



SAWING - DRILLING - CUTTING

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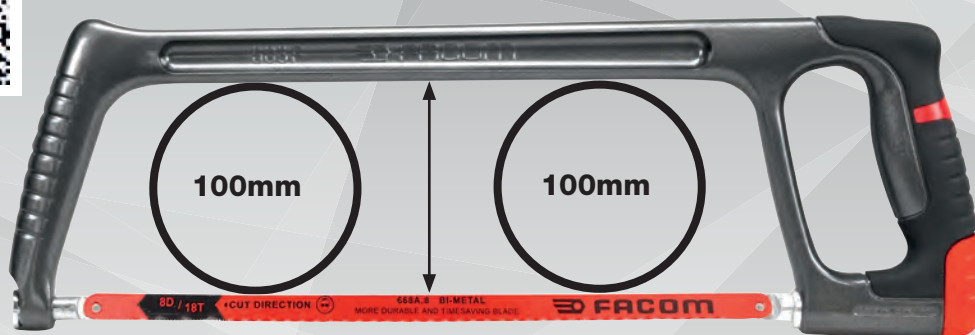
Punch kit

623

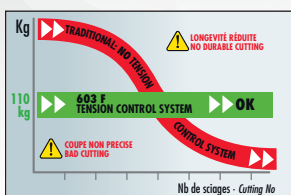
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HACKSAW FRAME

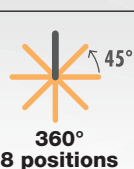
HIGH PERFORMANCE HACKSAW FRAME 603F

**OPTIMUM AND DURABLE CUT**

- Constant blade tension: 110 kg controlled automatically.
- Rigid aluminium bow.
- Bi-material ergonomic handle to reduce vibrations.

**SAVE TIME**

- Cutting capacity 100 mm over the full bow length.
- Ultra-fast blade changing.
- 8 cutting positions (every 45°).

**EXACT CUTTING**

- For a perfect tension control (110 kg), turn the button till CLICK.



■ "High performance" hacksaw frame

**NF E 73-073, DIN 6473**

- Optimum and durable automatic blade tension control at 110 kg.
- Aluminium bow for maximum stiffness.
- Ergonomic handle for maximum cutting comfort.
- 8 blade positions.
- Ultra-fast blade changing.
- Takes 300 mm blade.
- Dimensions (L. x W.): 440 x 145 mm.
- Supplied with one blade.
- Spare blades: 668A.



	L [mm]	ΔΔ [g]
603F	440	830

HACKSAW FRAME

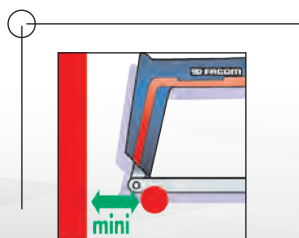
"TRAVELLING" HACKSAW FRAME 601



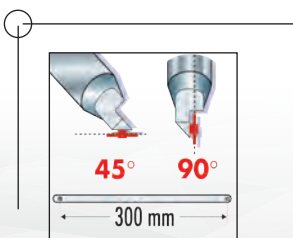
Practical and compact



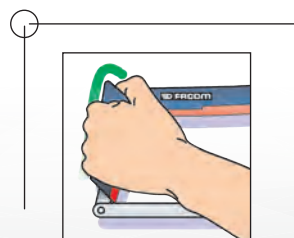
Compact: stored in a 5-compartment box and in roller-cabinet modules.



- Minimum clearance to start cutting.



- 2 blade positions on machined and shouldered pins.



- Left-hand rest.

Compact hacksaw frame

NF E 73-073, DIN 6473

- Impact-resistant steel/resin construction compact and lightweight.
- Blade tension 80 kg.
- 2 blade positions: 45° and 90°.
- Takes 300 mm blade.
- Dimensions (L x W.): 385 x 145 mm.
- Supplied with one blade.
- Spare blades: 668A.



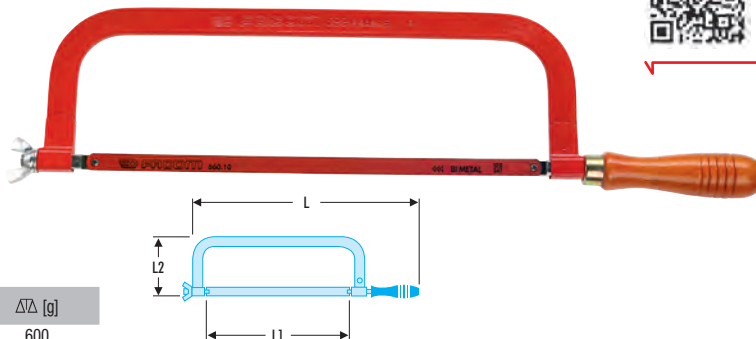
	L [mm]	ΔΔ [g]
601	385	590



Flat bow frame - adjuster fitting

NF E 73-073, DIN 6473

- Wood handle.
- Takes 300 mm blade.
- Spare blades: 668A.



	L [mm]	L1 [mm]	L2 [mm]	ΔΔ [g]
599	520	300	130	600



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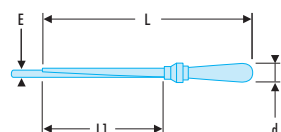


HACKSAW FRAME

■ Straight frame with blade backing

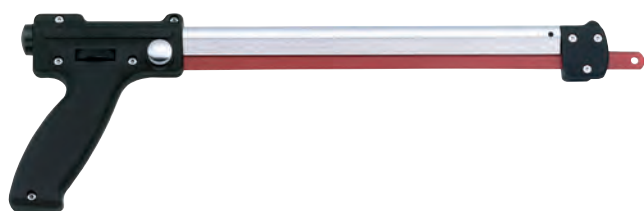


- Blade can be set to protrude beyond the backing to allow insertion into narrow gaps.
- Takes 300 mm blade.
- Spare blades: 668A.

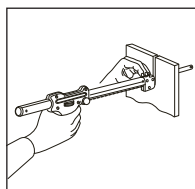
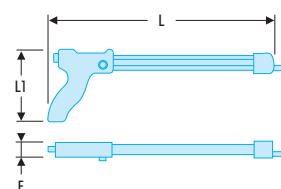


	d [mm]	E [mm]	L [mm]	L1 [mm]	ΔΔ [g]
606A	33	16	350	190	410

■ Revolver frame with sliding blade-guide



- Sliding guide steadies blade throughout cutting stroke.
- A thumbscrew can lock the guide to keep blade end clear.
- Takes 300 mm blade.
- Spare blades: 668A.



	E [mm]	L [mm]	L1 [mm]	ΔΔ [g]
605.B	30	370	130	780

■ Foam tray saw, tape measure and files



- Comprising:
 - 234.S: Scriber.
 - 603F: Alu hacksaw.
 - 893B.319: Tape measure.
 - CAR.MD200EMA: Flat second-cut file 200 mm with grip.
 - DRD.MD250EMA: Half-round second-cut file 200 mm with grip.
 - PAM.B250EMA: Flat bastard file 200 mm with grip.
 - TRI.MD200EMA: Triangle-shaped second-cut file 200 mm with grip.
 - Foam tray PM.MOD603F.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
MODM.603F	45	325	418	2.3

HACKSAW BLADES

Saw, tape measure and files module



- Comprising:
 - 601: Hacksaw frame.
 - 668A.10: Saw blades (10 teeth per cm).
 - 234.S: Scriber.
 - DELA.1051.300M: Stainless steel 2-face rule 300 mm.
 - 893B.319: Tape measure 3m.
 - 5 files with handle:
 - PAM.B250EMA (flat bastard file)
 - DRD.MD250EMA (half-round, half-smooth)
 - CAR.MD200EMA (square file, half-smooth)
 - TRI.MD200EMA (triangular file, half-smooth)
 - RD.MD200EMA (round file, half-smooth).
- Tray PL.335.



	H [mm]	L [mm]	ΔΔ [kg]
MOD.601	40	600	2.3

HACKSAW BLADES 668A



Made from cobalt steel



- Higher heat resistance, reduced teeth wear.
- Equal performance throughout blade lifecycle.
- Enhanced flexibility and neater cut.
- Suited to all materials.
- Available in 8, 10 and 12 teeth.

668A - Cobalt steel bimetal saw blades

- Characteristics:
 - 668A.8: for thick semi-hard steels - thickness recommended: 6 - 25 mm.
 - 668A.10: for special or alloy steels - thickness recommended: 3 - 6 mm.
 - 668A.12: for stainless steel, copper - thickness recommended: 1 - 3 mm.
- Blade in cobalt steel: higher heat resistance, reduced teeth wear.
- Equal performance throughout blade lifecycle.
- Enhanced flexibility and neater cut.
- Suited to all materials.
- Blade length 300 mm.
- Minimum order: 10 blades.



	Teeth [cm]	Contents	ΔΔ [kg]
668A.8	8	Plastic box	0,020
668A.10	10	Plastic box	0,018
668A.12	12	Plastic box	0,018



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FILE SELECTION GUIDE



FACOM technical specifications

- Made from high carbon-content steels.
- Optimum heat treatment for each application.
 - 64 to 66 HRC for engineers files.
 - 53 to 56 HRC for rasps.
 - 65 to 67 HRC for sharpening files.

File selection guide

Four criteria apply :

1. Shape or cross-section.
2. Pattern according to material.
3. Grade according to operation.
 - Standard files: - B: Bastard cut for rough filing.
 - MD: Second cut for general purpose.
 - Precision files: - TOA: Bastard cut for rough filing.
 - T2A: for normal smooth filing.

Pattern selection according to material		Steel	Cast Iron	Brass	Hard plastics, wood etc.	Aluminium and soft materials
Double cut for steel and metals.		●	●	●	●	
Single cut for good surface finish, sharpening saws, lathe filling and fitters' requirements.		●				
Dreadnought, for soft materials, sheet metal, etc. Leaves a smooth finish.		●		●	●	●
Rasp for soft materials and wood. Produces a rough surface.					●	●

FLAT PAM		
HALF-ROUND 	DRD ROUND RD 	THREE-
SQUARE TRI 	SQUARE CAR 	

4. File length.
• Lengths quoted are always without tang. Main shapes

SELECTION GUIDE: WOOD HANDLES FOR FILES AND RASPS



Files	100 mm	125 mm	150 mm	200 mm	250 mm	300 mm
PAM: Flat hand	MAN.3	-	MAN.3	MAN.2	MAN.1	MAN.0
DRD: Half-round	MAN.3	-	MAN.3	MAN.2	MAN.1	MAN.0
TRI: Three-square	MAN.4	MAN.3	MAN.3	MAN.2	MAN.1	MAN.1
RD: Round	MAN.4	MAN.4	MAN.4	MAN.3	MAN.2	MAN.0
CAR: Square	MAN.4	MAN.4	MAN.4	MAN.3	MAN.2	MAN.1
CT: Knife	MAN.3	MAN.3	MAN.2	MAN.2	MAN.1	MAN.1
PIL: Pillar	MAN.3	-	MAN.2	MAN.2	MAN.1	-
PDE: Fat warding	MAN.3	MAN.3	MAN.2	MAN.2	MAN.1	MAN.1
BAR: Barette	MAN.3	-	MAN.2	MAN.2	MAN.1	-
FRC / FRO: Tapered	-	-	-	-	-	MAN.0
TRO: Round for chainsaws	-	-	MAN.4	MAN.4	-	-
Type of rasps	100 mm	125 mm	150 mm	200 mm	250 mm	300 mm
RAB.DRD: Half-round	-	-	-	-	MAN.1	MAN.0
RAB.P: Flat	-	-	-	-	MAN.1	MAN.0
RAB.RD: Round	-	-	-	-	MAN.1	MAN.0



FILE SETS

■ MAN - Wood handles for files and rasps

- Varnished wood handles with nickel-plated steel ferrule.
- Supplied singly.



	d [mm]	L [mm]	ΔΔ [g]
MAN.0	34	132	55
MAN.1	32	124	45
MAN.2	28	110	40
MAN.3	25	102	30
MAN.4	22	98	25

SELECTION GUIDE: PLASTIC HANDLES FOR FILES AND RASPS



Files	100 mm	125 mm	150 mm	200 mm	250 mm	300 mm
PAM: Flat hand	MP.4	-	MP.3	MP.2	MP.1	MP.0
DRD: Half-round	MP.4	-	MP.3	MP.2	MP.1	MP.0
TRI: Three-square	-	-	MP.3	MP.1	MP.0	MP.0
RD: Round	MP.4	MP.4	MP.4	MP.3	MP.1	MP.0
CAR: Square	-	-	MP.4	MP.3	MP.1	MP.0
CT: Knife	MP.4	-	MP.3	MP.2	MP.1	-
PIL: Pillar	MP.4	-	MP.3	MP.2	MP.1	-
PDE: Fat warding	MP.4	-	MP.3	MP.2	MP.1	-
BAR: Barette	MP.4	-	MP.3	MP.2	MP.1	-
FRC / FRO: Tapered	-	-	-	-	-	MP.0
TRO: Round for chainsaws	-	-	MP.4	MP.4	-	-
Type of rasps	100 mm	125 mm	150 mm	200 mm	250 mm	300 mm
RAB.DRD: Half-round	-	-	-	-	MP.1	MP.0
RAB.P: Flat	-	-	-	-	MP.1	MP.0
RAB.RD: Round	-	-	-	-	MP.1	-



■ MP - Plastic handles for files and rasps

- Ergonomic handle in plastic resistant to workshop solvents.
- Supplied singly.



	d [mm]	L [mm]	ΔΔ [g]
MP.0	30	120	40
MP.1	30	120	45
MP.2	28	120	40
MP.3	28	105	35
MP.4	25	100	20



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FILE SETS

Set of 5 files



- Set of 5 files with varnished wood handles, for general engineering and automotive applications.
- Comprising:
 - PAM.B250A: Flat bastard file.
 - DRD.MD250A: Half-round second-cut file.
 - CAR.MD200EMA: Square second-cut file.
 - TRI.MD200EMA: Triangle second-cut file.
 - RD.MD200A: Round second-cut file.
- Supplied in grey hammer-finish wall-rack CKS.35A.



STG

 $\Delta\Delta$ [kg]

1.265

Set of 9 files



- Set of 9 files and rasps for engineering and industrial maintenance.
- Comprising:
 - PAM.B250A: Flat bastard file.
 - PAM.MD200A: Flat second-cut file.
 - DRD.B250A: Half-round second cut bastard file.
 - DRD.MD200A: Half-round second-cut file.
 - RD.B250A: Round bastard file.
 - RD.MD200A: Round second-cut file.
 - CAR.MD200A: Square second-cut file.
 - TRI.MD150A: Triangle second-cut file.
 - RAB.DRDMD250A: Half-round second-cut rasp.
- Supplied in grey hammer-finish wall-rack CKS.34A.



STU

 $\Delta\Delta$ [kg]

2.150

Set of 6 locksmiths files - length 100 mm



NFE 75-001, NFE 75-002

- Geneva pattern with wooden handle.
- Available in 3 different cuts.
 - CLE.BAM100A: Bastard cut files.
 - CLE.MDAM100A: Second cut files.
 - CLE.DAM100A: Smooth cut files.
- In plastic wallet dimensions (L. x D. x H.): 200 x 105 x 11 mm.



CLE.BAM100A
CLE.MDAM100A
CLE.DAM100A

H [mm]
11
11
11

L [mm]
200
200
200

$\Delta\Delta$ [g]
210
210
210

Module of 5 files 200 mm long with handle



- Comprising:
 - PAM.B200EMA: Flat bastard file.
 - DRD.MD200EMA: Half-round second-cut file.
 - CAR.MD200EMA: Square second-cut file.
 - TRI.MD200EMA: Triangle second-cut file.
 - RD.MD200EMA: Round second-cut file.
 - Thermoformed module PL606.
- Finish: ergonomic handle in plastic resistant to workshop solvents.



MOD.LIM

H [mm]
40

L [mm]
418

$\Delta\Delta$ [g]
950

FILE SETS

Set of 5 second-cut files 200 mm long



NFE 75-001, NFE 75-002

- Comprising:
 - PAM.MD200EMA: Flat second-cut file.
 - DRD.MD200EMA: Half-round second-cut file.
 - CAR.MD200EMA: Square second-cut file.
 - RD.MD200EMA: Round second-cut file.
 - TRI.MD200EMA: Triangle second-cut file.
- Finish: ergonomic handle in plastic resistant to workshop solvents.

	$\Delta\Delta$ [g]
LIM200EM.J5	820

Set of 5 second-cut files 250 mm long



NFE 75-001, NFE 75-002

- Comprising:
 - PAM.MD250EMA: Flat second-cut file.
 - DRD.MD250EMA: Half-round second-cut file.
 - CAR.MD250EMA: Square second-cut file.
 - RD.MD250EMA: Round second-cut file.
 - TRI.MD250EMA: Triangle second-cut file.
- Finish: ergonomic handle in plastic resistant to workshop solvents.

	$\Delta\Delta$ [g]
LIM250EM.J5	1350

ENGINEERS FILES

PAM.MDA - Half-round flat files



NFE 75-001, NFE 75-002

- Flat files with handle.
- 2 double cut squares.
- 1 single cut square.
- 1 smooth cut.
- Designed for steel, cast iron, brass, and hard plastics.


	E x E1 [mm]	L [mm]	$\Delta\Delta$ [g]
PAM.MD150A	4 x 15	150	75
PAM.MD200A	5 x 20	200	145
PAM.MD250A	6 x 25	250	270

PAM.MDEMA - Flat half-cut files with handle



NFE 75-001, NFE 75-002

- Flat files with handle.
- 2 double cut squares.
- 1 single cut square.
- 1 smooth cut.
- Finish: ergonomic handle in plastic resistant to workshop solvents.
- Designed for steel, cast iron, brass, and hard plastics.

	E x E1 [mm]	L [mm]	$\Delta\Delta$ [g]
PAM.MD150EMA	4 x 15	150	140
PAM.MD200EMA	5 x 20	200	200
PAM.MD250EMA	6 x 25	250	340



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ENGINEERS FILES

■ PAM.BA - Flat bastard files



NFE 75-001, NFE 75-002

- Flat files with handle.
- 2 double cut squares.
- 1 single cut square.
- 1 smooth cut.
- Designed for roughing steel, cast iron, brass, and hard plastics.

	E x E1 [mm]	L [mm]	ΔΔ [g]
PAM.B150A	4 x 15	150	60
PAM.B200A	5 x 20	200	145
PAM.B250A	6 x 25	250	270

■ PAM.BEMA - Flat bastard files with handle

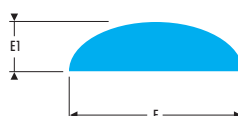


NFE 75-001, NFE 75-002

- Flat files with handle.
- 2 double cut squares.
- 1 single cut square.
- 1 smooth cut.
- Finish: ergonomic handle in plastic resistant to workshop solvents.
- Designed for roughing steel, cast iron, brass, and hard plastics.

	E x E1 [mm]	L [mm]	ΔΔ [g]
PAM.B150EMA	4 x 15	150	140
PAM.B200EMA	5 x 20	200	200
PAM.B250EMA	6 x 25	250	340

■ DRD.MDA - Half-round second-cut files

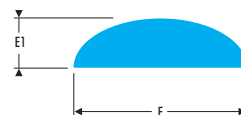


NFE 75-001, NFE 75-002

- Second-cut files with handle.
- Double second-cut squares.
- Double cut square.
- Designed for steel, cast iron, brass, and hard plastics.


	E x E1 [mm]	L [mm]	ΔΔ [g]
DRD.MD150A	4,5 x 16,0	150	60
DRD.MD200A	6 x 21	200	115
DRD.MD250A	7 x 25	250	220

■ DRD.MDEMA - Half-round second-cut files with handle



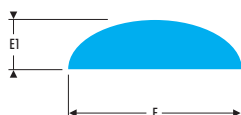
NFE 75-001, NFE 75-002

- Second-cut files with handle.
- Double second-cut squares.
- Double cut square.
- Finish: ergonomic handle in plastic resistant to workshop solvents.
- Designed for steel, cast iron, brass, and hard plastics.

	E x E1 [mm]	L [mm]	ΔΔ [g]
DRD.MD150EMA	4,5 x 16,0	150	100
DRD.MD200EMA	6 x 21	200	160
DRD.MD250EMA	7 x 25	250	280

ENGINEERS FILES

■ DRD.BA - Half-round bastard files

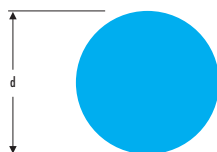


NFE 75-001, NFE 75-002

- Second-cut files with handle.
- Double second-cut squares.
- Double cut square.
- Designed for roughing steel, cast iron, brass, and hard plastics.

	E x E1 [mm]	L [mm]	ΔΔ [g]
DRD.B150A	4,5 x 16,0	150	60
DRD.B200A	6 x 21	200	115
DRD.B250A	7 x 25	250	220

■ RD.MDA - Second-cut round files

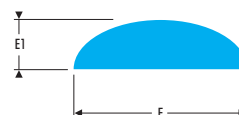


NFE 75-001, NFE 75-002

- Round files with handle.
- Double square.
- Designed for steel, cast iron, brass, and hard plastics.

	d [mm]	L [mm]	ΔΔ [g]
RD.MD150A	6	150	50
RD.MD200A	8	200	75
RD.MD250A	10	250	135

■ DRD.BEMA - Half-round bastard files with handle

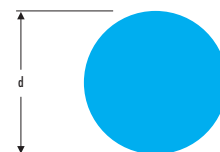


NFE 75-001, NFE 75-002

- Second-cut files with handle.
- Double second-cut squares.
- Double cut square.
- Ergonomic handle in plastic resistant to workshop solvents.
- Designed for roughing steel, cast iron, brass, and hard plastics.

	E x E1 [mm]	L [mm]	ΔΔ [g]
DRD.B150EMA	4,5 x 16,0	150	100
DRD.B200EMA	6 x 21	200	160
DRD.B250EMA	7 x 25	250	280

■ RD.MDEMA - Second-cut round files with handle



NFE 75-001, NFE 75-002

- Round files with handle.
- Double square.
- Finish: ergonomic handle in plastic resistant to workshop solvents.
- Designed for steel, cast iron, brass, and hard plastics.

	d [mm]	L [mm]	ΔΔ [g]
RD.MD150EMA	6	150	100
RD.MD200EMA	8	200	140
RD.MD250EMA	10	250	208



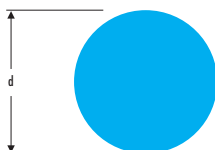
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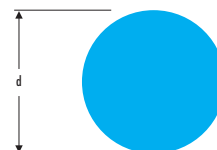


ENGINEERS FILES

RD.BA - Round bastard files



RD.BEMA - Round bastard files with handle



NFE 75-001, NFE 75-002

- Round files with handle.
- Double square.
- Designed for roughing steel, cast iron, brass, and hard plastics.

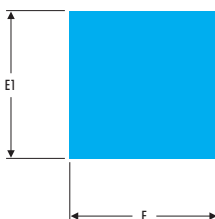
	d [mm]	L [mm]	ΔΔ [g]
RD.B150A	6	150	50
RD.B200A	8	200	75
RD.B250A	10	250	135

NFE 75-001, NFE 75-002

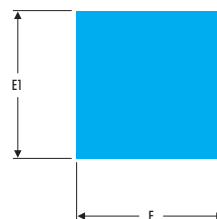
- Round files with handle.
- Double square.
- Finish: ergonomic handle in plastic resistant to workshop solvents.
- Designed for roughing steel, cast iron, brass, and hard plastics.

	d [mm]	L [mm]	ΔΔ [g]
RD.B150EMA	6	150	100
RD.B200EMA	8	200	140
RD.B250EMA	10	250	200

CAR.MDA - Second-cut square files



CAR.MDEMA - Second-cut square files with handle



NFE 75-001, NFE 75-002

- Square files with handle.
- Double square on 4 cuts.
- Designed for steel, cast iron, brass, and hard plastics.

	E x E1 [mm]	L [mm]	ΔΔ [g]
CAR.MD150A	6 x 6	150	60
CAR.MD200A	8 x 8	200	80
CAR.MD250A	10 x 10	250	140

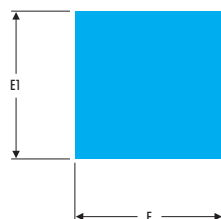
NFE 75-001, NFE 75-002

- Square files with handle.
- Double square on 4 cuts.
- Finish: ergonomic handle in plastic resistant to workshop solvents.
- Designed for steel, cast iron, brass, and hard plastics.

	E x E1 [mm]	L [mm]	ΔΔ [g]
CAR.MD150EMA	6 x 6	150	100
CAR.MD200EMA	8 x 8	200	120
CAR.MD250EMA	10 x 10	250	190

ENGINEERS FILES

■ CAR.BEMA - Square bastard files with handle

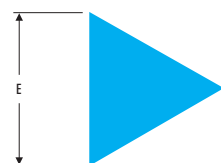


NFE 75-001, NFE 75-002

- Square files with handle.
- Double square on 4 cuts.
- Finish: ergonomic handle in plastic resistant to workshop solvents.
- Designed for roughing steel, cast iron, brass, and hard plastics.

	E x E1 [mm]	L [mm]	ΔΔ [g]
CAR.B150EMA	6 x 6	150	100
CAR.B200EMA	8 x 8	200	120
CAR.B250EMA	10 x 10	250	190

■ TRI.MDEMA - Second-cut triangle files with handle

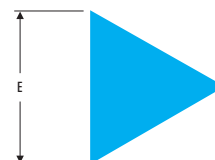


NFE 75-001, NFE 75-002

- Triangle files with handle.
- Double square on 3 cuts.
- Finish: ergonomic handle in plastic resistant to workshop solvents.
- Designed for steel, cast iron, brass, and hard plastics.

	E [mm]	L [mm]	ΔΔ [g]
TRI.MD150EMA	11	150	130
TRI.MD200EMA	15	200	210
TRI.MD250EMA	19	250	330

■ TRI.MDA - Second-cut triangle files



NFE 75-001, NFE 75-002

- Triangle files with handle.
- Double square on 3 cuts.
- Designed for steel, cast iron, brass, and hard plastics.

	E [mm]	L [mm]	ΔΔ [g]
TRI.MD150A	11	150	90
TRI.MD200A	15	200	170
TRI.MD250A	19	250	270



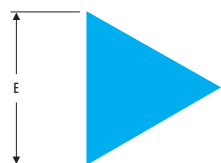
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ENGINEERS FILES

■ TRI.BEMA - Triangle bastard files with handle



NFE 75-001, NFE 75-002

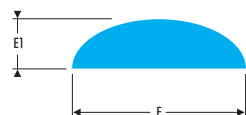
- Triangle files with handle.
- Double square on 3 cuts.
- Ergonomic handle in plastic resistant to workshop solvents.
- Designed for roughing steel, cast iron, brass, and hard plastics.



	E [mm]	L [mm]	ΔΔ [g]
TRI.B150EMA	11	150	130
TRI.B200EMA	15	200	210
TRI.B250EMA	19	250	330

WOOD RASPS


■ RAB.DRDMDA - Half-round second-cut rasps medium cut



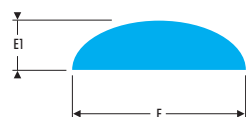
NFE 75-001, NFE 75-002

- Second-cut rasps with handle.
- RAB.DRDB250EMA - RAB.DRDMD300EMA: Rasp with handle.
- Finish: ergonomic handle in plastic resistant to workshop solvents.
- Designed for soft materials, aluminium, lead, plastic or wood.



	E x E1 [mm]	L [mm]	ΔΔ [g]
RAB.DRDMD250A	25 x 7	250	260
RAB.DRDMD300A	30,0 x 8,5	300	420
RAB.DRDMD250EMA	25 x 7	250	300
RAB.DRDMD300EMA	30,0 x 8,5	300	380

■ RAB.DRDBA - Half-round bastard rasps large cut



NFE 75-001, NFE 75-002

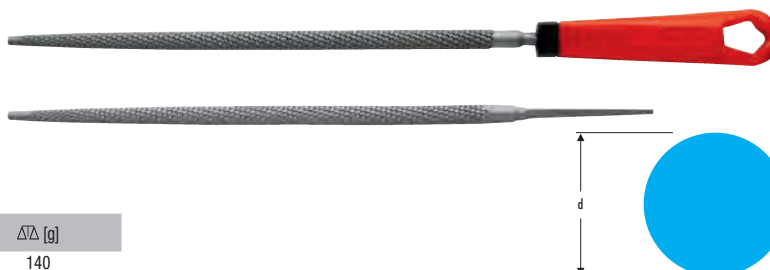
- Second-cut rasps with handle.
- RAB.DRDB300EMA: Rasp with handle.
- Finish: ergonomic handle in plastic resistant to workshop solvents.
- Designed for roughing work, soft materials, aluminium, lead, plastic or wood.



	E x E1 [mm]	L [mm]	ΔΔ [g]
RAB.DRDB250A	25 x 7	250	260
RAB.DRDB300EMA	30,0 x 8,5	300	480

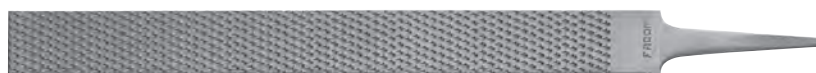
■ **RAB.RDA - Round second-cut rasps medium cut**

- Round rasps with handle.
- RAB.RD250EMA: Rasp with handle.
- Finish: ergonomic handle in plastic resistant to workshop solvents.
- Designed for soft materials, aluminium, lead, plastic or wood.



	d [mm]	L [mm]	$\Delta\Delta$ [g]
RAB.RD250A	10	250	140
RAB.RD250FMA	10	250	180

- Flat rasps with handle.
- Bastard finish: recommended for roughing work.
- Second cut finish recommended for current work.
- Designed for current work, for soft materials, aluminium, lead, plastic or wood.




	E x E1 [mm]	L [mm]	$\Delta\Delta$ [g]
RAB.PB250A	25 x 6	250	320
RAB.PMD250A	25 x 6	250	320



■ **AS - Selections of 6 and 12 needle files**

- AS.6L: Selection of 6 needle files: round (RD), half-round (DRD), flat entry (DPE), square (CAR), triangular (TRI), tile (PAM).
- AS.12L: Selection of 12 needle files: round (RD), half-round (DRD), flat entry (DPE), crossing file (FS), knife (CT), square (CAR), triangular (TRI), file (PAM), strip (BAR), BR tile (PAMBR), hook (CRO), oval (OV).
- T0 for rough filing.
- T2 for precise filing.



	L [mm]	Content set	Contents	Files	$\Delta\Delta$ [g]
AS.6L140T0A	140	6	Plastic wallet	T0	115
AS.6L140T2A	140	6	Plastic wallet	T2	115
AS.6L160T0A	160	6	Plastic wallet	T0	140
AS.6L160T2A	160	6	Plastic wallet	T2	140
AS.12LBC100T0A	100	12	Cardboard box	T0	55
AS.12LBC100T2A	100	12	Cardboard box	T2	55
AS.12LBP140T0A	140	12	Plastic box	T0	115
AS.12LBP140T2A	140	12	Plastic box	T2	115
AS.12LBP160T0A	160	12	Plastic box	T0	140
AS.12LBP160T2A	160	12	Plastic box	T2	140
AS.12LTP180T0A	180	12	Plastic wallet	T0	175
AS.12LTP180T2A	180	12	Plastic wallet	T2	175



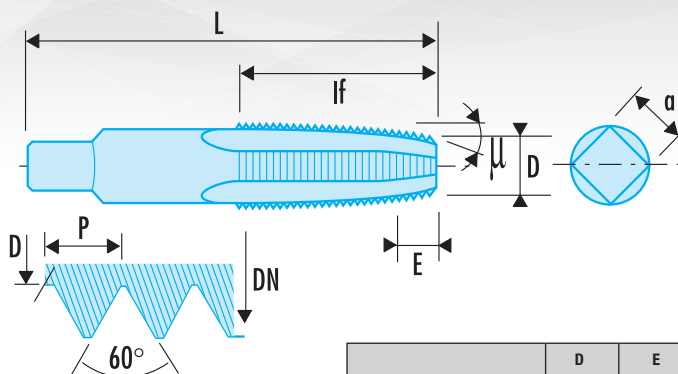
TAPS

TAP SELECTION GUIDE



- Ground-thread backed-off taps.
- ISO metric RH thread.6H machining.
- Set of 2 (ref. T2) for soft metals:
1 taper tap, 1 bottoming tap.
- Set of 3 (ref. T3) for hard metals:
1 taper tap, 1 second tap, 1 bottoming tap.

- Max. hardness: 70 daN/mm²:
- for taps 227 and 80 daN/mm²
- for taps 227.S.



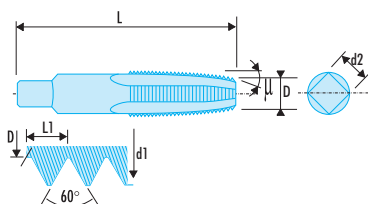
	D	E
Second	= 6 P	6°
Bottoming DN - 1.2p.	= 3.5 P	9°
Bottoming 18°	= 2 P	18°

■ 227 - Standard taps



NF ISO 529, NFEN 22857, ISO 529, ISO 2857

- HSS steel.
- 227.T3: Set of 3 taps (taper, second and bottoming).
- 227.T2: Set of 2 taps (taper and bottoming).



Ref	d1 [mm]	d2 [mm]	L [mm]	L1 [mm]	Content set	ΔΔ [g]
227.3X50T3	3	2,50	48	0,50	x 3	20
227.4X70T3	4	3,15	53	0,70	x 3	25
227.5X80T3	5	4,00	58	0,80	x 3	40
227.6X100T3	6	5,00	66	1,00	x 3	50
227.7X100T3	7	5,60	66	1,00	x 3	60
227.8X125T3	8	6,30	72	1,25	x 3	85
227.9X125T3	9	7,10	72	1,25	x 3	100
227.10X150T3	10	8,00	80	1,50	x 3	140
227.12X175T3	12	7,10	89	1,75	x 3	150
227.14X200T3	14	9,00	95	2,00	x 3	240
227.16X200T3	16	10,00	102	2,00	x 3	305
227.18X250T3	18	11,20	112	2,50	x 3	460
227.20X250T3	20	11,20	112	2,50	x 3	490
227.3X50T2	3	2,50	48	0,50	x 2	10
227.4X70T2	4	3,15	53	0,70	x 2	10
227.5X80T2	5	4,00	58	0,80	x 2	15
227.6X100T2	6	5,00	66	1,00	x 2	25
227.7X100T2	7	5,60	66	1,00	x 2	45
227.8X125T2	8	6,30	72	1,25	x 2	60
227.10X150T2	10	8,00	80	1,50	x 2	70
227.12X175T2	12	7,10	89	1,75	x 2	80

TAPS

227.S - "High performance" cobalt taps

NF ISO 529, NFEN 22857, ISO 529, ISO 2857

- Molybdenum and cobalt steel.
- The hardness of cobalt increases torque resistance and wear compared with standard taps.
- 227.ST3: Set of 3 taps (taper, second and bottoming).
- 227.ST2: Set of 2 taps (taper and bottoming).



	d1 [mm]	d2 [mm]	L [mm]	L1 [mm]	Content set	ΔΔ [g]
227.S3X50T3	3	2,50	48	0,50	x 3	15
227.S4X70T3	4	3,15	53	0,70	x 3	25
227.S5X80T3	5	4,00	58	0,80	x 3	40
227.S6X100T3	6	5,00	66	1,00	x 3	50
227.S8X125T3	8	6,30	72	1,25	x 3	85
227.S10X150T3	10	7,10	80	1,50	x 3	140
227.S12X175T3	12	8,00	89	1,75	x 3	150
227.S3X50T2	3	2,50	48	0,50	x 2	5
227.S4X70T2	4	3,15	53	0,70	x 2	10
227.S5X80T2	5	4,00	58	0,80	x 2	15
227.S6X100T2	6	5,00	66	1,00	x 2	25
227.S7X100T2	7	5,60	66	1,00	x 2	45
227.S8X125T2	8	6,30	72	1,25	x 2	50
227.S9X125T2	9	7,10	72	1,25	x 2	50
227.S10X150T2	10	8,00	80	1,50	x 2	70
227.S12X175T2	12	7,10	89	1,75	x 2	80
227.S14X200T2	14	9,00	95	2,00	x 2	160
227.S16X200T2	16	10,00	102	2,00	x 2	200
227.S18X250T2	18	11,20	112	2,50	x 2	290



DIES

221 - Split dies

NF ISO 261, ISO 261, DIN ISO 261

- ISO metric RH thread.
- Chrome-vanadium HSS hardened to 62/64 HRC (234 daN/mm²).
- Tapered adjusting screw.



	d [mm]	d1 [mm]	d2 [mm]	E [mm]	E1 [mm]	ΔΔ [g]
221.3X50	25,4	3	0,50	8	3,5	25
221.4X70	25,4	4	0,70	8	3,5	25
221.5X80	25,4	5	0,80	8	3,5	30
221.6X100	25,4	6	1,00	9	3,5	30
221.7X100	25,4	7	1,00	9	3,5	30
221.8X125	25,4	8	1,25	9	3,5	30
221.9X125	25,4	9	1,25	9	3,5	30
221.10X150	38,1	10	1,50	13	6,0	80
221.12X175	38,1	12	1,75	13	6,0	90
221.14X200	38,1	14	2,00	13	6,0	80
221.16X200	38,1	16	2,00	13	6,0	75
221.18X250	38,1	18	2,50	15	8,0	75



THREADING AND TAPPING TOOL SETS

221 - Tap and die sets



NFE 75-001, NFE 75-002

- Each selection includes sets of two taps per dimension: taper and bottoming.
- Selections Ref 227.SJ1 and 227.SJ2 include cobalt taps (Ref 227.S).
- Tray PL.47 and box BT.109G: for selection Ref 224.227J1 and 221.227SJ1.
- Tray PL.46 and box BT.105: for selection Ref 224.227J2 and 221.227SJ2.



	d [mm]	H [mm]	L [mm]	P [mm]	ΔΔ [kg]
221.227J1	M3 - M4 - M5 - M6 - M7 - M8 - M9 - M10 - M12	53	470	195	3.1
221.227SJ1	M3 - M4 - M5 - M6 - M7 - M8 - M9 - M10 - M12	53	470	195	3.1
221.227J2	M3 - M4 - M5 - M6 - M7 - M8 - M9 - M10 - M12 - M14 - M16 - M18	58	540	284	5.7
221.227SJ2	M3 - M4 - M5 - M6 - M7 - M8 - M9 - M10 - M12 - M14 - M16 - M18	58	540	284	5.7

227.A - Tap and drill-bit sets



NFE 75-001, NFE 75-002

- Each selection includes sets of 3 taps per dimension: taper, second and bottoming.
- Selection Ref 227.SJ2A includes cobalt taps (Ref 227.S).
- Supplied in metal box BT.228J2.



	d [mm]	H [mm]	L [mm]	P [mm]	Drill Bits	ΔΔ [kg]
227.J2A	M3 - M4 - M5 - M6 - M8 - M10 - M12	57	105	172	2,5 - 3,3 - 4,2 - 5,0 - 6,8 - 8,5 - 10,2 mm	1.1
227.SJ2A	M3 - M4 - M5 - M6 - M8 - M10 - M12	57	105	172	2,5 - 3,3 - 4,2 - 5,0 - 6,8 - 8,5 - 10,2 mm	1.1

227 - Tap set



NFE 75-001, NFE 75-002

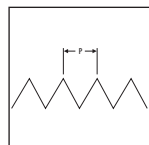
- Each selection includes sets of 3 taps per dimension: taper, second and bottoming.
- Selection Ref 227.SJ1 includes cobalt taps (Ref 227.S).
- Supplied in metal box BT.228J1.



	d [mm]	H [mm]	L [mm]	P [mm]	Qty	ΔΔ [g]
227.J1	M3 - M4 - M5 - M6 - M8 - M10 - M12	31	118	118	21 taps	720
227.SJ1	M3 - M4 - M5 - M6 - M8 - M10 - M12	31	118	118	21 cobalt taps	720

THREAD RESTORING TOOLS

237 - Thread restoring tool



- To restore male and female screw threads.



	L [mm]	P [mm]	Thread	ΔΔ [g]
237.A	230	75 - 100 - 125 - 150 - 175 - 200 - 250 - 300	SI	120
237.B	230	80 - 100 - 125 - 150 - 175 - 200 - 250 - 300	ISO	125
237.C	230	10F - 11F - 12F - 14F - 16F - 18F - 20F - 24F	WHITWORTH	125

TOOLS FOR TAPS AND DIES

830A.L - Long ratcheting tap wrenches

- Ideal for cutting threads in tight recesses.
- Two-way ratchet.
- Ratchet lock.
- Finish: polished chromed.



	d [mm]	L [mm]	Open Position maxi [mm]	For Tapp	ΔΔ [g]
830A.5L	20,5	250	5	M6	230
830A.10L	25,5	300	8	M12	415

830A - Short ratcheting tap wrenches

- Two-way ratchet.
- Ratchet lock.
- Finish: polished chromed.



	d [mm]	L [mm]	Open Position maxi [mm]	Open Position mini [mm]	For Tapp	Tapping	ΔΔ [g]
830A.5	20,5	85	5	5	M6	M6	165
830A.10	25,5	105	8	8	M12	M12	312

830A.RN - Repair kits

- Comprising chuck and spring.
- 830A.5RN, for 830A.5 and 830A.5L.
- 830A.10RN, for 830A.10 and 830A.10L.



	ΔΔ [g]
830A.5RN	15
830A.10RN	15

831 - Adjustable tap wrenches

NF E 66-130

- Pressure-cast Zamak body. Machined and hardened clamp.
- Finish: grey hammered finish.



	L [mm]	Open Position maxi [mm]	Open Position mini [mm]	Tapping	ΔΔ [g]
831.1	180	2-8	2-8	M3->M7	100
831.2	300	4-11	4-11	M5->M12	300
831.3	385	5-16	5-16	M6->M12	705

832 - Die stocks

- Pressure-cast Zamak body for accurate centring of the die.
- Finish: grey hammered finish.



	d ["]	d [mm]	L [mm]	Organizer for	ΔΔ [g]
832.1'	1	25,4	220	221.3x50 --> 221.9x125	115
832.1'1/2	1'-1/2	38,1	325	221.10x150 --> 221.18x250	410



FLUO

RFid



WORKSHOP DRILL BITS

■ 222A.T - Ground twist drills



- For steel up to 800 MPA, stainless steel, grey cast-iron and aluminium alloy.



	d [mm]	L [mm]	ΔΔ [g]
222A.T1	1,0	35	5
222A.T1,5	1,5	40	5
222A.T2	2,0	50	5
222A.T2,5	2,5	57	5
222A.T3	3,0	62	5
222A.T3,3	3,3	65	5
222A.T3,5	3,5	70	5
222A.T4	4,0	75	10
222A.T4,2	4,2	75	10
222A.T4,5	4,5	80	10
222A.T5	5,0	85	10
222A.T5,5	5,5	92	15
222A.T6	6,0	92	15
222A.T6,5	6,5	102	20
222A.T6,8	6,8	105	25

	d [mm]	L [mm]	ΔΔ [g]
222A.T7	7,0	107	25
222A.T7,5	7,5	110	30
222A.T8	8,0	117	35
222A.T8,5	8,5	117	40
222A.T9	9,0	127	50
222A.T9,5	9,5	127	55
222A.T10	10,0	132	60
222A.T10,2	10,2	132	65
222A.T10,5	10,5	132	70
222A.T11	11,0	142	80
222A.T11,5	11,5	142	90
222A.T12	12,0	152	100
222A.T12,5	12,5	152	110
222A.T13	13,0	152	115

■ 222A.TJ - Sets of ground twist drills



NF ISO 235, ISO 235, DIN 338

- For steel up to 800 MPA, stainless steel, grey cast-iron and aluminium alloy.
- Sets 222A.TJ19 and 222A.TJ25: Bits with 5/10 mm increments.
- Sets 222A.TJ50 and 222A.TJ81: Bits with 1/10 mm increments.



	d maxi [mm]	Content set	Dimension [mm]	ΔΔ [g]
222A.TJ19	1 - 10	19	165 x 110 x 35	730
222A.TJ25	1 - 13	25	190 x 110 x 54	1390
222A.TJ50	1 - 5,9	50	135 x 120 x 35	750
222A.TJ81	2 - 10	81	235 x 210 x 145	760

WORKSHOP DRILL BITS

Set of 32 ground twist drills

NF ISO 235, ISO 235, DIN 338

- For steel up to 800 MPA, stainless steel, grey cast-iron and aluminium alloy.
- 20 drill bits Ref 222A.T, diam.: 1 --> 10.5 mm (in 5/10 increments).
- 12 drill bits for riveting and tapping dimension diam.: 1.9 - 2.1 - 2.6 - 2.9 - 3.2 - 3.3 - 3.8 - 4.2 - 5.1 - 6.8 - 7.9 - 10.2 mm.
- Dimensions (L x W x H.): 170 x 110 x 50 mm.

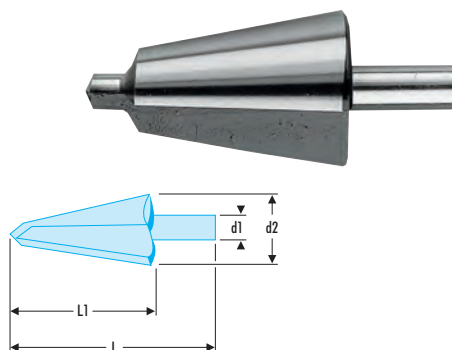
	H [mm]	L [mm]	$\Delta\Delta$ [kg]
222A.TJ32	50	170	1.2



229A - Boring bits

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

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



Stepped bits

- For precision-drilling straight bores in all materials.
- No pilot hole required.
- Cross-sharpening: self-centering.
- More aggressive cut for easier drilling and no burs.
- Better shaving removal.
- Less vibration, quieter operation.
- Parallel shank with 3 flats for positive rotation.
- Laser-engraved diameter marking in a groove.
- 678006: Special ISO gland.
- 678014: PG size step drill.

	d mini - maxi [mm]	d1 [mm]	L [mm]	$\Delta\Delta$ [g]
229A.ST0	4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12	6	65	25
229A.ST1	4 - 6 - 8 - 10 - 12 - 14 - 16 - 18 - 20	8	75	65
229A.ST2	4 - 6 - 9 - 12 - 15 - 18 - 21 - 24 - 27 - 30 - 33 - 36 - 39	10	107	315
229A.ST3	6 - 9 - 13 - 16 - 19 - 21 - 23 - 26 - 29 - 32 - 35 - 38	10	100	320
678006	6,5 - 8,5 - 10,5 - 12,5 - 16,5 - 20,5 - 25,5 - 29,0 - 32,5 - 36,5 - 40,5	10	96	310
678014	6,0 - 9,0 - 12,5 - 15,2 - 18,6 - 20,4 - 22,5 - 26,0 - 28,3 - 30,5 - 34,0 - 37,0	10	100	300



WORKSHOP DRILL BITS

■ Set of 3 tapered bits



- Capacity: 3 to 30.5 mm.
- Supplied with a bottle of lubricant.
- Supplied in a pressed sheet box, dim. (L. x W. x H.): 120 x 100 x 38 mm.



	H [mm]	L [mm]	ΔΔ [g]
229A.J3	38	120	555

BITS FOR IMPACT MACHINERY

■ Set of 7 short drill bits for straight chucks



- Sharpened carbide tip inserts.
- Ground from stock with L-groove.
- Diameters: 4 - 5 - 6 - 7 - 8 - 10 - 12 mm.
- In a steel case, dim. (L. x W. x H.): 155 x 100 x 30 mm.



	H [mm]	L [mm]	ΔΔ [g]
223.SJ7	30	155	355

VARIABLE PITCH HOLESAWS

BIMETAL HSS HOLESAW

For cutting holes through standard materials and metals used in mechanical engineering, sheet-metalworking and plumbing.

- High-speed steel teeth, hardness > 63 HRC.
- Holesaw back in thick sheet steel to minimise vibration.
- Side slots and holes for chip removal.



Quick assembly :
chuck, pilot drill, spring, blade.

609A - Variable pitch holesaws

- Variable pitch holesaws 4 to 6 mm.
- Softer cut and reduced vibration.
- Cutting depth 34 mm.
- Chuck and drill for holesaws 19 to 29 mm 609A.M1.
- Chuck and drill for holesaws 35 to 64 mm 609A.M2.
- Set of 2 spare bits + chuck screws: 609.M-ACC.

609A.29



609A.67



	d [mm]	L [mm]	ΔΔ [g]
609A.19	19	51	30
609A.22	22	51	45
609A.29	29	51	80
609A.35	35	51	100
609A.38	38	51	110
609A.40	40	45	140
609A.44	44	45	145

	d [mm]	L [mm]	ΔΔ [g]
609A.51	51	45	150
609A.57	57	45	165
609A.64	64	45	185
609A.65	65	45	200
609A.67	67	45	230
609A.68	68	45	285

HOLESAW SETS

609A.J - Set of variable-pitch holesaws with chucks

- Comprising:
 - 609A.M1: 1 chuck and drill for holesaws 19 to 29 mm.
 - 609A.M2: 1 chuck for holesaws 35 to 64 mm.
 - 609A.M-ACC: Set of 2 spare bits + chuck screws.
- Supplied in a plastic case, dim. (L. x W. x H.): 245 x 185 x 75 mm.



	d [mm]	H [mm]	L [mm]	ΔΔ [kg]
609A.J1	22 - 29 - 35 - 44 - 51 - 64	75	245	1.8
609A.J3	19 - 22 - 29 - 35 - 38 - 44 - 51 - 57 - 64	75	245	2.1

MILLS

VFA - Cutters



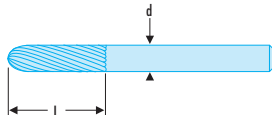
VF.1200



VF.1202



VF.1210

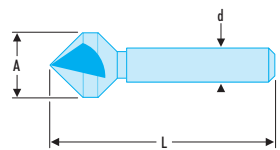


- Tungsten carbide.
- Right-hand spiral.
- Cutter shank diameter 6 mm.



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

229.TT - 90° cone bits



- 3 HSS cutting edges for countersunk screw holes.
- Requires a pilot hole with a cylindrical bit ref 222A.T.



ED	A [mm]	d [mm]	L [mm]	ΔΔ [g]
229.TT2	10,4	6	50	10
229.TT3	16,5	10	60	30
229.TT4	20,5	10	63	50
229.TT5	25,0	10	67	70

90° cone bits



- Comprising:
- 4 bits: 229.TT2 --> 229.TT5 (and lubricant).
- In a steel case, dim. (L. x W. x H.): 120 x 100 x 38 mm.



ED	H [mm]	L [mm]	ΔΔ [g]
229.TT4	38	120	450

SCRAPERS

Three-square scraper



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



ED	L [mm]	ΔΔ [g]
231	200	180

Half-round curved scraper

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



	L [mm]	ΔΔ [g]
232	200	180

Flat scraper

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



	L [mm]	ΔΔ [g]
329	200	185

Set of 3 stainless steel scrapers

- Stainless steel blade, thickness: 0.8 mm.
- Reinforced striking zone.
- 3 shapes:
 - Straight, width: 32 mm.
 - Straight, width: 50 mm.
 - Angled, width: 32 mm.



	L [mm]	ΔΔ [g]
235.J1	215	427

Set of 3 flexible spatulas

- Stainless steel blade, thickness: 0.5 mm.
- 3 shapes:
 - Straight, width: 32 mm.
 - Straight, width: 50 mm.
 - Angled, width: 32 mm.
- Width: 32 - 50 - 75 mm.



	L [mm]	ΔΔ [g]
237.J1	215	273



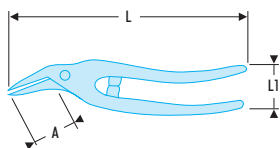
FLUO

RFid



METAL SHEARS

883 - Scroll shears

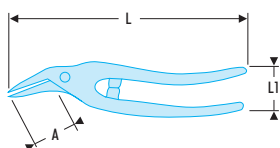


- Specially-shaped nose for accurately following detailed patterns.
- Steel end stops.
- Left-cut scroll shears: 883B.G.
- Right-cut scroll shears: 883B.
- Right cut large-capacity scroll shears: 883.32.
- Finish: Epoxy paint.



	A [mm]	L [mm]	L1 [mm]	Capacity Semi-hard steel [mm]	Capacity Stainless [80 kg/mm ²]	ΔΔ [g]
883B.G	46	260	43 - 170	1,0	0,8	535
883B	50	260	43 - 170	1,0	0,8	530
883.32	73	320	47 - 170	1,2	0,9	765

884 - Panel shears

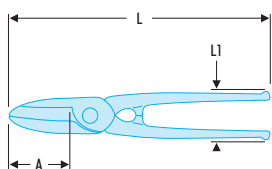


- The bottom-blade clearance makes these shears ideal for continuous straight cuts in large panels, leaving clean edges.
- Steel end stop.
- Right-hand panel shears: 884B.
- Right-hand high capacity panel shears: 884.30.
- Finish: Epoxy paint.



	A [mm]	L [mm]	L1 [mm]	Capacity Semi-hard steel [mm]	Capacity Stainless [80 kg/mm ²]	ΔΔ [g]
884B	40	260	43 - 130	1,0	0,8	670
884.30	52	300	45 - 150	1,2	0,9	840

General-purpose shears

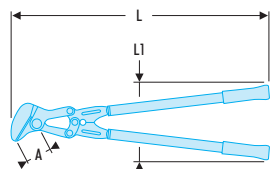


- 2 wide blades.
- Capacity:
 - Stainless 80 kg/mm²: 0.5 mm.
 - Semi-hard steel: 0.8 mm.
- Forged steel end stop.
- Finish: Epoxy paint.



	A [mm]	L [mm]	L1 [mm]	ΔΔ [g]
880	55	260	45 --> 130	520

882A-884A - Two-hand shears



884A.65

- Very high demultiplication.
- Forged steel end stop.
- Cutting capacity for blue sheet 120 kg/mm²: 2.0 mm (882A.65) and 2.5 mm (884A.65).
- Finish: Zinc-coated blades, tubular handles with neoprene grips.
- Spare blades:
 - 882A.L65 for 882A.65.
 - 884A.L65 for 884A.65.



	A [mm]	L [mm]	L1 [mm]	ΔΔ [kg]
882A.65	50	665	210 --> 820	2.1
884A.65	48	660	200 --> 790	2.4

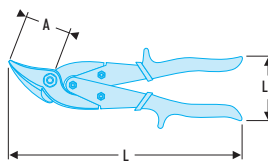
METAL SHEARS

■ Right-cut universal scroll shears

ASME B107.500

- Demultiplication reducing efforts.
- Forged, hardened and burnished blades.
- Red sheathed grips with guard.
- Inset opening spring.
- Lock-closed catch.
- Cutting capacity.
 - Stainless 80 kg/mm²: 0.8 mm.
 - Semi-hard steel: 0.8 mm.

	A [mm]	L [mm]	L1 [mm]	ΔΔ [g]
882A	32	250	45 - 130	475

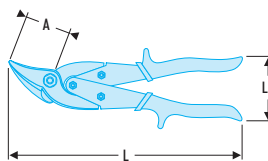


■ 982 - Compound scroll shears

ASME B107.500

- Panel-type shears with slightly serrated cutting edges to prevent workpiece slip.
- Good demultiplication and inset opening spring.
- Forged chrome molybdenum blades.
- Ergonomic non-slip bi-material grips.
- Colour-coded according to direction of cut.
 - Red: left cut (Ref 982.G).
 - Green: right cut (Ref 982).
- Jaw lock catch.
- Cutting capacity.
 - Stainless 80 kg/mm²: 0.8 mm.
 - Semi-hard steel: 1.2 mm.

	A [mm]	L [mm]	L1 [mm]	ΔΔ [g]
982	45	245	65 - 190	380
982.G	45	245	65 - 190	380

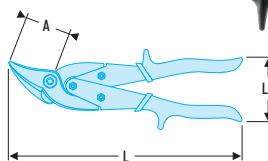


■ 985 - "Aircraft" shears

ASME B107.500

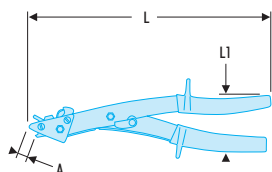
- High demultiplication allows long runs without effort.
- Good demultiplication and inset opening spring.
- Slightly serrated cutting edges prevent workpiece slip.
- Forged chrome molybdenum blades.
- Ergonomic non-slip bi-material grips.
- Colour-coded according to direction of cut.
 - Red: left cut (Ref 985.LE).
 - Green: right cut (Ref 985.RI).
 - Yellow: straight cut (Ref 985.ST).
- Jaw lock catch.
- Cutting capacity:
 - Stainless 80 kg/mm²: 0.8 mm.
 - Semi-hard steel: 1.2 mm.

	A [mm]	L [mm]	L1 [mm]	ΔΔ [g]
985.LE	55	255	60 - 150	400
985.RI	55	255	60 - 150	400
985.ST	55	255	65 - 165	390



METAL SHEARS

Nibblers



- Inset opening spring and high demultiplication allow effortless cutting along intricate patterns, removing a strip 2.8 mm wide.
- Die and blade system severs the strip at end of run.
- Top blades cut wire up to 2 mm in semi-hard steel and 2.5 mm in mild steel.
- Lock-closed catch.
- Cutting capacity.
 - Stainless 80 kg/mm²: 0,8 mm.
 - Semi-hard steel: 1 mm.
- Spare blade: 887A.L1.

	A [mm]	L [mm]	L1 [mm]	ΔΔ [g]
887A	7	260	45 - 110	520

990.B BOLT CROPPERS

**Powerful**

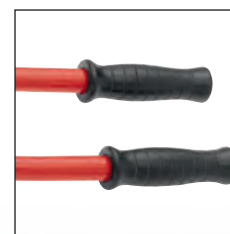
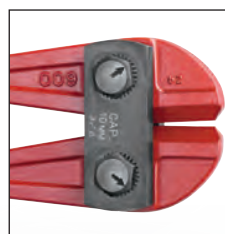
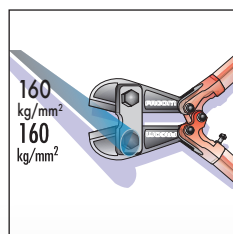
- Increased steel-cutting capacity up to 160 kg/mm².
- Available with forged arms.

Durable

- Harder blades for a more durable cut.
- Body specially treated to reduce play to a minimum.
- High performance chrome blades.
- Eccentric screw adjustment of play between blades.

Efficient

- Minimum cutting effort.
- Handgrip with guard for greater comfort



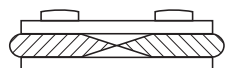
BOLT CROPPERS

BOLT CROPPERS

990.BF - Axial cut bolt croppers



- Forged arms = less cutting flexion.
- High performance chrome blades.
- Harder blades for a more durable cut.
- Eccentric screw adjustment of play between blades.
- Hand grip with guard for greater comfort.



	Ø [mm]: 60 - 140 - 160 kg/mm ²	Blade	L ["]	L [mm]	ΔΔ [kg]
990.BF0	7,0 - 6,0 - 5,5	990.LB0	18	450	1.7
990.BF1	10 - 8 - 7	990.LB1	24	600	2.8
990.BF2	13 - 9 - 8	990.LB2	30	750	4.2
990.BF3	16 - 10 - 9	990.LB3	35	900	6.4
990.BF4	18 - 11 - 10	990.LB4	41	1050	8.6

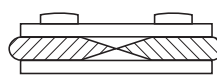
BOLT CROPPERS

■ 990.BF - Axial cut tubular arm bolt croppers

- High performance chrome steel blades.
- Harder blades for a more durable cut.
- Eccentric screw adjustment of play between blades.
- Hand grip with guard for greater comfort.



	Ø [mm]: 60 - 140 - 160 kg/mm ²	Blade	L ["]	L [mm]	ΔΔ [kg]
990.B0	7,0 - 6,0 - 5,5	990.LB0	18	450	1.7
990.B1	10 - 8 - 7	990.LB1	24	600	2.8
990.B2	13 - 9 - 8	990.LB2	30	750	4.2
990.B3	16 - 10 - 9	990.LB3	35	900	6.4
990.B4	18 - 11 - 10	990.LB4	41	1050	8.6

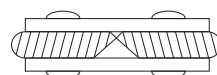


■ 990.RB0 - Flush-cut bolt croppers

- Specific blades for high performance chrome steel flush cutting.
- Harder blades for a more durable cut.
- Eccentric screw adjustment of play between blades.
- Hand grip with guard for greater comfort.
- 990.BRF0: Forged arms.
- 990.R00 - 990.R0: Tubular arms.



	Ø [mm]: 60 - 140 - 160 kg/mm ²	Blade	L ["]	L [mm]	ΔΔ [kg]
990.RB00	6 - 5 - 5	990.LRB00	12	350	1.0
990.RB0	7,0 - 6,0 - 5,5	990.LRB00	18	450	1.7
990.BRF0	7,0 - 6,0 - 5,5	990.LRB0	18	450	1.7



■ 990.LB - Replacement blades for series 990.B (with screws)

- Bolt-cropper blades are consumables and subject to normal wear. Facom guarantees their conformity to dimensional standards and suitability for recommended applications.
- Actual service life is dependent on conditions of use.
- Supplied with fasteners.

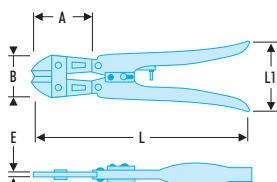


	For	ΔΔ [kg]
990.LB0	990.BF0 - 990.B0	0,650
990.LB1	990.BF1 - 990.B1	1,050
990.LB2	990.BF2 - 990.B2	1,650
990.LB3	990.BF3 - 990.B3	2,400
990.LB4	990.BF4 - 990.B4	3,400
990.LRB00	990.RB00	0,450
990.LRB0	990.BRF0 - 990.RB0	0,650



BOLT CROPPERS

■ Mini croppers



- Compact, lightweight tool with demultiplication system designed to cut hard and semi-hard wire: piano wire, bolts, rivets, pins and nails, etc.
- Forged, hardened blades.
- Cutting capacity:
 - Piano wire: max. diameter 2 mm to 200 kg/mm².
 - Soft wire: max. diameter 4 mm to 60 kg/mm².
- Ergonomic hardened pressed-steel handles with adjustable, shock-absorbing end stop.
- Spring-assisted opening.
- Blades lock in closed position.
- Finish: bronzed blades, painted grips.

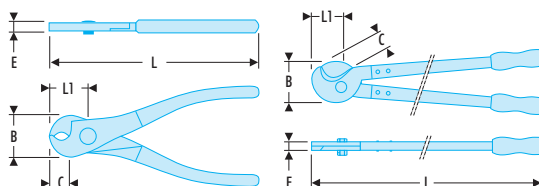


	A [mm]	B [mm]	E [mm]	L [mm]	L1 [mm]	ΔΔ [g]
997A.20	54,5	40	4,5	210	57	275

CABLE CUTTERS

COPPER AND ALUMINIUM CABLE CUTTERS

■ 412 - Cable cutters

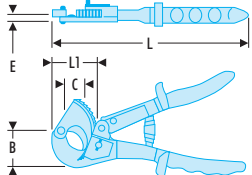


- 412B.10 "Compact" cable cutters:
 - Capacity: diameter 10 mm.
 - Integral opening spring.
 - Lock closed catch.
 - Cross proof design.
- 412.16 "Standard" cable cutters:
 - Capacity: diameter 16 mm.
 - Heavy-duty head, cross proof design.
 - Safety stop.
- 412.30 - 412.42 "Heavy-duty" cable cutters:
 - Capacity: 32 mm (Ref. 412.30) and 42 mm (Ref. 412.42).
- Powerful action, cuts without crushing electric cables.
- Safety stop.
- Set of blades for 412.30: 412.L30.
- Set of blades for 412.42: 412.L42.



	B [mm]	C [mm]	d [mm]	d mini - maxi [mm]	E [mm]	L [mm]	L1 [mm]	ΔΔ [kg]
412B.10	28	21	10	53 - 190	10	170	40	0.225
412.16	54	28	16	80 - 370	14	290	45	0.670
412.30	70	40	32	155 - 1000	16	600	60	2.5
412.42	115	70	42	200 - 1300	16	800	90	3.7

■ 413 - Ratchet cable cutters



- Ratchet-blade system for easy cut through thick gauge cables.
- Particularly useful in confined spaces.
- Non-slip grips with guards.
- Capacities: 32 - 52 mm.
- Spare blade for 413A.32: 413A.L32.



	B [mm]	C [mm]	d maxi [mm]	E [mm]	L [mm]	L1 [mm]	ΔΔ [g]
413A.32	58	34	32	7,8	255	65	385
413.52	80	53	52	8,0	275	75	800

COPPER AND ALUMINIUM CABLE CUTTERS

Manual 10 mm diameter copper/aluminium cable cutters

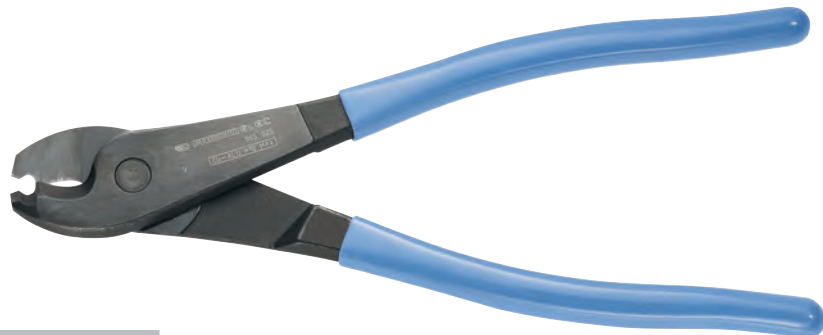
- Notched end for stripping wires.
- For single and multi-strand cables.
- Capacity:
 - Multi-strand cable: diameter 10 mm.
 - Single strand copper: diameter 8 mm.
 - Almelec: diameter 6 mm.



	L [mm]	$\Delta\Delta$ [g]
985912	165	225

Manual 18 mm diameter copper/aluminium cable cutters

- Notched end for stripping wires.
- For single and multi-strand cables.
- Capacity:
 - Multi-strand cable: diameter 18 mm.
 - Single strand copper: diameter 15 mm.
 - Almelec: diameter 10 mm.



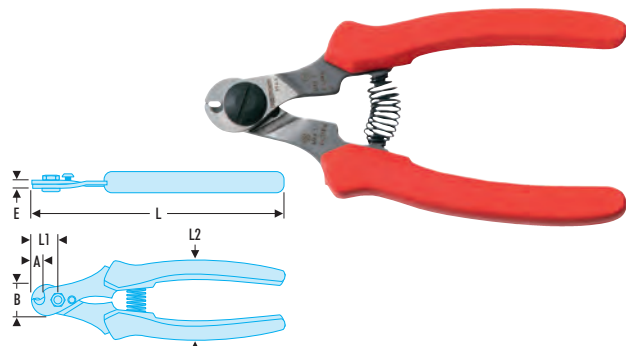
	L [mm]	$\Delta\Delta$ [g]
985925	231	350

STEEL CABLE CUTTERS

"Compact" steel cable cutters

NFE 75-001, NFE 75-002

- Lightweight tool with blades and cutting angle designed for cutting solid materials and multi-strand cables.
- Push catch to lock closed, simply squeeze handles to release.
- Blades hardened to 60-62 HRC.
- Capacity:
 - 5 mm for 60 - 100 kg/mm² soft steel cable.
 - 4 mm for 130 - 160 kg/mm² hard steel cable.
 - 3 mm for 60 kg/mm² round cable.

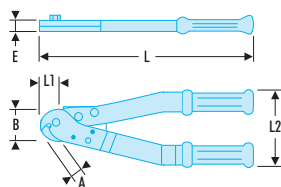


	A [mm]	B [mm]	E [mm]	L [mm]	L1 [mm]	L2 [mm]	$\Delta\Delta$ [g]
996.5	7	21	8	165	12	50 - 125	165



STEEL CABLE CUTTERS

■ "Standard" steel cable cutters



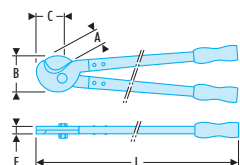
NFE 75-001, NFE 75-002

- Blade inserts in high-performance steel.
- Compact and powerful with ergonomic grips.
- Capacity:
 - 8 mm for 60 - 100 kg/mm² soft steel cable.
 - 7 mm for 130 - 160 kg/mm² hard steel cable.
 - 6 mm for 60 kg/mm² round cable.
- Spare blades: 996.L8.



	A [mm]	B [mm]	E [mm]	L [mm]	L1 [mm]	L2 [mm]	ΔΔ [g]
996.8	12	42	16	340	21	115 - 470	890

■ Steel cable cutters



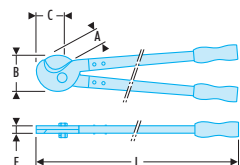
NFE 75-001, NFE 75-002

- Compact and powerful model.
- Blade inserts in high-performance steel.
- Cross proof design.
- Capacity:
 - 12 mm for 60 - 100 kg/mm² soft steel cable.
 - 10 mm for 120 - 150 kg/mm² hard steel cable.
 - 8 mm for 60 - 80 kg/mm² round cable.
- Spare blades: 996.L12.



	A [mm]	B [mm]	E [mm]	L [mm]	L1 [mm]	ΔΔ [kg]
996A.12	20	73	16	600	50	2.7

■ "Power" steel cable cutters



NFE 75-001, NFE 75-002

- Maximum power model.
- Forged blades in high-performance steel.
- Cross proof design.
- Ergonomic handles.
- Capacity:
 - 16 mm for 60 - 100 kg/mm² soft steel cable.
 - 13 mm for 120 - 150 kg/mm² hard steel cable.
 - 10 mm for 60 - 80 kg/mm² round cable.
- Spare blades: 996.L16.



	A [mm]	B [mm]	E [mm]	L [mm]	L1 [mm]	ΔΔ [kg]
996.16	28	115	16	800	55	5.0

THE NEW UTILITY KNIFE RANGE



Cutting tools designed for professionals

Uncompromising safety for professional applications

- Recommended by the Health and Safety Committees (CHSCT).
- Avoids the risk of cuts as a result of handling the blade, or blade slippage.



Rigorous quality

- Dynamic endurance tested for mechanism lifetime.
- Load tested for blade-locking.
- Torsion tested to ensure blade retention.
- Tested for resistance to workshop chemicals.

Especially designed for intensive and daily use

- Stainless steel blade guide providing perfect torsion resistance.
- Ergonomic handle for a more comfortable grip.
- Soft finish to avoid slippage.



- Automatic reload model.
- Blade lock feature.



Productivity and efficiency

- In-handle blade storage allows easy blade changes.
- Time-saving and safe.

Safety knife with retractable blade

- Safety knife.
- Blade automatically retracts after use.
- Zamak body.
- ABS cursor, front or side thumb control.
- Supplied with 3 blades (1 factory-mounted and 2 in the body).



	E [mm]	H mini - maxi [mm]	L [mm]	ΔΔ [g]
844.D	27	40,5 - 44,0	176	185



FLUO

RFid



UTILITY KNIVES

■ Retractable utility knife with interchangeable blades



- Choice of 3 blade settings.
- Moulded handle housing 5 blades.
- Zamak body.
- Zinc alloy slide-button.



	$\Delta\Delta$ [g]
844.R	190

■ 18 mm automatically reloading utility knife



- Productivity, accessibility, safety.
- Automatically reloading snap-off blades.
- Ergonomic soft ABS handle.
- Stainless steel blade guide.
- Blade lock knob.
- 6-blade cartridge.
- Integral blade snapper.



	E [mm]	H [mm]	L [mm]	$\Delta\Delta$ [g]
844.S18	24	47	172	160

■ Cutter with 18 mm snap-off blades



- Cutter with snap-off blades.
- Ergonomic soft ABS handle.
- Stainless steel blade guide.
- Automatic blade lock.
- 2-blade cartridge.
- Integral blade snapper.



	E [mm]	H [mm]	L [mm]	$\Delta\Delta$ [g]
844.SE18	24	43	172	90

■ Cutter with 9 mm snap-off blades



- Cutter with snap-off blades.
- Ergonomic soft ABS handle.
- Stainless steel blade guide.
- Automatic blade lock.
- 2-blade cartridge.
- Integral blade snapper.



	E [mm]	H [mm]	L [mm]	$\Delta\Delta$ [g]
844.S9	17	30	149	47

BLADE SELECTION GUIDE

Our cutting tool experience at the service of professionals

A perfectly cut blade guarantees your safety

- A neat, clean cut.
- Does not damage the material to be cut.
- Effortless cutting without the risk of blade slippage or pull-out.
- Saves time.

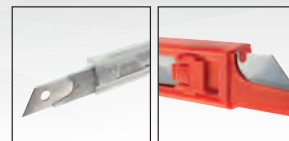


Choosing the right blade

- What material is being cut ? Material, thickness.
- On what backing surface will cutting be performed ? (Does it need protecting ?)
- Is there a risk of slipping ? (uneven surface)
- What is the work environment ?
- What is the frequency of use ?
- What is the desired durability ?

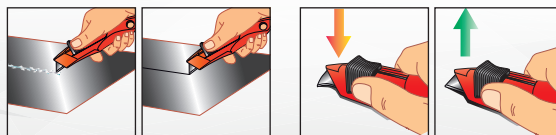
A choice of packaging

- 10 blade dispenser always handy.



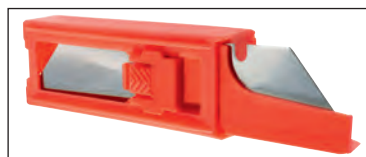
A blade is a compromise between :

- Hardness :
For a strong cutting section and good stress resistance.
- Flexibility :
For stress resistance as well as allowing the blade to twist without deforming for a neat cut.
- Cutting angle :
to guarantee an optimum cut according to the material.



High strength perforated trapezoidal blade

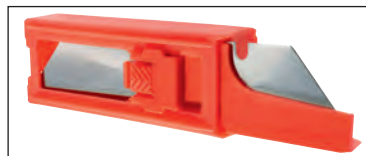
- High strength trapezoidal blade.
- Designed to produce a perfect cut in intensive applications.
- Ideal for cutting: thick cardboard, hose, plastic, resilient foam, heat-shrinkable tubing, nylon strip, plastic tubes, seals.
- Supplied in a 10 blade dispenser.



	E [mm]	H [mm]	L [mm]	ΔΔ [g]
844.TTL10	0,65	19	60	50

High performance safety trapezoidal blade

- High performance trapezoidal blade.
- Rounded corner to avoid risk of accidental cutting.
- Designed to produce a perfect cut in intensive applications.
- Ideal for cutting: thick cardboard, hoses, plastic, resilient foam, heat-shrinkable tubing, nylon strip, plastic tubes, seals.
- Supplied in a 10 blade dispenser.



	E [mm]	H [mm]	L [mm]	ΔΔ [g]
844.TRL10	0,65	19	60	50



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UTILITY KNIVES

■ High strength hook blade

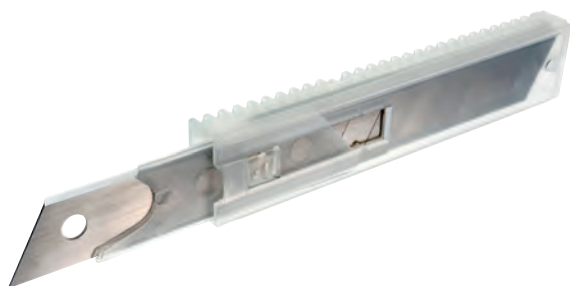


- High strength hook blade.
- Specially designed to protect the backing during cutting.
- Ideal for cutting:
 - Floor finishes, e.g. carpet, lino, PVC or other laid material.
 - Straps and thick fabric.
- Supplied in a 10 blade dispenser.




	E [mm]	H [mm]	L [mm]	ΔΔ [g]
844.TCL10	0,65	19	50	50

■ 18 mm snap-off blades



- 7-segment 18 mm snap-off blade.
- Ideal for all everyday cutting applications:
 - Thick cardboard.
 - Hose.
 - Plastic.
 - Resilient foam.
 - Heat-shrinkable tubing.
 - Nylon strip.
 - Plastic tubes.
 - Seals.
- Warning, snap-off blades are not designed to withstand excessive torsion forces.
- Supplied in a 10 blade dispenser.




	E [mm]	H [mm]	L [mm]	ΔΔ [g]
844.S18L10	0,53	18	110	90

■ 9 mm snap-off blades



- 7-segment 18 mm snap-off blade.
- Ideal for all everyday cutting applications:
 - Thick cardboard.
 - Hose.
 - Plastic.
 - Resilient foam.
 - Heat-shrinkable tubing.
 - Nylon strip.
 - Plastic tubes.
 - Seals.
- Warning, snap-off blades are not designed to withstand excessive torsion forces.
- Supplied in a 10 blade dispenser.



	E [mm]	H [mm]	L [mm]	ΔΔ [g]
844.S9L10	0,43	9,5	84	30

UTILITY KNIVES

"CUT ALL" GENERAL-PURPOSE SHEARS**An effortless clean cut every time**

Aluminium sheet (up to 1 mm thick), hard metal sheet (up to 0.5 mm), PVC, cardboard, rubber, floor coverings up to 5 mm thick, hoses, plastic ties, small diameter pipes, electric cables (up to d 2.5 mm), insulating foam, wrapping paper... and many other applications.

1-Precise: serrated blades, no risk of slipping.

2-Smart: 2 opening positions, adapts to your hand. (26 mm / 36 mm).

3-Safe: Locks in closed position.

4-Comfortable: Non-slip bi-material grips.

980 - Straight serrated shears

980C - Angled serrated shears

- Ideal for cutting long lengths.
- Keeps the hand away from the cutting operation.

Multi purpose shears

- 980: straight blade version.
- 980C: angled blade version.
- Blade opening 29 to 36 mm.
- Handle opening 77 to 102 mm.
- Comfortable: non-slip bi-material grips.
- Safe: locks in closed position.
- Accurate: slightly serrated blade prevents any risk of slippage.
- Ideal for all everyday cutting applications:
 - Cardboard, rubber, PVC, leather 5 mm thick.
 - Thin sheet steel 0.5 mm thick, aluminium sheet up to 1 mm thick.
 - Electric cables up to 2.5 mm diameter.
 - Hoses, tubes, insulating foam, etc.



	B [mm]	C [mm]	L [mm]	ΔΔ [g]
980	67	49	205	200
980C	67	49	205	200

SCISSORS - KNIVES**Sheathed electricians scissors**

- Ergonomic plastic moulded sheathing, left/right hand.
- Long blades, with wire cutter.
- Finish: bi-material grips, burnished blades.



	L [mm]	Blade	ΔΔ [g]
841A.4	143	45 mm	80



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SCISSORS - KNIVES

■ Electricians scissors



- 100% metal handles, left/right hand.
- Short reinforced blades, with wire cutter.
- Finish: polished chromed.



	L [mm]	Blade	ΔΔ [g]
841	150	33 mm	95

■ Heavy Duty Scissors



- Complete structure in steel (blades + handles).
- Crimping part.
- Cabel Cutter Ø 50 mm on both blades.
- Slot for stripping cable (1,5mm - 2,5mm - 4 mm).
- Stainless Steel blade.
- Holder with belt hooking clip.
- Anti-slip ridges on rings for handhold.
- Big and small eye for large or small fingers.



	L [mm]	Blade	ΔΔ [g]
841A.3	160	40 mm	150

■ Multi-purpose scissors



- Multiple use, highly versatile and maximum comfort.
- Exclusive FACOM ergonomic grip for right-handers for better comfort.
- Ideal for cutting thick cardboard, aluminium (thickness 0.2 mm), rubber (thickness 3mm), leather (thickness: 5 mm), rope, etc.
- Stainless steel blades: precision and better durability of the cutting edge.
- Finish: bi-material grips, burnished blades.



	L [mm]	Blade	ΔΔ [g]
841A.9	255	107 mm	210

KNIVES

■ Lock-back knife with bi-material handle



- Blade in polished stainless steel. Blade partially smooth for accurate cutting and another serrated for powerful cutting.
- Quick one-handed opening.
- Knife at the tip of the knife: window breaker function.
- Safe: lock-back.
- Universal hanging hook.
- Clip at the back of the knife for direct hanging to the belt.
- Blade length 77 mm; closed length: 115 mm.
- Total length: 186 mm.
- Supplied in vertical nylon case which fastens to the belt.



	L [mm]	ΔΔ [g]
840.F	115	170

KNIVES

840 THE 100% STAINLESS STEEL KNIFE

The knife designed as a tool

Stainless steel
12C27 stainless steel blade.

Comfortable

Safe one-handed thumbwheel blade opening (left or right hand).

Universal hanging hook.

Safe blade release

Blade is closed by releasing the "liner-lock" safety catch in two stages.

Ergonomic

One-piece brushed stainless steel handle for a better grip.

- Comes with horizontal leather case for complete freedom of movement and compliance with the safety regulations.



KNIVES

■ Thumbwheel knife

- 12C27 stainless steel construction: very high corrosion resistance. Ideal in marine environments.
- Quick one-handed opening.
- Right/left hand.
- Safe: Liner lock safety catch and 2 stage release.
- Universal hanging hook.
- Blade length 73.5 mm; closed length: 115.5 mm.
- Total length: 189 mm.
- Comes with horizontal leather case.



	L [mm]	ΔΔ [g]
840LE	115.5	250



■ Lock-back knife

- Polished stainless blade.
- Safe: lock-back.
- Rosewood handle and nickel silver bolster.
- Blade length 78 mm; closed length: 105 mm.
- Total length: 183 mm.



	L [mm]	ΔΔ [g]
840.4A	105	160

■ Twin-blade electricians knife with plastic handle

- Electricians knife with blades suitable for cable work:
 - 1 straight hollow ground general-purpose blade (length: 65 mm).
 - 1 short curved blade, specially designed for cable work (length: 35 mm).
- Safe: lock-back for each blade.
- Length closed: 104 mm.
- Total length: 131/169 mm.



	L [mm]	ΔΔ [g]
640180	104	100



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KNIVES

■ Electricians knife with wire stripper



- Blade in polished stainless steel.
- Billhook blade.
- Wood handle.
- Blade length 60 mm; closed length: 100 mm.
- Total length: 160 mm.

	L [mm]	ΔΔ [g]
840B	100	85

■ Twin-blade electricians knife with wood handle



- Blades in polished stainless steel.
- Billhook blade, length 65 mm.
- Straight blade, length: 80 mm.
- Wood handle.
- Length closed: 100 mm.
- Total length: 165/180 mm.

	L [mm]	ΔΔ [g]
843	100	115

■ Electricians knife with wire stripper with wood handle



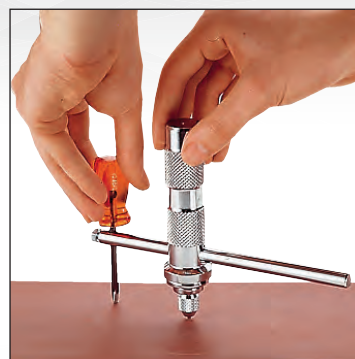
- Blade in polished stainless steel.
- Blade with 2 notches:
 - 1 half-moon notch for stripping.
 - 1 vee for cutting.
- Rosewood handle.
- Blade length 77 mm; closed length: 103 mm.
- Total length: 180 mm.

	L [mm]	ΔΔ [g]
840.1	180	75

PUNCH KIT

The solution to easily produce all your gaskets

- These kits are used to cut out clean and accurate circular gaskets in a variety of materials including cardboard, leather, rubber and fabric.
- To cut holes Ø 3 to 50 mm, use a punch 245A.T with a shank 245A. M.
- To cut holes Ø 44 to 420 mm, use calipers with centre-point and cutter.
- All components are available either separately or in kits.



■ 245A.T - Punches

Ref	d [mm]	Capacity Ø maxi [mm]	For	ΔΔ [g]
245A.T3	3	M13 x 100	245.J1 - 245.J2	10
245A.T4	4	M13 x 100	245.J1 - 245.J2	10
245A.T6	6	M13 x 100	245.J1 - 245.J2	15
245A.T8	8	M13 x 100	245.J1 - 245.J2	15
245A.T10	10	M13 x 100	245.J1 - 245.J2	15
245A.T12	12	21	245.J1 - 245.J2	20
245A.T14	14	28	245.J1 - 245.J2	20
245A.T16	16	21	245.J1 - 245.J2	20
245A.T18	18	21	245.J1 - 245.J2	25
245A.T20	20	21	245.J1 - 245.J2	25
245A.T22	22	31	245.J1 - 245.J2	40
245A.T24	24	31	245.J1 - 245.J2	40
245A.T26	26	31	245.J1 - 245.J2	45
245A.T28	28	31	245.J1 - 245.J2	50
245A.T30	30	31	245.J1 - 245.J2	60
245A.T32	32	41	245.J2	75
245A.T34	34	41	245.J2	80
245A.T36	36	41	245.J2	80
245A.T38	38	41	245.J2	75
245A.T40	40	41	245.J2	75
245A.T42	42	52	245.J2	100
245A.T44	44	52	245.J2	105
245A.T46	46	52	245.J2	105
245A.T48	48	52	245.J2	100
245A.T50	50	52	245.J2	100



245A.T6



245A.T22

245A.T12

■ Accessories for punches and calipers

Ref	No.	For	ΔΔ [g]
245A.M1	1	245.J1	450
245A.M2	2	245.J1	530
245A.M3	3	245.J1	310
245A.M4	4	245.J1 - 245.J2	150
245A.P1	5	245.J1 - 245.J2 - 245.AC	40



1

2

3

4

5



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