





# 17. Electronics

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**Micro-Tech®**

**A SPECIALISED RANGE OF 300 TOOLS DESIGNED AND DEVELOPED WITH THE HELP OF PROFESSIONALS!**

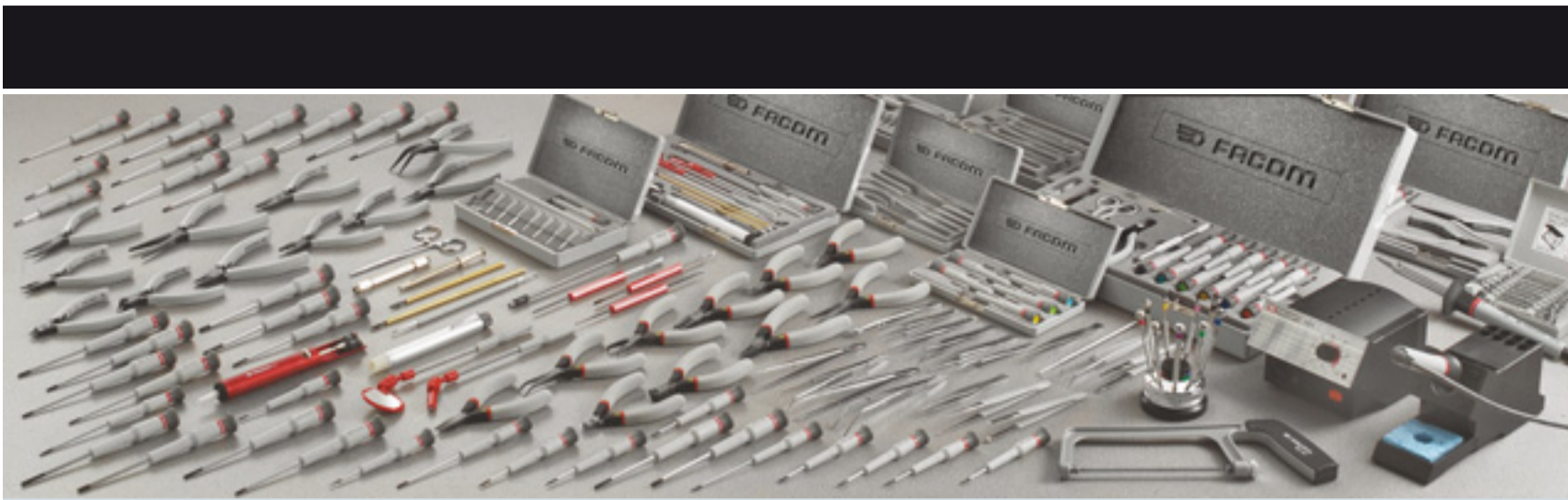
**Dedicated features**

- A range of materials to optimise gripping, cutting or handling of small components.
- Efficient storage for instant selection of the correct tool.
- Antistatic tools providing electrostatic discharge protection.


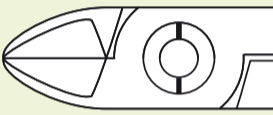

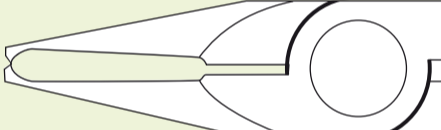

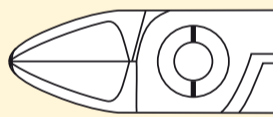


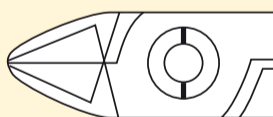
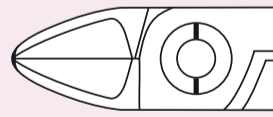


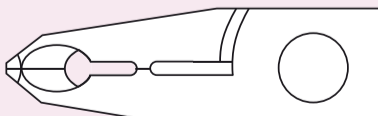
**Choosing the right electronics pliers**

▼ ACCORDING TO CUT : The Facom range offers three types. Choose the one best suited to your needs.

CUTTING EDGES	PATTERN	FEATURES	WIRE TYPE		OPERATION	APPLICATION
AXIAL CUT		Cutting edges are treated to achieve maximum strength and precision cutting of a wide range of materials, from piano wire to copper.	Cu	✓	- Production work. - Day-to-day use. - Maintenance. - Hard materials.	- Customer service (hi-fi) - Machine-tools - Automotive - Domestic appliances
			CuNi alloy CuNi	✓		
			Mild steel 30 HRc	✓		
			Hard steel 50 HRc Piano wire	✓		
SEMI-FLUSH CUT		Micro-chamfered cutting edges ensure high cutting capacity with clean finish. Precision is maintained throughout a long service life even in intensive use. Suitable for semi-hard wire.	Cu	✓	- Clean cut in intensive use - Wiring. - Batch electronics - Semi-hard materials.	- Computers - Telephone exchanges - Video and laser - Micro-Tech® (hi-fi, labs)
			CuNi alloy	✓		
			Mild steel 30 HRc	✓		
			Hard steel 50 HRc Piano wire	✗		
FLUSH CUT		This range is designed to give a through-cut without crushing the wire. Clean-cut ends allow reliable soldering, without damage to electronic components from arcing. Suitable for soft wire only.	Cu	✓	- High-frequency apparatus. - High precision equipment. - Cut-back before soldering. - Electrostatically sensitive components.	- Defence - Aerospace - Aviation - Laboratory
			CuNi alloy	✓		
			Mild steel 30 HRc	✗		
			Hard steel 50 HRc Piano wire	✗		



▼ ACCORDING TO PROFILE\*


NOSE DESIGN		Ø Cu WIRE (mm)	Ø MAX Fe WIRE 30 Hrc	Ø MAX PIANO WIRE
		0 0.5 1 1.5 2		
<ul style="list-style-type: none"> <li>Bullet nose for strength</li> </ul> 	405.8 MT-E 405.MT-E 405.10 MT-E 405.12MT-E 405-E 405.10 RMT-RE 405.12 RMT-RE*	0.2 → 1.0 0.3 → 1.3 0.3 → 1.4 0.4 → 2.0 0.3 → 1.1 0.3 → 1.2 0.4 → 1.5	0.5 0.7 0.8 1.0 0.7 0.8 1.0	 0.4 0.5 0.8 0.4 0.5 0.6
<ul style="list-style-type: none"> <li>End nose for reach</li> </ul> 	408.MT	0.4 → 1.5	0.5	
<ul style="list-style-type: none"> <li>Bullet nose for strength</li> </ul> 	406.8-MT-E 406.MT-E 435.MT-E 436.MT-E 415.MT-E 406.RMT-RE* 435.RMT-RE* 415.RMT*-RE*	0.1 → 1.0 0.1 → 1.3 0.1 → 1.3 0.1 → 1.2 0.3 → 2.0 0.1 → 1.1 0.1 → 1.1 0.3 → 1.5	 0.7 0.7 0.7 1.0 0.7 0.7 0.8	
<ul style="list-style-type: none"> <li>Pointed nose for control</li> </ul> 	416.MT-E 416.PMT-E 416.12 MT-E 416.RMT	0.1 → 1.0 0.1 → 0.8 0.3 → 1.6 0.1 → 0.9	0.5 0.4 0.7 0.5	
<ul style="list-style-type: none"> <li>Bullet nose for strength</li> </ul> 	407.8 MT-E 407.MT-E 425.MT-E 426.MT-E	0.1 → 0.8 0.1 → 1.3 0.1 → 1.3 0.1 → 1.2		
<ul style="list-style-type: none"> <li>Pointed nose for control</li> </ul>	417.PMT-E	0.1 → 0.8		
<ul style="list-style-type: none"> <li>Angled nose for accuracy</li> </ul> 	427.MT-E 429.MT-E 430.MT	0.2 > 0.6 0.2 → 1.0 0.2 → 1.0		
<ul style="list-style-type: none"> <li>End nose for reach</li> </ul>	418.MT 428.MT	0.1 → 0.6 0.1 → 0.8		






▶ "Micro-Tech®"

▶▶ Bullet-nose cutting pliers




### Bullet nose pliers


- Are stronger than other profiles.
- Have a high cutting capacity and durability that are useful in a wide variety of applications.



**AXIAL CUT**  
All materials, any application.



**SEMI-FLUSH CUT**  
Clean, long-life cut in semi-hard materials.











**FLUSH CUT**  
Smooth cut for sound soldered connections.

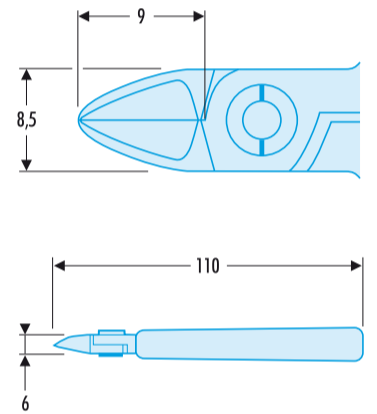
**Slim-joint models for precision**

▷ ISO 9654

- Suitable for miniature electronic components.

ΔΔ : 60 g.

Icon	Cut	Cu - Ni wire Ø mm	Fe wire 30 HRc Ø mm	Piano wire Ø mm
	∧	0,2 - 1	0,5	
	∩	0,1 - 1		
	—	0,1 - 1		











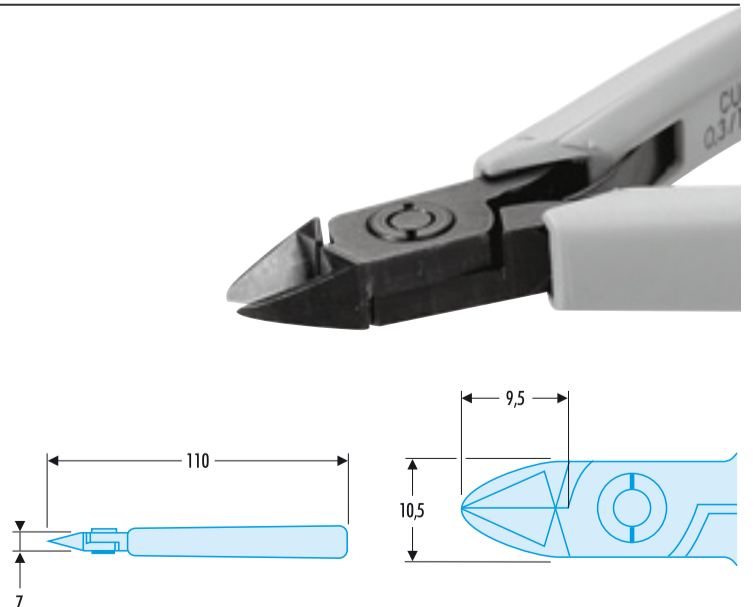
**Compact models for manoeuvrability**

▷ ISO 9654

- Slimmer bullet-nose profile combines cutting performance with manoeuvrability.
- Available with off-cut retaining system. Model 405.MT is suitable for cutting piano wire d. 0.4 mm

ΔΔ : 60 g.

Icon	Cut	Cu - Ni wire Ø mm	Fe wire 30 HRc Ø mm	Piano wire Ø mm	Offcut retainer
	∧	0,3 - 1,3	0,7	0,4	
	∩	0,1 - 1,3	0,7		
	—	0,1 - 1,1	0,6		•
	—	0,1 - 1,3			



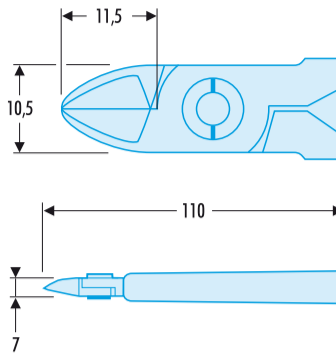
## Stocky models for versatility

▷ ISO 9654

- Clean cut in a variety of materials, from copper to piano wire up to > 0.5 mm.
- Available with off-cut retaining system.

ΔΔ : 60 g.

Icon	Cut	Cu - Ni wire Ø mm	Fe wire 30 HRc Ø mm	Piano wire Ø mm	Offcut retainer
	∧	0,3 - 1,4	0,8	0,5	
<b>405.10MT</b>	∧	0,3 - 1,4	0,8	0,5	
<b>405.10RMT</b>	∧	0,3 - 1,2	0,7	0,5	•



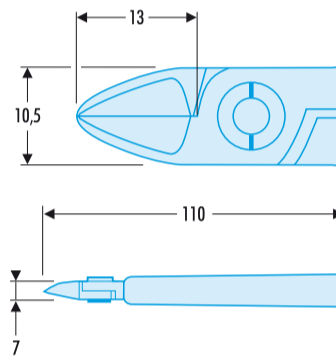
## Long-reach models for accessibility

▷ ISO 9654

- Up to 1.5 to 2 mm more reach than standard cutting pliers
- Available with off-cut retaining system.

ΔΔ : 60 g.

Icon	Cut	Cu - Ni wire Ø mm	Fe wire 30 HRc Ø mm	Offcut retainer
	∧	0,1 - 1,3	0,7	
<b>435.MT</b>	∧	0,1 - 1,3	0,7	
<b>435.RMT</b>	∧	0,1 - 1,1	0,7	•
<b>425.MT</b>	∧	0,1 - 1,3		



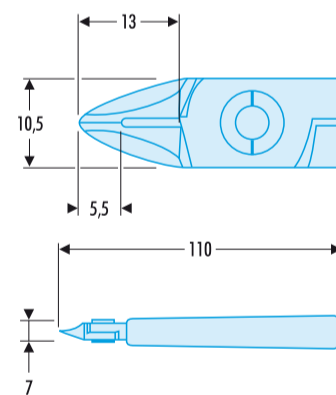
## Slim-nose model with back clearance

▷ ISO 9654

- For cutting behind components and reaching under obstacles such as coils or resistors.

ΔΔ : 60 g.

Icon	Cut	Cu - Ni wire Ø mm	Fe wire 30 HRc Ø mm
	∧	0,1 - 1,2	0,7
<b>436.MT</b>	∧	0,1 - 1,2	0,7
<b>426.MT</b>	∧	0,1 - 1,2	



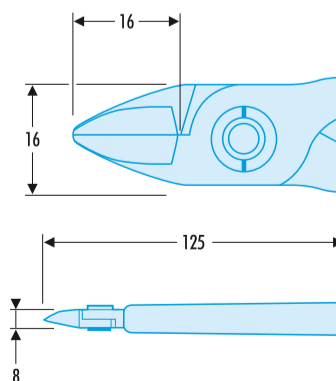
## Heavy-duty models for power

▷ ISO 9654


- For tough applications and repetitive work on a wide range of materials.
- Piano wire 405.12 MT : 0.8 mm ; 405.12 RMT : 0.6 mm.
- Available with off-cut retaining system.

ΔΔ : 95 g.

Icon	Cut	Cu - Ni wire Ø mm	Fe wire 30 HRc Ø mm	Piano wire Ø mm	Offcut retainer
	∧	0,4 - 2,0	1,0	0,8	
<b>405.12MT</b>	∧	0,4 - 2,0	1,0	0,8	
<b>405.12RMT</b>	∧	0,4 - 1,5	0,9	0,6	•
<b>415.MT</b>	∧	0,3 - 2,0	0,9		
<b>415.RMT</b>	∧	0,3 - 1,5	0,8		•




▶▶ Pointed-nose cutting pliers




## Pointed-nose pliers

- Are ideal where clearance is restricted and allow better visibility of the wire being cut.



**SEMI-FLUSH CUT**  
Clean, long-life cut in semi-hard materials.






**FLUSH CUT**  
Smooth cut for sound soldered connections.

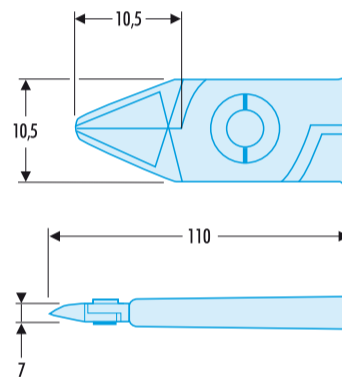
**Pointed models**

▷ ISO 9654

- Taper nose for improved accessibility.
- Available with off-cut retaining system.

ΔΔ : 60 g.

	Cut	Cu - Ni wire Ø mm	Fe wire 30 HRc Ø mm	Offcut retainer
<b>416.MT</b>		0,1 - 1,0	0,5	
<b>416.RMT</b>		0,1 - 0,9	0,5	•







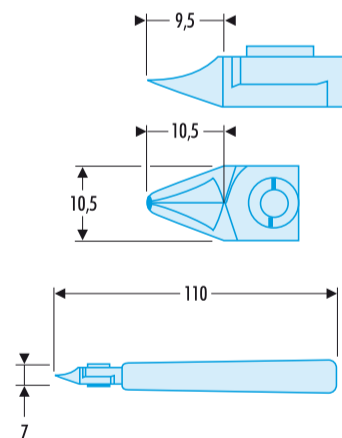
**Pointed slim-nose models for manoeuvrability**

▷ ISO 9654

- Slots in and around printed-circuit components, allowing good visibility.

ΔΔ : 60 g.

	Cut	Cu - Ni wire Ø mm	Fe wire 30 HRc Ø mm	Offcut retainer
<b>416.PMT</b>		0,1 - 0,8	0,4	
<b>417.PMT</b>		0,1 - 0,8		



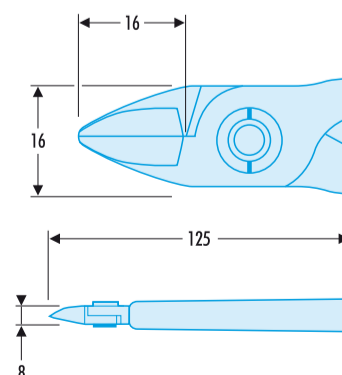
**Heavy-duty taper nose**

**416.12MT**


▷ ISO 9654

- Suitably sized for production applications.
- Semi-flush cut.
- Cu-Ni wire Ø 0.3 to 1.6 mm.
- Fe wire 30 HRc Ø 0.7 mm.

ΔΔ : 95 g.

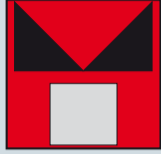


## ▶▶ Angled-nose cutting pliers



### Angled-nose pliers


- Ideal for use on printed circuits, electronic modules and hybrid circuits.
- Designed for cutting right up against the board in the smallest of spaces.
- Flush cutting edges.

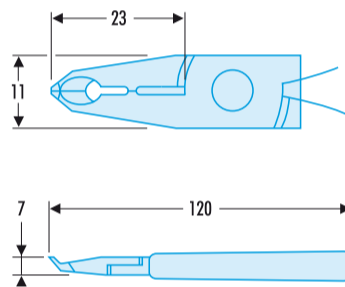


**FLUSH CUT**  
Smooth cut for sound soldered connections.

### 30° cutters


#### 427.MT

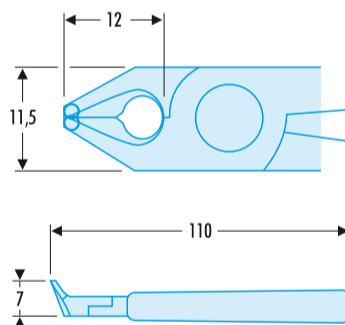
- Cutting edges at 30° with back clearance.
- Flush cut.
- Cu-Ni wire  $\varnothing 0.2$  to 0.6 mm.
-  Fe wire 30 HRc
- $\Delta\Delta$  : 65 g.



### 70° cutters


#### 429.MT

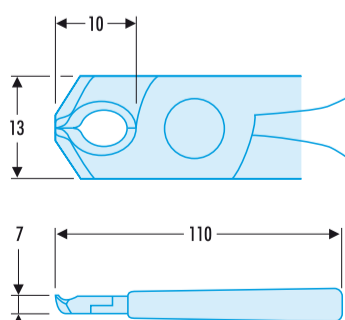
- ▷ ISO 9654.
- Wide edges at 70° with large back clearance.
- Flush cut.
- Cu-Ni wire  $\varnothing 0.2$  to 1.0 mm.
-  Fe wire 30 HRc
- $\Delta\Delta$  : 60 g.



### 70° narrow cutters


#### 430.MT

- ▷ ISO 9654.
- Narrow edges at 70° with back clearance.
- Flush cut.
- Cu-Ni wire  $\varnothing 0.2$  to 1.0 mm.
-  Fe wire 30 HRc
- $\Delta\Delta$  : 60 g.







## ▶▶ End cutters




## End cutters



- End cutting edges allow vertical access.
- Extended profile reaches wires or components on crowded boards.



**AXIAL CUT**  
All materials,  
any application.




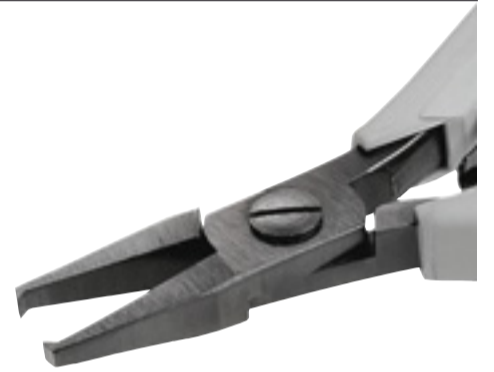
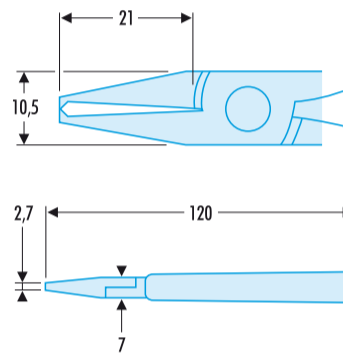
**FLUSH CUT**  
Smooth cut for  
sound soldered  
connections.

## End cutters

**418.MT**

▷ ISO 9654


- Long, narrow nose for vertical access.
- Flush cut.
- Cu-Ni wire  $\varnothing 0.1$  to 0.6 mm.
-  Fe wire 30 HRc
- $\Delta\Delta$  : 75 g.

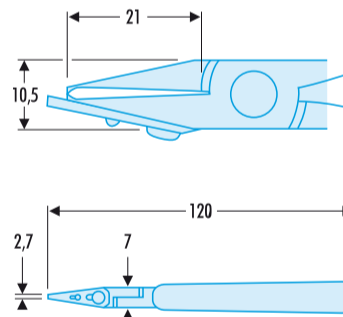


## End cutters with adjustable stop


**428.MT**

▷ ISO 9654.


- Similar to 418 but with 0 to 4 mm adjustment for precision cut at set distance from board.
- Flush cut.
- Cu-Ni wire  $\varnothing 0.1$  to 0.6 mm.
-  Fe wire 30 HRc
- $\Delta\Delta$  : 75 g.




## ▶▶ Cutting pliers for DIL, DIP and CMS components



## For DIL, DIP and CMS components



- Ideal for use on printed circuits, electronic modules and hybrid circuits.
- Designed for cutting right up against the board in the smallest of spaces.
- Flush cutting edges.



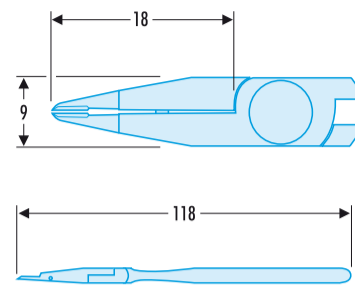
**FLUSH CUT**  
Smooth cut for  
sound soldered  
connections.

## Diagonal cutter for DIP components

### 437.MT

- Pointed, slim nose allows full access to DIP or SMD components.
- Flush cut.
- Cu-Ni wire  $\varnothing$  0.1 to 0.6 mm.

$\Delta\Delta$  : 40 g.

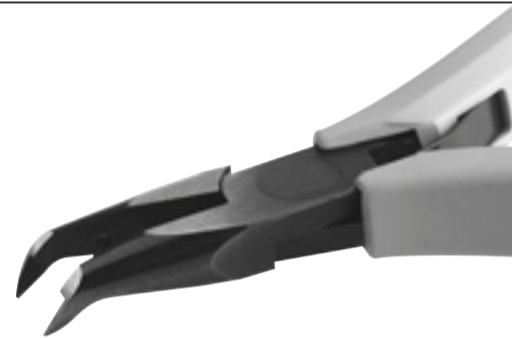
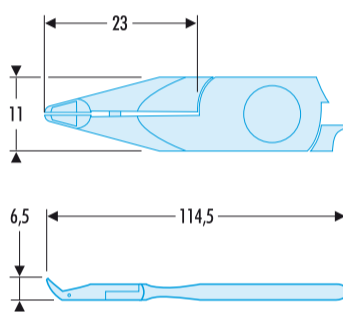


## Inverted 45° cutters

### 419.MT

- Designed to reach DIP pins from behind on crowded boards.
- Flush cut.
- Cu-Ni wire  $\varnothing$  0.1 to 0.5 mm.

$\Delta\Delta$  : 50 g.

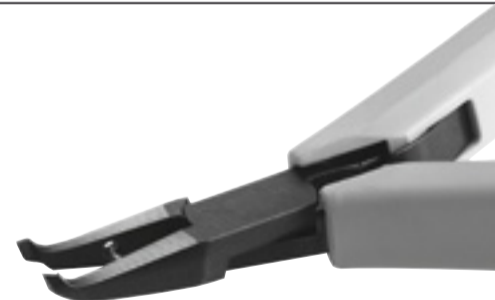
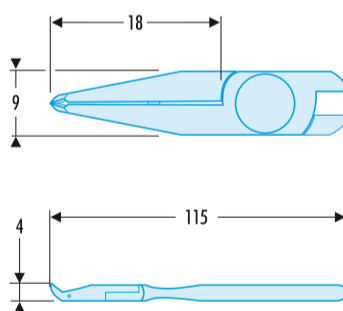


## 45° cutters

### 434.MT

- 45° cutters.
- Nose aligning pins.
- Flush cut.
- Cu-Ni wire  $\varnothing$  0.1 to 0.3 mm.

$\Delta\Delta$  : 40 g.



## Diagonal cutters for DIP and CMS components

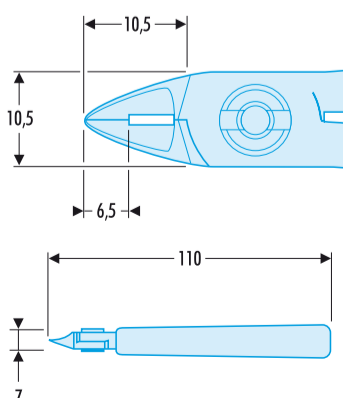
### 417.SPMT

▷ ISO 9654, DIN ISO 9654, NF ISO 9654.

- Designed to slot in the 0.65 mm gap between lugs of DIP components. The slender nose of this tool precludes its use for other purposes.

- Flush cut.
- Cu-Ni wire  $\varnothing$  0.1 to 0.6 mm.

$\Delta\Delta$  : 60 g.





## ▶▶ Flat-nose gripping pliers



## Flat-nose pliers



- These pliers serve all professional needs in laboratory, production and maintenance applications.
- The rectangular-section jaws are smooth with contoured inside edges to avoid damage to components.
- Matt black non-reflective finish. Leaf spring.

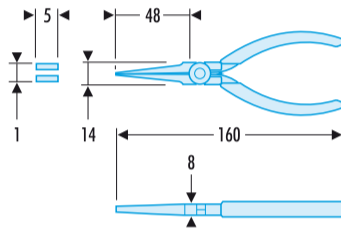
## Extended-nose pliers

**401.MT**

▷ ISO 9655, DIN ISO 9655, NF ISO 9655.

- For extra power.

ΔΔ : 80 g.

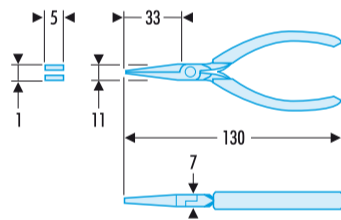


## Rigid long-nose pliers

**421.MT**

▷ ISO 9655, DIN ISO 9655, NF ISO 9655.

ΔΔ : 70 g.



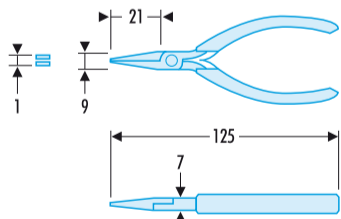
## Shaping pliers

**420.MT**

▷ ISO 9655, DIN ISO 9655, NF ISO 9655.

- Very slim nose.

ΔΔ : 60 g.



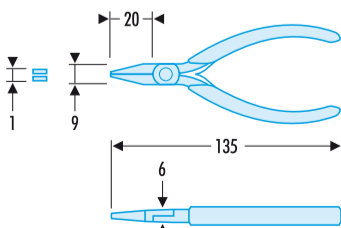
## Short-nose pliers

**431.MT**

▷ ISO 9655, DIN ISO 9655, NF ISO 9655.

- Slim joint for precision work.

ΔΔ : 55 g.



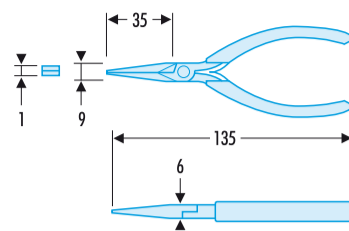
## Snipe-nose pliers

### 431.LMT

▷ ISO 9655, DIN ISO 9655, NF ISO 9655.

- Slim joint for precision work.

ΔΔ : 80 g.



## Mini combination pliers

### 443.12MT

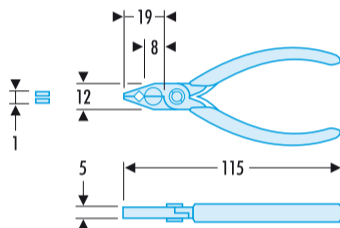
- Side wire-cutter, capacity up to  $\varnothing 1.7$  mm in Cu;

$\varnothing$  1 mm in soft iron

- Stocky serrated nose, with tube-grip.

- Matt black anti-glare finish.

ΔΔ : 80 g.



## ▶▶ Half-round nose gripping pliers

### Half-round nose pliers



- These pliers serve all professional needs in laboratory, production and maintenance applications.
- The half-round jaws are smooth with contoured inside edges to avoid damage to components.
- Presentation :
  - Matt black anti-glare finish.
  - Leaf spring.

## "Telephone" pliers

### 442.MT

▷ ISO 9655, DIN ISO 9655, NF ISO 9655.

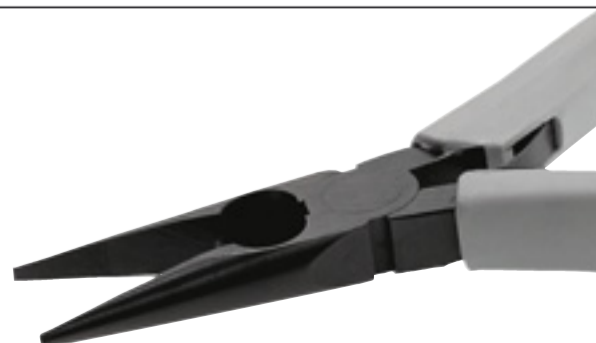
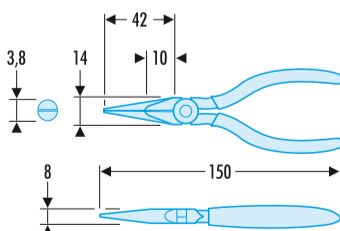
- Long stocky nose with fine end serrations.

- Side wire-cutter.

$\varnothing$  max. : 2 mm Cu wire.

$\varnothing$  max. : 1 mm Fe wire 30 HRc.

ΔΔ : 88 g.





## Extended-nose pliers

**402.MT**

▷ ISO 9655, DIN ISO 9655, NF ISO 9655.

- For extra power.

ΔΔ : 76 g.

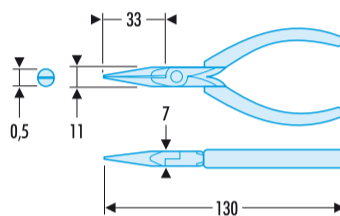


## Rigid long-nose pliers

**422.MT**

▷ ISO 9655, DIN ISO 9655, NF ISO 9655.

ΔΔ : 70 g.



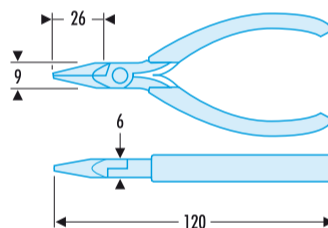
## Short-nose pliers

**432.MT**

▷ ISO 9655, DIN ISO 9655, NF ISO 9655.

- Slim joint.

ΔΔ : 55 g.



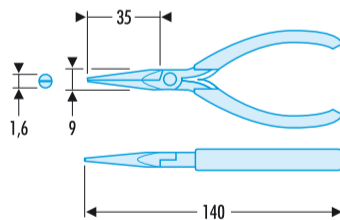
## Snipe-nose pliers

**432.LMT**

▷ ISO 9655, DIN ISO 9655, NF ISO 9655.

- Slim joint for precision work.

ΔΔ : 65 g.



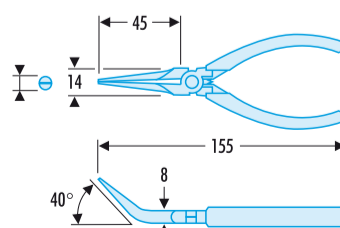
## Extended-nose 40° pliers

**403.MT**

▷ ISO 9655, DIN ISO 9655, NF ISO 9655.

- For extra power.

ΔΔ : 75 g.

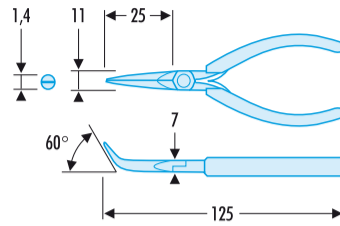


## Rigid-nose 60° pliers

### 423.MT

▷ ISO 9655, DIN ISO 9655, NF ISO 9655.

ΔΔ : 70 g.



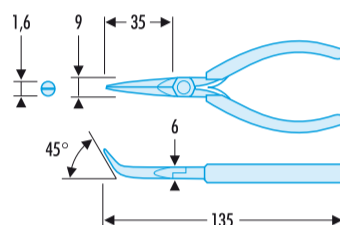
## Thin-nose 45° pliers

### 433.LMT

▷ ISO 9655, DIN ISO 9655, NF ISO 9655.

• Slim joint for precision work.

ΔΔ : 75 g.



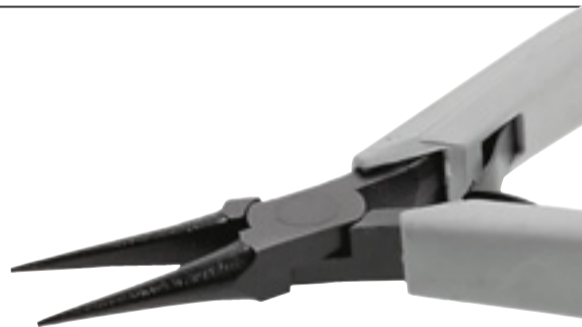
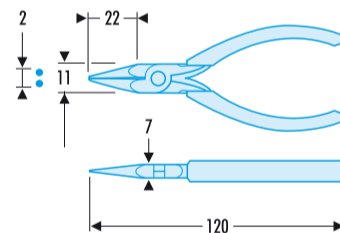
## ▶▶ Round-nose pliers

## Rigid short-nose pliers

### 424.MT

▷ ISO 9655, DIN ISO 9655, NF ISO 9655.

ΔΔ : 55 g.



## ▶▶ Plier module

## "Micro-Tech®" plier module

### MOD.MT1

• Comprising :

- 405.MT - 405.12MT - 406.MT - 406.8MT - 402.MT - 433.LMT.

• PL.612.

ΔΔ : 650 g.





## Static electricity



### A DANGER FOR ELECTRONIC COMPONENTS

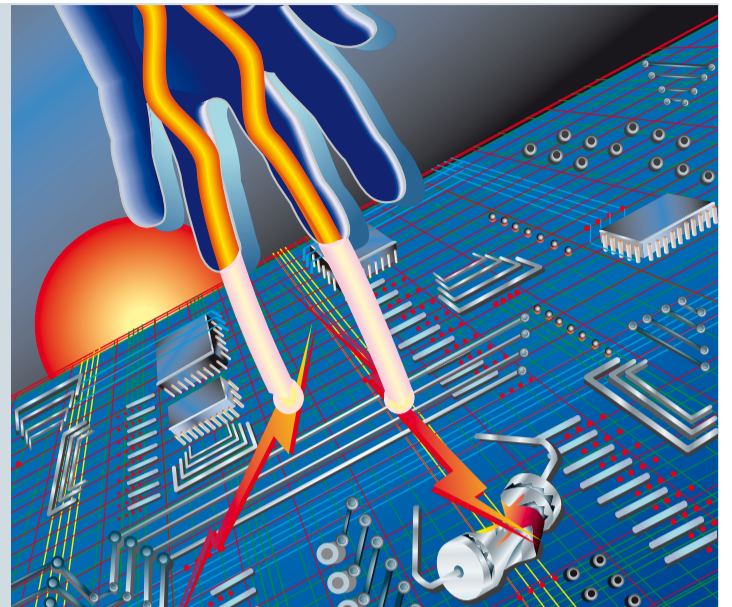
As they become smaller and more sophisticated, electronic circuits are increasingly at risk from static electricity - especially when the charge can build up to several thousand volts.

#### Controlling electrostatic build-up makes economic sense.

While the cost of a faulty component at acceptance-test stage is relatively small, it starts to increase once the component has reached the board, and escalates markedly once a fault involves sending back a complete unit. But the most important benefit in controlling static electricity is customer satisfaction.

Facom solves the problem with an antistatic range to EN 100-015/1. For safe work on printed circuits, all tools and equipment used should be interlinked and effectively connected to earth.

Measurements and tests on antistatic screwdrivers and electronics pliers have been carried out in laboratories approved by the electrical industry.



#### Safety first

Never use antistatic tools when working on live components.

## Bullet-nose cutting pliers

## Bullet nose pliers



Are stronger than other profiles.

Have a high cutting capacity and durability that are useful in a wide variety of applications.



#### AXIAL CUT

All materials, any application.



#### SEMI-FLUSH CUT

Clean, long-life cut in semi-hard materials.



#### FLUSH CUT

Smooth cut for sound soldered connections.

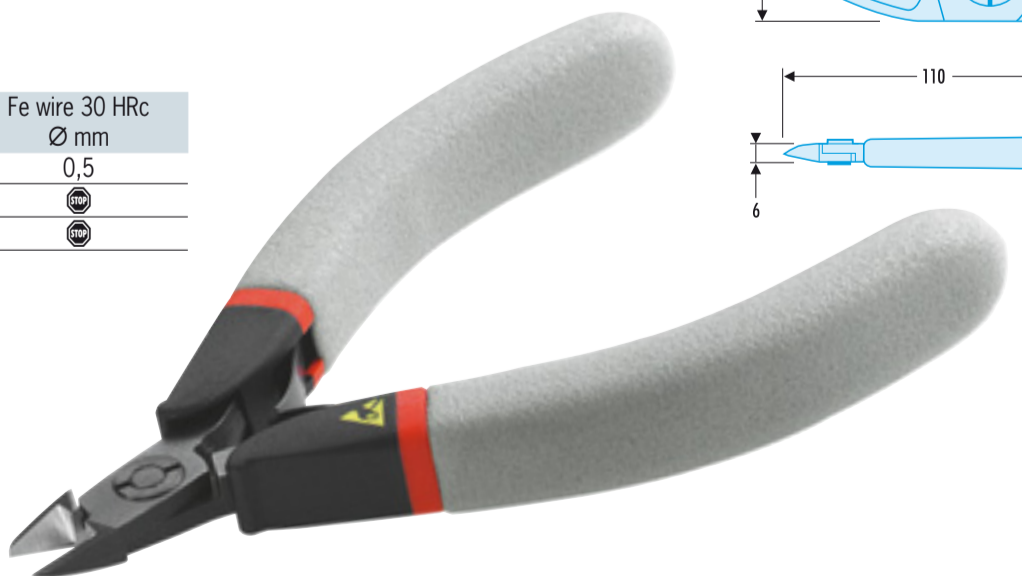
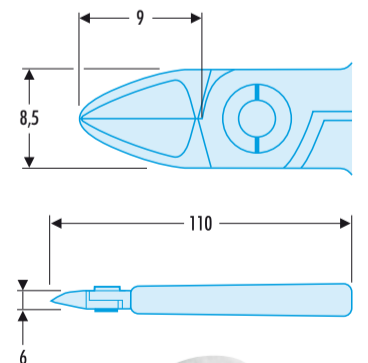
### Slim-joint models for precision

▷ ISO 9654, DIN ISO 9654, NF ISO 9654.

- Suitable for miniature electronic components.
- Flush-cut model is longer for increased reach.

ΔΔ 55 g.

Model	Cut	Cu - Ni wire Ø mm	Fe wire 30 HRc Ø mm
405.8E		0,2 - 1	0,5
406.8E		0,1 - 1	
407.8E		0,1 - 1	








# Anti-static series electronics pliers

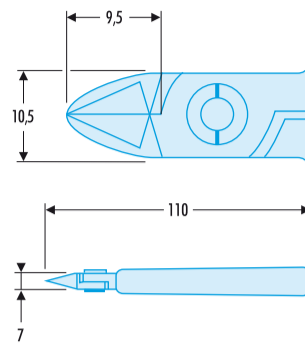
## Compact models for manoeuvrability

▷ ISO 9654, DIN ISO 9654, NF ISO 9654.

- Slimmer bullet-nose profile combines cutting performance with manoeuvrability.
- Model 405 is suitable for cutting piano wire  $\varnothing$  0.4 mm.

$\Delta\Delta$  : 65 g.

	Cut	Cu - Ni wire $\varnothing$ mm	Fe wire 30 HRc $\varnothing$ mm
<b>405.E</b>		0,3 - 1,3	0,7
<b>406.E</b>		0,1 - 1,3	0,7
<b>407.E</b>		0,1 - 1,3	






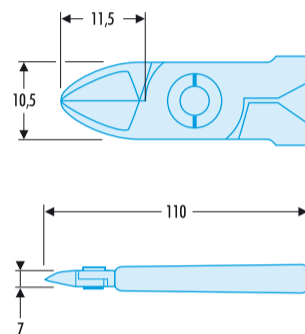
## Stocky models for versatility

▷ ISO 9654, DIN ISO 9654, NF ISO 9654.

- Clean cut in a variety of materials, from copper to piano wire  $\rightarrow$  0.5 mm.
- Available with offcut retaining system.

$\Delta\Delta$  : 65 g.

	Cut	Cu - Ni wire $\varnothing$ mm	Fe wire 30 HRc $\varnothing$ mm	Offcut retainer
<b>405.10E</b>		0,3 - 1,4	0,8	
<b>405.10RE</b>		0,3 - 1,2	0,7	•








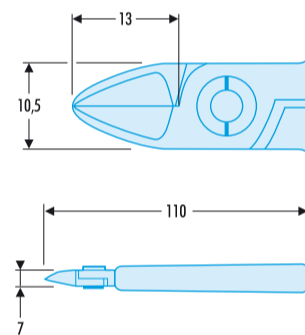
## Long-reach models for accessibility

▷ ISO 9654, DIN ISO 9655, NF ISO 9654.

- Up to 1.5 to 2 mm more reach than standard cutting pliers
- Available with offcut retaining system.

$\Delta\Delta$  : 65 g.

	Cut	Cu - Ni wire $\varnothing$ mm	Fe wire 30 HRc $\varnothing$ mm	Offcut retainer
<b>425.E</b>		0,1 - 1,3		
<b>435.E</b>		0,1 - 1,3	0,7	
<b>435.RE</b>		0,1 - 1,2	0,7	•







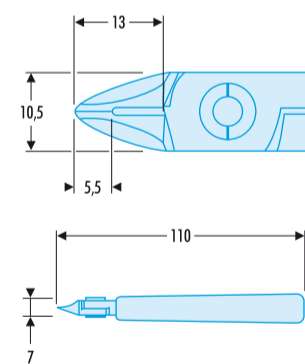
## Slim-nose models with back clearance

▷ ISO 9654, DIN ISO 9655, NF ISO 9654.

- For cutting behind components and reaching under obstacles such as coils or resistors.
- Anti-static user-comfort type only.

$\Delta\Delta$  : 65 g.

	Cut	Cu - Ni wire $\varnothing$ mm	Fe wire 30 HRc $\varnothing$ mm
<b>436.E</b>		0,1 - 1,2	0,7
<b>426.E</b>		0,1 - 1,2	








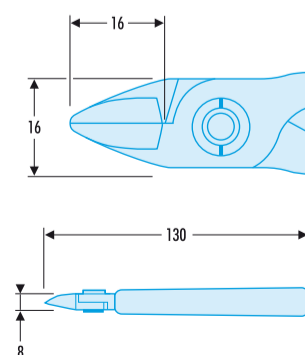
## Heavy-duty models

▷ ISO 9654, DIN ISO 9654, NF ISO 9654.


- For tough applications and repetitive work on a wide range of materials.
- Piano wire : 405.12 C : 0.8 mm; 405.12 RC : 0.6 mm.
- Available with offcut retaining system.

$\Delta\Delta$  : 105 g.

	Cut	Cu - Ni wire $\varnothing$ mm	Cu - Ni wire $\varnothing$ mm	Offcut retainer
<b>405.12E</b>		0,4 - 2,0	1,0	
<b>405.12RE</b>		0,4 - 1,5	0,9	•
<b>415.E</b>		0,3 - 2,0	1,0	
<b>415.RE</b>		0,3 - 1,5	0,8	•




## ▶▶ Pointed-nose cutting pliers




### Pointed-nose pliers

- Are ideal where clearance is restricted and allow better visibility of the wire being cut.



**SEMI-FLUSH CUT**  
Clean, long-life cut in semi-hard materials.





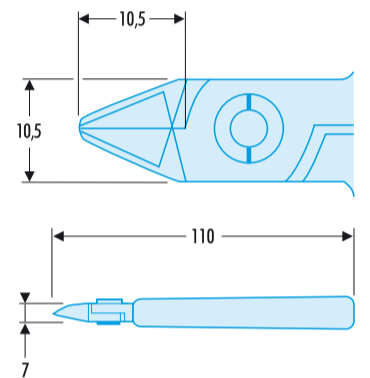
**FLUSH CUT**  
Smooth cut for sound soldered connections.

### Pointed models

#### 416.E






- ▷ ISO 9654, DIN ISO 9654, NF ISO 9654.
- Taper nose for improved accessibility.
- ΔΔ : 65 g.

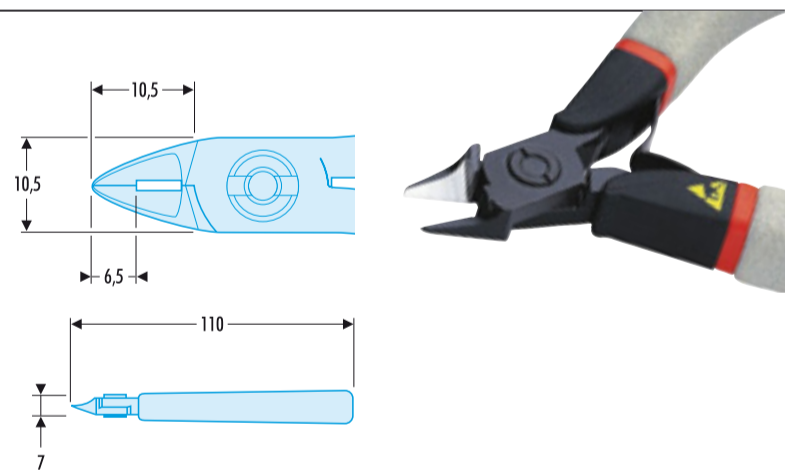
Icon	Cut	Cu - Ni wire Ø mm	Fe wire 30 HRc Ø mm
		0,1 - 1,0	0,5



### Pointed slim-nose models for manoeuvrability

- ▷ ISO 9654, DIN ISO 9654, NF ISO 9654.
- Slots in and around printed-circuit components, allowing good visibility.
- ΔΔ : 65 g.



Icon	Cut	Cu - Ni wire Ø mm	Fe wire 30 HRc Ø mm
		0,1 - 0,8	0,4
		0,1 - 0,8	

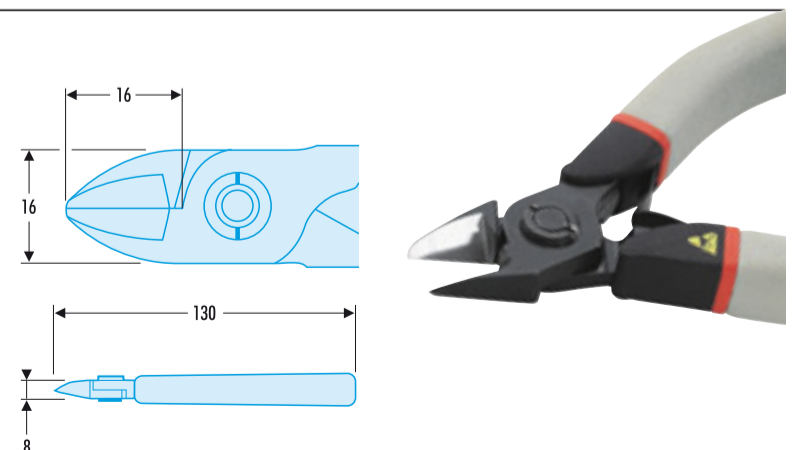


### Heavy-duty taper nose

#### 416.12E

- ▷ ISO 9654, DIN ISO 9654, NF ISO 9654.
- Suitably sized for production applications.
- ΔΔ : 105 g.


Icon	Cut	Cu - Ni wire Ø mm	Fe wire 30 HRc Ø mm
		0,3 - 1,6	0,7





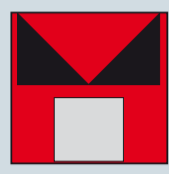
# Anti-static series electronics pliers

## ▶▶ Angled-nose cutting pliers



### Angled-nose pliers

- Ideal for use on printed circuits, electronic modules and hybrid circuits.
- Designed for cutting right up against the board in the minutest spaces.
- Flush cutting edges.





**FLUSH CUT**  
Smooth cut for sound soldered connections.

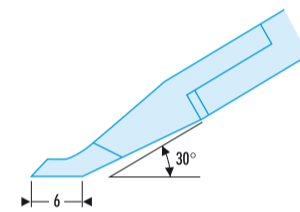
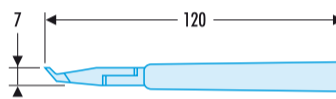
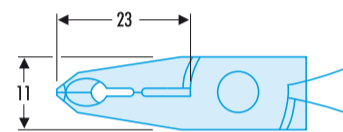
### 30° cutters

#### 427.E

▷ ISO 9654, DIN ISO 9655, NF ISO 9654.

- "ESD" model.
  - Cutting edges at 30° with back clearance.
- ΔΔ : 65 g.

	Cut	Cu - Ni wire Ø mm	Fe wire 30 HRc Ø mm
<b>427.E</b>		0,2 - 0,6	





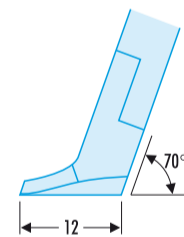
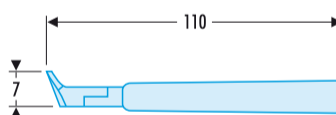
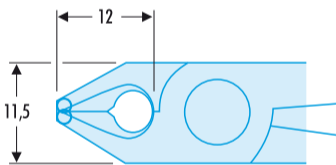
### 70° cutters

#### 429.E

▷ ISO 9654, DIN ISO 9655, NF ISO 9654.

- "ESD" model.
  - Narrow edges at 70° with back clearance
- ΔΔ : 66 g.

	Cut	Cu - Ni wire Ø mm	Fe wire 30 HRc Ø mm
<b>429.E</b>		0,2 - 1,0	




## ▶▶ Cutting pliers for DIP and CMS components

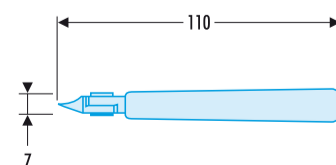
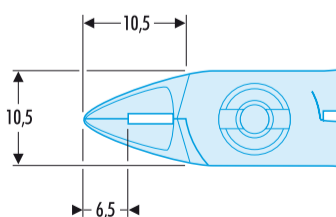
### Diagonal cutters for DIP and CMS components

#### 417.SPE

▷ ISO 9654, DIN ISO 9654, NF ISO 9654.

- Designed to slot in the 0.65 mm gap between lugs of DIP components. The slender nose of this tool precludes its use for other purposes.
- ΔΔ : 60 g.

	Confort/ESD	Cut	Cu - Ni wire Ø mm
<b>417.SPE</b>	ESD		0,1 - 0,7

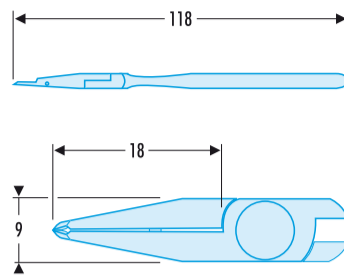


### Diagonal cutters for DIP components

#### 437.E

- Pointed, slim nose allows full access to DIP or SMD components.
- Flush cut.
- Cu-Ni wire  $\varnothing$  0.1 to 0.6 mm.

$\Delta\Delta$  : 40 g.

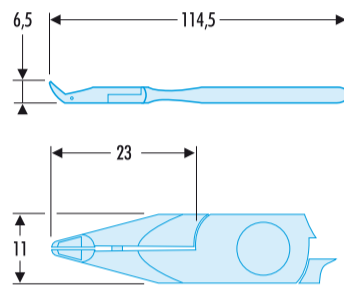


### Inverted 45° cutters

#### 419.E

- Designed to reach DIP pins from behind on crowded boards.
- Flush cut.
- Cu-Ni wire  $\varnothing$  0.1 to 0.5 mm.

$\Delta\Delta$  : 50 g.

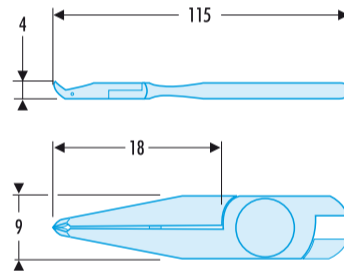


### 45° ESD cutters

#### 434.E

- Cutting pliers angled at 45°.
- Nose aligning pins.
- Cu-Ni wire  $\varnothing$  0.1 to 0.3 mm.

$\Delta\Delta$  : 40 g.



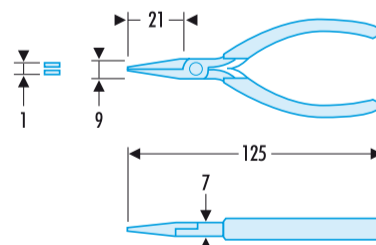
### ▶▶ Gripping pliers

### Flat-nose shaping pliers ESD model

#### 420.C

- Very slim nose.

$\Delta\Delta$  : 65 g.

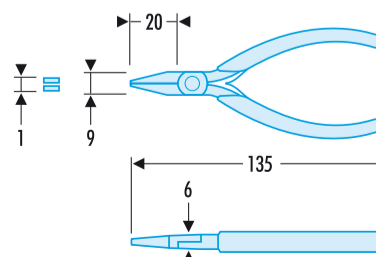


### Short flat-nose pliers ESD model

#### 431.E

- Slim joint for precision work.

$\Delta\Delta$  : 65 g.

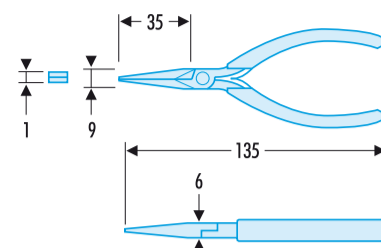
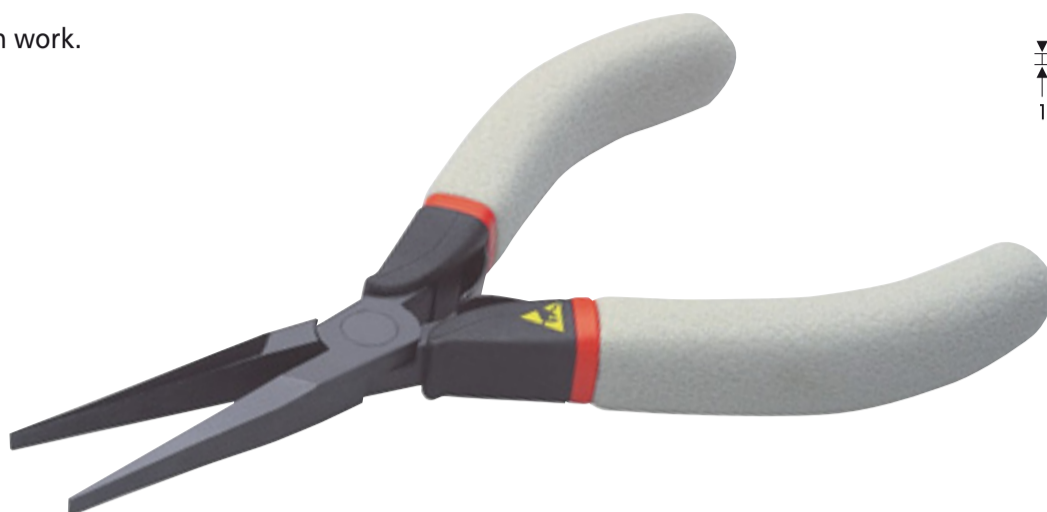


# Anti-static series electronics pliers

## Snipe flat-nose pliers ESD model

### 431.LE

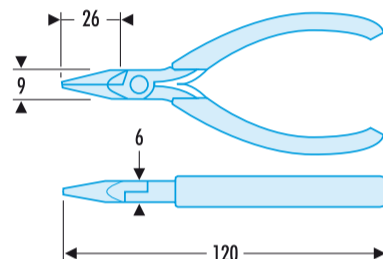
- Slim joint for precision work.
- ΔΔ : 75 g.



## Half-round nose pliers ESD model

### 432.E

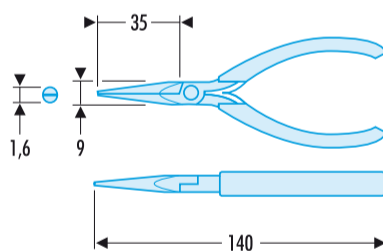
- Slim joint.
- ΔΔ : 70 g.



## Half-round snipe nose pliers ESD model

### 432.LE

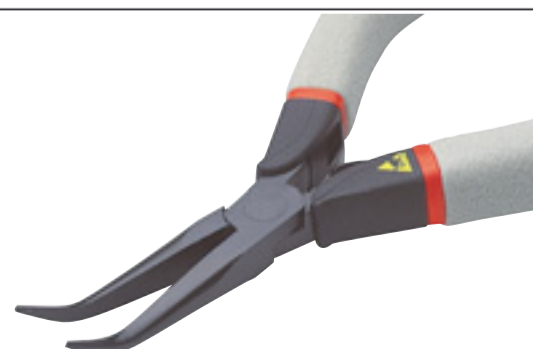
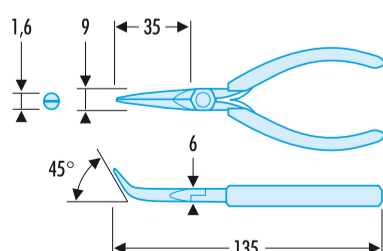
- Slim joint for precision work.
- ΔΔ : 70 g.



## Half-round angle nose pliers ESD model

### 433.LE

- 45° nose.
  - Slim joint for precision work.
- ΔΔ : 70 g.





### "Micro-Tech<sup>®</sup>" screwdrivers

- 1 Efficient**
  - The screwdriver end is designed to provide an effective pressure area in each of the three micro-engineering screwdriver positions. This end also rotates to optimize the turning motion.
- 2 3 Powerful and accurate**
  - The body comprises a gripping surface designed for optimum torque transmission with handling accuracy. The handle is shaped so fingers can naturally grip the specially designed handle for total tool control.
- 4 Quick and easy to use**
  - The ribbed cone provides maximum grip for fast pre-tightening. Blade clearance gives a clear view of the job in hand.
- 5 A large choice of blades**
  - A selection of over 50 high-precision steel or ceramic fixed or replaceable blades.
- 6 Easy identification**
  - colour-coded by size for instant selection of the correct tool.

Finger-tip grip area

Watch makers grip area

Full palm grip area

#### Small screwdriver

- Screw-lock chuck.
- Presentation : Burnished blade.

➤	mm	mm	⊙	mm	ΔΔ
<b>AE.1,2X35</b>	1,2 x 35	117	■	17 x 82	11,5
<b>AE.1,5X35</b>	1,5 x 35	117	■	17 x 82	11,5
<b>AEP.000X35</b>	2,0 x 35	117	■	17 x 82	11,5
<b>AEP.00X35</b>	2,5 x 35	117	■	17 x 82	11,5



#### ● Micro-Tech<sup>®</sup> screwdrivers for slotted heads

- Revolving end.
- Chromed blade, burnished tip.

➤	mm	mm	⊙	mm	ΔΔ
<b>AEF.1,5X35</b>	1,5 x 35	117	■	17 x 82	12,1
<b>AEF.1,8X35</b>	1,8 x 35	117	■	17 x 82	13,2
<b>AEF.2X35</b>	2,0 x 35	117	■	17 x 82	13,5
<b>AEF.2X75</b>	2,0 x 75	157	■	17 x 82	14,5
<b>AEF.2,5X35</b>	2,5 x 35	117	■	17 x 82	13,3
<b>AEF.2,5X75</b>	2,5 x 75	157	■	17 x 82	14,5
<b>AEF.3X75</b>	3,0 x 75	168	■	21 x 93	21,2
<b>AEF.3,5X75</b>	3,5 x 75	168	■	21 x 93	24,7
<b>AEF.4X75</b>	4,0 x 75	168	■	21 x 93	26,4



# "Micro-Tech®" screwdrivers

## ⊕ Screwdrivers for Phillips® and Pozidriv®

Chromed blade, burnished tip.  
Presentation : Burnished blade.

➤	mm	mm	☹	Pattern no.	mm	ΔΔ g
<b>AEFP.00X35</b>	2,5 x 35	117	■	PH.00	17 x 82	12,5
<b>AEFP.00X75</b>	2,5 x 75	157	■	PH.00	17 x 82	14,9
<b>AEFP.0X35</b>	3,0 x 35	117	■	PH.0	17 x 82	13,5
<b>AEFP.0X75</b>	3,0 x 75	168	■	PH.0	21 x 93	32,2
<b>AEFP.1X75</b>	4,0 x 75	168	■	PH.1	21 x 93	37,5
<b>AEFD.0X35</b>	3,0 x 35	117	■	PZ.0	17 x 82	13,5
<b>AEFD.0X75</b>	3,0 x 75	168	■	PZ.0	21 x 93	32,2
<b>AEFD.1X75</b>	4,0 x 75	168	■	PZ.1	21 x 93	37,5



## ⊕ Screwdrivers for Torx®

Chromed blade, burnished tip.

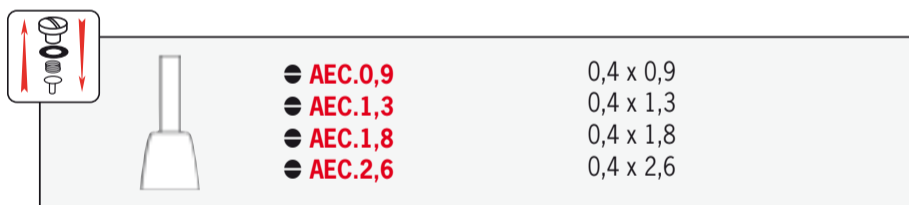
➤	mm	mm	☹	Pattern no.	mm	ΔΔ g
<b>AEX.5X35</b>	2,0 x 35	117	■	T x 5	17 x 82	13,0
<b>AEX.6X35</b>	2,0 x 35	117	■	T x 6	17 x 82	13,3
<b>AEX.7X35</b>	2,5 x 35	117	■	T x 7	17 x 82	13,3
<b>AEX.8X75</b>	2,5 x 75	168	■	T x 8	21 x 93	31,7
<b>AEX.9X75</b>	3,0 x 75	168	■	T x 9	21 x 93	32,6
<b>AEX.10X75</b>	3,0 x 75	168	■	T x 10	21 x 93	32,6
<b>AEX.15X75</b>	3,5 x 75	168	■	T x 15	21 x 93	35,0
<b>AEX.20X75</b>	4,0 x 75	168	■	T x 20	21 x 93	40,8



## Ceramic-blade screwdrivers

Removable blade.

➤	Dimensions mm	L mm
<b>AEMC.0,9</b>	● 0,4 x 0,9	116
<b>AEMC.1,3</b>	● 0,4 x 1,3	116
<b>AEMC.1,8</b>	● 0,4 x 1,8	116
<b>AEMC.2,6</b>	● 0,4 x 2,6	116



## 84E Hexagonal drivers ⊕

• Burnished blade

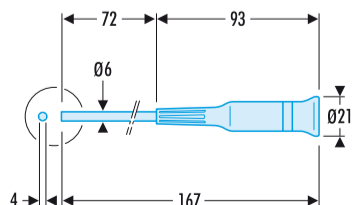
➤	mm	Total length mm	☹	ΔΔ g
<b>84E.0,9X35</b>	0,90	117	■	14,4
<b>84E.1,3X35</b>	1,30	117	■	15,0
<b>84E.1,5X35</b>	1,50	117	■	15,0
<b>84E.1,5X75</b>	1,50	157	■	15,0
<b>84E.2X75</b>	2,00	168	■	30,0
<b>84E.2,5X75</b>	2,50	168	■	32,0



## Bit driver ⊕ 4 mm

### AEM.M

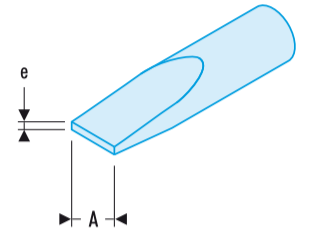
- Takes 0-series bits.
  - Burnished shank
  - Size :
    - Overall length 167 mm.
    - Blade length 6 x 72 mm.
    - Handle length 21 x 93 mm.
- ΔΔ : 49.6 g.



## ▶ 0-series bits - 4 mm drive

## ES.0 Bits for slotted heads

➤	e x A mm	L mm	ΔΔ g
ES.001,8	0,3 x 1,8	28	3,0
ES.002	0,4 x 2,0	28	3,0
ES.002,5	0,4 x 2,5	28	3,1
ES.003	0,5 x 3,0	28	3,1
ES.004	0,5 x 4,0	28	3,2
ES.004,5	0,6 x 4,5	28	3,2



## EP.0 Phillips® head 4 mm

➤	Phillips® no.	L mm	ΔΔ g
EP.0X2	PH.00	28	3,2
EP.000	PH.0	28	3,2



## ED.0 Pozidriv® head 4 mm

➤	Pozidriv® no.	L mm	ΔΔ g
ED.0X2	PZ.00	28	3,2
ED.000	PZ.0	28	3,2
ED.001	PZ.1	28	3,2



## ES.0 Bits for hexagon socket heads

➤	⌀ mm	L mm	ΔΔ g
EH.000,9	0,9	28	3,0
EH.001,3	1,3	28	3,1
EH.001,5	1,5	28	3,1
EH.002	2,0	28	3,2
EH.002,5	2,5	28	3,2



## ES.0 Spherical head bits for hexagon socket heads

- Spherical head allows up to 30° working angle.

➤	⌀ mm	L mm	ΔΔ g
ETS.001,5	1,5	28	3,1
ETS.002	2,0	28	3,2
ETS.002,5	2,5	28	3,2



## Drive socket adaptor

## ECR.0

- adaptor for using 1/4" "radio" sockets with the A.300MT and A.340MT series screwdrivers.
  - 4 mm hexagonal drive.
  - Length 22 mm.
- ΔΔ : 7 g.





# Case set of "Micro-Tech®"

## Case set of 5 "Micro-Tech®" screwdrivers

### AEF.J1

Icon	+	mm	Comprising	ΔΔ g
AEF.J1	AEFP.00 x 35	178 x 91 x 25	AEF.1,5 x 35 - 1,8 x 35 - 2 x 35 - 2,5 x 35	170



## Case set of 8 "Micro-Tech®" screwdrivers

### AEF.J3

Icon	+	mm	Comprising	ΔΔ g
AEF.J3	AEFP.00 x 75 - 0 x 75 - 1 x 75	205 x 130 x 31	AEF.2 x 75 - 2,5 x 75 - 3 x 75 - 3,5 x 75 - 4 x 75	384



## Case set of 5 "Micro-Tech®" screwdrivers

### AEF.J5

Icon	Contents -	Contents +	mm	ΔΔ g
AEF.J5	AEF.2x75-2,5x75-3x75	AEFD.0x75-1x75	183 x 109 x 32	230



## Case set of 8 "Micro-Tech®" screwdrivers

### AEF.J6

Icon	Contents -	Contents +	no.	mm	ΔΔ g
AEF.J6	AEF.2x75-2,5x75-3x75-3,5x75-4x75	AEFP.00x75	AEFD.0x75-1x75	215 x 130 x 31	385



## Case set of 5 "Micro-Tech®" screwdrivers for Phillips®



### AEFP.J1

Icon	mm	Comprising	ΔΔ g
AEFP.J1	183 x 109 x 32	00 x 35 - 00 x 75 - 0 x 35 - 0 x 75 - 1 x 75	267



## Case set of 5 "Micro-Tech®" screwdrivers



**AEF.J2**

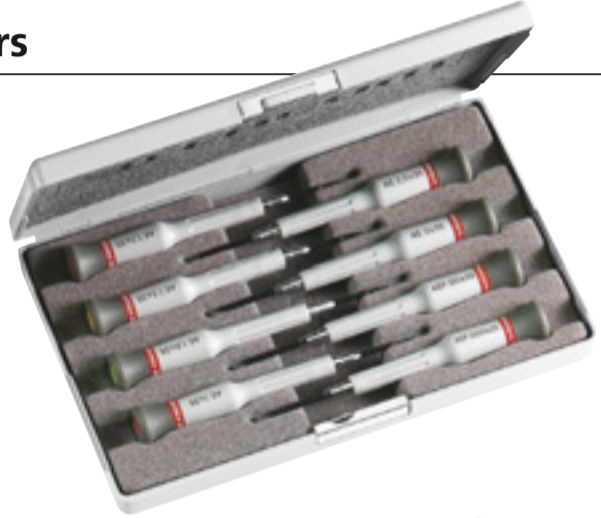
	 mm	Comprising	$\Delta\Delta$ g
<b>AEF.J2</b>	183 x 109 x 32	2 x 75 - 2,5 x 75 - 3 x 75 - 3,5 x 75 - 4 x 75	237



## Case set of 8 interchangeable blade screwdrivers

**AE.J1**

	 mm	Comprising	$\Delta\Delta$ g
<b>AE.J1</b>	205 x 130 x 31	● AE.1x35 - 1,2x35 - 1,5x35 - 1,8x35 - 2x35 - 2,5x35 ⊕ AEP.000x35 - 00x35	270



## Case set of 5 "Micro-Tech®" screwdrivers for Torx®



**AEX.J1**

	 mm	Comprising	$\Delta\Delta$ g
<b>AEX.J1</b>	183 x 109 x 32	AEX.6 x 35 - 7 x 35 - 8 x 75 - 9 x 75 - 10 x 75	280



## Case set of 8 "Micro-Tech®" screwdrivers for Torx®



**AEX.J2**

	 mm	Comprising	$\Delta\Delta$ g
<b>AEX.J2</b>	205 x 130 x 31	AEX.5 x 35 - 6 x 35 - 7 x 35 - 8 x 75 - 9 x 75 - 10 x 75 - 15 x 75 - 20 x 75	335



## Case set of 6 "Micro-Tech®" hexagonal drivers

**84E.J1**




	 mm	Comprising	$\Delta\Delta$ g
<b>84E.J1</b>	183 x 109 x 32	84E.0,9 x 35 - 1,3 x 35 - 1,5 x 35 - 2 x 75 - 2,5 x 75	250








## Case set of 9 "Micro-Tech®" wrenches

### 34.JE9

	 mm	Comprising		$\Delta\Delta$ g
34.JE9	123 x 95 x 28	34. 3,2 - 4 - 5 - 5,5 - 6 - 7 - 8 - 9 - 10	9	176

## Case set of 10 "Micro-Tech®" wrenches

### 39.JE10

	 mm	Comprising		$\Delta\Delta$ g
39.JE10	123 x 95 x 28	39.3,2 - 4 - 5 - 5,5 - 6 - 7 - 8 - 9 - 10 - 11	10	240

## "Micro-Tech®" tool sets

### 16-piece tool set

#### MT.J1

- Plastic case 366 x 180 x 66 mm.
- Comprising :
  - Screwdrivers AE.1 x 35-1.2 x 35.
  - Screwdrivers AEF.1.5 x 35-1.8 x 35-2 x 35-2.5 x 35.
  - Screwdriver AEP.000 x 35.
  - Screwdriver AEFP.00 x 35 .
  - Hexagonal drivers 84E.0.9 x 35 - 1.3 x 35 - 1.5 x 35.
  - Pliers 405.10MT-432LMT.
  - Scissors 841.1.
  - Scalpel 845.1
  - Tweezers 140AA.

$\Delta\Delta$  : 1.075 kg.

### 9-piece tool set

#### MT.J2

- Plastic case 285 x 138 x 26 mm.
- Comprising :
  - Mirror 834.R1.
  - Spring hook 835.A.
  - Mechanical retriever 826.0.
  - Mechanical retriever 827.2.
  - Screw starters AFE.1-AFEX.1.
  - Pen light 836.
  - Nut starter 825.
  - Pin vice 1817.

$\Delta\Delta$  : 627 g.

### 11-piece tool set

#### MT.J3

- Comprising :
  - Screwdrivers AE.1.2 x 35-AEF.1.5 x 35-1.8 x 35-2 x 35-2.5 x 35.
  - Screwdrivers AEFP.000 x 35-00 x 35-0 x 35
  - Tweezers 140A.
  - Pliers 405.10 MT-432 LMT.
- In a plastic case 285 x 138 x 26 mm.

$\Delta\Delta$  : 726 g.





**16-piece bit set****AEM.J1**

Comprising :

- Bit driver AEM.M.
- Bits for slotted heads ES.002 - 002.5 - 003 - 004 - 004.5.
- Bits for Phillips<sup>®</sup> heads EP.0 x 2 EP.000.
- Bits for Pozidriv<sup>®</sup> heads ED.0 x 2 ED.000.
- Bits for hexagon heads EH.001.5 - 002 - 002.5.
- Bits for hexagon heads ETS.001.5 - 002 - 002.5.

Case 183 x 109 x 32 mm.

ΔΔ : 237 g.

**26-piece bit and socket set****AEM.J2**

Comprising :

- All items from set AEM.J1 plus.
- Bits for Torx<sup>®</sup> heads EX.006 - 007 - 008 - 010.
- Socket coupler ECR.0.
- "Radio" sockets R. 3.2 - 4 - 5 - 5.5 - 7.

Plastic case 205 x 130 x 31 mm.

ΔΔ : 340 g.

**Watchmaker screwdriver sets****5-piece set of screwdrivers for slotted heads****HB.1B**

- 5 screwdrivers for slotted heads ⚭ : 0.8x13 - 1x16 - 1.2x17 - 1.6x19 - 2.5x21.

**6-piece screwdriver set****HB.2B**

- 3 screwdrivers for Pozidriv<sup>®</sup> heads ⚭ 1.5 - 2 - 2.5.  
 3 screwdrivers for Phillips<sup>®</sup> heads ⚭ PH N00 - 0 - 1.  
 Chrome finish, burnished blade.

**9-piece set of screwdrivers for slotted heads****HB.4**


- 9 screwdrivers for slotted heads ⚭ : 0.6x11 - 0.8x11 - 1x12 - 1.2x12 - 1.4x12 - 1.6x15 - 2x15 - 2.5 x 15.5 - 3x15.5.  
 Supplied on a carousel.



## ► Standard series

### 140 Straight models

- Non-serrated pointed tips.

	Finish	Length mm	Material	ΔΔ g
<b>140.AA</b>	Satin polish	125	Antimagnetic stainless steel	17
<b>140.AAW13</b>	Non-reflective black	130	Carbon steel	16



### Straight model

#### 149

- Long, fine serrated tips, guide pin.
- Stainless steel.
- Fine polish finish.
- Length 155 mm.

ΔΔ : 18 g.



### Model 150 at 40°

#### 151

- Long strong serrated tips, guide pin.
- Stainless steel.
- Fine polish finish.
- Length 155 mm.

ΔΔ : 22 g.



### Straight model

#### 153

- Cross-over, self-gripping serrated tips.
- Stainless steel.
- Fine polish finish.
- Length 150 mm.

ΔΔ : 23 g.



### Straight model

#### 148

- Narrow pointed non-serrated tips.
- Stainless steel.
- Fine polish finish.
- Length 130 mm.

ΔΔ : 15 g.



### Straight model

#### 150

- Long strong serrated tips, guide pin.
- Stainless steel.
- Fine polish finish.
- Length 165 mm.

ΔΔ : 22 g.



### Model 149 at 45°

#### 152

- Fine serrated tips, guide pin.
- Stainless steel.
- Fine polish finish.
- Length 150 mm.

ΔΔ : 19 g.



### Straight model

#### 154

- Strong rigid tips, serrated for cables.
- Stainless steel.
- Fine polish finish.
- Length 155 mm.

ΔΔ : 30 g.



► PVC-coated series

PVC model

**149.Y**

- Length 155 mm.
- ΔΔ : 25 g.



Gripping model

**146.1Y**

- Ø 2.5 to 4 mm in-line grip.
- Length 140 mm.
- ΔΔ : 25 g.



PVC model

**152.Y**

- Length 150 mm.
- ΔΔ : 25 g.



Gripping model

**146.2Y**

- Ø 2.5 to 4 mm right-angle grip.
- Length 140 mm.
- ΔΔ : 25 g.



► High-precision series

141 Straight models

- Non-serrated easy-flex snipe tips.

Icon	Length mm	ΔΔ g
<b>141.11</b>	110	13
<b>141.12</b>	120	14



Straight shouldered model

**142.1**

- Non-serrated easy-flex snipe tips.
- Length 112 mm.
- ΔΔ : 13 g.



Offset model at 15

**142.2**

- Non-serrated easy-flex snipe tips.
- Length 117 mm.
- ΔΔ : 15 g.



Curved model

**143**

- Non-serrated easy-flex snipe tips.
- Length 114 mm.
- ΔΔ : 14 g.



Ultra-flat straight model

**144**

- Finely contoured, non-serrated tips.
- Length 120 mm.
- ΔΔ : 17 g.



Splayed straight model

**145**

- Non-serrated tips.
- Tip width 7 mm.
- Length 123 mm.
- ΔΔ : 14 g.





## Heavy-duty straight model

### 156

- Serrated snipe tips.
  - Length 110 mm.
- ΔΔ : 15 g.



## ► Specialised tweezers

### Solid plastic tweezers

#### 150.P1

- Polypropylene, can be sterilised up to 180C.
  - Length 125 mm.
- ΔΔ : 6 g.



#### 150.P Anti-static solid plastic tweezers

To DIN 53482.

- Anti-static glass fibre-reinforced (20 %) polyamide.
- Antimagnetic.
- Acid-resistant.
- Heat-resistant up to 200C.
- Non-serrated precision tips.

150.P10 : Straight splayed tips.

150.P11 : Fine, angled tips.



➤	Length mm	ΔΔ g
<b>150.P10</b>	120	5
<b>150.P11</b>	120	5

## Cutting model for very fine wire

### 139

- Carbon alloy steel for perfect cutting edges.
- Very high precision cut.
- Fine polish finish.
- Tip width 10 mm.
- Length 110 mm.

ΔΔ : 27 g.



## ► Tweezer sets

### Tweezer sets

- Sets are supplied in plastic cases.

➤	mm	Comprising	ΔΔ g
<b>147.J5</b>	178x91x24	Set of 5 standard tweezers : 151 - 152 - 140.AA	240
<b>147.J6</b>	205x130x31	Set of 8 standard and sheathed tweezers : 150 - 151 - 153 - 149.Y - 152.Y - 146.1Y - 146.2Y - 140.AA	410
<b>147.J7</b>	205x130x31	Set of 7 high precision tweezers : 140.AA - 141.14 - 142.1 - 142.2 - 143 - 144 - 145	335



▶ **Circlip pliers**

Set of pliers for inside and outside circlips

**470.MT**

- Comprising :
  - Pliers 467.PMT.
  - Pliers 469.PMT.
  - 6 sets of pegs.
- Pliers fitted with return spring and screw stop to prevent circlip distortion and ensure precision of compression or expansion.
- Polished chrome finish. PVC grips.
- Supplied in plastic case 285 x 142 x 46 mm.

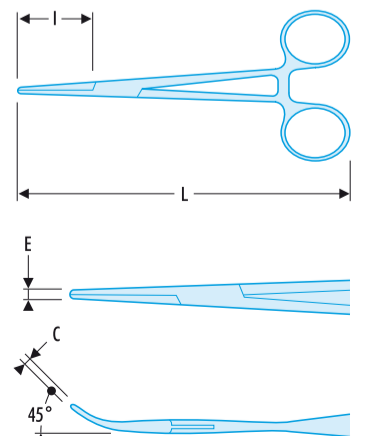
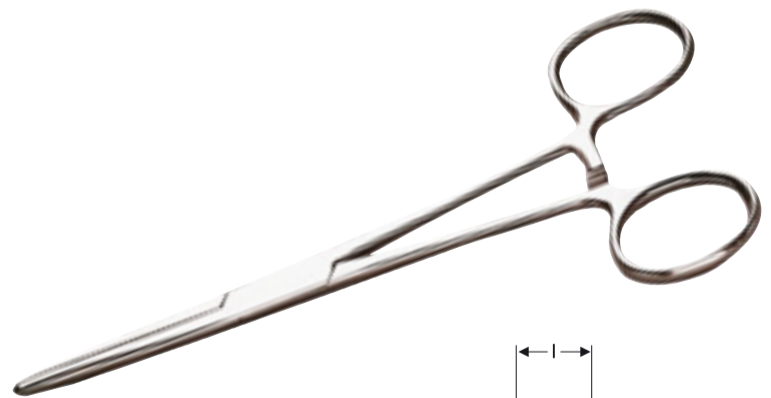
▶ **Truarc<sup>®</sup>**Truarc<sup>®</sup>**1813**

- Holds Truarc clips securely, up to Ø 6 mm. Ideal in confined spaces
- Length : 170 mm.
- ΔΔ : 19 g.

▶ **Ring pliers**

Ring pliers

- 438 Standard straight model.
- 438.1 Slim straight model.
- 439 Standard angled model.
- 439.1 Slim angled model.
- Ideal for miniature work.
- Self-locking.
- For holding components or wire during fitting or soldering.
- Scissor joint.
- Polished chrome finish.



➤	E mm	L mm	I mm	C mm	ΔΔ g
<b>438</b>	2,5	140	35	2	30
<b>438.1</b>	2,0	160	38	2	31
<b>439</b>	2,5	140	35	2	33
<b>439.1</b>	2,0	160	38	2	31

# Miscellaneous tools

## Short, very pointed scissors

### 841.1

- Precision cut.
  - Left/right hand.
  - Polished chrome finish, PVC grips.
  - Length 110 mm. Blade length 24 mm.
- ΔΔ : 27 g.



## Long pointed scissors

### 841.2

- Multi-purpose, left/right hand.
  - Polished chrome finish, PVC grips.
  - Length 120 mm. Blade length 42 mm.
- ΔΔ : 36 g.



## Serrated-blade scissors

### 841.3

- Short bullet nose for cutting thin sheet-metals.
  - Left/right hand.
  - Polished chrome finish.
  - Length 105 mm. Blade length 14 mm.
- ΔΔ : 27 g.



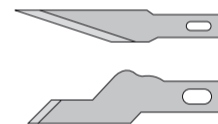
## Scalpel with interchangeable blades

### 845.1

- Clean, accurate cut.
  - Positive blade fitting.
  - 2 blade designs.
  - Length : 150 mm.
  - Scalpel with 10 blades type L1.
- ΔΔ : 15 g.



- Spare blades :
  - 845.L1 Set of 10 straight tapered blades.
  - 845.L2 Set of 10 offset blades.



## "Micro-Tech®" Hacksaw Frame

### 607.MT

- Secure grip. Lightweight Zamak body. Light-duty saw for plastics, wood and metal.
  - Supplied with 150 mm blade.
  - Overall length 262 mm.
- ΔΔ : 140 g.



## Pin vice

### 1817

- Two-collet chuck at both ends.
  - Takes any cylindrical tool Ø0.5 to Ø 3.5.
  - Length 110 mm.
- ΔΔ : 35 g.



## Precision three-square scraper

### 1816

- For careful work in small areas.
  - Reversible blade fully retracts into handle for safety.
  - Length 90 mm.
- ΔΔ : 26 g.

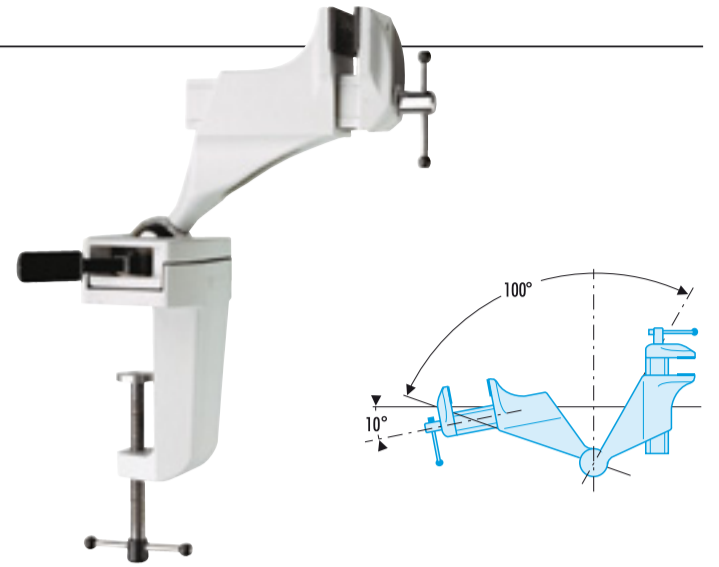




**"Micro-Tech®" Swivel vice**

**1150.MT**

- Designed to achieve optimum accuracy through enhanced operator comfort.
  - Quick-lock lever on ball joint.
  - Clamps securely to any support up to 80 mm thick.
  - Bonded plastic jaws 50 mm.
  - Max. jaw capacity 70 mm.
  - Max. throat depth 38 mm.
- ΔΔ : 1.4 kg.



**Spot oiler**

**372**

- Accurate lubrication from drop feed by slight pressure on end button.
  - See-through level.
  - Nozzle cap.
  - Metal pocket-clip.
  - Capacity : 5 cm<sup>3</sup>.
- ΔΔ : 20 g wide.



**Nut starter**

**825.MT**

- Micro-Tech® screwdriver handle with revolving end.
  - Hexagon nut capacity 3 to 14 mm A/F.
  - Shank length 150 mm. Overall length 240 mm wide.
  - Anti-corrosion treatment.
- ΔΔ : 60 g wide.



**Four-claw retriever**

**826.0**

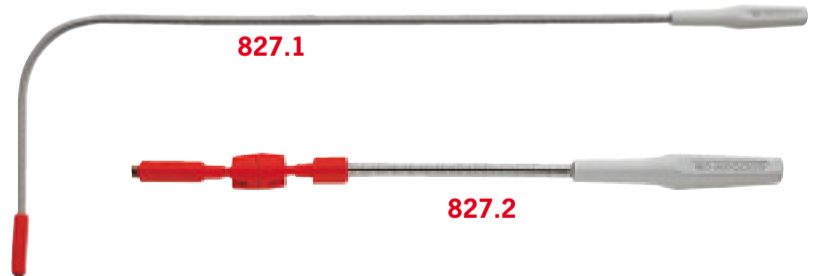
- For recovering small flat components up to Ø 30 mm.
  - Nickel finish.
- ΔΔ : 20 g wide.



**827 Ultra-slim magnetic retrievers**

- 827.1 : Long-reach flexible model Ø 7 mm head.
- 827.2 : Ball-joint model Ø 8 mm head.

⇒	Length mm	Max lifting capacity g	ΔΔ g
<b>827.1</b>	530	120	80
<b>827.2</b>	210	120	26



**Flexible magnetic retriever**

**827.M**

- Powerful magnet (3 kg).
  - Magnetic flux conductor prevents sticking to sides.
  - Length 560 mm. Adjustable stiffness.
  - Ø 20 mm magnet.
- ΔΔ : 130 g wide.



**New**

## Pen light

### 836

- Aluminium body and tube.
  - Length : 137mm.
  - Tube diameter : 14mm.
  - Operates using two LR03 AAA (1.5volt) batteries, not included.
  - Adjustable focal length.
  - Supplied with wrist strap
  - Replacement bulb reference : 836.AMP.
- ΔΔ : 29g.



## 834 Inspection mirrors

- Mirror in plastic frame.
- 834 : Fixed, rigid.  
 834.R1 : Articulated, flexible  
 834.R2 : Articulated, flexible  
 834A.RT : Articulated, telescopic.

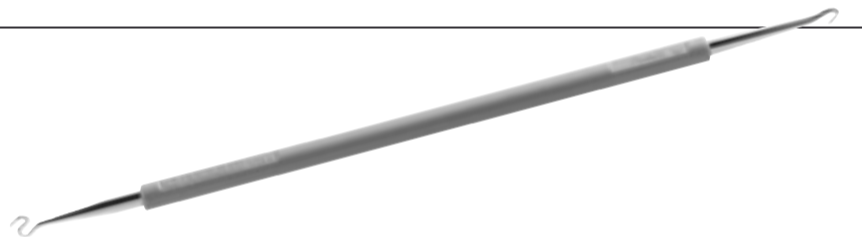
834	Ø Mirror mm	L mm	ΔΔ g
834	24	175	4
834.R1	36	210	13
834.R2	55	360	40
834A.RT	44	210-700	48



## Spring hook

### 835A

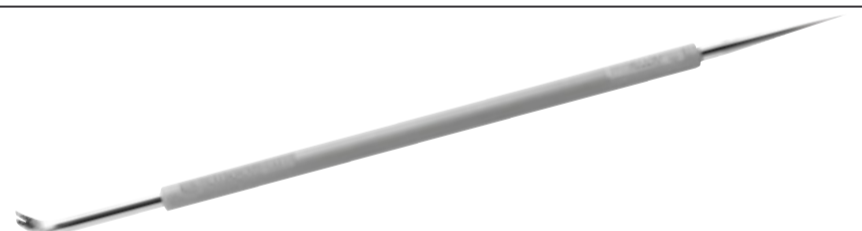
- With push and pull hooks.
  - Sleeved chromed shank.
  - Length 200 mm wide.
- ΔΔ : 13 g wide.



## Separator

### 835.1

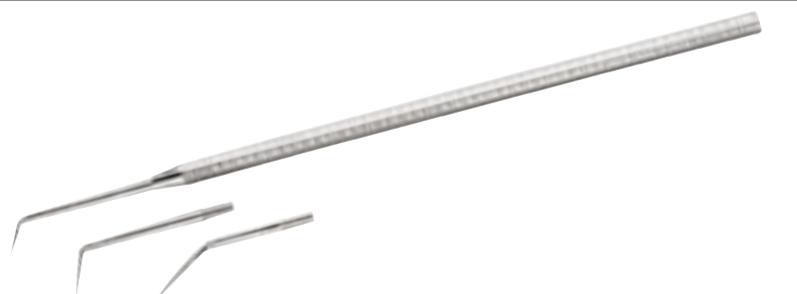
- With fork and point Ø0.5 mm.
  - Sleeved chromed shank.
  - Length 210 mm.
- ΔΔ : 15 g.



## Separator

### 835.2

- Supplied with 3 interchangeable ultra-fine curved tips.
  - Chrome finish.
  - Length 210 mm.
- ΔΔ : 25 g.



## 1830 Brushes

For cleaning or dusting.

- 1830.1 Extra-soft silk brush.
- 1830.2 Double-ended soft/hard nylon brush.
- 1830.3 Scouring brush, nylon outer and wire inner bristles.
- 1830.4 Soft nylon brush.

1830	l mm	L mm	ΔΔ g
1830.1		190	17
1830.2		210	15
1830.3	50	190	35
1830.4	100	230	30



**"Electronics" set****400.JT1**

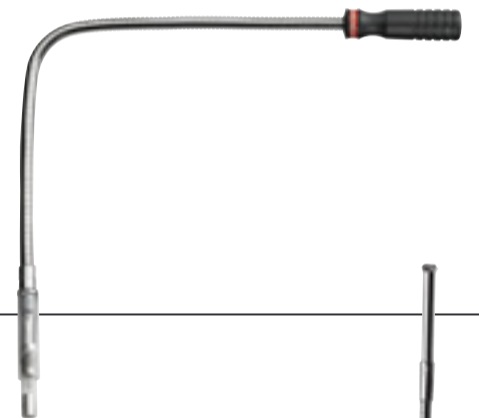
- Set of 7 electronics tools for on-site maintenance and laboratory work.
- Comprising :
  - 403.MT Long bent-nose gripping pliers.
  - 405.10RMT Axial cutting pliers.
  - 416.PMT Slim-nose semi-flush cutting pliers.
  - 429.MT 70 cutting pliers.
  - 442.MT Straight-nose gripping pliers.
  - 438.Straight-nose ring pliers.
  - 140.AA Precision tweezers.
- Supplied in a case 185 x 200 x 35 mm.
- $\Delta\Delta$  : 600 g.

**Flexible magnetic retriever****827B**

- $\varnothing$  max. : 12 mm.
- Max lifting capacity 850 g.
- Length 570 mm.
- $\Delta\Delta$  : 220 g.

**Flexible magnetic retriever with lamp****828**

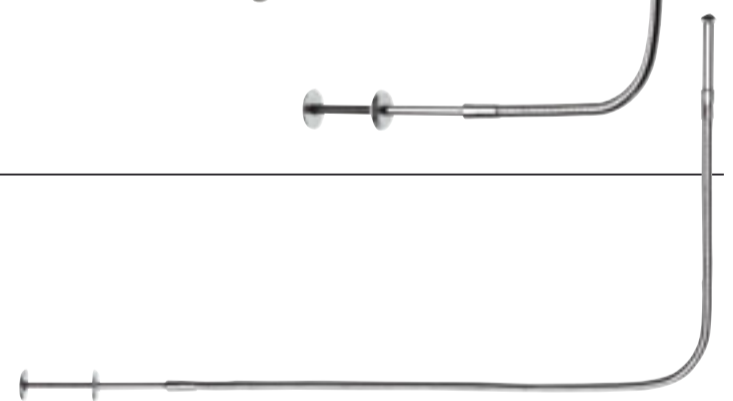
- LR1 battery supplied.
- $\varnothing$  max. : 15 mm.
- Max lifting capacity 1.2 kg.
- Length : 590 mm.
- $\Delta\Delta$  : 220 g.

**Flexible mechanical retriever****826.1**

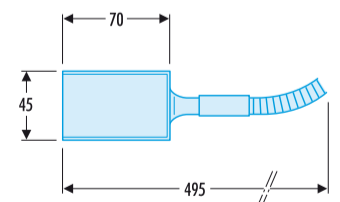
- $\varnothing$  Max jaw opening capacity 29 mm.
- Length 460 mm.
- $\Delta\Delta$  : 200 g.

**Flexible mechanical retriever****826.2**

- $\varnothing$  Max jaw opening capacity 29 mm.
- Length 1,000 mm.
- $\Delta\Delta$  : 400 g.

**Flexible swivel-mirror****829**

- Mirror adjustment push-button on end of handle.
- $\Delta\Delta$  : 225 g.

**Set of 2 tuning screwdrivers for slotted heads****HT.3**

- Also available individually.
- Supplied in a wallet.
- Blade sizes :
  - HT.2x2,4 : 2 and 2.4 mm.
  - HT.3x4 : 3 and 4 mm.
- $\Delta\Delta$  : 26 g.

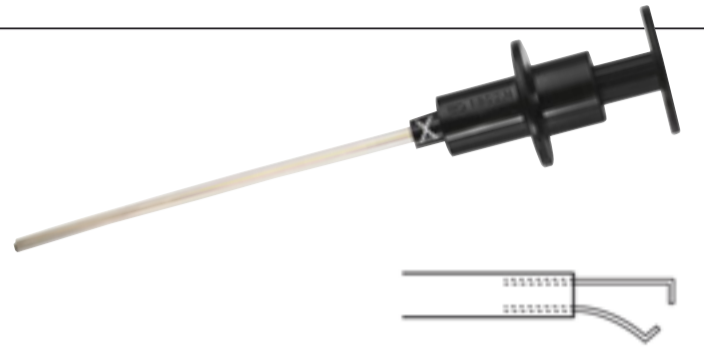




## Black wire-holder

### 1802A.N

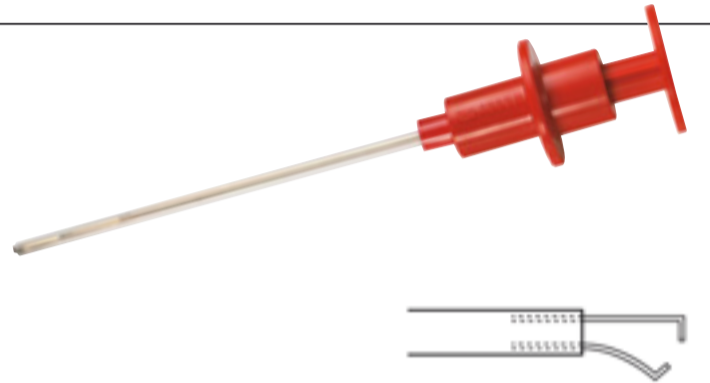
- Insulated, with twin claws and flexible tube  $\varnothing$  3 mm.
- Length 130 mm.
- $\Delta\Delta$  : 10 g.



## Red wire-holder

### 1802A.R

- Insulated, with twin claws and flexible tube  $\varnothing$  3 mm.
- Length 130 mm.
- $\Delta\Delta$  : 10 g.



## Black probe

### 1803A.N

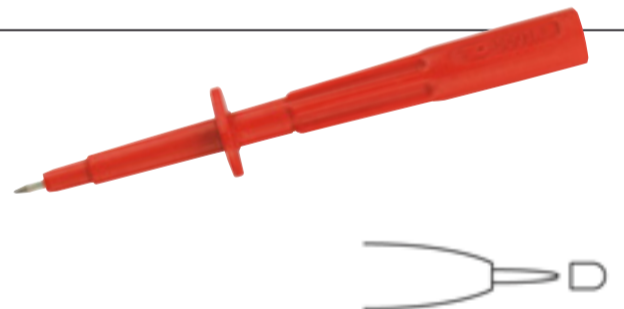
- Insulated, with brass tip and  $\varnothing$ 4 mm socket for lead 1804B.
- Complete with protective cap.



## Red probe

### 1803A.R

- Insulated, with brass tip and  $\varnothing$ 4 mm socket for lead 1804B.
- Complete with protective cap.



## Black connection lead

### 1804B.N

- Insulated, highly flexible, with retractable shroud.
- Two jacks  $\varnothing$ 4 mm for probe and wire holder.
- Length 2.1 m.
- $\Delta\Delta$  : 50 g.



## Red connection lead

### 1804B.R

- Insulated, highly flexible, with retractable shroud.
- Two jacks  $\varnothing$ 4 mm for probe and wire holder.
- Length 2.1 m.
- $\Delta\Delta$  : 50 g.



## ▶ Controlled-heat soldering stations

### 60 Watt soldering station

#### 1001A

- Power supply 230V.
  - Includes 60W soldering iron (with stand) operating on 24V supplied from station.
  - Reduced heating time.
  - High efficiency 60W/350C.
  - Ultra-flexible heat-resistant lead.
  - Temperature adjustment range 150 to 450 C.
  - 285 x 215 x 110 mm.
- ΔΔ : 2.8 kg.



### Soldering iron only

#### 1002.60

- Rating 60W at 350C.
  - Heating time 60 seconds to 350 C.
  - Silicone rubber lead 1.5m.
  - Power supply 24V.
  - Complete with tip 1002.P3.
- ΔΔ : 60 g.



### 60 Watt anti-static model

#### 1002A.E

- Similar to model 1001A but with anti-static properties.
  - Includes 60W soldering iron operating on 24V supplied from station.
  - 285 x 215 x 110 mm.
- ΔΔ : 2.8 kg.



### Anti-static soldering iron only

#### 1002.60E

- Similar to model 1001A.60 but with anti-static properties.
- ΔΔ : 60 g.



## 80 Watt model with digital display

### 1003A.E

- Power supply 230V.
- Includes 80W soldering iron (with stand) operating on 24V supplied from station.
- Positive temperature coefficient heating element reduces heating time.
- High efficiency 80W / 350C.
- Temperature adjustment range 50 to 450C.
- PVC lead 2m.
- 285 x 215 x 110 mm.
- $\Delta\Delta$  : 2.44 kg.



## Anti-static soldering iron only

### 1003A.80E

- Bayonet fitting.
- Rating 80W at 350C.
- Heating time 50 seconds.
- Silicone rubber lead 1.5m.
- Power supply 24V.
- $\Delta\Delta$  : 50 g.



## Soldering iron stand

### BV.21-10

- Ideal for storing a Facom 1024 or equivalent soldering iron immediately after use. Can be safely carried in a fitters case.
- Asbestos-free insulating section.
- 180 x  $\varnothing$ 35 mm.
- $\Delta\Delta$  : 210 g.



## ► Soldering irons for electronics

### Electronics soldering iron 24 volts

#### 1024.25

- Power supply 24V (plug not included).
- Heating time 60 seconds.
- Tip temperature 450C on 25W model.
- Complete with stand.

	Rating W	Length mm	Voltage V	$\Delta\Delta$ g
<b>1024.25</b>	25	240	24	34



### 1230 Electronics soldering iron 230 volts

- Range of models from 15W to 40W.
- High-efficiency internally heated tip.
- Complete with stand.


	Rating W	Length mm	Voltage V	Peak temp	Heating time minutes	$\Delta\Delta$ g
<b>1230.15</b>	15	240	230	350	1	28
<b>1230.25</b>	25	240	230	450	1	34
<b>1230.30</b>	30	240	230	420	2	80
<b>1230.40</b>	40	240	230	420	2	80





## Dual rating soldering iron (20/40W)

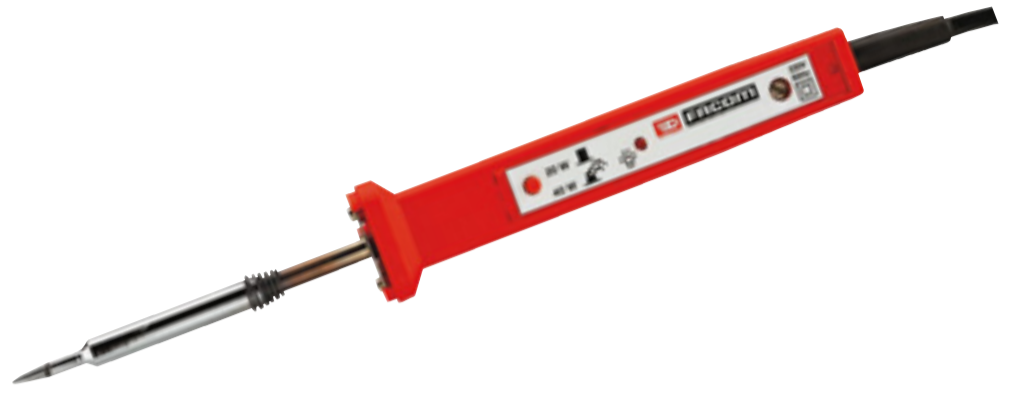
### 1116B.BW

- Power supply 230V.
- Double isolation .
- Ideal for electrical and electronics servicing.
- Normal 20W operation for soldering small components.
- Additional 40W power by pressing button.
- 2-core PVC lead (2 x 0.75<sup>2</sup>). Length 1.2 m.
- 10 A European plug.
- Complete with tip 1112.30P1.

ΔΔ : 145 g.




Tip : 1112.30P2



## ▶ Instant heat soldering irons

### "Instant heat" 25W/230V model

#### 848.25

- Double isolation .
- Ready to solder in 5 seconds with trigger control.
- Tip cools immediately after the trigger is released.
- Useful tool in a service case, for occasional non-continuous soldering.
- Supplied with 2 standard tips, 1 straight and 1 angled.
- 2-core PVC lead (2 x 0.75<sup>2</sup>). Length 1.1 m.
- 2-pole plug. Length without lead 220 mm.

ΔΔ : 360 g.




Tips : 848.25P1 (angled) - 848.25P2 (straight)



### 100W/230V model

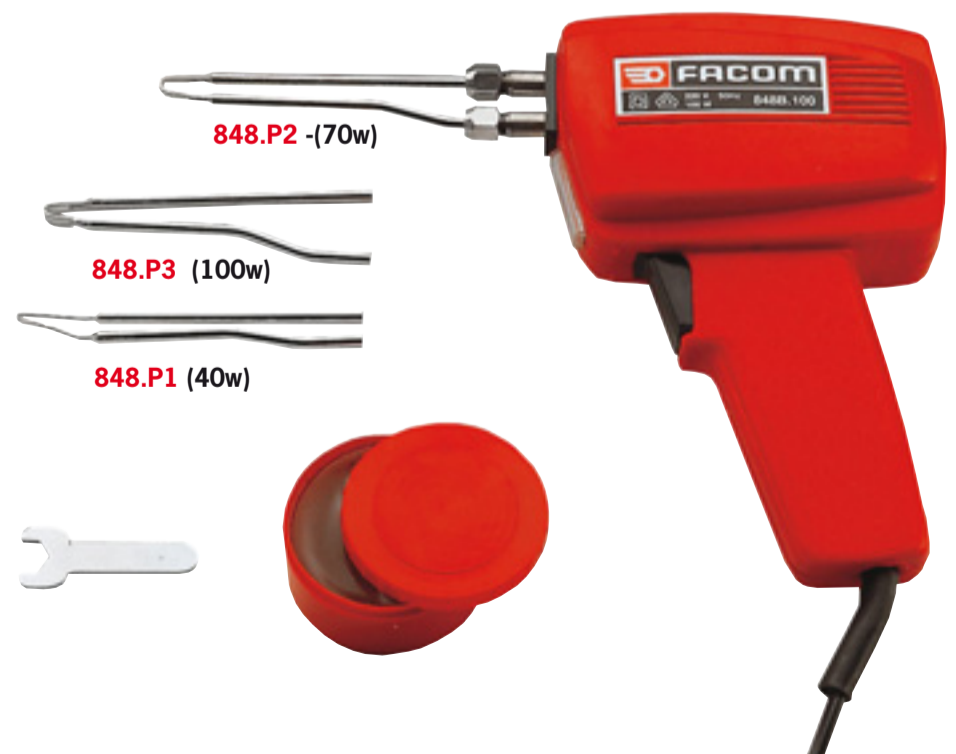
#### 848B.100

- Double isolation .
- Ready to solder in 5 seconds with trigger control.
- Tip cools immediately after the trigger is released.
- Useful tool in a service case, for occasional non-continuous soldering.
- Efficient well-protected spotlight.
- Supplied with 3 stainless tips 40, 70 and 100W, tip-change wrench, reel of solder and flux in a polystyrene box.
- 2-core PVC lead (2 x 0.75<sup>2</sup>).Length 1.25 m.
- 2-pole plug.
- Length 270 mm.

ΔΔ : 1 kg.



Tip: 848.100P2



## ► Heavy-duty soldering irons

### 947A Heavy-duty soldering irons - 230V

- Ratings from 50 to 400W.
- Supplied with angled tip.
- High-efficiency robust tool.
- Designed for optimum accessibility.
- Bright copper tip.
- Stainless heating tube.
- To EN 60335-2-45.

Model	Rating W	Voltage V	Length mm	Peak temp 10%	$\Delta\Delta$ g
<b>947.50</b>	50	230	266	390	290
<b>947.80</b>	80	230	295	400	330
<b>947A.100</b>	100	230	300	420	440
<b>947A.200</b>	200	230	315	450	675
<b>947A.300</b>	300	230	320	470	960
<b>947A.400</b>	400	230	320	500	960



## ► Gas soldering iron

### Gas soldering iron

#### ONE TOOL - FOUR FUNCTIONS



- **Rechargeable butane gas burner.**
- **Integral ignition system** (Piezo-electric system).
- **Adjustable power setting.**
- \* **Safe** : The cap on the end of the nozzle keeps the gas control valve closed.

**New**

### Gas soldering iron

#### 1075.G

- 75W equivalent power rating.
- Adjustable gas flow and power output. 45 minutes autonomy at maximum power.
- Max. temperature 1300C.
- Piezo-electric ignition.
- Heating time 40 sec.



## ► Solder wire

### Solder wire 40SN60PB

#### 661618

- Reel of tin solder 40SN60PB.
- 40 % tin and 60 % lead.
- Multi-purpose solder wire (tinning, simple soldering for basic connections, etc.).
- For standard soldering.
- Good mechanical strength.
- Good melting temperature.
- Flux core.

☞	Ø mm	ΔΔ g
<b>661618</b>	1	500



### Solder wire 60SN40PB

#### 661626

- Reel of tin solder 60SN40PB.
- 60 % tin and 40 % lead.
- For technical applications (electric circuits).
- High tin content for improved electrical conductivity.
- Good melting temperature.
- Flux core.

☞	Ø mm	ΔΔ g
<b>661626</b>	1	250



## ► Soldering accessories

### 839 Desoldering pumps

- Twin seal design: wiper seal ensures optimum efficiency of main seal.
- Set of 5 spare nozzles:
  - 839.E1J5: Standard, white.
  - 839.E2J5: Fine, black, anti-static.
  - 839.E3J5: Fine, white, standard.
  - 839.EJ5


☞	Ø Embouts mm	L mm	ΔΔ g
<b>839A</b>	3,2	190	75
<b>839A.0</b>	2,0	165	36
<b>839A.1</b>	2,0	200	78
<b>839A.7</b>	2,0	195	78





## 1130 Desoldering braid

- Outstanding absorbency. Protects fragile components from thermal shock.

	Width mm	Length m	ΔΔ g
<b>1130.1</b>	1,6	1,6	15
<b>1130.2</b>	2,7	1,66	18



## Accessory set




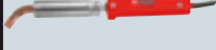

### 1195

- Plastic wallet set of 3 soldering accessories :
    - double scraper.
    - hook.
    - brush.
- ΔΔ : 35 g.



## Soldering iron tip selection guide

			
	<b>1001A.60</b>	<b>1002.P1</b> (46 mm)	<b>1002.P3</b> (46 mm)
		<b>1002.P2</b> (55 mm)	<b>1002.P4</b> (55 mm)
	<b>1002A.60E</b>	<b>1002.P1</b> (46 mm)	<b>1002.P3</b> (46 mm)
		<b>1002.P2</b> (55 mm)	<b>1002.P4</b> (55 mm)
	<b>1003A.80E</b>	<b>1002.P1</b> (46 mm)	<b>1002.P3</b> (46 mm)
		<b>1002.P2</b> (55 mm)	<b>1002.P4</b> (55 mm)
	<b>1230.15</b>	<b>1230.15P2</b>	<b>1230.15P3</b>
	<b>1024.25</b>	<b>1230.25P2</b>	<b>1230.25P3</b>
	<b>1230.25</b>	<b>1230.25P2</b>	<b>1230.25P3</b>
	<b>1230.30</b>	<b>1230.30P2</b>	<b>1230.30P3</b>
	<b>1230.40</b>	<b>1230.30P2</b>	<b>1230.30P3</b>

		
	<b>947.50</b>	<b>1130.1</b>
	<b>947.80</b>	<b>1130.1</b>
	<b>947A.100</b>	<b>1130.1</b>
	<b>947.200P1</b>	<b>1130.1</b>
	<b>947.300P1</b>	<b>1130.1</b>
	<b>947.50</b>	<b>1130.1</b>
	<b>1075.G</b>	<b>1075.G1</b>

