wires
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	Requirement	⚙️
117.1272	10.5	28.5	47.5	160.0	20.0	117.1258	220

CLASSIC 1000V fl t pliers

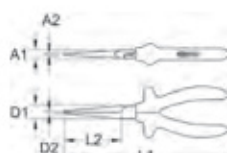
- In accordance to DIN / ISO 5745
- Insulated handle to IEC 60900
- Short and powerful jaws
- Serrated execution
- Matt chrome
- Special tool steel



	A mm	D1 mm	D2 mm	L1 mm	L2 mm	⚡	⚙️
117.1298	9.0	17.0	4.5	160.0	34.0	1000V	200

CLASSIC 1000V long jaw fl t pliers

- In accordance to DIN / ISO 5745
- Insulated handle to IEC 60900
- With coated working head
- With long jaws
- Matt chrome
- Special tool steel



	A1 mm	A2 mm	D1 mm	D2 mm	L1 mm	L2 mm	⚡	⚙️
117.1716	13.0	7.5	18.5	4.5	160.0	50.0	1000V	130