# **Explanations**

In our catalogue you will find several pictograms beside the text description.

They should be helpful for a quick and easier explanation of the articles and their attributes.

Prote	ection (IP-Code) acc. to DIN 40050 / IEC 60529 etc.	Seve	ral Icons
	Protected against solid particles Ø > 1 mm	ART NO	Article-Number
10 IP 41	Protected against solid particles Ø > 1 mm and drop water resistant		Reading / Resolution
10 d IP 44	Splash water resistant	KG	Weight in kg
10 IP 51	Drop water resistant		Cross section of the article
1/1/ IP 52	Drop water resistant	← max. →	Max. total accuracy(±)
1/4 IP 53	Dust and spray water resistant	→↓←   <sub>1,,,,,</sub>	Repeatability (±)
1/4 IP 54	Dust and spray water resistant	<u> </u>	Individual measuring range
1/4 IP 62	Dust and drop water proof	→mm ←	Article dimension
1/4 IP 63	Dust and spray water proof	UNIT	Measuring- and weighing-unit selectable or swichtable
1/4 IP 64	Dust and splash water proof		Corresponding battery included
1/4 IP 65	Dust and jet water proof	***************************************	Corresponding battery included
10 67	Water and oil tight (at times)	LR41 1,5V	Corresponding cell battery included
10 68	Water and oil tight (permanent)	LR44 1,5V	Corresponding cell battery included
<b>(E)</b>	Article is explosion proof	CR1632 Lithium 3V	Corresponding lithium battery included
ÛΓ	Article with UL-certificate (american safety norm)	CR2032 Lithium 3V	Corresponding lithium battery included
		- £	Accu
Manu	ufacturing process	~ 230V	Power supply
**	Article with laser engraved scale / graduation		Laser protection class
	Article with etched scale / graduation		Magnet power
	Article with printed scale / graduation (Pad print)	$\mathcal{M}$	Induction
	Hardened	***	Laser wavelength
INOX	Stainless steel	1	Shock proof
			Stand out
Icons	s for data process	mm/inch	Reading in mm and inch
RS232 C	RS232 data output by data cable	cm/inch	Reading in cm and inch
OPTO RS232 C	Opto RS232 data output	ABS/INC	Article with ABS/INC measuring system
PROXIMITY	Proximity data output, inductive, contactless	ABSOLUTE	Article with ABSOLUTE measuring function
	Data output by USB and data cable		
Vocom-s Duo-Datenausgang	Data output by USB and Mini USB		ATTENTION
Duo-Datenausgang	(compatible with Mitutoyo Digimatic) wireless communication (WiFi) possible		We charge transport and packing costs for articles marked with *!
0	Software on CD-Rom		

# **Explanations**

#### About the Certification:

We are also able to quote all DIN measuring tools with a certificate to VDI/VDE/DGQ 2618. Measuring tools manufactured at works standard will be certificated according to this norm. The calibrations will be done by an external calibration laboratory. The delivery time for external calibration will take approx one week. Calibration orders can't be cancelled and calibrated goods are excluded from sale of return. Whether you expect a calibration by laboratory of your choice, we are unable to guarantee for passing. Compensation of refund of costs are also impossible.

Norm	ns, accuracy-classes, regulations
EC I	Article fulfils the respective EC Class standard
EC II	Article fulfils the respective EC Class standard
E1	Article fulfils the respective verification standard
СС	Workshop calibration certificate, inclusive
TC	Article with test certificate, marked with IdentNo.
C€	Article with CE classification
MID CODE	Directive of the European Parliament and of the council on measuring instruments
T2	Article with strengths tolerances acc. to DIN 2275
Т3	Article with strengths tolerances acc. to DIN 2275
ASTM	Article fulfils the respective American standard
BS	Article fulfils the respective British standard
JIS K	Article fulfils the respective Japanese standard
DIN	Article fulfills the respective DIN standard
DIN EN	Article fulfils the respective DIN EN standard
ISO	Article fulfils the respective ISO standard
DIN ISO	Article fulfils the respective DIN ISO standard
NORM	Article manufactured acc. to tolerances of workshop standard
TUV S	Article with seal: "TÜV/Geprüfte Sicherheit (GS)"
<b>C</b> ₩ <b>d</b>	Article with seal: "TÜV"
IEC / EN	Article fulfils the respective norm standard

	Article will be packed in a sleeve
	Article will be sealed in a foil
	Article will be packed in a DIY plastic pouch with hanging card
1	Article will be packed in a plastic film pouch with hanging card
	Article comes with wall hanging card
	Article will be packed in a blister packing
	Article will be packed a clear plastic box
	Carry bag, for outdoor use
	Article delivered on a pallet

Product specifications

Art of package for each article

Article will be packed in a carton box

Article will be packed in a leatherette pouch

Article will be packed in a PVC pouch

Article will be packed in a sturdy box (wood, plastic or aluminum)

# Workshop or "DAkkS"-Calibration (German Calibration Service)

Calibrated instruments available for extra charge. Please send us your specific inquiry.

	Quality categories
<del>ሰ</del> ለሰለሰ	Product for highest demands
<b>***</b>	Industry and craft
<b>☆☆☆</b> ☆☆	Craft
☆☆☆☆☆	DIY and training

	Caliper jaw length
<b>→</b>	Measuring internal dimension
	Caliper jaws (cross shape)
1	Caliper jaws (knife shape)
•	Depth Gauge
Imbutulmini	Thumbroll
antindantindantind	Fine adjustment
-	Thread pitch
$\longrightarrow$	Measering Inside
*	Measuring outside
	Pointer rotation
0	Setting gauge
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# **Overview**



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# Spirit Levels, Angle Measurer Spirit Levels

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## DIGI PLUS-LINE 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.: 60 9283)
- with carrying bag and operation manual









ART NO	<b>→</b>  1000hm1 <b> </b>		± °	luuluul vial	→ <mark>mm</mark> ←	KG
71 1020	0 - 225°	0.05°	0.1°	1 mm/m = ±0.057°	440 x 60 x 25	0.900

## **☆☆☆**☆☆

## DIGIPLUS-LINE 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. 14:23/ better: (here CD2020, art no. 20.02020)
- incl. 1x 3 V battery (type CR2032, art. no. 20 02093), with operation manual





ART NO	<b>→</b> lmuhm1 <b>←</b>		max.	liiiliiiliiil vial	→ <mark>mm</mark> ←	KG
71 1025	0° - 228°	0.1°	0.2°	$1 \text{ mm/m} = \pm 0.057^{\circ}$	305 x 52 x 23	0.275

## **Electr. Digital Light Alloy Spirit Levels**

## DIGI PLUS-LINE Electr. Digital Light Alloy Spirit Level

- · 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 battery 1.5 V (type AAA, art.-no.: 60 9283)
- with operation manual





	UNIT	+
NORM	C€	TC

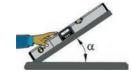
ART NO	<b>→</b> luuluul <b>←</b>		± °	→ <mark>mm</mark> ←	KG
71 2020	4 x 90°	0.1°	0.2°	416 x 50 x 21	0.308



## DIGI PLUS-LINE Electr. Digital Light Alloy Spirit Level

- with laser pointer and electronical inclination measurement
- conventional vials are still best means of making horizontal and vertical measurements, an electronic system is the superior method for measurement of all inclinations, this model includes both in one
- with overhead measurement, display always appears in the reading direction no matter which direction the device is rotated
- rugged, rectangular profile, made of light alloy, with ribbed surface
- with milled measuring surfaces, rugged electronic housing
- 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
- range of laserbeam at day-light  $\sim$ 50 m / in darkness  $\sim$ 100 m
- incl. 1x 9 V battery (type 6LR61, art.-no.: 60 9281), with acoustic signal
- · delivery with carrying bag, with operation manual

art.-no. 71 2991 attachable beam-prism







ART NO		→ <mark>mm</mark> ←	error limit at 0° and 90°	in normal position	KG
71 2001	0.1°	600 x 25 x 60	± 0.1°	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	0.790

### **ተተተ**

### DIGI PLUS-LINE 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
- incl. 1x 9 V battery (type 6LR61, art.-no.: 60 9281), with operation manual





with magnet inserts and M6 thread for tripod attachment





max.

NIT SHOT	
 NORM	TC

ART NO	<b>→</b> ltmlmt  <b>←</b>		1l1 ± °	→ mm ←	KG
71 2010	4 x 90°	0.05°	0.1	225 x 57 x 25	0.278

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## VBLUE-LINE 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. 71 4100 ~ 71 4110

with strong adhesive magnet in the measurement base



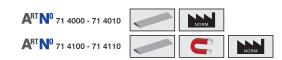
**A**RT **N**<sup>0</sup> 71 4100 - 71 4110



with strong adhesive magnet in the measurement base



plane, rectangular aluminium profile, extruded and warm cured



ART NO	<b>→</b> mm ←			vial	KG
71 4000	200	50 x 22	X	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	0.142
71 4001	300	50 x 22	X	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	0.194
71 4002	400	50 x 22	X	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	0.250
71 4003	500	50 x 22	X	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	0.299
71 4004	600	50 x 22	X	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	0.358
71 4005	800	50 x 22	X	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	0.422
71 4006	1000	50 x 22	X	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	0.565
71 4007	1200	50 x 22	X	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	0.682
71 4008	1500	50 x 22	X	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	1.105
71 4009	1800	50 x 22	X	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	1.226
71 4010	2000	50 x 22	X	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	1.366
71 4100	200	50 x 22	✓	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	0.210
71 4101	300	50 x 22	✓	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	0.266
71 4102	400	50 x 22	<b>✓</b>	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	0.383
71 4103	500	50 x 22	✓	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	0.482
71 4104	600	50 x 22	<b>✓</b>	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	0.509
71 4105	800	50 x 22	✓	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	0.614
71 4106	1000	50 x 22	<b>✓</b>	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	0.698
71 4107	1200	50 x 22	<b>✓</b>	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	0.809
71 4108	1500	50 x 22	<b>✓</b>	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	1.308
71 4109	1800	50 x 22	<b>✓</b>	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	1.554
71 4110	2000	50 x 22	<b>✓</b>	$0.5 \text{ mm/m} = \pm 0.029^{\circ}$	1.664

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