



# AEROSPACE GLOBAL SOLUTIONS

 **FACOM**®

# DESIGNING SOLUTIONS

DEDICATED TO AEROSPACE

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ALMOST **100 YEARS OF INNOVATION**  
**IN AEROSPACE SAFETY**

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Whether you're a manufacturer, an assembler, a subcontractor, an engine manufacturer or a maintenance facility... in civilian, military, or space operations, FACOM offers a solution adapted to your needs.



## CIVIL AVIATION



## MILITARY AVIATION



## HELICOPTERS



## SPATIAL



## THE PREFERRED TOOLS OF CHOICE BY:

Airbus Group, Air France/KLM Industries, GE Aviation Systems, British Airways Engineering, Emirates, Safran, Thales, GKN Aerospace, Sabena Technics, Dassault, Cessna, Rolls Royce, Latecoere, Embraer, BAE Systems...





# ADVANCED SOLUTIONS FOR AEROSPACE

Whether for manufacturers or maintenance services, safety has always been paramount in the aerospace field, where control over Foreign Object Debris (FOD) has become an unavoidable aspect.

The annual financial impact of FODs on the aerospace industry is about \$13 billion, indirect costs amounting to ten times the direct costs when considering the delays, aircraft replacements, fuel costs, and unplanned maintenance that FODs generate.



## FACOM TOOL CONTROL SYSTEM

A quintessential visual aid for instant tool inventory and missing tool identification.





## FACOM.FLUO RANGE

Detectable with a UV lamp, tools from the Fluo range are a simple and unique solution in the market thanks to the many tools available.



## FACOM • RFID TECHNOLOGY

- Tools instantly detectable by their RFID chip.
- RFID Facom-Cribmaster technologies for automated tool management and inventory.

**RFID**  
TECHNOLOGY  
BY FACOM



For more information on the RFID technology, refer to the dedicated catalogue or visit [www.facom.com](http://www.facom.com)



Over the last **95 years**, FACOM has imposed an **unrivaled quality standard**. This **search for excellence** is what drives FACOM teams.



## TRAINING:

FACOM offers training adapted to the specifics and expectations of employees and distributors.

## TECHNICAL SUPPORT:

Whatever your question is, our advisors search through comprehensive data to ensure you are provided with a reliable and precise answer, either directly or within a maximum of 24hrs.

## CONTROL LABORATORY:

FACOM has a control laboratory on its Morangis site. This laboratory offers different levels of services within its Cofrac #2-1934 torque measurement accreditation.

# FACOM SERVICES

## FOR AEROSPACE

MADE TO ORDER



- Your workshop with your colour scheme.
- Tool storage modules adapted per product selection.
- Roller cabinets with specific drawer set.
- Special bits for torque wrenches.
- Specific product finish and marking.
- Material change.



# MEETING YOUR NEEDS, ALL OVER THE WORLD

FACOM is present throughout the world with the same level of quality. The brand's offer is present all over the globe, from local organisations of the STANLEYBLACK&DECKER Group providing a proximity service. The other brands of the group reinforce the proposition of value with storage and power tool ranges.



*StanleyBlack&Decker*



▶ **1** FOD Solutions

10

▶ **2** Storage

20

▶ **3** Aerospace toolkits

27

▶ **4** Wrenches

36

▶ **5** Ratchets - Sockets

44

▶ **6** Torque control

62

▶ **7** Pliers

72

▶ **8** Screwdrivers - Keys - Bits

74

▶ **9** Lighting

80

▶ **10** Maintenance

84





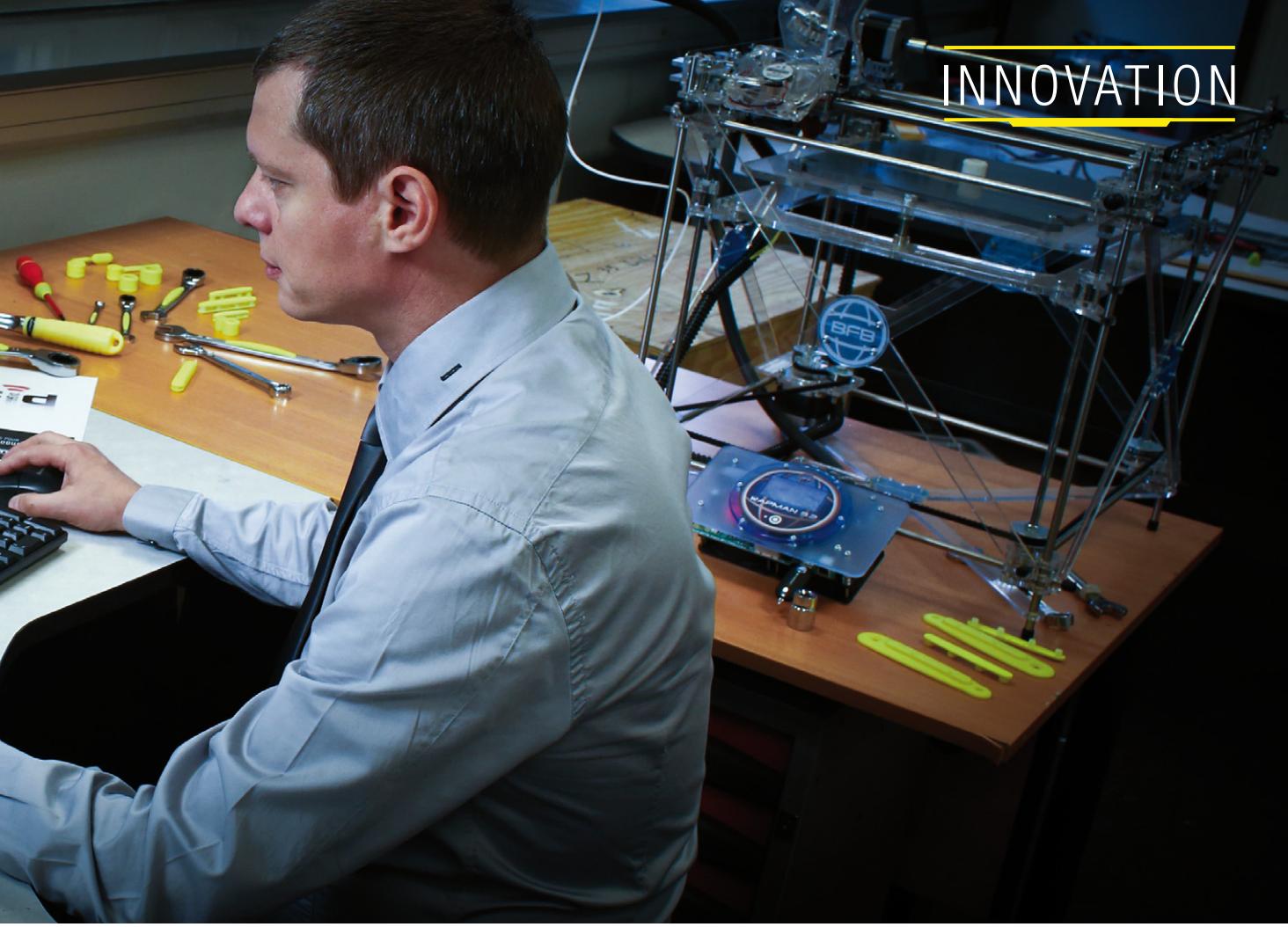
# A RANGE OF TOOLS AT THE FOREFRONT OF INNOVATION

**RFID**  
TECHNOLOGY  
BY FACOM



The RFID technology (Radio Frequency Identification) ensures remote tool identification by means of its built-in electronic chip. The latter uses energy propagated at short distances by the radio transmitter signal: no batteries required. Invisible and tough, RFID chips guarantee optimum operation for many years. The radio technology used has no impact on the external environment.





## CHIP SEAMLESSLY INTEGRATED TO THE TOOL

For each tool, the Facom Engineers have integrated the RFID chip guaranteeing the best possible data transmission. Encapsulated under an anti-shock shell, the chip is protected durably, including from chemical agents, without altering the tool's basic characteristics or its ergonomics.

## MULTIPLE BENEFITS IN THE WORKSHOP

- High quality chips programmed to guarantee the best detection.
- Tools traceable in the workshop by zones of use.
- Fluorescent tools can be found up to 3 meters away in dark areas.
- Broad range covering all applications.



**RFID  
TECHNOLOGY BY FACOM**

For more information on the RFID technology:  
[www.facom.com](http://www.facom.com)



Facom Aerospace 2015



**FACOM.FLUO** 

## YOUR SOLUTION FOR DARK OR DIMLY LIT AREAS

A UV lamp or tube is all you need to detect the fluorescent tools.



**RFID**

TOOL SOLUTIONS FOR MAXIMUM PRODUCTIVITY AND SAFETY

**FACOM**

**FIND ALL THE FLUO RANGE IN OUR CATALOG or on [www.facom.com](http://www.facom.com)**

**SAFETY**

- High-visibility colour code ensuring easy detection, even in broad daylight.

**IMPROVED PRODUCTIVITY**

- Faster recovery of lost tools.
- Easy cleaning.

**ERGONOMICS**

- Same dimensions as standard tools.
- Good product grip.





ENSURING SAFETY  
IN ANY CIRCUMSTANCES

## FACOM SOLUTIONS FOR WORKING SAFELY AT HEIGHT

FACOM has always worked closely with companies from various sectors to develop tooling solutions that perfectly meet user needs. The FACOM Safety Lock System (SLS) is perfect for those who regularly work in elevated locations, assembling and maintaining equipment above ground level.



GLOBAL SOLUTIONS FOR  
WORKING SAFELY  
AT HEIGHT

**FACOM**

**FIND THE ALL  
SLS RANGE  
IN OUR CATALOG  
or on [www.facom.com](http://www.facom.com)**



## THE RNANO CONCEPT

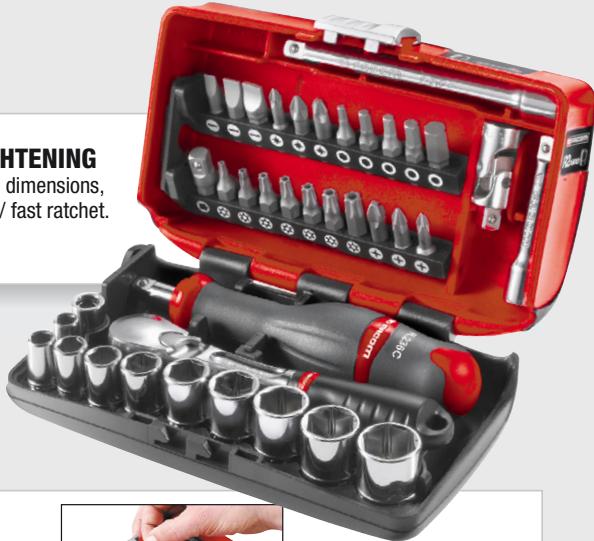


### ULTRA-COMPLETE: 100% BOLTING-TIGHTENING

- Up to 38 tools, 1/4" drive square, in metric or inch dimensions, 6- or 12-point sockets, with standard / pear head / fast ratchet.

### ULTRA-COMPACT

- 50% more compact than 1/4" sets in regular box.



### PRACTICAL: SAVE TIME

- Easy set and tool selection thanks to tool pattern tag,
- Thanks to 3-sided set identification sticker.



### Easy tool picking

- Bit strips rise automatically when opening the set.

- Socket picking by tilting.

- Auto-closing clasp: closes instantly.



### Sockets, bits, and accessories held in case of tipping



### STRENGTH AND COMFORT BY FACOM

- Sturdy closing system: metal clasp and hinge rod
- Bi-material body:
  - Box frame in PC/B > Rigid and unbreakable.
  - Skin in TPU = soft anti-slip > Good grip
    - > Does not slip on work surface
    - > Does not scratch the intervention zone (bodywork...)
- Plastic resistant to workshop solvents.



# DETECTION BOX CONCEPT

## REINFORCED SAFETY

- The "Detection BOX" concept ensures instant availability check even when the box is closed.



## EASY TO STORE

- Easy storage in all roller cabinet drawers (including 60 mm high).
- Adapts to 1/3 width of a roller cabinet module.
- Holds vertically.
- Does not slide, even on a smooth surface.



## EASY TO CARRY

- With the extension used as a handle.



## PRACTICAL

- Sockets locked securely in their slots and stay in place even when set is tipped over.

## HIGH STRENGTH

- Thanks to their bi-material shell, metal clasps and metal hinge pins.

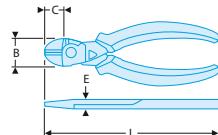




# Facom Aerospace 2015

## Cutters with offcut retainer

### □ 192.CPEF-R - Diagonal cutters with offcut retainer



NEW

FLUO



#### NF ISO 5749, ISO 5749, DIN ISO 5749, ASME B107.500

- Offcut retainer built into the cutting edges: the wire does not fall after cutting, hence preserving the FOD work space.
- Detect the tool thanks to its fluorescence, activated by a lamp or UV neon light. Detectable in black or dark environment up to 3 metres.
- Cutting edges designed to neatly cut all types of wires: piano wire, soft wires, modern materials (max. 200 kg/mm<sup>2</sup>).
- Minimum cutting force thanks to long lever arm and offset axis.
- High durability Chrome-Molybdenum-Vanadium steel, very hard cutting edges 61/63 HRc.
- Ergonomic grips resistant to chemical agents.
- Removable return spring.
- Chrome finish.

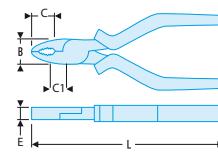
➊	B [mm]	C [mm]	d maxi [mm]	E [mm]	L [mm]	ΔΔ [g]
192.14CPEF-R	21,5	15,5	1,5	9,5	145	160
192.16CPEF-R	24,0	18,0	1,6	10,0	160	200
192.20CPEF-R	28,0	22,0	2,5	11,5	200	320

### □ 187.CPEF-R - Universal pliers with offcut retainer



NEW

FLUO



#### NF ISO 5746, ISO 5746, DIN ISO 5746, ASME B107.500

- Offcut retainer built into the cutting edges: the wire does not fall after cutting, hence preserving the FOD work space.
- Detect the tool thanks to its fluorescence, activated by a lamp or UV neon light. Detectable in black or dark environment up to 3 metres.
- Cutting edges designed to cut all types of wires: piano wire, soft wires, modern materials (max. Fe 200 kg/mm<sup>2</sup>).
- Long lever arm, offset pivot for minimum cutting effort.
- High durability Chrome-Molybdenum-Vanadium steel, very hard cutting edges 61/63 HRc.
- Ergonomic grips resistant to chemical agents.
- Removable return spring.
- Chrome finish.

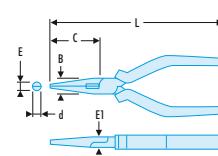
➊	B [mm]	C [mm]	E [mm]	L [mm]	ΔΔ [g]
187.16CPEF-R	21	34	9,5	165	195
187.18CPEF-R	23	36	10,0	185	196

### □ Long-reach half-round nose pliers with offcut retainer



NEW

FLUO



#### NF ISO 5745, ISO 5745, DIN ISO 5745, ASME B107.500

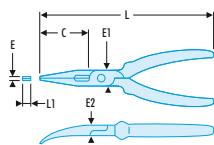
- Offcut retainer built into the cutting edges: the wire does not fall after cutting, hence preserving the FOD work space.
- Detect the tool thanks to its fluorescence, activated by a lamp or UV neon light. Detectable in black or dark environment up to 3 metres.
- Narrow, finely serrated tips with a pipe-grip.
- Side cutter for copper and hard steel wire (max. 160 kg/mm<sup>2</sup>).
- 185: Straight nose.
- Ergonomic grips resistant to chemical agents.
- Removable return spring.
- Chrome finish.

➊	B [mm]	C [mm]	d [mm]	E [mm]	E1 [mm]	L [mm]	ΔΔ [g]
185.20CPEF-R	18	75	75	3,6	9	200	192

**□ Long-reach half-round nose pliers with offcut retainer**



NEW

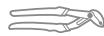


FLUO

**NF ISO 5745, ISO 5745, DIN ISO 5745, ASME B107.500**

- Offcut retainer built into the cutting edges: the wire does not fall after cutting, hence preserving the FOD work space.
- Detect the tool thanks to its fluorescence, activated by a lamp or UV neon light. Detectable in black or dark environment up to 3 metres.
- Narrow, finely serrated tips, 40° angled nose.
- Side cutter for copper and hard steel wire (max. 160 kg/mm<sup>2</sup>).
- Ergonomic grips resistant to chemical agents.
- Removable return spring.
- Chrome finish.

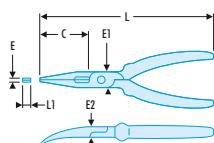
ED	C [mm]	d [mm]	E [mm]	E1 [mm]	E2 [mm]	L [mm]	L1 [mm]	ΔΔ [g]
183.20CPEF-R	69	69	3	18	9	200	2,5	185



**□ Short half-round nose pliers with offcut retainer**



NEW



FLUO

**NF ISO 5745, ISO 5745, DIN ISO 5745, ASME B107.500**

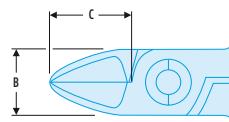
- Offcut retainer built into the cutting edges: the wire does not fall after cutting, hence preserving the FOD work space.
- Detect the tool thanks to its fluorescence, activated by a lamp or UV neon light. Detectable in black or dark environment up to 3 metres.
- Narrow, finely serrated tips, 40° angled nose.
- Side cutter for copper and hard steel wire (max. 160 kg/mm<sup>2</sup>).
- Ergonomic grips resistant to chemical agents.
- Removable return spring.
- Chrome finish.

ED	B [mm]	C [mm]	d [mm]	E [mm]	E1 [mm]	L [mm]	ΔΔ [g]
195.16CPEF-R	17	50	50	3	9	160	177

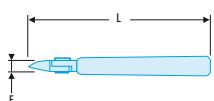
**□ Micro-Tech® "thin-nose tip" cutters with offcut retainer**



NEW



FLUO



**NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500**

- Offcut retainer built into the cutting edges: the wire does not fall after cutting, hence preserving the FOD work space.
  - Detect the tool thanks to its fluorescence, activated by a lamp or UV neon light. Detectable in black or dark environment up to 3 metres.
  - Compact nose tips for confined spaces.
- Weight: 60 g.

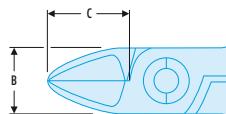
ED	B [mm]	d [mm]	E [mm]	L [mm]
416.RMTF	10,5	10,5	7	110





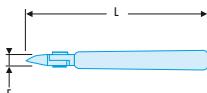
## Cutters with offcut retainer - Inspection mirrors

### □ Micro-Tech® "compact" cutters with offcut retainer



NEW

FLUO

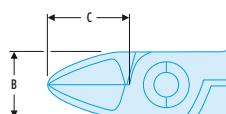


#### NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Offcut retainer built into the cutting edges: the wire does not fall after cutting, hence preserving the FOD work space.
  - Detect the tool thanks to its fluorescence, activated by a lamp or UV neon light. Detectable in black or dark environment up to 3 metres.
  - These pliers combine cutting performance with handling thanks to their new slim diagonal shape.
- Weight: 60 g.

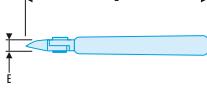
	B [mm]	d [mm]	E [mm]	L [mm]
406.RMTF	10,5	9,5	7	110

### □ Micro-Tech® "rugged" cutters with offcut retainer



NEW

FLUO



#### NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Offcut retainer built into the cutting edges: the wire does not fall after cutting, hence preserving the FOD work space.
  - Detect the tool thanks to its fluorescence, activated by a lamp or UV neon light. Detectable in black or dark environment up to 3 metres.
  - These pliers allow neat cutting of multiple materials: from copper wire to piano wire up to 0.5 mm.
- Weight: 60 g.

	B [mm]	d [mm]	E [mm]	L [mm]
405.10RMTF	10,5	11,5	7	110

### □ 834A.R - Flexible mirrors



NEW

- Flexible mirror adapting to all types of parts.
- Hinged head for enhanced visibility in cluttered locations.

	d [mm]	L [mm]	ΔΔ [g]
834A.R	70x45	308	44
834A.R1	36	210	13
834A.R2	55	360	40

### □ 829 - Orientable flexible mirrors



- Orientable flexible mirror.
- The mirror turns when pressing the buttons on the handle.

	d [mm]	L [mm]	ΔΔ [g]
829	70x45	495	225
829AR	55	480	224

**834B.RTI - Telescopic mirrors**

NEW

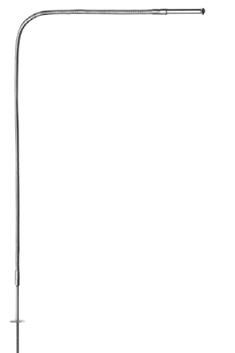
- Mirror with LED back lighting for better visibility in dark areas.
- Scratch resistant glass.
- Molded plastic rim around the glass to protect parts worked on and ensure mirror durability.
- Joint easily adjustable, even locks, by screw.
- Ergonomic plastic handle resists to solvents: Skydroll, diesel fuel, etc.
- Max length 850 mm.

	d [mm]	L [mm]	$\Delta\Delta$ [g]
834B.RTI	55	955	78
834B.RTIS	33	935	68
834B.RTIR	70x54	970	88

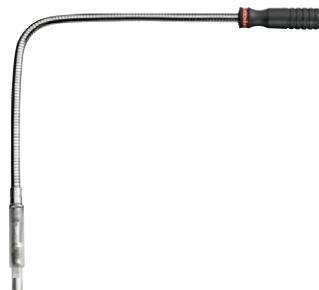
**834B.RTM Telescopic mirror with magnifying effect**

NEW

- Mirror with magnifying effect.
- Scratch resistant glass.
- Molded plastic rim around the glass to protect parts worked on and ensure mirror durability.
- Joint easily adjustable, even locks, by screw.
- Ergonomic plastic handle resists to solvents: Skydroll, diesel fuel, etc.
- Max length 850 mm.

**826.2 Flexible mechanical retriever 1000 mm**

- Max nose opening diameter: 29 mm.
  - Length: 1000 mm.
- Weight: 400 g.

**828 "Luminous" flexible magnetic retriever**

- Magnet diameter: 15 mm.
  - Max lifted weight: 1.2 kg.
  - LR1 battery.
  - Length: 590 mm.
- Weight: 220 g.

**827.1 Extra-thin flexible magnetic finger**

- Flexible and long head diameter model.
- Maximum supported weight: 120 g.



## Mobile storage

### MOBILE STORAGE



• Shock-resistant

#### **Sturdy**

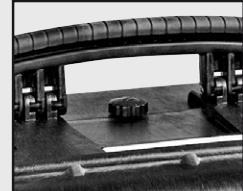
- Shock-resistant injected polypropylene.
- Reinforced angles for high durability.
- Stainless steel hinge angle, resistant to corrosion.

#### **Sealed**

- One-piece fitted sealing gasket: protects the content from outside aggressions.
- Minimum gap clasps, 100% sealed to dust and water.



• Handles on both sides



• Depressurizing valve

#### **Easy to transport**

- Ergonomic telescopic handle for improved comfort.
- Handles on both sides for easy handling.
- Ultra strong wheels.
- Depressurizing valve.



• Stackable



• Customizable identification plate

#### **Modular**

- Adaptable to all types of tool sets thanks to the foam module on demand program.
- Stackable.
- Several padlock clasps.
- Customizable identification plate.



### **BV.FC1 Sealed roller chest**



**NEW**

#### **IP67 STANAG 4280 DEF STAN 81-41 (Niv. J)**

- High density injected polypropylene resistant to extreme conditions of use.
- Totally sealed and resists to shock, dust and industrial fluids.
- Several padlock clasps available.
- Stainless steel hinge pins.
- Gap-free clasps and sealing gasket.
- Resists pressure differences. Manual depressurizing valve.
- Handle designed for maximum comfort.
- Temperature tolerance: -33°/+90°.
- Telescopic handle and side handles for easier use.
- Stackable.
- Customizable identification plate.
- Inner dimensions (LxWxD): 517x277x217 mm.
- Outer dimensions (LxWxD): 546x347x247 mm.

**BV.FC2 Sealed roller chest****IP67 STANAG 4280 DEF STAN 81-41 (Niv. J) MIL-STD 810F**

- High density injected polypropylene resistant to extreme conditions of use.
- Totally sealed and resists to shock, dust and industrial fluids.
- Several padlock clasps available.
- Stainless steel hinge pins.
- Gap-free clasps and sealing gasket.
- Resists pressure differences. Manual depressurizing valve.
- Handle designed for maximum comfort.
- Temperature tolerance: -33°/+90°.
- Telescopic handle and side handles for easier use.
- Stackable.
- Customizable identification plate.
- Inner dimensions (LxWxD): 538x405x250 mm.
- Outer dimensions (LxWxD): 627x475x292 mm.

**BV.FC3 Sealed roller chest****IP67 STANAG 4280 DEF STAN 81-41 (Niv. J) MIL-STD 810F**

- High density injected polypropylene resistant to extreme conditions of use.
- Totally sealed and resists to shock, dust and industrial fluids.
- Several padlock clasps available.
- Stainless steel hinge pins.
- Gap-free clasps and sealing gasket.
- Resists pressure differences. Manual depressurizing valve.
- Handle designed for maximum comfort.
- Temperature tolerance: -33°/+90°.
- Telescopic handle and side handles for easier use.
- Stackable.
- Customizable identification plate.
- Inner dimensions (LxWxD): 580x440x330 mm.
- Outer dimensions (LxWxD): 670x510x372 mm.

**BV.FC4 Sealed roller tool chest**

- High density injected polypropylene resistant to extreme conditions of use.
- Totally sealed and resists to shock, dust and industrial fluids.
- Several padlock clasps available.
- Stainless steel hinge pins.
- Clasps easy to use.
- Resists pressure differences.
- 2 lateral handles & telescopic handle.
- Temperature tolerance: -33°/+90°.
- Customizable identification plate.
- 4 60mm high drawers + worktop
- Tools accessible from the front or the top.
- Outer dimensions (LxWxD): 581x381x455 mm.





## Safety Roller Cabinets



### SAFETY ROLLER CABINETS

#### SAFETY LOCK SYSTEM

- ◆ 3 modules per drawer
- ◆ 12 to 27 modules distributed in 60 and 130 mm high drawers (200 and 270 mm drawers can also be fitted with modules)
- ◆ 125 to 185 kg total acceptable load in the drawers according to drawer composition (240 kg for 11-drawer unit)
- ◆ 150 to 155 litres effective volume according to drawer composition (230 litres for the 11-drawer unit)
- ◆ 0.22m<sup>2</sup> effective working surface (440 X 496 mm)
- ◆ 4 wheels diameter 125mm, 2 fixed, 2 castors, one with brake

#### TECHNICAL DATA

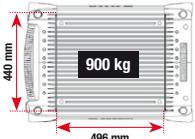
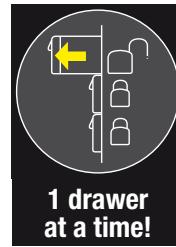
Overall dimensions (including wheels and worktop): L774 x D546 x H971 mm.  
Effective drawer dimensions: L569 x D421 x H60 / 130 / 200 / 270 mm.

#### LOAD PER DRAWER

- drawer 60 mm high: 20 kg
- drawer 130 mm high: 25 kg
- drawer 200 mm high: 30 kg
- drawer 270 mm high: 35 kg

#### EFFECTIVE VOLUME PER DRAWER

- drawer 60 mm high: 15 l
- drawer 130 mm high: 30 l
- drawer 200 mm high: 50 l
- drawer 270 mm high: 65 l



#### □ JET.6GM3S JET+ 6-drawer roller cabinets - 3 modules per drawer - safety range



- Supplied with the SAFETY LOCK SYSTEM preventing simultaneous opening of several drawers:
  - 1 drawer at a time.
  - Prevents the roller cabinet from tipping over.
  - 6 drawers = 15 modules distributed in the 60 and 130 mm wall drawers:
  - 4 drawers 60 mm wall = 12 modules.
  - 1 drawer 130 mm wall = 3 modules.
  - 1 drawer 270 mm wall.
  - The 130 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.
  - Wall storage capacity: 155 litres.
  - Overall dimensions (including wheels and worktop): L.774 x D.546 x H.971 mm.
  - Drawer useful size: L.569 x D.421 x H.60 / 130 / 210 / 270 mm.
  - 4 wheels 125 mm diameter: 2 fixed, 2 castors, one with brake.
  - Colour: Black 9004.
- Weight: 75.50 kg.

#### □ JET.8GM3S JET+ 8-drawer roller cabinets - 3 modules per drawer - safety range



- Supplied with the SAFETY LOCK SYSTEM preventing simultaneous opening of several drawers:
  - 1 drawer at a time.
  - Prevents the roller cabinet from tipping over.
  - 8 drawers = 24 modules distributed in the 60 and 130 mm wall drawers:
  - 6 drawers 60 mm wall = 18 modules.
  - 2 drawers 130 mm wall = 6 modules.
  - Total load in the drawers: 170 kg.
  - Wall storage capacity: 150 litres.
  - 4 wheels 125 mm diameter: 2 fixed, 2 castors, one with brake.
  - Overall dimensions (including wheels and worktop): L.774 x D.546 x H.971 mm.
  - Drawer useful size: L.569 x D.421 x H.60 / 130 / 210 / 270 mm.
  - Supplied with 10 partitions for drawers 60 mm wall.
  - Colour: Black 9004.
- Weight: 79,50 kg.

### JET+ 4-drawer roller cabinets - 3 modules per drawer



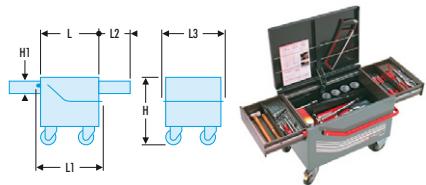
- Ideal for mobile maintenance.
- Retractable handle for travelling.
- Easy handling thanks to its high performance wheels (diameter 125 mm, 2 fixed and 2 castors including one with brake).
- 4 drawers = 12 modules distributed in the 60 and 130 mm high drawers.
- 3 drawers 60 mm high = 9 modules.
- 1 drawer 130 mm high = 3 modules.
- The 200 mm drawers can also be fitted with modules.
- Can be fitted with the JET2.15 and JET2.16 removable partitions - not supplied
- Acceptable load and useful volume per drawer of M3 versions:
  - 60 mm drawer: 20 kg - 15 litres.
  - 130 mm drawer: 25 kg - 30 litres.
- Total load in the drawers: 85 kg.
- High storage capacity: 75 litres.
- Overall dimensions (including wheels and worktop): L.774 x D.546 x H.621 mm.
- Drawer useful size: L.569 x D.421 x H.60 / 130 mm.

	ΔΔ [kg]
JET.CR4M3	48,50
JET.CR4GM3	48,50

### 2092A Roller chest



- Vertical access model.
  - Particularly interesting combination of size and useful.
  - Transportable in a vehicle.
  - Wheels diameter 125 mm for tireless long distance rolling.
  - 2 drawers height dimensions (L. x D. x H.): 100 x 360 x 300 mm.
  - Each drawer is completed with a mobile tray, dimensions (L x D x H): 360 x 148 x 40 mm, for storing small tools.
  - 2 compartments dimensions (L x D x H): 440 x 140 x 60 mm.
  - Lid interior holds documents or flat items. Large size bin dimensions (L. x D. x H.): 668 x 443 x 248 mm.
  - Padlock clasp (padlock not supplied).
  - Ankle protection thanks to the shelved compartment.
- Weight: 28.5 kg.



### JET.A11 Carry tray and holder



- High strength plastic carry tray.
  - Very handy to carry tools on the intervention site.
  - Easy installation on the roller cabinet thanks to its fastening kit.
  - Dimensions excluding handle: L.115 x D.385 x H.255 mm.
- Weight: 3 kg.



**NEW**

**MY TOOL STORAGE**  
SOLUTION



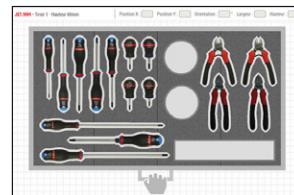
## BECAUSE NOBODY KNOWS WHAT YOU NEED BETTER THAN YOURSELF

### THE CUSTOMIZED STORAGE SOLUTION

*MyToolStorage.com* is the new online service for composing foam trays on demand by FACOM. A turn-key solution accessible via an interface designed and developed for easy access. Choose according to your budget and order only what you really need to create your own bespoke set by mixing all types of tools.

#### A CUSTOMIZED SOLUTION

- *MyToolStorage.com* guarantees ergonomics and flexibility from design to organization, and up to and including use.
- Perfectly adapted to FACOM storage solutions, the foam module is indispensable for organization: over 6000 tool references are available in the FACOM catalogue for creating sets.
- The user can also integrate any other object in dimensions different from FACOM standards.



#### PRODUCTIVITY ENSURED, SAFETY AND COSTS UNDER CONTROL

- Tool loss is both a financial loss and actual hazard. With their two colors, the foam trays ensure you spot missing tools at a glance.
- Designing your own organization space according to your tool set saves you valuable of time.
- This also controls costs as only the storage spaces you actually need are created in compliance with your requirements.



#### AN ACCESSIBLE AND USER-FOCUSED SERVICE

- *MyToolStorage.com* is an effective tool which in a few clicks allows you to design the model of your foam module, view the result in real time, have instant pricing, and issue a quote.
- All customized sets are archived.
- You can even choose the color of the modules (four colors available). When choosing a FACOM container (roller cabinets, metal box, cabinet, etc.), adapted foam module dimensions are suggested.



**LOG IN!**

New Range

JET+



The choice is yours



**JET<sup>3</sup>**

3 modules per drawer

① | ② | ③



20 to 35 kg per drawer - 15 to 65 litres per drawer



**JET<sup>4</sup>**

4 modules per drawer

① | ② | ③ | ④



25 to 45 kg per drawer - 20 to 85 litres per drawer



**JET<sup>5</sup>**

5 modules per drawer

① | ② | ③ | ④ | ⑤



35 to 60 kg per drawer - 25 to 110 litres per drawer





**Facom Aerospace 2015**

**Mobile storage**



**GLOBAL SOLUTION  
OF WORKSHOP**



***Create your flexible, evolutionary  
and innovative workspace!***

Made in France

**MODULAR**  
WORK, TIDY, SHARE AND ORGANISE

**COMFORT**  
AN ENVIRONMENT WHERE WORKING WILL BECOME  
A REAL PLEASURE !

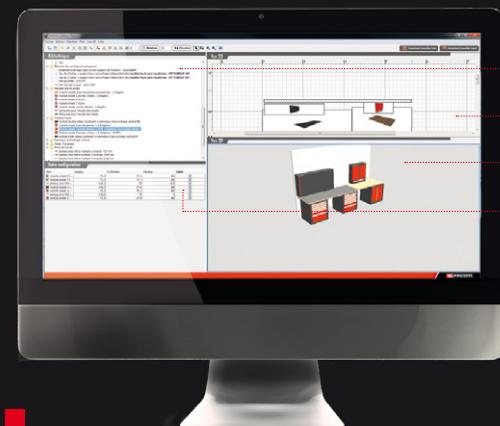
**SPACE**  
SO MANY POSSIBILITIES TO OPTIMISE YOUR SPACE

**FREEDOM**  
REDESIGN YOUR WORKSHOP AND CREATE YOUR IDEAL  
SET FREELY



**LET'S DESIGN  
AND CREATE THE PERFECT  
WORKSPACE...**

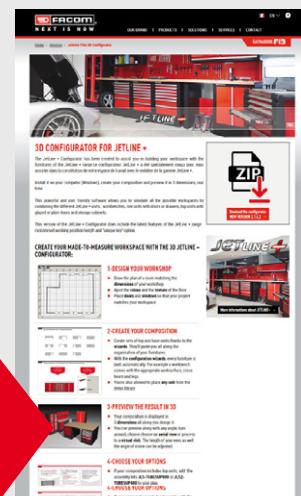
DOWNLOAD THE JETLINE+  
3D CONFIGURATOR  
(WINDOWS VERSION)  
from [www.facom.com](http://www.facom.com)  
to create your bespoke workspace.



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MICROSITE



**□ CU.AE50 152-piece engine mechanics set**

- Set designed for complete in-hangar overhauls as well as servicing work between overhauls on wide-body aircraft fitted with SNECMA, GE, PW or RR engines : AIRBUS A3xx, BOEING 7xx, Mc Donnel Douglas DCxx.
- Each foam module is also available per unit.

Weight: 17.800 kg.



	Qty	Set Description
<b>PM.MODMCUAE50-1</b>	1	Foam module
<b>34</b>	6	Open end wrenches: 34.1/4 - 34.11/32 - 34.3/8 - 34.5/16 - 34.7/16 - 34.9/32
<b>440</b>	17	Combination wrenches: 440.1/2 - 440.1/4 - 440.11/16 - 440.11/32 - 440.13/16 - 440.15/16 - 440.1P - 440.1P1/6 - 440.1P1/4 - 440.1P1/8 - 440.3/4 - 440.3/8 - 440.5/16 - 440.5/8 - 440.7/16 - 440.7/8 - 440.9/16
<b>64.3/8X7/16</b>	1	Ring wrenches
<b>PM.MODMCUAE50-2</b>	1	Foam module
<b>603F</b>	1	Hacksaw frame
<b>55A</b>	10	Offset-ring wrenches: 55A.1/2X9/16 - 55A.1/4X5/16 - 55A.11/32X13/32 - 55A.19/32X25/32 - 55A.1P1/8X1P1/4 - 55A.1PX1P1/16 - 55A.3/4X13/16 - 55A.3/8X7/16 - 55A.5/8X11/16 - 55A.7/8X15/16
<b>PM.MODMCUAE50-3</b>	1	Foam module
<b>R.210</b>	1	1/4" Wobble extension 100 mm
<b>R.215</b>	1	1 1/4" Wobble extension 150 mm
<b>R.232</b>	1	1/4" Coupler - 3/8"
<b>R.236A</b>	1	Drive medium spinner
<b>R.240A</b>	1	1 1/4" Universal joint
<b>R.151</b>	1	1/4" Standard ratchet
<b>J.240A</b>	1	3/8" Universal joint
<b>J.151A</b>	1	3/8" Standard ratchet
<b>J.115</b>	1	Drive metal-grip speed brace
<b>J.145</b>	1	Drive metal-grip hinged handle
<b>J.120A</b>	1	Drive sliding tee
<b>J.210</b>	1	Drive extensions 125 mm
<b>J.215</b>	1	Drive extensions 250 mm
<b>J.230</b>	1	Coupler 3/8" to 1/4"
<b>RB</b>	10	1/4" Sockets: RB.1/2 - RB.1/4 - RB.11/32 - RB.3/16 - RB.3/8 - RB.5/16 - RB.7/16 - RB.7/32 - RB.9/16 - RB.9/32
<b>JB</b>	12	3/8" Sockets : JB.1/2 - JB.1/4 - JB.11/16 - JB.11/32 - JB.13/16 - JB.3/4 - JB.3/8 - JB.5/16 - JB.5/8 - JB.7/16 - JB.7/8 - JB.9/16
<b>JF</b>	7	3/8" Drive hinged sockets: J.11/16F - J.7/16F - J.1/2F - J.3/4F - J.3/8F - J.5/8F - J.9/16F
<b>J.LA</b>	10	3/8" Long sockets: J.1/2LA - J.1/4LA - J.3/4LA - J.3/8LA - J.5/16LA - J.5/8LA - J.7/16LA - J.9/16LA - J.11/16LA - J.13/16LA

	Qty	Set Description
<b>PM.MODMCUAE50-4</b>	1	Foam module
<b>86H.JU6</b>	6	Hexagon keys on sleeve: 5/32" to 3/8"
<b>86H.JU7</b>	7	Hexagon keys on sleeve: 1/16" to 1/4"
<b>AN</b>	4	Screwdrivers for slotted head screws - milled blades: AN.2X75 - AN.3X75 - AN4X100 - AN.6X35
<b>ANP</b>	2	Screwdrivers for Phillips® screws: ANP1X35 - ANP2X35
<b>APZ.A</b>	1	Angled screwdrivers - for Phillips® screws
<b>APZ.B</b>	1	Angled screwdrivers - for slotted-head screws
<b>ARZ.5.5</b>	1	Angled screwdrivers - for Phillips® screws
<b>AW</b>	4	Screwdrivers for slotted head screws: AW4X100 - AW.5X150 - AW6.5X150 - AW8X200
<b>AWP</b>	4	Screwdrivers for Phillips® screws - short blades: AWP1X100 - AWP2X125 - AWP3X150 - AWP4X200
<b>CLE.MDAM100A</b>	6	Set of 6 locksmiths files - length 100 mm
<b>251A</b>	9	Precision sleeved drift punches: 251A.1 - 251A.1.5 - 251A.2 - 251A.2.5 - 251A.3 - 251A.3.5 - 251A.4 - 251A.5 - 251A.6
<b>PM.MODMCUAE50-5</b>	1	Foam module
<b>181A.25CPE</b>	1	Locking multigrip plier
<b>1830.1</b>	1	Brushe
<b>187.18CPE</b>	1	Combination plier
<b>189.17CPE</b>	1	Round nose pliers
<b>192.16CPE</b>	1	High-performance diagonal
<b>193.16CPE</b>	1	Short half-round nose plier
<b>195.20CPE</b>	1	Long half-round nose plier
<b>200C.26</b>	1	Graphite handle riveting engineers hammer
<b>200C.30</b>	1	Graphite handle riveting engineers hammer
<b>208A.40CBA</b>	1	Adaptable-tip mallets
<b>231</b>	1	Three-square scraper
<b>234</b>	1	Steel scriber
<b>256.2,5</b>	1	Precision centre punch
<b>410.S</b>	1	Connector plier
<b>445.10R</b>	1	Locking-wire plier
<b>803.300M</b>	1	Stainless steel rule - 2 sides
<b>804</b>	1	Round tip metric thickness gauge 19 blades
<b>834.R2</b>	1	Inspection mirror 55 mm



## Aerospace toolkits

### □ JETGXLUAE50 CU.AE50 set supplied in foam modules and JET.8GXLS

- Engine mechanics selection CU.AE50 supplied in foam modules in roller cabinet JET.8GXLS.



### □ CU.AE51 118-piece electricians set

- Major and minor in-hanger overhaul and servicing of electrical equipment including control looms, supply systems, interconnections and relays, lighting and audiovisual3.
- Each foam module is also available per unit.

Weight : 6,880 kg.



	Qtys	Set description
<b>PM.MODMCUAE51-1</b>	1	Foam module
<b>251A</b>	9	Precision sleeved drift punches: 251A.1 - 251A.1.5 - 251A.2 - 251A.2.5 - 251A.3 - 251A.3.5 - 251A.4 - 251A.5 - 251A.6
<b>256.2.5</b>	1	Precision centre punch
<b>841.A.4</b>	1	Sheathed electricians scissors
<b>34</b>	13	Open end wrenches: 34.1/2 - 34.1/4 - 34.11/16 - 34.11/32 - 34.13/32 - 34.3/16 - 34.3/8 - 34.5/16 - 34.5/8 - 34.7/16 - 34.7/32 - 34.9/16 - 34.9/32
<b>113A.8C</b>	1	Chromed adjustable wrench
<b>840.1</b>	1	Electricians knife with wire stripper with wood handle
<b>826.1</b>	1	Flexible mechanical retriever 460 mm
<b>804</b>	1	Round tip metric thickness gauge 19 blades
<b>200H.26</b>	1	Riveting engineers hammer
<b>208A.32CBA</b>	1	Adaptable-tip mallet
<b>234</b>	1	Steel scriber
<b>PM.MODMCUAE51-2</b>	1	Foam module
<b>836</b>	1	Pen light
<b>163</b>	1	Wire cutter and stripper
<b>445.8R</b>	1	Short locking-wire pliers 8"
<b>188.16CPE</b>	1	Flat nose pliers
<b>189.17CPE</b>	1	Round nose pliers
<b>410.S</b>	1	Connector plier
<b>193.16CPE</b>	1	Short half-round nose plier
<b>183.20CPE</b>	1	Half-round long snipe-nose plier
<b>405.15</b>	1	"Compact" diagonal cutter
<b>180.CPE</b>	1	High-performance multigrip plier
<b>PM.MODMCUAE51-3</b>	1	Foam module
<b>AS.6L160T2A</b>	6	Selections of 6 and 12 needle files
<b>ES.134T</b>	1	High Perf' bits series 1 for slotted head screws
<b>ES.136.5T</b>	1	High Perf' bits series 1 for slotted head screws
<b>ES.148T</b>	1	High Perf' bits series 1 for slotted head screws
<b>EP.101T</b>	1	High Perf' bits series 1 for Phillips® screws

	Qtys	Set description
<b>EP.102T</b>	1	High Perf' bits series 1 for Phillips® screws
<b>82.JU10</b>	10	Roll of offset hexagonal keys 1/16" to 3/8"
<b>APB.1X40</b>	1	ISORYL screwdrivers for Phillips® screws - short blade
<b>APZ.B</b>	1	Offset screwdrivers for Phillips® PH 1-2 head
<b>ARZ.5.5</b>	1	Angled screwdrivers - for slotted-head
<b>AN</b>	2	Screwdrivers for slotted head screws - milled blades: AN.2.5X75 - AN.3.5X75
<b>ANPOX75</b>	1	Screwdriver for Phillips® screws - round blades
<b>AW</b>	4	Screwdrivers for slotted head screws: AW4X100 - AW.5X150 - AW.6X150 - AW8X200
<b>AWP</b>	2	Screwdrivers for Phillips® screws - short blades: AWP1X100 - AWP2X125
<b>PM.MODMCUAE51-4</b>	1	Foam module
<b>1230.30</b>	1	Electronic soldering irons
<b>144</b>	1	Tweezers "high precision" straight model
<b>R.240A</b>	1	Universal joint
<b>R.151</b>	1	1/4" standard ratchet
<b>RB</b>	10	1/4" sockets : RB.1/2 - RB.1/4 - RB.11/32 - RB.3/16 - RB.3/8 - RB.5/16 - RB.7/16 - RB.7/32 - RB.9/16 - RB.9/32
<b>R.EL</b>	5	Long-reach metric 12-point socket: R.1/2EL - R.1/4EL - R.3/8EL - R.5/16EL - R.7/16EL
<b>R.235</b>	1	1/4" drive standard spring-clip bit holder
<b>R.210</b>	1	1/4" drive extension
<b>R.215</b>	1	1/4" drive extension
<b>R.216</b>	1	1/4" wobble extension
<b>R.120A</b>	1	1/4" drive sliding tee
<b>R.236A</b>	1	1/4" drive medium spinner
<b>834.R1</b>	1	Inspection mirror
<b>1830.1</b>	1	Brush
<b>839A.0</b>	1	Desoldering pump
<b>803.300M</b>	1	Stainless steel rule - 2 sides
<b>BV.21-10</b>	1	Soldering iron stand

## CU.AE52 86-piece flight instruments set

- In-hanger inspection and servicing of console instrumentation, electrical, electro-mechanical and electronic modules and systems function indicators.
  - Each foam module is also available per unit.
- Weight : 3,490 kg.



	Qtys	Set description
<b>PM.MODMCUAE52-1</b>	1	Foam module
<b>176A.CPY</b>	1	Multigrip pliers with ergonomic sheath - 17 cm
<b>194.12</b>	1	Fine wire strippers
<b>402</b>	1	Sheathed half round-nose pliers
<b>403</b>	1	Sheathed half round-nose pliers
<b>405.10</b>	1	Precision diagonal cutters, axial cut
<b>421</b>	1	Flat-nose pliers
<b>431.MT</b>	1	Microtech® narrow short-nose pliers
<b>A.VE</b>	3	1000 V insulated screwdriver for slotted heads: A3.5X100VE - A4X100VE - A5.5X150VE
<b>AWP</b>	2	Screwdriver for Phillips® heads: AWP1X100 - AWP2X125
<b>AEF.J3</b>	1	Micro-Tech® screwdrivers (in case)
<b>AS.6L160T2A</b>	6	Selections of 6 and 12 needle files
<b>22</b>	5	Inch 15° hinged "midget" open end wrenches: 22.1/2X9/16 - 22.11/32X7/16 - 22.3/16X1/4 - 22.5/16X3/8 - 22.7/32X9/32
<b>PM.MODMCUAE52-2</b>	1	Module mousse
<b>1230.30</b>	1	Electronic soldering irons (20/40 W)
<b>139</b>	1	Tweezers cutting model for extra-thin wires
<b>142.2</b>	1	"High precision" tweezers 15° angled model - cleared nose
<b>144</b>	1	Tweezers "high precision" straight model - very slim nose

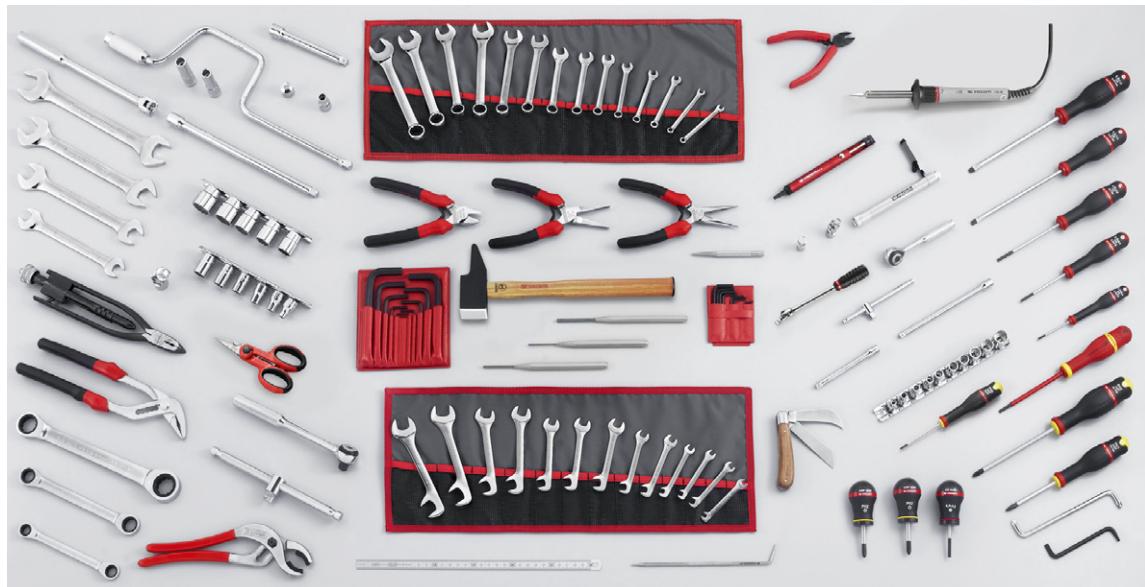
	Qtys	Set description
<b>1830.1</b>	1	Brush
<b>200H.26</b>	1	Riveting engineers hammers
<b>251A</b>	5	Precision sleeved drift punches: 251A.1 - 251A.1.5 - 251A.2 - 251A.2.5 - 251A.3
<b>RB</b>	10	1/4" Sockets: RB.1/2 - RB.1/4 - RB.11/32 - RB.3/16 - RB.3/8 - RB.5/16 - RB.7/16 - RB.7/32 - RB.9/16 - RB.9/32
<b>R.150A</b>	1	1/4" ratchet without handle
<b>R.151</b>	1	1/4" standard ratchet
<b>R.210</b>	1	1/4" drive extension 100 mm
<b>R.215</b>	1	1/4" drive extension 150 mm
<b>R.236A</b>	1	1/4" drive medium spinner
<b>R.240A</b>	1	1/4" universal joint
<b>803.300M</b>	1	Stainless steel rule - 2 sides
<b>826.0</b>	1	Mechanical retriever with 4 claws
<b>82H.JU10</b>	10	Roll of offset hexagonal keys 1/16" to 3/8"
<b>834</b>	1	Inspection mirror
<b>836</b>	1	Pen light
<b>835A</b>	1	Spring hook
<b>839A.0</b>	1	Desoldering pumps
<b>840.1</b>	1	Electricians knife with wire stripper with wood handle
<b>841</b>	1	Electricians scissors



## Aerospace toolkits

**□ CU.AE54 130-piece equipment maintenance set**

- Cabin layout, maintenance and repairs on passenger and cargo airliners : lighting, trim, seats, and air-conditioning systems.
  - Each foam module is also available per unit.
- Weight : 8,680 kg.



	Qty	Set description
<b>PM.MODMCUAE54-1</b>	1	Foam module
<b>34</b>	13	Open end wrenches: 34.1/2 - 34.1/4 - 34.11/16 - 34.11/32 - 34.13/32 - 34.3/16 - 34.3/8 - 34.5/16 - 34.5/8 - 34.7/16 - 34.7/32 - 34.9/16 - 34.9/32
<b>39</b>	10	Inch short-reach combination wrenches: 39.1/2 - 39.1/4 - 39.11/16 - 39.11/32 - 39.3/8 - 39.5/16 - 39.5/8 - 39.7/16 - 39.9/16 - 39.9/32
<b>39H</b>	4	Inch short-reach combination wrenches: 39.1/8H - 39.3/16H - 39.5/32H - 39.7/32H
<b>44</b>	4	Inch open end wrenches: 44.1/2X9/16 - 44.3/4X13/16 - 44.5/8X11/16 - 44.7/8X15/16
<b>64</b>	3	Short straight ratchet ring wrenches: 64.1/2X9/16 - 64.1/4X5/16 - 64.3/8X7/16
<b>PM.MODMCUAE54-2</b>	1	Foam module
<b>176A.CPY</b>	1	Multigrip pliers with ergonomic sheath - 17 cm
<b>188.16CPE</b>	1	Flat nose pliers
<b>192.16CPE</b>	1	High-performance diagonal cutter
<b>193.16CPE</b>	1	Short half-round nose plier
<b>405.12</b>	1	Diagonal cutter
<b>410.S</b>	1	Connector plier
<b>445.8R</b>	1	Locking-wire plier
<b>82H.JU10</b>	10	Roll of offset hexagonal keys 1/16" to 3/8"
<b>A3,5X100VE</b>	1	PROTWIST® 1,000 Volt insulated screwdriver for slotted-head screws
<b>AN</b>	3	Screwdrivers for slotted head screws - milled blades: AN2X75 - AN3.5X75 - AN4X35
<b>ANP</b>	3	Screwdrivers for Phillips® screws - round blades: ANP1X35 - ANP2X35
<b>AW</b>	3	Screwdrivers for slotted head screws: AW4X100 - AW5.5X150 - AW6.5X150
<b>AWP2X125</b>	1	Screwdriver for Phillips® screws - short blades: PH 2x125 mm
<b>APZ.B</b>	1	Angled screwdrivers - for Phillips® screws
<b>ARZ.5,5</b>	1	Angled screwdrivers - for slotted-head
<b>PM.MODMCUAE54-3</b>	1	Foam module
<b>J.115</b>	1	Drive metal-grip speed brace

	Qty	Set description
<b>J.120A</b>	1	Drive sliding tee
<b>J.145</b>	1	Drive metal-grip hinged handle
<b>J.151A</b>	1	3/8" Standard ratchet
<b>J.210</b>	1	Drive extensions 125 mm
<b>J.215</b>	1	Drive extensions 250 mm
<b>J.230</b>	1	Drive extensions 125 mm
<b>J.240A</b>	1	3/8" Universal joint
<b>R.120A</b>	1	1/4" drive sliding tee
<b>R.140A</b>	1	Hinged bar 1/4" with handle
<b>R.151</b>	1	1/4" Standard ratchet
<b>R.210</b>	1	1/4" Wobble extension 100 mm
<b>R.215</b>	1	1/4" Wobble extension 150 mm
<b>R.232</b>	1	1/4" - 3/8" Coupler
<b>R.240A</b>	1	1/4" Universal joint
<b>RB</b>	10	1/4" Sockets: RB.1/2 - RB.1/4 - RB.11/32 - RB.3/16 - RB.3/8 - RB.5/16 - RB.7/16 - RB.7/32 - RB.9/16 - RB.9/32
<b>JB</b>	12	3/8" Sockets : JB.1/2 - JB.1/4 - JB.11/16 - JB.11/32 - JB.13/16 - JB.3/4 - JB.3/8 - JB.5/16 - JB.5/8 - JB.7/16 - JB.7/8 - JB.9/16
<b>J.3/8LA</b>	1	3/8" Long socket
<b>J.7/16LA</b>	1	3/8" Long socket
<b>PM.MODMCUAE54-4</b>	1	Foam module
<b>BV.21-10</b>	1	Soldering iron stand
<b>1230.30</b>	1	Electronic soldering irons (20/40 W)
<b>200H.26</b>	1	Riveting engineers hammer
<b>234</b>	1	Scriber
<b>248</b>	3	One-piece drift punches: 248.2 - 248.3 - 248.4
<b>256.2.5</b>	1	Precision centre punch 2,5 mm
<b>803.300M</b>	1	Stainless steel rules - 2 sides
<b>836</b>	1	Pen light
<b>839A.0</b>	1	Desoldering pumps
<b>841</b>	1	Electricians scissors
<b>843</b>	1	Twin-blade electricians knife with wood handle

**CU.AE56 168-piece stop-over mechanics set**

- Servicing of engine accessories, airframes, electrical equipment and circuits.
  - Each foam module is also available per unit.
- Weight : 16,960 kg.



	Qty	Set description
<b>PM.MODMCUAE56-1</b>	1	Foam module
<b>64</b>	6	Inch straight ratchet ring wrenches: 64.1/2X9/16 - 64.1/4X5/16 - 64.3/4X13/16 - 64.3/8X7/16 - 64.5/8X11/16 - 64.7/8X15/16
<b>22</b>	5	Inch 15° hinged "midget" open end wrenches: 22.1/2X9/16 - 22.11/32X7/16 - 22.3/16X1/4 - 22.5/16X3/8 - 22.7/32X9/32
<b>440</b>	12	Combination wrenches: 440.1/2 - 440.1/4 - 440.11/16 - 440.13/16 - 440.15/16 - 440.3/4 - 40.3/8 - 440.5/16 - 440.5/8 - 440.7/16 - 440.7/8 - 440.9/16
<b>PM.MODMCUAE56-2</b>	1	Foam module
<b>376A</b>	1	Manual oil syringe
<b>603F</b>	1	Hacksaw frame
<b>6688.12</b>	10	Cobalt steel bimetal saw blades
<b>AS.6L160T2A</b>	6	Selections of 6 and 12 needle files
<b>CAR.MD200A</b>	1	Second-cut square files
<b>DRD.MD200A</b>	1	Half-round second-cut files
<b>PAM.B250A</b>	1	Flat bastard file
<b>RD.MD200A</b>	1	Second-cut round file
<b>TRI.MD200A</b>	1	Second-cut triangle file
<b>MAN</b>	1	Wood handles for files and rasps: MAN.0 - MAN.1 - MAN.2 - MAN.3
<b>PM.MODMCUAE56-3</b>	1	Foam module
<b>EP.101T</b>	1	High Perf® bit series 1 for Phillips® screws
<b>EP.102T</b>	1	High Perf® bits series 1 for Phillips® screws
<b>ES.134T</b>	1	High Perf® bit series 1 for slotted head screws
<b>ES.136,5T</b>	1	High Perf® bit series 1 for slotted head screws
<b>ES.148T</b>	1	High Perf® bit series 1 for slotted head screws
<b>J.115</b>	1	Drive metal-grip speed brace
<b>J.120A</b>	1	Drive sliding tee
<b>J.145</b>	1	Drive metal-grip hinged handle
<b>J.151A</b>	1	3/8" Standard ratchet
<b>J.210</b>	1	Drive extensions 125 mm
<b>J.215</b>	1	Drive extensions 250 mm
<b>J.230</b>	1	Drive extensions 125 mm
<b>J.240A</b>	1	3/8" Universal joint
<b>R.120A</b>	1	1/4" drive sliding tee
<b>R.140A</b>	1	Hinged bar 1/4" with handle
<b>R.151</b>	1	Ratchet 1/4"
<b>R.210</b>	1	1/4" Wobble extension 100 mm
<b>R.215</b>	1	1/4" Wobble extension 150 mm
<b>R.217</b>	1	1/4" drive extension 250 mm
<b>R.232</b>	1	1/4" to 3/8" coupler
<b>R.235</b>	1	1/4" drive standard spring-c lip bit holder
<b>R.236A</b>	1	1/4" drive medium spinner
<b>R.240A</b>	1	1/4" Universal joint
<b>RB</b>	10	1/4" Sockets : RB.1/2 - RB.1/4 - RB.11/32 - RB.3/16 - RB.3/8 - RB.5/16 - RB.7/16 - RB.7/32 - RB.9/16 - RB.9/32

	Qty	Set description
<b>JB</b>	12	3/8" Sockets : JB.1/2 - JB.1/4 - JB.11/16 - JB.11/32 - JB.13/16 - JB.3/4 - JB.3/8 - JB.5/16 - JB.5/8 - JB.7/16 - JB.7/8 - JB.9/16
<b>J.LA</b>	10	3/8" Long sockets: J.1/2LA - J.1/4LA - J.11/16LA - J.13/16LA - J.3/4LA - J.3/8LA - J.5/16LA - J.5/8LA - J.7/16LA - J.9/16LA
<b>PM.MODMCUAE56-4</b>	1	Foam module
<b>163</b>	1	Wire cutter and stripper
<b>180.CPE</b>	1	High-performance multigrip plier
<b>188.16CPE</b>	1	Flat nose pliers
<b>192.16CPE</b>	1	High-performance diagonal cutter
<b>193.16CPE</b>	1	Short half-round nose plier
<b>445.10R</b>	1	Locking-wire plier
<b>500A</b>	1	Short-nose lock-grip pliers
<b>82H.JU10</b>	1	Roll of offset hexagonal keys 1/16" to 3/8"
<b>AN</b>	4	Screwdrivers for slotted head screws - milled blades: AN2.5X75 - AN3.5X75 - AN4X100 - AN6.5X35
<b>ANP</b>	2	Screwdrivers for Phillips® screws - round blades: ANPOX75 - ANP1X35
<b>APZ.B</b>	1	Angled screwdrivers - for Phillips® screws
<b>ARZ.5.5</b>	1	Angled screwdrivers - for slotted-head screws
<b>AW</b>	3	Screwdrivers for slotted head screws: AW4X100 - AW5.5X150 - AW6.5X150
<b>AWP</b>	4	Screwdrivers for Phillips® screws - short blades: AWP1X100 - AWP2X125 -
<b>PM.MODMCUAE56-5</b>	1	Foam module
<b>113A.10C</b>	1	Chromed adjustable wrench 10"
<b>142.1</b>	1	"High precision" tweezers straight model - cleared nose
<b>154.C</b>	1	Tweezers straight model - power nose
<b>1830.1</b>	1	Brush
<b>200H.32</b>	1	Riveting engineers hammer
<b>208A.40CBA</b>	1	Adaptable-tip mallets
<b>234</b>	1	Steel scriber
<b>256.4</b>	1	Precision centre punche
<b>263.G19</b>	1	Sheathed chisels
<b>803.300M</b>	1	Stainless steel rules - 2 sides
<b>804</b>	1	Round tip metric thickness gauge 19 blades
<b>805.1</b>	1	Universal calipers class 0 - 1/10 mm
<b>826.1</b>	1	Flexible mechanical retriever 460 mm
<b>827.1</b>	1	Extra-thin flexible magnetic retriever
<b>840.1</b>	1	Electricians knife with wire stripper with wood handle
<b>841</b>	1	Sheathed electricians scissors
<b>844.S18</b>	1	18 mm automatically reloading utility knife
<b>882A</b>	1	Right-cut universal scroll shears
<b>893.316</b>	1	ABS body tape measure 2 m
<b>248</b>	7	One-piece drift punches: 248.2, 248.3, 248.4, 248.5, 248.6, 248.8, 248.10



## Aerospace toolkits

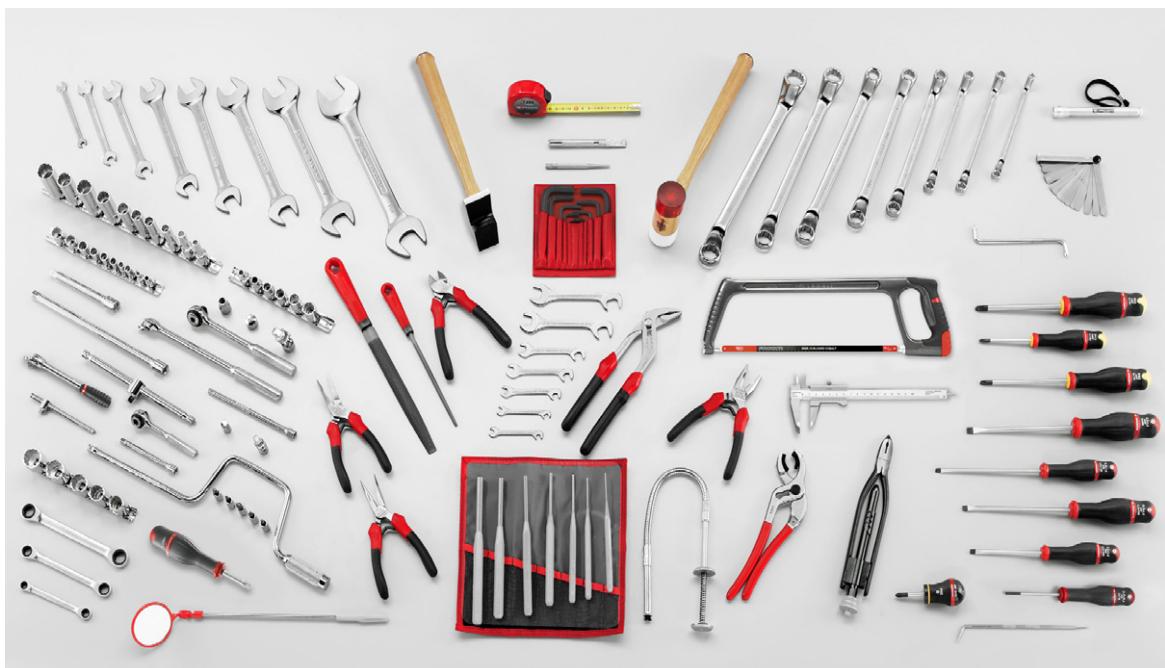
### □ JETGXLUAE56 CU.AE56 set supplied in foam modules and JET.8GXLS

- CU.AE56 stopover mechanics set supplied in foam modules and JET.8GXLS



### □ CU.AE57 132-piece major check set

- For regular major overhauls of engines, undercarriage, airframes and hydraulic systems of wide-body aircraft : AIRBUS, BOEING, MC DONNEL DOUGLAS.
  - Each foam module is also available per unit.
- Weight : 14,430 kg.



	Qty	Set description
<b>PM.MODM.CUAE57-1</b>	1	Foam module
<b>44</b>	8	Inch open end wrenches: 44.1/2X9/16 - 44.1/4X5/16 - 44.1P1/8X1P1/4 - 44.1PX1P1/16 - 44.3/4X13/16 - 44.3/8X7/16 - 44.5/8X11/16 - 44.7/8X15/16
<b>64</b>	3	Inch straight ratchet ring wrenches: 64.1/2X9/16 - 64.1/4X5/16 - 64.3/8X7/16
<b>55A</b>	8	Offset-ring wrenches: 55A.1/2X9/16 - 55A.1/4X5/16 - 55A.11/32X13/32 - 55A.19/32X25/32 - 55A.3/4X13/16 - 55A.3/8X7/16 - 55A.5/8X11/16 - 55A.7/8X15/16
<b>34</b>	7	Open end wrenches: 34.1/4 - 34.11/16 - 34.3/8 - 34.5/16 - 34.5/8 - 34.7/16 - 34.9/32
<b>PM.MODM.CUAE57-2</b>	1	Foam module
<b>410.S</b>	1	Connector plier
<b>445.10R</b>	1	Locking-wire plier
<b>180.CPE</b>	1	High-performance multigrip plier
<b>187.16CPE</b>	1	Combination plier
<b>188.16CPE</b>	1	Flat nose pliers
<b>192.16CPE</b>	1	High-performance diagonal cutter
<b>193.16CPE</b>	1	Short half-round nose plier
<b>EP.101T</b>	1	High Perf' bit series 1 for Phillips® screws
<b>EP.102T</b>	1	High Perf' bits series 1 for Phillips® screws
<b>ES.134T</b>	1	High Perf' bit series 1 for slotted head screws
<b>ES.136,ST</b>	1	Embossed High Perf' série 1 pour vis à fente
<b>ES.148T</b>	1	High Perf' bit series 1 for slotted head screws
<b>AN3.X75</b>	1	Tournevis PROTWIST® pour vis à fente 3 x 75 mm
<b>ANP.2X35</b>	1	Screwdrivers for Phillips® screws - round blades : PH 2x35 mm
<b>APZ.B</b>	1	Angled screwdrivers - for Phillips® screws
<b>AW</b>	4	Screwdrivers for slotted head screws: AW4X100 - AW5.5X150 - AW6.5X150 - AW8X200
<b>AWP</b>	3	Screwdriver for Phillips® heads: AWP1X100 - AWP2X125 - AWP3X150
<b>PM.MODM.CUAE57-3</b>	1	Foam module
<b>DRD.MD200EMA</b>	1	Half-round second-cut files with handle
<b>RD.MD150EMA</b>	1	Half-round second-cut files with handle
<b>248</b>	7	One-piece drift punches: de 248.2 - 248.3 - 248.4 - 248.5 - 248.6 - 248.8 - 248.10
<b>200H.32</b>	1	Riveting engineers hammer
<b>208A.40CBA</b>	1	Adaptable-tip mallets
<b>234</b>	1	Steel scriber

	Qty	Set description
<b>256.2.5</b>	1	Precision centre punche 2,5 mm
<b>263.G19</b>	1	Sheathed chisels
<b>PM.MODM.CUAE57-4</b>	1	Foam module
<b>J.115</b>	1	Drive metal-grip speed brace
<b>J.120A</b>	1	Drive sliding tee
<b>J.145</b>	1	Drive metal-grip hinged handle
<b>J.151A</b>	1	3/8" Standard ratchet
<b>J.210</b>	1	Drive extensions 125 mm
<b>J.215</b>	1	Drive extensions 250 mm
<b>J.230</b>	1	Drive extensions 125 mm
<b>J.240A</b>	1	3/8" Universal joint
<b>R.120A</b>	1	1/4" drive sliding tee
<b>R.140A</b>	1	Hinged bar 1/4" with handle
<b>R.210</b>	1	1/4" Wobble extension 100 mm
<b>R.151</b>	1	1/4" Standard ratchet
<b>R.215</b>	1	1/4" Wobble extension 150 mm
<b>R.232</b>	1	1/4" Coupler - 3/8"
<b>R.235</b>	1	1/4" drive standard spring-clip bit holder
<b>R.236A</b>	1	Drive medium spinner
<b>R.240A</b>	1	1/4" Universal joint
<b>JB</b>	12	3/8" Sockets: JB.11/32 - JB.1/2 - JB.1/4 - JB.3/8 - JB.5/16 - JB.7/16 - JB.9/16 - JB.11/16 - JB.13/16 - JB.3/4 - JB.5/8 - JB.7/8
<b>J.LA</b>	10	3/8" Long sockets: J.1/2LA - J.1/4LA - J.11/16LA - J.13/16LA - J.3/4LA - J.3/8LA - J.5/16LA - J.5/8LA - J.7/16LA - J.9/16LA
<b>RB</b>	10	1/4" Sockets : RB.1/2 - RB.1/4 - RB.11/32 - RB.3/16 - RB.3/8 - RB.5/16 - RB.7/16 - RB.7/32 - RB.9/16 - RB.9/32
<b>PM.MODM.CUAE57-5</b>	1	Foam module
<b>603F</b>	1	Hacksaw frame
<b>804</b>	1	Round tip metric thickness gauge 19 blades
<b>805.1</b>	1	Universal calipers class 0 - 1/10 mm
<b>826.1</b>	1	Flexible mechanical retriever 460 mm
<b>82H.JU10</b>	10	Roll of offset hexagonal keys 1/16" to 3/8"
<b>834.R2</b>	1	Inspection mirror 55 mm
<b>836</b>	1	Pen light
<b>893.316</b>	1	ABS body tape measure 2 m

## MODM.440-4 Inch combination wrench set in foam module



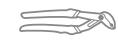
- Contains:
  - 13 combination wrenches in inches: 1/4 - 5/16 - 11/32 - 3/8 - 7/16 - 1/2 - 9/16 - 5/8 - 11/16 - 3/4 - 7/8 - 15/16".
  - Foam tray: PM.MOD440-4
- Weight: 1.650 kg.



## MODM.467JU12 Inch ratchet combination wrench set in foam modules



- Contains :
  - 12 ratchet combination wrenches in inches:
  - 1/4 - 5/16 - 11/32 - 3/8 - 7/16 - 1/2 - 9/16 - 5/8 - 11/16 - 3/4 - 7/8 - 15/16".
  - Foam tray: PM.MOD467JU12
- Weight: 2.040 kg.



## MODM.467FJU8 Inch hinged ratchet combination wrench set in foam module



- Contains:
  - 8 hinged ratchet combination wrenches in inches:
  - 5/16 - 3/8 - 7/16 - 1/2 - 9/16 - 5/8 - 11/16 - 3/4".
  - Foam tray: PM.MOD467FJU8
- Weight: 1.175 kg.





## Foam modules AERO

### **□ MODM.64JU6 Inch straight ratchet ring wrenches in foam module**



- Contains:
- 6 inch wrenches 64: 1/4X5/16, 3/8X7/16, 1/2X9/16, 5/8X11/16, 3/4X13/16, 64.7/8X15/16".
- Weight: 1,19 kg.

### **□ MODM.65JU6 Inch straight ratchet ring wrenches in foam module**



- Contains:
- 6 inch wrenches 65: 1/4X5/16, 3/8X7/16, 1/2X9/16, 5/8X11/16, 3/4X13/16, 64.7/8X15/16".
- Weight: 1,085 kg.

### **□ MODM.RL1U 1/4" locking ratchet and inch-size sockets foam module**



- Comprising:
- 1 ratchet RL.171 - 2 locking extensions R.210RC and R.217RC.
- 11 1/4" R.E sockets from 3/16 to 9/16".
- 10 1/4" R.EL long-reach sockets from 3/16 to 9/16".
- Foam tray: PM.MODRL1U.
- Weight: 0,665kg.

### **□ MODM.RL2U 1/4" locking ratchet and inch-size sockets foam module**



- comprising:
- 1 ratchet RL.161 - 1 sliding tee R.120A.
- 1 extension J4763 - 2 1/4" standard extensions R.209 and R.215.
- 11 1/4" R.E sockets from 3/16 to 9/16".
- 1 set of keys 83SH.JP8AU - 1 1/4" screwdriver grip R.236A.
- Bits: 3 x ED.1T (101 --> 103) - 3 x EP.1T (101 --> 103). 2 x ES.1T (134,5T - 136,5T)
- 5 bits EH.1 (103 --> 107). 5 x EX.1 (115 - 120 - 125 - 130 - 140).
- 1 1/4" universal joint R.240A - 1 1/4" bit holder socket R.235.
- Foam tray: PM.MODRL2U.
- Weight: 1,1 kg.

### **□ MODM.JL2U 3/8" locking ratchet - inch sockets in foam module**



- Contains :
- Ratchet JL.171
- 2 locking extensions J.210RC, J217RC.
- 13 3/8" J sockets: from 1/4" to 1".
- 10 long 3/8" JLA sockets: from 1/4" to 7/8".
- 7 inch ring wrenches from 1/4" to 15/16".
- 1 bit holder ratchet wrench 65.PE.
- Weight: 3,975 kg.

### **□ MODM.SL2U 1/2" locking ratchet - inch sockets in foam module**



- Contains :
- 1 ratchet SL.171.
- 2 locking extensions S.210RC, S.215RC.
- 16 1/2" S sockets: from 3/8" to 1'1/4".
- 7 long 1/2" SLA sockets: from 1/2" to 7/8".
- Weight: 4,266 kg.

**MODM.467SJU10 10-piece foam module of inch-size short ratchet combination wrenches**

NEW

- Includes 10 467S inch-size wrenches: 467.1/4, 467S.5/16, 467S.11/32, 467S.3/8, 467S.7/16, 467S.1/2, 467S.9/16, 467S.5/8, 467S.11/16, 467S.3/4.
  - Foam tray: PM.MOD467SJU10
- Weight: 0, 649 kg.

**MODM.57LJ9 9-piece foam module of metric-size 15° angled long-reach ring wrenches**

NEW

- Includes 9 57L metric-size wrenches: 57L.5.5X7, 57L.8X9, 57L.8X10, 57L.10X11, 57L.10X12, 57L.12X13, 57L.12X14, 57L.14X15, 57L.14X17.
  - Foam tray: PM.MOD57LJ9
- Weight: 2.040 kg.

**MODM.57LJU8 8-piece foam module of inch-size 15° angled long-reach ring wrenches**

NEW

- Includes 8 57L inch-size wrenches: 57L.7/32x1/4, 57L.1/4x5/16, 57L.5/16x3/8, 57L.3/8x7/16, 57L.7/16x1/2, 57L.1/2x9/16, 57L.9/16x5/8, 57L.5/8x3/4.
- Foam tray: PM.MOD57LJU8
- Weight: 1,377 kg.

**MODM.57LSPL6 6-piece foam module of Spline 15° angled long-reach ring wrenches**

NEW

- Includes 6 57L Spline wrenches: 57L.7X9SPL, 57L.8X10SPL, 57L.12X14SPL, 57L.16X18SPL, 57L.18X20SPL, 57L.22X24SPL.
  - Foam tray: PM.MOD57LSPL6.
- Weight: 1,223kg.

**MODM.56JU8 8-piece foam module of inch-size 10° angled short-reach ring wrenches**

NEW

- Includes 8 56A and 56L inch-size wrenches: 56A.1/4X5/16, 56A.5/16X3/8, 56A.3/8X7/16, 56A.1/2X9/16, 56A.9/16X5/8, 56L.5/16X3/8, 56L.7/16x1/2, 56L.9/16x5/8.
  - Foam tray: PM.MOD56JU8
- Weight: 0,659 kg.

**MODM.65SPL7 7-piece foam module of Spline 15° angled ratchet ring wrenches**

NEW

- Includes 7 65 Spline wrenches: 65.7X9SPL, 65.8X10SPL, 65.12X14SPL, 65.16X18SPL, 65.20X22SPL, 65.24X28SPL, 65.26X30SPL.
  - Foam tray: PM.MOD65SPL7.
- Weight: 0,937 kg.





## Ratchet wrenches

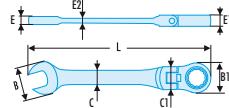
### □ 467.JP8U Inch ratchet combination wrench set in sleeve



#### ASME B107.100

- Productivity and safety = easy to organise, easy to spot, always with you.
  - Dimensions in inches: 5/16 - 3/8 - 7/16 - 1/2 - 9/16 - 5/8 - 11/16 - 3/4".
  - Resistant to chemicals and impacts.
  - Portable case: CK.467J1U.
- Weight: 1.380 kg.

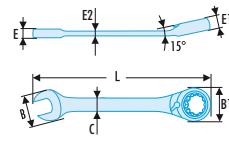
### □ 467.F.JP8U Inch hinged ratchet combination wrench set in sleeve



#### ASME B107.100

- Also exists in mm.
  - Productivity and safety = easy to organise, easy to spot, always with you.
  - Dimensions in inches: 5/16 - 3/8 - 7/16 - 1/2 - 9/16 - 5/8 - 11/16 - 3/4".
  - Resistant to chemicals and impacts.
  - Portable case: CK.467FJ1U.
- Weight: 1.200 kg.

### □ 467 - Inch standard ratchet combination wrenches

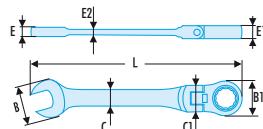


#### ASME B107.100

- Standard ratchet combination wrenches: for all current applications.
- Compact ratchet mechanism and reversible by lever.
- Increment 5° (7.5° for dimension 1/4" ; 6° for dimensions 5/16" and 11/32").
- Ring head angled at 15°.
- Open end head angled at 15°.
- Inch sizes: 1/4" to 15/16".
- Presentation: satin chrome finish.
- Also exists in mm.

	A ["]	B [mm]	B1 [mm]	E [mm]	E1 [mm]	E2 [mm]	L [mm]	$\Delta\Delta$ [g]
<b>467.1/4</b>	1/4	14,5	14	4	6,3	2,2	128	30
<b>467.5/16</b>	5/16	16,7	17	4,3	6,5	2,5	140	30
<b>467.11/32</b>	11/32	18,7	18,6	4,5	6,9	2,5	149	40
<b>467.3/8</b>	3/8	20,8	20,2	5	7,3	2,9	158	50
<b>467.7/16</b>	7/16	23	22	5,3	7,7	3,2	165	60
<b>467.1/2</b>	1/2	26,8	25,5	6,1	8,6	3,5	178	90
<b>467.9/16</b>	9/16	29	26,9	6,5	9	3,8	190	110
<b>467.5/8</b>	5/8	33	29,8	7,1	9,9	4,2	208	140
<b>467.11/16</b>	11/16	35,5	31,8	7,5	10,3	4,5	225	170
<b>467.3/4</b>	3/4	39,4	34	8,6	11,2	4,6	247	230
<b>467.7/8</b>	7/8	45,8	40,1	9	13	5,1	287,8	340
<b>467.15/16</b>	15/16	51,8	46,5	10	14,5	5,6	321	480

## □ 467F - Inch hinged jointed combination wrenches



## ASME B107.100

- Hinged head ratchet combination wrenches: to reach difficult access nuts.
- Compact ratchet mechanism and reversible by flipping the wrench.
- Increment 5° (6° for dimensions 5/16" and 3/8").
- Ring head hinged at 180°.
- Open end head angled at 15°.
- Inch sizes: 5/16" to 3/4".
- Presentation: satin chrome finish.
- Also exists in mm.

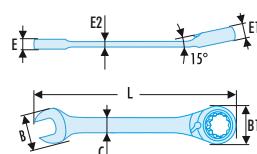
	A ["]	B [mm]	B1 [mm]	E [mm]	E1 [mm]	E2 [mm]	E3 [mm]	L [mm]	ΔΔ [g]
<b>467F.5/16</b>	5/16	16,2	16,7	4,3	6,5	2,7	13	127,5	45
<b>467F.3/8</b>	3/8	20,3	20,1	5	7,3	3,2	16	136,5	60
<b>467F.7/16</b>	7/16	22,5	21,8	5,4	7,7	3,6	17	141,5	65
<b>467F.1/2</b>	1/2	26,8	25,2	6,1	8,6	3,9	19	155	95
<b>467F.9/16</b>	9/16	28,7	26,8	6,4	9	4,2	20	161	110
<b>467F.5/8</b>	5/8	32,9	29,8	7,2	9,9	4,6	22	180	155
<b>467F.11/16</b>	11/16	34,5	31,8	7,6	10,3	4,9	23	191	175
<b>467F.3/4</b>	3/4	39,2	33,9	8,6	11,2	5,4	25	216	230



## □ 467S - Inch-size short-reach combination ratchets



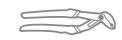
NEW



## ASME B107.100

- Extra-short handle combination ratchets: ideal for engine maintenance or other highly cluttered zones, inaccessible to standard wrenches.
- Compact lever ratchet mechanism.
- 5° increment (6° for the 1/4, 5/16 and 11/32 dimensions).
- Ring head and 15° angled open end for better access.
- Inch sizes 1/4" to 3/4"
- Satin chrome finish.
- Also exists in mm.

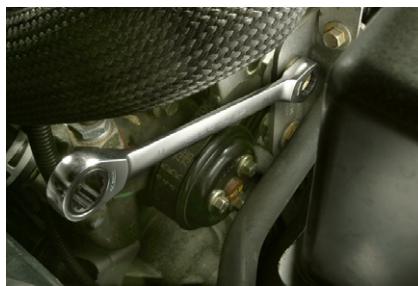
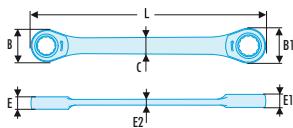
	A ["]	B [mm]	B1 [mm]	C [mm]	E [mm]	E1 [mm]	E2 [mm]	L [mm]	ΔΔ [g]
<b>467S.1/4</b>	1/4	15	14	6,5	3,9	6,3	2,8	80	17
<b>467S.5/16</b>	5/16	16,2	16,7	6,9	4	6,5	2,8	90	22
<b>467S.11/32</b>	11/32	18,2	18,6	6,9	4,4	6,9	3	93	28
<b>467S.3/8</b>	3/8	20,5	20	7,3	4,8	7,3	3,4	95	35
<b>467S.7/16</b>	7/16	22,5	21,8	7,7	5,2	7,7	3,7	103	41
<b>467S.1/2</b>	1/2	26,7	25,2	8,2	5,8	8,6	4	108	64
<b>467S.9/16</b>	9/16	28,8	26,8	8,6	6,2	9	4	115	74
<b>467S.5/8</b>	5/8	33,2	29,8	9	6,8	9,9	4,3	123	101
<b>467S.11/16</b>	11/16	35,1	31,8	10,3	7,2	10,3	5	127	113
<b>467S.3/4</b>	3/4	39,3	33,7	10,5	8,2	11,2	5,3	139	154





## Double ended ring wrenches

## □ 64 - Inch straight ratchet ring wrenches

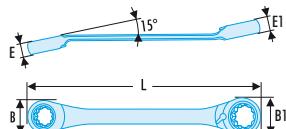


## ASME B107.100

- Straight ratchet ring wrenches: to reach the nut flat.
- Compact ratchet mechanism and reversible by flipping the wrench.
- Increment 5° (7.5° for dimension 1/4" mm; 6° for dimensions 5/16" and 11/32").
- Dimensions in inches: from 1/4" to 15/16".
- Presentation: satin chrome finish.
- Also exists in mm.

⊕	A ["]	B [mm]	B1 [mm]	C [mm]	E [mm]	E1 [mm]	E2 [mm]	L [mm]	ΔΔ [g]
<b>64.1/4X5/16</b>	1/4x5/16	14,2	17,2	8,0	6,3	6,5	3,0	115	40
<b>64.5/16X11/32</b>	5/16x11/32	16,8	20,2	8,3	6,5	6,9	3,2	128	45
<b>64.3/8X7/16</b>	3/8x7/16	20,2	21,8	9,1	7,3	7,7	3,6	150	60
<b>64.1/2X9/16</b>	1/2x9/16	23	24,8	11,3	8,6	9,0	4,2	180	115
<b>64.5/8X11/16</b>	5/8x11/16	29,5	33,5	14,8	9,9	10,7	5,4	210	185
<b>64.3/4X13/16</b>	3/4x13/16	33,5	40,0	15,2	11,2	13,0	5,4	245	310
<b>64.7/8X15/16</b>	7/8x15/16	40	46,0	15,2	13	14,5	5,4	260	480

## □ 65 - Inch 15° hinged ratchet ring wrenches



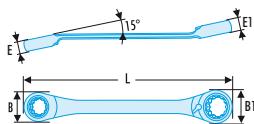
## ASME B107.100

- 15° hinged ratchet ring wrenches: ring offset to clear fingers or obstacles.
- Compact ratchet mechanism and reversible by lever.
- Increment 5° (7.5° for dimension 1/4"; 6° for dimensions 5/16" and 11/32").
- Ring head angled at 15°.
- Dimensions in inches: from 1/4" to 15/16".
- Presentation: satin chrome finish.
- Also exists in mm.

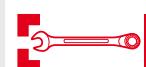
⊕	A ["]	B [mm]	B1 [mm]	E [mm]	E1 [mm]	L [mm]	ΔΔ [g]
<b>65.1/4X5/16</b>	1/4x5/16	14,0	17,0	6,3	6,5	115	30
<b>65.5/16X11/32</b>	5/16x11/32	17,0	20,2	6,5	6,9	128	45
<b>65.3/8X7/16</b>	3/8x7/16	20,2	22,0	7,3	7,7	150	65
<b>65.1/2X9/16</b>	1/2x9/16	25,5	26,9	8,6	9,0	180	110
<b>65.5/8X11/16</b>	5/8x11/16	29,8	31,8	9,9	10,3	200	170
<b>65.3/4X13/16</b>	3/4x13/16	34,0	40,1	11,2	13,0	245	290
<b>65.7/8X15/16</b>	7/8x15/16	40,1	46,5	13	14,5	260	420

**□ 65.SPL - Spline 15° angled ratchet ring wrenches**

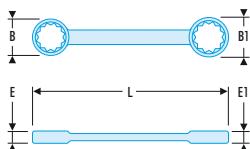
NEW

**MS-33787D**

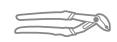
- Spline profile 15° angled ring ratchets for aeronautical fasteners.
- The spline profile applies more torque with less strength as the tightening contact surface is higher.
- The contact points of a Spline wrench are always far from the nut's angles. This limits wear of the nuts.
- The Spline profile ensures high versatility. It is compatible with Spline, Torx, 4-, 6- and 12-point fasteners.
- Recess under the handle allows to pass fingers or an obstacle.
- Reversible compact lever ratchet mechanism.
- 5° increments (6° for sizes 7, 8 and 9).
- Spline sizes: 7 to 36
- Satin chrome finish.
- Also exists in mm.



	A ["]	B [mm]	B1 [mm]	E [mm]	E1 [mm]	L [mm]	ΔΔ [g]
<b>65.7X9SPL</b>	7/32x9/32	14	17	6.3	6.5	115	24
<b>65.8X10SPL</b>	1/4x5/16	14	17	6.3	6.5	115	30
<b>65.12X14SPL</b>	3/8x7/16	20.2	22	7.3	7.7	150	49
<b>65.16X18SPL</b>	1/2x9/16	25.5	26.9	8.6	9	180	99
<b>65.20X22SPL</b>	5/8x11/16	29.8	31.8	9.9	10.3	200	165
<b>65.24X28SPL</b>	3/4x7/8	34	40.1	11.2	13	245	276
<b>65.26X30SPL</b>	13/16x15/16	40.1	46.5	13	14.5	260	294
<b>65.32X36SPL</b>	1x1P1/8	46	58.5	14.5	17	295	658

**□ 59L- Metric long double ended ring wrenches****AS 955**

- Offset box end for manoeuvrability in confined spaces.
- Metric dimensions: from 6 mm to 19 mm.
- Presentation: satin chrome finish.



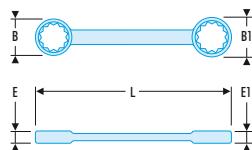
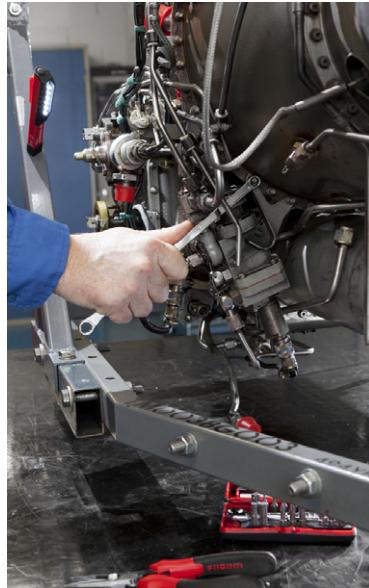
	A ["]	B [mm]	B1 [mm]	E [mm]	E1 [mm]	L [mm]
<b>59L.6X7</b>	6X7	10,2	11,6	6,3	7,3	200
<b>59L.8X9</b>	8X9	11,8	13,3	6,5	7,5	240
<b>59L.10X11</b>	10X11	14,6	16	7,5	8,7	288
<b>59L.12X13</b>	12X13	17,3	18,8	10,4	11,3	330
<b>59L.14X15</b>	14X15	20	21,5	12	13,7	364
<b>59L.14X17</b>	14X17	20	23,9	12	13,7	364
<b>59L.18X19</b>	18X19	25,3	26,5	14	15,1	405



# Facom Aerospace 2015

## Double ended ring wrenches

### □ 59L- Inch long double ended ring wrenches



#### AS 954

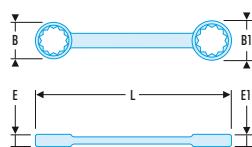
- Offset box end for manoeuvrability in confined spaces.
- Dimensions in inches: from 1/4" to 13/16".
- Presentation: satin chrome finish.

ED	A ["]	B [mm]	B1 [mm]	E [mm]	E1 [mm]	L [mm]
59L.1/4X5/16	1/4x5/16	10,2	11,6	6,3	7,3	200
59L.3/8X7/16	3/8x7/16	14,6	17,2	7,5	8,8	288
59L.1/2X9/16	1/2x9/16	18,8	20	12	13,7	364
59L.5/8X3/4	5/8x3/4	22,8	26,5	14	15,1	405
59L.11/16X13/16	11/16x13/16	25,4	30	17	18	410

### □ 56A - Inch 10° hinged short-reach ring wrenches



NEW



#### ASME B107.100 GGG-W-636E

- Short-reach 10° offset-ring wrenches. Recess allows to pass fingers or an obstacle.
- The short-reach series increases accessibility.
- Ergonomic handle to apply torque while maintaining comfort of use.
- OGV® profile 12-point ring for powerful tightening while protecting the nut.
- Inch sizes 3/16" to 13/16"
- Satin chrome finish.

ED	A ["]	B x B1 [mm]	E x E1 [mm]	L [mm]	ΔΔ [g]
56A.3/16X7/32	3/16x7/32	8,7x9,5	5,4x5,9	100	24
56A.1/4X5/16	1/4x5/16	10,5x12,5	5,9x6,5	110	31
56A.5/16X3/8	5/16x3/8	12,5x14,6	6,5x7,6	115	45
56A.3/8X7/16	3/16x7/32	14,6x16,7	7,6x8,3	122	55
56A.7/16X1/2	7/16x1/2	16,7x19	8,3x9,3	130	68
56A.1/2X9/16	1/2x9/16	19x21	9,3x10,3	140	89
56A.9/16X5/8	9/16x5/8	21x23,3	10,3x11,5	145	103
56A.5/8X3/4	5/8x3/4	23,3x27,5	11,5x12,8	160	139
56A.11/16X13/16	11/16x13/16	25,6x29,9	11,8x13	170	170

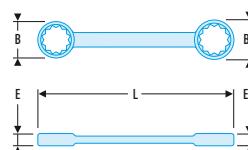
## Long-reach ring wrenches

### Wrenches

#### 56L - Inch 10° hinged long-reach ring wrenches

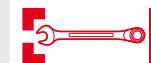


NEW



##### ASME B107.100 AS 954G GGG-W-636E

- Long-reach 10° offset-ring wrenches. Recess allows to pass fingers or an obstacle.
- Ergonomic handle to apply torque while maintaining comfort of use.
- OGV® profile 12-point ring for powerful tightening while protecting the nut.
- Inch sizes 3/16" to 13/16"
- Satin chrome finish.

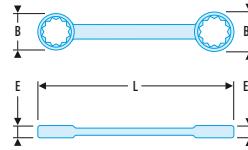


	A ["]	B x B1 [mm]	E x E1 [mm]	L [mm]	$\Delta\Delta$ [g]
<b>56L.1/4X5/16</b>	1/4x5/16	10,5x12,5	5,9x6,5	170	48
<b>56L.5/16X11/32</b>	5/16x11/32	12,5x13,5	6,5x7,2	180	62
<b>56L.5/16X3/8</b>	5/16x3/8	12,5x14,6	6,5x7,6	180	70
<b>56L.3/8X7/16</b>	3/8x7/16	14,6x16,7	7,6x8,3	185	82
<b>56L.7/16X1/2</b>	7/16x1/2	16,7x19	8,3x9,3	210	108
<b>56L.1/2X9/16</b>	1/2x9/16	19x21	9,3x10,3	220	137
<b>56L.9/16X5/8</b>	9/16x5/8	21x23,3	10,3x11,5	230	158
<b>56L.5/8X3/4</b>	5/8x3/4	23,3x27,5	11,5x12,8	260	216
<b>56L.11/16X3/4</b>	11/16x3/4	25,6x27,5	11,8x12,8	270	256
<b>56L.13/16X7/8</b>	13/16x7/8	29,9x32,2	13,5x14,5	300	363
<b>56L.15/16X1P</b>	15/16x1P	34,5x36,8	15x15,5	340	502
<b>56L.1PX1P1/16</b>	1Px1P1/16	36,8x38,8	15,4x16	370	598
<b>56L.1P1/8X1P1/4</b>	1P1/8x1P1/4	40,8x45,2	16x18	400	762

#### 57L - Inch 15° hinged long-reach offset-ring wrenches



NEW



##### AS 954G

- 15° thin wall long-reach offset-ring wrenches.
- Thin wall and long profile for maximum accessibility.
- Wrenches used in engine assembly and maintenance.
- OGV profile 12-point ring for powerful tightening.
- Inch sizes 7/32" to 7/8"
- Black phosphate finish.



	A ["]	B x B1 [mm]	E x E1 [mm]	H [mm]	L [mm]	$\Delta\Delta$ [g]
<b>57L.7/32X1/4</b>	7/32x1/4	9,5x10,7	6,3x7,3	3,8	191,8	42
<b>57L.1/4X5/16</b>	1/4x5/16	10,2x11,6	6,3x7,3	3,8	191,8	42
<b>57L.5/16X3/8</b>	5/16x3/8	11,8x14,6	6,5x7,5	4	231,7	60
<b>57L.3/8X7/16</b>	3/8x7/16	14,6x17,3	7,5x8,7	4	276,4	105
<b>57L.7/16X1/2</b>	7/16x1/2	17,3x18,8	10,4x11,3	5,2	317,3	185
<b>57L.1/2X9/16</b>	1/2x9/16	18,8x20	12x13,7	5,7	350,4	272
<b>57L.9/16X5/8</b>	9/16x5/8	20x22,8	13,7x14	5,7	350,4	278
<b>57L.5/8X3/4</b>	5/8x3/4	22,8x26,5	14x15,1	7	390,3	393
<b>57L.11/16X3/4</b>	11/16x3/4	25,4x30	14x15,1	7,8	396,1	503
<b>57L.25/32X7/8</b>	25/32x7/8	28,5x31	16,7x17	7,8	409,7	529

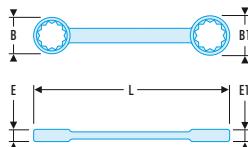


## Offset-ring wrenches

## □ 57L - Metric 15° hinged long-reach offset-ring wrenches



NEW



## AS 955

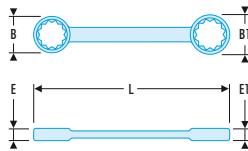
- 15° thin wall long-reach offset-ring wrenches.
- Thin wall and long profile for maximum accessibility.
- Wrenches used in engine assembly and maintenance.
- OGV profile 12-point ring for powerful tightening.
- Sizes in mm: from 5.5 to 22
- Black phosphate finish.

	A [mm]	B x B1 [mm]	E x E1 [mm]	H [mm]	L [mm]	$\Delta\Delta$ [g]
<b>57L.5X7</b>	5.5x7	9,5x10,7	6,3x7,3	3,8	191,8	50
<b>57L.8X9</b>	8x9	11,8x13,3	6,5x7,5	4	231,7	60
<b>57L.8X10</b>	8x10	11,8x14,6	6,5x7,5	4	231,7	66
<b>57L.10X11</b>	10x11	14,6x16	7,5x8,7	4	276,4	103
<b>57L.10X12</b>	10x12	14,6x17,3	7,5x8,7	4	276,4	105
<b>57L.12X13</b>	12x13	17,3x18,8	10,4x11,3	5,2	317,3	162
<b>57L.12X14</b>	12x14	17,3x18,8	10,4x11,3	5,2	317,3	181
<b>57L.14X17</b>	14x17	20x23,9	12x14	5,7	350,4	270
<b>57L.17X19</b>	17x19	23,9x26,5	14x15,1	7	390,3	360
<b>57L.18X20</b>	18x20	25,4x30,6	14x15,1	7,8	409,7	400
<b>57L.19X22</b>	19x22	28,5x31	16,7x17	7,8	409,7	425
<b>57L.20X22</b>	20x22	28,5x31	16,7x17	7,8	409,7	454

## □ 57L.SPL - Spline 15° hinged long-reach offset-ring wrenches



NEW

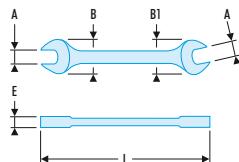


## AS 954C MS-33787 MIL-W-8982

- Spline profile 15° angled long wall offset-ring ratchets for aeronautical fasteners.
- Thin wall and long profile for maximum accessibility.
- Wrenches used in engine assembly and maintenance.
- The spline profile applies more torque with less strength as the tightening contact surface is higher.
- The contact points of a Spline wrench are always far from the nut's angles. This limits wear of the nuts.
- The Spline profile ensures high versatility. It is compatible with Spline, Torx, 4-, 6- and 12-point fasteners.
- Spline sizes: from 7 to 32
- Black phosphate finish.

	B [mm]	B x B1 [mm]	E x E1 [mm]	H [mm]	L [mm]	$\Delta\Delta$ [g]
<b>57L.7X9SPL</b>	7/32x9/32	9,5x10,7	6,3x7,3	3,8	191,8	44
<b>57L.8X10SPL</b>	1/4x5/16	10,2x11,6	6,3x7,3	3,8	191,8	46
<b>57L.12X14SPL</b>	3/8x7/16	14,6x17,3	7,5x8,7	4	276,4	100
<b>57L.16X18SPL</b>	1/2x9/16	18,8x20	12x13,7	5,7	350,4	269
<b>57L.18X20SPL</b>	9/16x5/8	21,1x23,4	12x13,7	5,7	350,4	274
<b>57L.22X24SPL</b>	11/16x3/4	25,4x30	14x15,1	7,8	396,1	490
<b>57L.26X30SPL</b>	13/16x15/16	29,9x34,5	14,2x15,6	7,8	431	550
<b>57L.28X32SPL</b>	7/8x1P	32,2x36,8	15x16	7,8	431	590

## □ 44 - Inch open end wrenches



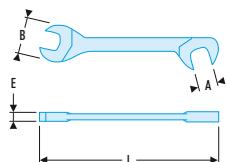
## ASME B107.100

- Open end wrenches = the open ends are slimmer than a standard combination wrench for better thickness accessibility.
- Examples: brake calipers, hydraulic hose locknuts.
- Heads hinged at 15°.
- Dimensions in inches: from 1/4" to 1"5/8".
- Presentation: satin chrome finish.
- Also exists in mm.

	A ["]	B x B1 [mm]	E [mm]	L [mm]	$\Delta\Delta$ [g]
<b>44.1/4X5/16</b>	1/4x5/16	15,0 x 17,5	3,5	120	20
<b>44.11/32X13/32</b>	11/32x13/32	19,0 x 23,0	4,2	143	40
<b>44.3/8X7/16</b>	3/8x7/16	23,0 x 25,0	4,7	152	50
<b>44.1/2X9/16</b>	1/2x9/16	29,0 x 33,5	5,5	177	80
<b>44.5/8X11/16</b>	5/8x11/16	37,0 x 42,0	6,8	210	145
<b>44.11/16X3/4</b>	11/16x3/4	37,0 x 42,0	6,8	210	145
<b>44.3/4X13/16</b>	3/4x13/16	43,0 x 48,5	7,5	240	200
<b>44.7/8X15/16</b>	7/8x15/16	47,5 x 52,0	8,3	251	260
<b>44.1PX1P1/16</b>	1'X1'1/16	56,0 x 61,6	8,8	282	360
<b>44.1P1/8X1P1/4</b>	1'1X1'1/4	63,0 x 70,0	9,8	318	515
<b>44.1P3/16X1P5/16</b>	1'3/16X1'5/16	63,0 x 70,0	9,8	318	515
<b>44.1P3/8X1P1/2</b>	1'3/8X1'1/2	78,0 x 87,0	12,0	381	945
<b>44.1'7/16X1'5/8</b>	1'7/16X1'5/8	78,0 x 87,0	12	381	945



## □ 34 - Inch 15° and 75° hinged "midget" open end wrenches



## ASME B107.100

- "Midget" open end wrenches: short shank and slim heads for manoeuvrability in confined spaces.
- Heads hinged at 15° and 75° allow to intervene on nuts inaccessible with a standard wrench.
- Dimensions in inches: from 5/32" to 11/16".
- Presentation: satin chrome finish.
- Also exists in mm.

	A ["]	B [mm]	E [mm]	L [mm]	$\Delta\Delta$ [g]
<b>34.5/32</b>	5/32	10	2,4	70	10
<b>34.3/16</b>	3/16	13	2,4	75	10
<b>34.7/32</b>	7/32	13	2,4	75	10
<b>34.15/64</b>	15/64	15	2,7	80	15
<b>34.1/4</b>	1/4	15	2,7	80	15
<b>34.9/32</b>	9/32	15	2,7	80	15
<b>34.5/16</b>	5/16	18,5	3,0	90	20
<b>34.11/32</b>	11/32	18,5	3,0	90	20
<b>34.3/8</b>	3/8	22	3,0	100	25
<b>34.13/32</b>	13/32	22	3,0	100	30
<b>34.7/16</b>	7/16	22	3	100	30
<b>34.1/2</b>	1/2	27	3,5	120	35
<b>34.9/16</b>	9/16	27	3,5	120	40
<b>34.5/8</b>	5/8	33	4,5	140	70
<b>34.11/16</b>	11/16	33	4,5	140	70





## Ratchets and sockets sets

### ■ RL.NANO-U1 RL.NANO-U1 - 1/4" inch 6-point nano sockets set



#### Includes:

- 1 x high performance sealed 1/4" ratchet RL.161
- 10 x 1/4" drive inch 6-point sockets: R. 7/32" - 1/4" - 9/32" - 5/16" - 11/32" - 3/8" - 13/32" - 7/16" - 1/2" - 9/16".
- 2 x 1/4" standard extensions: L 55mm (R.209) - L 100m (R.210).
- 1 x 1/4" universal joint: R.240A.
- 1 x 1/4" short-reach screwdriver grip: R.236C.
- 1/4" drive standard spring-clip bit holder socket: - R.235:
- 1 x 1/4" 6-point socket holder bit - 1/4" drive: ECR.
- 21 x bits series 1 - 1/4" - 6.35mm drive - L 25mm:
  - ES.T for slotted head screw: 4.5 - 6.5 - 8mm.
  - EP.T for Philips head screw: PH1 - PH2 PH3.
  - ED.T for Posidriv screw: PZ1 - PZ2 - PZ3.
  - EH for 6-point socket head screw: 1/4" - 1/8" - 3/16" - 5/32" - 7/32".
  - EXR. for Resistox screw: TT10 - TT15 - TT20 - TT25 - TT27 - TT30 - TT40.
- Empty case: BV.RNANO-U.

Weight: 0.810 kg.

### ■ RL.NANO-U112 RL.NANO-U112 - 1/4" inch 12-point nano sockets set



#### Includes:

- 1 x high performance sealed 1/4" ratchet RL.161
- 10 x 1/4" drive inch 12-point sockets: R.E 7/32" - 1/4" - 9/32" - 5/16" - 11/32" - 3/8" - 13/32" - 7/16" - 1/2" - 9/16".
- 2 x 1/4" standard extensions: L 55mm (R.209) - L 100m (R.210).
- 1 x 1/4" universal joint: R.240A.
- 1 x 1/4" short-reach screwdriver grip: R.236C.
- 1/4" drive standard spring-clip bit holder socket: - R.235:
- 1 x 1/4" 6-point socket holder bit - 1/4" drive: ECR.
- 11 x bits series 1 - 1/4" - 6.35mm drive - L 25mm:
  - ES.T for slotted head screw: 4.5 - 6.5 - 8mm.
  - ED.T for Posidriv screw: PZ1 - PZ2 - PZ3.
  - EH for 6-point socket head screw: 1/4" - 1/8" - 3/16" - 5/32" - 7/32".
  - EXR. for Resistox screw: TT10 - TT15 - TT20 - TT25 - TT27 - TT30 - TT40.
- Empty case: BV.RNANO-U.

Weight: 0.745 kg.

### ■ RL.NANO-U2 RL.NANO-U2 - 1/4" inch 6-point nano sockets set



#### Includes:

- 1 x high performance sealed 1/4" ratchet RL.161
- 10 x 1/4" drive inch 6-point sockets: R. 7/32" - 1/4" - 9/32" - 5/16" - 11/32" - 3/8" - 13/32" - 7/16" - 1/2" - 9/16".
- 2 x 1/4" standard extensions: L 55mm (R.209) - L 100m (R.210).
- 1 x 1/4" universal joint: R.240A.
- 1 x 1/4" short-reach screwdriver grip: R.236C.
- 1/4" drive standard spring-clip bit holder socket: - R.235:
- 1 x 1/4" 6-point socket holder bit - 1/4" drive: ECR.
- 21 x bits series 1 - 1/4" - 6.35mm drive - L 25mm:
  - ES.T for slotted head screw: 4.5 - 8mm.
  - EP.T for Philips head screw: PH1 - PH2 PH3.
  - ED.T for Posidriv screw: PZ1 - PZ2 - PZ3.
  - EH for 6-point socket head screw: 1/4" - 1/8" - 3/16" - 5/32" - 7/32".
  - EX. for Torx screw: T8.
  - EXR. for Resistox screw: TT10 - TT15 - TT20 - TT25 - TT27 - TT30 - TT40.
- Empty case: BV.RNANO-U.

Weight: 0.810 kg.

**R.360NANO-U1 R.360NANO-U1 - 1/4" inch 6-point nano sockets**

## Includes:

- 1 x 1/4" fast ratchet with rotating handle: R.360.
- 10 x 1/4" drive inch 6-point sockets: R. 7/32" - 1/4" - 9/32" - 5/16" - 11/32" - 3/8" - 13/32" - 7/16" - 1/2" - 9/16".
- 2 x 1/4" standard extensions: L 55mm (R.209) - L 100m (R.210).
- 1 x 1/4" universal joint: R.240A.
- 1 x 1/4" short-reach screwdriver grip: R.236C.
- 1/4" drive standard spring-clip bit holder socket: - R.235:
- 1 x 1/4" 6-point socket holder bit - 1/4" drive: ECR.
- 21 x bits series 1 - 1/4" - 6.35mm drive - L 25mm:
  - ES.T for slotted head screw: 4.5 - 6.5 - 8mm.
  - EP.T for Philips head screw: PH1 - PH2 - PH3.
  - ED.T for Posidriv screw: PZ1 - PZ2 - PZ3.
- EH for 6-point socket head screw: 1/4" - 1/8" - 3/16" - 5/32" - 7/32".
- EXR. for Resistox screw: TT10 - TT15 - TT20 - TT25 - TT27 - TT30 - TT40.
- Empty case: BV.RNANO-U.

Weight: 0.900 kg.

**R.360NANO-U112 R.360NANO-U112 - 1/4" inch nano sockets set**

## Includes:

- 1 x 1/4" fast ratchet with rotating handle: R.360.
- 10 x 1/4" drive inch 12-point sockets: R. 7/32" - 1/4" - 9/32" - 5/16" - 11/32" - 3/8" - 13/32" - 7/16" - 1/2" - 9/16".
- 2 x 1/4" standard extensions: L 55mm (R.209) - L 100m (R.210).
- 1 x 1/4" universal joint: R.240A.
- 1 x 1/4" short-reach screwdriver grip: R.236C.
- 1/4" drive standard spring-clip bit holder socket: - R.235:
- 1 x 1/4" 6-point socket holder bit - 1/4" drive: ECR.
- 11 x bits series 1 - 1/4" - 6.35mm drive - L 25mm:
  - ES.T for slotted head screw: 4.5 - 6.5 - 8mm.
  - ED.T for Posidriv screw: PZ1 - PZ2 - PZ3.
- EH for 6-point socket head screw: 1/4" - 1/8" - 3/16" - 5/32" - 7/32".
- Empty case: BV.RNANO-U.

Weight: 0.850 kg.





## Ratchets and sockets sets

### □ JL.DBOX500 JL.DBOX500 - 3/8" metric 6-point Detection Box



#### Includes:

- 1 x high performance sealed 3/8" locking ratchet: JL.171.
- 14 x 3/8" metric 6-point sockets J.H 8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 21 - 22mm.
- 2 x 3/8" locking extensions: L 125mm (J.210RC) - L 250m (J.215RC).
- 1 x 3/8" universal joint: J.240A.
- Empty case: BV.J1NANOA.

Weight: 2.100 kg.



### □ JL.DBOX501 JL.DBOX501 - 3/8" metric 12-point Detection Box



#### Includes:

- 1 x high performance sealed 3/8" locking ratchet: JL.171.
- 14 x 3/8" metric 12-point sockets J. 8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 21 - 22mm.
- 2 x 3/8" locking extensions: L 125mm (J.210RC) - L 250m (J.215RC).
- 1 x 3/8" universal joint: J.240A.
- Empty case: BV.J1NANOA.

Weight: 2.100 kg.

### □ JXL.DBOX1 JXL.DBOX1 - 3/8" metric 6-point Detection Box



#### Includes:

- 1 x high performance sealed 3/8" locking ratchet with extending and flexible head: JXL.171. 14 x 3/8" metric 6-point sockets J.H 8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 21 - 22mm.
- 2 x 3/8" locking extensions: L 125mm (J.210RC) - L 250m (J.215RC).
- 1 x 3/8" universal joint: J.240A.
- Empty case: BV.J1NANOA.

Weight: 2.150 kg.

**SL.DBOX501 SL.DBOX501 - 1/2" metric 12-point Detection Box**

## Includes:

- 1 x high performance sealed 1/2" locking ratchet: SL.171.
  - 17 x 1/2" metric 12-point sockets S. 8 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 21 - 22 - 24 - 27 - 30 - 32mm.
  - 2 x 1/2" locking extensions: L 130mm (S.210RC) - L 250m (S.215RC).
  - 1 x 1/2" universal joint: S.240A.
  - Empty case: BV.S1NANO.
- Weight: 3.740 kg.

**SL.DBOX500 SL.DBOX500 - 1/2" metric 6-point Detection Box**

## Includes:

- 1 x high performance sealed 1/2" locking ratchet: SL.171.
  - 17 x 1/2" metric 6-point sockets S.H 8 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 21 - 22 - 24 - 27 - 30 - 32mm.
  - 2 x 1/2" locking extensions: L 130mm (S.210RC) - L 250m (S.215RC).
  - 1 x 1/2" universal joint: S.240A.
  - Empty case: BV.S1NANO.
- Weight: 3.740 kg.

**SXL.DBOX1 SXL.DBOX1 - 1/2" metric 6-point Detection Box extending ratchet set**

## Includes:

- 1 x high performance sealed 1/2" locking ratchet with extending handle: SXL.161.
  - 17 x 1/2" metric 6-point sockets S.H 8 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 21 - 22 - 23 - 24 - 25 - 26 - 27 - 28 - 29 - 30 - 32mm.
  - 1 x 1/2" standard extension: L 250m (S.215).
  - 1 x 1/2" angled extension: L 130mm (S.210S).
  - 1 x 1/2" universal joint: S.240A.
  - Empty case: BV.S1NANO.
- Weight: 3.950 kg.

**SXL.DBOX2U SXL.DBOX2U - 1/2" metric 6-point Detection Box extending ratchet set**

NEW

## Includes:

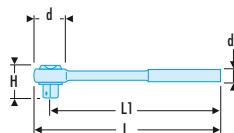
- 1 x high performance sealed 1/2" locking ratchet with extending handle: SXL.161.
  - 21 x 1/2" metric 6-point sockets S.H 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 21 - 22 - 23 - 24 - 25 - 26 - 27 - 28 - 29 - 30 - 32mm.
  - 1 x 1/2" standard extension: L 250m (S.215).
  - 1 x 1/2" angled extension: L 130mm (S.210S).
  - 1 x 1/2" universal joint: S.240A.
  - 1 x 1/2" to 3/4" coupler: S.232B.
  - Empty case: BV.S3NANO.
- Weight: 4.860 kg.





## 1/4" "Radio" range / ratchets

## □ High performance sealed 1/4" locking ratchet

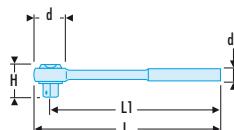


## NF ISO 3315, ISO 3315, DIN 3122, ASME B107.10

- Very long durability regardless of working conditions. Maintenance-free. Mechanism sealed to industrial dust.
- 72 tooth mechanism for 5° increments.
- Socket safety locking: no sockets lost in your machines.
- Lever reversing: easy even when wearing gloves. Visible rotation direction.
- "Palm control" system, allowing to press the ratchet head during (un)tightening without risk of accidental reversing of the rotation direction.
- Ultra-compact head.
- Bi-material elastomer grip: high resistance to abrasion and the most severe workshop solvents: SP95, SP98, diesel fuel, acetone, brake fluid, Skydrol, Jet Oil, kerosene.
- Hole in the handle for strapping when working in high places.

RL.171	d [mm]	d1 [mm]	H [mm]	L [mm]	L1 [mm]	ΔΔ [g]
	22	20	25	120	110	78

## □ 1/4" fast ratchet with rotating handle

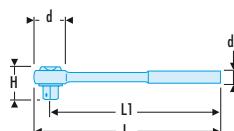


## NF ISO 3315, ISO 3315, DIN 3122, ASME B107.10

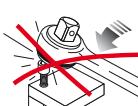
- Rotating handle mechanism: work twice faster in confined spaces.
- 60 tooth mechanism for 6° increments upon final tightening.
- Socket safety locking: no sockets lost in your machines.
- Reversing by rotating cap.
- "Palm control" system, allowing to press the ratchet head during (un)tightening without risk of accidental reversing of the rotation direction.
- Bi-material elastomer grip: high resistance to abrasion and the most severe workshop solvents: SP95, SP98, diesel fuel, acetone, brake fluid, Skydrol, Jet Oil, kerosene.

R.360	d [mm]	d1 [mm]	H [mm]	L [mm]	L1 [mm]	ΔΔ [g]
	27	21	29	120	120	144

## □ 1/4" Fluo Hi-Lok® ratchet



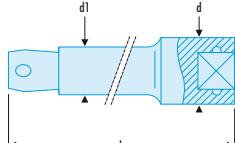
NEW



## ISO 3315

- Specific ratchet for use on Hi-Lok®, Hi-Lite® or Hi-Tigue® rivets.
- The sockets are locked onto square drive by a metal clip.
- Hole in the ratchet head to insert a key to lock the fastener during the tightening phase.
- Highly compact head for better accessibility.
- 1/4" square drive bit.
- 72 tooth mechanism for 5° increments.
- Detect the tool thanks to its fluorescence, activated by a lamp or UV neon light. Detectable in black or dark environment up to 5 metres.

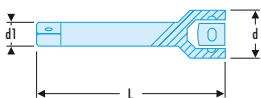
RL.161HLF	d [mm]	d1 [mm]	H [mm]	L [mm]	L1 [mm]	ΔΔ [g]
	22	20	25	120	110	78

**R.S - 1/4" wobble extension**

- Square drive profile gives 6° working angle.
- Hard to access with a socket or universal joint? Use a wobble extension !
- Finish: bright chrome.



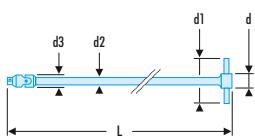
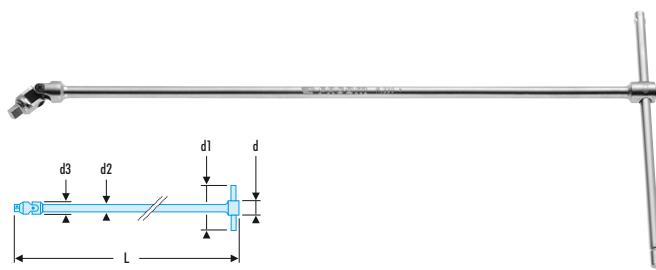
	d [mm]	d1 [mm]	L [mm]	$\Delta\Delta$ [g]
R.209S	12	8,2	55	30
R.210S	12	8,2	100	45

**1/4" wobble extension****ASME B107.10**

- Reaches fasteners out of direct access line.
- Unsuitable for high torques: max. 2.8 N.m.



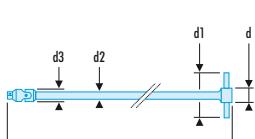
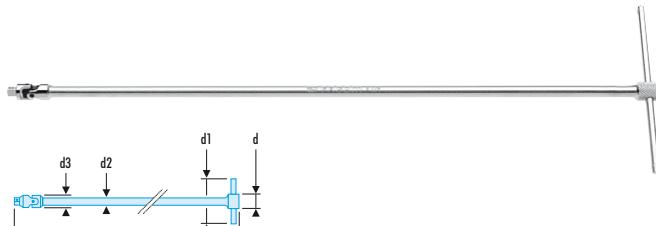
	d [mm]	d1 [mm]	L [mm]	$\Delta\Delta$ [g]
R.216	12	8	150	66

**1/4" drive tee with universal joint**

- Universal joint withstands high torques and is spring-steered in position.
- Long reach and working angle up to 65° allows access to recessed fasteners.
- Finish: bright chrome.



	d [mm]	d1 [mm]	d2 [mm]	d3 [mm]	L [mm]	$\Delta\Delta$ [g]
R.229A	13	135	9	13	385	215

**1/4" drive tee with universal joint**

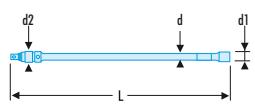
- Extended reach of tee-handle for particularly deep recesses.
- Finish: bright chrome.



	d [mm]	d1 [mm]	d2 [mm]	d3 [mm]	L [mm]	$\Delta\Delta$ [g]
R.228	13	135	9	13	470	250

**R.RCK - 1/4" knurled locking extensions**

NEW

**ISO 3316**

- Safety: locking mechanism, no risk of losing sockets. Limits FODs.
- Handy: easier handling with the knurls.
- Chrome finish.



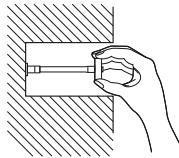
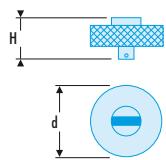
	d [mm]	d1 [mm]	L [mm]	L1 [mm]	$\Delta\Delta$ [g]
R.55RCK	7.9	12.3	55	7.5	27
R.100RCK	7.9	12.3	100	7.5	44
R.150RCK	7.9	12.3	150	38	65
R.250RCK	7.9	12.3	250	38	107
R.350RCK	7.9	12.3	350	38	140
R.600RCK	7.9	12.3	600	38	232





## 1/4" "Radio" range / ratchets

### □ R.150A 1/4" finger control ratchet



- 72 teeth mechanism for 5° increments.
  - Ideal for confined deep recess spaces.
- Weight: 120 g.

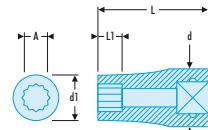
### □ R.236C 1/4" drive short spinner



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

- Ergonomic bi-material grip.
  - Ideal for confined spaces.
- Weight: 76 g.

### □ RB - 1/4" drive inch 12-point thin wall sockets

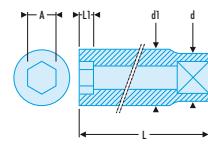


#### ASME B107.1

- OGV® profile: more powerful tightening, preserves fasteners.
- Thin-wall for better access, conform with aeronautical standards.
- Finish: bright chrome.

	A [""]		d [mm]	d1 [mm]	L [mm]	L1 [mm]	$\Delta\Delta$ [g]
<b>RB.3/16</b>	3/16	12	11,2	7,6	22	4,8	7
<b>RB.7/32</b>	7/32	12	11,2	8,7	22	5,5	8
<b>RB.1/4</b>	1/4	12	11,2	9,7	22	6,0	8
<b>RB.9/32</b>	9/32	12	11,2	10,6	22	6,0	10
<b>RB.5/16</b>	5/16	12	11,9	11,9	22	6,5	10
<b>RB.11/32</b>	11/32	12	12,9	12,9	22	6,5	11
<b>RB.3/8</b>	3/8	12	13,7	13,7	22	7,8	14
<b>RB.7/16</b>	7/16	12	14,8	15,8	22	9,0	17
<b>RB.1/2</b>	1/2	12	16,0	16,9	22	10,0	18
<b>RB.9/16</b>	9/16	12	17,5	18,7	22	10,0	22

### □ R.EL - 1/4" long-reach inch 12-point sockets



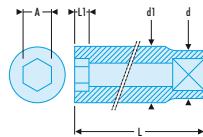
#### ASME B107.1

- OGV® profile: more powerful tightening, preserves fasteners.
- Long-reach sockets for long recess or thread access.
- High performance, suitable for aircraft fasteners to AS954E.
- Thinner socket walls for better accessibility.
- Available as rack set (Ref REL.40U).
- Finish: bright chrome.

	A [""]		d [mm]	d1 [mm]	L [mm]	L1 [mm]	$\Delta\Delta$ [g]
<b>R.3/16EL</b>	3/16	12	10,9	7,7	50	6,0	14
<b>R.7/32EL</b>	7/32	12	10,9	8,5	50	7,4	15
<b>R.1/4EL</b>	1/4	12	10,9	9,4	50	7,4	17
<b>R.9/32EL</b>	9/32	12	10,9	10,2	50	8,5	17
<b>R.5/16EL</b>	5/16	12	11,8	11,4	50	9,0	23
<b>R.11/32EL</b>	11/32	12	12,0	12,5	50	9,7	25
<b>R.3/8EL</b>	3/8	12	12,8	13,7	50	11,2	32
<b>R.7/16EL</b>	7/16	12	14,3	15,6	50	11,9	40
<b>R.1/2EL</b>	1/2	12	16,2	17,3	50	13,8	45
<b>R.9/16EL</b>	9/16	12	17,1	18,8	50	16,2	49

**R.HEL - 1/4" long-reach metric 6-point sockets**

NEW

**AS 954G ASME B107.100**

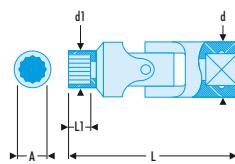
- OGV® profile for powerful tightening while protecting the nut.
- Long-reach sockets for long recess or thread access.
- High performance, suitable for aircraft fasteners to AS954E.
- Thinner socket walls for better accessibility.
- Chrome finish.

$\text{\textcircled{d}}$	A ["]	$\text{\textcircled{g}}$ [mm]	d [mm]	d1 [mm]	L [mm]	L1 [mm]	$\Delta\Delta$ [g]
<b>R.1/8HEL</b>	1/8	6	10.9	5.7	50	2.4	10
<b>R.5/32HEL</b>	5/32	6	10.9	6.7	50	3	12
<b>R.3/16HEL</b>	3/16	6	10.9	7.7	50	4.5	14
<b>R.7/32HEL</b>	7/32	6	10.9	8.5	50	4.9	15
<b>R.1/4HEL</b>	1/4	6	10.9	9.4	50	5.3	17
<b>R.9/32HEL</b>	9/32	6	10.9	10.2	50	5.5	17
<b>R.5/16HEL</b>	5/16	6	11.7	11.2	50	6.4	23
<b>R.11/32HEL</b>	11/32	6	12	12.5	50	6.8	25
<b>R.3/8HEL</b>	3/8	6	12.8	13.7	50	6.8	32
<b>R.7/16HEL</b>	7/16	6	14.3	15.5	50	8.8	40
<b>R.1/2HEL</b>	1/2	6	16.2	17.2	50	8.9	45
<b>R.9/16HEL</b>	9/16	6	17.1	18.8	50	9.1	49

**REL.40U Inch 1/4" long socket set on rack**

- 11 long sockets: 3/16 - 7/32 - 1/4 - 9/32 - 5/16 - 11/32 - 3/8 - 13/32 - 7/16 - 1/2 - 9/13".

Weight: 345 g.

**R.F - 1/4" drive hinged 12-point sockets****ASME B107.1**

- OGV® profile: more powerful tightening, preserves fasteners.
- Compact solution used instead of universal joint.
- Finish: bright chrome.

$\text{\textcircled{d}}$	A ["]	$\text{\textcircled{g}}$ [mm]	d [mm]	d1 [mm]	L [mm]	L1 [mm]	$\Delta\Delta$ [g]
<b>R.3/16F</b>	3/16	12	13	8.0	31.6	5.3	35
<b>R.7/32F</b>	7/32	12	13	8.5	32.4	6.1	13
<b>R.1/4F</b>	1/4	12	13	9.8	32.8	6.5	13
<b>R.9/32F</b>	9/32	12	13	10.5	32.8	6.5	13
<b>R.5/16F</b>	5/16	12	13	12.0	33.3	7.0	14
<b>R.11/32F</b>	11/32	12	13	13.3	33.3	7.0	16
<b>R.3/8F</b>	3/8	12	13	13.7	34.6	8.3	21
<b>R.7/16F</b>	7/16	12	13	15.5	35.8	9.5	27
<b>R.1/2F</b>	1/2	12	13	18.0	36.8	10.5	34
<b>R.9/16F</b>	9/16	12	13	19.2	36.8	10.5	35



## 1/4" "Radio" range / sockets



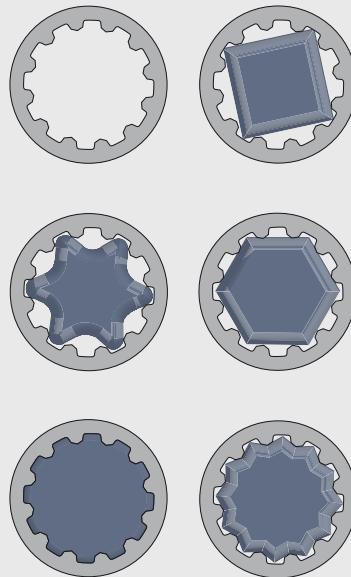
## SPLINE PROFILE WRENCHES AND SOCKETS



## THE SPLINE PROFILE IS SUITED TO SEVERAL TYPES OF FASTENERS

## Features and benefits

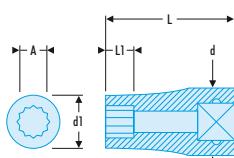
- SPLINE wrenches are extremely versatile and more effective than conventional wrenches.
- A SPLINE wrench can replace many others, as its profile is compatible with a wide variety of fastener patterns.
- The contact points of a SPLINE wrench are always apart from the fastener angles. This reduces the risk of damaging the fastener.
- On damaged fasteners, locking is improved as the SPLINE profile drives the fastener head along the flat edge.



## R.S - 1/4" Spline sockets



NEW



## MIL-W-8982

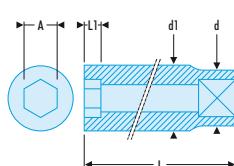
- Profile adapted to aerospace fasteners.
- The Spline profile ensures high versatility. It is compatible with Spline, Torx, 4-, 6- and 12-point fasteners. Ensures more effective tightening with less effort.
- Thin wall.
- High performance level.
- Chrome finish.

	A ["]	d [mm]	d1 [mm]	L [mm]	L1 [mm]	$\Delta\Delta$ [g]
R.7S	7/32	12	8.7	22	3.9	9
R.8S	1/4	12	9.5	22	4.3	9
R.9S	9/32	12	12	22	4.5	11
R.10S	5/16	12	12	22	5.5	13
R.12S	3/8	14.2	14.2	25	5.5	17
R.14S	7/16	16	14.2	25	7.8	22

## R.SEL - 1/4" Spline long-reach sockets



NEW



## MIL-W-8982

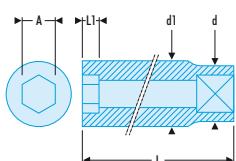
- For your safety, use impact sockets and accessories with the appropriate rings and pins.
- Long-reach sockets for long recess or thread access.
- Thin profile for difficult access.
- Built to aeronautical specifications.
- Black phosphate finish.

	A ["]	d [mm]	d1 [mm]	L [mm]	L1 [mm]	$\Delta\Delta$ [g]
R.8SEL	1/4	12	9.5	50	4.3	20
R.10SEL	5/16	12	12	50	5.5	24

NRB.L - 1/4" drive inch 12-point impact sockets



NEW

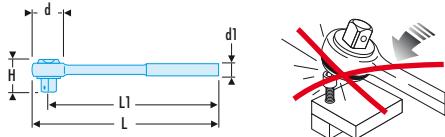
**ASME B107.110**

- For your safety, use impact sockets and accessories with the appropriate rings and pins.
- Long-reach sockets for long recess or thread access.
- Thin profile for difficult access.
- Built to aeronautical specifications.
- Black phosphate finish.



	A [mm]	∅ [mm]	d [mm]	d1 [mm]	L [mm]	L1 [mm]	ΔΔ [g]
<b>NRB.1/4L</b>	1/4	12	12.6	10.3	50	3.2	26
<b>NRB.9/32L</b>	9/32	12	12.6	11.3	50	3.2	29
<b>NRB.5/16L</b>	5/16	12	12.6	12.2	50	3.2	32

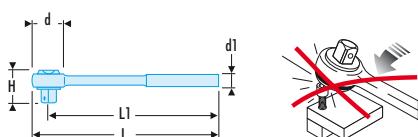
3/8" dustproof locking ratchet

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

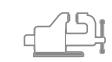
- Socket locking and quick release system.
- Dust proof, maintenance free mechanism.
- Palm control system - allows the operator to press down on the head avoiding risk of accidental reverse.



3/8" fast action twist handle ratchet

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

- 3/8" fast ratchet with rotating handle:
- Rotating handle jack: work twice as fast in confined spaces.
- 6° increments for final tightening.
- Socket safety locking = no sockets lost in your machines.
- Palm control system - allows the operator to press down on the head avoiding risk of accidental reverse.

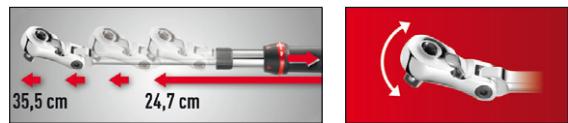
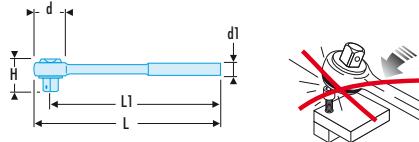


	d [mm]	d1 [mm]	H [mm]	L [mm]	L1 [mm]	ΔΔ [g]
<b>J.360</b>	37	37	39	233	233	442



## 3/8" "Junior" range / ratchets

## □ High performance sealed 3/8" locking ratchet with extending flexible head

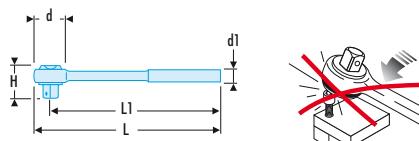


- 2-in-1 ratchet with extending handle. Standard use and easy storage in closed position. Higher torque, less effort and maximum accessibility in the extended position.

- Total length from 247 to 355 mm. 8 setting positions secured by safety catch.
- 180° hinged and secured head to maintain the position even with a socket engaged.
- Very long durability regardless of working conditions. Maintenance-free. Mechanism sealed to industrial dust.
- 72 tooth mechanism for 5° increments.
- Socket safety locking: no sockets lost in your machines.
- Lever reversing: easy even when wearing gloves. Visible rotation direction.
- "Palm control" system, allowing to press the ratchet head during (un)tightening without risk of accidental reversing of the rotation direction.
- Ultra-compact head.
- Bi-material elastomer grip: high resistance to abrasion and the most severe workshop solvents: SP95, SP98, diesel fuel, acetone, brake fluid, Skydrol, Jet Oil, kerosene.
- Hole in the handle for strapping when working in high places.

⊕	d [mm]	d1 [mm]	H [mm]	L [mm]	L1 [mm]	ΔΔ [g]
JXL.171	29	28-32	33	247/355	192/300	400

## □ 3/8" Fluo Hi-Lok® ratchet



## ISO 3315

- Specific ratchet for use on Hi-Lok®, Hi-Lite® or Hi-Tigue® rivets.
- The sockets are locked onto square drive by a metal clip.
- Hole in the ratchet head to insert a key to lock the fastener during the tightening phase.
- Highly compact head for better accessibility.
- 3/8" square drive bit.
- 72 tooth mechanism for 5° increments.
- Detect the tool thanks to its fluorescence, activated by a lamp or UV neon light. Detectable in dark environments up to 5 metres.

⊕	d [mm]	d1 [mm]	H [mm]	L [mm]	L1 [mm]	ΔΔ [g]
JL.161HLF	29	27	29	210	195	200

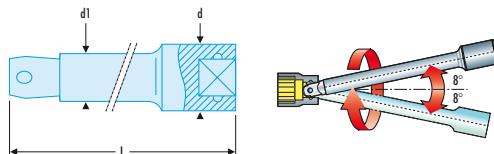
## □ J.RCK - 3/8" knurled locking extensions



## ISO 3316

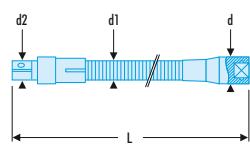
- Safety: locking mechanism, no risk of losing sockets. Limits FODs.
- Handy: easier handling with the knurls.
- Chrome finish.

⊕	d [mm]	d1 [mm]	L [mm]	L1 [mm]	ΔΔ [g]
J.75RCK	12	18.9	75	30	86
J.125RCK	12	18.9	125	30	130
J.250RCK	12	18.9	250	50	242
J.455RCK	12	18.9	455	50	432
J.600RCK	12	18.9	600	38	560

**□ J.S - 3/8" drive wobble extensions**

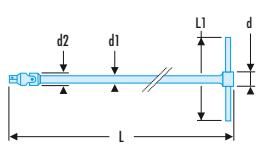
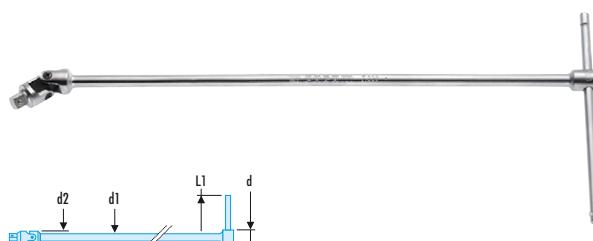
- Square drive profile gives 8° working angle.
- Useful where access is limited.
- Finish: bright chrome.

	d [mm]	d1 [mm]	L [mm]	ΔΔ [g]
J.209S	18	12,5	75	80
J.210S	18	12,5	125	130

**□ 3/8" flexible extension****ASME B107.10**

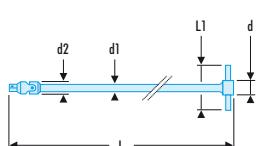
- Maximum access.
- Unsuitable for high torques.
- Finish: bright chrome.

	d [mm]	d1 [mm]	d2 [mm]	L [mm]	ΔΔ [g]
J.216	18	12,6	15	200	145

**□ 3/8" drive tee with universal joint**

- Universal joint withstands high torques and is spring-steadied in position.
- Long reach and working angle up to 65° allows access to recessed fasteners.
- Sliding tee handle for a T or L position for more power.
- Finish: bright chrome.

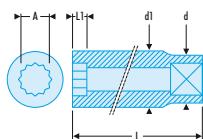
	d [mm]	d1 [mm]	d2 [mm]	L [mm]	L1 [mm]	ΔΔ [g]
J.229A	17	10	19	460	175	410

**□ 3/8" long-reach drive tee with universal joint**

- Universal joint withstands high torques and is spring-steadied in position.
- Long reach and working angle up to 65° allows access to recessed fasteners.
- Sliding tee handle for a T or L position for more power.
- Finish: bright chrome.

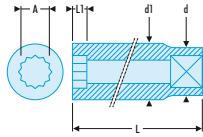
	d [mm]	d1 [mm]	d2 [mm]	L [mm]	L1 [mm]	ΔΔ [g]
J.228	18	12	19	700	190	660



**3/8" "Junior" range / sockets****□ JB - 3/8" inch 12-point sockets****ASME B107.1**

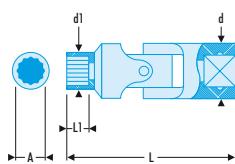
- OGV® profile: more powerful tightening, preserves fasteners.
- Built to aeronautical specifications.
- Finish: bright chrome.

$\text{d}$	A ["]	$\text{d}$ [mm]	d [mm]	d1 [mm]	L [mm]	L1 [mm]	$\Delta\Delta$ [g]
<b>JB.1/4</b>	1/4	12	16,7	9,7	27	6,0	20
<b>JB.5/16</b>	5/16	12	16,7	11,7	27	6,8	21
<b>JB.11/32</b>	11/32	12	16,7	12,7	27	6,8	22
<b>JB.3/8</b>	3/8	12	16,7	13,7	27	7,5	23
<b>JB.7/16</b>	7/16	12	16,7	15,6	27	9,0	24
<b>JB.1/2</b>	1/2	12	16,7	17,6	30	10,4	27
<b>JB.9/16</b>	9/16	12	18,5	19,6	30	10,5	33
<b>JB.5/8</b>	5/8	12	20,0	21,6	30	12,0	42
<b>JB.11/16</b>	11/16	12	22,0	23,6	32	13,0	50
<b>JB.3/4</b>	3/4	12	22,8	25,4	32	15,0	55
<b>JB.13/16</b>	13/16	12	24,0	27,4	32	16,0	68
<b>JB.7/8</b>	7/8	12	24,0	29,4	32	16,0	68

**□ J.LA - 3/8" inch 12-point sockets****ASME B107.1**

- OGV® profile: more powerful tightening, preserves fasteners.
- Long-reach sockets for long recess or thread access.
- Finish: bright chrome.

$\text{d}$	A ["]	$\text{d}$ [mm]	d [mm]	d1 [mm]	L [mm]	L1 [mm]	$\Delta\Delta$ [g]
<b>J.1/4LA</b>	1/4	12	17,5	10,6	44,7	4,0	36
<b>J.5/16LA</b>	5/16	12	17,5	12,4	44,7	4,3	36
<b>J.3/8LA</b>	3/8	12	17,5	14,3	44,7	4,7	41
<b>J.7/16LA</b>	7/16	12	17,5	16,2	44,7	6,2	45
<b>J.1/2LA</b>	1/2	12	18,2	18,2	44,7	7,4	50
<b>J.9/16LA</b>	9/16	12	20,5	20,5	48,0	9,0	72
<b>J.5/8LA</b>	5/8	12	22,3	22,3	63,8	10,2	104
<b>J.11/16LA</b>	11/16	12	23,8	23,8	63,8	10,2	113
<b>J.3/4LA</b>	3/4	12	25,3	25,3	63,8	11,8	127
<b>J.13/16LA</b>	13/16	12	27,0	27,0	63,8	12,3	140
<b>J.7/8LA</b>	7/8	12	30,2	30,2	63,8	12,7	181
<b>J.15/16LA</b>	15/16	12	31,8	31,8	63,8	12,7	185
<b>J.1PLA</b>	1	12	33,4	33,4	63,8	12,7	185

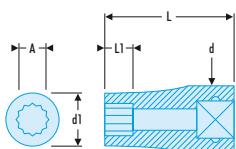
**□ J.F - 3/8" inch 12-point sockets****ASME B107.1**

- OGV® profile: more powerful tightening, preserves fasteners.
- Long-reach sockets for long recess or thread access.
- Finish: bright chrome.

$\text{d}$	A ["]	$\text{d}$ [mm]	d [mm]	d1 [mm]	L [mm]	L1 [mm]	$\Delta\Delta$ [g]
<b>J.3/8F</b>	3/8	12	19	14,0	27	8,3	26
<b>J.7/16F</b>	7/16	12	19	15,8	27	9,8	27
<b>J.1/2F</b>	1/2	12	19	18,3	30	11,3	36
<b>J.9/16F</b>	9/16	12	19	19,5	30	11,3	34
<b>J.5/8F</b>	5/8	12	19	22,00	30	12,8	46
<b>J.11/16F</b>	11/16	12	19	24,00	33	13,8	74
<b>J.3/4F</b>	3/4	12	19	25,8	33	15,8	76

**J.S - 3/8" Spline sockets**

NEW

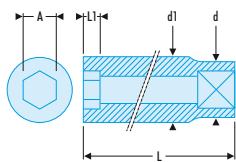
**MIL-W-8982**

- Profile adapted to aerospace fasteners.
- The Spline profile ensures high versatility. It is compatible with Spline, Torx, 4-, 6- and 12-point fasteners. Ensures more effective tightening with less effort.
- Thin wall.
- High performance level.
- Bright chrome finish.

	A ["]	d [mm]	d1 [mm]	L [mm]	L1 [mm]	ΔΔ [g]
<b>J.12S</b>	3/8	17	14	27	5.5	20
<b>J.14S</b>	7/16	17.5	16	27	7.8	25
<b>J.16S</b>	1/2	18.5	18.5	27	7.8	29
<b>J.18S</b>	9/16	20.6	20.6	27	8	37
<b>J.20S</b>	5/8	22.8	22.8	30	10.7	45

**J.SEL - 3/8" Spline long-reach sockets**

NEW

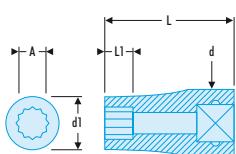
**MIL-W-8982**

- Profile adapted to aerospace fasteners.
- The Spline profile ensures high versatility. It is compatible with Spline, Torx, 4-, 6- and 12-point fasteners. Ensures more effective tightening with less effort.
- Thin wall.
- High performance level.
- Bright chrome finish.

	A ["]	d [mm]	d1 [mm]	L [mm]	L1 [mm]	ΔΔ [g]
<b>J.12SEL</b>	3/8	17	14	63	5.5	47
<b>J.14SEL</b>	7/16	17.5	16	63	7.8	64
<b>J.16SEL</b>	1/2	18.5	18.5	63	7.8	70
<b>J.18SEL</b>	9/16	20.6	20.6	63	8	88

**3/8" Spline impact socket (7/16")**

NEW

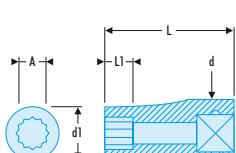
**MIL-W-8982 MS-33787**

- Aerospace dedicated socket: maintenance, fitting/ removing engines of the CFM56 series.
- Black phosphate finish.

	A ["]	d [mm]	L [mm]	L1 [mm]	ΔΔ [g]
<b>NJ.14S</b>	7/16	18.9	29.5	7.8	34

**NJB - 3/8" drive inch 12-point impact sockets**

NEW

**ASME B107.110**

- For your safety, use impact sockets and accessories with the appropriate rings and pins.
- Thin profile for difficult access.
- Built to aeronautical specifications.
- Black phosphate finish.

	A [mm]	∅ [mm]	d [mm]	d1 [mm]	L [mm]	L1 [mm]	ΔΔ [g]
<b>NJB.9/32</b>	9/32	12	18.9	12.2	29.5	2.6	33
<b>NJB.5/16</b>	5/16	12	18.9	12.6	29.5	2.6	33
<b>NJB.7/16</b>	7/16	12	18.9	17.1	29.5	5.2	36
<b>NJB.1/2</b>	1/2	12	18.9	18.9	29.5	5.3	37



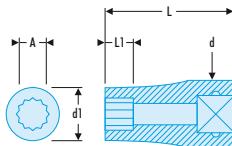


## 3/8" - 1/2" "Standard" range / ratchets

## □ NJB.L - 3/8" drive inch 12-point long-reach impact sockets



NEW

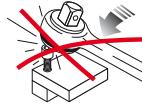
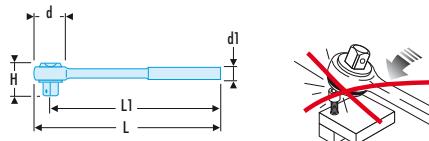


## ASME B107.10

- For your safety, use impact sockets and accessories with the appropriate rings and pins.
- Long-reach sockets for long recess or thread access.
- Thin profile for difficult access.
- Built to aeronautical specifications.
- Black phosphate finish.

	A [mm]		d [mm]	d1 [mm]	L [mm]	L1 [mm]	$\Delta\Delta$ [g]
NJB.9/32L	9/32	12	18.9	12.2	63	2.6	59
NJB.5/16L	5/16	12	18.9	12.6	63	2.6	67
NJB.7/16L	7/16	12	18.9	17.1	63	5.2	72
NJB.1/2L	1/2	12	18.9	18.9	63	5.3	80

## □ 1/2" maintenance free pear head locking ratchet

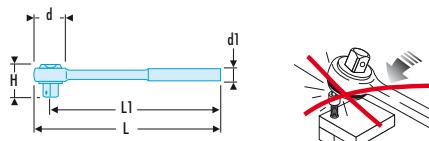


## NF ISO 3315, ISO 3315, DIN 3122, ASME B107.10

- Socket locking and quick release system.
- Dust proof, maintenance free mechanism.
- Palm control system - allows the operator to press down on the head avoiding risk of accidental reverse.

	L [mm]	$\Delta\Delta$ [g]
SL.171	262	446

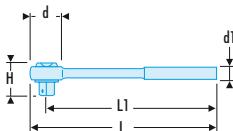
## □ 1/2" fast action twist handle ratchet



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

- Rotating handle jack: work twice as fast in confined spaces.
- 6° increments for final tightening.
- Socket safety locking = no sockets lost in your machines.
- Palm control system - allows the operator to press down on the head avoiding risk of accidental reverse.

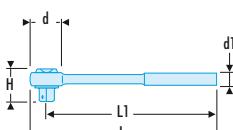
	d [mm]	d1 [mm]	H [mm]	L [mm]	L1 [mm]	$\Delta\Delta$ [g]
S.360	45	37	41	251	251	570

**□ Flexible head 1/2" locking extendable ratchet**

NEW



- 1 ratchet instead of 2.
- Short setting: standard use, easy storage.
- Long setting: more torque, less effort.
- Easy to use & strong extension mechanism.
- Watertight: no maintenance.
- Provides optimum safety.
- Very high strength flexible head for maximum accessibility.

**□ 1/2" Fluo Hi-Lok® ratchet**

NEW

**ISO 3315**

- Specific ratchet for use on Hi-Lok®, Hi-Lite® or Hi-Tigue® rivets.
- The sockets are locked onto square drive by a metal clip.
- Hole in the ratchet head to insert a key to lock the fastener during the tightening phase.
- Highly compact head for better accessibility.
- 1/2" square drive bit.
- 72 tooth mechanism for 5° increments.
- Detect the tool thanks to its fluorescence, activated by a lamp or UV neon light. Detectable in dark environments up to 5 metres.

**□ D.169 Set of 3 couplers**

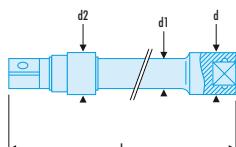
- Allows use of square drivers smaller than socket drive sizes:
    - 1/4" square drive + D.169RJ --> 3/8" socket.
    - 3/8" square drive + D.169JS --> 1/2" socket.
    - 1/2" square drive --> 3/4" socket.
  - Compactness means that fewer tools are needed for in situ maintenance operations.
  - Magnetic retainer and locking system (JS and SK).
  - Knurl allows hand tightening where access is difficult.
- Weight: 96 g.





## 1/2" "Standard" ranges / accessories

## □ S.RC - 1/2" drive locking extensions (1)

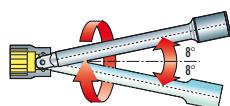
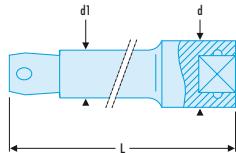


NF ISO 3316, ISO 3316, DIN 3123, ASME B107.10

- Total safety as lock system prevents socket loss.
- Safety and instant release, by retracting knurled ring, for total user confidence.
- Positive locking for use with sockets with internal ball notch.
- Finish: bright chrome with phosphate-hardened ring.

Ø	Square ["]	d [mm]	d1 [mm]	d2 [mm]	E [mm]	L [mm]	ΔΔ [g]
<b>S.210RC</b>	1/2	23	16,5	23	16,5	130	250
<b>S.215RC</b>	1/2	23	16,5	23	16,5	250	450
<b>S.217RC</b>	1/2	23	16,5	23	16,5	500	860

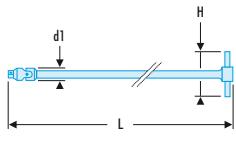
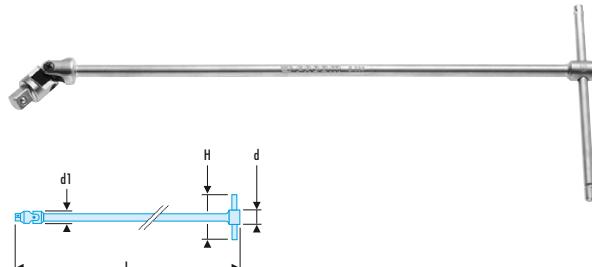
## □ S.S - 1/2" wobble drive extensions



- Square drive rounded profile gives 8° working angle.
- Useful where access is limited.
- Finish: bright chrome.

Ø	Square ["]	d [mm]	d1 [mm]	L [mm]	ΔΔ [g]
<b>S.208S</b>	1/2	23	16,5	75	130
<b>S.210S</b>	1/2	23	16,5	130	225
<b>S.215S</b>	1/2	23	16,5	250	420

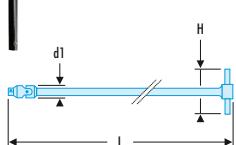
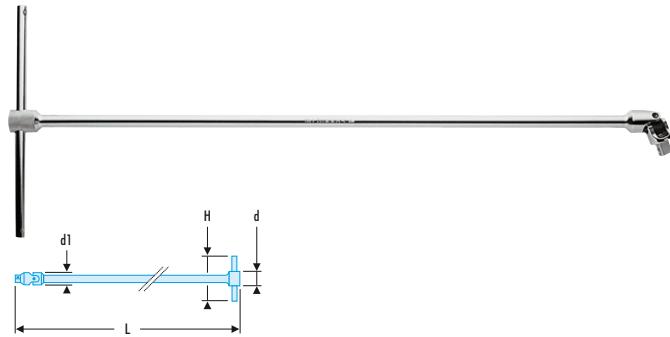
## □ 1/2" drive tee with universal joint



- Universal joint for high torques.
- Finish: bright chrome.

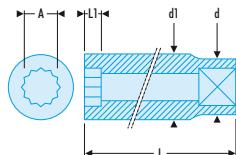
Ø	d [mm]	d1 [mm]	H [mm]	L [mm]	ΔΔ [g]
<b>S.229A</b>	18	24	180	495	550

## □ 1/2" extra-long drive tee with universal joint



- Extended reach of tee-handle is ideal for particularly deep recesses.
- Finish: bright chrome.

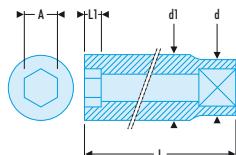
Ø	d [mm]	d1 [mm]	H [mm]	L [mm]	ΔΔ [kg]
<b>S.228</b>	24	25	240	700	1,20

**S - 1/2" metric 12-point sockets**

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

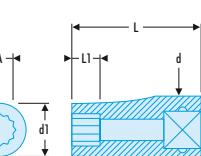
- OGV® profile: more powerful tightening, preserves fasteners.
- Finish: bright chrome.
- Supplied on metal rack. Ref S.40E (8 --> 16 mm) and Ref S.41E (17 --> 24 mm).

	A [mm]		d [mm]	d1 [mm]	L [mm]	L1 [mm]	
<b>S.8</b>	8	12	22,8	13,1	36	6,5	48
<b>S.9</b>	9	12	22,8	13,8	36	6,5	48
<b>S.10</b>	10	12	22,8	15,3	36	7,8	48
<b>S.11</b>	11	12	22,8	16,5	36	9,0	51
<b>S.12</b>	12	12	22,8	17,8	36	9,5	52
<b>S.13</b>	13	12	22,8	18,9	36	10,4	55
<b>S.14</b>	14	12	22,8	20,2	36	10,5	57
<b>S.15</b>	15	12	22,8	21,4	36	12,0	60
<b>S.16</b>	16	12	21,6	22,6	36	12,0	57
<b>S.17</b>	17	12	23,1	24,1	36	13,0	61
<b>S.18</b>	18	12	23,4	25,4	36	13,0	68
<b>S.19</b>	19	12	24,6	26,6	36	14,0	69
<b>S.20</b>	20	12	25,4	27,4	36	14,0	71
<b>S.21</b>	21	12	25,1	29,1	38	16,0	93
<b>S.22</b>	22	12	26,4	30,4	38	16,5	101
<b>S.23</b>	23	12	27,6	31,6	38	16,5	122
<b>S.24</b>	24	12	28,7	32,7	38	16,5	130
<b>S.25</b>	25	12	27,7	34,1	38	16,5	128
<b>S.26</b>	26	12	29,0	35,4	38	16,5	138
<b>S.27</b>	27	12	29,2	36,6	44	19,0	142
<b>S.28</b>	28	12	30,5	37,9	44	20,0	163
<b>S.29</b>	29	12	31,3	38,7	44	20,0	167
<b>S.30</b>	30	12	33,0	40,4	44	20,0	185
<b>S.31</b>	31	12	34,2	41,6	44	20,0	189
<b>S.32</b>	32	12	35,1	42,5	44	20,0	198
<b>S.34</b>	34	12	37,5	44,9	44	20,0	223

**S.LA - 1/2" inch 12-point sockets****ASME B107.1**

- OGV® profile: more powerful tightening, preserves fasteners.
- Long-reach sockets for long recess or thread access.
- Finish: bright chrome.

	A [""]		d [mm]	d1 [mm]	L [mm]	L1 [mm]	
<b>S.1/2LA</b>	1/2	12	22,3	19,0	82,2	8,1	135
<b>S.9/16LA</b>	9/16	12	22,3	20,6	82,2	9,6	138
<b>S.5/8LA</b>	5/8	12	22,3	22,3	82,2	10,9	150
<b>S.11/16LA</b>	11/16	12	24,4	24,4	82,2	10,9	160
<b>S.3/4LA</b>	3/4	12	26,9	26,9	82,2	12,4	165
<b>S.13/16LA</b>	13/16	12	28,7	28,7	82,2	12,9	175
<b>S.7/8LA</b>	7/8	12	30,2	30,2	82,2	14,0	200
<b>S.15/16LA</b>	15/16	12	31,7	31,7	82,2	15,0	225
<b>S.1'LA</b>	1	12	33,3	33,3	82,2	15,2	255
<b>S.1'1/16LA</b>	1 1/16	12	36,5	36,5	82,2	16,0	320
<b>S.1'1/8LA</b>	1 1/8	12	38,1	38,1	82,2	16,7	350
<b>S.1'1/4LA</b>	1 1/4	12	42,9	42,9	82,2	16,7	430

**NSB - 1/2" inch 12-point impact sockets****ASME B107.110**

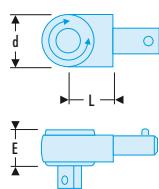
- For your safety, use impact sockets and accessories with the appropriate rings and pins.
- Thin profile for difficult access.
- Built to aeronautical specifications.
- Black phosphate finish.

	A [mm]		d [mm]	d1 [mm]	L [mm]	L1 [mm]	
<b>NSB.7/16</b>	7/16	12	21,9	18	38	5,2	55
<b>NSB.1/2</b>	1/2	12	21,9	20	38	5,3	56



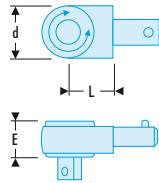
## Compact ratchets - Electronic torque wrenches

## □ Compact ratchets - drive 9 x 12 mm



	Square [""]	d [mm]	E [mm]	L [mm]
R.372	1/4	27	19	15
J.372V	3/8	37	26	15
S.372V	1/2	37	26	15

## □ Compact ratchets - drive 14 x 18 mm



- For S.382V : maximum torque of 350 N.m use.

	Square [""]	d [mm]	E [mm]	L [mm]
S.382V	1/2	41	26	27

## □ E.306D - Electronic torque wrenches



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

- Accuracy:  $\pm 2\%$  between 20% and 100% wrench capacity.
- Measuring mode: peak or follower.
- Measuring unit: N.m, lbf.ft, lbf.in and kg.cm.
- Bits: 9 x 12 and 14 x 18 mm.
- Numbered wrenches supplied with ISO 6789 calibration certificate.
- Presetting possible of 9 torque and/or angle values.
- Memory 250 values with PC USB link.
- Supplied in plastic case with foam interior.

	Capacity [N.m]	L [mm]	$\Delta\Delta$ [kg]
E.306-30D	1,5 - 30,0	360	1,520
E.306-135D	6,7 - 135,0	375	1,520
E.306-200D	10 - 200	474	2,400
E.306-340D	17 - 340	594	2,560

## □ E.306A - Electronic torque wrenches with ratchet



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

- Accuracy:  $\pm 2\%$  between 20% and 100% wrench capacity.
- Measuring mode: peak or follower.
- Measuring unit: N.m, lbf.ft, lbf.in and kg.cm.
- Bits: 9 x 12 and 14 x 18 mm.
- Numbered wrenches supplied with ISO 6789 calibration certificate.
- Presetting possible of 9 torque and/or angle values.
- Memory 250 values with PC USB link.
- Supplied in plastic case with foam interior.

	Capacity [N.m]	Square [""]	L [mm]	Ratchets	$\Delta\Delta$ [kg]
E.306A30R	1,5 - 30,0	1/4	390	R.372	1,604
E.306A135J	6,7 - 135,0	3/8	415	J.372V	1,697
E.306A135S	6,7 - 135,0	3/8	415	S.372V	1,709
E.306A200S	10 - 200	1/2	530	S.382V	2,699
E.306A340S	17 - 340	1/2	650	S.382V	2,859

**E.316D - Electronic torque / angle wrenches**

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

- Accuracy:
- Torque:  $\pm 2\%$  between 20% and 100% wrench capacity.
- Angle:  $\pm 2^\circ$ .
- End fitting: 9 x 12 and 14 x 18 mm.
- Measuring mode: peak or follower.
- Locking keypad (the operator has access only to program choices and result memorising).
- Measuring unit: N.m, lbf.ft, lbf.in, kg.cm and deg.
- Presetting possible of 9 torque and/or angle values.
- Memory 250 values with PC USB link.
- Supplied with calibration certificate.
- Supplied in plastic case and foam module.

**E.316A - Electronic torque / angle wrenches with ratchet**

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

- Accuracy:
- Torque:  $\pm 2\%$  between 20% and 100% wrench capacity.
- Angle:  $\pm 2^\circ$ .
- End fitting: 9 x 12 and 14 x 18 mm.
- Measuring mode: peak or follower.
- Locking keypad (the operator has access only to program choices and result memorising).
- Measuring unit: N.m, lbf.ft, lbf.in, kg.cm and deg.
- Presetting possible of 9 torque and/or angle values.
- Memory 250 values with PC USB link.
- Supplied with calibration certificate.
- Supplied in plastic case and foam module.



	Capacity [N.m]	Square ["]	L [mm]	Ratchets	$\Delta\Delta$ [kg]
<b>E.316A30R</b>	1,5 - 30,0	1/4	390	R.372	1,604
<b>E.316A135J</b>	6,7 - 135,0	3/8	415	J.372V	1,697
<b>E.316A135S</b>	6,7 - 135,0	1/2	415	S.372V	1,709
<b>E.316A200S</b>	10 - 200	1/2	530	S.382V	2,699
<b>E.316A340S</b>	17 - 340	1/2	650	S.382V	2,859



## Electronic torque wrenches and adapters

## □ R-J-S.306U - Click wrenches with dual lbf.in or lbf.ft and N.m graduation



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

- Factory accuracy:  $\pm 2\%$ .
- Reliability of mechanism: 50,000 cycles.
- Click wrenches with dual lbf.in or lbf.ft and N.m graduation.
- Reversible model.
- Full metal wrenches with knurled handle.
- Numbered wrenches supplied with ISO 6789 calibration certificate.
- Supplied in plastic box with ratchet.

Model	Capacity [lbf.in]	Capacity [lbf.ft]	Attachment	Graduation [lbf.in]	Capacity [lbf.in]	Square ["]	L [mm]	Box	$\Delta\Delta$ [kg]
R.306U	40 - 200	-	9 x 12	1	-	1/4	285	BP.D1	0,460
J.306U	200 - 1000	-	9 x 12	5	-	3/8	379	BP.D2	1,050
S.306U	-	30 - 250	14 x 18	-	30 - 250	1/2	600	BP.D3	1,630

## □ E.2000 - Torque controllers



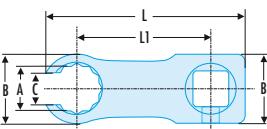
- Accuracy:  $\pm 1\%$ ,  $\pm 1$  digit.
- Measuring unit: N.m, lbf.ft, lbf.in.
- Measuring mode: monitor, edge and peak.
- Possible presetting of a limit value and tolerance with orange, green, red LED indicator.
- RS232 PC link.
- Dimensions (L. x W. x H.): 150 x 150 x 90 mm.
- Supplied with a calibration certificate.

Model	Capacity [N.m]	Square ["]	Square	$\Delta\Delta$ [kg]
E.2000-50	2 - 50	3/8"	-	2,60
E.2000-350	10 - 350	1/2"	-	2,60
E.2000-1000	100 - 1000	-	27	4,60

## □ R.FLA - 1/4" inch crowfoot box end bits



NEW



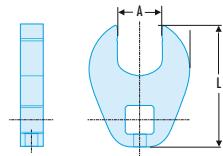
## ASME B107.100

- Thin wall 12-point head.
- Max torque recommended: 8.5 N.m.
- Built to aeronautical specifications.
- Inch sizes: from 1/4" to 3/8".
- Bright chrome finish.

Model	A ["]	C [mm]	E [mm]	L1 [mm]	$\Delta\Delta$ [g]
R.1/4FLA	1/4	4.5	5.9	36.3	13
R.5/16FLA	5/16	5.8	5.9	36.8	12.5
R.3/8FLA	3/8	7	5.9	38	14

**R.CF - 1/4" metric crowfoot end bits**

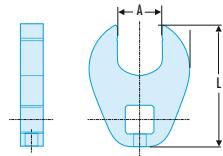
NEW

**ASME B107.100**

- Anti-slip design ensuring proper fitting on the fastener.
- Shaped to distribute the contact force over a larger surface.
- Suitable for use in confined spaces.
- Adapted to low torque uses.
- Sizes in mm: from 7 to 14
- Bright chrome finish.

**R.CF - 1/4" inch crowfoot open end bits**

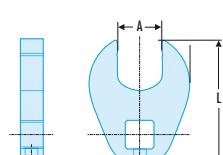
NEW

**ASME B107.100**

- Anti-slip design ensuring proper fitting on the fastener.
- Shaped to distribute the contact force over a larger surface.
- Suitable for use in confined spaces.
- Adapted to low torque uses.
- Inch sizes: from 1/4" to 9/16".
- Bright chrome finish.

**J.CF - 3/8" metric crowfoot open end bits**

NEW

**ASME B107.100**

- Anti-slip design ensuring proper fitting on the fastener.
- Shaped to distribute the contact force over a larger surface.
- Suitable for use in confined spaces.
- Adapted to low torque uses.
- Sizes in mm: from 8 to 32
- Bright chrome finish.

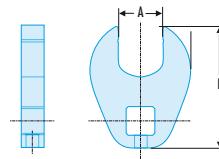


	A [mm]	E [mm]	L [mm]	L1 [mm]	$\Delta\Delta$ [g]
<b>J.8CF</b>	8	8	33.8	22.9	20
<b>J.9CF</b>	9	8	33.6	22.9	22
<b>J.10CF</b>	10	8	34.2	23.6	25
<b>J.11CF</b>	11	8	34.8	23.6	32
<b>J.12CF</b>	12	8	37.4	27.9	35
<b>J.13CF</b>	13	8	37.9	27.9	37
<b>J.14CF</b>	14	8	38.5	30	40
<b>J.15CF</b>	15	8	41.1	34.3	45
<b>J.16CF</b>	16	8	42.2	34.3	49
<b>J.17CF</b>	17	8	43.6	35.8	54
<b>J.18CF</b>	18	8	48.9	40.9	59
<b>J.19CF</b>	19	8	49.5	40.9	61
<b>J.20CF</b>	20	8	52.5	40.9	63
<b>J.21CF</b>	21	8	53.4	43.9	65
<b>J.22CF</b>	22	8	56.3	43.9	68
<b>J.23CF</b>	23	8	59.4	51.3	75
<b>J.24CF</b>	24	8	60.7	51.3	80
<b>J.27CF</b>	27	8	59.8	51.3	90
<b>J.30CF</b>	30	8	62.4	54	100
<b>J.32CF</b>	32	8	61.8	54	110



## Crowfoot 3/8" open end bits

### □ J.CF - 3/8" inch crowfoot open end bits



NEW

#### ASME B107.100

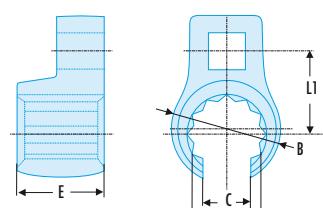
- Anti-slip design ensuring proper fitting on the fastener.
- Shaped to distribute the contact force over a larger surface.
- Suitable for use in confined spaces.
- Adapted to low torque uses.
- Inch sizes: from 3/8" to 3".
- Bright chrome finish.

ED	A ["]	E [mm]	L [mm]	L1 [mm]	$\Delta\Delta$ [g]
J.3/8CF	3/8	8	32.3	23.4	27
J.7/16CF	7/16	8	33.1	23.4	29
J.1/2CF	1/2	8	35.8	27.9	32
J.9/16CF	9/16	8	40	31.5	35
J.5/8CF	5/8	8	42.1	34.3	41
J.11/16CF	11/16	8	47.5	39.1	45
J.3/4CF	3/4	8	48.5	40.4	50
J.13/16CF	13/16	8	50	43.7	52
J.7/8CF	7/8	8	51.3	45.2	54
J.15/16CF	15/16	8	52.8	45.7	59
J.1PCF	1P	8	54.1	50.8	70
J.1P1/16CF	1P1/16	8	55.3	53.1	109
J.1P1/8CF	1P1/8	8	56	53.1	115
J.1P3/16CF	1P3/16	8	57.6	53.8	120
J.1P1/4CF	1P1/4	8	59.5	54.6	122
J.1P5/16CF	1P5/16	8	61.9	54.6	125
J.1P3/8CF	1P3/8	8	63.4	61	131
J.1P7/16CF	1P7/16	8	65.3	61	135
J.1P1/2CF	1P1/2	8	67.8	65.8	150
J.1P9/16CF	1P9/16	8	69.3	65.8	154
J.1P5/8CF	1P5/8	8	71.2	69.1	163
J.1P11/16CF	1P11/16	8	73.6	69.1	172
J.1P3/4CF	1P3/4	8	74.5	73.7	177
J.1P13/16CF	1P13/16	8	76.9	73.7	181
J.1P7/8CF	1P7/8	8	77.9	81.3	204
J.1P15/16CF	1P15/16	8	81.1	84.8	222
J.2PCF	2P	11.1	85.2	88.1	322
J.2P1/16CF	2P1/16	11.1	86.8	88.1	331
J.2P1/8CF	2P1/8	11.1	90	91.2	336
J.2P3/16CF	2P3/16	11.1	91.7	92.7	354
J.2P1/4CF	2P1/4	11.1	93.3	99.1	404
J.2P5/16CF	2P5/16	11.1	95	100.8	408
J.2P3/8CF	2P3/8	11.1	99.6	105.4	458
J.2P7/16CF	2P7/16	11.1	103.7	105.4	467
J.2P1/2CF	2P1/2	11.1	106.9	108.7	499
J.2P9/16CF	2P9/16	11.1	108.5	110.2	503
J.2P5/8CF	2P5/8	11.1	112.5	116.6	576
J.2P11/16CF	2P11/16	11.1	114.5	119.9	608
J.2P3/4CF	2P3/4	11.1	117.6	121.4	621
J.2P13/16CF	2P13/16	11.1	121.5	121.4	626
J.2P7/8CF	2P7/8	11.1	123.3	129.3	689
J.2P15/16CF	2P15/16	11.1	124.9	130.8	703
J.3PCF	3P	11.1	125.7	130.8	717

### □ J.FL - 3/8" inch crowfoot box end bits



NEW

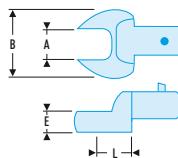


#### ASME B107.100

- Thin wall 12-point high head for better accessibility.
- Adapted to use in confined spaces inaccessible to ratchets and other wrenches.
- The hole in the drive bit secures the bit during use.
- Built to aeronautical specifications.
- Dimensions in inches: 5/8" to 1P1/16".
- Bright chrome finish.

ED	A ["]	C [mm]	L [mm]	$\Delta\Delta$ [g]
J.5/8FL	5/8	18.3	38	40
J.11/16FL	11/16	18.3	41	46
J.3/4FL	3/4	19.1	43	54
J.13/16FL	13/16	19.1	45	58
J.7/8FL	7/8	19.8	48	68
J.15/16FL	15/16	19.8	49	72
J.1PFL	1P	20.6	51	74
J.1P1/16FL	1P1/16	20.6	53	83

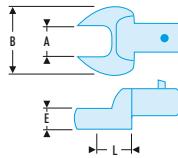
## □ 10 - Metric open end bits - drive 9 x 12 mm



Ø	A [mm]	B [mm]	E [mm]	L [mm]
<b>10.7</b>	7	21,0	5	17,5
<b>10.8</b>	8	22,0	5	17,5
<b>10.9</b>	9	23,5	6	17,5
<b>10.10</b>	10	24,5	6	17,5
<b>10.11</b>	11	26,0	6	17,5
<b>10.12</b>	12	27,5	7	17,5
<b>10.13</b>	13	29,0	7	17,5
<b>10.14</b>	14	31,5	7	20,0
<b>10.15</b>	15	33,0	9	20,0
<b>10.16</b>	16	35,5	9	20,0
<b>10.17</b>	17	37,5	9	20,0
<b>10.18</b>	18	39,0	9	20,0
<b>10.19</b>	19	41,5	9	20,0



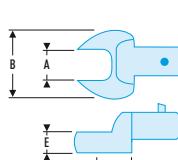
## □ 10 - Inch open end bits - drive 9 x 12 mm



Ø	A ["]	B [mm]	E [mm]	L [mm]
<b>10.1/4</b>	1/4	19	5	17,5
<b>10.5/16</b>	5/16	19	5	17,5
<b>10.3/8</b>	3/8	25	6	17,5
<b>10.7/16</b>	7/16	25	6	17,5
<b>10.1/2</b>	1/2	31	7	17,5
<b>10.9/16</b>	9/16	31	7	20,0
<b>10.5/8</b>	5/8	37	9	20,0
<b>10.11/16</b>	11/16	37	9	20,0
<b>10.3/4</b>	3/4	40	9	20,0



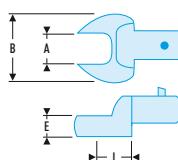
## □ 11 - Metric open end bits - drive 14 x 18 mm



Ø	A [mm]	B [mm]	E [mm]	L [mm]
<b>11.13</b>	13	34	8	25,0
<b>11.14</b>	14	34	8	25,0
<b>11.15</b>	15	34	8	25,0
<b>11.16</b>	16	39	10	25,0
<b>11.17</b>	17	39	12	25,0
<b>11.18</b>	18	39	12	25,0
<b>11.19</b>	19	45	12	25,0
<b>11.21</b>	21	45	12	25,0
<b>11.22</b>	22	52	14	25,0
<b>11.23</b>	23	52	14	25,0
<b>11.24</b>	24	52	14	25,0
<b>11.27</b>	27	59	16	32,5
<b>11.30</b>	30	64	18	32,5
<b>11.32</b>	32	64	18	32,5



## □ 11 - Inch open end bits - drive 14 x 18 mm



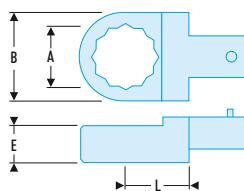
Ø	A ["]	B [mm]	E [mm]	L [mm]
<b>11.1/2</b>	1/2	34	8	25,0
<b>11.9/16</b>	9/16	34	8	25,0
<b>11.5/8</b>	5/8	39	10	25,0
<b>11.11/16</b>	11/16	39	12	25,0
<b>11.3/4</b>	3/4	45	12	25,0
<b>11.13/16</b>	13/16	45	12	25,0
<b>11.7/8</b>	7/8	52	14	25,0
<b>11.15/16</b>	15/16	52	14	25,0
<b>11.11 1/4</b>	1 1/4	59	16	32,5
<b>11.11 1/16</b>	1 1/16	64	18	32,5





## Polygon bits

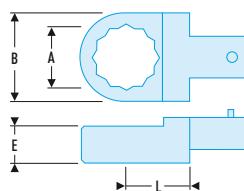
### □ 12 - Inch ring ends - 9x12 mm end fitting



- Straight ring ends, 3/8" drive.
- Allows use in confined spaces.
- 9 dimensions available.

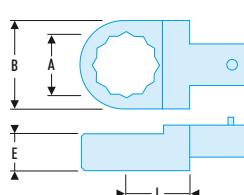
⊖	A ["]	E [mm]	L [mm]
<b>12.1/4</b>	1/4	7,9	17,5
<b>12.5/16</b>	5/16	7,9	17,5
<b>12.3/8</b>	3/8	7,9	17,5
<b>12.7/16</b>	7/16	7,9	17,5
<b>12.1/2</b>	1/2	12,1	17,5
<b>12.9/16</b>	9/16	12,1	17,5
<b>12.5/8</b>	5/8	12,9	17,5
<b>12.11/16</b>	11/16	13,1	17,5
<b>12.3/4</b>	3/4	13,1	17,5

### □ 12 - Polygon drives - drive 9 x 12 mm



⊖	A [mm]	B [mm]	E [mm]	L [mm]
<b>12.7</b>	7	20	7,9	17,5
<b>12.8</b>	8	20	7,9	17,5
<b>12.9</b>	9	20	7,9	17,5
<b>12.10</b>	10	20	7,9	17,5
<b>12.11</b>	11	20	7,9	17,5
<b>12.12</b>	12	20	12,1	17,5
<b>12.13</b>	13	20	12,1	17,5
<b>12.14</b>	14	23,5	12,1	17,5
<b>12.15</b>	15	24,5	12,1	17,5
<b>12.16</b>	16	26,5	12,9	17,5
<b>12.17</b>	17	27,5	13,1	17,5
<b>12.18</b>	18	30	13,1	17,5
<b>12.19</b>	19	31	13,1	17,5

### □ 13 - Polygon drives - drive 14 x 18 mm

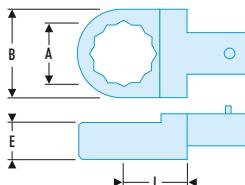


⊖	A [mm]	d [mm]	E [mm]	L [mm]
<b>13.13</b>	13	30,0	11	25
<b>13.14</b>	14	30,0	11	25
<b>13.15</b>	15	30,0	11	25
<b>13.16</b>	16	30,0	11	25
<b>13.17</b>	17	30,0	12	25
<b>13.18</b>	18	30,0	12	25
<b>13.19</b>	19	31,0	12	25
<b>13.21</b>	21	33,0	12	25
<b>13.22</b>	22	35,0	14	25
<b>13.23</b>	23	38,0	14	25
<b>13.24</b>	24	38,0	14	25
<b>13.27</b>	27	41,5	16	31
<b>13.30</b>	30	45,0	18	31
<b>13.32</b>	32	47,5	18	31
<b>13.34</b>	34	51,0	11	31
<b>13.36</b>	36	53,0	19	31

## □ 13 - Inch polygon bits - drive 14x18



NEW



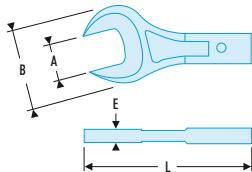
## ASME B107.100

- Polygon bits drive 14x18.
- Inch sizes: from 1/2 to 1P1/16.

⊖	A ["]	E [mm]	L [mm]	ΔΔ [g]
<b>13.1/2</b>	1/2	21.5	60.9	126
<b>13.9/16</b>	9/16	21.5	61.4	128
<b>13.5/8</b>	5/8	21.5	62.9	134
<b>13.11/16</b>	11/16	21.5	63.9	138
<b>13.3/4</b>	3/4	21.5	65.4	142
<b>13.13/16</b>	13/16	21.5	66.4	150
<b>13.7/8</b>	7/8	21.5	67.4	152
<b>13.15/16</b>	15/16	21.5	68.4	180
<b>13.1P1/16</b>	1P1/16	21.5	76.6	204



## □ 20 - Open end bits - drive 20 x 7 mm



- For use on torque wrenches series 203, 306R and 446.

⊖	A [mm]	B [mm]	E [mm]	L [mm]
<b>20.10</b>	10	24	6,0	105
<b>20.11</b>	11	24	6,0	105
<b>20.12</b>	12	29	6,0	106
<b>20.13</b>	13	29	6,0	106
<b>20.14</b>	14	29	6,0	106
<b>20.15</b>	15	40	7,5	109
<b>20.16</b>	16	40	7,5	109
<b>20.17</b>	17	40	7,5	109
<b>20.18</b>	18	40	7,5	109
<b>20.19</b>	19	40	7,5	109
<b>20.21</b>	21	53	8,0	112
<b>20.22</b>	22	53	8,0	112
<b>20.23</b>	23	53	8,0	112
<b>20.24</b>	24	53	8,0	112
<b>20.27</b>	27	66	9,0	115
<b>20.30</b>	30	66	9,0	115
<b>20.32</b>	32	66	9,0	115
<b>20.36</b>	36	74	10,0	118



## □ 14 - Welding tip



- Welding a tool onto a weld-on tip modifies the centre distance between the tool centre and the wrench. This modification changes the torque value required. Therefore, a torque controller must be used to recalibrate the torque wrench (E.2000).
- Presentation: black finish.
- Hardness: 46-50 HRC.

⊖	A [mm]	B [mm]	C [mm]	L [mm]	L1 [mm]
<b>14.9X12</b>	9x12	14,7	17,4	24,5	16,5
<b>14.14X18</b>	14x18	22	26,3	36,5	24,5





# TORQUE ACCESSORIES



## 7 TYPES OF ACCESSORY



Pivot knob



Standard ratchet



Compact ratchet



Square drive



Open end



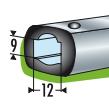
Ring end



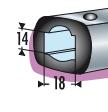
Crowfoot end

Wrench fitted with a ratchet J.372, a knob S.305P and a socket.

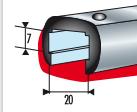
## 3 types of end fitting:



9x12



14x18



20x7

## 1. CHOOSE YOUR WRENCH OR DRIVER

306	208	200	203
R.304DA R.306-25D J.306-50D S.306-1000 R.306U J.306U	J.208-50D S.208-100D		
S.306-200D S.306-350D S.306U K.306-600D	J.208-200D S.208-340D		
K.306-1000D		K.200DB K.202DB M.200DB	
S.306-100R S.306-200R S.306-350R			R.203DA J.203DA S.203A
E.306	E.316	248	446
E.306-30D E.306-130D	E.316-30D E.316-130D	R.344DA R.248-25D J.248-50D S.248-100D	R.446-25
E.306-200D E.306-340D	E.316-200D E.316-340D	S.248-200D S.248-340D	
			J.446-50 S.446-100
		A.400 A.300MT	A.440 A.340MT
		A.402 A.404	A.442 A.444
		A.300MT A.301MT	A.340MT A.341MT

## 2. CHOOSE THE TYPE OF ACCESSORY

9x12	J.372 S.372	R.372 J.372V S.372V	R.373 J.373 S.373	Series 10	Series 12
14x18	S.382	S.382V K.382A	S.383 K.383	Series 11	Series 13
Ø 30		K.200DB K.202DB M.200DB	K.151A M.151		
20x7		J.152 S.152	J.203E S.203E	Series 20	
9x12	J.372 S.372	R.372 J.372V S.372V	R.373 J.373 S.373	Series 10	Series 12
14x18	S.382	S.382V K.382A	S.383 K.383	Series 11	Series 13
20 x 7		J.152 S.152	J.203E S.203E	Series 20	
	Series	mm	Inches		
9x12	Series 10	7 à 19	1/4 à 3/4		
9x12	Series 11	7 à 19	1/4 à 3/4		
14x18	Series 12	13 à 32	1/2 à 1"1/16		
14x18	Series 13	13 à 36	1/2 à 1"1/16		
20x7	Series 14	10 à 36	-		
Ø 1/4	ECR				
Ø 4		ECRO			

## Pliers



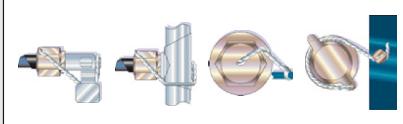


## Locking-wire pliers

### FACOM LOCKING-WIRE PLIERS

**Fast twist mechanism lock wires together.**

- For stainless and inconel wire Ø 1 mm.
- Side wire cutter.
- Slim nose-tip for optimum manoeuvrability.
- 10" model: 3 turns, 125 mm travel.
- 8" model: 2.5 turns, 95 mm travel.

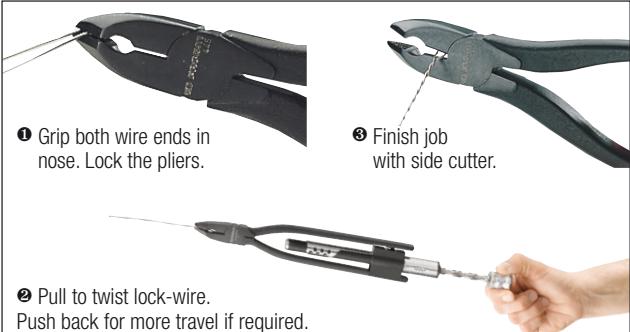


**Automatic model**

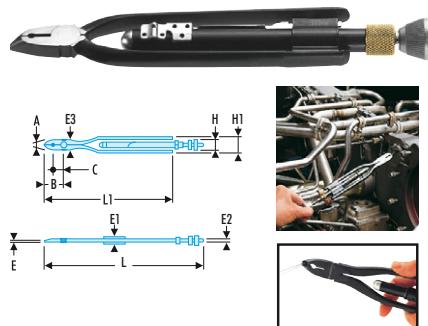
- Automatic-reset model for simplicity and time-saving.

**Reversible model.**

- Allows the operator to reverse rotation.



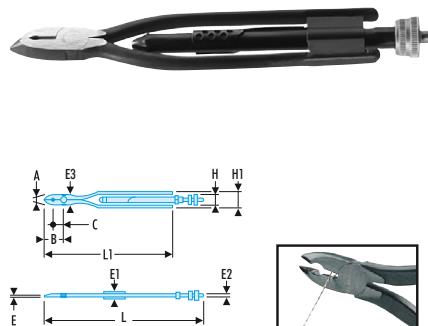

### Short locking-wire pliers 8"

**ASME B107.500**

- 445.8R = "automatic" model.
- 445.8DS = "reversible" model.
- Side wire-cutter: stainless steel diameter 1 mm.
- 2.5 turns: 95 mm length.

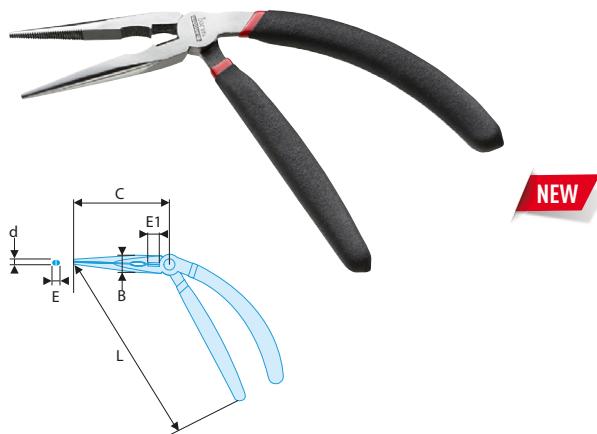
	A [mm]	B [mm]	C [mm]	E [mm]	E1 [mm]	E2 [mm]	E3 [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	ΔA [g]
<b>445.8R</b>	3	20	7	2,5	15	10,5	15	22	37	215	170	245
<b>445.8DS</b>	3	22	9	2,2	15	29,8	14	30	41	284	170	320

### Locking-wire pliers 10"

**ASME B107.500**

- 445.10R = "automatic" model.
- 445.10DS = "reversible" model.
- Side wire-cutter: stainless steel diameter 1 mm.
- 3 turns: 125 mm length.

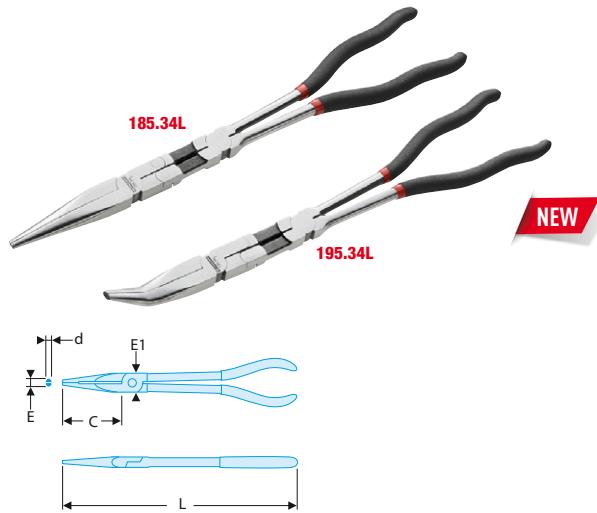
	A [mm]	B [mm]	C [mm]	E [mm]	E1 [mm]	E2 [mm]	E3 [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	ΔA [g]
<b>445.10R</b>	3	30	11	2,5	15,5	11,5	19	25	40	360	230	400
<b>445.10DS</b>	3	30	11	2,2	15,5	29,8	19	30	45	360	230	450

**■ 193.20G Angled combination pliers**

- Angled 45° semi-round noses to work in awkward zones.
- The plier angle provides good visibility on the part and prevents muscle pain in the wrist.
- 3-in-1 combination pliers: tube clamp, grip, cutting.
- Long slim noses for better access.
- Ergonomic handle for easy grip.
- Polished with plastic sheath finish.



193.20G	B [mm]	C [mm]	d [mm]	E [mm]	E1 [mm]	L [mm]	$\Delta\Delta$ [g]
	14.7	82.5	3	3	9.9	200	280

**■ Double jointed extra long half-round nose pliers**

- Length 340 mm.
- 195.34L : 45° angle for better accessibility.
- Double joint and slim profile, for working in awkward zones, even single-handed.
- Serrated nose for good grip.
- Ergonomic handle for easy grip.
- Polished with plastic sheath finish.

	C [mm]	d [mm]	E [mm]	E1 [mm]	L [mm]	$\Delta\Delta$ [g]
185.34L	81	6	3	19	340	350
195.34L	77	6	3	19	340	350

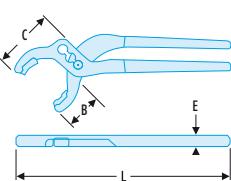
**■ 410 - "Connector" pliers****ASME B107.500**

- For handling fragile round components, e.g. screwed connector sleeves, tubes, lamps or wire looms, etc.
- Wide capacity from 3-position slip joint: max. diameter 55 mm.
- Replaceable plastic jaws available in 2 jaw hardness options:
  - 410: hard jaws - 70 shore B.
  - 410.S: soft jaws - 55 shore B.
- Finish: polished chrome, red PVC grips.



## Spare jaws:

- 410.1: Set of 2 jaws with screws (hard).
- 410.S1: Set of 2 jaws with screws (soft).



	B [mm]	C [mm]	E [mm]	L [mm]	$\Delta\Delta$ [g]
410	68	47	10	230	320
410.S	68	47	10	230	320





# F Protwist®

## CHOOSING THE RIGHT BLADE FOR YOUR NEEDS

### THE PROTWIST® RANGE

- An ideal combination of blade types, tip patterns and materials to choose from
- Over 250 references to cover all your needs.

Short blade AN	Round blade, sand-blasted tip AS	Round blade, black tip AN	Hexagonal blade AW	Hexagonal blade with bolster AWH	1,000 V insulated blade A.VE	Hexagonal blade AWHH/AWSH	Stainless steel blade AXT	Impact blade	Fluo grip		
Awkward spaces	Frequent use	Intensive use	High torque	Added torquing power with a wrench	Live working	Hexagon socket heads	Stainless fasteners/corrosive environment	Locked fasteners	Tool detection		
	4 to 6.5 mm 	2.5 to 10 mm 	2 to 10 mm 	4 to 12 mm 	5.5 to 14 mm 	2 to 12 mm 		4 to 8 mm 	4 to 14 mm 	2.5 to 10 mm 	
	1-2 	0 to 3 	0 to 4 	1 to 4 	1 to 4 	0 to 4 		1 to 2 	1.2 to 3 	0-1-2-3 	
	1-2 	0 to 3 	0 to 4 	1 to 4 	1 to 4 	0 to 3 		1 to 2 	1.2 to 3 		
		10 to 30 	6 to 40 					10 to 40 			
			10 to 40 								
			5 to 40 								
			10 to 40 								
			1 to 3 								
<i>Borneo</i>							1 to 2 				
								2 to 8 mm 			3-4-5 

Colour coding for immediate identification of all Protwist® screwdrivers.

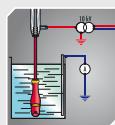


## 1,000 VOLTS INSULATED SCREWDRIVERS - SLIM BLADE

### ACCESSIBILITY :

**Up to 27% reduction to the blade versus standard Facom insulated range providing accessibility in all areas.**

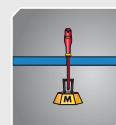
- Moulded polymer handle for durable performance, a comfortable grip and excellent resistance to chemicals.
- Tools built for electrical safety to European standard EN60900 specifications, and designed for working on live components up to 1,000 V AC and 1,500 V DC.
- For your safety, every screwdriver is tested to 10,000 V for 10 seconds at the end of the manufacturing cycle.



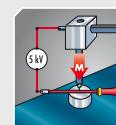
Electrical  
resistance



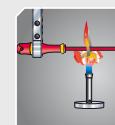
Impact  
resistance



Load  
resistance

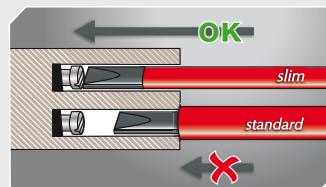


Penetration  
resistance



Combustion  
resistance

**Protwist®**  
*slim*



Made in France

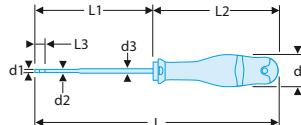
**1000 VOLTS**  
EN 60900

**GARANTIE**  
GUARANTEE

### □ A.TVE - PROTWIST® 1000 Volt insulated screwdrivers for slotted-head screws



NEW



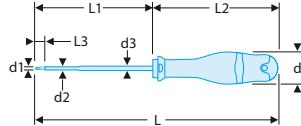
- For your safety, each screwdriver is tested individually at 10000 Volts for 10 seconds, at the end of the manufacturing cycle.
- 1000 Volt sheathed round blade.
- Bi-material grip resists to impacts, abrasion, and chemicals.

Ø	d [mm]	d1 [mm]	d2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	ΔΔ [g]
A3.5X100TVE	25	3.5	3.8	204	100	104	15	46
A4X100TVE	30	4	4.3	210	100	110	15	65
A5.5X125TVE	30	5.5	5.8	235	125	110	15	83
A6.5X150TVE	36	6.5	6.8	270	150	120	15	134

### □ AP.TVE - PROTWIST® 1000 Volt insulated screwdrivers for Phillips® head screws



NEW



- For your safety, each screwdriver is tested individually at 10000 Volts for 10 seconds, at the end of the manufacturing cycle.
- 1000 Volt sheathed round blade.
- Bi-material grip resists to impacts, abrasion, and chemicals.

Ø	d [mm]	d1 [mm]	d2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	ΔΔ [g]
AP1X100TVE	30	4.5	4.8	210	100	110	18	70
AP2X125TVE	36	6	6.3	245	125	120	18	120

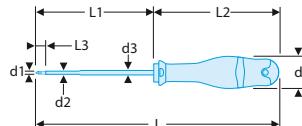


## Screwdrivers

### □ AD.TVE - PROTWIST® 1000 Volt insulated screwdrivers for Pozidriv® screws



NEW



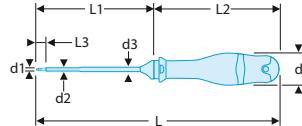
- For your safety, each screwdriver is tested individually at 10000 Volts for 10 seconds, at the end of the manufacturing cycle.
- 1000 Volt sheathed round blade.
- Bi-material grip resists to impacts, abrasion, and chemicals.

⊕	d [mm]	d1 [mm]	d2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	ΔΔ [g]
<b>AD1X100TVE</b>	30	4.5	4.8	210	100	110	18	70
<b>AD2X125TVE</b>	36	6	6.3	245	125	120	18	120

### □ APB.TVE - PROTWIST® BORNEO® screwdrivers for mixed heads - Phillips®



NEW



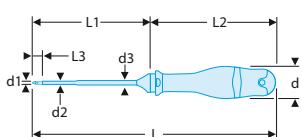
- For your safety, each screwdriver is tested individually at 10000 Volts for 10 seconds, at the end of the manufacturing cycle.
- 1000 Volt sheathed round blade.
- Bi-material grip resists to impacts, abrasion, and chemicals.

⊕	d [mm]	d1 [mm]	d2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	ΔΔ [g]
<b>APB1X100TVE</b>	30	5	5.3	210	100	110	18	75
<b>APB2X125TVE</b>	36	6	6.3	245	125	120	18	121

### □ ADB.TVE - PROTWIST® BORNEO® screwdrivers for mixed heads - Pozidriv®



NEW



- For your safety, each screwdriver is tested individually at 10000 Volts for 10 seconds, at the end of the manufacturing cycle.
- 1000 Volt sheathed round blade.
- Bi-material grip resists to impacts, abrasion, and chemicals.

⊕	d [mm]	d1 [mm]	d2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	ΔΔ [g]
<b>ADB1X100TVE</b>	30	5	5.3	210	100	110	18	75
<b>ADB2X125TVE</b>	36	6	6.3	245	125	120	18	121

**□ A.TVE - Sets of PROTWIST® 1000 Volt insulated screwdrivers**



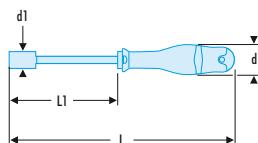
NEW

- For your safety, each screwdriver is tested individually at 10000 Volts for 10 seconds, at the end of the manufacturing cycle.

	ΔΔ [g]
AD.J5TVE	430
AP.J5TVE	430



**□ ACL.1A PROTWIST® ratchet blade holder screwdriver + 15 bits**



- High quality 45-teeth ratchet = fast screwing, accuracy, strength and longevity.
- 3-position bush: screwing, unscrewing and locking (hand selection).
- Storage cap for charger.
- Cap can be used as mini bit holder for use in confined spaces.
- Partially hollow handle to store more bits or screws.
- Bimaterial ergonomic handle for comfortable and reliable screwing.
- Very low blade return torque.
- Powerful magnetic adapter allowing the magnet to hold the bit and screw.
- Magnetised central storage of chargers serves as additional mini bit holder.
- Including 2 chargers:
  - 1 charger containing 7 screw bits + 1 separate:  
' 4 - 6,5 ; ( PH.1 - PH.2 ; § PZ.1 - PZ.2 ; 3 4 - 6.
  - 1 transparent charger containing 7 Resistortx bits  
1 EXR.110 - EXR.115 - EXR.120 - EXR.125 - EXR.127 - EXR.130 - EXR.140.





## Hexagon keys

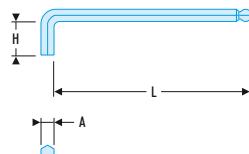
### □ Set of hexagon keys in wallet



- Keys are packaged in a compact wallet for easy selection of the dimension required.
- Sets available in 2 types of keys:
  - 82H: Short keys.
  - 83H: Long keys.
- JP = metric key sets.
- JPU = inch key sets.

⊖	∅ [mm]	Wrench	ΔΔ [g]
<b>82H.JP8AU</b>	3/32 - 1/8 - 5/32 - 3/16 - 7/32 - 1/4 - 5/16 - 3/8	82H	235
<b>83H.JP9A</b>	1,5 - 2,0 - 2,5 - 3,0 - 4,0 - 5,0 - 6,0 - 8,0 - 10,0	83H	350

### □ 83SH - Long spherical head inch keys



#### ASME B18.3

- Manufactured in silicon steel.
- The spherical head allows to handle screws with a tilt angle up to 30°.
- Inch sizes: from 0.05 to 3/8
- Phosphate finish.

⊖	A ["]	L [mm]	H [mm]	ΔΔ [g]
<b>83SH.050</b>	0,05	72	14	1
<b>83SH.1/16</b>	1/16	76	15	1
<b>83SH.5/64</b>	5/64	81	16	2
<b>83SH.3/32</b>	3/32	86	17	4
<b>83SH.7/64</b>	7/64	91	18	6
<b>83SH.1/8</b>	1/8	95	19	7
<b>83SH.9/64</b>	9/64	100	20	10
<b>83SH.5/32</b>	5/32	105	21	13
<b>83SH.3/16</b>	3/16	114	24	22
<b>83SH.7/32</b>	7/32	124	26	34
<b>83SH.1/4</b>	1/4	134	29	42
<b>83SH.5/16</b>	5/16	152	32	80
<b>83SH.3/8</b>	3/8	172	35	128

### □ 83SH - Set of long spherical head inch keys

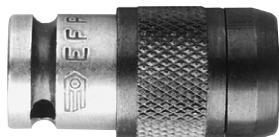


#### ASME B18.3

- Keys are packaged in a compact wallet for easy selection of the dimension required.

⊖	∅ [mm]	Wrench	ΔΔ [g]
<b>83SH.JP13U</b>	050, 1/16, 5/64, 7/64, 9/64, 1/4, 3/32, 1/8, 5/32, 3/16, 7/32, 5/16, 3/8	83SH	390

### EF - Snap ring bit holder sockets



NF ISO 2725-1, NF ISO 1173, ISO 2725-1, ISO 1173,  
DIN 3124

- For bits series 1 - 1/4" - 6.35 mm drive.

	A ["]	L [mm]	Square ["]	$\Delta\Delta$ [g]
EF.R	1/4	30	1/4	26
EF.J	1/4	43	3/8	48
EF.S	1/4	50	1/2	88



### EF.6P5 Locking ring bit holder

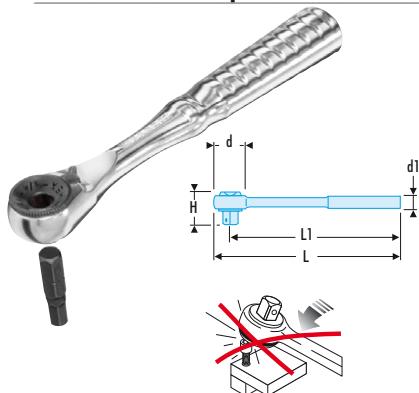


NF ISO 1173, ISO 1173

- Drive 1/4" - 6.35 mm.
- Fast bit change.
- Length: 51 mm.
- Weight: 31 g.



### R.PE Ultra compact 1/4" bit ratchet



- Exceptionally compact design when using end bits.
- Mechanism: 60 teeth.
- Use sockets with the ECR adapter.
- Supplied with magnetic extension.



### R.PEJ31 1/4" bits-ratchet set - 31 pieces



- Contains:
  - 1 bit holder ratchet 1/4" R.PE
  - 1 extension 100 mm long.
  - 28 1/4" bits: 1 TT10-15-20-25-27-30-40  
S T 6-7-8-9 - 3 1,5-2-2,5-3-4-5-6-7-8 mm  
(PH N° 1-2-3 - PZ N° 1-2-3 - 4-5,5 mm)
  - + adapter ECR n 1/4" □ L 1/4".
- Ultra compact box.
- Weight: 445 g.



### 65.PE Bit-holder ratchet wrench 1/4" - 5/16"



- Takes the following bits: - Series 1: hexagon 1/4".
- Series 2: hexagon 5/16".
- Used for installing 1/4" and 5/16" aircraft fasteners.
- Increment: 5°.
- Heads angled at 15°.
- Bits held by a spring clip.
- Knurled head for fast pre-tightening.
- Length 150 mm.
- Satin chrome finish.





## Inspection lamp

### 779.CL3 CORDLESS LED INSPECTION LAMP

#### Dual function light

- Powerful directive torch light for inspecting.
- Soft permanent lighting on the front to light a work zone.

#### High performance

- Very long lasting LEDs.
- Neutral white torch light.
- White fluorescent panel lighting with diffusing glass.

#### Extended use

- 8h torch lighting or 5h panel lighting.
- Charges in 2h30.
- High capacity Lithium-Ion battery without memory effect.

#### Proven resistance

- Shock-proof structure (IK08) and drop resistant.
- Watertight construction (IP55).
- Resists workshop solvents and common chemicals.

#### Safety – Comfort

- Low operating temperature -> does not burn.
- Compact design -> for better accessibility.
- Magnet fastener or notched 360° swivel hook.
- Wall or worktop charger.
- 2m mains cable.
- Blanks 15 min before lamp discharges.



### 779.CL3 Standard inspection lamp with white spotlight



- Wide beam working light: 330 lux @ 0.5 m and high power spot light: 700 lux @ 0.5 m.
- Up to 9 hours burn time using spot light Up to 6 hours with working light.
- Special charging dock reduces likelihood of theft as charging bay is essential to operation.
- 360° hook and concealed magnet to assist with hand free positioning.
- Power Source : Battery.
- Burn Time [Work Light / Spot] : 6 / 9 hours.
- Charge Time : 2.5 hours.
- Flux @ 0.5 m [Work Light / Spot] : 330 / 700 Lux.
- Luminosity [Work Light / Spot] : 260 / 100 Lumen.
- Impact Protection IK09.
- Environment Protection IP55.
- Dimensions : L.243 x W.58 x D.40 mm.
- Operating Temperature : -20 / +70 °C.
- Weight : 0.38 kg.

## 779.SILR SLIM INSPECTION LAMP

**ILLUMINATION FOR AREAS WITH RESTRICTED ACCESS AND CONFINED SPACES****EXCEPTIONAL DURABILITY**

- Extra-slim lamp for lighting difficult to access work spaces.
- Exceptional durability: resistant to shock, water, oil, workshop lubricants, solvents and common chemicals.
- Flexible hook for safely working at height.
- Integrated 1/4" tripod stud thread to enable hands free operation.
- Fast charge ~ 3h (~ 6h via USB cable).
- Integrated charging status indicator.
- High capacity Lithium-Ion battery.
- Delivered with 230V charger, cigar light charger, USB cable.



- **Standard** for close working, reducing glare.



- **"Boost"** for inspection and maximum visibility.



- **Flexible hook** to prevent damage when hanging / removing.

**779.SILR 779.SILR - Cordless LED slim inspection lamp****NEW**

- Super slim design to access and illuminate confined spaces.
  - Exceptional Durability: Resistant to impact, water, oil and other workshop lubricants and solvents.
  - Unique semi-rigid soft-contact hook helps prevent damage to contact surfaces and enables hands-free illumination.
  - Two output modes for flexibility in use:
    - Normal : for close up work in confined spaces.
    - Boost : for inspection and general work space illumination.
  - Li-ion rechargeable battery for longer battery life-time.
  - High performance white SMD LEDs with 120° beam.
  - Light output:
    - Normal : 175 lux @ 0.5m (120 lumen)
    - Boost : 350 lux @ 0.5m (240 lumen)
  - Burn time:
    - Normal : 8 Hours.
    - Boost : 4 Hours.
  - Charge and operate simultaneously.
  - Integrated 1/4" thread mounting point for wider hands-free working possibilities.
  - Tether point for additional safety and working at height
  - Delivered with 110 - 240 V AC adaptor, Automotive 12V Cigar socket adaptor and USB lead.
  - Charging time: with AC adaptor 3h. (lamp turned off).
  - Lamp dimensions (max LxWxD): 327 x 45 x 25 mm.
  - Lamp dimensions (head WxD): 28 x 11.5 mm.
- Weight: 160 g. (inc battery)





## Inspection lamp



### 779.PC "POCKET" LED LIGHT

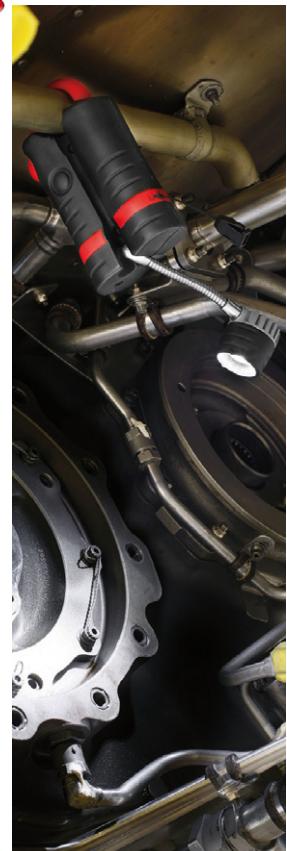


#### HANDS FREE LIGHTING

##### Quick and easy to attach

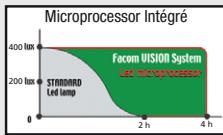
To illuminate a work area, one hand is often needed to hold the lamp. The FVS Pocket leaves both hands free as it incorporates a range of options for attachment and light direction.

- Innovating clamp hook.
- Removable magnet.
- Flexible head to turn on any axis.
- Compact shape for easy positioning.



##### Long autonomous operation

FVS Pocket is a genuinely professional lamp, no need to change the batteries. Equipped with a rechargeable LI-ION battery, it provides 4 hours of continuous operation and recharges in only 2 1/2 hours.



##### Professional quality

Designed to the same specifications as the 779.CL2, it provides 4 hours of constant illumination and is very resistant to impact, workshop solvents and water.



### 779.PC Facom Vision System FVS POCKET



- Wireless pocket lamp supplied by Lithium-ion rechargeable battery.
- Autonomy: 4h fast charge: 2h30.
- Microchip-controlled charging and lighting.
- Lighting level constant throughout the operating time.
- High power 1W LED.
- 2 levels of power:
  - Economic mode 300 lux at 50 cm.
  - "Booster" mode 400 lux at 50 cm.
- Impact-resistant casing.
- Sealing rating: IP.55.
- Supplied with: 230V charger, supply cable, user manual and wrist-strap.
- Dimensions: 130 x 65 x 30 mm.
- Weight: 210 g.

**779.FRT1** LED head lamp

- Hands free lighting.
- 2 lighting powers:
  - Normal – 400 Lux @ 0.5 m.
  - Boost – 925 Lux @ 0.5 m.
- Rotation on the vertical axis: 104°.
- Operating time up to 10 hours in normal mode and up to 3 hours in boost mode.
- Cold white "Cree" 1W LED supplying 20-45 Lumen for excellent visibility.
- Lightweight: less than 100 g with the 3 AAA 1.5V batteries.
- Adjustable elastic strap.  
Weight: 103 g.

**779.PEN** LED pen light

- Wide and powerful lighting inspection lamp with 6 LEDs.
- 36 lumens .
- 100 Lux at 1 meter.
- 8-hour continuous operating time.
- Splash-proof IP54.
- Clip to fasten the lamp to a pocket or other holder.
- Convenient magnetic bracket.
- Additional magnetic bracket strapped with Velcro.
- Runs on 3 AAA batteries supplied.
- Dimensions L = 156mm x W 16 mm.
- Weight: 65g.

**836** Pen light

- Body in aluminum tube.
- LED light.
- Length: 137 mm.
- Tube diameter: 14 mm.
- Runs on two AAA LR03 (1.5 volt) batteries not supplied.
- Supplied with wrist strap.
- Weight: 29 g.



## Automatic pliers



CL3.CTB

NEW CORDLESS  
CABLE TIE PLIERSTOOLS DESIGNED TO AVOID  
MUSCULO-SKELETAL DISORDERS (MSD)

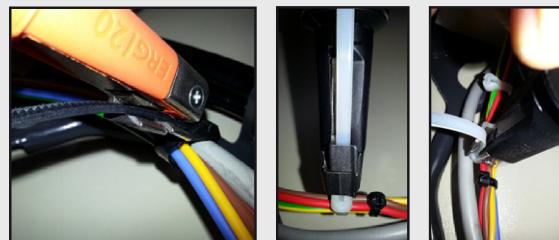
Optimize your productivity by improving operator work ergonomics.



- A low vibration, silent and **lightweight tool** (900 gram battery included) reducing work pain compared with manual or pneumatic tools.
- **Rotating head** for left-handed or right-handed use, and "comfortable" work posture in repetitive tasks: the head turns, not the operator's wrist.
- **Fall risk prevention:** after cutting, the tie end remains inside the tool nose and is held as long as the trigger is not released, for controlled disposal by the operator.



- The **very fine head and body** makes access possible in the most confined spaces.
- The **long nose** allows easy reaching into zones not accessible to shorter manual or air pliers.
- **High productivity tool:** Tightens and cuts up to 400 ties per hour.
- **Battery capacity:** 3,200 ties (i.e. 8 hours work) with maximum tightening strength.



More economical than standard air-operated pliers.

- Plastic ties tightened and cut **in less than one second**.
- Torque settings for optimum tie tightening.
- **Torque can be locked** to a specific position for use by a production line operator.

- **High durability blade** for neat tie cutting: Up to 30,000 ties per blade. The tool is supplied with two additional easy-to-install blades.
- **Tool auto-diagnostic:** LED on the top of the tool indicates charge and operation.
- Easy maintenance: **ultra-fast head change** (less than 30 seconds).

**CL3.CTB50 Automatic pliers for 4.8 mm ties**

- Ties from 2.4 mm (0.094") up to 4.8 mm (0.189").
- 8 Torque settings for optimum tie tightening.
- Lightweight tool 880 g. (Tool including battery), low vibration and silent to reduce work strain versus manual or air tools.
- Supplied in an industrial rolling chest in two foam trays, comprising:
  - Automatic pliers only CL3.CTB50.
  - 2 spare blades CL3.CTB50-SB for the head.
  - 1 Lithium-ion 11.25V / 2.95Ah batterie CL3.CTB-BA.
  - 1 Charger CL3.CTB-CH.
  - 1 operator belt with 2 pockets: One on the left and one on the right.
  - Shock proof strong case with retracting handle, resists to extreme conditions, model BV.FC1.
  - 2 foam trays.
- Dimensions (L. x H.): 270 x 200 mm.
- Nose width: 15 mm.
- Weight: 880 g. Tool + Battery.
- Weight of tool only: 700 g.
- Battery weight: 180 g.

**CL3.CTB120 Automatic pliers for 7.6 mm ties**

- Ties from 4.8 mm (0.189") up to 7.6 mm (0.299").
- 2 Torque settings for optimum tie tightening.
- Lightweight tool 900 g. (Tool including battery), low vibration and silent to reduce work strain versus manual or air tools.
- Supplied in an industrial rolling chest in two foam trays, comprising:
  - Automatic pliers only CL3.CTB120.
  - 2 spare blades CL3.CTB120-SB for the head.
  - 1 Lithium-ion 11.25V / 2.95Ah batterie CL3.CTB-BA.
  - 1 Charger CL3.CTB-CH.
  - 1 operator belt with 2 pockets: One on the left and one on the right.
  - Shock proof strong case with retracting handle, resists to extreme conditions, model BV.FC1.
  - 2 foam trays.
- Dimensions (L. x H.): 270 x 200 mm.
- Nose width: 20 mm.
- Weight: 900 g. Tool + Battery.
- Weight of tool only: 720 g.
- Battery weight: 180 g.

**Accessories for automatic tie pliers CL3.CTB120 and CL3.CTB50**

- Lithium-ion 11.25V / 2.95Ah batteries CL3.CTB-BA.
- Charger for CL3.CTB-CH battery.
- Belt CL3.CTB-B.
- Right-hand pocket CL3.CTB-HR.
- Left-hand pocket CL3.CTB-HL.
- Suspension hook CL3.CTB-SH to position the tool on a balancer.
- Maintenance kit: spare head with two blades, one head and a special head-removal tool:
  - CL3.CTB50-MK: Maintenance kit for CL3.CTB50.
  - CL3.CTB120-MK: Maintenance kit for CL3.CTB120.
- Facom «Flycase»: Shock proof strong case with retracting handle, resists to extreme conditions, model BV.FC1.





## Feeler gauges

### □ 804 Round tip metric feeler gauges



- Set of 19 feeler gauges (round tip):  
4/100 --> 100/100 mm.
- Blade length: 90 mm.
- Weight: 60 g.

### □ 804.L Long metric feeler gauges



- Set of 19 feeler gauges (round tip):  
4/100 --> 25/100 mm.
- Blade length: 150 mm.

### □ 804.U Inch feeler gauges



- Set of 26 feeler gauges (tapered tip):  
15/10000 --> 250/10000 inches.
- Blade length: 3"1/2 (88.9 mm).

**DTS.1B Inspection creeper**

- High density foam padded vinyl headrest resistant to automotive fluid.
- Frame made of ovoid-shape tube: no protruding angle to improve comfort and better wheel fastening.
- Maximum height: 100 mm.
- Max. chassis load: 150 kg.
- 6 wheels.
- Dimensions (L. x W.): 1010 x 630 mm.  
Weight: 8.200 kg.

**DTS.2B Heavy-duty inspection creeper**

- Adjustable headrest.
- Tool tray.
- High density foam padded vinyl headrest resistant to automotive fluid.
- Maximum height: 100 mm.
- Max. chassis load: 150 kg.
- 6 wheels.
- Dimensions: 101 x 63 cm.  
Weight: 10 kg.

**DTS.4 Mid-height work seat**

- Ideal for working on wheels, brakes and bodywork.
- Thick heavy-duty PVC padding.
- Stability ensured by 4 wheels diameter 75 mm.
- Magnetic surface for fasteners and small components.
- Overall height: 590 mm.
- Seat height: 420 mm.
- Dimensions (L. x W.): 463 x 430 mm.  
Weight: 10 kg.





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13.22.....	68	57L.10X12.....	42	192.20CPEF-R.....	16		
13.23.....	68	57L.11/16X13/16.....	41	193.20G.....	73		
13.24.....	68	57L.12X13.....	42	193.20G.....	73		
13.27.....	68	57L.12X14.....	42	195.16CPEF-R.....	17		
13.3/4.....	69	57L.12X14SPL.....	42	195.34L.....	73		
13.30.....	68	57L.14X17.....	42	195.34L.....	73		





## Notes

## Notes



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