

COMMON RAIL GLOW PLUG TOOLS

TO PREVENT GLOW PLUGS FROM SEIZING



Glow plug well cleaning grinder.

- Built-up scale between the glow element and the cylinder head results in breaking glow plugs when removing them.
- Using a glow plug well cleaning grinder reduces the risk of breakage. On "sensitive" engines, glow plugs should be changed every 80 000 KM and the glow plug wells be cleaned.

■ Cylinder head tool for 10 x 100 and 10 x 125 glow plugs



- Removes scale deposits between the cylinder head and the spark plug heating element.
- Prevents seizing and breakage of glow plugs in the cylinder heads.



DCR.HC10	ΔΔ [g]
	219

FUEL INJECTION

■ 1/2" square drive diesel injectors sockets



- 1/2" square drive 12-point long reach sockets.
- D.27A.
- D.132B.
- Available for:
 - MAZDA Familia 1.7.
 - MERCEDES 250C > 94.
 - MITSUBISHI Pajero 2.
 - NISSAN Serena 2.3.
 - PEUGEOT 106/605/2.5.
 - SEAT Terra 1.7.
 - VOLKSWAGEN Polo D.
- CITROËN Saxo 1.5/Boxer TD.
- FORD Maverick.



	d [mm]	Width l [mm]	L [mm]	ΔΔ [g]
D.27A	36	87	87	265
D.132B	29	98	98	160

■ Injector test pump



- For checking injector leak-back, injection pressure and fuel spray pattern.
- Dial gauge: 0-600 bar.
- Reservoir complete with filter.
- For use with fluid to NF ISO 4113 and vapour extractor Ref D.144.



	H [mm]	Width l [mm]	L [mm]	ΔΔ [kg]
916.600	410	100	220	4.4

FUEL INJECTION

■ Vapour extractor

- Collects fumes and fluid checking or adjusting injectors.
- Air inlet hose fitted with shut-off valve.
- Inlet pressure: 6 bar.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
D.144	420	380	400	5,2

■ Fuel gauge wrench

- Used to dismount and refit fuel gauges bushes.
- Capacity: 88 -> 170 mm.
- Opening regulation through diaphragm.



	ΔΔ [kg]
DM.JL	0,200

■ Automatic clamp pliers

- Pliers to open or close automatic clamps.
- Multi-direction gripping of clamps to work either vertically or horizontally (right or left).



	ΔΔ [g]
DM.CC	200

■ Diesel filter fitting and removal tool

- For multi-jet 1.3 and 1.9 diesel engines in Fiat and Opel.
- Filter holder support for lock grip.
- Filter holder wrench with 3/8" square bit.
- Allows retightening at the original torque value (value indicated on the plastic cap).



	ΔΔ [g]
DM.FR2	894



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FUEL CIRCUIT TOOLS

Fast fit fuel pliers



- For petrol and diesel vehicles.
- To disconnect fast fuel fittings.
- Length: 175 mm.



	$\Delta\Delta$ [g]
DM.F	171

DM.MUB - SPRING CLAMP PLIERS



For an easier reach

Time-saving

- No need to remove components obstructing the hose clamp.
- Compact and lightweight for confined spaces.

Comfortable

- Non-slip grips.
- Ratchet lock system for reduced effort.

Capacity 18 to 54 mm.

Pliers for removing and fitting self-tightening spring clips

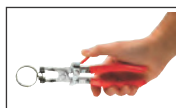
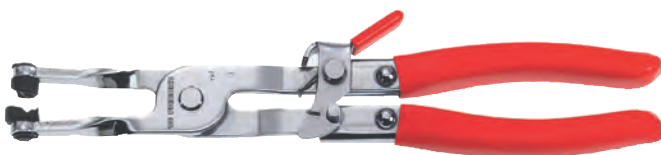


- Fits self-tightening spring clips diameter: 18 --> 51 mm.
- Can be used one-handed.
- Non-slip bi-material handle for a better grip.
- Rack system for reduced effort.
- Sheath length: 560 mm.
- Total length: 780 mm.



	$\Delta\Delta$ [g]
DM.MUB-A	456

Self-tightening clamp pliers



- For hose clamps on cooling, heating, fuel or screen-washer.
- DM.25: slip-joint model.
- DM0.27: long-reach model with lock and pivoting jaws.
- DM0.29: standard-reach model with lock and pivoting jaws.



	d [mm]	Width l [mm]	L [mm]	P [mm]	Dimension [mm]	$\Delta\Delta$ [g]
DM.25	12.60	55	275	20	275 x 55 x 20	400
DM.27	15.56	60	275	25	275 x 60 x 25	395
DM.29	15.56	60	215	25	215 x 60 x 25	340

Flexible nut drivers (6 point)



- For loosening and tightening hose clamps.



	d [mm]	$\Delta\Delta$ [g]
D.133B6	6	185
D.133B7	7	187
D.133B8	8	188
D.133B10	10	189

SEALS

217 - Set of Master bearing race and seal driver

- Smart multi diameter tool: Place seals, bearing race without any damages. Adjustable jaws.
- All in one design, eliminating the need for a driver and several different heads.
- 2 SKUs:
 - Jaws from 9,5 to 50 mm.
 - Jaws from 18 to 90 mm.
- 3-stepped jaws quickly adjust to accommodate bearing races and seals.
- Can be used on most vehicles, including motorcycles.



	$\Delta\Delta$ [kg]
217.J2	1,1

Gasket centrer, 50 mm cages

- Multiple diameter tool to place and centre sealing gaskets, bearings... Adjustable jaws.
- Inserts gaskets without damaging them.
- Jaws from 9.5 to 50 mm.
- 3 stages per jaw to adapt to all types of gaskets and bearing cages.
- Adapted to most vehicles, including motorcycles.



	$\Delta\Delta$ [g]
217.50	280

Gasket centrer, 90 mm cages

- Multiple diameter tools to place and centre sealing gaskets, bearings... Adjustable jaws.
- Inserts gaskets without damaging them.
- Jaws from 18 to 90 mm.
- 3 stages per jaw to adapt to all types of gaskets and bearing cages.
- Adapted to most vehicles, including motorcycles.



	$\Delta\Delta$ [g]
217.90	834

COOLING SYSTEM TESTER

Vacuum cooling circuit fillers

- For total filling of cooling circuits also without bleed screw.
- Supplied in a plastic case (complete with 5 can adaptors).



	$\Delta\Delta$ [kg]
935A	1,960

Anti-freeze hydrometer

- Measures antifreeze levels in engine coolant.
- Two scales for cold or warm engines.



	Width I [mm]	L [mm]	$\Delta\Delta$ [g]
778A	42	350	90



COOLING SYSTEM TESTER

■ Cooling circuit tester with 14 adapters



- Manual pump 0 to 2.5 bar.
- Set of 14 plugs.
- For vehicles by: RENAULT, PEUGEOT, CITROEN, FIAT, ALFA, LANCIA, MINI, VOLVO, NISSAN, TOYOTA, MITSUBISHI, SUZUKI, OPEL, SAAB, FORD, MAZDA, MERCEDES, VOLKSWAGEN, SEAT, SKODA, AUDI, PORSCHE, BMW, CHEVROLET EUROPE, SMART.
- Plastic storage case.
- Supplied with instructions.



	$\Delta\Delta$ [kg]
920B	2.1

AFKNIJPTANGEN

■ Screw-type hose clamps



- Metal structure.
- Applications:
 - Cooling circuit.
 - Fuel circuit.
 - Air circuit.



	d [mm]	Width l [mm]	L [mm]	$\Delta\Delta$ [g]
DM.90	27	65	65	190
DM.91	45	85	85	240

■ Hose clamps



- Hoses are clamped shut instantly without damage.
- Plastic structure.



	d [mm]	Width l [mm]	L [mm]	$\Delta\Delta$ [g]
DM.33	8...15	160	160	170
DM.34	15...28	180	180	190
DM.34GM	25...55	205	205	210

CYLINDER HEAD - VALVES

■ Valve lifter



- For removing valve springs.
- Complete with jaws ref U.13B.



	H [mm]	Width l [mm]	L [mm]	$\Delta\Delta$ [kg]
U.13L	20	365	265	1,1

Collet clamp and cup

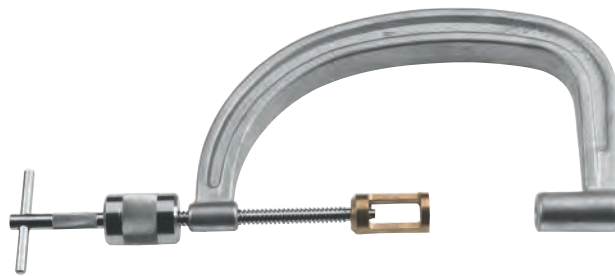
- To fit U.13L, the collet replacing the screw, with the cup inserted between the 2 jaws.
- U.13DB: For 16-valve engines.



🔧	d [mm]	ΔΔ [g]
U.13DB	30	335
U.13DC	33	340

Slide-hammer valve lifter

- For removing valve springs.
- The slide hammer is used to free split collets.
- Diameter: 34 mm.



🔧	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
U.43LA	36	390	200	1.4

Collet clamp

- For 16-valve engines.
- Fits U.43LA.
- Diameter: 29 mm.



🔧	L [mm]	ΔΔ [g]
U.43LA16A	54	55

Cylinder-head rest

- Adjustable distance between feet.
- Designed for easy use of valve lifters U.13L - U.43LA.



🔧	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
U.43	165	500	215	1.8



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CYLINDER HEAD - VALVES

Special pliers



- For removing valve guide seals.
- Length: 245 mm.
- Finish: Nickel, burnished jaws.



	L [mm]	ΔΔ [g]
DM.7	245	350

Valve stem seal pliers

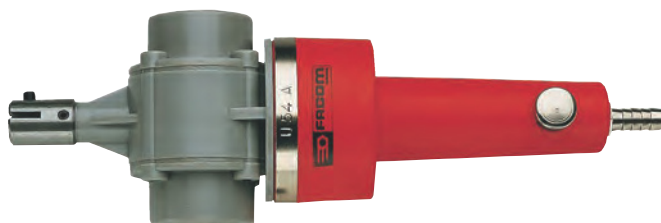


- For removing valve guide seals.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [g]
DM.10A	15	80	235	135

Air-operated valve grinder



- Working pressure: 8 bar.
- Air consumption: 0.08 m³/min.
- Supplied with 2 suction cups (diam.: 22 and 33 mm).
- Suction cup 22 mm: U.54AV1.
- Suction cup 33 mm: U.54AV2.
- Suction cup 30 mm: U.54AV3.
- Suction cup 45 mm: U.54AV4.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [g]
U.54A	70	90	280	800

Valve grinder



- Suction pads: 19 - 22 mm.



	Width I [mm]	L [mm]	ΔΔ [g]
D.51	22	235	30

Scraper



- For deburring and scraping off gasket debris.
- Triple-edge blade.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [g]
D.1	20	25	200	105

7-piece set of 6-spline bits 1/2"

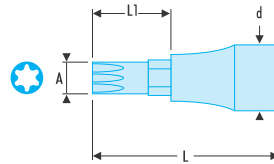
- Comprising: D.34B7 - D.34B7L - D.34B9L - D.34B10 - D.34B12L - D.34B14L - D.34B16L.
- Supplied on a rack.



Part No.	Weight $\Delta\Delta$ [g]
D.34J7	900

D.34B - Long-reach 6-spline bits

Part No.	A [mm]	d [mm]	Width l [mm]	L [mm]	L1 [mm]	$\Delta\Delta$ [g]
D.34B7	7	7	60	60	15	70
D.34B7L	7	7	100	100	63	120
D.34B9L	9	9	100	100	63	130
D.34B10	10	10	60	60	15	75
D.34B12L	12	12	100	100	63	140
D.34B14L	14	14	100	100	63	150
D.34B16L	16	16	100	100	63	160

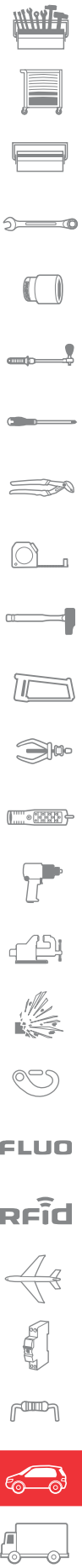


Set of Torx® socket wrenches and bits

- J.235: Bit holder.
- R0.235: 1 bit holder socket 1/4".
- S.236: 1/2" bit holder socket.
- EX.2 40 - 45 - 50 - 55: 5/16 bits.
- EXR. 10 - 15 - 20 - 25 - 30 - 40: 1/4 bits.
- JTX. 8 - 10 - 12 - 14 - 16: 3/8" sockets.
- STX 18 - 20: 1/2" sockets.
- 59TX 6 x 8 - 10 x 12 - 14 x 18 - 20 x 24: Ring wrenches.



Part No.	H [mm]	Width l [mm]	L [mm]	Contents	$\Delta\Delta$ [kg]
MOD.TX1A	40	175	418	PL.360	0.995



CYLINDER HEAD - VALVES

■ **5-piece set of drive bits for spline socket head (XZN) bits 1/2"**



- Comprising the bits: SV.14LB - SV.12LB - SV.10LB - SV.8LB - SV.6LB.
- Bit length: 64 mm.
- Supplied on a rack.



	$\Delta\Delta$ [g]
SV.J5	670

■ **20-piece set of short-reach bits**



- Tray PL.393A.
- Plastic case BP.102.
- Dimensions (L. x W. x H.): 204 x 122 x 52 mm.



	$\Delta\Delta$ [g]
SE.1A	475

■ **Storage holder for cylinder head**



- For engines up to 4 cylinders.
- 8 or 16 valves.
- Single or dual camshaft.
- Holder for valves, springs, key, camshaft.



	H [mm]	Width I [mm]	L [mm]	$\Delta\Delta$ [kg]
U.43-ORG	22	40.5	45	2.3

TORQUE TIGHTENING : WRENCHES AND DRIVES

E.306 and E.316 series

- 9 torque and/or angle values can be preset.
- 250 results can be saved, downloaded via USB.



Series E.506

- 9 torque and/or angle values can be preset.
- 50-result memory.



Series E.406

- 9 preset angle values.
- 50-result memory.



DIGITAL CONTROL TOOLS

■ E.506 - Torque and angled adapter



NF EN ISO 6789, ISO 6789, DIN EN ISO 6789

- Drive bit 1/2".
- Accuracy:
 - Torque: $\pm 3\%$ between 20% and 100% wrench capacity.
 - Angle: $\pm 2^\circ$.
- Measuring mode: peak or track follower.
- Cycle counter.
- Locking keypad (the operator has access only to program choices and memorise results).
- Measuring unit: N.m, ft.lb, In.lb, kg.cm, deg.
- Presetting possible of 9 torque and/or angle values.
- Memory 50 values.
- Length: 80 mm.
- Supplied in plastic case with calibration certificate.



	L [mm]	Capacity [N.m]	Résolution	$\Delta\Delta$ [g]
E.506-135S	80	6,7 - 135,0	0,1	268
E.506-200S	80	10 - 200	0,1	268
E.506-340S	80	17 - 340	0,1	268

■ Angular adapter



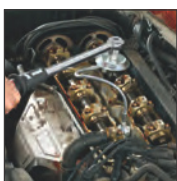
- Accuracy: $\pm 2^\circ$.
- Angular range: 1 - 360°.
- Measuring unit: degree.
- Presetting possible of 9 angle values.
- Memory 50 values.
- Supplied in plastic case with calibration certificate.



	$\Delta\Delta$ [g]
E.406	

ANALOG CONTROL TOOLS

■ Angular torque gauge 1/2" drive

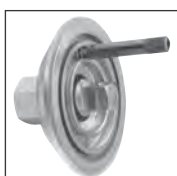


- Including:
 - 3 bits (length: 24 - 45 - 65 mm).
 - 1 flexible.
 - 1 pair of pliers.
 - 1 magnet.



	H [mm]	Width I [mm]	L [mm]	$\Delta\Delta$ [g]
DMP.360L	145	180	375	550

■ Side-graduated angular torque gauge 1/2" drive bit



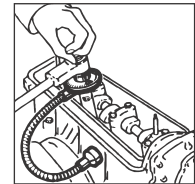
- Lateral reading tapered drum for maximum legibility.
- Double index (red line) for presetting. To tighten, simply align the two markers. Ideal with low lighting.
- 2° resolution.
- Supplied with a limit stop (length: 24 - 45 - 65 mm).



	$\Delta\Delta$ [g]
D.360L	414

DM - Angular torque gauge

- 2° graduations.
- Male and female square drive.
- Fixed point by flexible with magnet.



DM	d [mm]	L [mm]	Square ["]	ΔΔ [g]
DM.360	63	410	1/2	350
DM.370	73	430	3/4	550

PISTONS - PISTON RINGS

Piston ring compressors

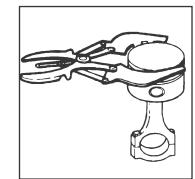
- For easy insertion of piston into cylinder bore and even compression over full ring length.
- Ratchet mechanism.
- Complete with key (length: 6 mm).



Model	d [mm]	L [mm]	ΔΔ [g]
750.TB	55...110	80	260
750.KB	100...160	80	300

Piston ring pliers

- Even expansion over full ring length.
- Quick and easy to use.



Model	d [mm]	Width l [mm]	L [mm]	ΔΔ [g]
751.T	45...100	210	210210	280
751.K	90...150	255	255	330

LAMBDA PROBE

Lambda probe wrench and sockets

- For use on lambda probes.
- Featuring a slot for the connecting lead.
- Square drive bit 1/2".
- N.B. Lambda probes must be torqued to manufacturers specified values.



Model	d [mm]	ΔΔ [g]
D.145A	33 x 85	200
D.146A	33 x 85	230



MAINTENANCE

PSA exhaust collar pliers



- Bi-material grip, for opening exhaust collars.



	Open Position maxi [mm]	$\Delta\Delta$ [g]
DE.C	60	442

Ratchet tube cutter



- Precise cutting line with the ratchet system.
- Load reduction thanks to the screw blade movement.
- No risk of sparks or damage to the lower part of the vehicle.
- \varnothing 31 to 65 mm - Tube thickness up to 3 mm.



	$\Delta\Delta$ [kg]
DE.8	1,084

OTHER

Set of threading repair inserts



- M5, M6, M8, M10, M12 stainless steel inserts.
- Special taps to repair M5, M6, M8, M10, M12 threads.
- Special drill bits to repair M5, M6, M8, M10, M12 threads.
- Mixed tools (mounting inserts and tap wrench) for M5, M6, M8, M10, M12 inserts.
- Magnetic "bit breaker" tools for M5, M6, M8, M10, M12 threads.



	H [mm]	Width l [mm]	L [mm]	$\Delta\Delta$ [kg]
TRK5-12	40	310	330	1,2

Right angle hook



- Multi-function hook to catch gaskets in grooves, pull small springs.



	$\Delta\Delta$ [g]
AR.90	23

Curved angle hook



- Multi-function hook to catch gaskets in grooves, pull small springs.



	$\Delta\Delta$ [g]
AR.C	23

OTHER

Strait tip

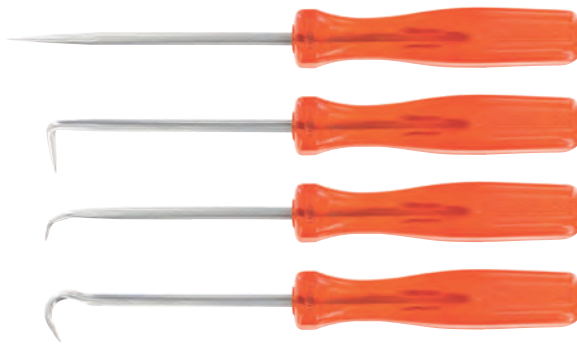
- Multi-function hook to catch gaskets in grooves.



	$\Delta\Delta$ [g]
AR.D	22

Set of 4 hooks

- Multi-function hook to catch gaskets in grooves, pull small springs.



	$\Delta\Delta$ [g]
AR.CJ4	108

Open angle hook

- Multi-function hook to catch gaskets in grooves, pull small springs.



	$\Delta\Delta$ [g]
AR.CR	23

Curved spatula

- Multi-function spatula allowing to recover gaskets from grooves, separate small parts.
- Rounded shape ensuring parts are neither marked or damaged.



	$\Delta\Delta$ [g]
AR.PSPC	20



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OTHER

Set of 4 spatulas



- Multi-function spatulas allowing to recover gaskets from grooves, separate small parts.
- Rounded shape ensuring parts are neither marked or damaged.



AR.SPJ4

ΔΔ [g]

105

Straight spatula



- Multi-function spatula allowing to recover gaskets from grooves, separate small parts.
- Rounded shape ensuring parts are neither marked or damaged.



AR.PSPD

ΔΔ [g]

19

Straight and long spatula



AR.GSPD

ΔΔ [g]

24

Long curved spatula



- Multi-function spatula allowing to recover gaskets from grooves, separate small parts.
- Rounded shape ensuring parts are neither marked or damaged.

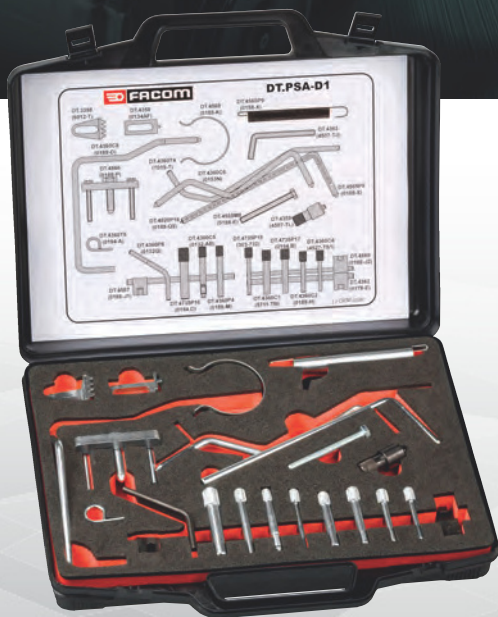
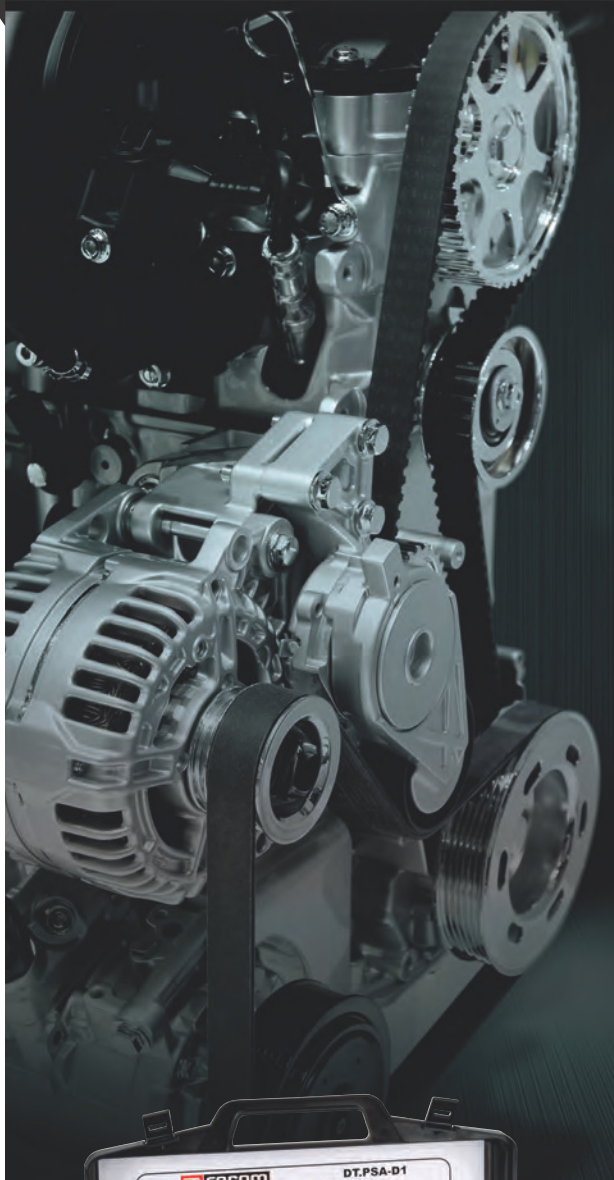


AR.GSPC

ΔΔ [g]

24

DT SERIES : TIMING ADJUSTMENT



Accuracy and speed

For safe accurate timing adjustment.

The ignition timing of modern multi-valve petrol and high pressure diesel engines requires accurate adjustment.

Inaccurate adjustment can lead to :

- Over-consumption, engine breakage, malfunction, pollution, etc.

On many modern twin-cam engines, at least one of the two pulleys will turn when the timing belt is removed :

- The method of aligning timing marks is no longer appropriate.

Poor timing adjustment will at the very least cause engine malfunction, requiring the work to be restarted :

- The use of timing tools really does save time.

For all of these reasons, it is essential to immobilise the engine when readjusting timing or changing the timing belt.

The right equipment ensures profitability

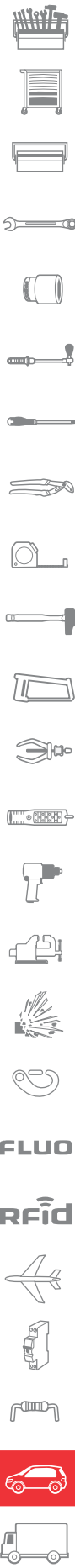
With a separate kit for each make or range of engines, you only buy the tools that you need.

The kits are defined according to the European vehicle fleet and timing belt sales statistics.

A clear and precise method.

Each kit comes with precise instructions that are sufficient for changing a timing belt or chain, or for adjusting the timing.

Regular updates : See www.facom.com for our latest products and applications.



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TIMING KITS: ALLOCATION TABLE

RENAULT

- **Timing Belt Diesel engine:** 1.5dCi - 1.9dCi - 1.9dTi - 2.2dCi - 2.5dCi.
Models: Clio, Espace, Kangoo, Laguna, Logan (LSO), Megane Scenic, Modus, Scenic, Scenic RX4, Traffic.
- **Timing Belt Petrol engine:** 1.2 16V - 1.4 - 1.4 16V - 1.6 - 1.6 16V - 1.8 - 2.0 - 2.0 16V.
Models: Clio, Espace, Grand Scenic, Kangoo, Laguna, Logan, Megane, Megane Scenic, Modus, Twingo, Wind.

NISSAN

- **Timing Belt Diesel engine:** 1.5dCi - 1.9dCi - 2.5dCi.
Models: Almera, Cube, Interstar, Juke, Kubistar, Micra, Note, NV200, Primastar, Primera, Qashqai, Tiida.

MAZDA

- **Timing Belt Diesel engine:** 1.4TDCi - 1.6D.
Models: 2, 3, 5.

OPEL

- **Timing Belt Diesel engine:** 1.9CDTi - 2.2DTI - 2.5CDTi.
Models: Astra H, Movano-A, Signum, Vectra C, Vivaro, Zafira B.
- **Timing Belt Petrol engine:** 1.6 - 1.6 OPC/VXR - 1.8 - 2.0 TURBO.
Models: Agila, Ascona, Astra, Astra Max, Belmont, Cavalier, Combo, Corsa, Insigna, Kadett-E, Meriva, Nova, Signum, Tigra, Vectra, Zafira.

AUDI - VOLKSWAGEN - SEAT - SKODA

- **Timing Belt Diesel engine:** "TDI PD": 1.2 - 1.4 - 1.9 - 2.0 • "TDI CR": 1.6 - 2.0 • "SDI": 1.7 - 1.9 - 2.0 • 1.7D - 1.9D - 1.9TDI - 1.9D TURBO - 2.5 TDI (6-cylinder engine with rotating pump).
Models: AUDI: A2, A3, A4, A5, A6, A8, Allroad, Q5. SEAT: Altea, Arosa, Cordoba, Exeo, Ibiza, Leon, Toledo. SKODA: Fabia, Felicia/Van/Pick Up, Octavia, Praktik, Roomster, Superb, Yeti. VW: Beetle, Bora, Caddy, Eos, Fox, Golf, Golf Plus, Jetta, Lupo, Passat, Polo, Scirocco, Sharan, Tiguan, Touran, Transporter.
- **Timing Belt Petrol engine:** 1.4 16V - 1.4 FSI - 1.6 - 1.6 16V - 1.6 FSI - 1.8 - 1.8 TURBO - 2.0 - 2.0FSI - 2.0FSI.
Models: AUDI: A2, A3, A3 Cabrio, A4, A6, S3, TT. SEAT: Alhambra, Altea, Cordoba, Ibiza, Inca, Leon, Toledo, Sharan. SKODA: Fabia, Octavia. VW: Beetle, Bora, Caddy, Corrado, Golf, Jetta, Lupo, Passat, Polo, Scirocco, Sharan, Touran, Vento.

FORD

- **Timing Belt Diesel engine:** 1.4TDCi - 1.6TDCi - 1.8D - 1.8D TURBO - 1.8TDCi - 1.9TDCi PD - 2.0TDCi - 2.2TDCi - 2.5D - 2.5D TURBO.
Models: C-Max, Courier, Escort, Fiesta, Fiesta Econetic, Focus, Focus C-MAX, Fusion, Galaxy, Mondeo, Orion, Tourneo Connect, Transit, Transit Connect.
- **Timing Belt Petrol engine:** 1.25 - 1.4 - 1.6 - 1.6 Ti - VCT - 1.6SCTi EcoBoost - 1.8 - 2.0.
Models: C-Max, Cougar, Fiesta, Focus, Focus C-MAX, Fusion, Grand C-max, Mondeo, Puma, Tourneo Connect, Transit Connect.

PEUGEOT - CITROEN

- **Timing Belt Diesel engine:** 1.4HDI - 1.5D - 1.6HDI - 1.9D - 2.0HDI - 2.0DHDi 16V - 2.2Hdi - 2.5D TURBO.
Models: AX, Berlingo, Bipper, C1, C2, C3, C4, C5, Dispatch, Nemo, Jumper, Jumpy, Relay, Saxo, Xsara / 106, 107, 205, 206, 207, 306, 307, 308, 309, 405, 406, 407, 605, 607, 806, 807, 1007, 3008, 5008, Boxer, Expert, Partner.
- **Timing Belt Petrol engine:** 1.0 - 1.1 - 1.4 - 1.6 - 1.6 VTS - 1.8 16V - 2.0 - 2.0 16V - 2.2.
Models: AX, Berlingo, BX, C2, C3, C3 Pluriel, C4, C5, C8, C15, Dispatch, Evasion, Jumper, Jumpy, Relay, Saxo, Synergie, Xantia, XM, Xsara, ZX / 106, 205, 206, 306, 307, 309, 405, 406, 407, 605, 607, 806, 807, 1007, Boxer, Expert, Partner/Ranch.

ALFA ROMEO - FIAT - LANCIA

- **Timing Belt Diesel engine:** 1.6JTDM 16V - 1.6 MULTIJET - 1.9 MULTIJET - 1.9JTD - 1.9JTD/MULTIJET - 2.0JTDM 16V - 2.0 MULTIJET - 2.4JTD.
Models: ALFA: 147, 156, 159, 166, Brera, Crosswagon, Giulietta, GT, Mito, Spider. FIAT: Brava, Bravo, Croma, Doblo, Doblo Cargo, Grande Punto, Idea, Linea, Marea, Marengo, Multipla, Palio Weekend, Punto, Punto Evo, Sedici, Stilo, Strada Pick-up. LANCIA: Delta, Kappa, Lybra, Musa, Thesis.



TIMING KITS

FIAT timing kit - Diesel engines no.1

- Makes: FIAT, ALFA ROMEO, LANCIA, FORD, OPEL, SUZUKI.
- Timing chain diesel engine: 1.3 MULTIJET - 1.3 CDTi - 1.3 TDCi - 1.3 JTD/MULTIJET.
- Models:
 - ALFA: Mito.
 - FIAT: 500, Doblo, Doblo Cargo, Fiorino, Grande Punto, Idea, Linea, Panda, Punto, Punto Evo, Qubo, Strada Pick-up.
 - LANCIA: Musa, Ypsilon.
 - OPEL: Agila, Astra H, Combo C, Corsa C, Corsa D, Meriva, Tigra B.
 - SUZUKI: Ignis, Swift, Wagon/Wagon R+.
 - FORD: Ka.
- Supplied in plastic case.



SE	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
DT.FIAT-D1	77	325	265	1.4

FIAT timing kit - Diesel engines no.2

- Makes: FIAT, LANCIA, ALFA ROMEO, OPEL.
- Timing belt diesel engine: 1.6 JTDM 16V - 1.6 MULTIJET - 1.9 MULTIJET - 1.9 CDTi (engine Z19) - 1.9 JTD - 1.9 JTD/MULTIJET - 2 JTDM 16V - 2 MULTIJET - 2.4 JTD.
- Models:
 - ALFA: 147, 156, 159, 166, Brera, Crosswagon, Giulietta, GT, Mito, Spider.
 - LANCIA: Delta, Kappa, Lybra, Musa, Thesis.
 - OPEL: Astra H, Signum, Vectra C, Zafira B.
 - FIAT: Brava, Bravo, Cromia, Doblo, Doblo Cargo, Grande Punto, Idea, Linea, Mareva, Marengo, Multipla, Palio Weekend, Punto, Punto Evo, Seidici, Stilo, Strada Pick-up.
- Supplied in plastic case.



SE	H [mm]	L [mm]	P [mm]	ΔΔ [g]
DT.FIAT-D2	45	250	205	935

FIAT timing kit - Petrol engines

- Makes: FIAT, ALFA ROMEO.
- Petrol engine: 0.9 TWINAIR - 1.4 MULTIAIR.
- Models:
 - ALFA: Giulietta, Mito.
 - FIAT: 500, Punto Evo.
- Supplied in plastic case.



SE	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
DT.FIAT-P1	77	325	265	1.6



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TIMING KITS

■ FORD timing kit - Diesel engines



- Makes: FORD, MAZDA.
- Timing belt diesel engine: 1.4 TDCi - 1.6D - 1.6 TDCi - 1.8 D - 1.8 D TURBO - 1.8 TDCi - 1.9 TDI PD - 2.0 TDCi - 2.2 TDCi - 2.5 D - 2.5 Tci - 2.5 D TURBO.
- Models:
 - FORD: C-Max, Courier, Escort, Fiesta, Fiesta Econetic, Focus, Focus C-MAX, Fusion, Galaxy, Mondeo, Orion, Tourneo Connect, Transit, Transit Connect.
 - MAZDA: 2, 3, 5.
- Supplied in plastic case.

FACOM	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
DT.FORD-D1	77	325	265	2.2

■ FORD timing kit - Petrol engines



- Make: FORD.
- Timing belt petrol engine: 1.25 - 1.4 - 1.6 - 1.6 Ti-VCT - 1.6 SCTi EcoBoost - 1.8 - 2.0.
- Models:
 - FORD: C-Max, Cougar, Fiesta, Focus, Focus C-MAX, Fusion, Grand C-max, Mondeo, Puma, Tourneo Connect, Transit Connect.
- Supplied in plastic case.

FACOM	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
DT.FORD-P1	77	325	265	1.1

■ OPEL timing kit - Diesel engines



- Make: OPEL.
- Diesel engine: 1.5 D - 2.0 DTi (chain) - 2 D TURBO - 2.2DTi (chain) - 2.2D - 3.0 D TURBO - 3.1 D TURBO.
- Models:
 - OPEL: Astra G, Cavalier, Frontera B, Midi, Monterey, Omega B, Signum, Sintra, Vectra B, Vectra C, Zafira A.
- Dimensions (L. x W. x H.): 325 x 265 x 77 mm.
- Supplied in plastic case.

FACOM	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
DT.OPEL-D1	77	325	265	2.9

■ OPEL timing kit - Petrol engines

- Make: OPEL.
- Petrol engine: 1.0/1.2/1.4 ("X" & "Z" chain engines) - 1.6 - 1.6 OPC/VXR - 1.8 - 2.0 TURBO.
- Models:
 - OPEL: Agila, Ascona, Astra, AstraMax, Belmont, Cavalier, Combo, Corsa, Insignia, Kadett-E, Meriva, Nova, Signum, Tigra, Vectra, Zafira.
- Supplied in plastic case.



ED	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
DT.OPEL-P1	77	325	265	1.5

■ PSA timing kit - Diesel engines

- Makes: CITROEN, PEUGEOT.
- Timing belt diesel engine: 1.4 HDi - 1.5 D - 1.6 HDi - 1.9 D - 2.0 HDi - 2.0 DHDi 16V - 2.2 HDi - 2.5 D TURBO.
- Models:
 - CITROEN: AX, Berlingo, Bipper, C1, C2, C3, C4, C5, Dispatch, Nemo, Jumper, Jumpy, Relay, Saxo, Xsara.
 - PEUGEOT: 106, 107, 205, 206, 306, 307, 308, 309, 405, 406, 407, 605, 607, 806, 807, 1007, 3008, 5008, Boxer, Expert, Partner.
- Supplied in plastic case.



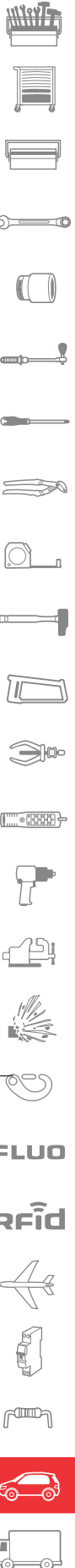
ED	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
DT.PSA-D1	95	335	400	2.4

■ PSA timing kit - Petrol engines

- Makes: CITROEN, PEUGEOT.
- Timing belt petrol engine: 1.0 - 1.1 - 1.4 - 1.6 - 1.6 VTS - 1.8 16V - 2.0 - 2.0 16V - 2.2.
- Models:
 - CITROEN: AX, Berlingo, BX, C2, C3, C3 Pluriel, C4, C5, C8, C15, Dispatch, Evasion, Jumper, Jumpy, Relay, Saxo, Synergie, Xantia, XM, Xsara, ZX.
 - PEUGEOT: 106, 205, 206, 306, 307, 309, 405, 406, 407, 605, 607, 806, 807, 1007, Boxer, Expert, Partner/Ranch.
- Dimensions (L. x W. x H.): 325 x 265 x 77 mm.
- Supplied in plastic case.



ED	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
DT.PSA-P1	77	265	325	1.9



TIMING KITS

- Timing kit for PSA & MINI 1.4L and 1.6L gasoline chain engines.



- For the 1.4L engines N12, B14(AB), EPC(C), 8FP, 8FR, present in PEUGEOT, CITROEN, MINI gasoline vehicles.
- For the 1.6L engines N12 B16(A), N14 B16A, N14 B16CD (T0), EP6(5FW), EP6C, (5FH) (5FS), EP6CDT(5FV), EP6DT, 5FD, 5FE, 5FF, 5FK, 5FM present in PEUGEOT, CITROEN, MINI vehicles.
- Compliant with manufacturer tools.
- Supplied with the list of allocations and a cross-reference table between FACOM references and manufacturer references.
- Supplied in plastic case.

FACOM	H [mm]	L [mm]	P [mm]	$\Delta\Delta$ [kg]
DT.PCM-P1	80	325	260	2.4

- Timing kit for PSA, MINI and BMW 1.6 L and 2.0 L gasoline chain engines.



- For the 1.6L and 2.0L engines DV6TED4, DV6ATED4, DV6C, DV6, DV6UC, DV6DU, 9HZ, 9HX, 9HY, 9HP, 9HR, 9HJ, 9HL, 9HU, 9HW, 9HH, W16 D16, and N47 present in PEUGEOT, CITROEN, MINI, BMW Diesel vehicles.
- Compliant with manufacturer tools.
- Supplied with the list of allocations and a cross-reference table between FACOM references and manufacturer references.
- Supplied in plastic case.

FACOM	H [mm]	L [mm]	P [mm]	$\Delta\Delta$ [kg]
DT.PCMB-D1	75	315	257	1.9

- Blocking kit for PSA 1.0L and 1.2L gasoline engines




- For vehicles since 2012.
- CITROEN vehicles: C1 II, C3 III, C4 II, C4 CACTUS, DS4.
- PEUGEOT vehicles: 108, 208, 308.
- Cross-reference between manufacturer and FACOM references.
- Supplied in plastic case with foam module.
- Instructions.

FACOM	Width I [mm]	L [mm]	P [mm]	$\Delta\Delta$ [kg]
DT.PSA-P10	245	280	80	1.3

RENAULT timing kit - Diesel engines


- Makes: RENAULT, NISSAN, OPEL.
- Timing belt diesel engine: 1.5 dCi - 1.9 dCi - 1.9 dTi - 1.9CDTi (F9Q engines) - 2.2 dCi - 2.2 DTI - 2.5 dCi - 2.5 CDTi.
- Models:
 - NISSAN: Almera, Cube, Interstar, Juke, Kubistar, Micra, Note, NV200, Primastar, Primera, Qashqai, Tiida.
 - OPEL: Movano-A, Vivaro.
 - RENAULT: Clio, Espace, Kangoo, Laguna, Logan (LSO), Megane Scenic, Modus, Scenic, Scenic RX4, Traffic.
- Supplied in plastic case.

	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
DT.REN-D1	75	325	260	2.3



RENAULT timing kit - Petrol engines

- Make: RENAULT.
- Timing belt petrol engine: 1.2 16V - 1.4 - 1.4 16V - 1.6 - 1.6 16V - 1.8 - 2.0 - 2.0 IDE - 2.0 16V.
- Models:
 - RENAULT: Clio, Espace, Gran Scenic, Kangoo, Laguna, Logan, Megane, Megane Scenic, Modus, Twingo, Wind.
- Supplied in plastic case.

	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
DT.REN-P1	75	325	260	2.2



Timing set for RENAULT 1.6 dci - 2.0 dci engines


- For 1.6 dci R9M engines mounted in RENAULT vehicles.
- For 2.0 dci M9R engines mounted in RENAULT, NISSAN, OPEL vehicles.
- Compliant with manufacturer tools.
- Supplied with a list of allocations and a cross-reference table between FACOM references and manufacturer references.
- Supplied in plastic case.

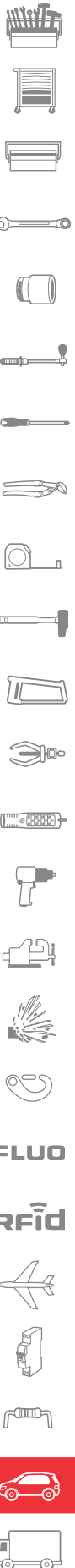
	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
DT.REN-D2	90	400	314	1.9



VAG timing kit - Diesel engines no.1

- Makes: AUDI, SEAT, VW, SKODA.
- Timing belt diesel engine: "TDI PD": 1.2 - 1.4 - 1.9 - 2.0 - "TDI CR": 1.6 - 2.0 - "SDI": 2.0.
- Models:
 - AUDI: A2, A3, A4, A5, A6, Q5.
 - SEAT: Altea, Arosa, Cordoba, Exeo, Ibiza, Leon, Toledo.
 - SKODA: Fabia, Octavia, Praktik, Roomster, Superb, Yeti.
 - VW: Beetle, Bora, Caddy, Eos, Fox, Golf, Golf Plus, Jetta, Lupo, Passat, Polo, Scirocco, Sharan, Tiguan, Touran, Transporter.
- Supplied in plastic case.

	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
DT.VAG-D1	74	325	262	1.9



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TIMING KITS

VAG timing kit - Diesel engines no.2



- Additional tooling kit for the timing case DT.VAG-A.
- Makes: Audi, VW, Seat, Skoda.
- Timing belt diesel engine: "TDI PD": 1.9 - 2.0 with oval crankshaft pulley.
 - Models:
 - AUDI: A3, A4, A6.
 - SEAT: Altea, Cordoba, Ibiza, Leon, Toledo.
 - SKODA: Fabia, Octavia, Roomster, Superb.
 - VW: Beetle, Bora, Caddy, Eos, Golf, Jetta, Passat, Polo, Scirocco, Sharan, Touran, Transporter.
- Supplied in blister.



	H [mm]	L [mm]	P [mm]	ΔΔ [g]
DT.VAG-D2	40	145	80	310

VAG timing kit - Petrol engines no.1



- Makes: AUDI, SEAT, VW, SKODA.
- Chain petrol engine: 1.2 (6V & 12V 3-cylinder engine) - 1.4 FSI - 1.4 TSI - 1.6 FSI.
- Models:
 - AUDI: A3.
 - SEAT: Cordoba, Ibiza.
 - SKODA: Fabia, Praktik, Roomster.
 - VW: Eos, Fox, Golf, Jetta, Passat, Polo, Scirocco, Sharan, Tiguan, Touran.
- Supplied in plastic case.



	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
DT.VAG-P1	77	325	265	1.9

VAG timing kit - Petrol engines no.2



- Makes: AUDI, SEAT, VW, SKODA.
- Timing belt petrol engine: 1.4 16V - 1.4 FSI - 1.6 - 1.6 16V - 1.6 FSI - 1.8 - 1.8 TURBO - 2.0 - 2.0TFSI - 2.0 FSI.
- Timing belt diesel engine: 1.7 D - 1.7 SDI - 1.9 D - 1.9 TDI - 1.9 SDI - 1.9 D TURBO - 2.5 TDI (rotating pump 6-cylinder engine).
- Models:
 - AUDI: A2, A3, A4, A6, A8, Allroad, S3, TT.
 - SEAT: Alhambra, Altea, Arosa, Cordoba, Ibiza, Inca, Leon, Toledo.
 - SKODA: Fabia, Felicia/Van/Pick Up, Octavia, Superb n.
 - VW: Beetle, Bora, Caddy, Corrado, Fox, Golf, Jetta, Lupo, Passat, Polo, Scirocco, Sharan, Touran, Transporter Vento.
- Supplied in plastic case.



	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
DT.VAG-PTD1	77	325	265	2.2

Blocking kit for VAG 1.0L gasoline engines



- For vehicles since 2011.
- SEAT vehicles: Mil.
- SKODA vehicles: Citigo And Fabia III.
- Volkswagen vehicles: UP! AND POLO.
- Cross-reference between manufacturer and FACOM references.
- Supplied in plastic case with foam module.
- Instructions.



	Width l [mm]	L [mm]	P [mm]	ΔΔ [kg]
DT.VAG-P10	245	280	80	1.4

Flywheel stay

- To lock the flywheel crown gear.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [g]
D.86	25	46	30	21

DCR.HR-100: DEFORMED GLOW PLUGS EXTRACTOR

1. Open the extractor.
2. Insert the glow plug into it.
3. Lock the extractor.
4. Fit the slide hammer.
5. Extract the glow plug.

Composite chisels to separate casings

- To separate chain timing casings, rocker covers, crank cases, for engine and gearbox.
- No damage to the parting surfaces.
- Comprising:
 - Short straight chisel.
 - Long straight chisel.
 - Short round chisel.
 - Long round chisel.



	ΔΔ [g]
DM.PS4	164

Set of pullers for deformed glow plugs

- For diesel engines.
- To extract deformed glow plugs from the combustion chambers.
- 3 x Pliers to work with 8, 9 and 10 mm glow plugs.
- Inertia puller:
 - Mass: 1.37 kg.
 - Length: 19 cm.



	ΔΔ [kg]
DCR.HR-100	2.4



BELT TENSION TESTING

DT.HERTZ - BELT TENSION TESTER

The right tension guaranteed



Avoid breakage

The correct belt tension is essential:

- If insufficiently tight,
 - The auxiliary belts will slip and become worn.
 - Timing belts may jump (engine breakdown)
- If over-tightened,
 - The forces will damage the rollers and pumps.
 - Risk of premature belt failure.

Easy, accurate testing

- Simply place the ultra-compact sensor against the belt and induce a vibration in the belt (like a guitar string).
- Compare the displayed reading with the recommended value in the guide.

Regular updates.

- The DT.DOC guide is regularly updated.
- See www.facom.com for the reference number of the latest version.

Multi-make electronic belt tension-meter



- Quickly and easily checks the tension of timing and auxiliary belts.
- Can be used for all belts on the market.
- Compact, manoeuvrable tool, can be operated one-handed.
- Cable length: 1,200 mm.
- Supplied in a plastic case; with reference value guide.

	H [mm]	Width I [mm]	L [mm]	ΔΔ [g]
DT.HERTZ	28	50	135	150

Multi-make electronic belt tension-meter



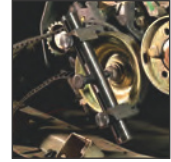
- For checking timing belt tension.
- Comes in a plastic case with 6 interchangeable ends, a belt thickness measuring gauge and a calibration checking gauge.

	H [mm]	Width I [mm]	L [mm]	ΔΔ [g]
DM.16	50	120	170	420

TIMING PULLEY AND BELT FITTING AND REMOVAL

Multi-diameter damper pulley puller

- Removes crankshaft multi-groove pulleys without damage.
- Lockable, adjustable legs to fit the various pulley sizes.
- Compact design for working on engine in situ.
- Pulley capacity: 45 to 175 mm.
- No groove: 3.56 mm.



DM.50	$\Delta\Delta$ [kg]
	1,120

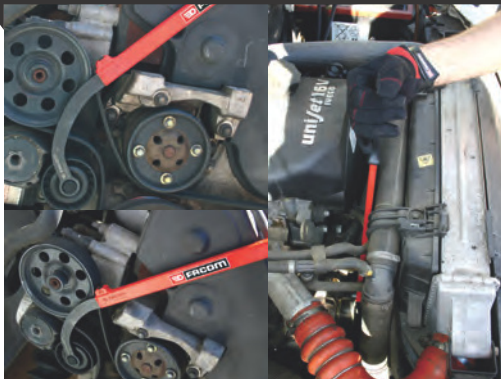
Multi-diameter timing and injection pump pulley puller

- Removes pulleys without damage.
- Adjustable legs adapt to differing pulley diameters.
- Compact design for working on engine in situ.



DM.17A	Width l [mm]	L [mm]	$\Delta\Delta$ [g]
	110	90	925

DT.TW - BELT TENSIONER WRENCHES



Handy

- One "arm" = 5 dimensions.
- Suited to most vehicles on the market.
- Angled wrenches for optimised access
- Mechanical wrench locking on the arm.



Hand and fast hanging system

5-piece set of belt-tensioner nut wrenches

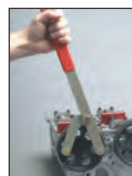
- To turn tensioner belts, timing pulley nuts and auxiliary elements even in confined positions.
- Wrench easy fastening / unfastening system integral to the handle.
- Comes with 445 mm handle and 5 ring wrenches 13 - 15 - 16 - 17 - 19 mm.



DT.TW	$\Delta\Delta$ [kg]
	1.4

Universal pulley wrench

- For blocking, cranking and holding camshaft and injection pump pulleys.



DT.CLE	L [mm]	$\Delta\Delta$ [g]
	410	950



■ Alternator pulley kit



- For fitting and removing the alternator pulley.
- 13 tools.
- Comprising:
 - 2 TORX bits T40 - T50.
 - 2 XZN bits M8 - M10.
 - 2 6-point bits 8 - 10mm.

- 1 TORX COMBI socket.
- 1 XZN COMBI socket.
- 2 special fitting / removal sockets.
- 1 double 6-point socket.
- 1 square / 6-point adapter.
- Supplied in a plastic case,



	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
DM.APR	65	330	140	1.6

■ Flexible belt kit



- For fitting / removing flexible service belts (A/C, power steering, alternator) without tensioner.
- Comprises two special tools for fitting and removing the belt.
- Special profile allowing use also on different diameter pulleys.
- Compact dimensions for access into the engine compartment.
- No regulations required for use on different pulleys.
- Supplied in a plastic case, dim. (L. x W. x H.): 210 x 120 x 55 mm.



	ΔΔ [g]
DT.SFB	400

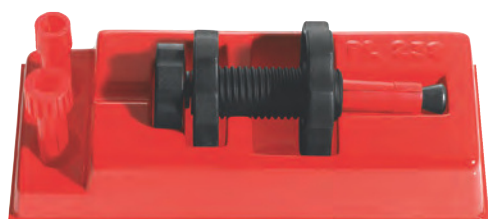
DT.SFB - FLEXIBLE BELT FITTING/REMOVING TOOL

Handy

- Tool suited to simple and double diameter pulleys.
- No adjustment required for fitting or removing.
- Suited to all types of elastic belts: A/C, alternators, belts.



■ Universal clutch aligner no.2



- The tool centres and holds the clutch disc and mechanism.
- Supplied complete with 3 expanding clamps:
 - Clamp for diameter 18 to 21 mm.
 - Clamp for diameter 22 to 25 mm.
 - Clamp for diameter 14.5 to 18 mm.



	ΔΔ [g]
DM.30	258

■ Inside and outside circlip® pliers



- Interchangeable tips for:
 - Diameter 8 to 63 mm for inside Circlips®.
 - Diameter 3 to 63 mm for outside Circlips®.
- Contains:
 - 469.PA: Inside circlip® pliers.
 - 467.PA: Outside circlip® pliers.
 - 82H.2.5: Key.
 - Set of 18 removable tips.
 - Plastic box.



	ΔΔ [kg]
470	1,500

GEARBOX AND CLUTCH

Set of spare screws

- For Ref.: 467 - 469 - 470.

	$\Delta\Delta$ [g]
467.01AJ2	4



Transmission collar clamp

- To crimp collars on transmission bellows.
- For OETIKER collar.

	H [mm]	Width I [mm]	L [mm]	$\Delta\Delta$ [g]
DM.14	20	50	280	475



BRAKES - HG

INSPECTION

Disc brake vernier caliper

- Vernier caliper for checking the thickness of brake discs.
- Accurate, error-free reading.
- Measurements can be taken with wheel in place (if no protective bodywork).
- Can quickly demonstrate to customers the need for changing brakes.
- Capacity 0 to 50 mm, outer thickness measurement of the disc brakes of cars and LCV's.
- Nose length: 50 mm.
- 0.1 mm reading increments.
- Mechanical memory device.
- Supplied in a reinforced fabric case with serial number for traceability in ISO certified workshops.

	$\Delta\Delta$ [g]
DF.18-01	



Drum brake vernier caliper

- Capacity and reading to suit requirements of car, LCV and HGV applications.
- Capacity: 40 to 300 mm, inner thickness measurement of brake drums on cars and LCVs.
- Nose length: 100 mm.
- 0.20 mm reading increments internal drum measurements for cars and LCVs.
- 0.10 mm increments for readings between tips.
- Supplied in a reinforced fabric case with serial number for traceability in ISO certified workshops.

	$\Delta\Delta$ [g]
DF.19-01	



INSPECTION

DF.16 - BRAKE FLUID TESTER

Quick brake fluid tester



A quick, cost-effective analysis. For the safety of your customers.

- Water in the brake fluid can turn into vapour under severe or repeated braking, making the brake pedal ineffective.

The boiling point of brake fluids must exceed a specified minimum value :

DOT 3	140°C
DOT 4	155°C
DOT 5.1	180°C

▪ Brake fluid tester



- For testing brake fluids (DOT3 - DOT4 - DOT5.1).
- Measures brake fluid boiling point.
- Automatic test lasting up to 1 min.
- LCD display.
- °C / °F switch.
- Accuracy: 3%.
- Power supply: 12 V (vehicle battery).
- Plastic case.

	H [mm]	Width l [mm]	L [mm]	ΔΔ [kg]
DF.16	80	285	350	1,17

DIAGNOSTICS AND BLEEDING

■ **Analog brake bleeder**

- Tank 10L.
- Accessory storage.
- Connects to the vehicle's 12 V battery.
- "High volume" 1.5 litre /min pump (open circuit, allowing fast brake fluid renewal).
- Pressure adjusted by button.
- Automatic low level stop gauge.
- Regulated pressure adjustable from 0.5 to 4 bar with Glycerine pressure gauge.



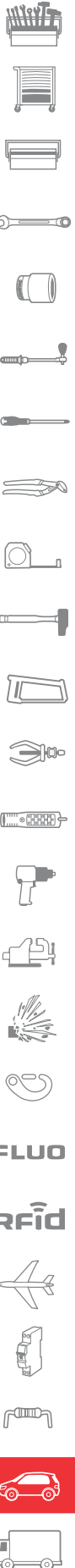
	$\Delta\Delta$ [kg]
DF.81	16,2

■ **Digital brake bleeder**

- Tank 10L.
- Connects to the vehicle's 12 V battery.
- "High volume" 1.5 litre /min pump (open circuit, allowing fast brake fluid renewal).
- A vehicle battery can be integrated to make it stand-alone.
- Digital controls for accurate pressure settings (pitch 0.1 bar).
- Automatic depressurization when stopping the bleeder.
- Low level indication with automatic stop.
- "BA" type warning indicating the battery is low.
- Lateral hose storage tab.
- Certificate of compliance issued at end of manufacturing (individual check).
- Storage tray covering the battery.
- Regulated pressure adjustable from 0 to 4 bar.



	$\Delta\Delta$ [kg]
DF.101	17



DIAGNOSTICS AND BLEEDING

■ Universal plug for bleeding brakes and clutches of LCV's and HGV's



- Can be used for bleeding the brakes and clutches of 90% vehicles (incl. Asian makes, except Honda).
- Can also be used for bleeding HGV clutches.
- Claw system overcomes the many different bayonet shapes and different types and diameters of screw heads used by the various vehicle manufacturers.
- Working diameter: 35 to 83 mm.
- Minimum clearance required above the jar: 80 mm.
- Maximum working pressure of the bleeder: 3 bar.
- Connection by Rectus series 21 male coupling.
- 90° swivel connection.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [g]
DF.20-12A	85	195	115	475

■ Aluminium brake bleeder plug



- Special thread: 44 - 45 mm.
- 90° rotating coupling.
- Height including plunger: 46 mm.
- Height of the rotating part above the alu body: 16.3 mm
- Used with DF.81 and DF.101 drains to automatically level the brake fluid jar.



	ΔΔ [g]
DF.20-07A	70

■ Aluminium brake bleeder plug



	ΔΔ [g]
DF.2007D	60

DISC BRAKES

■ Brake disc module



- Including:
 - 31.14X15 - 31.16X17: Extra-slim open end wrenches for removing the locknuts on the caliper yokes.
 - 467BF.12 - 467BF.13 - 467BF.14: Hinged combination wrench ratchets for removing the caliper yokes.
 - NJ.260: Impact screwdriver + bit holder sockets.
 - NJ.236A: 3/8" bit holder impact socket.
 - 83SH.7: Spherical head male key 7 mm.
 - 249.G4: Sheathed drift punch, diam. 4 mm.
 - Bits: Torx® ENX.230 - ENX.240, Phillips® N° 2 and 6-point ENH.205 5 mm.
- Thermoformed module.



	H [mm]	Width I [mm]	L [mm]	Contents	ΔΔ [kg]
MOD.DFD	40	175	418	PL.685	1.7

■ Wire brush



- For cleaning calipers.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [g]
DF.3	15	45	225	65

DF.17 : PNEUMATIC DISC BRAKE PISTON PUSHING/TURNING TOOLS



Essential for replacing brake pads.

Quick and easy to use

- The pneumatic cylinder holds the flange against the head of the brake piston and the long handle allows the piston to be wound-back in a clockwise or anti-clockwise direction with minimum effort.

Saves time

- The special Facom flange design covers the entire European vehicle fleet with only 9 flange types, minimising the number of flange changes and saving time.



■ Brake disc caliper tool

- Pneumatic cylinder for retracting and rotating the piston.
- Frequency of use: at each brake pad replacement.
- Compatible with flanges DF.6A.
- Can be used on clockwise and anti-clockwise pistons.
- Max pressure: 6.2 bars 1/4 NPT, Diameter 10 mm 3/8".
- Supplied in a plastic case with operating instructions and application guide.



DF.17 ΔΔ [kg]

■ Pneumatic piston pushing tool

- Pneumatic cylinder for retracting and rotating the piston.
- Can be used on clockwise and anti-clockwise pistons.
- Max pressure 6.2 bars 1/4 NPT. Ø 10 mm 3/8".
- Including:
 - 1 pneumatic tool DF.17.
 - 9 cups: DF.6-2A, DF.6-3A, DF.6-4A, DF.6-5, DF.6-8, DF.6-9, DF.6-14, DF.6-15, DF.6-16.

Examples of allocation:

- DF.6-2A: Ford Focus - Renault Megane III - Volkswagen Touran...
- DF.6-3A: Alfa Romeo Mito - Audi A3 - Citroën C3, C4, C5, Picasso, DS3, Ford Focus - Opel Astra - Peugeot 308, 3008, 508, 5008, 607, Renault Megane III - Volkswagen Golf V and 6, Polo...
- DF.6-4A: Citroën C5 - Ford C-Max, Focus - Renault Espace, Laguna, Megane III...
- DF.6-5: BMW Series 7 - Honda Accord - Mercedes Class B - Toyota Land Cruiser...
- DF.6-8: Honda CRZ - Hyundai IX20, I10 - Mini Cooper - Renault Clio III, Megane III, Twingo - Suzuki Swift - Toyota Prius...
- DF.6-9: Mini Cooper - Toyota Auris.
- DF.6-14: Iveco Daily.
- DF.6-15: Renault Scenic, Laguna.
- DF.6-16: Renault Master 3 phase I.
- Supplied in a plastic case with operating instructions and application guide.



DF.17-100A ΔΔ [kg]

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DISC BRAKES

Multiple diameter piston pushing tool



- Fork with 2 Pins, spacing: min 15 mm- max 34 mm.
- Fork with 3 Pins, spacing: min 15 mm- max 30 mm.
- Thickness 21 mm pins included.
- Allows working on most brake pistons.
- Evolutive for future vehicles.



FACOM	$\Delta\Delta$ [kg]
DF.6-2P	0.136
DF.6-3P	0.131

Brake calliper piston pusher



- Pushes back double or quadruple pistons perfectly parallel simultaneously.
- Thrust power 215 kg with one hand (2,200 N).
- Handle can be used to push or release pressure.
- Rotating head: easy work to the left and right.
- AUDI / MERCEDES / BMW / RENAULT (e.g. Megane RS)/ CITROËN (e.g. DS3 Racing) specifications.



FACOM	$\Delta\Delta$ [kg]
DF.23	1.271

DRUM BRAKES

Hand-brake pliers

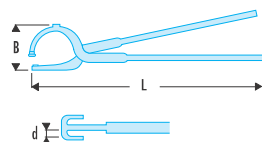


- For holding the handbrake cable spring.
- For easy hook-up of hand-brake cable with both hands.
- Set of 2 "spring stop" ends, dim.(L. x W.): 70 x 10 mm.
- 1 magnetic bit holder ref AM.M1.



FACOM	Width l [mm]	L [mm]	$\Delta\Delta$ [g]
DF.2	10	70	40

196 Brake-spring pliers



- For removing shoe springs.
- Suitable for right-handed and left-handed working.



FACOM	B [mm]	d [mm]	L [mm]	$\Delta\Delta$ [kg]
196.TS	83	3	350	0.580
196.KS	100	5	485	1.2

Hand-brake pliers



- For easy hook-up of hand-brake cable.



FACOM	L [mm]	$\Delta\Delta$ [g]
D.79A	230	180

DRUM BRAKES

Steady-spring tool

- Fits steady-spring caps for compression against drum-brake shoes.
- Adapts to all makes.
- Length: 240 mm.
- Diameter: 34 mm.



	L [mm]	ΔΔ [g]
D.104B	240	240

Drum brake servicing module

- Including:
 - D.104A: Steady-spring tool.
 - DF.2: Hand-brake cable screwdriver.
 - D.79A: Hand-brake pliers.
 - 43.8x10 - 43.11x13: Flare-nut wrenches.



	H [mm]	Width I [mm]	L [mm]	Contents	ΔΔ [kg]
MOD.DFT	40	175	418	PL.684	0.855

BRAKE LINES

Flange press

- Specifically designed for flanging (diam. 4.75 mm) automotive brake lines.
- SAE or DIN fittings are formed easily with the help of its 3 T hydraulic jack.
- Compact size allows working in situ on vehicles.
- Diameter: 4.75 mm.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
DF.475A	75	200	212	1.1

Flange press set for S.A.E., DIN, S.A.E./DIN fittings

- Capacity: for copper and steel pipework diameter 4.75 to 12 mm; 3/16" to 1/2".
- Wall thickness: 0.7 to 1 mm.
- Press can be secured in a vice for increased stability.
- Fast and effortless forming.
- Kit includes 11 punches and 10 dies. Instructions explain selection according to flange type.
- Steel case.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
347	82	224	396	7.9



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DLS.500HP : SUSPENSION



Spring compressors

Safety and efficiency

DLS.500HP offers the highest productivity.

- Easy and fast changing of struts to adapt to the vehicle concerned.
- Effortless pneumatic compression.

While guaranteeing optimum safety.

- By full application of the European Directive on Machinery 2006 42/CE.

Springs = Danger

Compression of springs, increasingly strong and complex-shaped remains a frequent source of occupational accidents in workshops.

4 safety benefits

- Strut strength tested at 1.5 times the max pressure of the machine.
- Protection barrier closing mandatory, checked by an air intake cut-off valve preventing use in open position.
- Compression speed regulated at less than 10 cm /second.
- Check valves preventing clamps from opening in case of accidental air supply cut.



**DLS.500HP =
MAXIMUM
SAFETY**



SPRING COMPRESSORS

■ Pneumatic spring compressor

- Pneumatic spring compressor for removing and fitting shock absorbers on Mac Pherson struts.
- Pressure: 1200 to 2200 kg according to air pressure (7 to 10 bars).
- Compression travel: 440 mm.
- Triple safety device:
 - Protection barrier with automatic air stop device.
 - Regulated compression speed.
 - Protection valve preventing jaw opening in case of accidental air cut off.
- Supplied with 2 flanges (springs 78 to 220 mm).

ED	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
DLS.500HP	1530	590	590	66,0



■ High safety pneumatic spring compressor

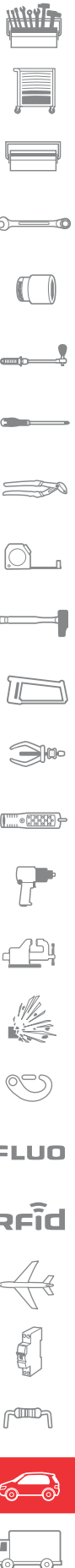
- Pneumatic spring compressors for removing and fitting shock absorbers on Mac Pherson struts.
- Pressure: 1200 --> 2200 kg according to air pressure (7 to 10 bars).
- Compression travel 440 mm.
- 6 safety devices:
 - Reinforced frame.
 - Air cut off when the cage is opened.
 - Valve preventing the arms from raising in case of accidental air supply cut-off. No sudden spring decompression.
 - Cage locked when the arms start lowering.
 - Highly enveloping cage (upper, centre and lower protection).
 - Long pedal to allow the operator to stand far.
- Supplied with 2 flanges (springs 78 to 182 mm).
- Other cups also available.
- EC compliance certified by an independent laboratory.
- Meets the CE directive on machinery and the French labor code. Directive 2006/42/CE of the European Parliament and Council of 17 May 2006 on machinery.

ED	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
DLS.500HPS	1535	648	731	89,0



■ Special forks for Asian vehicles

ED	ΔΔ [kg]
DLS.500-04	0,970



SPRING COMPRESSORS

▪ **Special upper fork for Mercedes prior to 2010**



	$\Delta\Delta$ [kg]
DLS.500-05	4,510

▪ **Lower fork for Renault - Nissan**



• For Renault Koleos / Nissan Qashquai, reversed pitch springs.

	$\Delta\Delta$ [kg]
DLS.500-07HP	4,400

▪ **Lower fork 105-182 mm**



	$\Delta\Delta$ [kg]
DLS.500-08HP	4,300

▪ **Lower fork 125-205 mm**



	$\Delta\Delta$ [kg]
DLS.500-02HP	4,500

▪ **Vice for lower grip on Mc Pherson strut**



• For long and regular springs.

	$\Delta\Delta$ [kg]
DLS.500-06HP	3,966

U.89 SPRING COMPRESSOR - AN UPGRADEABLE INVESTMENT



The most universal system

Whether used on a workbench or workstation, this tool evolves according to your needs through its range of accessories available.

- Since it was set up in 1995, our database lists all vehicles U.89 adapts to.
- Each unit is supplied with a list of allocations and updates are available on www.facom.com.



Mini mechanical set

- Kit includes
 - U.89M: Mechanical body.
 - U.89J1: Set of forks.
 - U.89J2: Set of forks.
- Supplied with operating instructions and vehicle application guide.



Icon	$\Delta\Delta$ [kg]
U.89M20	14.7

Standard mechanical set

- Kit includes
 - U.89M: Mechanical body.
 - U.89J1: Set of forks.
 - U.89J2: Set of forks.
 - U.89J3: Set of forks.
- Supplied with operating instructions and vehicle application guide.



Icon	$\Delta\Delta$ [kg]
U.89M30	19.1

Mechanical body

- Two-stage screw operated telescopic body.
- Hexagonal drive: 22 mm.
- Can be used with an electric or mechanical impact wrench.
- Tested to 100,000 N.
- Fitted with a safety pin.
- Can be used with all U.89 forks.
- Travel: 235 mm.
- Extended length: 540 mm.
- Compressed length: 305 mm.
- Diameter: 70 mm.



Icon	L [mm]	$\Delta\Delta$ [kg]
U.89M	305	5.0



SPRING COMPRESSORS

■ Mechanical compressor with multi-diameter fork set



- Kit includes
 - U.89M2: Mechanical body with two-position spacer.
 - U.89JMA: Pair of multi-diameter forks for spring diam. 100 to 215 mm.
- Supplied with operating instructions and vehicle application guide.



	L [mm]	ΔΔ [kg]
U.89M2JM		11.6

■ Spring compressor - Universal system with interchangeable forks



- Two-stage screw operated telescopic body (hexagonal up to 22 mm).
- Mobile spacer for two possible working positions for the forks.
- Drive possible by 1/2 inch impact wrench.
- Body tested to 100,000 N.
- Travel: 235 mm.
- Compressed length: 305 mm.
- Extended length: 540 mm.
- Diameter: 70 mm.
- Supplied with 3 sets of plastic-coated forks J1 - J2 - J3.
- CE.



	L [mm]	ΔΔ [kg]
U.89M230	305	14.7

■ Mechanical body



- Two-stage screw operated telescopic body.
- Hexagonal drive size 22 mm. Can be used with 1/2 inch electric or pneumatic impact wrench.
- Tested to 100,000 N.
- Spacer allowing to place the lower fork in two positions: allows for maximum travel on springs with few coils.
- Can be fitted with all U.89 forks.
- Travel: 235 mm.
- Compressed length: 305 mm.
- Extended length: 540 mm.
- Diameter: 70 mm.



	L [mm]	ΔΔ [kg]
U.89M2	305	5.1

■ Multi-diameter fork set



- Offset forks: grip the spring at the end of the coil, this increasing the compressor's effective travel. This shape of fork is particularly effective for use on new-generation springs having a small number of coils.
- A hinged joint at the connection to the compressor allows the fork to be aligned with the slope of the coil.
- New design, fork fits directly onto the springs for quick installation.
- Suitable for 100 to 215 mm springs.
- Compatible with all U.89 bodies without modification.



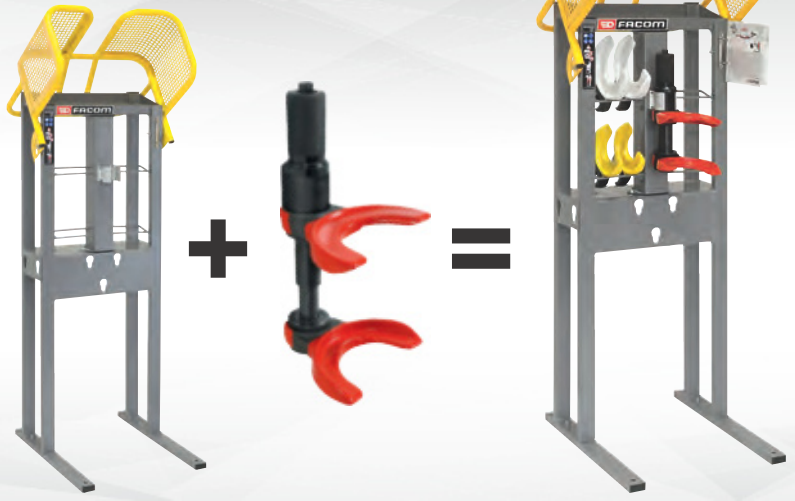
	ΔΔ [kg]
U.89JMA	6.6

WORKSTATION

SUSPENSION - WORKSTATION



Upgrade your U.89 spring compressor.



Spring compressor workstation (naked)

- Designed to receive FACOM compressor ref U.89M2 - U.89H2.
- Can accommodate up to 6 sets of forks.
- Impact wrench storage space.
- Space for set D.83C (new XL module).
- Space for application list.
- Hook for torque wrench.
- Small plan dimensions: 590 x 590 mm.
- Closed height 1.430 max height: 1.726 mm.
- Supplied with operating instructions and vehicle application guide.

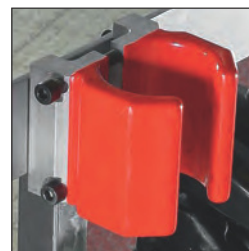
	$\Delta\Delta$ [kg]
DLS.400	39.385



Compressor holder

- For attaching a compressor type U.89M or U.89H to workstation DLS.300.
- For bodies of max. diameter: 55 mm.

	$\Delta\Delta$ [kg]
DLS.300-03	0.7



Special workbench vice

- For holding struts vertically on the workbench.
- Max diameter: 65 mm.
- Dimensions (L. x W.): 410 x 190 mm.
- Finish: zinc.

	Width l [mm]	L [mm]	$\Delta\Delta$ [kg]
D.22B	190	410	3.5



STRUT REMOVAL

Mac Pherson clamp separator set



- Including:
 - DS.10A: 7.5 x 9 mm.
 - DS.11A: 5.2 x 6.9 mm.
 - DS.12A: 6.6 x 7.9 mm.
 - DS.13: 4.3 x 6.0 mm.
 - DS.14: 12.7 x 16.7 mm.
 - DS.P: 3/8" (9.53 mm) square drive operating handle.
 - J.236: Bit holder socket.
- Helps open the clamp on vehicles fitted with Mac Pherson struts.
- Allows shock-absorbers to be stripped down at the work bench.
- Fast and efficient.
- All vehicles fitted with removable clamps (Citroen, Peugeot, Ford, VAG, Audi).
- A "junior" series ratchet can be used instead of the handle (space provided in the case).



	$\Delta\Delta$ [kg]
DS.J5	0,484

TOOLS FOR SHOCK ABSORBERS

Set of 28 tools in modules for Mac Pherson strut rods



- Including:
 - 10 long-reach sockets 14 - 15 - 16 - 17 - 18 - 19 - 21 - 22 - 24 mm.
 - Slotted bits (3 No.) 5, 6 and 8 mm.
 - 6-point sockets (3 No.) 8, 9 and 11 mm.
 - 1 magnetic bit holder extension 7.94 mm.
 - 1 bit-holder extension 6.35 mm.
 - 1 extension with square drive 8 mm.
 - EH bits: 6 - 7 - 8 mm .
 - Bits: EXR.140 - EX.245 - XZN EV.212.
 - 1 handle: J.120.
 - 1 wrench 68: 17x19.
 - 1 torque wrench adaptor.
- For holding the strut rod while tightening or loosening of the nut, for tightening with a torque wrench to a specified torque.
- Tool can be extended to include other bits (Torx, XZN, 6-point).
- XL module.
- Supplied in modules for placing in the drawer of a roller cabinet or workbench. Empty spaces for additional tools.



	H [mm]	Width l [mm]	L [mm]	Contents	$\Delta\Delta$ [kg]
D.83C	40	188	418	PL.647	3.8

Shock absorber removing lever



- Chrome finished steel arm.
- 6 adjustment positions by ball locked axis (similar to ratchet square).
- Length: 120 cm.
- Tube diameter: 32 mm.
- Tube thickness: 3 mm.
- Knurled grip zone. length: 300 mm.
- Hook with two adjustment heights.
- DLS.40A-1: Axis, diameter 11.7 mm.



	L [mm]	$\Delta\Delta$ [kg]
DLS.40A	120	5.6

WHEEL REMOVAL AND INSPECTION

Wheel nut tightening module

- 77AT0D: Cross brace.
- S.208 - 200: Torque wrench 40 to 200 Nm.
- NSB.17 - 19 - 21: Long-reach impact sockets.
- SH.17 - 19 - 21: 6-point sockets.
- Tray PL.337.



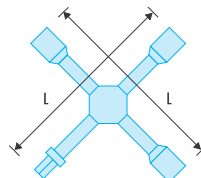
🔗	H [mm]	Width l [mm]	L [mm]	Contents	ΔΔ [kg]
MOD.208	40	350	418	PL.337A	5.5

Cross braces

- Designed for removing wheel nuts on cars, light commercial and heavy goods vehicles.
- Replaceable bit on wrenches featuring a square drive.
- 77.P1: Spare male 3/4" square bit.
- 77.T1: Spare male 1/2" square bit.



🔗	d [mm]	L [mm]	Square ["]	ΔΔ [kg]
77A.T0	17 - 19 - 23	400	1/2	1.8
77A.T02	17 - 19 - 21	400	1/2	1.8
77A.T0D	17 - 19 - 22	400	1/2	1.8
77A.PL1	24 - 27 - 30 - 32	700	-	4.7
77A.PL2	24 - 27 - 33	700	3/4	4.6



Air-line connector and gauge

- Pressure range: 0 to 12 bar.
- Impact-resistant rubber casing.



🔗	H [mm]	Width l [mm]	L [mm]	ΔΔ [g]
U.179A	80	120	250	850

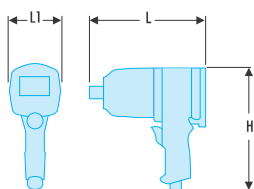


1/2" IMPACT WRENCHes

1/2" impact wrench



- High torque 1/2" Impact Wrench
- Progressive trigger for better control
- Cold forged twin hammer impact system for greater durability
- 3 forward, 1 reverse speed with single hand operation
- Ergonomic handle provides user comfort"



	H [mm]	L [mm]	L1 [mm]	Maximum RPM [min]	BPM	Sound Pressure DB[A]	Vibration [M/S ²]	ΔΔ [kg]
NS.3100G	212	162	75.3	7000	1300	93 (K=3)	6.2 (K=2.5)	2

1/2" reinforced impact sockets:



- Up to 7 times stronger.
- Separation with metallic strapping.
- Teflon lining to protect alloy rims.
- Short-reach sockets 15, 17, 19, 21, 22 mm.

	ΔΔ [kg]
NSI.15L	0,156
NSI.17L	0,156
NSI.19L	0,156
NSI.21L	0,156
NSI.22L	0,156

1/2" reinforced long-reach impact sockets



- Up to 7 times stronger.
- Separation with metallic strapping.
- Teflon lining to protect alloy rims.
- Long-reach sockets 17, 19, 21 mm.

	ΔΔ [kg]
NSI.19EL	0,400
NSI.21EL	0,400

Set of 1/2" reinforced long-reach impact sockets

- Up to 7 times stronger.
- Separation with metallic strapping.
- Teflon lining to protect alloy rims.
- New Detection Box set: instant availability check even when the box is closed.
- Easy to store and carry in a pocket or tool box.
- Content: - NSI.17EL - NSI.19EL - NSI.21EL.

Icon	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
NSI.3EL	120	200	120	1.3



Set of 1/2" reinforced impact sockets

- Up to 7 times stronger.
- Separation with metallic strapping.
- Teflon lining to protect alloy rims.
- New Detection Box set: instant availability check even when the box is closed.
- Easy to store and carry in a pocket or tool box.
- Content: - NSI.15L - NSI.17L - NSI.19L - NSI.21L - NSI.22L.

Icon	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
NSI.5L	45	185	120	1.3



Set of 1/2" reinforced impact sockets

- Up to 7 times stronger.
- Separation with metallic strapping.
- Teflon lining to protect alloy rims.
- New Detection Box set: instant availability check even when the box is closed.
- Easy to store and carry in a pocket or tool box.
- Content: - NSI.17L - NSI.19L - NSI.21L.

Icon	H [mm]	L [mm]	P [mm]	ΔΔ [g]
NSI.3L	40	210	160	689



Impact sockets for Mercedes wheel nuts

- 1/2" square drive bit.
- Rim protection tube.

Icon	d [mm]	d1 [mm]	L [mm]	ΔΔ [g]
NS.MB	26	27,4	80,3	172



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WHEEL REMOVAL AND INSPECTION

■ Air-hose reel



- Polyurethane hose, inner diam. 10 mm.
- Specifically designed for high air consuming tools (impact wrenches).
- Very high strength, return spring tested to 20,000 cycles minimum.
- Length: 15 m + 1.
- Hose stop every 50 cm.
- Pressure: 15 bar.



	$\Delta\Delta$ [kg]
N.709	7.8

■ Valve core remover



- The swivelling head and fluted body derived from the Facom Microtech screwdriver simplifies valve core removal and fitting.



	L [mm]	[g]
D.93	102	15

■ D.3 - Tyre-remover



- Double tee section for added strength.
- Finish: zinc and chrome-plated.



	Width l [mm]	L [mm]	$\Delta\Delta$ [g]
D.3-300	300	300	200
D.3-400	400	400	400
D.3-500	500	500	570
D.3-600	600	600	900

■ Silent valve core remover



- Noise < 85 dB(A) in compliance with the French labour code and the European Directive 2003/10/CE.
- Safety against core and particle projection.
- No impact on deflating speed.
- Adapted to all tires whatever the size (particularly suited to Heavy Goods Vehicle tires).
- Supplied with a 2-slot case (contains one valve core remover only).



	$\Delta\Delta$ [g]
DR.SIL	101

■ 1 Silencer for deflating HGV wheels + 2-slot cover



- Maintains noise < 85 dB(A) in compliance with the French labour code and the European directive 2003/10/CE.
- Safety against the risk of projection of the valve and particles.
- Does not slow down deflating.
- Suited to all sizes of tires (particularly adapted to HGV tires).
- Supplied with 2-slot bag (contains one valve core remover only).



	$\Delta\Delta$ [g]
DR.SILH	101

U.16 - Ball joint pullers

- Used to dismount steering and suspension ball joints.
- Supplied with a set of 2 spare safety pins.
- U.16-05J3: Set of 3 pins for U.16B and U.16A18.
- U.16-A45-05J3: Set of 3 shear pins for U.16B32 and U.16B45.

Part No.	A [mm]	d [mm]	L [mm]	ΔΔ [kg]
U.16A18	45	16	100	0,635
U.16B	45	22	100	0,665
U.16B32	80	32	158	2,5
U.16A45	80	45	158	2,6



Lower ball-joint socket

- Castle nut socket.
- 6-point drive: 32 mm.
- Tightening torque: 250 N.m.
- For models:
 - CITROEN: BX / Xsara / XM / Xantia.
 - PEUGEOT: 306 / 309 / 405 / 406.

Part No.	Width l [mm]	L [mm]	ΔΔ [g]
D.138	48	52	230



Socket for angular tightening of the hub nut

- Drive bit: 3/4".
- 6-point drive 36 mm.

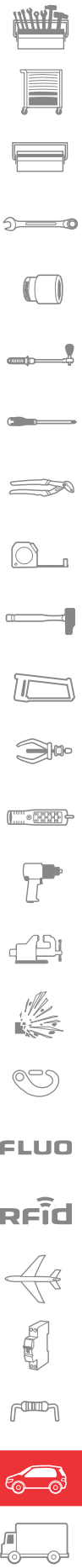
Part No.	ΔΔ [g]
D.143B	415



Transmission collar clamp

- To crimp collars on transmission bellows.
- For OETIKER collar.

Part No.	H [mm]	Width l [mm]	L [mm]	ΔΔ [g]
DM.14	20	50	280	475



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WHEEL REMOVAL AND INSPECTION

Steering ball joint separator



- Used to disassemble and assemble steering ball joints.
- Capacity Ø: 35-45 mm.
- Usable with 27 mm socket or wrench or 1/2" bit.
- Length: 402 mm.
- Head diameter: 89 mm.
- Guarantee: 2 years - repair.



	L [mm]	ΔΔ [kg]
U.7-3545	402	1.8

TPMS valve kit

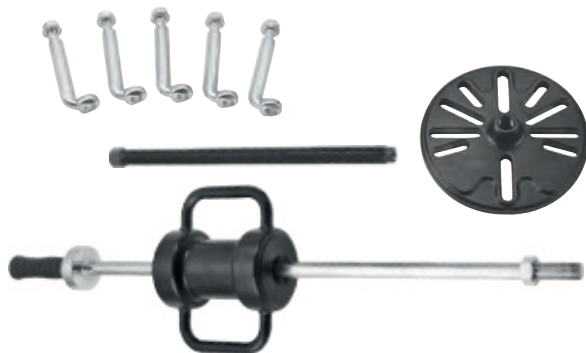


- 12-tool set for reliable controlled torquing of TPMS type valves.
- Comprising:
 - a torque screwdriver 2 to 10 N.m A.404. Supplied with certificate of compliance, adjustment key and force grip A.300PA.
 - 3 long bits for Resistor[®] screws T10-T15-T20.EXR.110L-EXR.115L-EXR.120L
 - 1 1/4" adapter for ECR sockets.
 - 2 1/4" long-reach 6-point sockets size 11 and 12 mm, R.11LA-R.12L.A
 - 1 steel valve puller with rubber protection.
 - 1 gasket tool.
- Supplied in case BP.102 and foam module PM.DRV2.



	H [mm]	L [mm]	P [mm]	ΔΔ [g]
DR.V2	70	390	170	458

U.11M - Universal joint pusher - mechanical hub puller



- Complete set comprising:
- One U.9-03 screw diameter 19 mm, length 390 mm. Drive by 24 mm 6-point.
 - One slide hammer U.2A of 9.8 kg ideal for SUVs, 4X4, Light utility vehicles. Rod length 750 mm, threaded length 70 mm. Diameter M22.
 - Tray U.9-01A diameter 236 mm. Central threading M22. Suitable for 90%+ automotive fleet thanks to versatile configurations offered and the 5 legs.
 - 1 set of 5 legs U.9-02, length 169 mm. Diameter for wheel axles up to 16 mm.



	ΔΔ [kg]
U.11M	15

Universal joint pusher - hydraulic hub puller.



- Complete set comprising:
- One hydraulic screw U.3 power 10 t, stroke 14 mm, threading M22X200.
 - Slide hammer U.2A of 9.8 kg ideal for SUVs, 4X4, Light utility vehicles. Rod length 750 mm, threaded length 70 mm. Diameter M22.
 - Tray U.9-01A diameter 236 mm. central threading M22. Suitable for 90%+ automotive fleet thanks to may solutions offered and the 5 legs.
 - 1 set of 5 legs U.9-02, length 169 mm. Diameter for wheel axles up to 16 mm.



	ΔΔ [kg]
U.11VHA	26,5

■ Screw

- Diameter 19 mm.
- Length 390 mm.
- Drive by 24 mm 6-point.



Part Number	Weight [kg]
U.9-03	1,13

■ Tray for hub puller

- Diameter 236 mm.
- Central threading M 22 X 200.



Part Number	Weight [kg]
U.9-01A	4,6

■ Slide hammer 9.8 Kg

- Rod length under handle 750 mm
- Threaded length 70 mm.
- Diameter M22.



Part Number	Weight [kg]
U.2A	14,3



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AUTOMOTIVE BODYWORK



Time-saving tools at every stage

Stripping, cutting, forming, assembling, painting, windshields, pneumatics.
 In order to improve your everyday working life, Facom offers customised solutions for :

- Saving time.
- Optimising storage.

Workstations



Supports



INSPECTION LAMP - BODYWORK

779.CML BODYWORK INSPECTION LAMP

2-in-1 lamp ideal for paint and bodywork operations.



Warm light (4,500K)

- To check light coloured surfaces.



4500 K
Chaud
Warm



Cold light (6,500K)

- To check dark coloured surfaces.



6500 K
Froid
Cool



Large lighting surface

- Contrasted and natural lighting: colours respected (IRC 95).
- Multi-position head swivelling at 360°.



Long Operating Time & Comfort

- 3h constant lighting: 500 lumen / 190 lux at 1 m.
- High power COB LEDs. Li-ion batteries.
- Attachment hook and magnet for more comfort.

■ Inspection lamp - bodywork

- Ideal to compare colour charts and detect imperfections on the vehicle's bodywork.
- Two lighting modes: cold 4500K hot 6500K.
- Operating time: 3 hours.
- Charging time: 4 hours.
- 1 magnet.
- 1 removable hook.
- Supplied with mains charger and USB cable (5 V - 2A).
- Beam pivots through 360°.
- Mains or USB charging.



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	Δ [g]
779.CML	396

SUPPORTS

Bodywork component storage stand



- Maximum supported weight 150 kg.
- For storing bonnets, doors and exhaust systems.
- Incorporates anti-slide stops & gravity stabiliser.
- Dimensions: 90 x 60 x 190 cm.
- 4 castor wheels.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
CR.S1	190	60	90	41.0

Mechanical component storage stand



- Storage of removed components on 4 levels for easy identification of the order of reassembly.
- 4 castor wheels for east manoeuvring around the vehicle.
- 2 fluid storage containers (water, oil) for a clean workshop.
- 2 plastic bins for fasteners.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
CR.S11	61	90	165	40.0

Heavy-duty support stand for engines, gearboxes, etc.



- Maximum supported weight 450 kg.
- Modular support: many applications in bodywork and mechanical workshops.
- Raised stand (CR.S9) transforms the tool into a waist-height work table.
- Allows high pressure jetting before reassembly.
- Sliding, removable containers allow recovery of liquids.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
CR.S6	40	80	90	27.0

Raised stand for CR.S6



- Maximum supported weight 450 kg.
- Raised stand transforms support (CR.S6) into a waist-height work table.
- Allows high pressure jetting before reassembly.
- Transforms into a work table with raised stand CR.S9.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
CR.S9	80	80	90	15.5

Support for moving vehicles with no steering gear

- Maximum supported weight by CR.S8: 450 kg.
- To support and move vehicles without front axle.
- Width adjustment (110 to 160) to suit vehicle.
- 4 castor wheels.
- Axle supported on a rubber-coated pivoting saddle.
- Dimensions (L x W x H.): (110 to 160) x 50 x 30 cm.



	H [mm]	P [mm]	ΔΔ [kg]
CR.S8	30	50	21.0

Hydraulic wheel jack

- Wheel jack to move vehicles in the workshop.
- Single capacity: 600 kg.
- 4 bi-material wheels.
- Aluminum wheel rollers.
- Lifting by hydraulic jack.
- Safety pins.
- Supplied in pairs.
- Dimensions between rollers: 280 mm to 540 mm.
- Do not use to tow a vehicle.



	ΔΔ [kg]
CR.12H	35

STRIPPING TOOLS

Trim clip removal plier

- For quickly removing staples, clips, door panels, facia and trim supports, etc.
- Wide nose for undoing facings without risk of breaking or tearing panels.
- Finger guard to avoid injury.
- Designed for accessing difficult-to-reach places.
- Length: 240 mm.
- Finish: black head, chrome pliers.



	L [mm]	ΔΔ [g]
CR.D1	240	190

Trim removal tool

- For removing interior door trimmings without damage.
- Dimensions (L x W x H.): 155 x 32 x 45 mm.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [g]
D.115A	45	32	155	106



STRIPPING TOOLS

Fastener removal tool



- For removing plastic fasteners securing carpets, trim and panels.
- Capacity:
 - Fitter diameter: 9 to 22 mm springs.
 - Body diameter: 4 to 9 mm springs.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [g]
D.137A	40	28	200	110

Set of 1/4" and 1/2" drive sockets and Torx driver bits



- Tray PL.393A.
- Plastic case BP.102.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [g]
RSX.19A	52	122	204	620

PLASTIC MULTIFUNCTION TOOLS



Handy

- To remove plastic parts inside or outside the vehicle.

Safe

- They protect plastic or varnished parts, trim, ceramics, etc.

Plastic component removal tool set



- For removing or unclipping plastic components (dashboard, door, external trim, snap rings, etc.).
- Set of 5 tools for different applications.
- Supplied in blister pack.



	ΔΔ [g]
CR.D5	275

4-piece set of plastic multi-use tools

- For removing adhesive weights from wheels in alloy, silicon, elastic sealing products, hub caps, etc.
- No damage to plastic or varnished parts, trim, ceramics, etc.
- 4 widths: 19 - 22 - 25 - 38 mm.
- For use with a hammer and resharpenable with a file.
- Supplied in blister pack.



	$\Delta\Delta$ [g]
CR.D4	525

518A - Vice pliers for bodywork

- Bodywork vice pliers for tacking and welding operations of automotive bodywork elements.
- 518A.1: Ultra wide nose pliers.
- 518A.2: Clearance pliers.
- 518A.3: Wide pliers.
- 518A.4: Compact clearance pliers.
- 518A.5: Compact pliers.



	H [mm]	Width I [mm]	L [mm]	$\Delta\Delta$ [g]	$\Delta\Delta$ [kg]
518A.1	70	60	200	500	0,550
518A.2	45	50	230	500	0,560
518A.3	45	50	210	500	0,508
518A.4	25	40	210	500	0,475
518A.5	25	40	195	500	0,456
518A.6	49	66	198	495	0,495

Set of 6 vice pliers for bodywork

- Bodywork vice pliers for tacking and welding operations of automotive bodywork elements.
- Including:
- 518A.1: Ultra wide nose pliers.
- 518A.2: Clearance pliers.
- 518A.3: Wide pliers.
- 518A.4: Compact clearance pliers.
- 518A.5: Compact pliers.



	$\Delta\Delta$ [kg]
518A-J6	2.9

Corded plastic stapler

- Stapler for plastic: indispensable for repairing plastic bodywork parts.
- Fast heating and temperature programming by level.
- Use on 220-240V 50hz.
- Supplied with a set of staples.



	Width I [mm]	L [mm]	P [mm]	$\Delta\Delta$ [kg]
CR.PS	220	310	95	2.0



STRIPPING TOOLS

■ Cordless plastic stapler



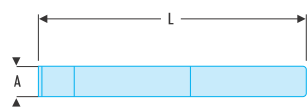
- Indispensable for repairing plastic bodywork parts.
- Two heating levels.
- LED lighting.
- Operating time about 50 staples.
- Supplied with a set of staples.



🔪	Width l [mm]	L [mm]	P [mm]	ΔΔ [kg]
CR.PSC	250	355	90	1.3

CHISELS

■ Slim-profile chisels



- Slim profile chisel.
- Chrome vanadium forged steel, treated 57 HRc on edge and 40 HRc on impact head.
- Blade width: 26 mm.
- Length: 235 mm.
- Presentation: lacquered.



🔪	L [mm]	ΔΔ [g]
259	235	240

■ Slim-profile chisel with guard



- Chisel with guard, diameter: 85 mm.
- Chrome Vanadium forged steel, treated 57 HRc on edge and 40 HRc on impact head.
- Blade width: 26 mm.
- Presentation: lacquered.



🔪	L [mm]	ΔΔ [g]
259.P	235	400

■ Wide chisel with guard



- Chisel with guard, diameter: 85 mm.
- Chrome vanadium forged steel and hardened to 57 HRc on edge.
- Edge resharpening with grinder.
- Head hardened to prevent head effect.
- Blade width: 60 mm.
- Presentation: lacquered.



🔪	L [mm]	ΔΔ [g]
260.P	250	630

CHISELS

■ Three-square scraper

- Finish: high quality steel blade, polished chrome finish and varnished wood handle.
- Shank length: 200 mm.



🔪	L [mm]	ΔΔ [g]
231	200	180

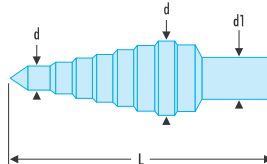
DRILL BITS

■ 229A - Stepped bits

- For cylindrical high accuracy drilling in all materials.
- HSS steel.
- Cylindrical shank with 3 flats for proper drive, avoiding micro locking.
- Laser marking of different diameters in a groove.



🔪	d mini - maxi [mm]	d1 [mm]	L [mm]	ΔΔ [g]
229A.ST0	4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12	6	65	25
229A.ST1	4 - 6 - 8 - 10 - 12 - 14 - 16 - 18 - 20	8	75	65
229A.ST2	4 - 6 - 9 - 12 - 15 - 18 - 21 - 24 - 27 - 30 - 33 - 36 - 39	10	107	315
229A.ST3	6 - 9 - 13 - 16 - 19 - 21 - 23 - 26 - 29 - 32 - 35 - 38	10	100	320

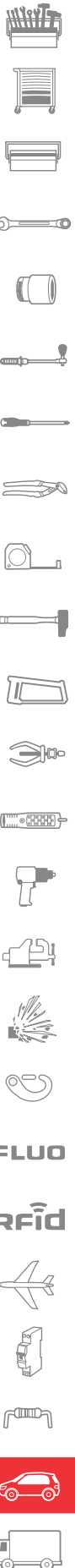


■ Set of 3 tapered bits

- Capacity: 3 to 30.5 mm.
- Supplied with a bottle of lubricant.
- Supplied in a pressed sheet box,



🔪	H [mm]	Width l [mm]	L [mm]	ΔΔ [g]
229A.J3	38	100	120	555



DRILL BITS

Set of mills



- Set with a 230 module, 2 centring tips and 10 reversible mills.
- Dimensions (L. x W. x H.): 115 x 65 x 22 mm.
- Set of 5 spare tips: ref 230.A1J5.

	H [mm]	Width l [mm]	L [mm]	ΔΔ [g]
230.J1	22	65	115	90

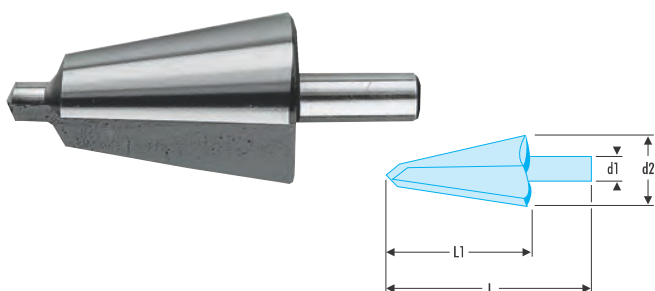
Welding spot mill



- This tool, fitted on a drill, separates two spot-welded metal sheets.
- Includes the mill holder assembly, reversible mill and centring tip.
- Not compatible with ref V.781B.
- Length: 70 mm.
- Set of 5 spare tips: 230.A1J5.

	ΔΔ [g]
230	23

229A - Boring bits



- For drilling, deburring, boring thin materials: press sheet, non ferrous metals.
- HSS steel.
- Max. thickness recommended: 4 mm.
- Does not require a tapping hole.

	d1 [mm]	d2 [mm]	L [mm]	L1 [mm]	ΔΔ [g]
229A.1	6	3 - 14	59	37	25
229A.2	8	5 - 20	71	41	45
229A.3	9	16,0 - 30,5	76	48	130

VFA - Filing burrs



- Tungsten carbide mill.
- Right-hand cut.

	d [mm]	L [mm]	No.	tr/min	ΔΔ [g]
VFA.600	6	18	1	50000	25
VFA.602	6	18	2	50000	25
VFA.604	6	18	3	50000	25
VFA.606	6	18	4	50000	20
VFA.608	6	18	5	50000	20
VFA.610	6	15	6	50000	20
VFA.1200	12	25	1	20000	55
VFA.1202	12	25	2	20000	55
VFA.1204	12	25	3	20000	50
VFA.1206	12	25	4	20000	30
VFA.1208	12	25	5	20000	35
VFA.1210	12	20	6	20000	40

MISCELLANEOUS

Steel wire brush



🔗	H [mm]	Width l [mm]	L [mm]	ΔΔ [g]
270A.MA	60	34	280	150

Set of 3 stainless steel scrapers

- Dimensions:
 - Length: 215 mm.
 - Width: 32 mm straight - 32 mm angled - 50 mm straight.



🔗	L [mm]	ΔΔ [g]
235.J1	215	427

Set of 3 flexible wide scrapers

- Dimension:
 - Length: 215 mm.
 - Width: 32 mm - 50 mm - 75 mm.



🔗	ΔΔ [g]
237.J1	273



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AIR HAMMER

Chisel hammer set



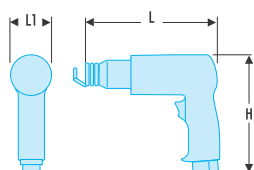
- Kit includes
 - V.320FH: 1 power chisel.
 - 1 sheet-metal cutter.
 - 1 double edge sheet-metal cutter.
 - 1 weld point cutter.
 - 1 straight chisel.
 - 1 punch.

	H [mm]	L [mm]	P [mm]	Air Consumption [l/min]	BPM	Piston Stroke [mm]	Sound Pressure DB[A]	Vibration [M/S ²]	ΔΔ [kg]
V.321AH	100	320	245	90	3000	67	102.62 (K=3)	8.01 (K=1.5)	6,3

Power chisel with hexagonal shank



- Chisels available:
 - Straight chisel: V.320HA1.
 - Punch (hexagonal shank): V.320HA2.
 - Weld point cutter (hexagonal shank): V.320HA3.
 - Sheet metal cutter (hexagonal shank): V.320HA4.
 - Double-edge sheet-metal cutter (hexagonal shank): V.320HA5.
- Kit with the 5 chisels: V.321AH.

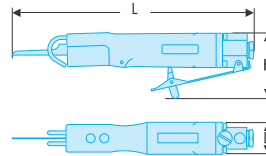


	H [mm]	L [mm]	L1 [mm]	Air Consumption [l/min]	BPM	Piston Stroke [mm]	Sound Pressure DB[A]	Vibration [M/S ²]	ΔΔ [kg]
V.320FH	160	171	50	90	3000	67	102.62 (K=3)	8.01 (K=1.5)	1,6

AIR TOOLS - BODYWORK

▪ Sabre saw

- 10000 oscillations per minute for efficient cutting.
- Adjustable guide for the saw blade.
- Comfort rubber grip over aluminium to insulate.
- Teasing trigger for great control.
- Air inlet swivels to avoid coiling of the hose.
- Delivered in a starter package with 3 x 10 teeth/cm and 3 x 12 teeth/cm blades.
- Blows per minute 10000 bpm.
- Working pressure 6,2 bar.
- Average air consumption 32 l/min.
- Air inlet 1/4".
- Minimum hose diameter 10 mm - 3/8".
- Vibration 17,10 m/s²/a.
- Vibration 2,19 m/s²/K.
- Sound pressure 83,50 dB(A).
- Sound power 94,50 dB(A).
- Available as accessories:
 - Set of 6 x 12 teeth/cm blades: V.770F1.
 - Set of 6 x 10 teeth/cm blades: V.770F2.

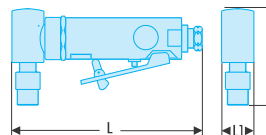


Icon	H [mm]	L [mm]	L1 [mm]	ΔΔ [g]
V.770F	75	270	36	800



▪ Angle die grinder - 6 mm collet

- Built in air regulator which can be adjusted with a screwdriver.
- Compact angled head for difficult-to-reach places.
- Feather teasing trigger for optimum control.
- Rear exhaust hose blows air away from the workplace, and reduces the sound level.
- Supplied with 6 mm pliers + 2 open end wrenches.

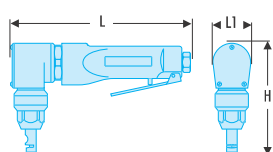


Icon	H [mm]	L [mm]	L1 [mm]	Maximum RPM [mm]	Air Consumption [l/min]	Sound Pressure DB(A)	Vibration [M/S ²]	ΔΔ [kg]
V.347F	347	160	27	18000	110	90.9 (K=3)	1.52 (K=0.53)	0,66



AIR TOOLS - BODYWORK

■ Air nibbler

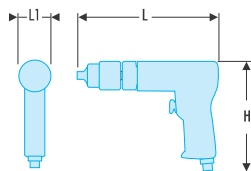
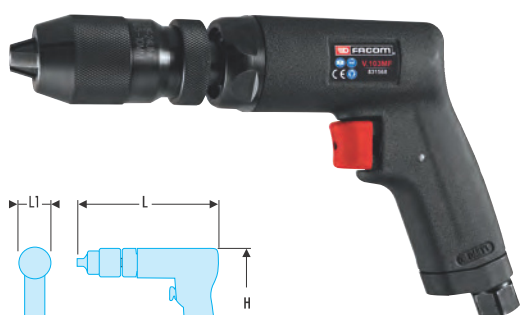


- Lever throttle for precise control and low-speed start.
- Easy access to replace the punch: V.850FKR2.
- Can produce rounded edges up to 6.5 mm radius.
- Can cut 1.8M of sheet metal per minute at a max depth of 1.2 mm.
- Durable motor design encased in a strong and robust aluminium housing.
- Blows per minute 4300 cpm.
- Working pressure 6,2 bar.
- Average air consumption 280 l/min.
- Average air consumption 9,6 cfm.
- Air inlet 1/4".
- Minimum hose diameter 10 mm - 3/8".
- Vibration 6 m/s²/a.
- Vibration 1,09 m/s²/K.
- Sound pressure 95,90 dB(A).
- Sound power 106,90 dB(A).
- Available as accessory:
- Punch set: V.850FKR2.



	H [mm]	L [mm]	L1 [mm]	ΔΔ [kg]
V.850F	118	179	40,5	1.0

■ Drill 10 mm with self-locking chuck

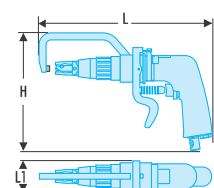


- The powerful 450 watt motor is suitable for many applications and is resistant to stalls.
- Ergonomic grip maximises operator comfort.
- Industrial quality keyless chuck for durability.
- Teasing trigger offers maximum control for the operator.
- Rear handle exhaust blows away air from the workplace.
- Swivel air inlet avoids coiling of the hose.



	H [mm]	L [mm]	L1 [mm]	Maximum RPM [mn]	Sound Pressure DB[A]	Vibration [M/S ²]	ΔΔ [kg]
V.103MF	145	234	44	2800	87.4 (K=3)	7.2 (K=1.21)	1,48

■ Spot weld drill remover



- Fast drilling action at 1800 RPM to get points drilled out quickly.
- Fitted with a counterarm to hold the workpiece in position.
- Depth of drilling can be easily adjusted by the operator to suit his application.
- Feather teasing trigger for optimal speed control.
- Durable and robust thanks to an aluminium casted housing.
- Delivered with one 8 mm drill point which can be ordered as an accessory.
- Milling bit diameter 8 mm.
- Available as accessory: Milling bit diameter 8 mm: V.781A1 (minimum order quantity: 5).
- Free speed 1800 tr/min.
- Milling bit size 8 mm.
- Working pressure 6,2 bar.
- Average air consumption 110 l/min.
- Average air consumption 3,9 cfm.
- Air inlet 1/4".
- Minimum hose diameter 10 mm - 3/8".
- Vibration <250 m/s²/a.
- Vibration 0,54 m/s²/K.
- Sound pressure 90,70 dB(A).
- Sound power 101,70 dB(A).



	H [mm]	L [mm]	L1 [mm]	ΔΔ [kg]
V.781F	198	270	53	2.1

BODYWORK REPAIR WORKSTATION

Bodywork repair workstation

- A lid:
 - Containing a panel fitted with a system for securing dressers and hammers.
 - PK perforations for freely hanging other tools.
 - 2 gas springs for comfort of use.
- 2 trays that pull out sideways to reveal a large bin for storing heavier tools such as dollies and spoons. The bottom of the trays and the bin are fitted with non-slip mats.
- 3 drawers (2 x 60 + 1 x 130 mm) compatible with the Facom modular storage system and 1 bin drawer (270 mm high) for storing bulky items and pneumatic tools.
- Galvanised steel worktop: easy-to-maintain and high resistance.
- Safe: central key locking of lid and drawers.
- Corner bumpers to avoid damage to vehicles in case of accidental contact.
- Manoeuvrability ensured by 4 large diameter wheels, 2 fixed, 2 castors, one with a brake.



	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
CR.T4XL	1035	825	546	77.0

DENT REMOVAL

Slide puller for dent removal without paint

- Supplied with a set of 10 bits CR.GP-1
- Dimensions: 370 X 33 X 33 mm.
- Use recommended with FACOM glue CR.GLUE



	Width I [mm]	L [mm]	P [mm]	ΔΔ [g]
CR.GPSH	33	370	33	890

Manual paint-free dent removal puller

- Use by hand.
- Pads 35 X 82 mm with elastomer bodywork protection.
- Supplied with a set of 10 bits CR.GP-1.
- Dimensions: 127 X 110 X 83 mm.
- Use recommended with FACOM glue CR.GLUE



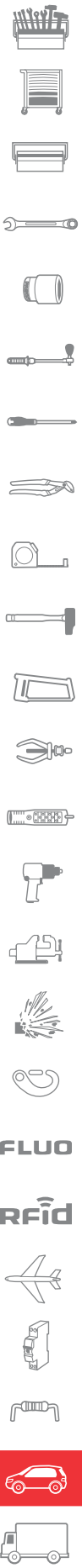
	H [mm]	L [mm]	P [mm]	ΔΔ [g]
CR.GPP	127	110	83	310

Paint-free dent removal by glue dots kit

- Special bodywork glue cleaned with rubbing alcohol. Easy to use.
- CR.GPSH Slide puller and set of 10 bits.
- CR.GPP Screw puller and set of 10 bits.
- CR.PRK-3 Set of 3 plastic jets.
- CR.GLUE: Box of dent removal glue for. (1 KG) to be used with hot glue gun type FACOM 900A.
- Storage box BP.C19.



	ΔΔ [kg]
CR.GP-KIT	4,4



DENT REMOVAL

Slide suction puller by manual pump



- To pull dents over large areas. For door panels and LUV.
- Vacuum by manual pump.
- Supplied with 3 suction cups Ø80 mm 105 mm and 126 mm.
- Supplied in plastic box.



	Width l [mm]	L [mm]	P [mm]	ΔΔ [kg]
CR.SSH	165	750	100	4.6

Slide suction puller by venturi

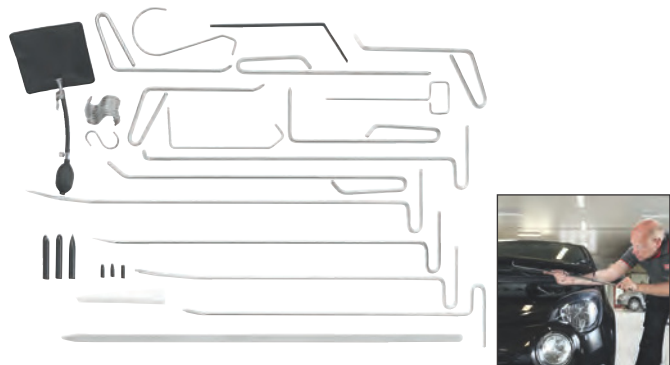


- To pull dents over large areas. For door panels and LUV.
- Vacuum by venturi supplied with compressed air.
- Supplied with 3 suction cups Ø80 mm 105 mm and 126 mm.
- Supplied in plastic box.



	Width l [mm]	L [mm]	P [mm]	ΔΔ [kg]
CR.ASH	310	610	100	4.2

Set of 34 paint-free dent removal tools



- Short rods.
- Long rods.
- Flexible pads.
- Composite rod tips.
- Set of 3 composite jets.
- Hooks.
- Carry bag.



	ΔΔ [kg]
CR.PRK	8.60

Set of 3 plastic jets

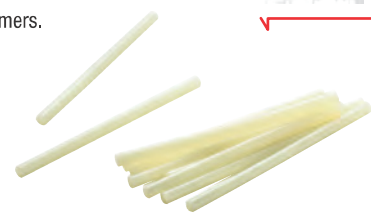
- For finish of dent removal operations without paint.
- Jet Ø 15 mm X 101 mm.
- 1 round tip jet.
- 1 sharp tip jet.
- 1 flat face round tip jet.



	ΔΔ [g]
CR.PRK-3	78

Glue sticks

- Glue based on thermoplastic polymers.
- For use with hot glue gun FACOM E.900A or equivalent.
- Sticks Ø 11 mm X 198 mm.
- Suited to bodywork dent removal operations.
- Cleaned with rubbing alcohol.
- Packaged in 1 kg box.



	L [mm]
CR.GLUE	198

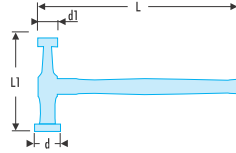
PANEL BEATING HAMMERS

861D - Bumping hammers

- Stretching and planishing hammer.
- Convex, round and square heads.
- Secure handle attachment.
- Finely polished planishing surfaces.
- Facetted hickory handle.
- Spare handle and wedge: 211.MH26.



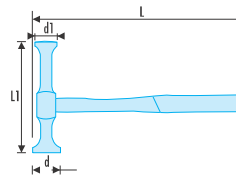
Model	d [mm]	d1 [mm]	L [mm]	L1 [mm]	ΔΔ [g]
861D.26	25	30	310	100	300
861D.30	30	35	310	100	390



Round, flat, and convex head hammer

- Bumping and planishing hammer.
- Flat, round and convex heads.
- Secure handle attachment.
- Finely polished heads.
- Hickory handle.
- Spare handle and wedge: 211.MH26.

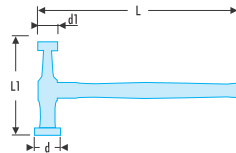
Model	d [mm]	d1 [mm]	E [mm]	L [mm]	L1 [mm]	ΔΔ [g]
861D.RPC	32	40	40	310	150	600



866D - Shrinking hammers

- Stretching and planishing hammer.
- 1 round ribbed face, one square smooth face.
- Secure handle attachment.
- Hickory handle.
- Spare handle and wedge: 211.MH26.

Model	d [mm]	d1 [mm]	L [mm]	L1 [mm]	ΔΔ [g]
866D.32	30	35	310	100	310
866D.41	35	40	310	100	380

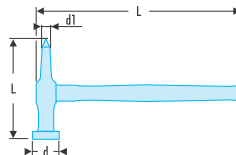


Hammer with round flat face and straight pein

- Planishing hammer.
- 1 round flat face, 1 straight pein.
- Secure handle attachment.
- Finely polished head.
- Hickory handle.
- Spare handle and wedge: 211.MH26.



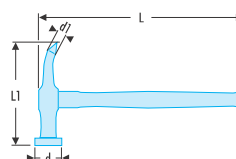
Model	d [mm]	d1 [mm]	L [mm]	L1 [mm]	ΔΔ [g]
868D.40PLD1	40	23	310	140	320



Hammer with round domed face and curved pein

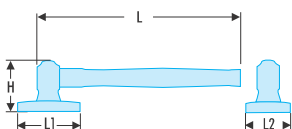
- Planishing hammer.
- 1 round domed face, 1 curved pein.
- Secure handle attachment.
- Finely polished head.
- Hickory handle.
- Spare handle and wedge: 211.MH26.

Model	d [mm]	d1 [mm]	L [mm]	L1 [mm]	ΔΔ [g]
868D.40BOC	40	23	310	23	430



DRESSERS

■ **Flat dresser**

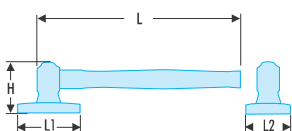


- Flat dresser.
- Secure handle attachment.
- Finely polished head.
- Hickory handle.
- Spare handle and wedge: 211.MH26.



	H [mm]	L [mm]	L1 [mm]	L2 [mm]	ΔΔ [g]
862D.60	70	295	50	30	320

■ **Wide-dome dresser**

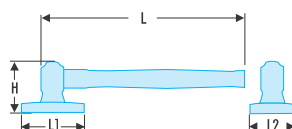


- Surface curved widthwise.
- Secure handle attachment.
- Finely polished head.
- Hickory handle.
- Spare handle and wedge: 211.MH26.



	H [mm]	L [mm]	L1 [mm]	L2 [mm]	ΔΔ [g]
864D.60	70	295	50	30	320

■ **Shrinking dresser no.1**

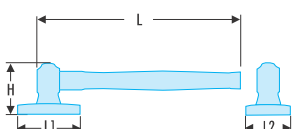


- Ribbed face.
- Secure handle attachment.
- Finely polished head.
- Hickory handle.
- Spare handle and wedge: 211.MH26.



	H [mm]	L [mm]	L1 [mm]	L2 [mm]	ΔΔ [g]
867D	70	295	50	30	310

■ **Shrinking dresser no.2**



- Ribbed face.
- Secure handle attachment.
- Finely polished head.
- Hickory handle.
- Spare handle and wedge: 211.MH26.



	H [mm]	L [mm]	L1 [mm]	L2 [mm]	ΔΔ [g]
867D.DS	70	295	50	30	310

DOLLIES

Regular dolly no.1



• Finish: polished.

	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
870A	35	60	88	1.1

Regular dolly no.2



• Combination of sharp and rounded edges.
• Finish: polished.

	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
870B	35	55	90	1.2

Slim shaping dolly



• Finish: polished.

	H [mm]	Width I [mm]	L [mm]	ΔΔ [g]
909A	23	60	88	750

Slim wedge dolly



• Slim model with a domed face.
• Finish: polished.

	H [mm]	Width I [mm]	L [mm]	ΔΔ [g]
871B.45	37	55	125	900

Dished dolly



• Curved on all sides.
• Finish: polished.

	H [mm]	Width I [mm]	L [mm]	ΔΔ [g]
874A	26	65	106	980

Pinch wedge dolly



• One curved face and one flat face.
• Finish: polished.

	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
906A	25	68	130	1.2



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SPOONS AND BLADES

Long single spoon



- Bumping spoon.
- Finish: polished.



Ref	L [mm]	ΔΔ [kg]
875.3	390	1.3

Angled, flat short double spoon



- Double bumping spoon, very cranked at one end.
- Also available in a long version (ref: 877A, length: 510 mm).
- Length: 400 mm.
- Finish: polished.



Ref	L [mm]	ΔΔ [kg]
876A	400	1.7

Short single spoon



- Bumping spoon.
- Length: 285 mm.
- Finish: varnished and polished.



Ref	L [mm]	ΔΔ [g]
895A	285	820

Flat shrinking blade



- Ribbed face.



Ref	L [mm]	ΔΔ [g]
891A.PL	350	700

FILES

850 milled files



- Recommended for soft metal, cast iron, mild steel and soft plastics.
- For use with frame 851B.



Ref	L [mm]	Teeth [cm]	Tooth shape	Blade profile	Number of Teeth per [cm]	Size [mm]	ΔΔ [g]
850.S300	300	31/2	Courbe	Curved	3 1/2	Standard	190
850.S350	350	31/2	Courbe	Curved	3 1/2	Standard	270
850.SD350	350	31/2	Droite	Straight	3 1/2	Standard	260
850.F350	350	41/2	Courbe	Curved	4 1/2	Slim	270
850.EF350	350	6	Courbe	Curved	6	Extra-slim	300

Frame for milled files



- Ergonomic handle with a choice of two working positions according to the task to be performed.
- Accurate setting of the file profile.
- Takes both 300 and 350 mm file lengths.
- Dimensions (L. x W. x H.): 360 x 33 x 140 mm.
- Supplied without file.



Ref	H [mm]	Width [mm]	L [mm]	ΔΔ [g]
851B	140	33	360	630

FORMING TOOL SETS

■ **CR.CM92** 135-piece bodywork tool set



Item Code	Qty	Set Description
440.JP9	9	Combination wrenches 8 to 19 mm
R2NANO	38	1/4" sockets: 5,5 to 14 mm and accessories
SL.DBOX1	21	1/2" sockets: 8, 10 to 19, 21, 22, 24, 27, 30, 32 mm and accessories
AMZ.M1	1	Short bit holder
BP.102	1	Plastic case
ED.T	3	1/4" Pozidriv® tips 101-102-103
EH	4	1/4" 6-point tips 103 - 104 - 105 - 106
EP.T	3	1/4" Phillips® tips 101 - 102 - 103
ES.T	3	1/4" bits for slotted heads 134.5 - 136.5 - 148
EXR	6	1/4" Resistor® tips 110 to 140
PL.400A	1	Plate for screwing bits
181A.25CPE	1	Lockable multigrip pliers
192A.16CPE	1	Piano wire diagonal cutters
185A.20CPE	1	Sheathed straight half-round nose pliers
501A	1	Long-nose lock-grip pliers
893.316	1	Locking tape measure 3 m
234	1	Scriber
601	1	Hacksaw frame
668B.10	10	Saw blades
882A	1	Metal shears
RD.MD200EMA	1	Flat second-cut file 200 mm
DRD.MD200EMA	1	Half-round second-cut file 200 mm

Item Code	Qty	Set Description
200H.50	1	Riveting hammer
208A.32CBA	1	Interchangeable-tip mallets
249	2	Drift punches 2 - 4 mm
256.6	1	Precision centre punch
259.P	1	Extra-flat chisel
861D.RPC	1	Round, flat, and convex head hammer
871B.45	1	Slim wedge dolly
861D.30	1	Bumping hammer
866D.32	1	Finishing hammer
868D.40BOC	1	Offset peening hammer
862D.60	1	Flat dresser
870B	1	Thin toe dolly
906A	1	Flat wedge dolly
875.3	1	Long single spoon
895A	1	Short single spoon
518.3	1	Lock-grip pliers
518.4	1	Lock-grip pliers
225.J3	3	End mills
851B	1	Frame for milled files
850.S350	1	Standard file
CR.D10	1	Windshield wiper arm remover
CR.D1	1	Trip removal tool

■ **CR.858J5** Specialist 5-piece forming tool set: a must-have

- Supplied without content, detail below.

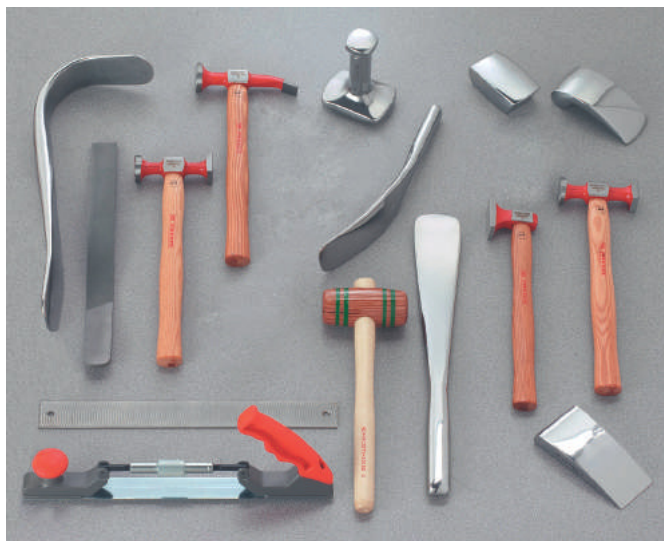


Item Code	Qty	Set Description
861D.30	1	Bumping hammer
862D.60	1	Flat dresser
870B	1	Thin toe dolly
906A	1	Flat wedge dolly
871B.45	1	Slim wedge dolly



FORMING TOOL SETS

■ **CR.858J15** Specialist 15-piece forming tool set: basic for professionals



• Supplied without content, detail below.

🔗	Qtys	Set Description
868D.40BOC	1	Offset peening hammer
866D.32	1	Finishing hammer
861D.30	1	Bumping hammer
862D.60	1	Flat dresser
870B	1	Thin toe dolly
906A	1	Flat wedge dolly
871B.45	1	Slim wedge dolly
872A	1	Curved head dolly
875.3	1	Long single spoon
876A	1	Offset flat spoon
895A	1	Short single spoon
891A.PL	1	Flat shrinking blade
851B	1	Frame for milled files
850.S350	1	Standard file
209.50	1	Wood mallet

■ **CR.858J20** Specialist 20-piece forming tool set: a must-have for specialists



• Supplied without content, detail below.

🔗	Qtys	Set Description
868D.40BOC	1	Offset peening hammer
866D.32	1	Finishing hammer
861D.30	1	Bumping hammer
861D.RPC	1	Round, flat, and convex head hammer
862D.60	1	Flat dresser
870B	1	Thin toe dolly
906A	1	Flat wedge dolly
908A	1	Flat regular dolly
871B.45	1	Slim wedge dolly
874A	1	Dished dolly
872A	1	Curved head dolly
875.3	1	Long single spoon
875.4	1	40° single spoon
876A	1	Offset flat spoon
895A	1	Short single spoon
891A.PL	1	Flat shrinking blade
851B	1	Frame for milled files
850.S350	1	Standard file
850.F350	1	Fine file
209.50	1	Wood mallet

MODULES

Bodywork module no.2

- Comprising:
 - 259: Slim-profile chisel 235 mm.
 - 209.50: Wooden mallet 50 mm.
 - 225.J3: Set of 3 end mills.
 - 850.S350: Standard angled milled file.
 - 851B: Frame for milled files.
 - 860H.28: Round head hammer 28 mm.
 - 861D.30: Bumping hammer.
 - 862D.60: Flat dresser.
 - 867D: Shrinking dresser.
 - 870B: Thin toe dolly.
 - 871B0.55: Wedge dolly.
 - 874A: Dished dolly.
 - 875.3: Long single spoon.
 - 906A: Pinch wedge dolly.
 - Thermoformed module PL.679 (value 3 modules).



	H [mm]	Width I [mm]	L [mm]	Contents	ΔΔ [kg]
MOD.CAR2	40	525	418	PL.679	10.0

PLIERS

Hand punch

- Punch: 5 mm.
- Max. sheet thickness: 0.8 mm.
- Punch and die, 5 mm diameter: CAD.10RN1.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
CAD.9	30	130	290	1.2

Hand crimper and punch

- Crimp width: 12 mm.
- Punch 5 mm.
- Swivel head.
- Max. sheet thickness: 0.8 mm.
- Punch and die, 5 mm diameter: CAD.10RN1.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
CAD.10	30	130	290	1.2

SUPPORTS

Multi-functional bodywork support cradle

- Maximum supported weight by CR.S8: 80 kg.
- Foam protections to prevent scratches.
- Ergonomic design, flexible fabric sling moulds to the shape of the panel supported.
- 4 castor wheels (2 castors with brake).
- Floor dimensions.
- Easy to store.
- Foam protection CR.S7PRO.
- Set of 2 slings CR.S7-05.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
CR.S7	93	82	90	8.0



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SUPPORTS

Painters support



- Maximum supported weight by CR.S8: 50 kg.
- Multi-adjustable support for bonnets, doors, etc.
- Modular: 16-point adjustment, adjustable height, 360° rotation, with locking supports.
- With 2 large-size wheels.
- Small floor dimensions
- Dimensions (L. x W. x H.): 130 x 120 x 70 cm.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
CR.P1	70	120	130	19.0

Bodywork component horizontal stand



- Maximum supported weight by CR.S8: 80 kg.
- 3-point support stand with anti-scratch protection.
- Work height: min. 800 mm and max. 1100 mm.
- Small floor dimensions, easy storage.
- Foam protection CR.S7PRO.



	ΔΔ [kg]
CR.P2	8.0

Surface preparation workstation



- Workstation comprising:
 - 2 sloping upper shelves for storing consumables.
 - 1 drawer 130 mm high with padlock for expensive items, safety items, etc.
 - 1 2-way sloping shelf for ordinary tools.
 - 1 storage area for bulky consumables.
 - Perforated recessed side panels for attaching accessories: 2 bottle-shelves, 1 paper-roll holder, wire supports to hold paint guns, 1 waste bag holder.



	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
CR.T3XL	1645	825	546	51.0

■ **Magnetic holder for painting small bodywork parts**

- For rear view mirror shell, motorbike parts, etc.
- Withstands parts up to 2 kg.
- Length: 255 mm.
- Diameter 1: 10 mm.
- Diameter 2: 58 mm.



Icon	L [mm]	ΔΔ [g]
CR.SMP	255	275

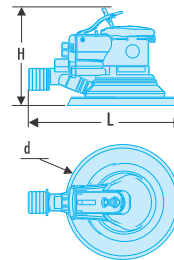
AIR TOOLS - PAINT PREPARATION

■ **Orbital palm sander 150 m - 5 mm orbit**

- Central vacuum exhaust port to allow easy removal of dust if connected to a central vacuum system.
- Easy to access speed regulator just below the trigger.
- Ergonomic trigger for perfect control.
- Productivity increased with low vibration level.
- Composite body is lightweight and insulates against cold.



Icon	A [mm]	d [mm]	E [mm]	H [mm]	Maximum RPM [mn]	Air Consumption [l/min]	Pad Dimensions [mm]	Sound Pressure DB[A]	Vibration [M/S2]	ΔΔ [kg]
V.252F		152		115	10000	212	150	79.9 (K=3)	11.86 (K=1.67)	0,84

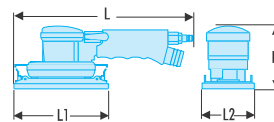


■ **Jitterbug sander - 95 x 170 mm - 8 holes**

- One hand forward reverse "butterfly" trigger
- Two hand design great for work on large and / or vertical surfaces.
- 29 mm central vacuum exhaust port to allow easy removal of dust.
- Easy to access speed regulator.
- Composite body is lightweight and insulates against cold.
- Easy to use clips for abrasive attachment.
- Supplied with 8 hole 95 x 170 mm velcro pad.
- Supplied with pad and 8-hole abrasive perforator.

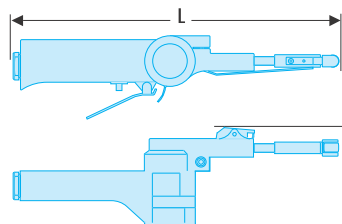


Icon	H [mm]	I2 [mm]	L [mm]	L1 [mm]	Maximum RPM [mn]	Air Consumption [l/min]	Pad Dimensions [mm]	Sound Pressure DB[A]	Vibration [M/S2]	ΔΔ [kg]
V.260F	120		288	170	8500	115	95x170	95.2 (K=3)	53.8 (K=5.82)	2,1



AIR TOOLS - PAINT PREPARATION

■ Belt sander - 10 x 330 mm



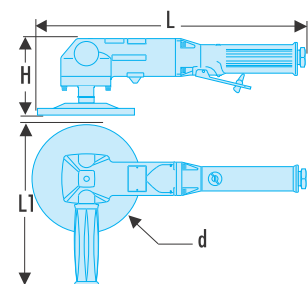
- Handle rotates enabling the operator to always have the best grip.
- Easy and fast changing of belts with the quick change arm.
- Feather teasing trigger for great control.
- Starter pack with tool delivered with 3 abrasives: 2 x P120 and 1 x P80.
- Long and Narrow 10 mm arm to get in the most confined spaces.



	H [mm]	L [mm]	Maximum RPM [mn]	Air Consumption [l/min]	Sound Pressure DB[A]	Vibration [M/S ²]	ΔΔ [kg]
V.402F	83	283	16000	110	86.1 (K=3)	<2.5 (K=0,63)	0,8

AIR TOOLS - PAINT PREPARATION

■ Angle sander diameter 178 mm



- Feather teasing trigger for optimum control.
- Speed control screw for use in different applications.
- Second handle for better grip.
- Hardened and ground spiral bevel gears for best durability.
- Delivered with a 178 mm backing pad for efficient sanding on large surfaces.



	d [mm]	H [mm]	L [mm]	L1 [mm]	Maximum RPM [mn]	Air Consumption [l/min]	Pad Dimensions [mm]	Sound Pressure DB[A]	Vibration [M/S ²]	ΔΔ [kg]
V.411F	178	101	373	229	4500	110	178	95 (K=3)	9,2 (K=1.78)	2,6

SELF-ADJUSTABLE SANDING BLOCK



Work better and faster



SAVE TIME

- Faster operation due to greater surface area coverage.

EASY TO USE

- Easy and accurate shape restoration.



Versatile

- Compatible with 3M® sanding paper, Velcro® paper.



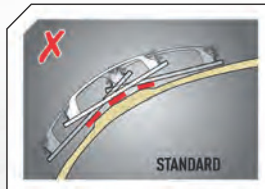
Complete

- 2 sizes adapted to all your needs.
- 200 mm to 400 mm.



Handy

- Can be connected to a vacuum cleaner.
- The vacuum cleaner bit can be changed or removed.



High quality finish

- Perfect finish when working on curved surfaces.



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SELF ADJUSTING SANDING WEDGES

Set of 2 self adjusting sanding wedges



- Wedge for dressing putty repairs in bodywork.
- 1 CR.SBL, 1 CR.SBS.
- Sole with self-gripping grip.
- Peripheral dust vacuuming.
- Legal guarantee.
- Shoe CR.SBL-01.



	$\Delta\Delta$ [kg]
CR.SB-J2	1.1

Compact self adjusting sanding wedge



- Wedge for dressing putty repairs in bodywork.
- Sole with self-gripping grip.
- For dressing cuts 70 x 200 mm.
- Peripheral dust vacuuming.
- Removable vacuum tip \varnothing 20 mm.
- Legal guarantee.
- Useful dimensions (L. x W. x H.): 200 x 70 x 90 mm
- Shoe CR.SBS-01.



	H [mm]	Width I [mm]	L [mm]	$\Delta\Delta$ [g]
CR.SBS	90	70	200	340

Long self adjusting sanding wedge



- Wedge for dressing putty repairs in bodywork.
- Sole with self-gripping grip.
- For dressing cuts 70 x 400 mm.
- Peripheral dust vacuuming.
- Removable vacuum tip \varnothing 20 mm.
- Legal guarantee.
- Useful dimensions (L. x W. x H.): 400 x 70 x 90 mm
- Shoe CR.SBS-01.



	H [mm]	Width I [mm]	L [mm]	$\Delta\Delta$ [g]
CR.SBL	120	70	400	660

Short sanding wedge



- Sanding wedge for repairs with bodywork putty.
- Sole with self-gripping grip
- For sanding cups 70 x 200 mm.
- Dust extraction.
- Removable extraction bit \varnothing 20 mm.
- Legal warranty.
- Useful dimensions (L x W x H): 200 x 70 x 90 mm.



	$\Delta\Delta$ [kg]
CR.SBF-S	0.34

Long sanding wedge

- Sanding wedge for repairs with bodywork putty.
- Sole with self-gripping grip
- For sanding cups 70 x 400 mm.
- Dust extraction.
- Removable extraction bit \varnothing 20 mm.
- Legal warranty.
- Useful dimensions (L x W x H): 200 x 70 x 90 mm.



Icon	$\Delta\Delta$ [kg]
CR.SBF-L	0.68

Set of 2 sanding wedges

- Set of 2 sanding wedges for repairs with bodywork putty.
- Sole with self-gripping grip
- For sanding cups 70 x 400 mm and 70 x 200 mm
- Dust extraction.
- Removable extraction bit \varnothing 20 mm.
- Legal warranty.



Icon	$\Delta\Delta$ [kg]
CR.SBF-J2	1,1

WINDSHIELD TOOLS

Windshield wiper arm remover

- Including spacer for wiper arms with integral washer jet.
- Each leg can be removed for a better fit on the arm.
- Capacity diam.: 44 mm.
- Supplied with instructions.



Icon	$\Delta\Delta$ [g]
CR.D10	220



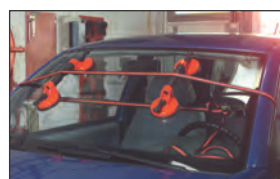
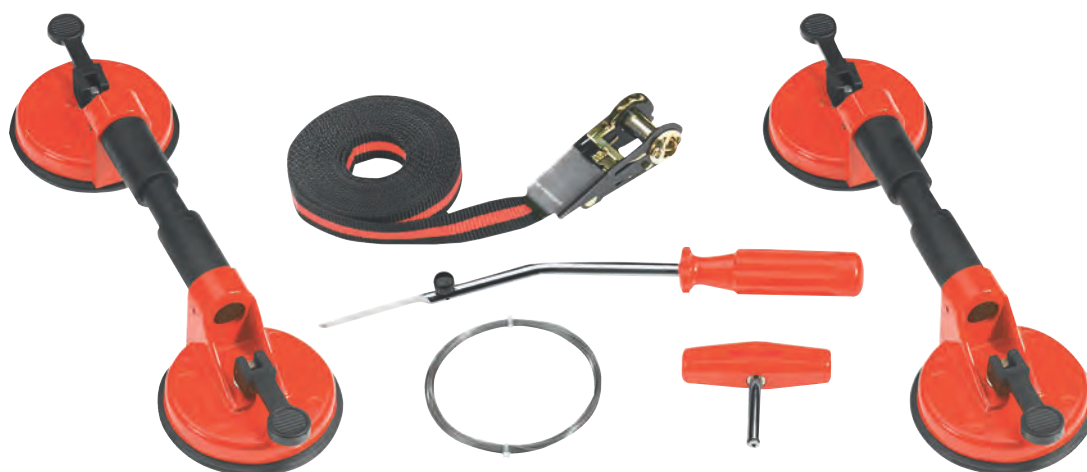
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WINDSHIELD TOOLS

Windshield replacement kit



- Comprising:
 - D.28A1: Suction cups (2x).
 - D.28A2: Ratchet strap.
 - D.28-3: Removal tool.
 - D.28-4: Pull handle.
 - D.28-5: Braided wire for windshields (18 m).

	$\Delta\Delta$ [kg]
D.28B	3.3

Windshield tools

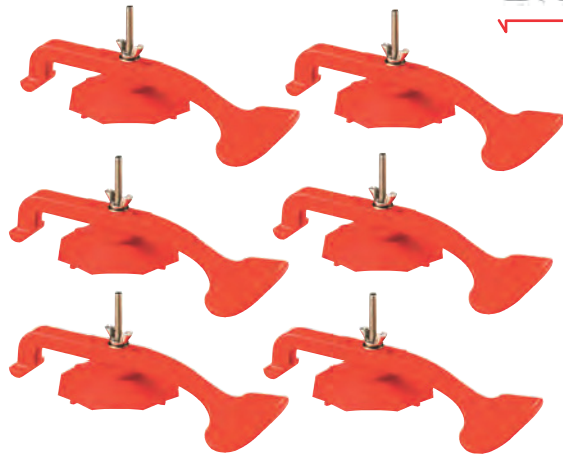


- Set of 3 tools.
- Comprising:
 - D.80-01: Windshield fitting tool.
 - D.80-02: Trim fitting tool.
 - 82H.4: Hexagon key (4 mm).
 - For narrow trim: D.80-02-04.
 - For medium trim: D.80-02-05.
 - For wide trim: D.80-02-06.
 - Supplied in a plastic case.

	H [mm]	Width l [mm]	L [mm]	$\Delta\Delta$ [g]
D.80	50	135	325	820

■ Set of 6 suction cups

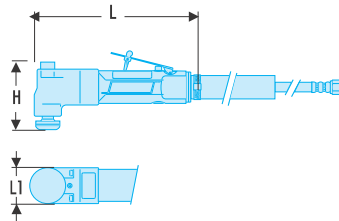
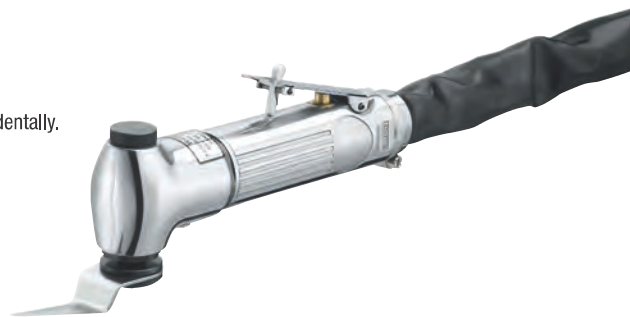
- Secures components while curing.
- Many bodywork applications:
 - Windshield trims.
 - Names and badges.
 - Interior mirrors, etc.
- Excellent suction on painted panels and windows.




	$\Delta\Delta$ [g]
DCR.20J6	470


■ Windshield cutter

- 20,000 oscillations per min reduces time to replace a windshield.
- Exhaust hose muffles the sound and drives air away from the workplace and the operator.
- Safety trigger protects the user from switching on the tool accidentally.
- Durable aluminium housing.
- Oscillations per minute : 22000.
- Working pressure 6,2 bar.
- Average air consumption 100 l/min.
- Average air consumption 3,4 cfm.
- Air inlet 1/4".
- Minimum hose diameter 10 mm - 3/8".
- Vibration 7,30 m/s²/a.
- Vibration 1,22 m/s²/K.
- Sound pressure 82 dB(A).
- Sound power 93 dB(A).
- Supplied with instructions, without blade.



	H [mm]	L [mm]	L1 [mm]	$\Delta\Delta$ [kg]
CAD.P300F	85	209	45	1,2

■ Windshield cutter blades CAD.P300F

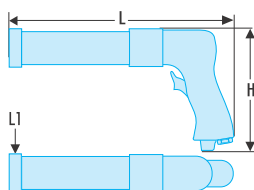
	L [mm]	No.
CAD.P300F1	63	F1
CAD.P300F2	30	F2
CAD.P300F3	36	F3
CAD.P300F4	57	F4
CAD.P300F5	18	F5
CAD.P300F6	35	F6
CAD.P300F7	35	F7
CAD.P300F8	90	F8
CAD.P300F9	90	F9
CAD.P300F10	25	F10
CAD.P300F11	35	F11
CAD.P300F12	45	F12



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AIR TOOLS - WINDSHIELDS

■ Caulking gun - 50 x 215 mm cartridge



- For applying silicon, mastics, adhesives in standard 50 x 215 mm cartridges.
- Easy to use regulator to adjust the actual flow coming out.
- Automatic pressure release halting flow of mastic: When trigger is depressed flow is immediately stopped.
- 70 dB(A) sound level increases operator comfort.
- Robust aluminium housing for high durability.
- Working pressure 6,2 bar.
- Average air consumption 85 l/min.
- Average air consumption 2,9 l/min.
- Air inlet 1/4".
- Minimum hose diameter 10 mm - 3/8".
- Vibration <2,50 m/s²/a.
- Vibration 0,51 m/s²/K.
- Sound pressure 97,60 dB(A).
- Sound power 108,60 dB(A).



	H [mm]	L [mm]	L1 [mm]	ΔΔ [kg]
V.801F	168	305	62	1.1

HYDRAULIC EQUIPMENT

■ 10 T hydraulic straightening kit



- Comprising:
 - 1 hand pump (600 cm³).
 - 1 push-jack (154 mm stroke).
 - 1 plier-spreader jack.
 - 4 extension pieces (127 to 711 mm).
 - 7 accessories: flat base, spreading legs, heads (V, chequered, rubber).
- Quick couplers.
- Working pressure: 700 bar.
- Supplied in a wheeled storage case.
- CE.

	ΔΔ [kg]
CR.10TA	37,100

4 T hydraulic straightening kit



- Comprising:
 - 1 hand pump (270 cm³).
 - 1 push-jack (122 mm stroke).
 - 1 plier-spreader jack.
 - 5 extension pieces (115 to 534 mm).
 - 7 accessories: flat base, spreading legs, heads (V, chequered, rubber).
- Quick couplers.
- Working pressure: 700 bar.
- Supplied in a storage case.
- EC standard

Icon	Model	Weight [kg]
	CR.4TA	21,400

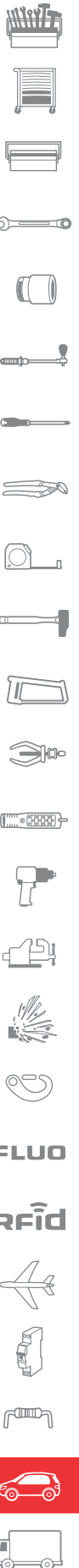
DIVERS

Rechargeable aerosol

- Examples of use:
 - Cleaning with detergent.
 - Dusting with blower.
 - Degreasing.
 - Releasing with an appropriate liquid.
 - Applications: automotive, industrial maintenance, motorbike, bicycle, marine, DIY, etc.
- CAUTION!
 - Never use the DM.SPRAY in medical and biological applications.
 - Never use the DM.SPRAY in agro-food applications.
 - Never apply DM.SPRAY under a pressure above 5 bars (pressurize with a bicycle pump (5 bars).
- Fluid content: 50 ~ 350 cc.
- Length: 280 mm.
- Diameter: 65 mm.
- Capacity: 650 ml.
- Spare parts: DM.SPRAY-1: Bottle , DM.SPRAY-2: Cap, DM.SPRAY-3: Nozzle



Icon	Length L [mm]	Weight Δ [g]
	DM.SPRAY	280 / 186



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HEAVY GOODS VEHICLES - INDUSTRIAL VEHICLES



MOBILE LIFTING EQUIPMENT - HG

1166

- Trolley jacks 1167
- Hydropneumatic jacks 1168
- Bottle jacks 1169
- Heavy load props 1169
- Hoists 1170
- Device removal jack 1171



HYDRAULIC PRESSES - HGV

1172

- Hydraulic presses - HGV 1172



STORAGE - HG

1174

- Roller cabinets and mobile tables 1174
- JET+ roller cabinets 1176



RATCHETS - SOCKETS - HG

1178

- Ratchets - Sockets - HG 1178



TORQUE CONTROL - HG

1179

- Torque control - HG 1179



PNEUMATIC TOOLING - HG

1181

- Pneumatic tooling - HG 1181



PULLERS - HG

1182

- Pullers - HG 1182



CYLINDER HEAD - PISTONS - VALVES

1183

- Cylinder head - pistons - valves 1183



LUBRICATION - FILTRATION - HG

1184

- Automatic oil-Filter wrench 1184



BRAKES - HG

1185

- Inspection Drum 1185
- Drum 1186



CLUTCH CENTRING - HG

1186



WHEEL - STEERING - TRANSMISSION - HG

1186

- Wheels 1186
- Steering ball joints 1187



ELECTRICITY - HG

1188

- Electricity - HG 1188



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SERVICE TRUCKS INDUSTRIAL VEHICLES



Demonstrations, Technical information, Online updates and Automated chest inventories

You can also make an appointment with a FACOM distributor to produce an inventory of your tooling base (roller cabinets, chests, work benches...).

Advice, demonstration.

- For a presentation, demonstration, call our sales department or local dealer to speak to a FACOM adviser.



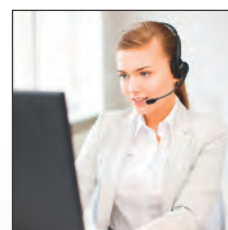
Internet.

- Access the entire up-to-date Facom product range in one click, download the whole catalogue, specific sections, and much, much more on www.facom.com.



Technical information.

- For information on a product, spare part, etc...



Inventory of boxes.

- Save time.
 - Optimise your expenses.
 - Control your tooling budget.
 - Individual lists and box harmonisation help certifying your workshop to ISO.
1. During the first inventory, we define, for each worker (mechanical, bodywork, electricity, 24/24 service...), the computerised list of tools contained in his box.
 2. Every year, we produce an annual inventory against the original list. This allows to manage the equipment stock precisely, keep the right equipment and empower all persons. You complete your workshop equipment effectively. (Service available only in mainland France).

TROLLEY JACKS

"HEAVY DUTY" MOBILE LIFTING ROLLER JACKS

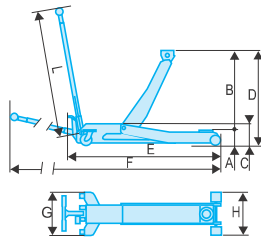
Characteristics common to "heavy duty" hydraulic jacks

- Fast approach pedal.
- "Dead man" device.
- Load descent rate regulation.
- Conformity with EC Directive on machinery 2006 and EN 1494.



5 t rolling jack

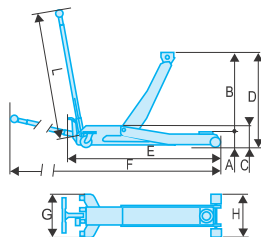
- Load capacity: 5 t.
- Maximum lifting height: 685 mm
- Minimum height under body: 150 mm.
- Fast foot lifting.
- Handle adjustable in 3 positions 90, 135, 180 degrees.
- Overload valve.
- CE Compliance Standard EN1494+A1.



	A [mm]	B [mm]	B1 [mm]	C [mm]	D [mm]	H [mm]	L [mm]	Oil Capacity [cm ³]	Tonnes [t]	ΔΔ [kg]
DL.PL5	150	685	1153	150	685	1380	1506	540	5	89

10 t rolling jack

- Load capacity: 10 t.
- Maximum lifting height: 525 mm
- Minimum height under body: 160 mm.
- Fast foot lifting.
- Handle adjustable in 3 positions 90, 135, 180 degrees.
- Overload valve.
- CE Compliance Standard EN1494+A1.



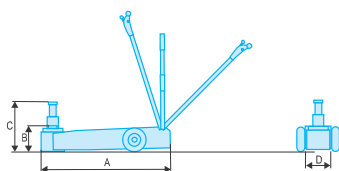
	A [mm]	B [mm]	B1 [mm]	C [mm]	D [mm]	L [mm]	Oil Capacity [cm ³]	Tonnes [t]	ΔΔ [kg]
DL.PL10A	160	525	1153	333	525	1637	1050	10	129

HYDROPNEUMATIC JACKS

"HEAVY DUTY" MOBILE LIFTING ROLLER JACKS**Characteristics common to "heavy duty" hydraulic jacks**

- Fast approach pedal.
- "Dead man" device.
- Load descent rate regulation.
- Conformity with EC Directive on machinery 2006 and EN1494-ASME-PASE.

15-25-35T hydropneumatic jack

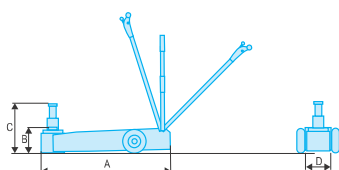


- Heavy duty construction.
- Long folding handle.
- 2 large wheels for better handling.
- Triple stage: 70 // 55 // 85.
- Air control on handle.
- Pivotable handle, 3 positions.
- Includes 2 adapters to increase lifting height.
- Compliant with EC standard EN 1494-ASME-PASE.



	A [mm]	B [mm]	C [mm]	D [mm]	Oil Capacity [cm ³]	Tonnes [t]	$\Delta\Delta$ [kg]
DL.1050	686	151	361	333	1200	10 - 25 - 50	65

15-30T hydropneumatic jack



- Heavy duty construction.
- Long foldable handle.
- 2 large wheels for better handling.
- Double stage: 70 // 75.
- Air control on handle.
- Pivotable handle, 3 positions.
- Includes 2 adapters to increase lifting height and avoid contact with the chassis.
- Compliant with EC standard EN 1494-ASME-PASE.



	A [mm]	B [mm]	C [mm]	D [mm]	Oil Capacity [cm ³]	Tonnes [t]	$\Delta\Delta$ [kg]
DL.1530C	538	151	296	289	1500	15 - 30	48

BOTTLE JACKS

MOBILE LIFTING ACCESSORIES FOR HYDROPNEUMATIC JACKS



Bottle Jacks

Designed for heavy-duty professional use: the welded base provides enhanced strength to the jack.

Can be used for special applications:

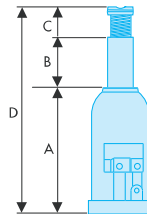
- The internal pump system allows for horizontal use as a pusher jack.
- CE.

DL.BTI - Heavy duty series bottle jacks

- Capacity: 2t, 5t, 8t, 12t, 20t, 30t.
- Designed for heavy-duty professional use.
- Welded base plate jacks, control in the axis: Stronger, more stable, less leaks.
- Heat and surface treated pump shaft and actuator.
- Allows for horizontal use as a pusher jack.
- Complies with directive on machinery 2006/42/CE.



Model	A [mm]	B [mm]	C [mm]	D [mm]	Oil Capacity [cm³]	Tonnes [t]	ΔΔ [kg]
DL.2BTI	178	177	52	317	0.7	2	2.4
DL.5BTI	198	122	70	390	15	5	3.7
DL.8BTI	198	124	72	394	20	8	5.6
DL.12BTI	238	160	80	468	37	12	8
DL.20BTI	270	160	-	430	62	20	13
DL.30BTI	280	165	-	440	83	30	18.4



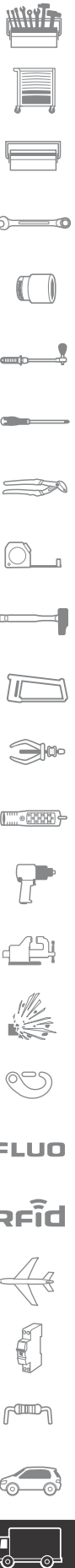
HEAVY LOAD PROPS

Pair of 22 t axle stands (1)

- Load capacity: 22 t.
- Axle stands with rack and locking axis.
- 4 height settings from 338 to 500 mm.
- Pin linked by wire with storage system.
- Reliable and sturdy construction.
- Square base with welded plates for enhanced stability and stiffness.
- Closed dimensions (L. x W. x H.): 250 x 250 x 338 mm.
- Weight: 27.5 kg (per pair).



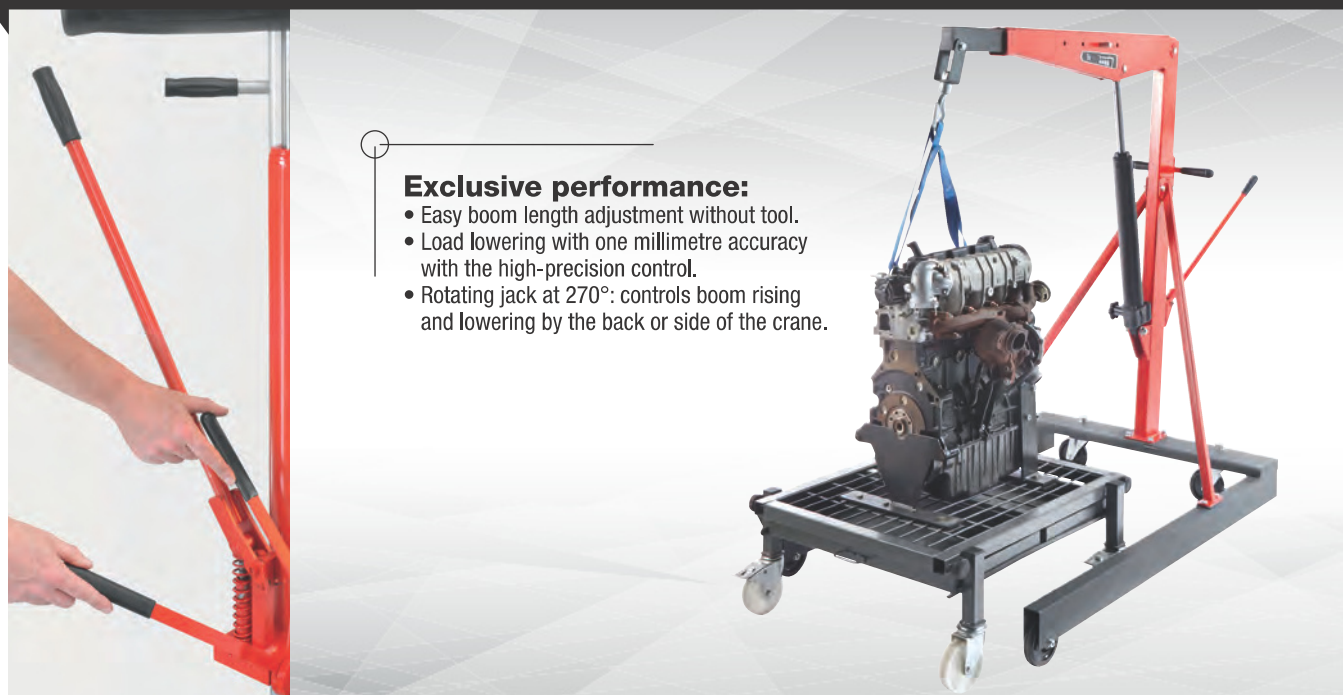
Model	H mini [mm]	Width l [mm]	L [mm]	ΔΔ [kg]
DL.PL22A	338	250	250	27.5



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HOISTS

WORKSHOP CRANES



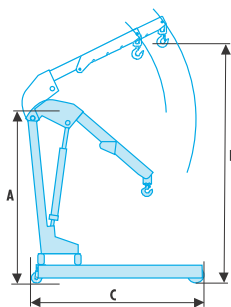
Exclusive performance:

- Easy boom length adjustment without tool.
- Load lowering with one millimetre accuracy with the high-precision control.
- Rotating jack at 270°: controls boom rising and lowering by the back or side of the crane.

1 t europalette workshop crane



- 1 t folding workshop crane compatible with EU pallet.
- Tool-free jib extension.
- Easy use, pivoting rear wheels.
- Capacity: 1 t.
- 4 positions: 500, 670, 830, 1000 kg.
- Max length from arm to hook: 1360 mm
- Width 838 mm, inside the forks.
- Floor dimensions: 1527x992 mm.
- Hook height: 128-2128 mm.
- Jack fitted with overload valve.
- CE Compliance Standard EN1494+A1.

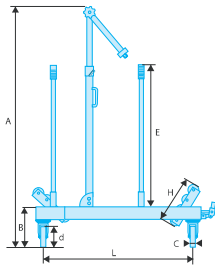


	A [mm]	B [mm]	C [mm]	Tonnes [t]	ΔΔ [kg]
DL.500EU	1613	2128	1527	1	86

DEVICE REMOVAL JACK

Hydraulic tractor wheel lift

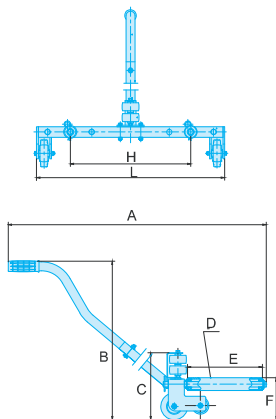
- Load capacity: 1.5 t.
- Easy and secured removing - fitting of tractor wheels
- 6 orientable rollers for easy wheel positioning upon refitting.
- Wheel diameter: 1350 to 2150 mm.
- Max width wheels: 800 mm.
- Adjustable width: 1200-1970 mm.
- Floor dimensions: 1310 x 1020 mm.
- 2 wheels with brakes.
- CE Compliance Standard EN1494+A1.



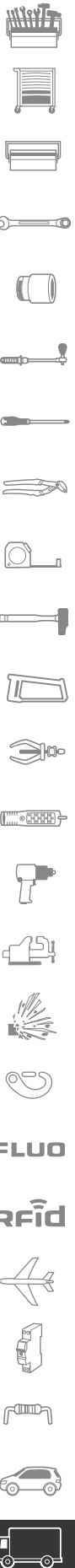
	A [mm]	B [mm]	C [mm]	d [mm]	E [mm]	H [mm]	L [mm]	Tonnes [t]	ΔΔ [kg]
DL.1500	1350-2150	280	50	150	1000	76	210-845	1,5	125

HGV, bus' wheel lift

- Load capacity: 250 kg.
- For easy and secured removal - refitting of wheels on buses, HGVs, forklift trucks.
- 2 rollers adjustable in width from 6.5" to 22.5".
- 2 rollers length: 280 mm.



	A [mm]	B [mm]	C [mm]	d [mm]	E [mm]	H [mm]	L [mm]	Tonnes [t]	ΔΔ [kg]
DL.275	1160	758	251		280	450	702	1,5	12,5



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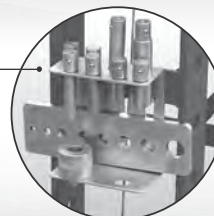
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HYDRAULIC PRESSES - HGV

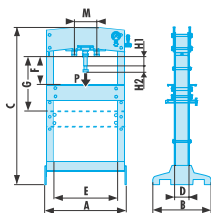
HYDRAULIC PRESSES

30t and 50t Workshop presses

- Table raised by a single operator using the integral winch (model 50t).
- Integral pusher support.
- Jack mobile laterally.
- Supplied assembled with a pair of Vees.
- Piston with automatic return spring.
- Base allowing to move it using a pallet jack, ground anchorage.
- CE.



15 t hydraulic bench press

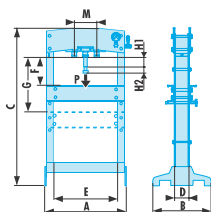
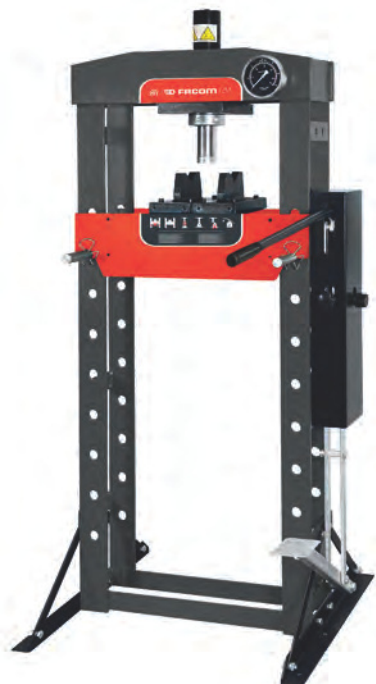


- Lateral adjustable jack.
- Eye-level pressure gauge.
- Piston with automatic return.
- Piston travel: 160 mm.
- Supplied fitted with pair of reversible V and set of pushers.
- Floor dimensions: 700 x 540 mm.
- CE compliance Standard EN1494+A1.



Model	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Tonnes [t]	$\Delta\Delta$ [kg]
W.415WBA	700	540	882	965	500	15	75

20 t hydraulic press



- Double pump for fast approach.
- Foot and hand control.
- Eye-level pressure gauge.
- Piston with automatic return.
- Piston travel: 185 mm.
- Supplied with pair of reversible V and set of pushers.
- Floor dimensions: 730 x 560 mm.
- CE compliance Standard EN1494+A1.

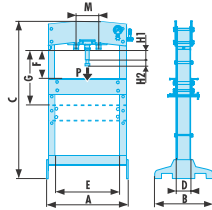


Model	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Tonnes [t]	$\Delta\Delta$ [kg]
W.420	730	560	1519	1626	510	20	112

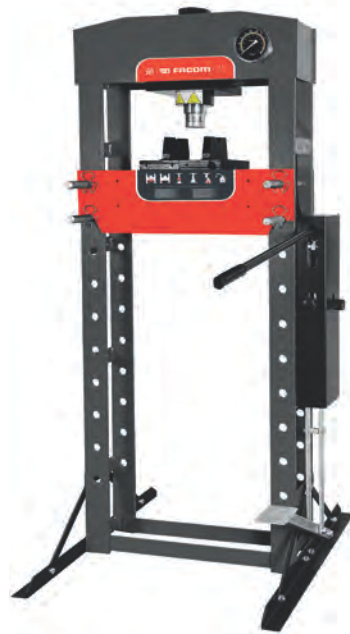
HYDRAULIC PRESSES - HGV

30 t hydraulic press

- Double pump for fast approach.
- Foot and hand control.
- Eye-level pressure gauge.
- Piston with automatic return.
- Piston travel: 150 mm.
- Supplied with pair of reversible V and set of pushers.
- Floor dimensions: 795 x 700 mm.
- CE compliance Standard EN1494+A1.

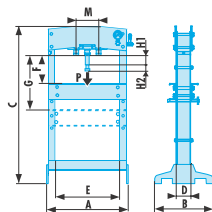


W.430	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Tonnes [t]	$\Delta\Delta$ [kg]
W.430	795	700	1773	1830	535	30	167

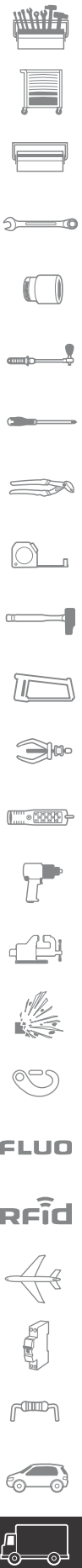


50 t hydraulic press

- Double pump for fast approach.
- Foot and hand control.
- Eye-level pressure gauge.
- Piston with automatic return.
- Piston travel: 200 mm.
- Supplied with pair of reversible V and set of pushers.
- Table adjustable by winch.
- Floor dimensions: 730 x 560 mm.
- CE compliance Standard EN1494+A1.



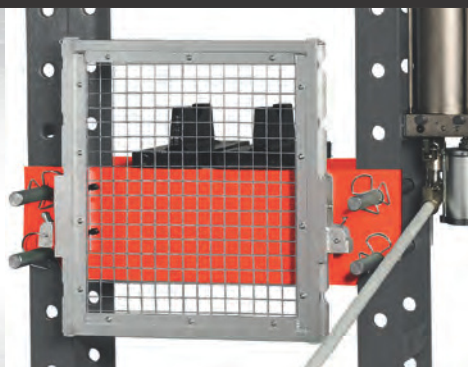
W.450	A [mm]	B [mm]	C [mm]	d [mm]	E [mm]	Tonnes [t]	$\Delta\Delta$ [kg]
W.450	1030	800	1831	1877	730	50	300



PROTECTION FOR WORKSHOP PRESSES

FLEXIBILITY

- Several height positions of the protection according to the part's size. Allows to position the protection flush with the part for large parts.
- Adapts to 20t, 30t and 50 t workshop presses.



W.PROTECT20 for press 20 t W.420
 W.PROTECT30 for press 30 t W.430
 W.PROTECT50 for press 50 t W.450

ROLLER CABINETS AND MOBILE TABLES

HEAVY LOAD MOBILE WORKBENCHES



Max resistance:

- Acceptable load 500 kg - Extremely strong welded steel tubular structure.
- Upper top and lower shelf in 20/10th steel.

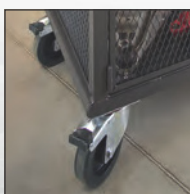
Multi function:

- Laying plan (for 600 x 800 mm pallet), Worktop (locked wheels) and Transport.



Max manoeuvrability:

- 4 large wheels: 2 castors with brake and 2 fixed wheels, Ø 160 mm, rubber tread, for easy manoeuvrability even with heavy load.
- Sturdy and comfortable manoeuvring handle.



Max safety:

- Upper worktop with retaining lips on 3 sides (including 2 folding), 25 mm high preventing objects/tools from falling while moving.
- Rounded base providing ankle protection.



■ Heavy-duty roller table



- Ideal to deposit and transport heavy loads.
- Max strength and handling:
 - Load acceptable 500 kg - extreme resistance mechanically welded steel tubular structure.
 - Upper surface and lower shelf in steel 20/10th.
- Handling:
 - 4 large size wheels: 2 castors with brake and 2 fixed rollers, Ø 160 mm, rubber tire, for easy handling of the trolley, even when heavily loaded.
 - Robust and comfortable handle.
- Multi function:
 - Laying surface (for pallet 600x800 mm), worktop (locked wheels) and transport.
- Max safety:
 - Worktop with edges on 3 sides (including 2 retractible), height 25 mm to avoid prevent objects/tools from falling during transport.
 - Lower panel rounded to protect ankles.
- Colours: grey ELIAN.
- Dimensions: L.1092 x D.617 x H.903 mm.
- Accessories:
 - Additional shelf in galvanised metal sheet thickness 2 mm with anti-fall edges dimensions: L.960 x D.546 x H.20mm / 9kg.

	H [mm]	L [mm]	W [mm]	ΔΔ [kg]
2702	903	1092	617	9

ROLLER CABINETS AND MOBILE TABLES

Additional shelf

- In galvanised metal sheet thickness 2 mm with anti-fall edges.



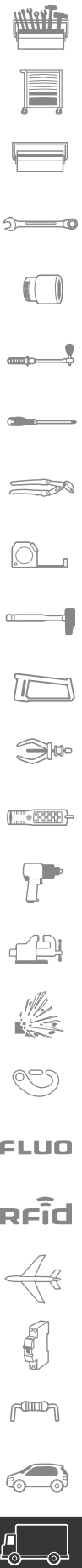
	H [mm]	L [mm]	W [mm]	ΔΔ [kg]
2702.TAB	20	960	546	9.0

Heavy-duty trolley

- Ideal for secured transport or storage of tools and components.
 - Max strength and handling:
 - Load acceptable 500 kg - extreme resistance mechanically welded steel tubular structure.
 - Upper surface and lower shelf in steel 20/10th.
 - Handling:
 - 4 large size wheels: 2 castors with brake and 2 fixed rollers, Ø 160 mm, rubber tire, for easy handling of the trolley, even when heavily loaded.
 - Robust and comfortable handle.
 - Multi function:
 - Laying surface (for pallet 600x800 mm), worktop (locked wheels) and transport.
 - Max safety:
 - Worktop with edges on 3 sides (including 2 retractible), height 25 mm to avoid prevent objects/tools from falling during transport.
 - Lower panel rounded to protect ankles.
 - Steel grid sides. (deployed metal 40*23 thickness 1.5mm).
 - Padlock clasp (padlock not supplied).
 - Acceptable load 500 kg.
 - Extreme resistance steel tubular structure.
 - Colours: grey ELIAN.
 - Dimensions: L.1092 x D.617 x H.903 mm.
- Accessories:
- Additional shelf in galvanised metal sheet thickness 2 mm with anti-fall edges.
 - L.960 x D.546 x H.20mm / 9kg.
 - Weight: 54 kg.



	H [mm]	L [mm]	W [mm]	ΔΔ [kg]
2703	903	1092	617	54.0



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JET+ ROLLER CABINETS

M5 ROLLER CABINET

**Extra wide worktop,
unequalled storage capacity,
exceptional handling.**

JET+

- + **Extra-wide drawers -**
- + **5 modules per drawer.**
- 25 to 45 modules**
distributed in 60 and 130 mm high
drawers (200 and 270 mm drawers can
also be fitted with modules).
- + **235 to 320 kg**
total acceptable load in the drawers
according to drawer composition.
- + **250 to 255 litres** effective
volume according to drawer composition.
- + **0.40 m²** effective working surface
(440 X 876 mm).



Technical data

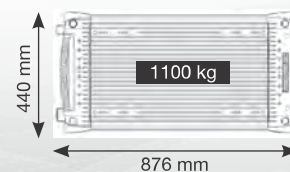
- Overall dimensions (wheels
and worktop included):
L.1154 x D.546 x H.1000 mm.
- Effective drawer dimensions:
L.948 x D.421 x H.60 / 130 /
200 / 270 mm.

Load per drawer for M5 versions

- Drawer 60 mm high: 35 kg
- Drawer 130 mm high: 40 kg
- Drawer 200 mm high: 50 kg
- Drawer 270 mm high: 60 kg

Effective drawer volume in litres on M5 version

- Drawer 60 mm high: 25 L
- Drawer 130 mm high: 50 L
- Drawer 200 mm high: 80 L
- Drawer 270 mm high: 110 L



JET+ 6-drawer roller cabinets - 5 modules per drawer



- 6 drawers = 25 modules distributed
in the 60 and 130 mm drawers:
 - 3 drawer 60 mm wall = 15 modules.
 - 2 drawer 130 mm wall = 10 modules.
 - 1 drawer 200 mm wall.
- The 200 and 270 mm drawers can also be fitted with modules.
- Supplied with 12 partitions for 60 mm drawers and 4 partitions
for 130 mm drawers.
- Total load in the drawers: 235 kg.
- Wall storage capacity: 255 litres.
- Drawer useful size: L.948 x D.421 x H.60 / 130 / 200 mm.
- Furnished with 8 separators for drawers of 60 mm and 8 separators
for drawer of 130 mm.



ED	H [mm]	L [mm]	P [mm]	Colour	ΔΔ [kg]
JET.6M5	1000	1154	546	Rouge 3020	104.5
JET.6GM5	1000	1154	546	Noir 9004	104.5

JET+ ROLLER CABINETS

Jet+ 6-drawer mobile workbenches - 3 modules per drawer



- 6 drawers = 15 modules distributed in the 60 and 130 mm drawers:
 - 4 drawers 60 mm high = 12 modules.
 - 1 drawer 130 mm high = 3 modules.
 - 1 drawer 270 mm high.
- The 200 and 270 mm drawers can also be fitted with modules.
- Supplied with 6 partitions for 60 mm drawers and 2 partitions for 130 mm drawers.
- Total load in the drawers: 140 kg.
- High storage capacity drawers: 155 litres.
- 1 full-length closed compartment for storing long tools:
 - Door with key lock.
 - Identical key for the drawers and the compartment.
- Supplied with the plastic carrier tray.
- For the wood top version, just add wood top JET.A14M5.
- Compatible with the JET+ and JET.XL range of accessories.
- 4 very high performance wheels 160 mm diameter - 2 castors (including 2 with brakes) and 2 fixed.
- Drawer useful size: L.569 x D.421 x H.60/130/200 mm.
- Compartment dimensions: L.378 x D.430 x H.679 mm (passage width with door open 310 mm).



ED	H [mm]	L [mm]	W [mm]	Colour	ΔΔ [kg]
JET.T6M3	1000	1154	546	Red 3020	100.0
JET.T6GM3	1000	1154	546	Black 9004	100.0



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FIND THE COMPLETE RANGE ROLLER CABINET JET +



PAGE 54



RATCHETS - SOCKETS - HG

3/4" 6-point sockets set 19 - 55 mm



Including:

- 1 K.152 3/4" 72-teeth square drive, length: 505 mm.
 - 13 12-point OGV® sockets 3/4" square drive: 19 - 21 - 22 - 24 - 27 - 30 - 32 - 34 - 36 - 41 - 46 - 50 - 55 mm.
 - 2 3/4" extensions:
 - K.210B: length 200 mm.
 - K.215B: length 400 mm.
 - 1 K.240A 3/4" square drive universal joint, length: 105 mm.
 - Supplied in plastic case BV.COMPO-K, compatible with drawers of JET+ rolling cabinets and JETLINE units.
- Dimensions (L. x D. x H.): 565 x 412 x 105 mm.

	$\Delta\Delta$ [kg]
K.500	13.7

3/4" 12-point sockets set 19 - 55 mm

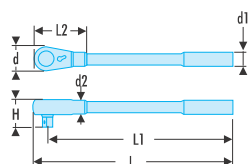


Including:

- 1 K.152 3/4" 72-teeth square drive, length: 505 mm.
 - 13 6-point OGV® sockets 3/4" square drive, KHB or KB: 19 - 21 - 22 - 24 - 27 - 30 - 32 - 34 - 36 - 41 - 46 - 50 - 55 mm.
 - 2 3/4" extensions:
 - K.210B: length 200 mm.
 - K.215B: length 400 mm.
 - 1 K.240A 3/4" square drive universal joint, length: 105 mm.
 - Supplied in plastic case BV.COMPO-K, compatible with drawers of JET+ rolling cabinets and JETLINE units.
- Dimensions (L. x D. x H.): 565 x 412 x 105 mm.

	$\Delta\Delta$ [kg]
K.501	13.7

3/4" drive "heavy duty" ratchet



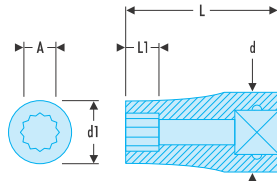
NF ISO 3315, ISO 3315, DIN 3122, ASME B107.10

- Suitable for outdoor working:
 - Sturdy mechanism protected against dirt.
 - Recessed reversing switch.
 - 9° increments.
 - 40 tooth mechanism.
 - Removable handle K.149M.
- Plunger lock.
- Finish: mat chrome.

	d [mm]	d1 [mm]	d2 [mm]	H [mm]	L [mm]	L1 [mm]	$\Delta\Delta$ [kg]
K.149	65,5	25	32	62	510	475	2,9

RATCHETS - SOCKETS - HG

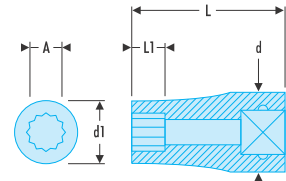
3/4" hexagonal socket 43 mm "IVECO HGV's"



- Examples of use: IVECO HGV's hub removal.
- OGV® profile.
- Safe locking with ratchets and accessories fitted with plungers.
- Fitted with quick release button.
- Finish: chromed.

Part No.	A [mm]	d [mm]	d1 [mm]	L [mm]	L1 [mm]	Hex [mm]	ΔΔ [g]
K.43HB	43	40	60,7	66,9	27	6	560

1" 12-point sockets 65 mm



- Example of use:
 - IVECO: disc bearing nut.
 - Mercedes: transfer or transmission box gears.
- Thinner, lighter body.
- Safe locking with ratchets and accessories fitted with plungers.
- Push-button release.
- Finish: chromed.

Part No.	A [mm]	d [mm]	d1 [mm]	L [mm]	L1 [mm]	12 [mm]	ΔΔ [kg]
M.65B	65	58,3	85,4	92	42	12	1.7

TORQUE CONTROL - HG

Click wrenches with removable ratchet



- Factory accuracy: ± 4%.
- Reliability of mechanism: 50 000 cycles (wrenches up to 200 N.m).
- Can be used with Ø 30 mm accessories.
- One-way wrenches usable for unscrewing by reversing the bits.
- Numbered wrench supplied with ISO 6789 calibration certificate.
- Supplied in plastic box with ratchet.

Part No.	L [mm]	Attachement	Capacity [N.m]	Clé	Cliquets	Graduation [N.m]	ΔΔ [kg]
K.306A1000	1280	Ø 30 mm	200 - 1000	K.306-1000D	K.151A	4,00	5,9



TORQUE CONTROL - HG

■ Torque and angle adapter

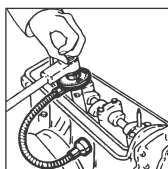


- Accuracy:
 - Torque: $\pm 3\%$ between 20% and 100% wrench capacity.
 - Angle: $\pm 2^\circ$.
- Measuring mode: peak or follower.
- Cycle counter.
- Locking keypad (the operator has access only to program choices and result memorising).
- Measuring unit: N.m, ft.lb, ln.lb, kg.cm, deg.
- Presetting possible of 9 torque and/or angle values.
- Memory: 50 values.
- Supplied in plastic case with calibration certificate.



➤	L [mm]	Capacity [N.m]	Resolution	$\Delta\Delta$ [g]
E.506-340S	80	17 - 340	0,1	268

■ DM - Angular tightening gauges

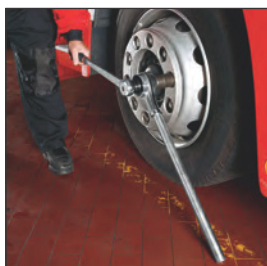
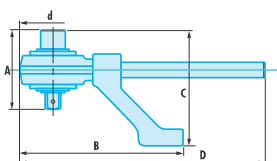


- Magnetic attached angle gauge for cylinder heads.
- Allows accurate measurement of angle following tightening with a torque wrench.
- Flat drum with top reading.
- Drum positioning on the value recommended by the manufacturer, then tightening to zero.
- Graduations: 2° .
- Male and female square drive.
- Fixed point by flexible with magnet.



➤	d [mm]	L [mm]	Square ["]	$\Delta\Delta$ [g]
DM.360	63	410	1/2	350
DM.370	73	430	3/4	550

■ MC.B Torque Multiplier



- Compact and lightweight models suited to maintenance work on vans, trucks.
- Multiplication ratio: 5:1.
- Supplied with 2 reaction arms (straight and angled) and one spare drive square.

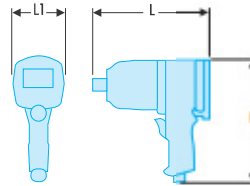


➤	A [mm]	B [mm]	C [mm]	d [mm]	L [mm]	Capacity Maxi [N.m]	F Square	Male Square	$\Delta\Delta$ [kg]
MC.130B	126	263	180	106	396	1300	3/4	1/2	3.8
MC.270B	128	263	186	106	396	2700	1	1/2	3.8

PNEUMATIC TOOLING - HG

3/4" titanium impact wrench

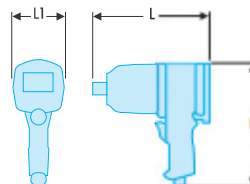
- Lightweight titanium housing for maximum durability.
- Feather throttle for maximum operator control.
- Titanium exhaust deflector & muffler.
- Over molded comfort grip.
- One hand power & reverse adjustment.
- Innovative motor construction increases durability.



FACOM	H [mm]	L [mm]	L1 [mm]	ΔΔ [kg]
NK.3000F	227	227	97	3,8

3/4" composite impact wrench

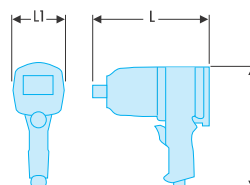
- Durable twin hammer mechanism encased in a strong aluminium housing.
- One switch integrating regulation and forward reverse.
- Insulating and lightweight durable composite housing.
- Feather teasing trigger for optimal speed regulation.
- Specific short design to get into confined spaces.
- Socket ring retainer for safety.



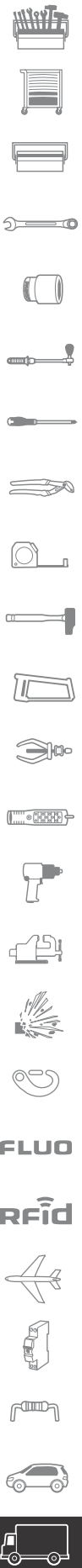
FACOM	H [mm]	L [mm]	L1 [mm]	ΔΔ [kg]
NK.2000F2	213	221	86	3,9

3/4" aluminum impact wrench

- Durable twin hammer mechanism encased in a strong aluminium housing.
- One hand forward reverse switch with integrated regulator with 6 positions.
- Feather teasing trigger for optimal speed regulation.
- Socket ring retainer for safety.



FACOM	H [mm]	L [mm]	L1 [mm]	ΔΔ [kg]
NK.1000F2	233	222	93	5,6



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PULLERS - HG

Hydraulic puller 10 T for outside puller - 3 sets of legs



- Versatile: takes 2 or 3 legs.
- Safety: power is limited hydraulically to 10 tonnes. No risk of breakage.
- Comprising:
 - A 10-tonne hydraulic jack (100 kN) U.312-01 + and guide tip U.312-02 + set of 2 extensions U.312-03.
 - A body with 2 or 3 legs U.312-04 + centering screw U.312-04-01 + set of 3 screws/nuts U.312-04-02.
 - 3 sets of legs: U.312G160, U.312G210 and U.312G260.
- Supplied in plastic case U.312VAL.



	H [mm]	W [mm]	L [mm]	$\Delta\Delta$ [kg]
U.312HJ3	105	412	565	13.2

Hydraulic puller 10 T for outside puller - 4 sets of legs



- Versatile: takes 2 or 3 legs.
- Safety: power is limited hydraulically to 10 tonnes. No risk of breakage.
- Comprising:
 - A 10-tonne hydraulic jack (100 kN) U.312-01 + and guide tip U.312-02 + set of 2 extensions U.312-03.
 - A body with 2 or 3 legs U.312-04 + centering screw U.312-04-01 + set of 3 screws/nuts U.312-04-02.
 - 4 sets of legs: U.312G110, U.312G160, U.312G210 and U.312G260.
- Supplied in plastic case U.312VAL.



	H [mm]	W [mm]	L [mm]	$\Delta\Delta$ [kg]
U.312HJ4	105	412	565	14.4

CYLINDER HEAD - PISTONS - VALVES

■ Piston ring compressors 100 - 160 mm

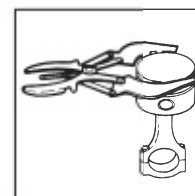
- For easy insertion of piston into cylinder bore and even compression over full ring length.
- Ratchet mechanism.
- Complete with key (length: 6 mm).



	d [mm]	L [mm]	ΔΔ [g]
750.KB	100...160	80	300

■ Piston ring pliers

- Even distribution of the load around the piston ring.
- Fast.



	d [mm]	W [mm]	L [mm]	ΔΔ [g]
751.K	90...150	255	255	330

■ Renault and Volvo Trucks OIL FILTER WRENCH

- For filters in confined spaces.
- Filters situated in compact clusters make using a strap or chain wrench very difficult, even impossible.
- Diameter 106 mm.
- 15-point.
- 1/2" drive bit or 36 mm - 6-point socket.



	ΔΔ [g]
DR.106-15	450

PULLERS

Complete range of pullers see section 12 p. 624.



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AUTOMATIC OIL-FILTER WRENCH

Self-gripping oil-filter wrench for HGV's



- For HGV's and farming vehicles.
- 1/2" drive bit.
- For oil filters diam.: 95 --> 165 mm.



Part Number	Weight [kg]
D.151PL	1,345

Automatic oil-filter wrench for HGV's

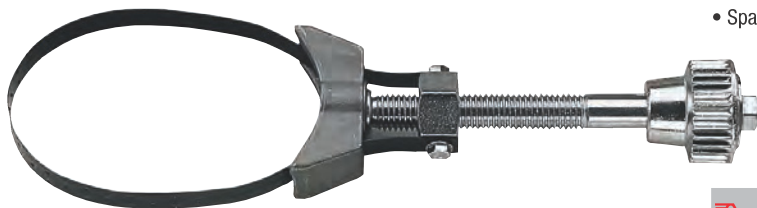


- For HGV's and farming vehicles.
- For filters diam.: 106 --> 145 mm.
- Ratchet effect increment: 5°.
- Optimised automatic tightening.
- Spare strap U.48-PL2 for oil filter wrench.



Part Number	Weight [g]
U.48PL	290

Adjustable oil-filter wrench for HGV's



- Automatic oil filter wrench for HGV's and farming vehicles.
- For filters diam.: 105 --> 145 mm.
- Max length: 300 mm.
- Spare strap U.46APL2 for oil filter wrench.

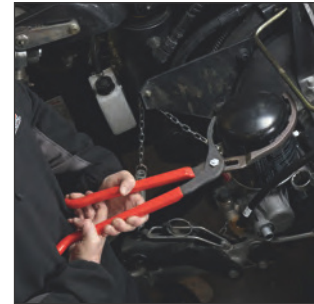


Part Number	Weight [g]
U.46PL	350

AUTOMATIC OIL-FILTER WRENCH

XL filter pliers

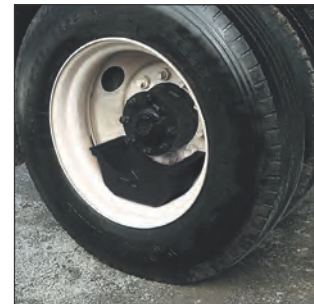
- Forged pliers.
- Capacity: diameter 95 to 178 mm .
- Fast and precise adjustment, 8-position slip-joint.
- Return spring.
- "triangle" teeth for enhanced filter tightening.
- Main applications industrial vehicles, buses, nautical (desiccator filters, oil filters, plugs).



Icon	L [mm]	ΔΔ [kg]
170.FIL	500	1.5

Hub truck oil pan

- Shaped to follow the wheel.
- 2.6 l capacity.
- Additional hole on the upper part to drain the oil from the nuts.
- Two magnets for improved stability.



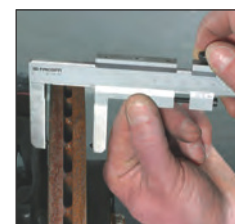
Icon	ΔΔ [g]
D.HUP	738

BRAKES - HG

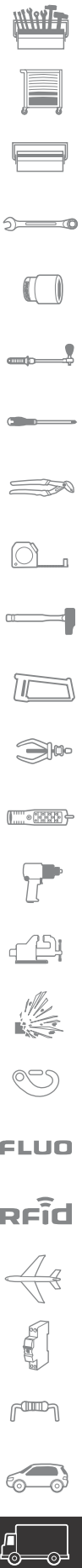
INSPECTION

Disc brake vernier caliper

- Vernier caliper for checking the thickness of brake discs.
- Accurate, error-free reading.
- Measurements can be taken with wheel in place (if no protective bodywork).
- Can quickly demonstrate to customers the need for changing brakes.
- Capacity 0 to 50 mm, outer thickness measurement of the disc brakes of cars and LCV's.
- Nose length: 50 mm.
- 0.1 mm reading increments.
- Mechanical memory device.
- Supplied in a reinforced fabric case with serial number for traceability in ISO certified workshops.



Icon	ΔΔ [g]
DF.18-01	250

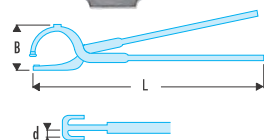


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DRUM

196 Brake-spring pliers



- For removing shoe springs.
- Suitable for right-handed and left-handed working.



ED	B [mm]	d [mm]	L [mm]	ΔΔ [kg]
196.TS	83	3	350	0.580
196.KS	100	5	485	1.2

HEAVY GOODS - INDUSTRIAL VEHICLES

HGV clutch centring set



Includes:

- 4 cylinders diameter 20 -25 -27 -30 mm for bearings.
References DM.30PL-20/-25/-27/-30.
- 2 expandable positioning tools:
- DM.30PL-3645 capacity 36 to 45 mm.
- DM.30PL-4252 capacity 42 to 52 mm.
- Rubber rings reference DM.30PL-01.
- Set supplied in case BP.112 with Tray PL.490.

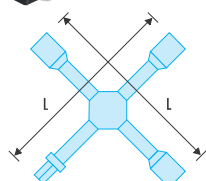


ED	ΔΔ [kg]
DM.30PL	3.260

WHEEL - STEERING - TRANSMISSION - HG

WHEELS

77A.PL - HV Cross braces



- Braces used to remove nuts from wheels of light, utility and heavy vehicles.
- When the brace has a drive bit, it is interchangeable.



ED	d [mm]	L [mm]	Square ["]	ΔΔ [kg]
77A.PL1	24 - 27 - 30 - 32	700	-	4.7
77A.PL2	24 - 27 - 33	700	3/4	4.6

STEERING BALL JOINTS

Hydraulic ball joint puller



- Examples of allocation: Volvo, RVI, Scania, Mercedes.
- Capacity: diameter 36 mm, can be used on ball joints of trucks, coaches.
- Jack power: 8 tonnes.

	H [mm]	W [mm]	L [mm]	ΔΔ [kg]
U.18H36	400	100	480	6.8

HGV's ball joint puller



- Mechanical screw model.
- Diameter 36 mm.

	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
U.18-36	80	210	180	4.3

Ball joint puller



- Used to dismount steering and suspension ball joints.
- Length: 158 mm, height: 75 mm.
- Capacity diameter 32 mm, opening 80 mm.
- U.16A-45-05J3: Set of 3 safety pins.

	A [mm]	d [mm]	H [mm]	L [mm]	ΔΔ [kg]
U.16B32	80	32	75	158	2.5

LCV's, HGV's ball joint puller



- Used to dismount steering and suspension ball joints.
- Length: 158 mm, height: 90 mm.
- Capacity diameter 45 mm, opening 80 mm.
- U.16A-45-05J3: Set of 3 safety pins.

	A [mm]	d [mm]	H [mm]	L [mm]	ΔΔ [kg]
U.16A45	80	45	90	158	2.6



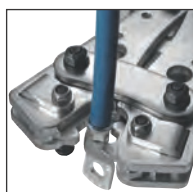
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ELECTRICITY - HG

■ Crimping pliers for tubular terminals with rotating dies



- Rotating dies indexable in 6 positions:
6 - 10 - 16 - 25 - 35 - 50 mm².
- The pliers can be disengaged during crimping.
- Capacity: 6 to 50 mm²



986095	L [mm]	ΔΔ [kg]
	390	1.185

HYDRAULIC CRIMPING



Reliability and safety

- Effortless crimping, identical to original fit, of all large-size electrical terminals (10 to 70 mm²) found on a heavy vehicle.
- Repair faster and higher quality than soldering.
- Easier access and better grip than mechanical liers.
- Examples of use: terminals on batteries, alternators, starters, ground studs, electric lifts, gate links, etc.

■ Hydraulic crimping pliers



- Example of use: battery, alternator, starter, tailgate, trailers.
- High quality crimping in a shape identical to what is done in the factory thanks to the 35,000 N jack and crimping complete trigger system guaranteeing proper pressure.
- Faster and more reliable than welding.
- Crimps electric terminals from 10 to 70 mm.
- Heads rotating over 360° for difficult access.
- Travel adjustable from 5 to 8 mm.
- Pliers dimension (L. x D. x H.): 215 x 180 x 30 mm.
- Pliers supplied in a box with 5 hexagon-shaped dies: 10 - 25 - 35 - 50 - 70 mm².



789.5	H [mm]	L [mm]	W [mm]	ΔΔ [kg]
	30	215	180	1.7

12 - 24 volt battery charger for HGV's, CGV's, LGV's, farm equipment



- Compatible with all "lead acid" batteries: VLRA, GEL, AGM, CALCIUM, Liquid.
- "Standard" mode for humid battery.
- "Power supply" mode to supply and save memory when changing a battery.
- "Dry" mode for charging AGM, GEL and VLRA batteries.
- Can be used as maintaining charger.
- "BOOST" mode to save limit batteries.
- Automatic charge compensation according to the temperature around the battery.
- Automatic 12 - 24 V switching.
- For batteries 12 V and 24 V, 90 Ah to 600 Ah batteries.
- Power supply: 200 V, 50 - 60 Hz.
- Supplied with alligator clips.



BC2410	ΔΔ [kg]
	2,3

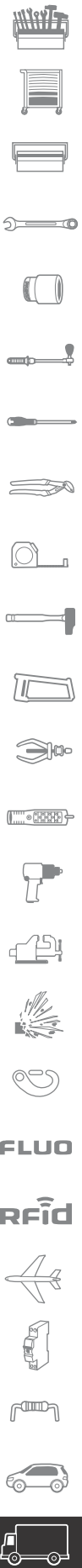
Automotive multimeter



- Measures internal resistance of batteries.
- Automatic calibre.
- Voltmeter: AC / DC 0 --> 600 V.
- Ammeter: AC / DC 0 --> 400 mA.
- Ohmmeter: 0 0 --> 40 MO.
- Continuity and LED test.
- Temperature measurement.
- Cyclic ratio: 5% --> 99% .
- Cam angle.
- Tachometer.
- Frequency meter: 1 Hz --> 400 KHz.
- Compatible with clip-on ammeter Ref 711A.P500.



714A	ΔΔ [kg]
	1,265



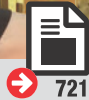
YOUR HEALTH IS IMPORTANT. PROTECT YOURS BY USING THE BEST QUALITY TOOLS DESIGNED FOR YOUR SPECIFIC APPLICATION. USING TOOLS IN THE CORRECT MANNER IS YOUR BEST GUARANTEE.



GLOVES



EYE PROTECTION



MASKS



MATS



GENERAL RECOMMENDATIONS :

These safety recommendations for tool usage reflect good engineering practice and are not intended to be a comprehensive set of rules. They complement, but do not replace, standard precautions to be taken by every user complying with professional guidelines, company procedures and national regulations.

PERSONAL SAFETY

- Wear eye protection for any job involving chips, splinters, sparks, dust, flashes or UV rays.
- Wear gloves to protect against cuts, knocks and burns.

1,000 V INSULATED TOOLS FOR ELECTRICAL SAFETY

- Never work on or near live components without 1,000 V tools. Only these can provide the insulation required for adequate protection. Plastic handles of other tools are not designed to insulate.

CORRECT TOOL SELECTION

- Use the right tool. Each tool is designed for a specific application and should not be used for other jobs. Only the right tool will ensure safety, comfort and productivity.
- Never attempt DIY modifications to a tool, whether by grinding, welding or heating. Altered specifications could make it unsafe.
- Do not exceed tool capacities with inappropriate extensions or impact accessories.

SENSIBLE PRECAUTIONS

- Secure balance especially when pushing and pulling, e.g. tight fasteners.
- Straight back and bent knees when lifting.

TOOL CARE

- Keep tools clean to prevent risk of slipping and give a more secure grip.
- Check tools before use for any defects such as excessive wear or breakage. Some mechanisms need regular cleaning and lubrication.
- Keep and follow manufacturers' operating instructions. Use the complete contents of any service kits.

WORKSHOP FURNITURE AND STORAGE



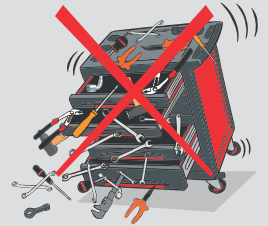
55

ROLLER CABINETS

- Never open more than one loaded drawer at a time, otherwise the unit may tip.
- Do not exceed drawer load capacity.
- Apply the brake when stationary. Close and lock all drawers before moving.
- Do not pull the cabinet towards you, always push it and avoid balancing items on top.



- Don't pull behind you.
- Nothing balanced on top.



- Only one drawer at a time

TOOLBOXES AND CHESTS

- Watch your back when lifting heavy containers.
- Do not stand on toolboxes.
- Mind your hands and wear gloves. Sharp or rough objects should not be kept loose.

WRENCHES



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SENSIBLE PRECAUTIONS

- Secure your balance and pull the wrench towards you rather than push it.
- Wear gloves and eye protection.
- Do not grind, weld or heat your tool. It could become unsafe.
- Check condition of both fastener and tool before use.

CORRECT TOOL SELECTION, WITHOUT OVERLOAD

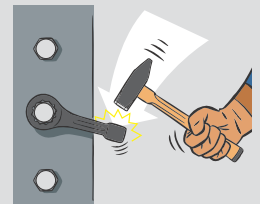
- Never exceed tool capacity. Do not use an extension or a hammer.
- Always use the right size for the fastener head.
- Select a ring wrench for high torques. When using an open-end wrench, engage fastener head fully to avoid distorting the nose of the wrench, and work in a straight line.



- Always pull the wrench towards you.



- No metric tools on inch sizes.



- Only fit slogging wrenches.

SOCKETS



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PERSONAL SAFETY WITH IMPACT SOCKETS

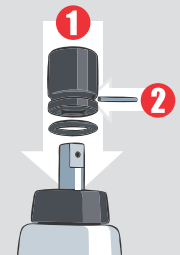
- Always secure sockets to the machine with locking ring and pin (references given for each socket).
- Never hold a socket or accessory while the machine is turning.
- Wear gloves and eye protection.
- Never use a manual or simple machine socket on a power impact tool.

SENSIBLE PRECAUTIONS

- Secure your balance. Pull the tool towards you rather than push it.
- Use only recommended extensions and do not overload.
- Check that ratchet mechanisms engage fully.
- Select 6-point sockets if fasteners are worn or hardened.
- Do not use tools showing signs of breakage or excessive wear.



- Don't exceed tool capacity or use oversize extensions.



- Only use impact sockets when locked.

SCREWDRIVERS



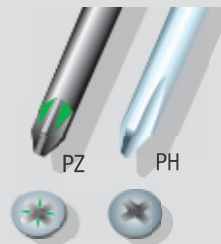
415

PERSONAL SAFETY

- Plastic-handled screwdrivers are not insulated, with the exception of 1,000V tools.
- Keep your free hand clear when driving home a fastener in case the screwdriver slips.
- Wear gloves.

CORRECT TOOL SELECTION

- Avoid using screwdrivers as chisels, levers or punches.
- Avoid damage to fastener heads or tool blades, always select the appropriate pattern.
- Do not modify or heat blades as this will impair performance.
- For extra torque select a screwdriver with a hexagonal bolster.
- Wood-handled through-blade screwdrivers withstand gentle tapping on the end to free seized fasteners.



- Select the correct pattern :
Black blades PZ : Pozidriv®.
Chrome blades PH : Phillips®.



- Never use a screwdriver as a chisel or lever.

SAFETY RECOMMENDATIONS

PLIERS



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PERSONAL SAFETY

- Wear eye protection, especially when cutting wire and fitting circlips or rivets.
- Sheathed handles are not insulating. Only 1,000V tools are designed for working with live components.

CORRECT TOOL SELECTION

- Keep within cutter capacity (wire diameter and hardness).
- Do not modify or heat tips as this will impair performance.
- Cut at right angles and avoid twisting the wire. Use the throat rather than the tip of cutting edges.
- When fitting circlips, use a tool within the correct range and only compress or expand the clip just enough.
- Lock-grip pliers should not be used as a permanent clamp. Components can move due to vibration or shock.



- Never modify the shape of a tool.



- Always use a 1,000V insulated tool when working with live components.

HAMMERS, IMPACT TOOLS



559

PERSONAL SAFETY

- Wear gloves and eye protection.
- Avoid striking equally hard surfaces. Do not use a hammer on surfaces exceeding 46 HRc. Use a mallet instead.
- Do not use suspect tools such as hammers with chipped heads, insecure or cracked handles, excessively mushroomed chisels or punch ends. Check handle fit before use.
- Hammering may generate sparks. Do not use hammers in a fire-risk area.

CORRECT TOOL SELECTION

- Rule of thumb: hammer head should have a diameter about 10 mm larger than the surface to be struck. Avoid hitting with the edge of the hammer.
- Select chisels and punches fitted with a guard for increased safety and comfort.
- Do not use punches for leverage.



- Select tools with a guard.



- Never use tools with ill-fitting or damaged handles.



- Never "hard on hard".
- Check tool condition before use.

SAWING, CUTTING, DRILLING



583

WATCH OUT FOR CHIPS

- Wear eye protection and gloves when sawing, cutting or drilling, and when handling sheet metal or metal objects while machining.
- Keep hands away from the cutting path.
- Metal shears are designed for cutting sheet metal, not for wire.
- Keep within capacities.



- Don't cut wire with metal shears.

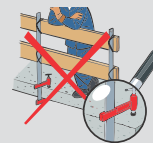
PRESSES AND BAR CLAMPES



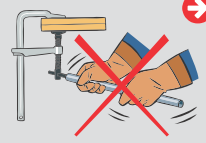
737

REMAIN WITHIN CAPACITY

- Presses and bar clamps are not designed for permanent clamping and should never be used to construct a guard rail or platform.
- Avoid using bar clamps to hold assemblies subject to vibration or shock, as the joint could work loose.
- Do not use these tools for lifting.
- Always check before use and keep within clamping capacity (do not use extensions or impact tools).



- Never erect guard rails or platforms using clamps.



- Don't use an extension for tightening.

VICES



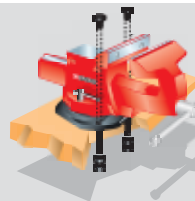
736

PERSONAL SAFETY

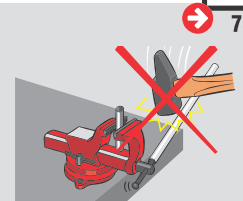
- Fit the vice securely to a suitably sized support.
- Never use an extension or a hammer to tighten a vice. Avoid clamping hard towards the end of the jaws.
- Do not use the jaws as an anvil.
- Never repair or modify a vice.
- Always wear eye protection and gloves when grinding, sawing, drilling and hammering.

CORRECT TOOL SELECTION

- Select a swivel-base vice so that you approach the workpiece from the best angle.



- Fix vice securely to bench.



- Don't use a hammer or extension to increase pressure.

TORQUE CONTROL

SENSIBLE PRECAUTIONS FOR PRECISION TOOLS

- Avoid overloading by applying torques beyond rated capacity.
- Never fit an extension as this would modify lever ratios and give incorrect readings.
- Always store torque wrenches carefully after use.
- Torque wrenches are precision tools. Have yours checked regularly by accredited Facom facilities.
- Read operating instructions before use.
- Do not use impact drivers on torque multipliers. Always use a torque wrench.



- Careful storage and regular inspection by accredited Facom facilities.



- Never fit an extension to a torque wrench.



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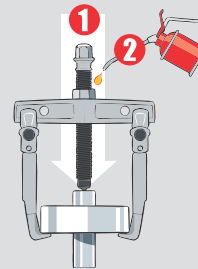
PULLERS

PERSONAL SAFETY

- Wear gloves, eye protection and safety shoes.
- Pullers generate several tonnes of force during use.
- Ensure correct positioning – centred, in line with the pulling axis and with a good grip on each leg.
- Steady a puller where necessary to avoid rotation during tightening.
- Cover the assembly to contain components if the fitting splits suddenly or the puller slips.
- Do not stand in line with the puller and keep other people away.

CORRECT TOOL SELECTION

- Never exceed puller capacity.
- Use a 3-leg puller rather than a 2-leg, and select short legs.
- Always check tool condition before use and lubricate the screw. If a leg needs changing, replace the complete set.
- Never modify or heat the legs as this will make them unsafe.
- Do not operate with an impact wrench.
- Use a mallet if the screw needs tapping to unstick a fitting.
- Do not use impact drivers on nut splitters.



- Always check that the pressure screw is properly centred and legs have secure purchase.
- Lubricate the screw regularly.



- Don't modify the legs of a puller as this will make it unsafe.



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AIR TOOLS

PERSONAL SAFETY

- Wear gloves and eye protection. Wear a dust mask when sanding.
- For intensive use, protect your hearing with ear muffs.
- Consider the safety of bystanders.

SENSIBLE PRECAUTIONS

- Always disconnect tools before fitting drill bits, grinding wheels or impact sockets.
- Keep within accessory rated diameters and speeds.
- Retain original guards (e.g. on grinding tools).
- On impact power wrenches, use only impact sockets with appropriate locking pin and ring.
- Read operating instructions before use.



- Always wear appropriate protective gear.



- Always lock sockets to the machine.



- Always disconnect power tools before fitting accessories.

- Facom air tools conform to current standards.



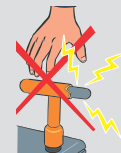
741

WORKING ON OR NEAR LIVE COMPONENTS

- Only 1,000V insulated tools protect from electrical hazards up to 1,000V AC.
- Facom 1,000V insulated tools conform to European standard EN 60900 and are individually tested and checked.
- Inspect your tool after each use. Discard if the insulation is damaged.
- Give yourself additional protection by using gloves, mats and anti-UV goggles.



- 1,000V insulated tools must be used when working near live components.



- Never use a tool with damaged insulation.



950

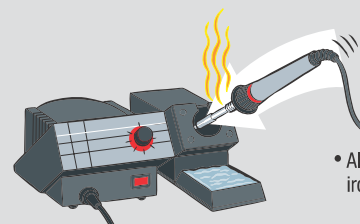
ELECTRICAL AND ELECTRONIC ASSEMBLIES

PERSONAL SAFETY

- Wear eye protection when there is a risk of flying debris, e.g. for wire cutting, stripping, crimping or soldering. Choose wire strippers with off-cut retainers.
- Work with loaded capacitors or live components using antistatic tools (dissipating sheaths).

CORRECT TOOL SELECTION

- Do not leave a hot soldering iron on fragile or flammable surfaces. Always use a stand. Do not store a soldering iron while hot. Disconnect after use.
- Use ESD antistatic tools to IEC 61340-5-1 and IEC 61340-5-2 to protect sensitive electronic components.



- Always rest a hot soldering iron on its stand.



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CONVERSION OF MEASURING UNITS

- The table below gives the SI unit conversion factors of a certain number of units that do not belong to the SI system. Some of these are still in use in France or abroad, in general or specialised applications, others belong to old systems of measurement that are now obsolete.
- Units that are specific to the United States or the United Kingdom are indicated respectively by "US" or "UK" in brackets.

SYMBOLS AND ABBREVIATIONS

UNITS	SYMBOL OR ABBREVIATION	SI UNIT CONVERSION FACTOR	PHYSICAL QUANTITY	COMMENT
Ampere-hour	Ah	$3,6 \times 10^3 \text{c}$ (exact)	Quantity of electricity	Used for storage batteries
Angström	Å	10^{-10}m (exact)	Length	Wavelength, atomic distance
Bar	bar	105Pa (exact)	Pressure	Fluids
Barrel (US)	bbl	$0,158\ 987\ 3 \text{ m}^3$	volume	1 barrel (US) = 42 gallons (US).
Calorie I.T	cal I.T	$4,186\ 8 \text{ J}$ (exact)	Energy	Quantity of heat
Candela	cd	Basic SI unit	Luminous intensity	
Cheval vapeur (horsepower)	ch	$735,498\ 75 \text{ W}$ (exact)	Power	1ch = 75 kgm/s (exact).
Degree	°	$1,745\ 329 \times 10^{-2} \text{ rad}$ (2/360 rad)	Angle	
Degree Celsius	°C	$T_k = 0^\circ\text{C} + 273,15$ (exact)	Temperature	The origin of the Celsius scale is set by convention at 273.15 K.
Degree Fahrenheit	°F	$T_k = 5/9 (0^\circ\text{F} + 459,67)$ (exact)	Temperature	$0^\circ\text{C} = 5/9 (0^\circ\text{F} - 32)$ (exact)
Electronvolt	eV	$1,602\ 177\ 33 \times 10^{-19} \text{ J}$	Energy	Atomic and nuclear physics
Farad	F	Derived SI unit $1\text{F} = 1\text{C/V}$	Electric capacitance	
Faraday		$9,648\ 70 \times 10^{-4} \text{ C}$	Quantity of electricity	Based on carbon 12.
Fluid ounce (UK)	fl oz (UK)	$2,841\ 30 \times 10^{-5} \text{ m}^3$	volume	
Fluid ounce (US)	fl oz (US)	$2,957\ 35 \times 10^{-5} \text{ m}^3$	volume	Liquids
Foot	ft	$30,48 \text{ cm}$ (exact)	Length	The symbol ' is also used
Gallon (UK)	gal (UK)	$4,546\ 09 \times 10^{-3} \text{ m}^3$	volume	
Gallon (US)	gal (US)	$3,785\ 41 \times 10^{-3} \text{ m}^3$	volume	Liquids
Hertz	Hz	Derived SI unit $1\text{Hz} = 1\text{s}^{-1}$	Frequency	
Horsepower (UK)	hp	$745,700 \text{ W}$	Power	The US value of horse power varies according to the field.
Inch	in	$2,54 \text{ cm}$ (exact)	Length	The symbol " is also used.
Joule	J	Derived SI unit $1\text{J} = 1\text{N.m}$	Energy	Work, quantity of heat
Kelvin	K	Basic SI unit	Temperature	Thermodynamics
Kilogram-meter	kgm	$9,806\ 65 \text{ J}$ (exact)	Work	
Kilogram-force	kgf	$9,806\ 65 \text{ N}$ (exact)	Force	
Kilowatt-hour	kWh	$3,6 \times 10^{-6} \text{ J}$ (exact)	Energy	Electrical energy consumption
Liquid pint (US)	liq pt (US)	$4,731\ 76 \times 10^{-4} \text{ m}^3$	volume	Liquids
Liquid quart (US)	liq qt	$9,463\ 529 \times 10^{-4} \text{ m}^3$	volume	Liquids
Litre	l, L	10^{-3} m^3 (exact)	volume	C.G.P.M. 1964.
Lux	lx	Derived SI unit $1\text{lx} = 1\text{lm/m}^2$	Illumination	
Micron	μ	10^{-6} m (exact)	Length	Replaced by micrometer
Mile	mile	$1,609\ 344 \times 10^3 \text{ m}$ (exact)	Length	Also called "statute mile"
International nautical mile		$1,852 \times 10^3 \text{ m}$ (exact)	Length	Sea and air navigation
Millimetre of mercury (conventional)	mmHg	$133,322\ 4 \text{ Pa}$	Pressure	Equal to 13..595 1 mmH2O. (exact).
Nautical mile (UK)		$1,852 \times 10^3 \text{ m}$ (exact)	Length	Since 1970, the UK nautical mile is equal to the international nautical mile.
Newton	N	Derived SI unit $1\text{N} = 1 \text{ kg.m.s}^{-2}$	Force	
Ohm	Ω	Derived SI unit $1\ \Omega = 1 \text{ V} / \text{A}$	Electrical resistance	
Ounce	oz	$28,349\ 5 \text{ g}$	Mass	16 oz = 1 lb
Pascal	Pa	Derived SI unit $1 \text{ Pa} = 1 \text{ N/m}^2$	Pressure, stress	
Pound	lb	$0,453\ 592\ 37 \text{ kg}$ (exact)	Mass	
Pound-force	lbf	$4,448\ 22 \text{ N}$	Force	
Psi	psi	$6,894\ 757 \times 10^3 \text{ Pa}$	Pressure	Abbreviation of "poundforce per square inch".
Radian	rad	Derived SI unit 1 m/m	Angle (plane)	The symbol rd has also been used in France
Second	s	Basic SI unit	Time	
Torr	torr	$133,322\ 4 \text{ Pa}$	Pressure	1/760 normal atmosphere (exact).
Volt	V	Derived SI unit $1 \text{ V} = 1 \text{ W/A}$	Electric potential	
Voltampère	VA	1 W (exact)	Apparent power	Electricity.
Watt	W	Derived SI unit $1 \text{ W} = 1 \text{ J/s}$	Power	
Watt-hour	Wh	3600 J (exact)	Energy	Electrical energy consumption
Weber	Wb	Derived SI unit $1 \text{ Wb} = 1 \text{ V.s}$	Magnetic induction	
Yard	yd	$0,914\ 4 \text{ m}$ (exact)	Length	