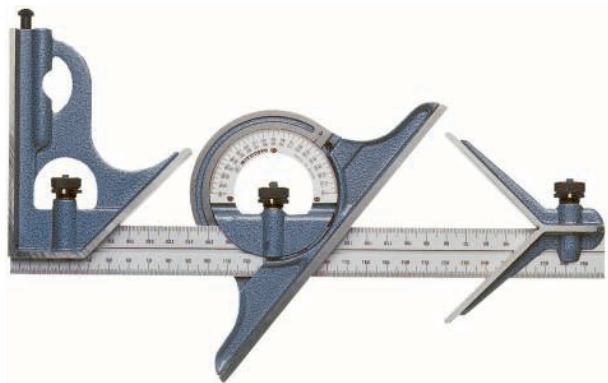


Combination Square Set

Series 180

This Combination Square Set offers you the following benefits:

- Three heads are attachable to the stainless steel rule (blade), enabling you to take versatile measurements of various types of workpiece.
- The heads are hardened.



180-910U

Metric

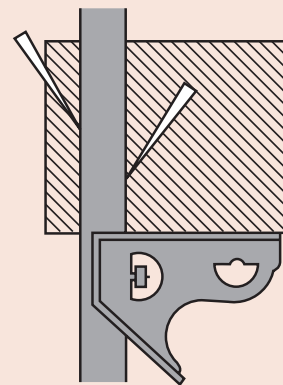
No.	Description	Mass [g]
180-910U	Combination set : square head (180-102U) center head (180-202U) protractor head (180-301U) 300 mm blade size (180-505U)	1110

Blade (individual)

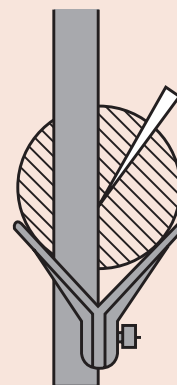
No.	Range	Graduation	Mass [g]
180-405U	150mm	1 mm. 0,5 mm. 1 mm. 0,5 mm	40
180-505U	300mm	1 mm. 0,5 mm. 1 mm. 0,5 mm	130

Head (individual)

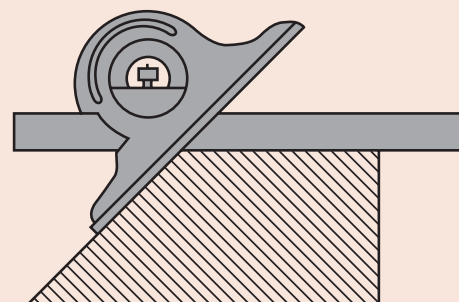
No.	Description	Mass [g]
180-102U	Square head, hardened and ground, with spirit level and scriber	350
180-202U	Centre head, hardened and quenched	150
180-301U	Reversible protractor head, with spirit level, bidirectional graduation from 0 to 180°	520



180-102U
Square head



180-202U
Center head



180-301U
Reversible protectorhead

Universal Bevel Protractor

Series 187

This Universal Bevel Protector offers you the following features:

- Its high-precision angle gauge enables you to take accurate angle measurements of machines, moulds and jigs.
- You can attach it to height gauges.
- It comes with a magnifying glass.

Specifications

Graduation	5' (0° - 90° - 0°)
Circle division	4 x 90°
Delivery	In a box

Standard accessories

No.	Description
187-106	Blade 150
187-107	Blade 300
950750	Holder for Height Gauges with 9 x 9 scribe shaft

187-106 for 187-901, 187-908
187-107 for 187-901, 187-907
950750 for Height Gage with 9x9 mm scribe shaft

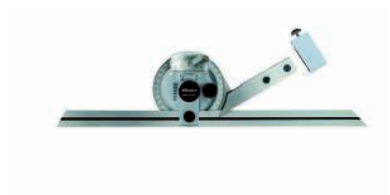
Optional accessories

No.	Description
187-105	Acute angle attachment

187-105 standard accessory for 187-901



187-901
with magnifying glass



187-908
with height gage holder

Metric

No.	Blade edge angle	Blade length	Mass [g]
187-901	w/60°, 45° and 30° edges	150, 300 mm	195
187-907	w/60° and 45° edges	150 mm	885
187-908	w/60° and 45° edges	300 mm	1085



Specifications

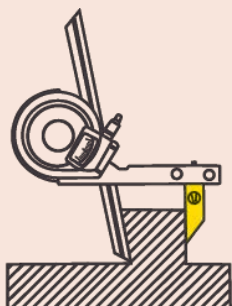
Graduation	5'
Circle division	4 x 90°
Delivered	in a box with acute angle attachment

Standard accessories

No.	Description
187-105	Acute angle attachment

Optional accessories

No.	Description
952624	Holder for height gauges with 9 x 9 scribe shaft



Application with acute angle attachment

Series 187



187-201

No.	Fixed blade length [mm]	Adjustable blade length [mm]	Mass [g]
187-201	135	150	212

Digimatic Universal Protractor

Series 187

This is a Digimatic Universal Protractor with data output that offers you the following features:

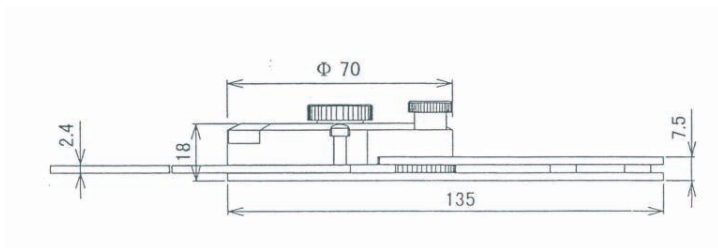
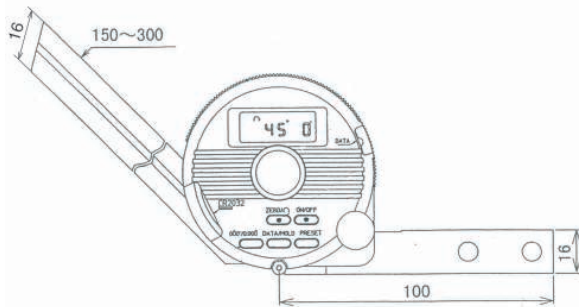
- It has an easy-to-read digital display.
- It automatically turns off after 10 minutes, and gives you fixed reference points for easy adjustment.
- You can slide and clamp the measuring blade over the entire length.
- You can make fine adjustments to precisely adjust arbitrary angle dimensions.
- It comes with a mounting facility on height gauges and tracers of series 192 via holder.



187-502



Holder



Metric

No.	Blade length	Mass [g]
187-501	150 mm	624
187-502	300 mm	662



Functions	Series 187
ON/OFF	●
DATA/HOLD	●
Data output	●
Zero set	●
PRESET	●
Angle sexagesimal/decimal	●

Specifications

Range	-360° - 360°
Repeatability	1' (0,01°)
Digital step	1' (0,01°)
Max. permissible error	2' (0,03°)
Battery life	approx. 2 hours
Display	LCD with Character Height 6,5 mm
Delivered	in a box including battery

Standard accessories

No.	Description
187-106	Blade 150
187-107	Blade 300
950750	Holder for Height Gauges with 9 x 9 scriber shaft

187-106 for 187-501
187-107 for 187-502
950750 for 187-501, 187-502

Optional accessories

No.	Description
187-105	Acute angle attachment
905338	Digimatic cable (1 m)
905409	Digimatic cable (2 m)
02AZD790F	Connecting cable U-Wave
06ADV380F	USB Input Tool Direct cable (2 m)

Consumable spares

No.	Description
055AA217D	Lithium battery CR-2032

Precision Level

Series 960

- For use in setting machined surfaces precisely horizontal



960-601

No.	Sensibility (mm/m per division)	Sensibility " (Arcsecond)	Max. Permissible Error (indication accuracy)	Flatness of reference face (bottom) [μm]	Mass [kg]
960-601	0,1	20"	$\pm 0,5$ graduations = $\pm 0,05$ mm/m	5	1,45
960-602	0,05	10"	$\pm 0,5$ graduations = $\pm 0,025$ mm/m	5	1,45
960-603	0,02	4"	$\pm 0,7$ graduations = $\pm 0,014$ mm/m	5	1,45

Precision Frame Level

Series 960

This Precision Frame Level offers you the following benefits:

- You can set machined surfaces to precisely horizontal or vertical.
- It has 2 vee and 2 flat reference faces, and is precision ground.
- It features graduated main (longitudinal) and auxiliary (transverse) vials.



960-701

No.	Sensibility (mm/m per division)	Sensibility " (Arcsecond)	Max. Permissible Error (indication accuracy) [mm/m]	Flatness of reference faces [μm]	Parallelism of reference faces [μm]	Perpendicularity of reference faces [μm]	Mass [kg]
960-701	0,1	20	$\pm 0,03$ graduations = $\pm 0,03$ mm/m	5	50	25	4
960-702	0,05	10	$\pm 0,3$ graduations = $\pm 0,015$ mm/m	5	25	25	4
960-703	0,02	4	$\pm 0,5$ graduations = $\pm 0,015$ mm/m	3	10	15	4

Specifications

Dimensions (WxDxH)	200 x 44 x 38,2 mm
Vee angle	140°
Delivered	In a wooden case

Specifications

Dimensions (WxDxH)	200 x 44 x 200 mm
Vee angle	140°
Delivered	In a wooden case

Digital Precision Level

Series 950

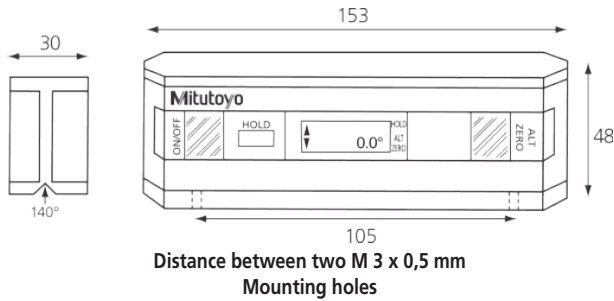
This Digital Precision Level offers you the following benefits:

- You can measure flatness, squareness and angularity.
- Precision support surfaces in aluminium frame provide you with high rigidity and low weight.



950-317

No.	Max. permissible error (degrees)	Repeatability (degrees)	Model	Data output	Sensitivity (degrees)	Mass [g]
950-317	Horizontal : 0,1 Vertical : 0,2	0,1	Pro 360		0,1	300
950-318	0,05 (0 to 10) 0,1 (80 to 90) 0,2 (10 to 80)	0,05	Pro 3600		0,01 (0 to 9,99) 0,1 (10 to 90)	300



Distance between two M 3 x 0,5 mm Mounting holes

Thickness Gauge

Series 184 - Thickness Gauge

- Size clearly stamped on each leaf.
- Leaves are easy to remove and can be individually locked open.

Metric

No.	Range	Accuracy	Number of leaves	Leaf length [mm]
184-304S	0,05-1 mm by 0,05 mm steps	0,05 up to 0,15 mm : $\pm 0,005$ mm 0,2 up to 0,5 mm : $\pm 0,012$ mm 0,55 up to 1 mm : $\pm 0,02$ mm	20	150

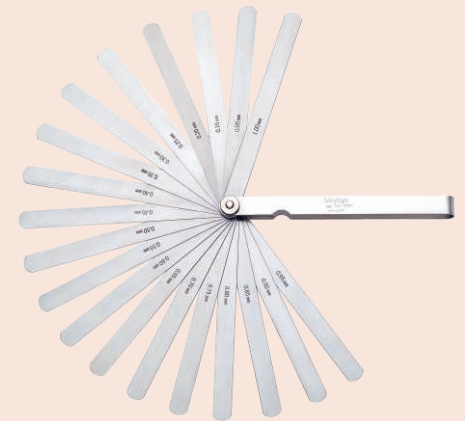
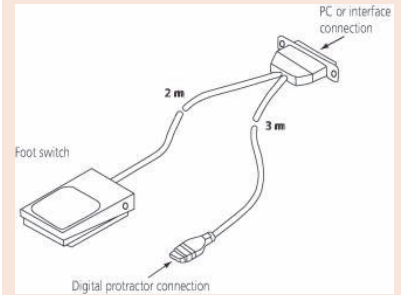
Specifications

Range	360° (4 x 90°)
Power supply	Standard battery (9 V) GLRG1
Battery life	ca. 500 hours
Delivered	Including box

Optional accessories

No.	Description
50AAA983A	RS-232C 25 pin signal cable with foot switch

- Note: 50AAA983A is for 950-318 only



184-304S

90° Steel Square

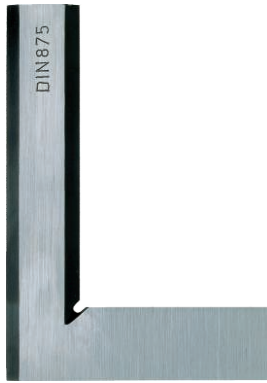
Series 916

This 90° Steel Square offers you the following benefits:

- Three types of square are available.
- It is hardened, and has precision ground edges.

Specifications

Accuracy | According to DIN 875



Bevelled-edge square



Try square



Try square with shoulders

Bevelled-edge square

No.	Leg length [mm]	Cross section [mm]	Grade	Remarks
916-105	50x40	14x4	00	stainless steel
916-106	75x50	15x4	00	stainless steel
916-107	100x70	20x5	00	stainless steel
916-108	150x100	25x6	00	stainless steel
916-109	200x130	30x7	00	stainless steel

Try square

No.	Leg length [mm]	Cross section [mm]	Grade	Remarks
916-201	50x40	15x5	0	stainless steel
916-202	75x50	15x5	0	stainless steel
916-203	100x70	20x5	0	stainless steel
916-204	150x100	25x5	0	stainless steel
916-205	200x130	30x6	0	stainless steel
916-206	250x165	35x7	0	stainless steel
916-207	300x200	40x8	0	stainless steel
916-208	400x265	45x10	0	stainless steel
916-209	500x330	50x10	0	stainless steel
916-221	50x40	15x5	1	steel
916-222	75x50	15x5	1	steel
916-223	100x70	20x5	1	steel
916-224	150x100	25x5	1	steel
916-225	200x130	30x6	1	steel
916-226	250x165	35x7	1	steel
916-227	300x200	40x8	1	steel
916-228	400x265	45x10	1	steel
916-229	500x330	50x10	1	steel
916-231	50x40	15x5	2	steel
916-232	75x50	15x5	2	steel
916-233	100x70	20x5	2	steel
916-234	150x100	25x5	2	steel
916-235	200x130	30x6	2	steel
916-236	250x165	35x7	2	steel
916-237	300x175	35x7	2	steel
916-238	400x100	35x7	2	steel
916-239	500x150	40x8	2	steel

90° Steel Square

Try square with shoulders

No.	Leg length [mm]	Cross section [mm]	Grade	Remarks
916-310	50x40	15x5	0	stainless steel
916-311	75x50	15x5	0	stainless steel
916-312	100x70	20x5	0	stainless steel
916-313	150x100	25x5	0	stainless steel
916-314	200x130	30x6	0	stainless steel
916-315	250x165	35x7	0	stainless steel
916-316	300x200	40x8	0	stainless steel
916-317	400x265	45x10	0	stainless steel
916-318	500x330	50x10	0	stainless steel
916-320	50x40	15x5	1	steel
916-321	75x50	15x5	1	steel
916-322	100x70	20x5	1	steel
916-323	150x100	25x5	1	steel
916-324	200x130	30x6	1	steel
916-325	250x165	35x7	1	steel
916-326	300x200	40x8	1	steel
916-327	400x265	45x10	1	steel
916-328	500x330	50x10	1	steel
916-330	50x40	15x5	2	steel
916-331	75x50	15x5	2	steel
916-332	100x70	20x5	2	steel
916-333	150x100	25x5	2	steel
916-334	200x130	30x6	2	steel
916-335	250x165	35x7	2	steel
916-336	300x175	35x7	2	steel
916-337	400x200	35x7	2	steel
916-338	500x250	40x8	2	steel

Specifications

Accuracy	According to DIN 874
Section	60°

Knife Edge Straight Edge

Series 528

This Knife Edge Straight Edge offers you the following benefits:

- Its straight edges are especially suited to testing the flatness of surfaces.
- It has a hardened, ground and micro lapped measuring edge.



Series 528

No.	Remarks	Length [mm]
528-100	-	50
528-101	-	75
528-102	-	100
528-110	-	125
528-103	-	150
528-104	-	200
528-105	Supplied in a wooden case	300
528-106	Supplied in a wooden case	400
528-107	Supplied in a wooden case	500

Steel Rules

Series 182

These are fully and semi-flexible rules that offer you the following benefits:

- They have clear graduations on satin-chrome finish.
- The rules are stainless tempered.

Metric Fully-flexible rule

No.	Range	Graduation	Width
182-211	150 mm	1 mm. 5 mm (on both sides)	12 mm
182-231	300 mm	1 mm. 5 mm (on both sides)	12 mm
182-251	450 mm	1 mm. 5 mm (on both sides)	18 mm
182-271	600 mm	1 mm. 5 mm (on both sides)	18 mm



Series 182

These are wide, rigid types of steel rules that offer you the following benefits:

- They have clear graduations on satin-chrome finish.
- The rules are stainless tempered.

Metric

No.	Range	Graduation	Width
182-131	300 mm	1 mm - 0,5 mm (on both faces)	25 mm
182-151	450 mm	1 mm - 0,5 mm (on both faces)	30 mm
182-171	600 mm	1 mm - 0,5 mm (on both faces)	30 mm

