



Measuring Solutions

EDITION 75

Marking, Scribing Devices, Protractors





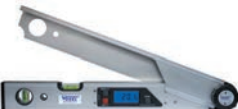
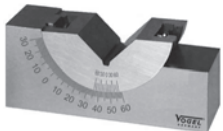
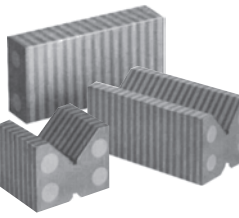
Marking, Scribing Devices, Protractors

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Ink Markers and Steel Scribes

Emil Otto • Metal Etching Pens

- for markings on metal and aluminium
- with exchangeable ink tank
- chemical and thermal resistant
- package contents 1 pen holder and 2 cartridges



ink tank (spare part)

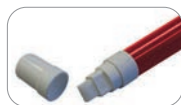
ART N° for metal (green liquid)	ART N° for aluminium (light blue liquid)	ART N° for tool steel (blue liquid)	ART N° for titanium and titanium alloys (turquoise dark blue)
334501	334502	334503	334504
ART N° spare part ink tank for metal (green liquid)	ART N° spare part ink tank for aluminium (light blue liquid)	ART N° spare part ink tank for tool steel (blue liquid)	ART N° spare part ink tank for titanium and titanium alloys (turquoise dark blue)
334591	334592	334593	334594

EMIL OTTO • Marking Ink

- for the marking of machining points on surfaces
- as marker, in a spray bottle or in a plastic canister available
- dries within seconds
- non-reflective fluid
- good adhesions and can be removed easily
- 2 different colours available



ART N° 262601



ART N° 262611



ART N° 262603



ART N° 262605



ART N° 262604

ART N°	colour	contents ml	marker	spray bottle	canister
262601	blue	30	✓	—	—
262603	blue	500	—	—	✓
262604	blue	1000	—	—	✓
262605	blue	500	—	✓	—
262611	red	30	✓	—	—
262613	red	500	—	—	✓
262614	red	1000	—	—	✓
262615	red	500	—	✓	—

Steel Scribes

- with hardened tips
- made from special steel

ART N° 334604



ART N° 334602



ART N° 334600



ART N° 334603



ART N°	mm	scriber-ø mm	version
334600	180	5	straight bar, knurled handle
334602	230	4	straight and cranked bar, with plastic handle
334603	175	4	straight bar, exchangeable tip, knurled handle
334604	250	4	straight and cranked bar, exchangeable tips, knurled handle
334691	90	4	spare tip, straight (for art.-no.: 334603 – 334604)
334692	100	4	spare tip, cranked (for art.-no.: 334604)

Steel Scribers

- with tungsten carbide tips



ART N°	mm	shaft-ø mm	version
334606	175	14	straight bar, with red plastic handle
334608	150	6	hexagonal bar, galvanized, with clip
334609	180	8	hexagonal bar, galvanized, without clip
334610	150	8	hexagonal, aluminium shaft, lacquered, with drop mechanic
334695	35	—	spare tip, carbide, for 334610
334611	150	10	„RICO“-Marker, aluminium shaft, knurled handle, pen type
334694	70	—	spare tip, carbide, for 334611
334612	230	4	straight and cranked bar, exchangeable tips, knurled handle
334615	150	9	carbide marker, push technique, with clip
334690	30	—	spare tip, carbide, straight version, for 334615
334696	90	—	spare tip, carbide, straight version, for 334612
334697	100	—	spare tip, carbide, cranked version, for 334612

Steel Scribers

- with tungsten carbide needle
- with clip and magnet

- made of steel, black burnished
- with exchangeable needle
- with anti-slip knurled handle



with magnet



ART N°	mm	shaft-ø mm	version
334620	155	7.5	with tungsten carbide tip, anti-slip knurled handle
334629	—	3	spare part, tungsten carbide needle

Parallel Surface Gauge

- for simple workshop purposes

- round, chromed column, without graduation
- hardened steel scriber, straight and cranked bar
- scriber is rotatable and turnable
- round and lacquered iron base



ART N°	mm
342102	300
342104	500

Dividers and Compasses

Spring Divider

DIN 6486

- steel, polished
- square legs, with hardened tips
- with quick nut for quick movement
- with fine adjustment

ART N° 302422



ART N° 302682



ART N° 302689
pair of spare needles



DIN

ART N°

Divider



ART N°	
302420	100
302421	125
302422	150
302423	175
302424	200
302425	250
302426	300
302427	400
302428	500
302429	600

ART N°

Divider with exchangeable points



ART N°	
302680	100
302681	125
302682	150
302683	175
302684	200
302685	250
302686	300
302687	400
302688	500
302689	600

Internal and External Spring Joint Compass

DIN 6482/6484

- steel, polished
- square legs, with hardened tips
- with quick nut for quick movement
- with fine adjustment

ART N° 302442



ART N° 302462



DIN

ART N°

Spring Inside Compass



ART N°	
302440	100
302441	125
302442	150
302443	175
302444	200
302445	250
302446	300
302447	400
302448	500
302449	600

ART N°

Spring Outside Compass



ART N°	
302460	100
302461	125
302462	150
302463	175
302464	200
302465	250
302466	300
302467	400
302468	500
302469	600

Divider and Divider with Setting Wing

DIN 6486

- steel, polished
- square legs, with hardened tips
- with rivet

ART N° 302402



ART N° 302412



ART N° 302472



DIN

ART N° Divider	→ ←
302402	150
302403	175
302404	200
302405	250
302406	300
302407	400
302408	500

ART N° with setting wing	→ ←
302412	150
302413	175
302414	200
302415	250
302416	300
302417	400
302418	500

ART N° with holder	→ ←
302472	150
302473	175
302474	200
302475	250
302476	300
302477	400
302478	500

Internal and External Joint Compass

DIN 6482 / 6484

- steel, polished
- with flat legs
- with rivet

ART N° 302432



ART N° 302452



DIN

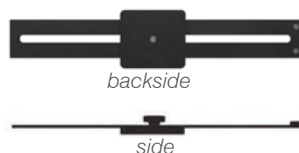
ART N° Inside Compass	→ ←
302432	150
302433	175
302434	200
302435	250
302436	300
302437	400
302438	500

ART N° Outside Compass	→ ←
302452	150
302453	175
302454	200
302455	250
302456	300
302457	400
302458	500

Marking Gauges and Marking Vernier Calipers

Marking Gauges

- with flat sliding ruler and marking block
- with fixing screw
- made of Dur-Aluminium, surface hardened HRC63
- scratch-resistant, black anodized surface
- marking block made of steel
- laser engraved, clear reading scale
- vernier reading 0.05 mm



ART N°	mm	mm	mm
336230	200	0.05	298 x 60 x 16
336231	250	0.05	348 x 60 x 16
336233	300	0.05	400 x 60 x 16

Marking Gauges

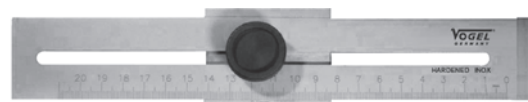
- with flat sliding ruler and marking block
- with fitting screw
- made of Dur-Aluminium, surface hardened HRC63
- scratch-resistant, black anodized surface
- with hardened steel marking block, locking screw
- laser engraved, clear reading scale
- marking block 44 mm high



ART N°	mm	mm	mm
336260	200	0.05	300 x 60 x 44
336261	250	0.05	350 x 60 x 44
336262	300	0.05	400 x 60 x 44

Marking Gauges

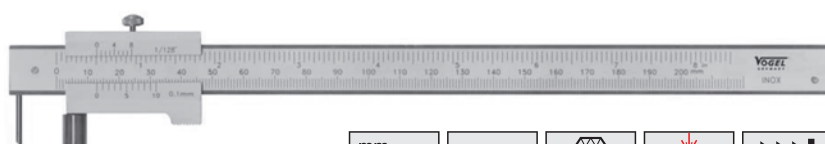
- with flat sliding rule
- with metal fixing screw
- stainless steel blade, with hardened marking block
- laser engraved scale, blade surface matt chrome finish
- with vernier reading 0.1 mm



ART N°	mm	mm	mm
336220	200	0.1	260 x 40 / 50 x 25
336221	250	0.1	305 x 40 / 50 x 25
336223	300	0.1	360 x 40 / 50 x 25

Universal Marking Gauges

- with contact-roll
- carbide scribe, exchangeable
- stainless steel, hardened
- laser engraved scale, reading parts in matt chrome finish
- 2nd scribe as spare part included

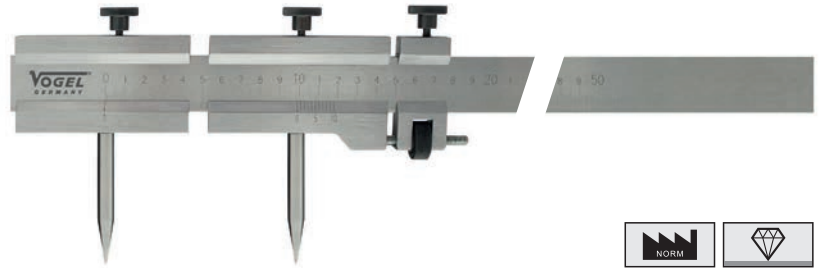
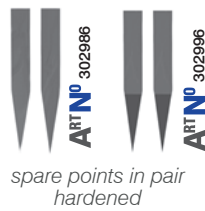


ART N°	mm / inch	mm	ART N°
335070	200 / 8	0,1	carbide scribe (spare part)
335071	400 / 16	0,1	335072
			335072

Marking Gauges and Marking Vernier Calipers

Trammels

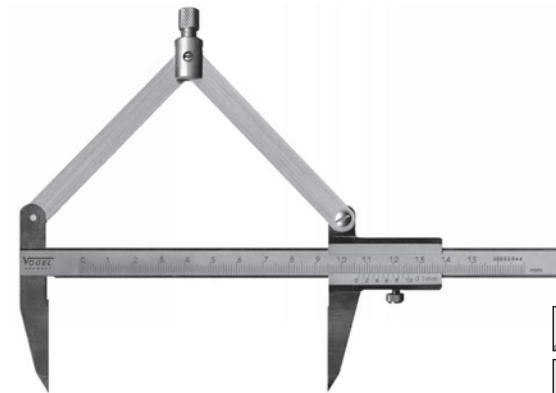
- steel, with hardened, exchangeable points
- flat beam, with fine adjustment
- with fixing screws



ART N°	 mm	 mm
302911	500	0.1
302912	1000	0.1
302913	1500	0.1
 302914	2000	0.1
 302915	3000	0.1

Compass Vernier Calipers

- for accurate marking owing to parallel position of the scriber jaws
- special steel, reading scale in matt chrome finish
- with fixing screw
- with carbide tips or hardened tips at your choice



ART N° hardened tips	ART N° carbide tips	 mm	 for ø mm	 mm
303002	303102	150	300	0.1
303003	303103	200	400	0.1
303004	303104	250	500	0.1
303005	303105	300	600	0.1

Marking Gauges

- with round bar
- chromed bar and scale, with 0.1 mm vernier reading
- with round contact plate, with fixing screw
- with or without fine adjustment, at your choice
- with exchangeable, hardened marking needle

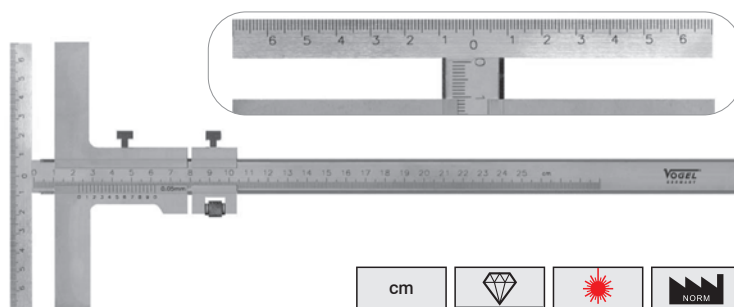


ART N° 	ART N° 	 cm		ART N° spare needle
335030	335031	30	0.1	335066
—	335051	50	0.1	335066

Marking Vernier Calipers and Digital Protractors

T-Marking Vernier Calipers

- with mm-graduation at the edge of the T-bar
- special steel, hardened, with fine adjustment
- laser engraved scale, reading parts in matt chrome finish



ART N°	cm	mm	length of T-bar mm
337301	16	0.05	100
337302	25	0.05	140
337303	30	0.05	160
337305	50	0.05	160

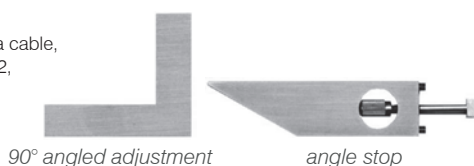
Electr. Digital Universal Bevel Protractor Set

- with data output
- with 3 blades (150 / 200 / 300 mm), 90° square and angle stop

- stainless steel, hardened and fine ground
- rugged ABS-plastic housing, multifunctional display
- with fine adjustment for easy adjustment and fixing device for the blade
- large LCD display with clear reading
- two display lines, resolution in 1. line with 0.005° and in 2. line with min. 10"
- preset to 360° / 180° / 90°, two measuring directions selectable
- On/Off button, mode-button, set-button, zero setting at any position
- automatic switch off after approx. 5 min
- operation temperature 0 °C ~ +40 °C, storage temperature -10 °C ~ +60 °C
- incl. 1x 3 V battery (type CR2032, art.-no.: 90112), with operation manual

Option

- data transfer via cable, art.-no. 2420192, see page 272

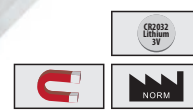


ART N°	length of blade mm				
320100	150 / 200 / 300	360° / 2x 180° / 4x 90°	0.005° / 10"	5'	on request

Electr. Digital Protractor

- for checking and transferring angles

- large LCD display with clear reading, digit height 10 mm
- blades in anodized aluminium with profile grooves, and embedded magnet strips
- On/Off button and data hold function, with fixing screw
- 180° rotating display, by pressing function button
- zero setting at any position
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), operation manual



ART N°				length of blades mm		
320021	0 – 360	0.05	0.3	200 x 200	205 x 45 x 30	on request
320022	0 – 360	0.05	0.3	300 x 300	305 x 45 x 30	on request

Electr. Digital Bevel Protractor

- for high precision accuracy and safety reading

- LCD display with clear reading, digit height 10 mm
- stainless, hardened and fine ground
- On/Off button, with fixing screw
- zero setting at any position, with data hold function
- reading of values in display by 180° switchable
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual



ART N° 320201



ART N° 320202 – 320203



ART N°	length of blade mm	arc-ø mm				
320201	150	120	0 – 180	0.05	0.3	on request
320202	200	150	0 – 180	0.05	0.3	on request
320203	300	200	0 – 180	0.05	0.3	on request

Protractor (Skew Measure)

- for high precision accuracy and safety reading

- LCD display with clear reading, digit height 10 mm
- stainless, hardened and fine ground
- On/Off button, with fixing screw
- zero setting at any position, with data hold function
- reading of the values in the display from 10° – 170°
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual



ART N°	length of blade mm	arc-ø mm	angle graduation	
320581	150	100	10 – 170	on request
320582	300	150	10 – 170	on request
320583	400	200	10 – 170	on request

Digital Protractors

Electr. Digital Angle-Sensor „Bevel-Box“ and „Level-Box“ • IP54

- dust- and splash water proof acc. to DIN 40050 / IEC 60529
- ideal device for angle adjustment, can be used for many purposes

- rugged metal housing
- large LCD display with clear reading, digit height 10 mm
- with 3 magnetic discs in the bottom of the housing
- with On/Off-, zero- and ABS button, data hold function
- art.-no. 32 0011 added with a vial on top of the housing
- incl. 1x 3 V battery (type CR2032, art. no.: 90112), with operation manual



magnetic discs



ART No				
320010	$\pm 180^\circ$	0.1°	$\pm 0.1^\circ$	50 x 50 x 32
320011	$\pm 180^\circ$	0.1°	$\pm 0.1^\circ$	50 x 63 x 32

Electr. Digital Angle-Sensor with 90° swiveling LCD display • IP54

- dust- and splash water proof acc. to DIN 40050 / IEC 60529
- ideal device for angle adjustment, can be used for many purposes

- large LCD display, with clear reading, digit height 8 mm
- LCD display swivelling up to 90°, with direction indicating vial in the display
- with magnetic V-base
- On/Off button and data hold function
- incl. 2x 1.5 V battery (type AAA, art. no.: 90002), with operation manual



magnetic V-base

swivelling display



ART No				
320015	$\pm 180^\circ$	0.1°	$\pm 0.1^\circ$	55 x 57 x 32

Electr. Digital Protractor • IP65

- water- and coolant proof acc. to DIN 40050 / IEC 60529
- ideal device for precise leveling and measuring of flatness and squareness, can be used for many purposes

- sturdy housing with aluminium V-prism at top and bottom side
- art.-no. 320016 additionally with magnetic discs in the V-bottom
- large LCD display, with clear reading, digit height 9 mm
- with acoustic signal and backlight
- autom. 180° rotating display, by turning up-side down
- with data hold function, ABS system, with easy to handle self calibration
- On/Off- and zero button, zero setting at any position
- incl. 2x 1.5 V battery (type AAA, art. no.: 90002), with operation manual



ART No 320016



magnetic base



ART No					
320013	4 x 90° (0 – 360°)	0.05°	$\pm 0.15^\circ$	150 x 33 x 60	X
320016	4 x 90° (0 – 360°)	0.05°	$\pm 0.15^\circ$	150 x 33 x 60	✓

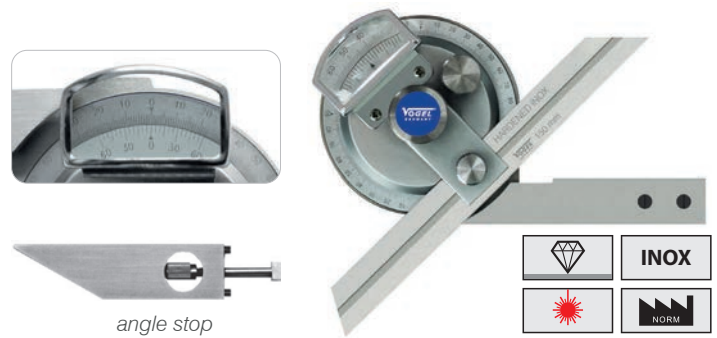
Universal Bevel Protractor Set

- set with 3 blades in different length

- stainless, hardened and fine ground
- scales matt chrome finish
- parallaxfree reading by vernier, with large magnifying lens
- with fine adjustment
- incl. angle stop (art. no.: 321276)

Option

- Wooden box: art. no.: 3299020



ART N°	length of blades mm		angle graduation °	
321220	150 / 200 / 300 mm	4 x 90°	1/12° = 5'	on request

Protractors (Skew Measurer)

- for standard mechanical engineering

- special steel, in chromed finish
- scale in matt chrome finish
- with adjustable blade, with fixing screw



ART N°	length of blades mm	arc-Ø mm	angle graduation °
320571	150	100	10 – 170°
320572	300	150	10 – 170°
320573	400	200	10 – 170°
320574	500	250	10 – 170°

Protractor

- with fixing screw
- with half round plate

- special steel, chromed
- scale matt chrome finish
- double graduation from 0° – 180° in opposite direction



ART N°	length of blades mm	arc-Ø mm		
322541	150	80	0 – 180	on request

Spare Parts for Electr. Digital Universal Protractors

- art.-no. 320100

ART N°	
320101	150
320102	200
320103	300

ART N° 320101

ART N° 320102

ART N° 320103



ART N°	90° angled adjustment	
321275		60 x 50 / 15 x 4

ART N°	angle stop
321276	

70 / 40 x 18 x 4

ART N° 321276

ART N° 321275



Analog Protractors

Spare Parts for Universal Protractors

- art.-no. 321220

ART N°	spare blade
321225	150
321226	200
321227	300
321229	500



ART N°	magnifying glass, w/o screws	mm
321228		37 x 22



ART N° 321228

ART N°	angle stop	mm
321230		68 x 38 / 18 x 4



ART N° 321230

Protractor

- with fixing screw
- for standard mechanical engineering
- made of Dur-Aluminium, surface hardened HRC63
- scratch-resistant, black anodized surface
- laser engraved, clear reading scale



ART N°	length of blade mm	arc-Ø mm	eye	CC
322511-2	120	80	0 – 180	on request
322512-2	150	120	0 – 180	on request
322513-2	200	150	0 – 180	on request
322514-2	300	200	0 – 180	on request
322515-2	500	300	0 – 180	on request

Protractor

- with fixing screw
- for standard mechanical engineering
- special steel, in chromed finish
- scale in matt chrom finish, laser engraved scale



ART N°	length of blade mm	arc-Ø mm	eye	CC
322511	120	80	0 – 180	on request
322512	150	120	0 – 180	on request
322513	200	150	0 – 180	on request
322514	300	200	0 – 180	on request
322515	500	300	0 – 180	on request
322516	600	300	0 – 180	on request

Angle Measure Spirit Levels

Electr. Digital Angle Measurer Spirit Level

- automatic calculation of single and double mitre angles without any other tools
- sturdy aluminium housing, with adjustable bevel blade
- large LCD display, digit height 12 mm, reading from all directions possible, with shiftable backlight
- rapid calculation and transfer of angles by means of memory function for frequently used angle dimensions
- power On/Off button, data hold function, shock resistant up to 1 m falling down
- precise mitre- and self-calibration function
- with 1x horizontal vial and 1x vertical vial
- with fixing screw for fixing the angle setting
- incl. 2x battery 1.5 V (type AAA, art.-no.: 90002)
- incl. operation manual



ART N°					
711020	0 – 225°	0.05°	0.1°	1 mm/m = ±0.057°	440 x 60 x 25

Electr. Digital Angle Measurer Spirit Level

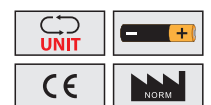
- for quick and accurate measuring of angular degrees, can also be used as a spirit level
- with 1x horizontal vial and 1x vertical vial
- sturdy aluminium housing, with adjustable bevel blade
- large LCD display with clear reading, digit height 12 mm
- On/Off and zero button, zero setting at any position
- incl. 1x 3 V battery (type CR2032, art.-no.: 90112), with operation manual



ART N°					
711025	0° – 225°	0.1°	0.3°	1 mm/m = ±0.057°	305 x 52 x 23

Electr. Digital Spirit Level

- for trade and industry
- rugged, rectangular profile, made of light alloy
- large LCD display with clear reading, digit height 12 mm, with shiftable back light
- display always appears in the reading direction no matter which direction the device is rotated
- conversion between ABS- and INC-measurement
- calculation of ascend/descend, angle and deviation
- with self-calibration function
- power On/Off button, data hold function
- with 1 x horizontal vial and 1 x vertical vial
- incl. 2x 1.5 V battery (type AAA, art.-no.: 90002)
- with operation manual



ART N°				
712020	4 x 90°	0.1°	0.2°	416 x 50 x 21

Angle Measure Spirit Levels and Spirit Levels

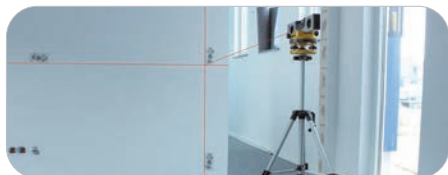
Electr. Digital Light Alloy Spirit Level

• with cross laser, angle degree indicator and percent deviation

- rugged, rectangular profile, made of light alloy, with ribbed surface
- large LCD display, digit height 10 mm, reading from all directions possible
- switchable display in angle-, percentage measuring- and tangent-mode
- On/Off button, data hold function and memory function
- magnetic inserts in the bottom and M6 thread for tripod attachment
- with each 1x horizontal and 1x vertical vial
- with self-calibration and switchable cross laser, range about 7 m (inside)
- incl. 1x 9 V battery (type 6LR61, art.-no.: 90006), with operation manual



with cross laser



with magnet inserts and M6 thread for tripod attachment



ART N°				
712010	4 x 90°	0.05°	0.2	225 x 57 x 25

Spirit Levels „NIVEAU NORM“

• top quality spirit levels with plane surfaces

- rugged light alloy rectangular profile, from up 1500 mm length with extrem solid wallthickness
- with 1x horizontal vial and 1x vertical vial
- barrel-shaped vials with patented SOLID built-in system, permanent fixed and constantly aligned with the profile
- surfaces in stratosilver elocated
- measuring accuracy adjusted by electronical adjustment and at final inspection
- measuring accuracy in normal position 0.5 mm/m = 0.029°, with reversal measurement minimum 0.75 mm/m = 0.043°

art.-no.: 714100 – 714110

- with strong adhesive magnet in the measurement base



plane, rectangular aluminium profile, extruded and warm cured

ART N° 714000 – 714010



without magnets

ART N° 714100 – 714110



with strong adhesive magnet in the measurement base

ART N° 714000 – 714010



ART N° 714100 – 714110



ART N°				
714000	200	50 x 20	X	0.5 mm/m = ±0.029°
714001	300	50 x 20	X	0.5 mm/m = ±0.029°
714002	400	50 x 20	X	0.5 mm/m = ±0.029°
714003	500	50 x 20	X	0.5 mm/m = ±0.029°
714004	600	50 x 20	X	0.5 mm/m = ±0.029°
714005	800	50 x 20	X	0.5 mm/m = ±0.029°
714006	1000	50 x 20	X	0.5 mm/m = ±0.029°
714007	1200	50 x 20	X	0.5 mm/m = ±0.029°
714008	1500	50 x 20	X	0.5 mm/m = ±0.029°
714009	1800	50 x 20	X	0.5 mm/m = ±0.029°
714010	2000	50 x 20	X	0.5 mm/m = ±0.029°
714100	250	50 x 20	✓	0.5 mm/m = ±0.029°
714101	300	50 x 20	✓	0.5 mm/m = ±0.029°
714102	400	50 x 20	✓	0.5 mm/m = ±0.029°
714103	500	50 x 20	✓	0.5 mm/m = ±0.029°
714104	600	50 x 20	✓	0.5 mm/m = ±0.029°
714105	800	50 x 20	✓	0.5 mm/m = ±0.029°
714106	1000	50 x 20	✓	0.5 mm/m = ±0.029°
714107	1200	50 x 20	✓	0.5 mm/m = ±0.029°
714108	1500	50 x 20	✓	0.5 mm/m = ±0.029°
714109	1800	50 x 20	✓	0.5 mm/m = ±0.029°
714110	2000	50 x 20	✓	0.5 mm/m = ±0.029°

Parallel V-Block Pairs

- made of dense special cast iron with high resistance to wear
- supplied in matched pair
- 4 different large grooves, 90°
- available in milled or ground version

grade 0 = ground parallelism tolerance = ± 0.008 mm
grade 1 = ground parallelism tolerance = ± 0.016 mm
grade 3 = milled parallelism tolerance = ± 0.064 mm



ART N° grade 0	ART N° grade 1	ART N° grade 3		for shaft-ø mm
333511	333501	333531	60 x 120 x 100	8 – 90
333512	333502	333532	75 x 150 x 130	10 – 120
333513	333503	333533	90 x 200 x 170	12 – 180

Prism Pair

- made of dense special cast iron with high resistance to wear
- supplied in matched pair
- with 1 large cut, 90°
- available in milled or ground version
- from 200 mm length with grooves

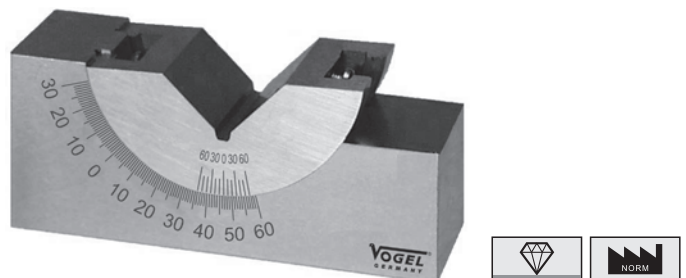
grade 0 = ground parallelism tolerance = ± 0.008 mm
grade 1 = ground parallelism tolerance = ± 0.016 mm
grade 3 = milled parallelism tolerance = ± 0.064 mm



ART N° grade 0	ART N° grade 1	ART N° grade 3		for shaft-ø mm
333101	333201	333301	100 x 40 x 30	6 – 40
333102	333202	333302	150 x 50 x 40	8 – 50
333103	333203	333303	200 x 70 x 50	8 – 70
333104	333204	333304	250 x 85 x 60	12 – 85
333105	333205	333305	300 x 100 x 70	12 – 100

Adjustable Angle Prism

- special steel, hardened, fine ground
- prism cut 90°, angle scaling 0° – 60° / 0° – 30°



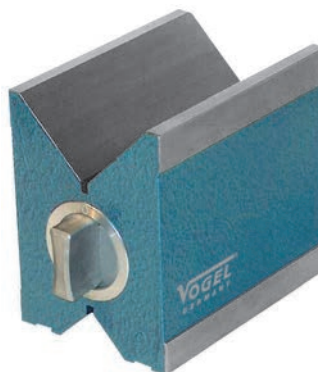
ART N°		parallelism tolerance $\pm$ mm	for shaft-ø mm
334001	75 x 25 x 32 / 23	0.05	28
334002	102 x 30 x 48 / 29	0.05	40
334003	102 x 46 x 48 / 29	0.05	40

Magnetic Blocks

Magnetic Measuring and Clamping V-Block

- especially engineered for toolmakers etc.

- made of special steel
- with V-cut 90°, finely ground
- strong magnetic block
- with On/Off-rotary switch made of aluminium
- magnetic base with finely ground prism
- plane, parallel and squared machined



ART N°	mm	for shaft- $\varnothing$ mm	parallelism tolerance $\pm$ mm	prism N	surface N
330100	80 x 67 x 96	$\varnothing$ 6 – 66	0,004	400	900
330101	100 x 70 x 96	$\varnothing$ 6 – 72	0,004	650	1800

Magnetic Measuring and Clamping V-Block

- special steel made
- with On/Off switch
- art.-no. 331000 – 331002: with flat magnetic base
- art.-no. 331010 – 331012: with magnetic prism base
- with V-cut 90°, fine ground
- plane, parallel and squared machined

ART N° 331012

ART N° 331002

ART N° 331010 + 331011



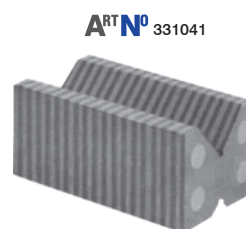
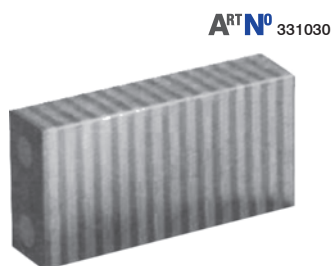
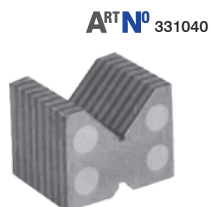
ART N° steel	mm	for shaft- $\varnothing$ mm	parallelism tolerance $\pm$ mm	N	flat base	prism base
331000	101 x 76 x 78	$\varnothing$ 6 – 40	0.05	700	✓	—
331001	127 x 60 x 73	$\varnothing$ 6 – 35	0.05	600	✓	—
331002	70 x 60 x 73	$\varnothing$ 6 – 30	0.05	700	✓	—
331010	80 x 70 x 95	$\varnothing$ 6 – 30	0.05	800	—	✓
331011	101 x 67 x 95	$\varnothing$ 6 – 70	0.05	1000	—	✓
331012	115 x 75 x 100	$\varnothing$ 6 – 70	0.05	800	—	✓

Magnetic Blocks and V-Blocks with Clamps

Lamellar Block / Prism Lamellar Block

- for setting on magnetic holding plates

- special steel, fine ground
- with 90° cut or in flat version
- with pole distance 4 mm



ART N° flat	
331030 (pair)	100 x 50 x 25
—	—

ART N° with V-cut	
331040 (pair)	50 x 60 x 48
331041 (single)	100 x 60 x 48

V-Block with Clamp

- for clamping cylindrical pieces

- special steel, hardened, fine ground
- 2 different deep 90° V-cuts
- 2 supporting surfaces
- single or in pair adjusted available



ART N° single	ART N° pair		clamping range for ø mm	 ± mm / 100 mm
333001	333011	45 x 40 x 35	5 – 20	0.01
333002	333012	70 x 45 x 40	5 – 25	0.01

V-Block Pair with Clamps

- for clamping cylindrical pieces and marking purposes, etc.

- special steel, hardened or stainless steel hardened
- 2 different deep 90° V-cuts, surfaces finely ground
- front faces angular ground in regard to base area, adjusted in pairs

Option

- wooden boxes available, by extra charge



ART N° carbon steel in pairs		clamping range for ø mm	 ± mm / 100 mm
333041	50 x 40 x 50	5 – 30	0.01
333042	75 x 55 x 55	5 – 50	0.01
333043	100 x 75 x 75	7 – 70	0.01

Clamps for Prisms and Precision Parallel Support Sets

Replacement Clamp for Prisms

- single packed

ART N°	suitable for
3330901	333001 + 333011
3330902	333002 + 333012
3330941	333041
3330942	333042
3330943	333043



Precision Parallel Support Sets

- 14 pairs of parallels
- special steel, carefully hardened and strain-removed, HRC 58 – 60
- longitudinal surfaces are plane parallel machined and extra fine adjusted in pairs



ART N°	sizes mm		accuracy for height ± mm
260600	14 / 16 / 18 / 20 / 22 / 24 / 26 / 28 / 30 / 32 / 35 / 40 / 45 / 50	150 x 10 ± 0.05	0,01

Precision Parallel Support Sets, magnetic

- hardened (~60 HRC), black anodized
- with magnetic inserts, reduce the clamping time by up to ~ 10
- fine ground in pair, as set of each 5 pairs
- scratch-resistant, black anodized surface



Application example



ART N°	sizes mm	height tolerance ± mm	width tolerance ± mm	
260620	15 / 22 / 25 / 30 / 32	0.005	0.01	120 x 2.5
260621	15 / 30 / 35 / 37 / 39	0.005	0.01	125 x 2.5
260622	25 / 35 / 40 / 45 / 47	0.005	0.01	150 x 2.5



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