



9. Measuring, marking-out, metrology

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► Mechanical metrology

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► Precision measurement

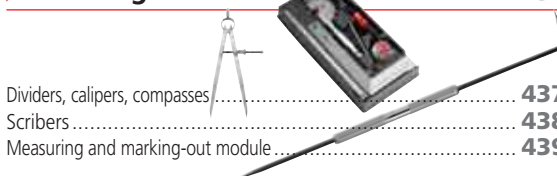
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NEW**Series 897 stainless steel tape measures*****Professional quality stainless steel and bi-material tape measures*****Advantages**

- ▶ Stainless steel case
- ▶ Soft grip
- ▶ Nylon blade and high strength hook

**N** 442**NEW****Series 893*****ABS case - Nylon blade*****Advantages**

- ▶ Compact
- ▶ Sturdy
- ▶ Easy to maintain

**N** 443

Easy, efficient and reliable

Advantages

- ▶ Easy to read
- ▶ Fast
- ▶ Efficient, reliable data transmission
- ▶ IP65 : Resistant to water and dust



N 420



Metrology - Introduction to the Standards



DIN 862

- Vernier and digital caliper measurements from 0 to 2,000mm.
- Vernier or circular scale reading to 0.1 / 0.05 / 0.02mm.

• Dimensional standard

Length of rule	Height of lower jaw	Height of upper jaw	Total thickness for inside measurement	Extent of depth gauge
	a1 mm	a1 mm	a1 mm	a1 mm
160	40	8	5	100
200	60		10	
250	75			
250	90			

• Accuracy

Length of rule	limit of error in μm			
	Accuracy			Digital reading
	0.1 1/10ème	0.05 1/20ème	0.02 1/50ème	0.01 1/100ème
50	50	20	20	20
100				30
200				
300			30	

• Hardness of measuring surfaces.

- +/- 53 HRC for stainless steel.

• Digital display measurements.

- Rate of displacement > standard (0.5 m/s).
- Error notification in case of :
 - Excessive speed.
 - Low power.

DIN 861- Part 1 - Outside micrometers - Standard design.

Mechanical and digital display micrometer.

• Dimensional standard.

- Anvil diameter 6.5, 7.5 or 8 mm.
- Tolerance of flatness of measuring surfaces 0.6 μm .
- The locking lever must not alter the reading by more than 2 μm .
- Thimble graduation.

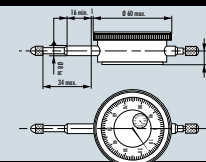
Range of measurement	Bias error	Tolerance of parallelism Applied force = 10N	Frame bending tolerance Applied force = 10N
mm	μm	μm	μm
0-25	4	2	2
25-50	4	2	2
50-75	5	3	3
75-100	5	3	3

Other specifications covered by the standard.

- Maximum force applied to the measured component between 5 and 10N.
- The quality of the materials used and their elasticity under load.

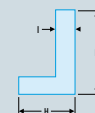
DIN 878 - Dial gauges to 1/100 mm

- Dimensional standard.
- Definition of accuracy.
- Measuring force - between 0.3N and 1.5N.



DIN 875 - Engineers squares

- Accuracy class.
- Perpendicularity tolerance of 2 surfaces.
- Flatness of edges.
- Legal markings.



Perpendicularity tolerance in μm Dimensions	Tolerance of flatness in μm Accuracy class			
	LxH mm	0	1	2
	Accuracy class			
75	7 14 28	3	5	10
100	7 15 30	3	5	11
150	8 18 35	3	6	11
200	9 20 40	3	6	12
250	10 23 45	3	7	13
300	11 25 50	4	7	14
330	11 25 50	4	8	16
500	15 35 70	5	9	18
		5	10	20
		5	11	
		7	14	28

Dimensions L	H	
	Classe 00/0/1	Classe 2
75	50	50
100	70	70
150	100	100
200	130	130
250	165	165
300	200	175
500	330	250

► Digital calipers

New

DIGITAL DISPLAY MEASUREMENTS

EASY, EFFICIENT AND RELIABLE

Easy to use

- Clear, easy-to-read LCD screen.
- More intuitive to use.
- Quick and easy to operate.
- Easier data transmission.

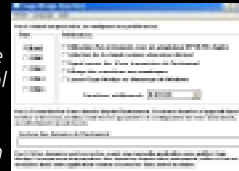
Reliable

- DIN 862.
- Ingress protection (IP) - IEC529.
- Protection against dust and liquids
- For perfect reliability under all operating conditions.
- IP 6x = No dust penetration.
- IP x5 = Protected against water jets from any direction during for 3 minutes.
- Patented inductive measuring system.
- RS 232 connection.
- PC data transmission utility.



Efficient data transmission

- Gagewedge utility program developed for FACOM.
- Reliable data recording.
- Saves time, simple and easy to use.
- Compatible with the entire FACOM digital range.
- Easy RS232 cable connection between the measuring instrument and the PC.



Free download from www.facom.com

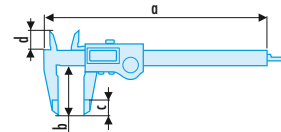
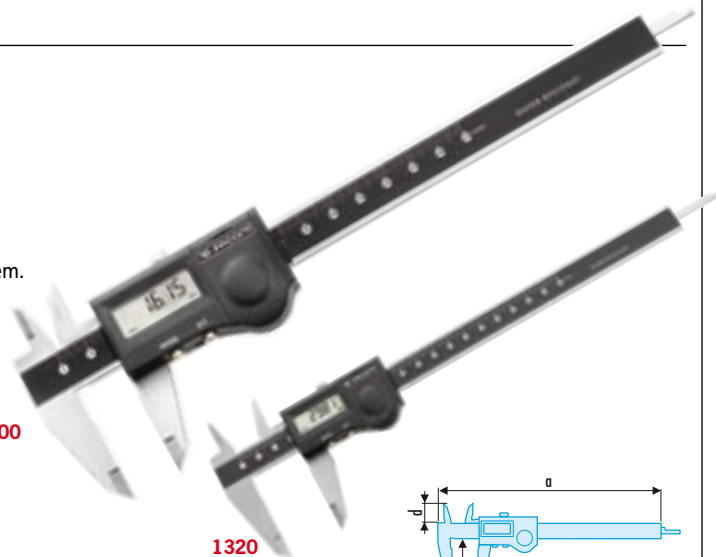
New

1300 - 1320 Digital calipers

- To DIN 862.
- Accuracy 0.01 mm.
- Resistant to water and cutting oil - IP 65.
- IP 6x = No dust penetration.
- IPx5 = Protected against water jets from any direction during 3 minutes.
- Ground stainless steel mechanism.
- Reading rule with patented inductive measuring system.
- Flat depth gauge.
- 6 mm LCD display.
- Floating zero.
- mm/inch conversion.
- Automatic shutoff.
- Battery life approximately 3,500 hours
- Supplied in a case with a certificate of conformity.
- RS 232 port.

1300

1320



	Capacity mm	Resolution mm	Repeatability mm	Bias error μm	a mm	c mm	d mm	b mm	ΔΔ g
1300	150	0,01	10μm	20μm	233	10	16	40	465
1320	200	0,01	10μm	30μm	290	14	20	50	400
	Description								
1300.C2	PC connection cable								
Gagewedge	Data transmission software - via cable 1300.C2 Available from www.facom.com or upon request								



► Digital depth gauge

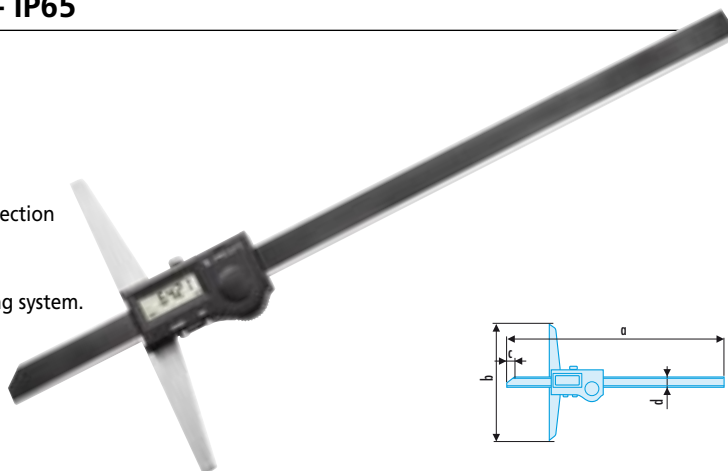
New

Digital depth gauge 300 mm - IP65

1350

► To DIN 862.

- Accuracy 0.01 mm.
- Resistant to water and cutting oil - IP 65.
- IP 6x = No dust penetration.
- IP x5 = Protected against water jets from any direction for 3 minutes.
- Ground stainless steel mechanism.
- Reading scale with patented inductive measuring system.
- 6 mm LCD display.
- Floating zero.
- mm/inch conversion.
- Automatic shutoff.
- Battery life approximately 3,500 hours.
- Supplied in a case with a certificate of conformity.
- RS 232 port.



	Capacity mm	Resolution mm	Repeatability mm	Bias error μm	a mm	b mm	c mm	d mm	ΔΔ g
1350	300	0,01	10μm	20μm	372	150	10	16	928
Description									
1300.C2	PC connection cable								
Gagewedge	Data transmission software - via cable 1300.C2 Available from www.facom.com or upon request								



► Digital micrometer

Outside digital micrometer 0-25 mm

1355

► DIN 863.

- Floating zero.
- Preset.
- Metric/inch units.
- MAX, MIN, MAX-MIN tolerances.
- RS 232 port.
- Design features :
 - non-rotating setting rod.
 - carbide anvil Ø 8 mm.
- Battery life up to 2,000 hours.
- Accuracy 0.002 mm.
- Supplied with a FACOM certificate of conformity.

ΔΔ : 810 g.



	Description
1300.C2	PC connection cable
Gagewedge	Data transmission software - via cable 1300.C2 Available from www.facom.com or upon request



► Digital indicator

Digital indicator - IP51

1365

► To DIN 878.

- Measuring range 0-12.5 mm.
- Accuracy 0.001 mm.
- mm/inch conversion.
- 6 mm LCD display.
- Clamping stem (8 mm dia.)
- Interchangeable M2.5 contact points.
- Display pivots through 270°.
- Floating zero.
- Zero set at any position.
- Allows measurements to be made using 2 separate references.
- Measurement memorisation (display hold).
- RS 232 connection - For transmitting reading to a statistical processing system.
- Supplied with a FACOM certificate of conformity.

ΔΔ : 213 g.



	Description
1300.C2	PC connection cable
Gagewedge	Data transmission software - via cable 1300.C2 Available from www.facom.com or upon request

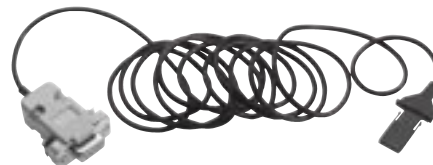
► Accessories

PC connection cable

1300.C2

- This cable can be used to connect the various items of metrology equipment to a PC.

ΔΔ : 55 g.



► Vernier calipers

MECHANICAL METROLOGY

IMPROVED PERFORMANCE

Compliance with DIN 862

- Dimensional regulation.
- Hardness of measuring faces.
- Accuracy and limit of error in μm .
- Standard of quality and readability of graduations.

Technical specifications

- Ground stainless steel
- Lock screw for reliable readings without risk of slippage.
- Vernier with guide.
- Natural hand position.
- Increased comfort.

Perfect reading quality

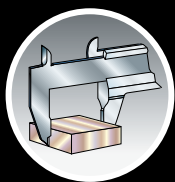
- Good contrast and anti-reflection.
- Excellent readability.
- Chemically formed graduation markings for perfect resistance to wear and chemical agents.

Accuracy

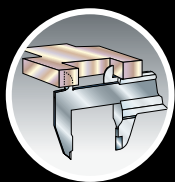
- To 1/50 - 1/20 - 1/10 mm.

Traceability

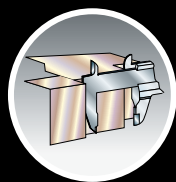
- Supplied with a numbered certificate of conformity.



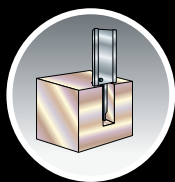
Outside measurement.



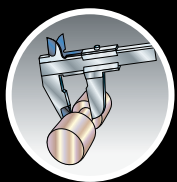
Inside measurement.



Step measurement.



Depth measurement.



Throat measurement.



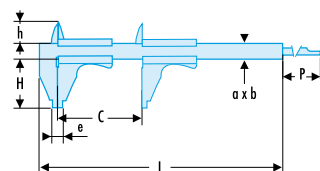
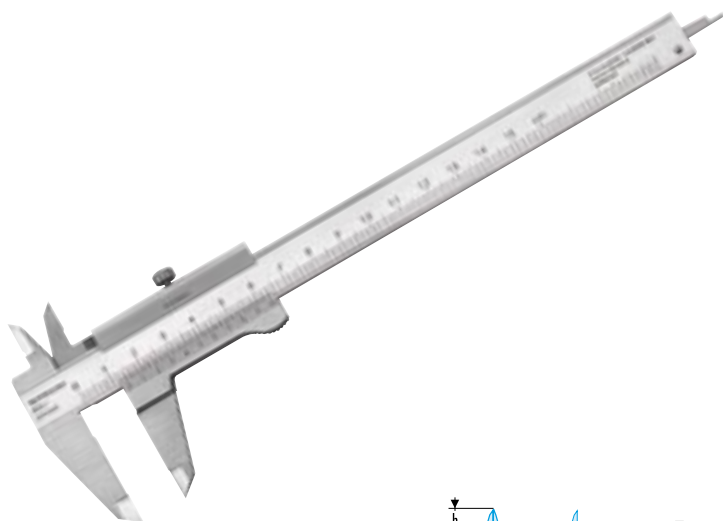
Extra service

Have your measuring instruments inspected each year by an accredited organisation to guarantee their accuracy.

805 Universal vernier caliper to 1/50 mm

► DIN 862.

- Class 0.
- Accurate to 0.02 mm (1/50 mm).
- Inside, outside and depth measurements.
- Matt stainless steel rule.
- Minimum rule hardness 40 HRC.
- Flat depth gauge.
- Vernier with thumb positioning guide.
- Minimum vernier life expectancy 20,000 cycles.
- Vernier screw lock.
- Supplied in a case with a certificate of conformity.



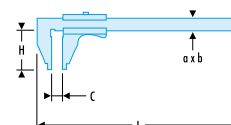
	Accuracy mm	Bias error μm	a x b mm	C mm	H mm	L mm	$\Delta\Delta$ g
805.1	0,02	20 μm	16 x 3	150	40	228	290
805.2	0,02	30 μm	17x3,5	200	50	290	419

Workshop vernier caliper to 1/50 mm

805.M

▷ DIN 862.

- Class 0.
- Accurate to 0.02 mm (1/50 mm).
- Measuring range 200 mm.
- Inside and outside measurements (down to 10 mm bores).
- Matt stainless steel rule.
- Minimum rule hardness 40 HRc.
- Vernier with thumb positioning guide.
- Minimum vernier life expectancy 20,000 cycles.
- Vernier screw lock.
- Graduations resistant to chemical products.
- Perfect contrast for optimum reading quality.
- Supplied in a case with a certificate of conformity.



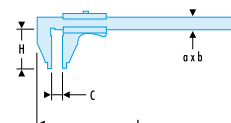
	Accuracy mm	Bias error μm	a x b mm	C mm	L mm	H mm	ΔΔ g
805.M	0,02	30μm	17x3,5	200	290	60	423

Workshop vernier caliper to 1/50 mm - 300 mm capacity

805.S

▷ DIN 862.

- Accurate to 0.02 mm (1/50 mm).
- Measuring range 200 mm.
- Inside and outside measurements (down to 10 mm bores).
- Matt stainless steel rule.
- Minimum rule hardness 40 HRc.
- Vernier with thumb positioning guide.
- Minimum vernier life expectancy 20,000 cycles.
- Vernier screw lock.
- Fine adjustment screw.
- Supplied in a case with a certificate of conformity.



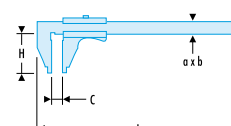
	Accuracy mm	Bias error μm	a x b mm	C mm	H mm	L mm	ΔΔ g
805.S	0,02	30μm	20 x 4	200	100	418	941

Universal vernier caliper to 1/20 mm

816

▷ DIN 862.

- Accurate to 0.05 mm (1/20 mm).
- Inside, outside and depth measurements.
- Matt stainless steel rule.
- Minimum rule hardness 40 HRc.
- Flat depth gauge.
- Vernier with thumb positioning guide.
- Minimum vernier life expectancy 20,000 cycles.
- Vernier screw lock.
- Supplied in a case with a certificate of conformity.



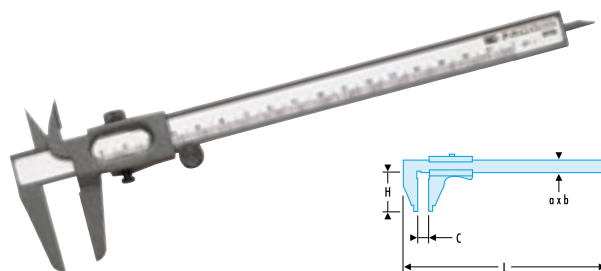
	Accuracy mm	Bias error μm	a x b mm	C mm	L mm	H mm	ΔΔ g
816	0,05	50μm	16 x 3	150	228	40	288

Pocket vernier caliper to 1/10 mm

815A

- Inside, outside and depth measurements.
- Screw lock.
- Thumbscrew adjustment.
- Matt rule.
- Supplied in an individual FACOM wallet.

	Reading mm	a x b mm	C mm	L mm	H mm	$\Delta\Delta$ g
815A	0,1	15 x 2	160	230	37	120



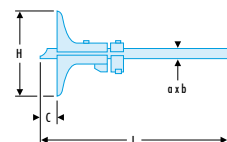
► Mechanical depth gauge

811 Mechanical depth gauges to 1/50 mm

▷ DIN 862.

- Class 0.
- Accurate to 0.02 mm (1/50 mm).
- Matt stainless steel rule.
- Minimum rule hardness 40 HRC.
- Measuring faces hardened to minimum 53 HRc.
- Vernier with thumb positioning guide.
- Minimum vernier life expectancy 20,000 cycles.
- Vernier locked by fine adjustment screw.
- Supplied in a case with a certificate of conformity.

	Accuracy mm	Bias error μm	a x b mm	C mm	H mm	L mm	$\Delta\Delta$ g
811B	0,02	20 μm	10 x 4	160	100	240	465
811C.250	0,02	30 μm	10 x 4	250	100	330	491



► Mechanical micrometer

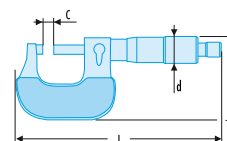
806 Micrometers to 1/100 mm

▷ DIN 863.

- Resolution 0.01 mm.
- Carbide anvil 6.5 mm dia.
- Ratchet thimble with torque limiter :
- Strictly limits the maximum force applied to the measured component to between 5 and 10 Nm.
- Thimble diameter 18 mm.
- 50-division thimble (one turn = 0.5 mm).
- Heat-insulating plates.
- Supplied complete with :
 - a pin-type calibration key.
 - a gauge block key from model 806C.50.
- Packaged in a plastic case.
- Supplied with a certificate of conformity.

	Measuring range mm	Bias error μm	Parallelism of measuring faces	Flatness of measuring surfaces/Max.
806.C25	0-25 mm	4 μm	2 μm	0,4 μm
806C.50	25-50 mm	4 μm	2 μm	0,4 μm
806C.75	50-75 mm	5 μm	3 μm	0,4 μm
806C.100	75-100 mm	5 μm	3 μm	0,4 μm

	Measuring range mm	Gauge block
806.C25	0-25 mm	
806C.50	25-50 mm	25 mm +/- 1,5 μm
806C.75	50-75 mm	50 mm +/- 2 μm
806C.100	75-100 mm	75 mm +/- 2,5 μm

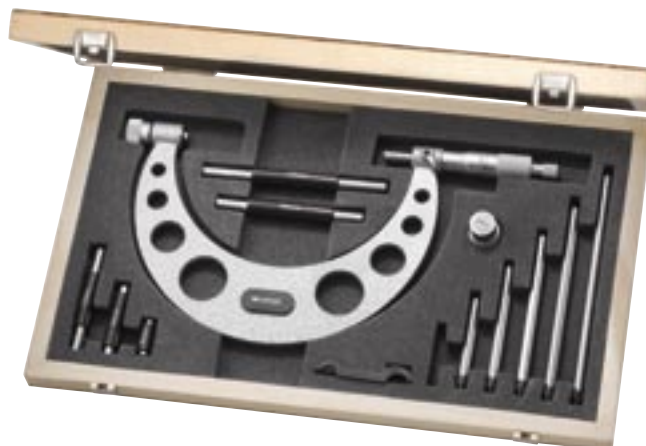


Multi-range mechanical outside micrometer to 1/100 mm

807C

▷ DIN 863.

- Measuring range 0 to 150 mm.
- Resolution 0.01 mm.
- Ratchet thimble with torque limiter.
- Strictly limits the maximum force applied to the measured component to between 5 and 10 N.m.
- Thimble diameter 18 mm.
- Carbide anvil 6.5 mm dia.
- Interchangeable fixed anvil.
- Set of 6 extensions.
- Heat-insulating plates.
- Anvil locking device.
- Packaged in a wooden case.
- Supplied with a certificate of conformity.



	Gauge block
807C.CALE25	25 mm +/- 1,5µm
807C.CALE50	50 mm +/- 2µm
807C.CALE75	75 mm +/- 2,5µm
807C.CALE100	100 mm +/- 3µm
807C.CALE125	125 mm +/- 3,5µm

Friction mechanical outside micrometer to 1/100 mm

806.F

▷ DIN 863.

- Resolution 0.01 mm.
- Carbide anvil 6.5 mm dia.
- Ratchet thimble with torque limiter.
- Strictly limits the maximum force applied to the measured component to between 5 and 10 N.m.
- Thimble diameter 18 mm.
- Anvil locking device.
- Packaged in a plastic case.
- Supplied with a certificate of conformity.



	Capacity mm	Parallelism of measuring faces	Flatness of measuring surfaces/Max.	Bias error µm
806.F	0-25	2µm	0,4µm	4µm

► Metrology module

Metrology module

MOD.MET

- 805.1 Vernier caliper to 1/50 mm, capacity 150 mm.
- 806.F Micrometer to 1/100 mm, range 0 to 25 mm.
- 814.M Screw pitch gauge, 23 blades from 25 to 300.
- 804 Metric feeler gauges from 4/100 to 1 mm.
- Tray PL.634.

△△ : 0.930 kg.



► Metrology set

8-piece metrology and inspection set

809.J2

- Comprising :
 - 805.M Vernier caliper to 1/50 mm, capacity 200 mm.
 - 803.300M Stainless rule 300 mm.
 - 811 Depth gauge to 1/50 mm, capacity 160 mm, fine adjustment screw.
 - 818B.15 Plain square 150 mm, class I.
 - 236 Carbide scriber.
 - 256.4 Centre punch.
 - 806.C25 Micrometer to 1/100 mm, range 0 to 25 mm.
 - 1901.05 Dividers, capacity 150 mm.
- Supplied in a case 365 x 260 x 30 mm.

ΔΔ : 2.1 kg.



10-piece metrology and inspection set

809.J3

- Comprising :
 - 805.M Vernier caliper to 1/50 mm, capacity 200 mm.
 - 806.C25 Micrometer to 1/100 mm, range 0 to 25 mm.
 - 806C.50 Micrometer to 1/100 mm, range 25 to 50 mm.
 - 811 Depth gauge to 1/50 mm, capacity 160 mm, fine adjustment screw.
 - 818B.15 Plain square 150 mm, class I.
 - 819B.15 Flanged square 150 mm, class I.
 - 1901.05 Dividers, capacity 150 mm.
 - 236 Carbide scriber.
 - 803.300M Stainless rule 300 mm.
 - 256.4 Centre punch.
- Supplied in a case 410 x 280 x 40 mm.

ΔΔ : 3.56 kg.



► Dial indicator

Dial gauge to 1/100 mm

812A.1

- Plunger travel 10 mm with totalizing pointer.
- Rotating scale Ø 57 mm.
- Interchangeable stylus.
- Flat back can be replaced by back fitted with 8 mm lug.

ΔΔ : 345 g.

	Description
812.PF	Back fitted with lug
812A.1A	Steel ball stylus
812A.1B	Flat stylus Ø 2 mm tip
812A.1C	Long stylus Ø 2 mm, effective length 15 mm

Shock-resistant gauge to 1/100 mm

812.ANT

- Similar design to 812A.1.
- Shock resistant to protect mechanism.
- Tolerance adjustment.

ΔΔ : 335 g.

	Description
812.PF	Back fitted with lug
812A.1A	Steel ball stylus



Dial gauge to 1/100 mm with lever

812.P

- Travel 0.8 mm.
- Rotating scale Ø 31 mm.
- Supplied with 2 mounting stems Ø 4 and 8 mm.
- Anvil Ø 2 mm.

ΔΔ : 154 g.

	Description
812.PF	Back fitted with lug
812A.1C	Long stylus Ø 2 mm, effective length 15 mm

► Magnetic bases

Magnetic stand

812.2

- Magnetic base with screw. Ground surfaces.
- Adherence force 300 N (30 kg).
- Post height 245 mm.
- Beam height range 40 to 210 mm.
- Base 52 x 40 x 47 mm.

ΔΔ : 1.52 kg.

Hinged magnetic stand

812.3

- Effective radius 280 mm.
- Vertical lifting force 600 N (60 kg).
- Ø M8 thread.
- Base 50 x 55 x 60 mm.

ΔΔ : 1.9 kg.

► Surface gauges

Precision surface gauge to 1/50 mm - 300 mm capacity

796B

- ▷ NF E 11 - 106.
- Class 0.
- Bias error = +/- 28µm.
- Repeatability error = +/- 12µm.
- Accurate to 0.02 mm (1/50 mm).
- Hardened stainless steel rule, anti-glare matt finish.
- Section 25 mm.
- Minimum rule hardness 40 HRC.
- Maximum measuring capacity 300 mm.
- Stainless scriber.
- Minimum hardness 53 HRC.
- Better scribing quality.
- Fine adjustment screw.
- Adjustable magnifying lens.
- Dial gauge attachment supplied as standard for gauge with 8 mm dia. stem (DIN 878).
- Total overall dimensions 455 mm x 90 mm.
- Supplied with a certificate of conformity.

ΔΔ : 3.280 kg.

	Serial no.	Description
796B.04	A02 0001 → mars 01	Scriber
796C.04	A03 0001 → A04 0001 →	Scriber



Engineers surface gauge

795A

- Non-graduated.
- Fine adjustment screw on rocker arm.
- Cast-iron base.
- True face with 90° vee-groove.
- Post Ø 10 mm.

ΔΔ : 1.745 kg.

▶ **Surface plates****1200 Cast-iron surface plates**

▷ DIN 876, Class II.

	Dimensions mm	ΔΔ kg
1200.30	300 x 200	7
1200.40	400 x 250	16
1200.50	500 x 300	22
1200.60	600 x 400	35

▶ **Pairs of vees****1202.00 Pairs of steel vees, 20 microns**

▷ ISO 8512-1, DIN 876-2.

- Vee-blocks with four 90 notches.
- Matching pair with identification number stamped on top.

	Vee widths mm	Overall size mm	ΔΔ kg
1202	30 x 40 x 50 x 60	120 x 120 x 38	7,371
1202.00	20 x 30 x 40 x 50	95 x 70 x 35	2,808





Rules

A FACOM SPECIALITY? RIGOROUS EXPERTISE

Tight production control

Rigorous selection of materials guaranteeing the highest quality

- Compromise between rigidity and flexibility
- Matt surface for perfect readability
- Smooth finish for fine, clean markings

Chemical engraving

- Deep markings
- Perfect contrast
- Resistant to wear and chemical agents

A range of over 50 references

- Stainless steel or duralumin
- Rigid, semi rigid, flexible
- Graduation mm - 1/2mm



Information

European directive 2004/22/EC, necessary harmonisation and change

Measuring Instrument Directive - Annex MI-008 - material measures. Harmonisation of the regulations for the 25 member States. Entry into force in France on 30 October 2006. Gradual implementation as pattern approvals expire. NB : Only measurements > 500 mm are considered in legal metrology (OIML 35). No pattern and regulatory marking approvals are required for measurements < 500 mm.



▶ Class I stainless steel rules with calibration certificate



Class I stainless steel rules with calibration certificate

Like metrology and torque-control instrumentation, measuring tools are often used in quality-certification procedures. Facom class I stainless-steel rules, with Cofrac-approved calibration certificate, are suitable for this application.

These rules may be utilized as a standard for periodic inspection of rules and tapes by a quality-control department, or for direct measurement. Calibrated rules are measured at 10 cm intervals, numbered and supplied complete with their certificate.



Class I stainless steel rule - 1,000 mm long

DELA.61058.10C

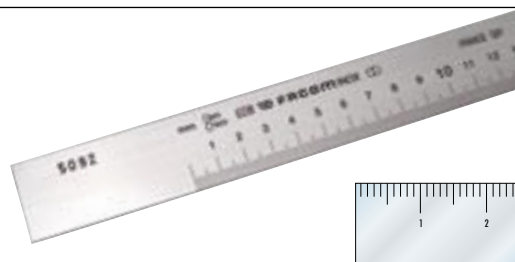
Etched on one side.

1 edge in mm.

18 % Cr - 8 % Ni.

Anti-glare finish.

	Length mm	Cross-section mm	$\Delta\Delta$ g
DELA.61058.10C	1000	30 x 1	191

▶ **Class II rules****803 Flexible stainless 2-sided rules**

• Etched on both sides, except 803.1000M (etched on 1 side, upper edge in 1/2 mm, lower edge mm).

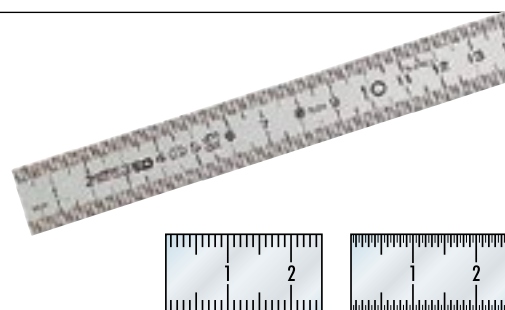
• 1 side mm on both edges - 1 side 1/2 mm.

• 18 % Cr - 8 % Ni.

• Anti-glare matt satin finish.

* Rules of 500 mm or more conform to precision class II regulations.

	Length mm	Cross-section mm	$\Delta\Delta$ g
803.200M	200	13 x 0,4	10
803.300M	300	13 x 0,5	16
803.500M	500	20 x 0,5	40
803.1000M	1000	25 x 0,5	100

**DELA.1051 Flexible stainless 2-sided rules**

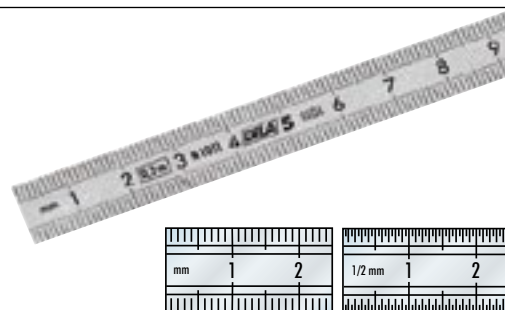
• Etched on both sides.

• 1 side mm both edges, 1 side 1/2 mm.

• 18 % Cr - 8 % Ni.

• Anti-glare finish.

	Length mm	Cross-section mm	$\Delta\Delta$ g
DELA.1051.02	150	13 x 0,5	8,5
DELA.1051.03	200	13 x 0,5	10,9
DELA.1051.04	250	13 x 0,5	13,5
DELA.1051.05	300	13 x 0,5	16,1
DELA.1051.06	500	20 x 0,5	40,4

**DELA.1021 Flexible stainless 1-sided rules**

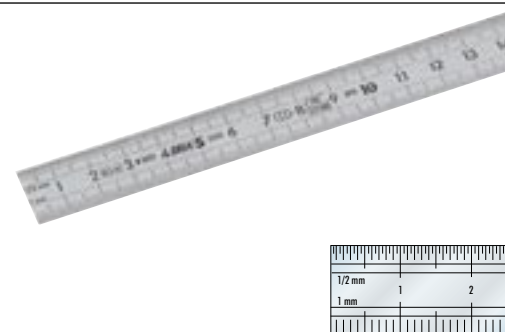
• Etched on one side.

• 1 edge mm, 1 edge 1/2 mm.

• 18 % Cr - 8 % Ni.

• Anti-glare finish.

	Length mm	Cross-section mm	$\Delta\Delta$ g
DELA.1021.02	150	13 x 0,5	8,5
DELA.1021.03	200	13 x 0,5	10,9
DELA.1021.05	300	13 x 0,5	16,1
DELA.1021.06	500	20 x 0,5	40,4
DELA.1021.07	1000	25 x 0,5	100
DELA.1021.08	1500	25 x 0,5	152
DELA.1021.09	2000	25 x 0,5	200

**803 SR Semi-rigid stainless 2-sided rules**

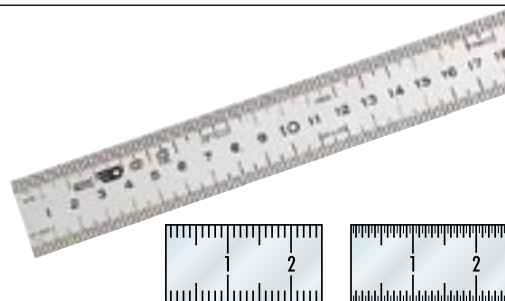
• Etched on both sides, except 803.SR1000 (1 side).

• 1 edge mm, 1 edge 1/2 mm.

• 18 % Cr - 8 % Ni.

• Anti-glare matt satin finish.

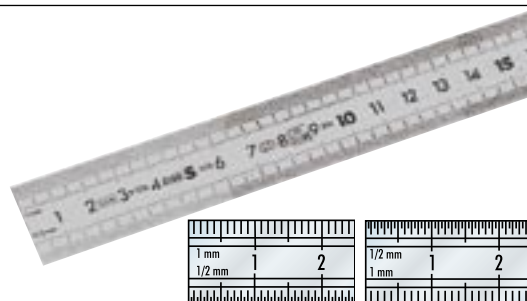
	Length mm	Cross-section mm	$\Delta\Delta$ g
803.SR300	300	30 x 1	62
803.SR500	500	30 x 1	100
803.SR1000	1000	30 x 1	200



DELA.1056 Semi-rigid short stainless 2-sided rules

- Etched on both sides.
- 1 edge mm, 1 edge 1/2 mm.
- 18 % Cr - 8 % Ni.
- Anti-glare finish.

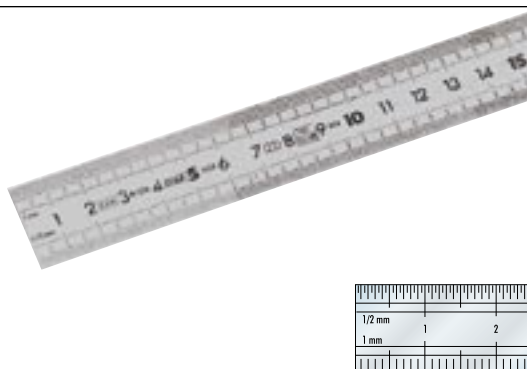
	Length mm	Cross-section mm	ΔΔ g
DELA.1056.01	300	30 x 0,8	60
DELA.1056.02	500	30 x 0,8	100



DELA.1056 Semi-rigid long stainless 1-sided rules

- Etched on one side.
- 1 edge mm, 1 edge 1/2 mm.
- Graduations in mm on both edges at 3,000, 4,000 and 5,000 mm.
- 18 % Cr - 8 % Ni.
- Anti-glare finish.

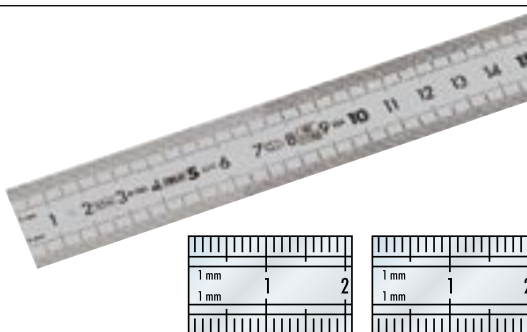
	Length mm	Cross-section mm	ΔΔ kg
DELA.1056.03	1000	30 x 0,8	0,191
DELA.1056.04	1500	30 x 0,8	0,290
DELA.1056.05	2000	30 x 0,8	0,380
DELA.1056.06	3000	30 x 1,0	0,709
DELA.1056.07	4000	30 x 1,0	0,946
DELA.1056.08	5000	30 x 1,0	1,168



DELA.1061 Semi-rigid short duralumin 2-sided rules

- Etched on both sides.
- Both edges in mm.
- Anti-glare finish.

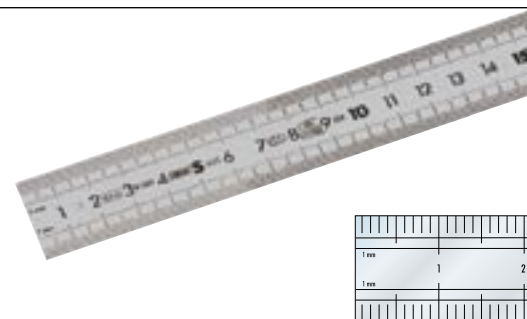
	Length mm	Cross-section mm	ΔΔ g
DELA.1061.01	300	30 x 1,2	33
DELA.1061.02	500	30 x 1,2	53



DELA.1061 Semi-rigid long 1-sided rules

- Etched on one side.
- Both edges in mm.
- Anti-glare finish.

	Length mm	Cross-section mm	ΔΔ g
DELA.1061.03	1000	30 x 1,2	110
DELA.1061.04	1500	30 x 1,2	150
DELA.1061.05	2000	30 x 1,2	200

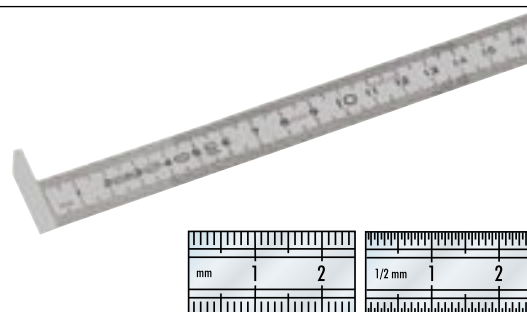


Assorted rules

DELA.1052 Stainless rules with heel

- Etched on both sides.
- 1 side mm, 1 side 1/2 mm.
- 18 % Cr - 8 % Ni.
- Anti-glare finish.

	Length mm	Cross-section mm	ΔΔ g
DELA.1052.02	200	13 x 0,5	12
DELA.1052.03	300	13 x 0,5	17
DELA.1052.04	500	20 x 0,8	44



Engineers rules

Stainless steel straight edge

809.IN500

▷ DIN 847/1, NF E 11.105

- Supplied in a wooden case.
- Class I, flatness. $(4 + L/60) \mu\text{m}$, where L is the length in mm.
- Stainless steel.

	L mm	Cross-section mm	$\Delta\Delta$ kg
809.IN500	500	50 x 10	2,9



Graduated stainless rule

809.ING500

▷ DIN 874-1, NF E 11.105

- Supplied in a wooden case.
- Class I, flatness. $(4 + L/60) \mu\text{m}$, where L is the length in mm.
- Graduations with offset zero.

	L mm	Cross-section mm	$\Delta\Delta$ kg
809.ING500	500	50 x 10	2,9

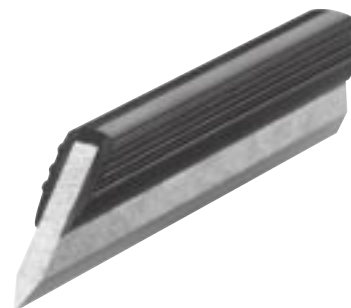


809 Stainless filament rules

▷ DIN 874, NF E 11.104

- For checking a plane or an edge.
- Hard stainless steel with insulating grip.
- Supplied in a sheath.

	Length mm	Flatness m	$\Delta\Delta$ g
809.75	75	2	80
809.100	100	2	125
809.150	150	3	200
809.200	200	3	280



Precision measurement

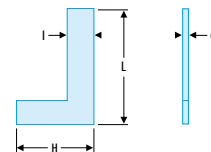
Precision squares

818.CLO Precision try square, Class O

▷ DIN 875, NF E 11-103.

- Accuracy $\pm (5 + h/50) \mu\text{m}$, where h is height in mm.
- Stainless steel.
- Ground faces and outside edges.

	L x H mm	l x e mm	$\Delta\Delta$ kg
818.75CLO	75 x 50	15 x 5	0,140
818.100CLO	100 x 70	20 x 5	0,220
818.150CLO	150 x 100	28 x 6	0,455
818.200CLO	200 x 130	32 x 7	0,760
818.300CLO	300 x 200	40 x 8	1,765

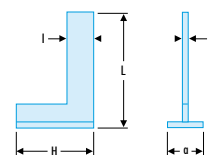


819.CLO Precision flanged square, Class O

▷ DIN 875, NF E 11-103.

- Accuracy $\pm (5 + h/50)$ μm , where h is height in mm.
- Stainless steel.
- Ground faces and outside edges.

	L x H mm	l x e mm	a mm	$\Delta\Delta$ kg
819.75CLO	75 x 50	15 x 5	15	0,175
819.100CLO	100 x 70	20 x 5	20	0,280
819.150CLO	150 x 100	28 x 6	28	0,600
819.200CLO	200 x 130	32 x 7	32	1,095
819.300CLO	300 x 200	40 x 8	40	2,337

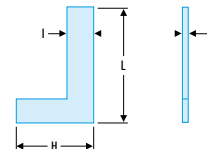


818B Try squares, Class I

▷ DIN 875, NF E 11-103.

- XC12 steel square.
- Ground faces and edges.

	L x H mm	l x e mm	$\Delta\Delta$ kg
818B.10	100 x 70	20 x 5	0,13
818B.15	150 x 100	25 x 6	0,24
818B.20	200 x 130	30 x 7	0,41
818B.30	300 x 180	30 x 7	0,88

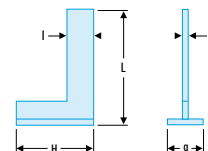


819B Flanged squares, Class I

▷ DIN 875, NF E 11-103.

- Similar to try squares but with screwed flange.
- Supplied with a certificate of conformity.

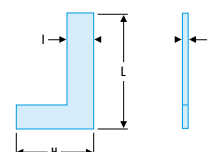
	L x H mm	l x e mm	a mm	$\Delta\Delta$ kg
819B.10	100 x 70	20 x 5	20	0,25
819B.15	150 x 100	25 x 6	25	0,47
819B.20	200 x 130	30 x 7	30	0,8
819B.25	250 x 160	30 x 7	30	0,98
819B.30	300 x 180	30 x 7	30	1,205



DELA.1256 90° try squares, Class II

▷ DIN 875, NF E 11-103.

	L x H mm	l x e mm	$\Delta\Delta$ kg
DELA.1256.02	100 x 70	20 x 5	0,125
DELA.1256.04	150 x 100	20 x 5	0,29
DELA.1256.06	200 x 130	30 x 7	0,515
DELA.1256.07	250 x 165	30 x 7	0,58
DELA.1256.08	300 x 200	30 x 7	0,7
DELA.1256.09	400 x 265	40 x 7	1,42
DELA.1256.10	500 x 330	40 x 7	1,8

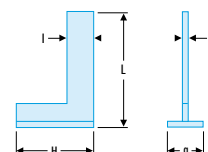


DELA.1257 90° flanged squares, Class II

▷ DIN 875, NF E 11-103.

- Screwed flange.
- Perfect fit between flange and face.

	L x H mm	l x e mm	a mm	$\Delta\Delta$ kg
DELA.1257.02	100 x 70	20 x 5	20	0,2
DELA.1257.04	150 x 100	20 x 5	20	0,39
DELA.1257.06	200 x 130	30 x 7	30	0,715
DELA.1257.07	250 x 165	30 x 7	30	0,85
DELA.1257.08	300 x 200	30 x 7	30	1,02
DELA.1257.09	400 x 265	40 x 7	40	2
DELA.1257.10	500 x 330	40 x 7	40	2,6



► Squares

817 Bevels

- Steel. Ground faces and edges.

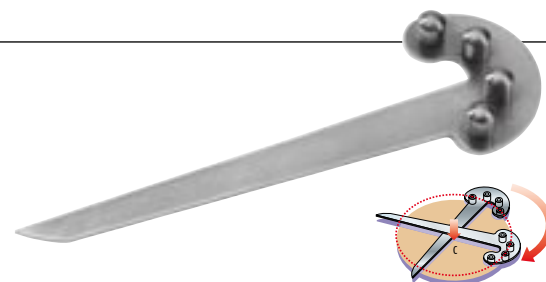
	e mm	H mini - maxi mm	L mm	ΔΔ g
817.15	15	19 - 145	150	350
817.20	15	24 - 195	200	580
817.25	15	24 - 240	250	720
817.30	15	24 - 285	300	810



Centre-square

DELA.1290.00

- Steel square with 4 symmetrical pins.
 - Locates the centre of a circle in 2 easy steps.
- ΔΔ : 100 g.



DELA.1272 Flanged double-mitre square

- ▷ DIN 875, NF E 11-103.
- 30, 45, 60, 90 angles.

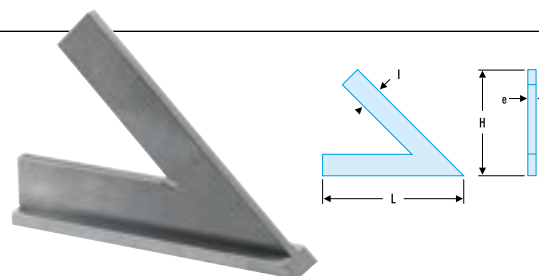
	Long-blade length mm	ΔΔ g
DELA.1272.01	100	270
DELA.1272.02	120	310
DELA.1272.03	150	600
DELA.1272.04	200	720



45° flanged square

DELA.1292.00

	L x H mm	l x e mm	ΔΔ g
DELA.1292.00	150 x 150	26 x 7	324



► Protractors

Engineers protractor

DELA.1885.00

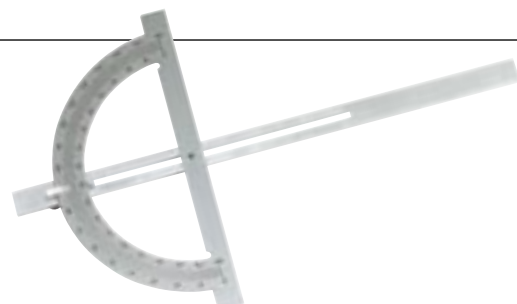
- Ground stainless steel.
 - Protractor base marked in mm.
 - Graduated 0 to 180 in both directions.
 - Protractor Ø 85 mm.
 - Rule length 170 mm.
 - Sight-hole with pointer for easy readings.
- ΔΔ : 50 g.



Wide-arc protractor

DELA.1880.00

- Rule length 400 mm.
 - Hardened steel.
 - Open protractor for angle readings 10 to 170.
 - Ø 200 mm protractor.
 - Degree graduations.
 - Sliding rule with locking screw.
- ΔΔ : 420 g.



Basic bevel protractors

DELA.1897.02

- Stainless steel, without acute angle attachment.
 - Accurate to within 5 minutes of arc.
 - Length 300 mm.
 - Supplied in a case 370 x 145 x 35 mm.
- ΔΔ : 400 g.



Precision bevel protractor

813B.S

- Hardened stainless steel.
 - Anti-glare matt chrome finish.
 - Measuring range 0 to 360.
 - Minimum vernier reading 5 minutes of arc.
 - Dial diameter 70 mm.
 - Dimensions 315 x 75 x 20 mm.
 - Rotating dial with vernier and dial locking screw.
 - 2 rules with bevelled ends at 45 and 60 :
 - 1 short rule 20 mm x 16 mm.
 - 1 long rule 300 mm x 16 mm.
 - Offset rule 85 mm x 16 mm.
 - Sliding rule locking screw.
 - Magnifying lens.
 - Cast iron support base 70 mm x 30 mm.
 - Complete with a fitted rigid case 325 x 125 x 47 mm.
- ΔΔ : 1.466 kg

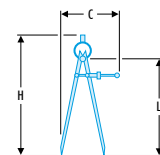


Marking-out

► Dividers, calipers, compasses

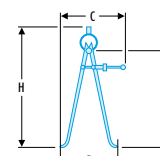
DELA.1901 Dividers

	L mm	H mm	B mm	C mm	ΔΔ g
DELA.1901.03	100	148	100	67	70
DELA.1901.04	125	165	125	77	80
DELA.1901.05	150	195	150	85	90
DELA.1901.07	200	245	200	100	160
DELA.1901.08	250	300	250	125	200
DELA.1901.09	300	350	300	140	240
DELA.1901.11	500	575	500	225	485



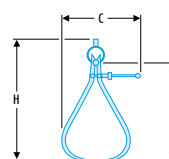
DELA.1902 Inside calipers

	L mm	H mm	B mm	C mm	ΔΔ g
DELA.1902.04	150	170	160	82	80
DELA.1902.06	200	225	210	100	165
DELA.1902.08	300	325	315	125	230



DELA.1903 Outside calipers

	L mm	H mm	B mm	C mm	ΔΔ g
DELA.1903.06	200	230	200	140	180
DELA.1903.07	250	280	250	165	210
DELA.1903.08	300	330	300	200	255

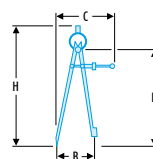


Pencil compass

DELA.1905.05

- Pencil Ø 8 mm.

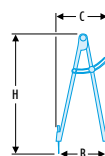
	L mm	H mm	B mm	C mm	ΔΔ g
DELA.1905.05	250	300	250	125	210



823 Wing dividers

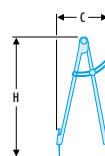
- Straight, rigid, polished steel legs, interchangeable hardened points.

	Points only	H mm	B mm	C mm	ΔΔ g
823.19	823.19SE1	190	220	70	235
823.25	823.25SE1	250	300	94	370



DELA.1908 Point wing dividers

	H mm	B mm	C mm	ΔΔ g
DELA.1908.03	220	220	68	180
DELA.1908.04	250	250	68	190



Scribers

Steel scriber

234

- Hardened chrome-vanadium steel tips.
 - Tip Ø 4 mm.
 - Length 190 mm.
 - Polished chrome finish.
- ΔΔ : 20 g.



Scriber with interchangeable steel tips

234.S

- Hardened HSS tips.
 - Tips Ø 4 mm.
 - Body Ø 8 mm.
 - Length 260 mm.
- ΔΔ : 58 g.



	Description
234.SP2	Set of 2 spare tips.

Steel scriber

DELA.1586.00

- Plastic body.
- Tip Ø 4 mm.
- Body Ø 8 mm.
- Length 210 mm.

ΔΔ : 20 g.



Carbide pen scriber

DELA.1589.00

- Hexagonal steel body with clip.
- Regrindable tip, length 12 mm, Ø 2.5 mm.
- Length 150 mm.

ΔΔ : 35 g.



Retractable carbide scriber

233A

- Body with clip.
- Double-dressed tungsten-carbide tip.
- Length 145 mm.
- Tip Ø 2 mm.
- Body Ø 8 mm.

ΔΔ : 16 g.

	Description
233.P5	Set of 5 spare tips



Monobloc carbide scriber

236

- Inset tungsten-carbide tip for marking hard surfaces Ø 2 mm.
- Octagonal body Ø 12 mm.
- Length 180 mm.

ΔΔ : 30 g.



Square tips

- Hardened steel point, square blade. Isoryl handle. For starting holes, chamfering, deburring, etc.

	Handle Ø x L mm	Length mm	Blade □ x L mm	ΔΔ g
AP.6x80	30 x 110	190	6 x 80	72
AP.8x125	34 x 120	245	8 x 125	132

AP.8x125



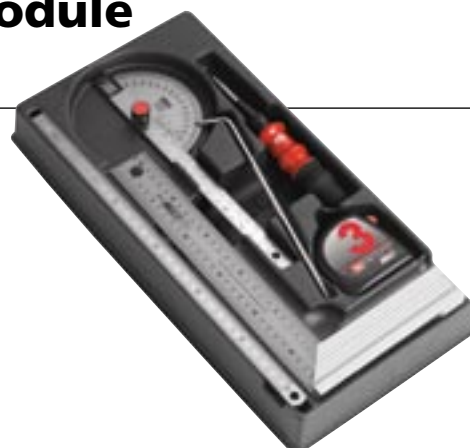
▶ Measuring and marking-out module

Measuring and marking-out module

MOD.234

- 257G. Automatic centre punch.
- 234 Scriber.
- 893.316 Tape measure 3 m.
- DELA.1051.05 Rule 300 mm long.
- DELA.1885.00 Protractor.
- DELA.1223.02 Try and mitre square 300 mm long.
- Tray PL.633.

ΔΔ : 1.05 kg.





European standards

MID 2004/22/EC - A PASSPORT FOR EUROPE

European Harmonisation

- Applicable in the 25 Member States.
- A common procedure for the verification, bringing into conformity and inspection of measuring instruments.

Scope

- Material measure comprising marks whose distances are given in legal units of length.
- Placing products on the market.
- Putting into use.

Entry into force

- 30 October 2006.
- Gradual implementation over a period of 10 years.

The main changes

Bringing into conformity

- The principle of quality assurance.
- Manufacturing process approval.
 - Includes the design and production phases.
- The MID ensures that the products are manufactured under conditions guaranteeing the best quality.
- Choice of conformity modules according to :
 - Quality management system.
 - Expected flexibility of the manufacturing process.
 - Desired marketing flexibility.

Manufacturer's liability

- Assumes liability for product design and manufacture.
- Guarantees product compliance.
 - By applying CE marking.
 - By establishing declarations of conformity.

Regulatory markings

Length	Accuracy	Make	CE approval	M + the last two numbers of the year
5 M	II	FACOM	CE	M07
XXXX	T1001	20°	50N	
Certified body No. : 0122 for NMI	Type examination certificate No. (Only according to choice of module)	Information regarding normal conditions of use	Only for 5m long tape measures (does not apply to rigid or semi- rigid tape measures)	

Implementation transition period

- Does not concern EN tape measures already in use.
- Approval of current models
 - Replacement by MID when pattern approval is renewed.
- New products must comply with MID.





Short tape measures

EXCEPTIONAL ABRASION WEAR AND CORROSION RESISTANCE

Blade

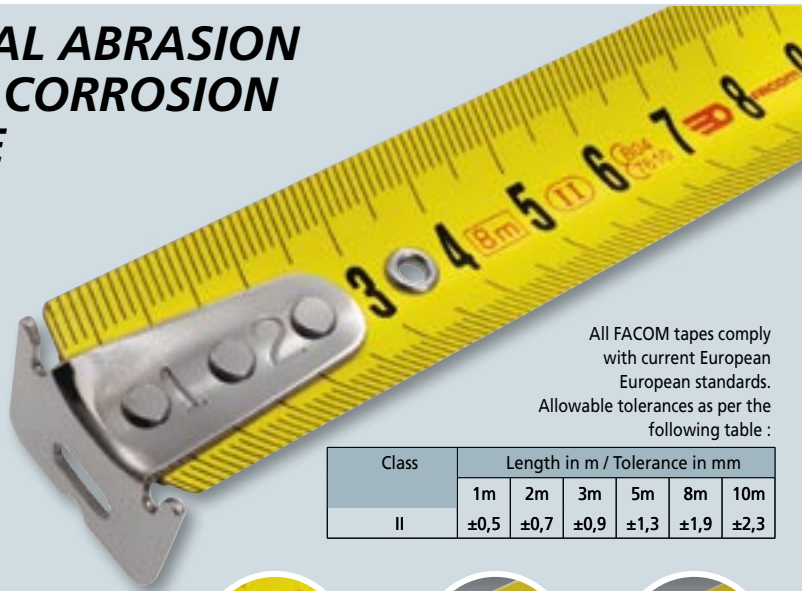
- High protection nylon coating.
- Professional-quality blade for all uses, ideal for intensive use.
- Optimum readability.
Matt anti-glare finish.

High rigidity

- Up to 2.90m vertically and 2.30m horizontally without bending for the 25mm wide blade.

Hook

- Tensile strength exceeds 1,000 N (100 kg)
- Wide, protective hook.
- Hardened steel. Equipped with a stainless steel reinforcing plate. Sliding hook for hooking or internal and external measuring.



All FACOM tapes comply with current European standards.
Allowable tolerances as per the following table :

Class	Length in m / Tolerance in mm					
	1m	2m	3m	5m	8m	10m
II	±0,5	±0,7	±0,9	±1,3	±1,9	±2,3



Hardened, concave, carbon steel



High contrast, bold figures, differentiated graduations, red "tens" markers



Wide, hook

SELECTION GUIDE	Stainless steel case 897. nylon-coated blade	ABS case 893 nylon-coated blade	800 series stainless steel case, varnish-coated blade	ABS case 893F nylon-coated blade. Direct reading
2 M				
3 M				
5 M				DIRECT READING : For directly measuring the distance between two faces. 893.316F
8 M				
10 M				



► **Stainless steel case series****New****SERIES 897**

**PROFESSIONAL
QUALITY STAINLESS
STEEL AND
BI-MATERIAL TAPE
MEASURES**

**Blade lock**

Ergonomic 2-position lock.
Simple, effortless
operation.

**Soft coating**

Comfortable, non-slip grip.
Prevents shocks when
dropped.
Stainless steel case.

**Facom hook**

Corner protection
to prevent accidental
cutting.
3 rivets for increased
pulling resistance.

**Belt clip**

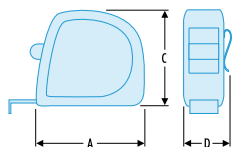
Stainless steel.

Facom blade

High performance nylon
coating.

New**897 Stainless steel case tape measure**

- Case with stainless steel reinforcing plate.
- Soft, heavy-duty, impact-resistant coating.
- Matt, anti-glare nylon-coated blade.
- Covering 3-rivet hook with stainless steel reinforcing plate.
- Horizontal and vertical blade rigidity : see table.
- Internal measurement obtained by adding dimension A (see table).
- Stainless steel belt clip.



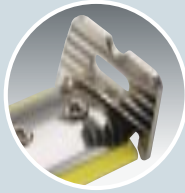
	I	L mm	A mm	D x C mm	Rigidity Max Vertical mm	Rigidity Max Horizontal m
897.216	2	16	70	32 x 64	1,6	1,5
897.319	3	19	70	32 x 64	2,2	1,9
897.525	5	25	78	41 x 72	2,8	2,4
897.825	8	25	90	40,5 x 82	2,8	2,4
897.1025	10	25	90	40.50x82	2,8	2,4

Short tape measures

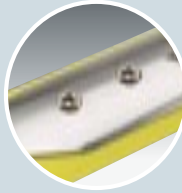


Heavy-duty hook

**TENSILE
STRENGTH
EXCEEDS
1,000 N (100 KG)**



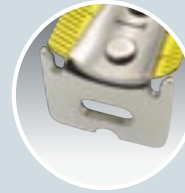
Non-slip serrations.



With stainless
steel reinforcing
plate.



Multi rivets.



Wide hook with
protective lugs.
Multi-functional.

► ABS Case Series



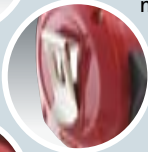
Series 893

COMPACT AND TOUGH



Easily accessible tape lock

For keeping a measurement, making comparative measurements, marking-out, etc.



Stainless steel belt clip

- For easy carrying.



Wrist strap hole

- Avoids dropping the tape, frees the hand. Hole (except 893.316F)

Functional case

- Base and bearing face at 90°. Rounded additional length.

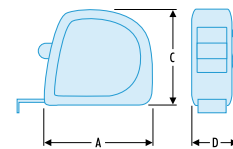


ABS case tape measure - 2 metres with lock

893.213

- 2 m x 13 mm matt, anti-glare, nylon-coated blade.
- Blade rigidity : 1.30 m vertically - 1.20 m horizontally.
- 2-rivet hook with stainless steel reinforcing plate.
- Internal measurement obtained by adding dimension A (see table).
- Ergonomic ABS case.
- Blister card presentation (145x96 mm).

	Blade length	Blade width	A	C x D	ΔΔ
	m	mm	mm	mm	g
893.213	2	13	55	53 x 24	78

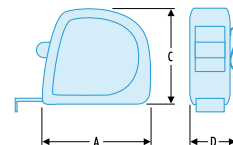


ABS case tape measure - 3 metres with lock

893.316

- 3 m x 16 mm matt, anti-glare, nylon-coated blade.
- Blade rigidity : 1.80 m vertically - 1.50 m horizontally.
- 2-rivet hook with stainless steel reinforcing plate.
- Internal measurement obtained by adding dimension A (see table).
- Ergonomic ABS case.
- Blister card presentation (145x96 mm).

	Blade length	Blade width	A	C x D	ΔΔ
	m	mm	mm	mm	g
893.316	3	16	60	60 x 27	126

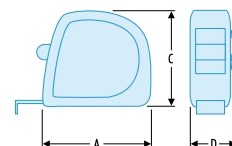


ABS case tape measure - 3 metres top reading with lock

893.316F

- 3 m x 16 mm matt, anti-glare, nylon-coated blade.
- Printed on both sides, for directly reading internal measurements in the window.
- Covering 2-rivet hook with stainless steel reinforcing plate.
- Ergonomic ABS case.
- Blister card presentation (145x96 mm).

			A	C x D	$\Delta\Delta$
	m	mm	mm	mm	g
893.316F	3	16	60	60 x 27	121

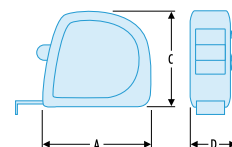


ABS case tape measure - 5 metres with lock

893.519

- 5 m x 19 mm matt, anti-glare, nylon-coated blade.
- Blade rigidity : 2.30 m vertically - 1.80 m horizontally.
- Covering 3-rivet hook with stainless steel reinforcing plate.
- Internal measurement obtained by adding dimension A (see table).
- Ergonomic ABS case.
- Blister card presentation (170x120 mm).

			A	C x D	$\Delta\Delta$
	m	mm	mm	mm	g
893.519	5	19	70	68 x 31	197

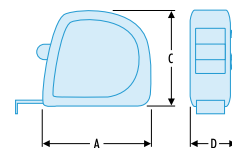


ABS case tape measure - 8 metres with lock

893.825

- 8 m x 25 mm matt, anti-glare, nylon-coated blade.
- Blade rigidity : 2.90 m vertically - 2.30 m horizontally.
- Covering 3-rivet hook with stainless steel reinforcing plate.
- Internal measurement obtained by adding dimension A (see table).
- Ergonomic ABS case.
- Blister card presentation (170x120 mm).

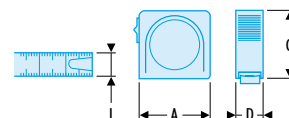
			A	C x D	$\Delta\Delta$
	m	mm	mm	mm	g
893.825	8	25	85	81,5 x 37,5	200

► **Metal Case Series**

800A-801A "Stainless" 2, 3 metres

- 2-rivet blade
- 16 mm wide, rigid up to 1.10m
- Compact.

			A	D x C	$\Delta\Delta$
	m	mm	mm	mm	g
800A	2	16	50	21,4 x 50	90
801A	3	16	60	21,4 x 60	125



Short tape measures

► Metric and inch export series



Ruban export mm/inches

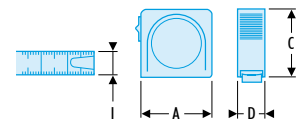


- Hardened steel blade, concave for stiffness.
- Yellow background, protective coating.
- Identical casing to equivalent metric series.

800A-801A.EX 2, 3 metres - 6, 10 FEET

- Same specifications as 800A-801A series.

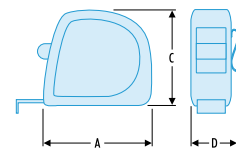
	m	ft	mm	A mm	D x C mm	ΔΔ
800A.EX	2	6	16	50	21,4 x 50	90
801A.EX	3	10	16	60	21,4 x 60	125



DELA.25-35-55.EX 2, 3, 5 metres - 6, 10, 16 FEET

- Same specifications as DELA.25-35-55 series.

	m	ft	mm	A mm	D x C mm	ΔΔ
DELA.25.00EX	2	6	16	64	33 x 62	98
DELA.35.00EX	3	10	16	64	33 x 62	124
DELA.55.00EX	5	16	19	76	44 x 71	202





Long tape measures



FACOM DESIGNS AND DEVELOPS A RANGE OF PROFESSIONAL-GRADE LONG TAPES

Plastiver tapes are ideal for outdoor applications, e.g. building sites.

Stringent inspection procedures ensure that our tapes conform to precision class I, II or III.

STEEL TAPE : Class I and II



Hard-wearing coating

Yellow finish

Corrosion protection

Hardened steel

PLASTIVER TAPE : Class III



32 glass-fibre strands coated with PVC. centimetres marked in black and metres in red for excellent readability.

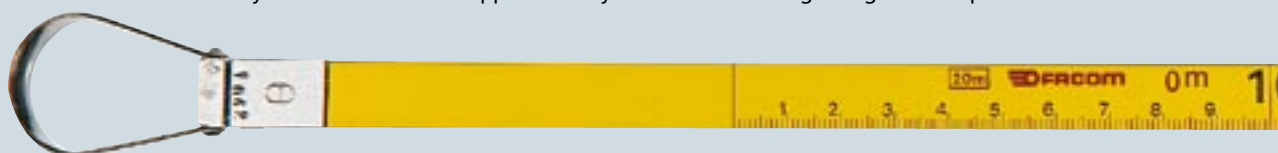
► Class I corrosion resistant steel tape



Corrosion resistant steel tape.

Definition of class I

The particularly exacting tolerances of class I are limited to $\pm 1/10$ millimetre per metre. Class I tapes are supplied complete with a COFRAC calibration certificate. They have the zero mark approximately 10 cm after the beginning of the tape.



Calibration certificate

These tapes come with a COFRAC-approved calibration certificate in line with ISO 9000 certification procedures. For 10m and 20m tapes, checks are made every metre. For 30m and 50m tapes, checks are at 5-metre intervals.

DELA.62881 Open frames

- Paint-finish steel frame with folding winder.
- Tape guide-rollers.
- Loop with retractable claw.
- Zero mark 10 cm from loop.

	Length m	Width mm	Weight g
DELA.62881.01C	10	13	369
DELA.62881.02C	20	13	604

DELA.62883 Challenger

- Ergonomic revolver handle with folding winder.
- Loop with retractable claw.
- Zero mark 10 cm from loop.
- Carrier case 325 x 275 x 56 mm.

	Length m	Width mm	Weight g
DELA.62883.03C	30	13	1270
DELA.62883.04C	50	13	1720



▶ Class II corrosion resistant steel tape

DELA.2881 Open frames

- Paint-finish steel frame with folding winder.
- Tape guide-rollers.
- Loop with retractable claw.

	Length m	Width mm	Weight g
DELA.2881.01	10	13	369
DELA.2881.02	20	13	604
DELA.2881.03	30	13	874

Class II Challenger tape measure - 50 m

DELA.2883.04

- Ergonomic revolver handle with folding winder.
- Loop with retractable claw.
- Carrier case 325 x 275 x 56 mm.

	Length m	Width mm	Weight g
DELA.2883.04	50	13	1720



DELA.2831 Contoured cases

- Sealed ABS casing with retractable handle.
- Corrosion resistant tape.
- Folding winder.

	Length m	Width mm	Weight g
DELA.2831.01	10	10	175
DELA.2831.03	20	10	339
DELA.2831.05	30	10	493



► Class III Plastiver tape

DELA.8947 Discover

- Closed synthetic case with folding winder.
- Graduated on both sides.
- Loop fitted with claw.
- Fast rewind.

			$\Delta\Delta$
	m	mm	g
DELA.8947.02	10	15	161
DELA.8947.03	20	15	318



Class III Verajour tape measure - 20 m long

DELA.2882.20

- Open steel frame with folding winder.
- Graduated on both sides.
- Loop fitted with claw.
- Fast rewind.

			$\Delta\Delta$
	m	mm	g
DELA.2882.20	20	15	480



Levels

► Engineers levels

DELA.3151 Two-vial levels

- Accuracy 0.4 mm/m
- Trued steel base with grooves for round objects.
- Adjustable horizontal vial with guard.

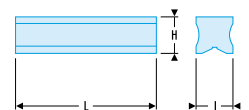
	L	$\Delta\Delta$
	mm	g
DELA.3151.01	200	400
DELA.3151.02	300	550



3067 Precision straight levels

- DIN 877.
- Stabilized cast iron.
- Comes in a wooden case with a certificate of conformity.
- Accuracy 0.04 mm/m.
- Non-slip insulating side pads.
- Colourless Plexiglas vial guard.
- Prismatic base with 140° vee.
- Ether spirit.

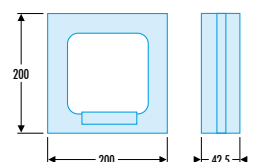
	L	I	H	$\Delta\Delta$
	mm	mm	mm	kg
3067.200	200	40	42,5	1,62
3067.300	300	50	47	2,58



Frame level

3071.200

- DIN 877.
 - Stabilized cast iron.
 - Comes in a wooden case with a certificate of conformity.
 - Accuracy 0.04 mm/m.
 - Non-slip insulating side pads.
 - Colourless Plexiglas vial guard.
 - Prismatic base with 140° vee.
 - Ether spirit.
- $\Delta\Delta$: 4.3 kg.



DELA.3180 Round screw-down level

- Spherical vial.
- Nickel-plated brass.
- Multi-directional level checks.

	Ø mm	ΔΔ g
DELA.3180.02	25	12
DELA.3180.03	30	20
DELA.3180.05	50	80

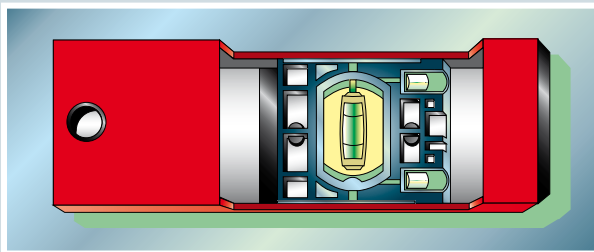


► Builders levels



Levels

EASY-TO-USE PROFESSIONAL QUALITY TOOLS



Accuracy

- The accuracy of a level is defined by 2 elements :
 - The quality of machining of the flat faces,
 - The quality and positioning of the vial.
- Vial integral with the body of the level.



Readability

- Vial machined from a solid acrylic block :
 - Anti-reflective
 - Anti-parallax
- Does not become clouded over time.
- High impact resistance.

Durability

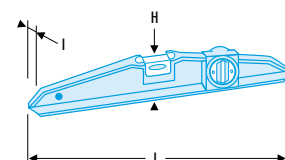
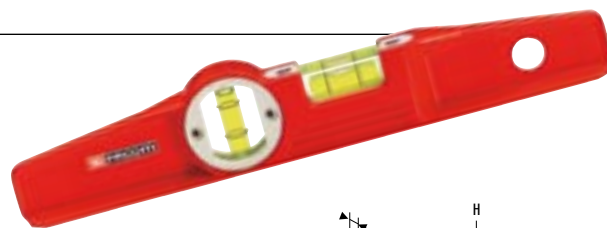
- Unbreakable synthetic caps.
- Impact-protection system providing maximum protection. to the face.
- Rigid.
- Leak proof and highly impact-resistant acrylic glass.

►► Trapezoidal levels

307AM Magnetic levels

- DIN 877.
- Accuracy 0.75 mm/m when used upside down.
- Solid die-cast lightweight alloy body.
- Electrostatic powder coating.

	L mm	H mm	I mm	ΔΔ g
307AM.25	250	45	22	200
307AM.40	400	50	23	420
307AM.50	500	50	23	540
307AM.60	600	50	23	680

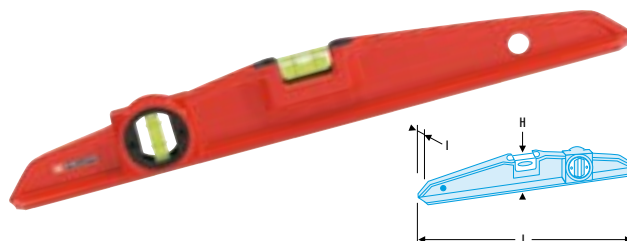


307A Standard levels

▷ DIN 877.

- Similar to 307AM but non-magnetic.

	L mm	H mm	I mm	ΔΔ g
307A.25	250	45	22	200
307A.40	400	50	23	420
307A.50	500	50	23	540
307A.60	600	50	23	680



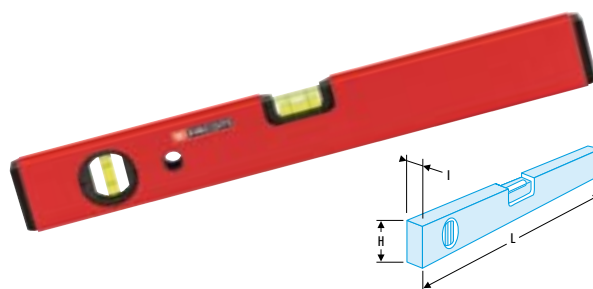
Box section levels

320 Standard levels, 1 machined faces

▷ DIN 877.

- Accuracy 0.75 mm/m when used upside down.
- Extruded lightweight alloy body.
- Electrostatic powder coating.
- 1 horizontal vial and 1 plumb vial.

	L mm	H mm	I mm	ΔΔ g
320.40	400	50	21	300
320.50	500	50	21	370
320.60	600	50	21	480
320L.200	2000	50	21	2000

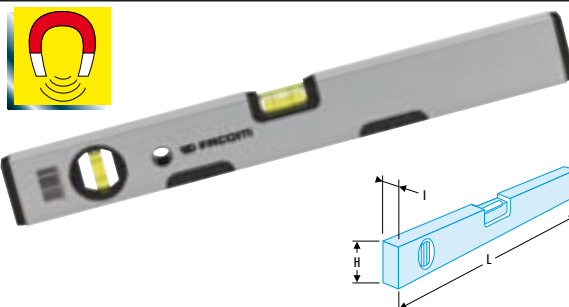


309M Magnetic levels

▷ DIN 877.

- Accuracy 1 mm/m when used upside down.
- Extruded lightweight alloy body.
- Smooth anodised finish (easy to clean).
- 1 horizontal vial and 1 plumb vial.

	L mm	H mm	I mm	ΔΔ g
309M.40	400	50	21	300
309M.50	500	50	21	400

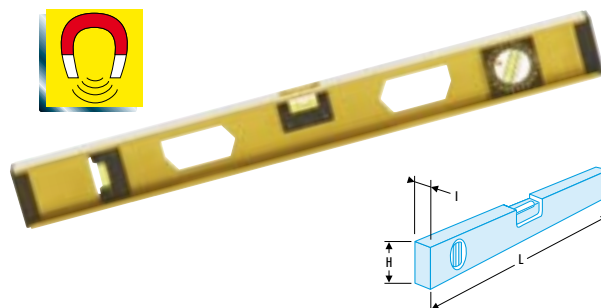


311A Magnetic levels, 1 machined face

▷ DIN 877.

- Accuracy 0.5 mm/m when used upside down.
- 1 horizontal, 1 plumb and 1 protractor vial.

	L mm	H mm	I mm	ΔΔ kg
311A.50	500	54	25	0,57
311A.60	600	54	25	0,663
311A.80	800	54	25	0,88
311A.100	1000	54	25	1,08

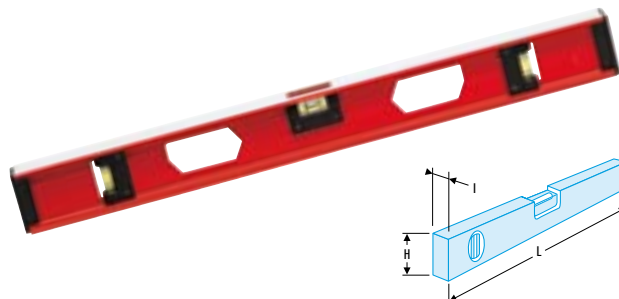


310B Standard levels, 2 machined faces

▷ DIN 877.

- Accuracy 0.5 mm/m when used upside down.
- 1 horizontal vial and two plumb vials.

	L mm	H mm	I mm	ΔΔ g
310B.40	400	54	25	420
310B.50	500	54	25	520
310B.60	600	54	25	600





Folding rules

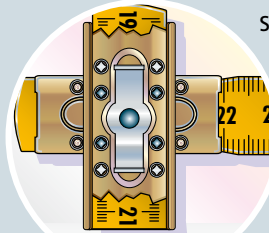
FOLDING RULES ARE THE BUILDERS' TRADITIONAL MEASURING TOOL

The FACOM DELA range features 4 models

- 2 duralumin, 1 wooden and 1 synthetic rule, complying with the requirements of precision class III.
- The blades are locked into position either by brass springs or by embossed notches.
- Typical specifications for measuring instruments.

Tolérances de précision

Length	1 m	2 m
Class	± 1,0 mm	± 1,4 mm



Springs are located within the trim inlaid in the wood, preventing expansion of the joints in damp conditions.

► Class III Duralumin rules

5-blade rule, 1 m

DELA.625.00

- Deep etching.
- Graduated on both sides in mm.
- Brass springs.
- Satin finish.
- 15 mm wide.

ΔΔ : 92 g.

10-blade rule, 2 m

DELA.626.00

- Deep etching.
- Graduated on both sides in mm.
- Brass springs.
- Satin finish.
- 15 mm wide.

ΔΔ : 162 g.

► Class III hardwood rules

10-blade rule, 2 m

802.B2

- Hornbeam for flexibility and strength.
- Abrasion-resistant varnish for high performance.
- Unique locking system for smoothness and accuracy.
- Decimals highlighted in red.
- Graduated in mm on 2 edges both sides.
- 16 mm wide.

ΔΔ : 135 g.

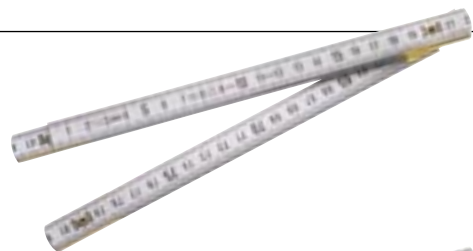
► Class III synthetic rules

10-blade rule, 2 m

DELA.401.00

- Graduated in mm on 2 edges both sides.
- Washable.
- Locks at 90° or 180°.

	m	mm	Number of blades	ΔΔ g
DELA.401.00	2	16	10	105



► Chalk line reels

DELA.13299 "Profil" chalk line reels

- Ergonomic aluminium casing. Wear-resistant line entry.
- Fast rewind.
- Polycotton line Ø 1 mm, with hook.

	Length m	ΔΔ g
DELA.13299.30	30	265
DELA.13299.15	15	250

	Length m	Description	ΔΔ g
DELA.3226.01.CORD	100	Spare line	100



DELA.3298 Chalk line reels and plumb lines

- Metal case with folding handle for reel lock.
- Line Ø 1.5 mm.

	Length m	ΔΔ g
DELA.3298.15	15	240
DELA.3298.30	30	250

	Length m	Description	ΔΔ g
DELA.3225.02	25	Spare line	50



Grodel chalk line

DELA.3400.00

- Building site and construction model.
- Heavy-duty synthetic casing with folding handle.
- Large chalk reservoir.
- Line Ø 3 mm.

	Length m	ΔΔ g
DELA.3400.00	30	500

	Description
DELA.3403.00	Spare line (30 m)



► Powder and unbleached cotton twine

Blue chalk powder

	ΔΔ g
DELA.3402.00	100
DELA.3404.00	360



► Plumb lines

Plumb lines

- DELA.3210 Cone plumb-line, with clearance plate and 4m line Ø 2 mm.
- DELA.3224.00 Engineers plumb-line, with 4m line Ø 2 mm.

	Ø mm	ΔΔ g
DELA.3210.02	35	160
DELA.3224.00	16	125

	Description
DELA.3226.03	Spare line (45 m)



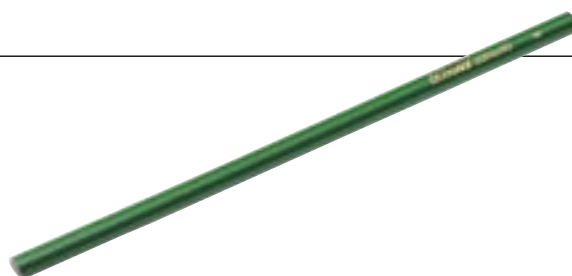
► Pencils

Masons hard pencil (2 x 30 cm)

DELA.3303.00

- Rectangular lead pencil ideal for marking-out.
- Available loose.

	a x b cm	ΔΔ g
DELA.3303.00	1 x 30	18

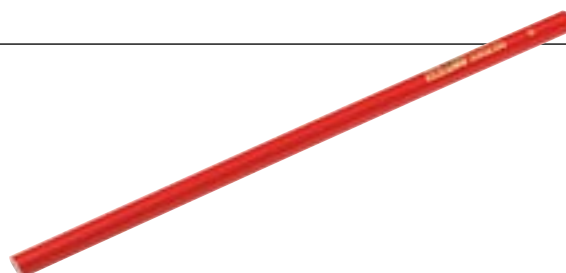


Joiners soft pencil (1 x 30 cm)

DELA.3302.00

- Rectangular lead pencil ideal for marking-out.
- Available loose.

	a x b cm	ΔΔ g
DELA.3302.00	1 x 30	15



► Chalk

DELA.3312 Wax markers

- Suitable for all surfaces including metal.
- Withstands temperatures up to 1200°C.

	Colour		A mm	B mm	ΔΔ g
DELA.3312.02P1	■	12	13	92	210
DELA.3312.03P1	■	12	13	92	210
DELA.3312.04P1	□	12	13	92	210



French chalks

DELA.3310.00

- Tapered chalk sticks for marking metal.
 - Cross section 10 x 10, length 100 mm.
 - Colour white.
 - Box of 50.
- ΔΔ : 1.3 kg.



► Letter and number stencils

DELA.13250 Alphabet sets of 26 capitals 30 to 100 mm high

	Height mm	ΔΔ g
DELA.13250.06	30	100
DELA.13250.08	40	180
DELA.13250.10	50	275
DELA.13250.12	70	490
DELA.13250.13	80	540
DELA.13250.15	100	800



► Number and letter punches in 60 HRc carbon steel

292A Punch sets, 26 letters + dot

- Supplied in a plastic box.

	Length mm	mm	Characters height mm	Cross-section mm	ΔΔ kg
292A.2	70	110 x 40 x 80	2	8 x 8	0,8
292A.3	70	110 x 40 x 80	3	8 x 8	0,8
292A.4	70	110 x 40 x 80	4	8 x 8	0,8
292A.5	75	110 x 40 x 80	5	10 x 10	1,34
292A.6	75	110 x 40 x 80	6	10 x 10	1,35
292A.8	83	145 x 55 x 90	8	13 x 13	2,52
292A.10	90	145 x 55 x 90	10	15 x 15	3,75



293A Punch sets, 9 numerals

- Supplied in a plastic box.

	Length mm	mm	Characters height mm	Cross-section mm	ΔΔ kg
293A.2	70	40 x 40 x 80	2	8 x 8	0,265
293A.3	75	40 x 40 x 80	3	8 x 8	0,270
293A.4	75	40 x 40 x 80	4	8 x 8	0,275
293A.5	75	40 x 40 x 80	5	10 x 10	0,460
293A.6	75	40 x 40 x 80	6	10 x 10	0,460
293A.8	83	55 x 55 x 90	8	13 x 13	0,925
293A.10	90	55 x 55 x 90	10	15 x 15	1,275



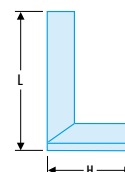
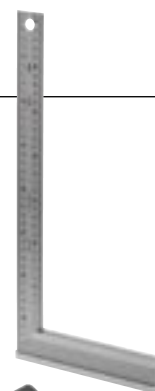
Joiners squares

DELA.1223 Stainless try and mitre squares

- NF E 73-205.

- Stainless steel blade, mm markings both sides, protective sheath.
- Anti-glare. Deep graduations.
- Anodized aluminium stock.

	L x H mm	ΔΔ g
DELA.1223.01	200 x 120	160
DELA.1223.02	250 x 140	200
DELA.1223.03	300 x 170	240
DELA.1223.04	400 x 200	300



Measuring and marking-out module

MOD.234

- 257G. Automatic centre punch.
- 234 Scriber.
- 893.316 Tape measure 3 m.
- DELA.1051.05 Rule 300 mm long.
- DELA.1885.00 Protractor.
- DELA.1223.02 Try and mitre square 300 mm long.
- Tray PL.633.

ΔΔ : 1.05 kg.

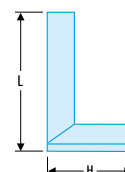
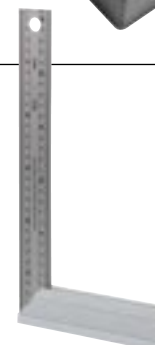


DELA.1234 Duralumin try and mitre squares

- NF E 73-205.

- Duralumin blade, mm markings both sides, protective sheath.
- Anti-glare. Deep graduations.
- Anodized aluminium stock.

	L x H mm	ΔΔ g
DELA.1234.01	200 x 120	140
DELA.1234.02	250 x 140	175
DELA.1234.03	300 x 170	200
DELA.1234.04	400 x 200	260



Double mitre squares

DELA.1206.03

- Steel blade, fruitwood stock.
- Length 300 mm, height 170 mm.

	Blade length mm	$\Delta\Delta$ g
DELA.1206.03	300	160



Measuring tools for construction

DELA.1207-1208 Standard and sliding bevels

- Hardwood stock, steel blade, brass fittings.

	Blade length mm	$\Delta\Delta$ g
DELA.1207.02	250	150
DELA.1207.03	300	180
DELA.1208.02	250	120
DELA.1208.03	300	140



DELA.1210 Sliding bevels

- Polypropylene stock.
- Steel blade.

	Blade length mm	$\Delta\Delta$ g
DELA.1210.01	200	80
DELA.1210.02	250	90
DELA.1210.03	300	100



DELA.1276 Metal-stock sliding bevels

- Cast metal stock.
- Steel blade.
- Blade locking screw in stock end.

	Blade length mm	$\Delta\Delta$ g
DELA.1276.02	250	260
DELA.1276.03	300	270



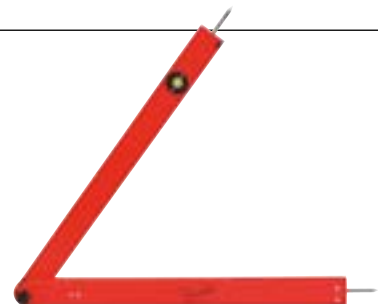
Angle reader

Angle reader

DELA.7598.00

- Analogue display of measurements from 0 to 180°.
- Direct reading.
- Thumbscrew locks angle.
- Integral horizontal and vertical vials.
- Option to replace one point with a marker (field dividers).
- Arm length 600 mm.

$\Delta\Delta$: 1.32 kg.



► Sounding tapes

DELA.5111 Earthed sounding line Yellow-finish steel tape

- Corrosion-resistant hardened steel tape finished in yellow.
- Suitable for explosive environments.
- Earthed to prevent electrical discharges.
- 900g weight attached by swivel-joint to keep the tape kink free.
- Stored in carrier case 325 x 278 x 53 mm.

	L m	l mm	$\Delta\Delta$ kg
DELA.5111.20	20	13	2,3
DELA.5111.30	30	13	2,5



5112 Earthed plumb-rule sounding line Black etched steel tape

- Etched black tape with highlighted numbers and graduations.
- Suitable for corrosive and chemical environments.
- Corrosion-resistant.
- Earthing system.
- 900g weight attached by swivel-joint to keep the tape kink free.
- Stored in carrier case 325 x 278 x 53 mm.

	L m	l mm	$\Delta\Delta$ kg
5112.20	20	13	2,4
5112.30	30	13	2,75



► Spare parts

5116 Yellow-finish tape with ballast

	L m	l mm	$\Delta\Delta$ kg
5116.20A	20	13	1,255
5116.30A	30	13	1,400



5117 Black etched tape with ballast

	L m	l mm	$\Delta\Delta$ kg
5117.20A	20	13	1,255
5117.30A	30	13	1,400

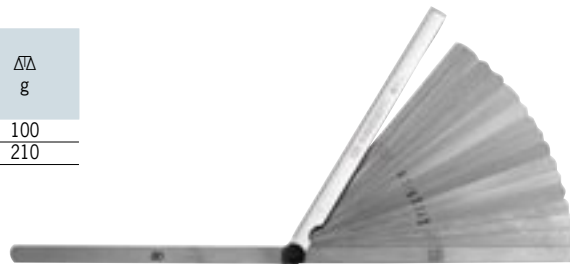


► Feeler gauges

Long metric feeler gauges

- Rounded tips.

	Number of blades	Blade length mm	Blade width mm	Blade thickness in 1/100 mm	ΔΔ g
804.L	19	150	10	4-5-6-7-8-9-10-15-20-25	100
804.SL	19	250	10	30-35-40-50-60-70-80-90-100	210



Metric feeler gauges

- Blade length 90 mm.

	Number of blades	Blade profile	Width x length of blades in mm	Blade thickness in 1/100 mm	ΔΔ g
804	19		10 x 90	4-5-6-7-8-9-10-15-20-25-30	60
804.P	19		10 x 90	35-40-50-60-70-80-90-100	60



Non-magnetic metric feeler gauges

804.AM

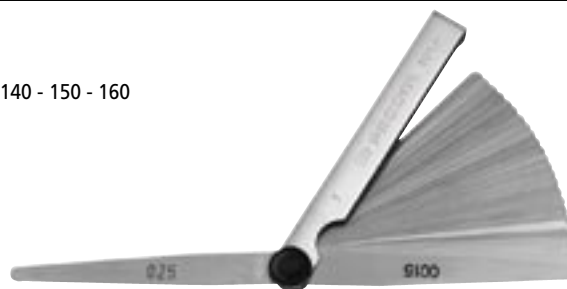
- Blade thickness in 1/100 mm.
- 19 blades : 10 - 15 - 20 - 25 - 30 - 35 - 40 - 45 - 50 - 55 - 60 - 65 - 70 - 75 - 80 - 85 - 90 - 95 - 100.
- Brass blades 1000 mm long.
- Width : 10 mm.
- Tapered tips.
- ΔΔ : 110 g.



Inch feeler gauges

804.U

- Blade thickness in 1/10,000".
- 26 blades : 15 - 20 - 25 - 30 - 40 - 50 - 60 - 70 - 80 - 90 - 100 - 110 - 120 - 130 - 140 - 150 - 160 - 170 - 180 - 190 - 200 - 210 - 220 - 230 - 240 - 250.
- Tapered tips.
- Length : 3 1/2" (88.9 mm).
- Width : 15/32".
- ΔΔ : 83 g.



► Radius gauges

Radius gauges

- For internal and external radii.
- Hardened steel blades. 3 models cover radii from 1 mm to 25 mm.



	Number of blades	mm	Set contents	ΔΔ g
DELA.1786.00	34	1 -> 7	1-1.25-1.50-1.75-2-2.25-2.50-2.75-3-3.5-4-4.50-5-5.50-6-6.50-7	65
DELA.1787.00	32	7,5 -> 15	7.50-8.50-9.50-10-10.50-11-11.50-12-12.5-13-13.50-14-14.50-15	80
DELA.1790.00	30	15,5 -> 25	15.50-16-16.50-17-17.50-18-18.50-19-19.50-20-21-22-23-24-25	125

► Screw pitch gauges

814 Screw pitch gauges



	Thread forms	Number of blades	Pitch recognition	$\Delta\Delta$ g
814.M	Metric thread	60 cutting gauge + 31 blades	25 - 30 - 35 - 40 - 45 - 50 - 55 - 60 - 65 - 70 - 75 - 80 85 - 90 - 100 - 110 - 120 - 125 - 130 - 140 - 150 - 160 170 - 175 - 180 - 190 - 200 - 225 - 250 - 275 - 300	53
814.NI	I.S.O thread	60 cutting gauge + 25 blades	0.25 - 0.30 - 0.35 - 0.40 - 0.45 - 0.50 - 0.60 - 0.70 0.75 - 0.80 - 1.00 - 1.25 - 1.50 - 1.75 - 2.00 - 2.50 3.00 - 3.50 - 4.00 - 4.50 - 5.00 - 5.50 - 6.00 - 6.50 - 7.00	35
814.WH	Whitworth thread	55 cutting gauge + 29 blades	4 - 4.5 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 - 16 - 18 - 19 20 - 22 - 24 - 25 - 26 - 28 - 30 - 32 - 34 - 36 - 38 - 40 - 48 - 60	40
814.G	Gas thread	8 blades	Female threads : 11 - 14 - 19 - 28 Male threads : 11 - 14 - 19 - 28	20

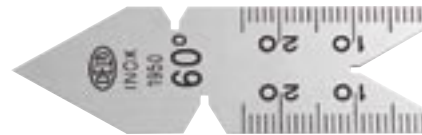
► Miscellaneous gauges

Angle gauge

DELA.1950.00

- 60 screw pitch gauge. Stainless steel.
- Graduated in mm on one side and 1/2 mm on the other. Useful for lathe-tool and thread angles.

$\Delta\Delta$: 30 g.



Drill gauge

DELA.1952.00

- Gives correct drill-bit cutting angle of 120°.
- Cutting edge gauge graduated 0-20 in mm and 1/2 mm.
- Stainless steel.

$\Delta\Delta$: 50 g.



Welders gauge

DELA.1960.00

- Gives correct 60, 70, 80 and 90 weld fillet angles.
- Includes 1/10 vernier for measuring weld seams.
- Steel.

$\Delta\Delta$: 76 g.

