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# **RATCHETS - SOCKETS**

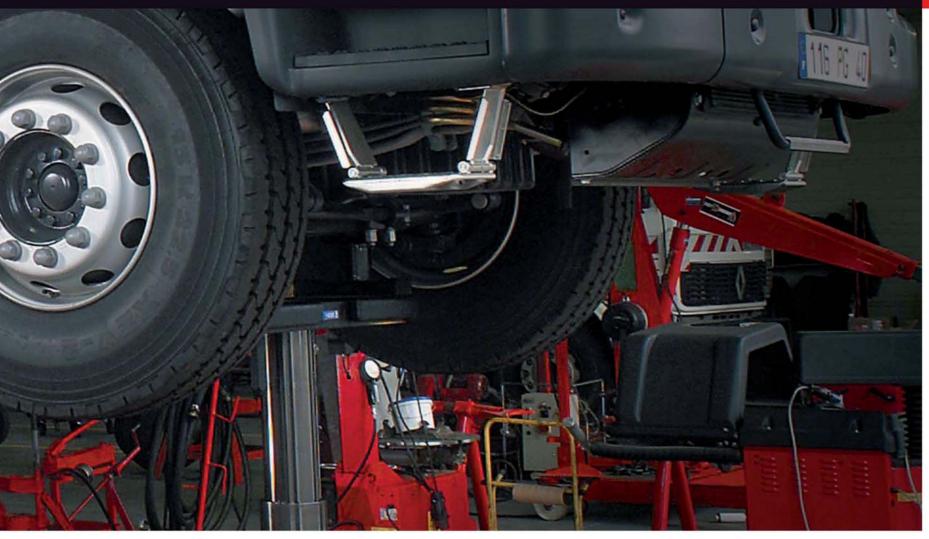


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# **TORQUE CONTROL**



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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.

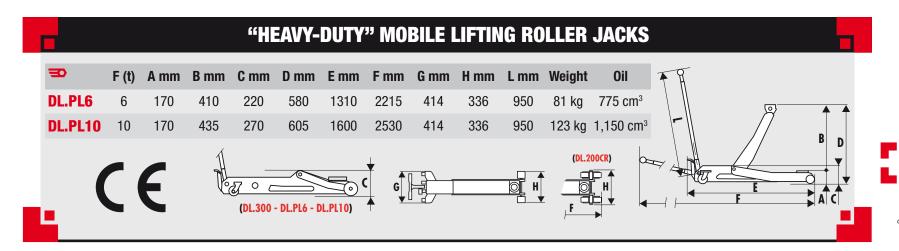
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- Load capacity: 6 t and 10 t.
- Maximum lifting height:
- 6 t jack: 580 mm.
- 10 t jack: 605 mm.
- Minimum height under body: 170 mm.
- Quick installation device.

<b>=</b> 0	Δ\\ [kg]
DL.PL6	81,0
DL.PL10	122,5



(COMPA)

# **Hydropneumatic jacks**

# Н

# **MOBILE LIFTING HYDROPNEUMATIC JACKS**

# ы

### CHARACTERISTICS COMMON TO "HEAVY DUTY" HYDROPNEUMATIC JACKS

- · Fast empty approach.
- "Dead man" device.
- Load descent automatic rate regulation.
- Air pressure required 7 to 10 bar.
- Conformity with EC Directive on machinery 2006/42/EC and EN 1494.





# **■ DL.PLHP1530P** 15T - 30T intervention carry jack





# EN 1494

Compact and light: designed for use in intervention vehicles.

- Dual stage hydropneumatic jack:
- 15 t.
- 30 t.
- Height:
- Minimum: 150 mm.
- Maximum: 300 mm.
- Jack identical to workshop model, but with shorter body.
- Supplied with 100 mm extension.

Weight: 31 kg.

# **■ DL.PLHP1530A** 15T - 30T workshop jack



### EN 1494

- Dual stage hydropneumatic jack:
- 15 t, lift 370 mm.
- 30 t, lift 275 mm.
- Minimum height under body 185 mm.
- Supplied with 100 mm extension.

Weight: 51.500 kg.

# **■ DL.PLHP1035A** 10T - 20T - 35T extra-flat workshop jack



### EN 1494

- Designed specifically for low ground clearance heavy goods vehicles, e.g. Renault Middlum.
- Triple stage hydropneumatic jack:
- 10 t.
- 20 t.
- 35 t.
- Maximum lifting height: 345 mm including 60 mm extension
- Minimum height under body: 125 mm. Weight: 42.500 kg.













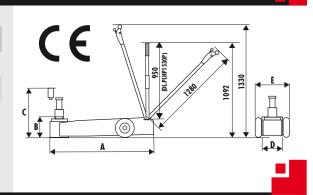






# **MOBILE LIFTING HYDROPNEUMATIC JACKS**

<b>3</b> 0	F (t)	A mm	B mm	C mm	D mm	E mm	Weight	Oil
DL.PLHP1530	15-30	805	185	470	183	300	51.5 kg	1,300 cm <sup>3</sup>
DL.PLHP1530P	15-30	518	150	400	154	253	31 kg	1,300 cm <sup>3</sup>
DL.PLHP1035	10-35	805	125	345	183	280	42.5 kg	1,300 cm <sup>3</sup>





























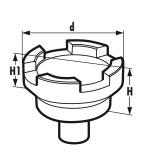




# **Accessories for hydropneumatic jacks**

# **■** Wide head for jacks DL.PLHP1530



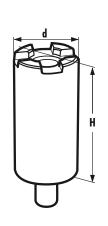


- Wider contact surface with the jack head.
- Adaptable on jacks: DL.PLHP1530 DL.PLHP1530P

<b>=</b> 0	d [mm]	H [mm]	H1 [mm]
DL.PLHP15305204	79,8	40,2	17,03

### Extension





- Extension 100 mm.
- Adaptable on jack: DL.PLHP1035.

<b>=</b> 0	d [mm]	H [mm]
DL.PLHP10355205	50	100

# **Mobile lifting equipment**

# **Bottle jacks**

# **■ 10T - 20T - 30T bottle jacks**



### 2005 / 42 / CE

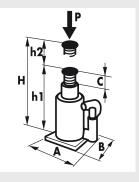
- Designed for heavy-duty professional use.
- Welded base plate jacks:
- High strength.
- Less leaks.
- 20 t and 30 t versions fitted with a carry handle.
- Possible use for special works: the internal pump system allows for horizontal use as a pusher jack.

<b>₹</b>	H mini [mm]	H maxi [mm]	∆∏∆ [kg]
DL.10T	231	444	6,500
DL.20TA	250	459	12,100
DL.30T	263	467	15,500

# **MOBILE LIFTING BOTTLE JACKS**

<b>=</b> 0	P (kg)	A mm	B mm	C mm	h1 (min) mm	h2 mm	H (max) mm	Weight	Oil
DL.10T	10000	140	95	75	231	213	444	6.5 kg	275 cm <sup>3</sup>
DL.20TA	20000	170	143	75	250	209	459	12.1 kg	525 cm <sup>3</sup>
DL.30T	30000	185	143	75	263	204	467	15.5 kg	800 cm <sup>3</sup>







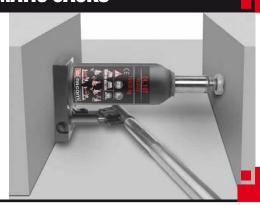
# **MOBILE LIFTING ACCESSORIES FOR HYDROPNEUMATIC JACKS**

# **BOTTLE JACKS**

• Designed for heavy-duty professional use: the welded base provides enhanced strength to the jack, reducing risks of leaks.

### Can be used for special applications:

- The internal pump system allows for horizontal use as a pusher jack. The 20T and 30T are fitted with a carrying handle.
- CE





# **Props**

# **■ DL.PL12** Pin props 12T



- Load capacity: 12 t.
- Height adjustable from 485 to 750 mm.
- Adjustment pitch: 50 mm.
- Captive pin fastened to the body of the prop by a sheathed steel wire.
- CE.

Weight: 25 kg (per pair).













































# **Heavy load props**

# **■ DL.PL22** 22T HGV's jack stands





- Load capacity: 22 t.
- Height:
- Minimum: 310 mm.
- Maximum: 505 mm.
- Safety pin pitch: 55 mm.
- Pin attached by a metallic cable.
- Housing on the base of the stand for the pin.
- Head dimensions: 70 x 80 mm.
- Overall floor dimensions: 250 x 250 mm.
- Supplied in pairs.
- CE.

Weight: 29 kg (per pair).

### **Hoists**

# **WORKSHOP CRANES**

# **Exclusive performance:**

- Easy boom length adjustment without tool nor pin.
- 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.







# **■ DL.20EU** 2T workshop hoist



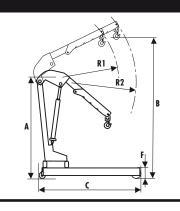


- Capacity: 2000 kg.
- Effective load with boom deployed: 1.650 kg.
- Hoist can be disassembled for European pallets.
- Tool-free boom deployment.
- Effective, fast, precise.
- Easy use, instant adjustment.
- Footprint 1870 x 820 mm.
- CE.
- Exists in 1t version: DL.10EU. Weight: 180 kg.

# **CRANES**



• Exists in 1T version, section 19 workshop equipment.





### **■ DL.10F** Drum lifter



- To handle metal drums with a crane.
- Max. load: 300 kg. Weight: 8.600 kg.

### **■ DL.101** Load balancer



- Allows to balance the load under the hoist according to the shape of the part or engine to lift.
- Maximum load: 600 kg.
- Supplied with 4 fastening chains.
- Easy adjustment by crank.
- Center distance: 330 mm.

Weight: 6.600 kg.



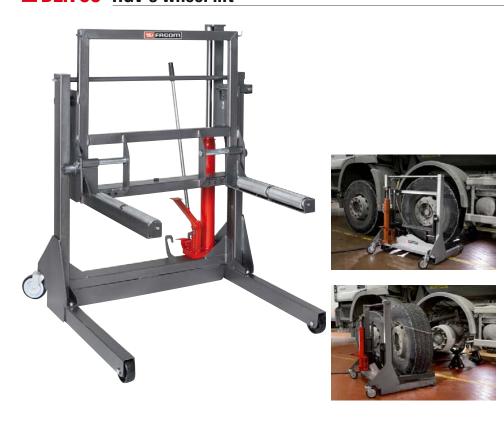






# **Unit lifting jacks**

# **■ DL.700** HGV's wheel lift



### **CE EN 1494**

- To handle dual wheels + drum.
- Maximum load: 700 kg.
- Maximum lifting height: 630 mm.
- Minimum fork height: 105 mm.
- Double rollers adjustable in width, from 480 to 750 mm (5 positions).
- Foot or hand control.
- Wheel holding safety chain.
- Easy rolling thanks to 4 large diameter wheels.
- Load-regulated lowering rate.
- "Dead man" device.
- Overload valve.
- Dimensions: 1000 x 990 x 1150 mm.

Weight: 134 kg.









- For 4WD, LUV and HV below 6 t.
- Max. load: 1200 kg.
- Adjustable height:
- Minimum: 900 mm.
- Maximum: 1.900 mm.
- Adjustable arms.Load holding chains.
- Foot control.
- "Dead man" device.
- Floor diameter: 650 mm.
- Can be fitted with two optional high density foam pads (Ref DI 2001IP)
- Supplied with swivel head. Weight: 35.500 kg.



ramon .





# **Workshop presses**

# **HYDRAULIC PRESSES**

### **30T AND 50T WORKSHOP PRESSES**

- Table raised by a single operator using the integral winch.
- Integral pusher support (set of pushers not supplied).
- 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.



# **■ W.430HA** 30T hydraulic workshop press







- Table raised by a single operator using the integral winch.
- Manual two-speed hydraulic jack, mobile laterally.
- Piston with automatic return spring.
- Piston travel: 150 mm.
- Screw extension: 75 mm.
- Floor anchoring possible.
- Integral pusher support (set of pushers not supplied).
- Supplied assembled with pair of Vees.
- CE.

Weight: 195 kg.

# **■ W.450HPA** 50T hydropneumatic workshop press



- Hydropneumatic foot control.
- Table raised by a single operator using the integral winch.
- Integral pusher support (set of pushers not supplied).
- · Lateral moving jack.
- Piston travel: 150 mm.
- Screw extension: 75 mm.
- Piston with automatic return spring.
- Floor anchoring possible.
- Supplied assembled with pair of Vees.
- CE.

Weight: 229 kg.

# ■ W.430-6 Set of 7 press pushers



- To be used with presses Ref. W.415HA W.430HA -W.450HPA.
- Diameters: 12 16 18 20 22 25 30 mm.
- Length: 57 57 82 82 84 115 108 mm.
- Max loads: 3 8 12 14 18 18 20 t.







































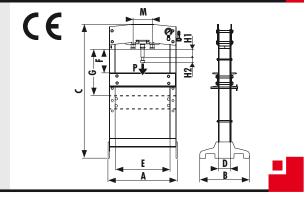






# **HYDRAULIC PRESSES**

P (t)	A mm	B mm	C mm		D mm	E mm
30	880	650	1830		145	710
50	880	650	1910		145	710
mm G	i mm H	l1 mm H	2 mm	M	Weight	Oil
150	700	120	75	250	195 kg	900 cm <sup>3</sup>
155	720	120	75	250	229 kg	900 cm <sup>3</sup>
	150	50 880 mm G mm F 150 700	50 880 650 mm G mm H1 mm H 150 700 120	50 880 650 1910 mm G mm H1 mm H2 mm 150 700 120 75	50       880       650       1910         6 mm       G mm       H1 mm       H2 mm       M         150       700       120       75       250	50       880       650       1910       145         6 mm       G mm       H1 mm       H2 mm       M       Weight         150       700       120       75       250       195 kg



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# **PROTECTION FOR WORKSHOP PRESSES**

# **SAFETY FIRST**

• 2 impact-proof polycarbonate windows protect against risks of projection should a part break under the press.

# **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 30T and 50 T workshop presses.
- Available under a special reference: ask your local dealer.

# **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 20/10<sup>th</sup> steel.

### **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.

### **Multi function:**

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

# 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.













### **■ 2702** 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.

Weight: 42 kg.

### **■ 2702.TAB** Additional shelf



- In galvanised metal sheet thickness 2 mm with anti-fall edges.
- Dimensions: L.960 x D.546 x H.20 mm.

Weight: 9 kg.

Storage Workshop equipment

# **■ 2703** 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.

### Roller chest



- Vertical access model.
- Particularly interesting combination of size and volume.
- Transportable in a vehicle.
- Wheels = 125 mm allowing for long distances without tiring.
- 2 drawers, dim. (L. x D. x H.): 100 x 360 x 300 mm.
- Each drawer is includes a mobile compartment, dim. (L. x D. x H.): 360 x 148 x 40 mm (for small tool storage).
- 2 compartments, dim. (L. x D. x H.): 440 x 140 x 60 mm.
- The roller cabinet lid includes a storage for documents or flat objects.
- Large size chest, dim. (L. x D. x H.): 668 x 443 x 248 mm.
- Locking possible by padlock (not supplied).
- Achiles heels protection on the chest.

<b>=</b> 0	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]
2092A	550	100	670	740	252	512









































### **JET+ roller cabinets**



# **M5 ROLLER CABINET**

# **EXTRA WIDE WORKTOP,**UNEQUALLED STORAGE CAPACITY, EXCEPTIONAL HANDLING.

- **★** 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.
- Overall dimensions (including wheels and worktop): L.1154 x
   D.546 x H.1000 mm.
- Drawer useful size: L.948 x D.421 x H.60 / 130 / 200 mm.

<b>⇒</b>	Colour	∆∏∆ [kg]
JET.6M5	Red 3020	104,50
JET.6GM5	Black 9004	104,50



**Storage Workshop equipment** 

# 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.
- Can be fitted with a JET.C4GM5 chest
- 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.
- Overall dimensions (including wheels and worktop): L.1154 x D.546 x H.1000 mm.
- 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).

<b>=</b> 0	Colour	∆ [kg]
JET.T6M3	Red 3020	100
JET.T6GM3	Black 9004	100

### **Truck selections**

### ■ CM.105 - 105-piece tool set with storage modules



- Set of 9 tool modules (3 drawers), detail below:
- MOD.A1.
- MOD.A3.
- MOD.PR9.
- MOD.R2.
- MOD.S7.
- MOD.440-1.
- MOD.440-2. - MOD.M13.
- MOD.CPE.
- Selection compatible with JET+ and Chrono+ roll cabs.
- Thermoformed modules.

Weight: 13.570 kg.













































# **■ CM.159 - 159-piece tool set with storage modules**



- Set of 13 tool modules (5 drawers), detail below.
- MOD.A1.
- MOD.A3.
- MOD.PR9.
- MOD.R2.
- MODICA
- MOD.S1.
- MOD.440-1.
- MOD.440-2.
- MOD.MI3.
- MOD.ANX.
- MOD.PCSN.
- MOD.TX1. - MOD.601.
- MOD.CPE.
- Selection compatible with JET+ and Chrono+ roll cabs.
- Thermoformed modules.

Weight: 19.270 kg.

**■ K.500** 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. Weight: 13.700 kg.

# **■ K.501** 3/4" 12-point sockets set 19 - 55 mm



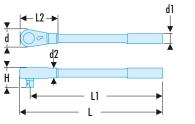
### Including:

- 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. Weight: 13.700 kg.

# ■ 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.
- Plunger lock.
- Finish: mat chrome.

<b>3</b>	d [mm]	d1 [mm]	d2 [mm]	H [mm]	L [mm]	L1 [mm]	L2 [mm]	∆\\ [kg]
K.149	65,5	25	32	62	510	475	151	2,85









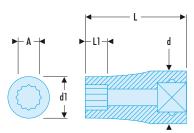






# ■ 3/4" hexagonal socket 43 mm "IVECO HGV's"





# NF ISO 2725-1, NF ISO 1711-1, ISO 2725-1, ISO 1711-1, DIN 3124, ASME B107.5

- 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.

<b>=</b> 0	A [mm]	d [mm]	d1 [mm]	L [mm]	L1 [mm]	∆∏∆ [g]
K.43HB	43	40	60,7	66,9	27	560















# **ASME B107.1**

- 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.

<b>3</b>	A [mm]	d [mm]	d1 [mm]	L [mm]	L1 [mm]	∆™ [kg]
M.65B	65	58,3	85,4	92	42	1,652





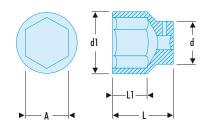






# ■ 1" 12-point sockets 65 mm





### **■** Click wrenches with removable ratchet



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

- 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.

<b>=</b> 0	L [mm]	Graduation [N.m]	Capacity [N.m]	Attachment	Wrench	Ratchet	Вох	∆™ [kg]
K.306A1000	1280	4,00	200 - 1000	Ø 30 mm	K.306-1000D	K.151A	BP.D1000	5,900

# **■** Torque and angle adapter



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

- Accuracy:
- Torque: ± 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.

<b>=</b> 0	Capacity [N.m]	Resolution
E.506-340S	17 - 340	0,1

# **■ DM - Angular tightening wrenches**



- 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.

<b>=</b> 0	d [mm]	L [mm]	Square ["]	∆\\[ [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.

<b>=</b>	A [mm]	B [mm]	d [mm]	L [mm]	∆ [kg]
MC.130B	126	263	106	396	3,80
MC.270B	128	263	106	396	3,80

# **PNEUMATIC TOOLING**



# **COMPLETE RANGE OF PNEUMATIC TOOLS. SEE SECTION 14 P. 676**



# **■** 3/4" titanium impact wrench



- Structure: titanium.
- Impact system: twin hammer.
- Max torque: 2,115 N.m.
- Progressive trigger.
- Power setting: 3.

<b>⇒</b>	H [mm]	L [mm]	L1 [mm]	∆ [kg]
NK.3000F	227	227	97	3,800

































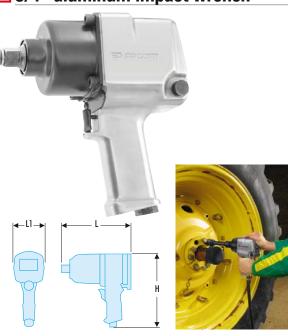
# **■** 3/4" composite impact wrench



- Structure: composite.
- Impact system: twin hammer.
- Max torque: 1,700 N.m.
- Progressive trigger.
- Power setting: 3.

<b>3</b> 0	H [mm]	L [mm]	L1 [mm]	∆ [kg]
NK.2000F2	213	221	86	3,900

# ■ 3/4" aluminum impact wrench



- Structure: aluminum.
- Impact system: twin hammer.
- Max torque: 2,400 N.m.
- Progressive trigger.
- Power setting.

<b>=</b> 0	H [mm]	L [mm]	L1 [mm]	△T∆ [kg]
NK.1000F2	233	222	93	5,600

# **PULLERS**



# **COMPLETE RANGE OF PULLERS SEE SECTION 12 P. 626.**



# **■ U.312HJ3** 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, dimensions (L. x W. x H.): 565 x 412 x 105 mm.

Weight: 13.200 kg.

# **■ U.312HJ4** 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, dimensions (L. x W. x H.): 565 x 412 x 105 mm.

Weight: 14.400 kg.

Power plant Workshop equipment

# **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).

<b>=</b>	d [mm]	L [mm]	∆\\(\D\) [g]
750.KB	100160	80	300







































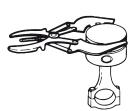






# Piston ring pliers





- $\bullet$  Even distribution of the load around the piston ring.
- Fast.

<b>3</b> 0	d [mm]	∆\\(\D\) [g]
751.K	90150	330

# Cooling

### **■ 780A** Refractometer



- Two quality control measuring cycles:
- Coolant: 0 to -50°C (graduations 5°C).
- Battery fluid density: 1.10 to 1.40 kg / I.
  Simple screw recalibration using distilled water.
- Supplied in a case with a sampling pipette and screwdriver.
- Dimensions (L. x W. x H.): 700 x 235 x 70 mm. Weight: 550 g.

# **Automatic oil-filter wrench**

# **■ D.151PL** 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. Weight: 1.345 kg.

**■ U.48PL** 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. Weight: 290 g.

**■ U.46PL** Adjustable oil-filter wrench for HGV's



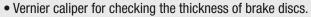
- Automatic oil filter wrench for HGV's and farming vehicles.
- For filters diam.: 105 --> 145 mm.
- Max length: 300 mm.
- Spare strap U.46APL2 for oil filter wrench. Weight: 350 g.

**Brakes Workshop equipment** 

# **Inspection**

# **■ DF.18-01** Disc brake vernier caliper





- 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
- 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.











































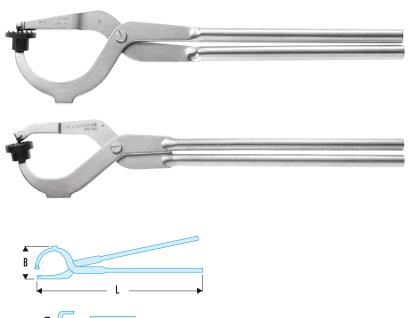








# **■ 196 Brake-spring pliers**



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

<b>3</b> 0	B [mm]	d [mm]	L [mm]	∆∏∆ [kg]
196.TS	83	3	350	0,580
196.KS	100	5	485	1,230

# **Bleeding**

# **HYDRAULIC CLUTCH BLEEDING AND FILLING**

# Performance suited to the requirements of HGV workshops!

- Bleeding and filling HGV hydraulic clutch circuits require a sufficient flow rate.
- The new pump and adjustable pressure of DF.21 ensure it meets this application perfectly.

# **Extended connections possible.**

 The standard DF.21 is supplied with an aluminium plug suited to diameters 44 and 45 mm, and a multiple diameter plug adapting to all diameters up to 60 mm.







# **■ DF.21** Adjustable-pressure electronic brake bleeder



- For bleeding car and LCV brakes and HGV clutches.
- Pressure adjustment from 0.5 to 3 bar.
- Pressure adjustment keys: up and down.
- Electronic pressure control holds pressure steady at the selected value.
- ABS compatible.
- Portable, stand-alone appliance (12 V).
- Reservoir with visible level.
- Automatically stops below minimum level.
- Capacity: 5 L.
- Body: stainless/ABS.
- Length of hose and power cable: 4 m.
- Contains:
- 1 multi diameter plug for using the bleeder on vehicles with a bayonet plug (DF.20-12).
- 1 standard screw plug.
- 1 fluid collector with attaching chain. Weight: 10.900 kg.

1012

# **BLEEDING HYDRAULIC CLUTCH AND GEARBOX COMMAND**

# **Using hydraulic mineral oil**

- Certain HV manufacturers (Mercedes, Man) use mineral hydraulic oil in certain vehicles to command their gearbox or clutch.
- Special hydraulic oil is also sometimes found in farming equipment.

### **Precautions of use:**

- · Always observe compatibility of mineral oils.
- There are 2 CHF products 11S or LHM.
- These 2 fluids are not compatible and must never be mixed, the system must be dedicated to one or the other permanently.
- Caution! DF.22 is incompatible with DOT, vehicles with a circuit using DOT, always use DF.21.
- Any error of use of one or the other hydraulic fluids is detrimental to the vehicle circuit and bleeder.



















# **■ DF.22** Hydraulic oil drain



- Special drain for mineral hydraulic oil (CHF11S, LHM).
- Pressure adjustable from 0.5 to 3 bar.
- Simple 4-key use.
- Digital pressure display.
- Pressure stabilisation by electronic pressure switch.
- Automatic preset pressure adjustable at 2 bar.
- Low tank warning and automatic stop.
- Tank can be filled while bleeding (non pressurised tank).
- Tank 5 L.
- High flow pump: rate 30 I / h at 2 bar.
- Supplied with Facom compliance certificate (ISO workshops).
- Supplied without cap nor fitting.
- Standard 12 V power supply, 4 m cable. Weight: 12 kg.







### **■ DF.22KIT1** Mercedes connection kit



- Set of connections and collection can, compatible with mineral oil.
- To be used with Mercedes trucks.















### **■ DF.22KIT2** Man connection kit



- Set of connections and collection can compatible with mineral oil.
- For MAN truck.

# **Steering ball joints**

# ■ **U.18H36** 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.
- Dimensions (W. x L. x H.): 100 x 480 x 400 mm. Weight: 6.800 kg.

■ U.18-36 HGV's ball joint puller



- Mechanical screw model.
- Diameter 36 mm.
- Dimensions (L. x D. x H.): 210 x 180 x 80 mm. Weight: 4.320 kg.

# **■** Ball joint puller



- Used to dismount steering and suspension ball joints.
- Length: 158 mm, height: 75 mm.
- Capacity diameter 32 mm, opening 80 mm. Weight: 2.410 kg.
- U.16A-45-05J3: Set of 3 safety pins.

<b>=</b>	A [mm]	d [mm]	△□△ [kg]
U.16B32	80	32	2,452



















- Used to dismount steering and suspension ball joints.
- Length: 158 mm, height: 90 mm.
- Capacity diameter 45 mm, opening 80 mm. Weight: 2.543 kg.
- U.16A-45-05J3: Set of 3 safety pins.

<b>=</b> 0	A [mm]	d [mm]	∆ [kg]
U.16A45	80	45	2,543



























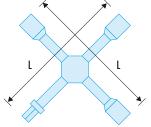




### Wheels

# **■ 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.

<b>=</b> 0	d [mm]	L [mm]	Square ["]	∆∏∆ [kg]
77A.PL1	24 - 27 - 30 - 32	700	-	4,650
77A.PL2	24 - 27 - 33	700	3/4	4,580
77A.PL2D	24 - 27 - 32	700	3/4	4,600

# **■ 986095** Crimping pliers for tubular terminals with rotating dies



### NFC 20-130

- Rotating dies indexable in 6 positions: 6 10 16 25 35
   50 mm<sup>2</sup>
- The pliers can be disengaged during crimping.
- Capacity: 6 to 50 mm<sup>2</sup>
- Length: 390 mm. Weight: 1.185 kg.

# **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 pliers.
- Examples of use: terminals on batteries, alternators, starters, ground studs, electric lifts, gate links, etc.



### **■ 789.5** Hydraulic crimping pliers



- Example of use: battery, alternator, starter, tailgate, trailors.
- 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 mm<sup>2</sup>.

Weight: 1.700 kg.

**Electricity Workshop equipment** 

# **■ DX.8-24** Surge arrester 24V



- Protects electronic components in the vehicle.
- For 24 Volt vehicle.
- Cable length: 500 mm.
- Dimensions (L. x D. x H.): 100 x 20 x 45 mm. Weight: 190 g.















# **■ BC2430A** 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.

































### **■ 714A** 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.