



K
11

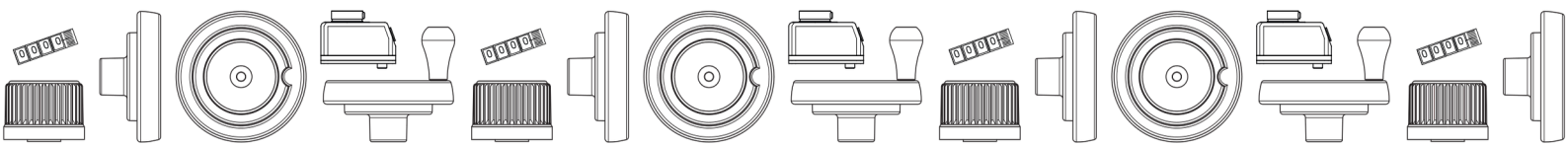


GROUP - 11

CONTROL HANDWHEELS WITH INDICATOR

BOTECA Control Handwheels with Indicator

These components with indicator were developed from the collaboration between Boteco and SIKO, German leader in the production of gravity position indicators and measuring systems. The union of the products of the two companies has resulted in an extensive range that not only includes handwheels, but also handgrips, control knobs and other components with gravity position indicators. The counters are available in a wide range of colours and mounting combinations. For detailed information on the specifications of each individual product please consult the technical sheet.



K150

KNURLEDKNOB FOR INDICATOR



Materials:

Reinforced polyamide. Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL 9011).

Mountable indicator:

Gravity position indicator type K650050. The indicator can be only used in a vertical position (horizontal machine axis). The indicator must be purchased separately. For further information see article K650 [page].

ATTENTION:

In your order specify the following information and select the corresponding letter to insert in the code:

Rotation direction

O = increase of values with clockwise rotation. A = increase of values with counter clockwise rotation.

Gear ratio and corresponding scale:

Select the appropriate gear ratio by deciding which number the big black pointer must indicate after the knob has completed one turn. The graduated scale will be proportional to the selected ratio. A ratio of 12 will have a scale that ranges from 0 to 12.

Insert

Galvanised steel insert with smooth through bore (tolerance H10).

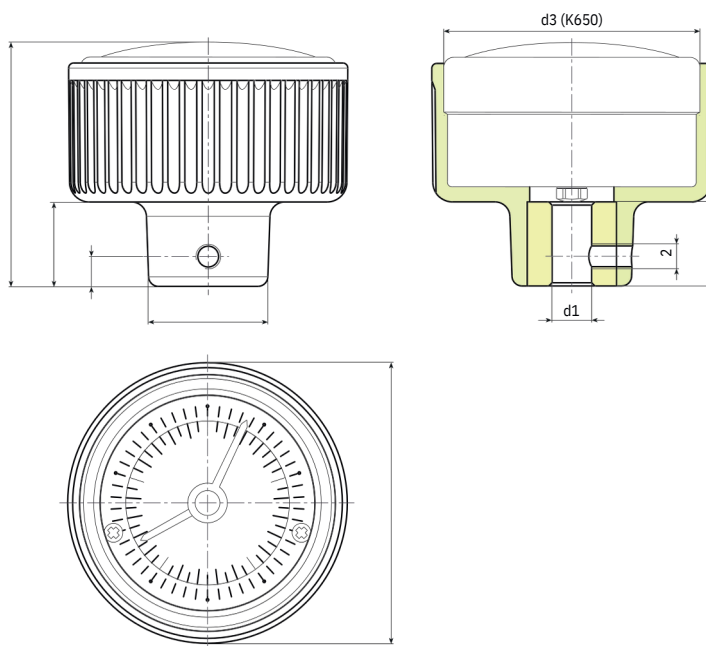
Fixing method:

The knob is fixed to the shaft by means of the threaded radial hole (d2) (grab screw not supplied).
Special Requests:

- Upon request and for special quantities inserts can be supplied with custom hole diameter d1.
- Upon request and for special quantities inserts can be supplied in different materials.

Combinations Diameters/Indicators:

d3=52.4 --> K650050 d3=66.8 --> K650070 d3=87.4 --> K650080 or K660080



art.	D	d	H	h	m	d3	d2	d1H10	dm	Q	g
K150057.TD0801...	57	24	50	6 6	17	52,4	M5	8	12	16	105
K150057.TD1001...	57	24	50	6 6	17	52,4	M5	10	12	16	104
K150057.TD1201...	57	24	50	6 6	17	52,4	M5	12	12	16	103
K150072.TD0801...	72	28	56	6 6	21	66,8	M5	8	12	20	165
K150072.TD1001...	72	28	56	6	21	66,8	M5	10	12	20	163
K150072.TD1201...	72	28	56		21	66,8	M5	12	12	20	161
K150094.TD1001...	94	36	60		24	87,4	M5	10	15	24	376
K150094.TD1201...	94	36	60		24	87,4	M5	12	15	24	373
K150094.TD1401...	94	36	60		24	87,4	M5	14	15	24	370

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated). Dm = Maximum obtainable diameter for subsequent machining (widening).

Available gear ratios: 1-2-3-6-10-12-15-18-20-24-30-36-48-50-60-72-84-96-100. In your order enter rotating direction and gear ratio in place of the three dots. Example: clockwise indicator with a ratio of 12 on knob d. 57 with hole 10 H10: code: K150057.TD1001O12.



K170

LOBEDHANDWHEEL FOR INDICATOR



Materials:

Reinforced polyamide. Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL9011).

Mountable indicator:

Gravity position indicator model K650080. The indicator can be only used in a vertical position (horizontal machine axis). The indicator must be purchased separately. For ~~insert~~ information see article K650 [page].
Galvanised steel insert with smooth through bore (tolerance H10) with key according to the dimension of the bore.

Indicator fixing method:

Fix the indicator with a threaded grub screw M05 (not supplied) to be inserted in the special bore M05.

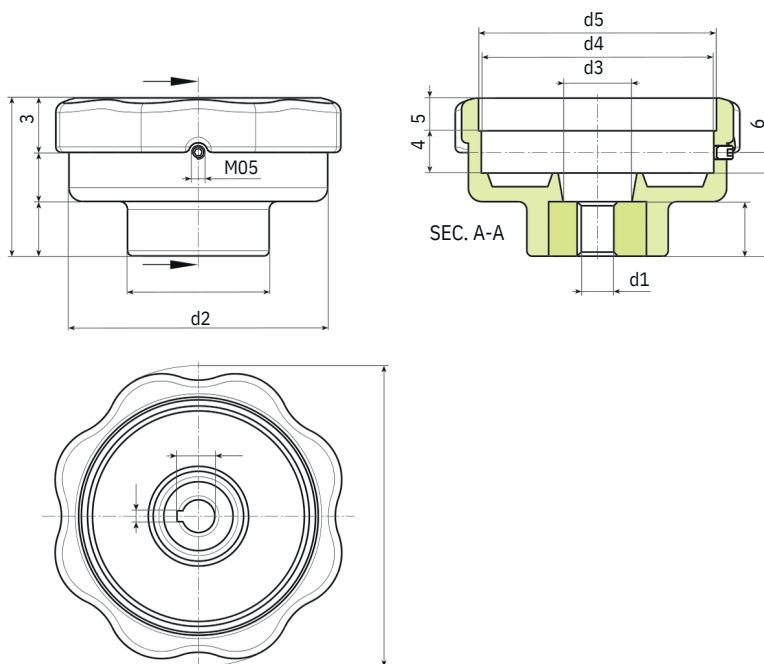
Special Requests:

- On request and with a minimum of 50 pieces, the inserts can be supplied with the hole d1 with H7 tolerance and black-oxide finish.
- Upon request and for special quantities inserts can be supplied with custom hole diameter d1.
- Upon request and for special quantities inserts can be supplied in different materials.

Combinations Diameters/Indicators:

d5=52.4 --> K650050

d5=87.4 --> K650080 or K660080



Code	art.	D	H	h	h1	h2	h3	h4	h5	h6	d	d2	d3	d4	d5	A	B	d1 _{H10}	Q	g
K170110.0001	K170110.T80D1201H	110	58	30.5	20	18	20	15.5	12	7.5	52	95	25	85.5	87.4	4	13.1	12	20	230



BOTECA

K405

SPOKEHANDWHEEL WITH INDICATOR SEAT



Materials:

Reinforced and stabilized polyamide. Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL9011).

Insert:

Galvanised steel insert with smooth through bore (tolerance H10).

SolidHub.

Hub: Lightweight hub.

Mountable indicator:

Gravity position indicator with 50/80mm diameter (models K650-K660). The indicator can be only used in a vertical position (horizontal machine axis). The indicator must be purchased separately. For further information see article K650 [page].

Indicator fixing method:

Fasten the indicator with a threaded grub screw M05 inserted in the bore d4, (screw supplied with adapter).

Handwheel fixing method:

The handwheel is fixed to the shaft using a thrust pin (not supplied) to be inserted on the threaded hole d2.

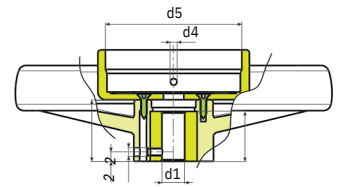
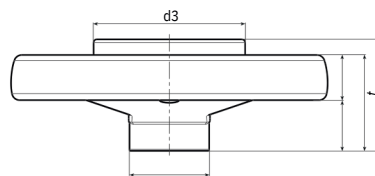
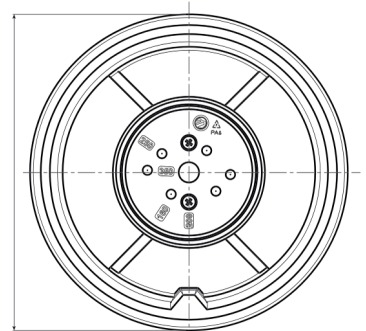
Special Requests:

- On request and with a minimum of 50 pieces, the inserts can be supplied with the hole d1 with H7 tolerance and black-oxide finish.
- Upon request and for special quantities inserts can be supplied with custom hole diameter d1.
- Upon request and for special quantities inserts can be supplied in different materials.
- Upon request the handwheels can be supplied with indicator (not assembled for transport).

Combinations Diameters/Indicators:

d5=52.4 --> K650050

d5=87.4 --> K650080 or K660080



Code	art.	D	d	m	c	H	Ht	h	h2	d2	d3	d4	d5	Dm	d1H10	Q	g
K405130.0001	K405130.T050D0801	129	32	32	18	50	65.5	36	8	M5	62	M5	52,4	18	8	24	314
K405160.0002	K405160.T050D0801	159	40	34	23	57	69	40.5	8	M5	62	M5	52,4	22	8	32	464
K405160.0003	K405160.T080D0801	159	40	34	23	57	72	40.5	8	M5	97	M5	87,4	22	8	32	485
K405200.0005	K405200.T080D0801	198	51	33	28.5	61.5	71	39.5	8	M5	97	M5	87,4	22	8 (*)	32	725
K405250.0001	K405250.T080D0801	252	55.5	38.5	31.5	70	79	47	8	M5	97	M5	87,4	28	8 (*)	36	1015
K405350.0001	K405350.T080D0801	346	67.5	43.5	36.5	80	81.5	49.5	8	M5	97	M5	87,4	30	8 (*)	32	1625

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).
Dm = Maximum obtainable diameter for subsequent machining (widening).

K406

SPOKEHANDWHEEL WITH HANDLE AND INDICATOR SEAT



Materials:

Reinforced and stabilized polyamide. Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL9011).

Main insert:

Galvanised steel insert with smooth through bore (tolerance H10).

Lateral insert:

Brass insert with threaded through hole.
(+) Hexagonal black-oxide treated steel insert with threaded through hole. Fixed with black-oxide treated button head screw ISO 7838.

Hub:

Solid Hub.
(*) Lightweight hub.

Mountable indicator:

Gravity position indicator with 50/80mm diameter (models K650-K660). The indicator can be only used in a vertical position (horizontal machine axis). The indicator must be purchased separately. For further information see article K650 [page].

Indicator fixing method:

Fasten the indicator with a threaded grub screw M05 inserted in the bore d4, (screw supplied with adapter).

Handwheel fixing method:

The handwheel is fixed to the shaft using a thrust pin (not supplied) to be inserted on the threaded hole d2.

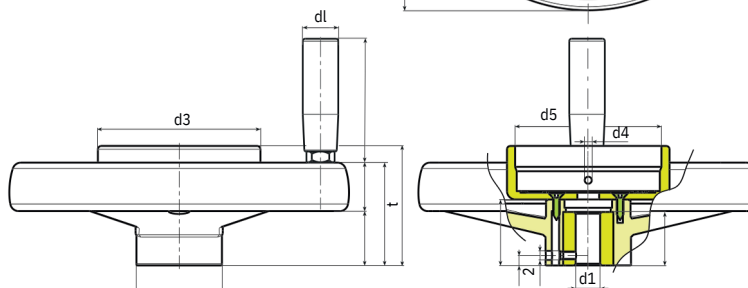
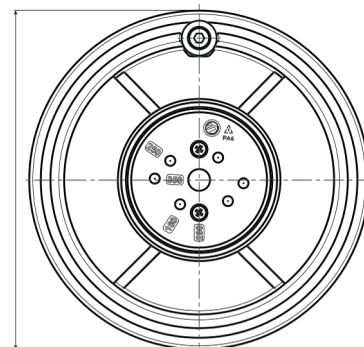
Special Requests:

- On request and with a minimum of 50 pieces, the inserts can be supplied with the hole d1 with H7 tolerance and black-oxide finish.
- Upon request and for special quantities inserts can be supplied with custom hole diameter d1.
- Upon request and for special quantities inserts can be supplied in different materials.
- Upon request the handwheels can be supplied with indicator (not assembled for transport).

Combinations Diameters/Indicators:

d5=52,4 --> K650050

d5=87,4 --> K650080 or K660080



Code	art.	D	d	m	c	H	Ht	h	h2	d2	d3	d4	d5	Dmd1	H10	d1	L	Q	g
K406130.0001	K406130.T050D0801	129	32	3218	3423	50	65.5	36	8	M5	62	M5	52,4	18	8	21	65	24	370
K406160.0001	K406160.T050D0801	159	40	3423	33	57	69	40.5	8	M5	62	M5	52,4	22	8	23	76	32	532
K406160.0002	K406160.T080D0801	159	40	28.5	38.5	57	72	40.5	8	M5	97	M5	87,4	22	8	23	76	32	553
K406200.0001	K406200.T080D0801	198	51	31.5	43.5	61.5	71	39.5	8	M5	97	M5	87,4	22	8 (*)	23	76	32	795
K406250.0001	K406250.T080D0801	252	55.5	36.5		70	79	47	8	M5	97	M5	87,4	28	8 (*)	25	86	36	1125
K406350.0002	K406350.T080D0801	346	67.5			80	81.5	49.5	8	M5	97	M5	87,4	30	8 (*)	25	86	32	1725

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).
Dm = Maximum obtainable diameter for subsequent machining (widening).

K500

ADAPTER FOR INDICATOR

+135°
-30°

PA6
+G.F.

UL94
HB

RoHS
COMPLIANT

Materials:
 Reinforced and stabilized polyamide.
 Resistant to oils and greases.

Surface finish:
 Satin.

Colour:

Primary cap colour:
 Black (RAL 9011).

Secondary cap colour:
 Grey (RAL 7035).

Alternative cap colours:
 Orange (RAL 2004 code 02).
 Blue (RAL 5015 code 07).
 Yellow (RAL 1021 code 10).
 Red (RAL 3000 code 16).
 Green (RAL 6024 code 17).
 Grey (RAL 7035 cod. 13).

Cap fixing method:

Push-fit. Removable.

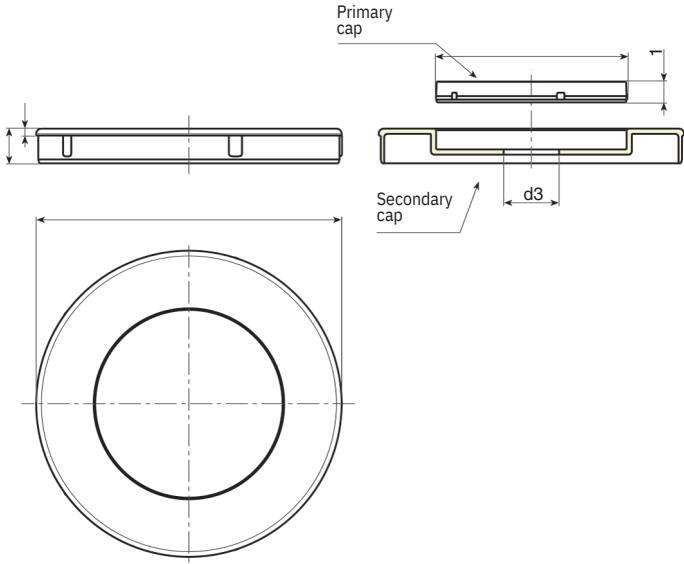
• None.

Special Requests:

Pad printing service:
 Upon request and for special quantities caps can be supplied with custom pad printing.



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Code	art.	D	d	d3	H	h	h1	g
K500.0001	K500.0500113	K650050	34	10	8	2	5	10
K500.0003	K500.0800113	K650080	55	16	10	2	6	25

K590

FIXINGPLATE FOR NUMERATOR BLOCK



PA6

Zamak

UL94
HB

RoHS
COMPLIANT

Material:

Plate:

Die-cast zinc alloy (zamak).

Lever:

Glass fiber reinforced polyamide. See specific data on art. A580.

Surface finish:

Plate:

Smooth, epoxy powder coated.

Lever:

Satin.

Colour:

Black(RAL 9011).

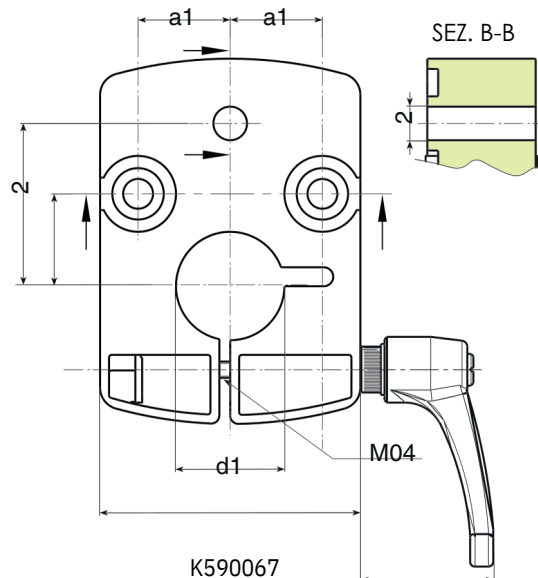
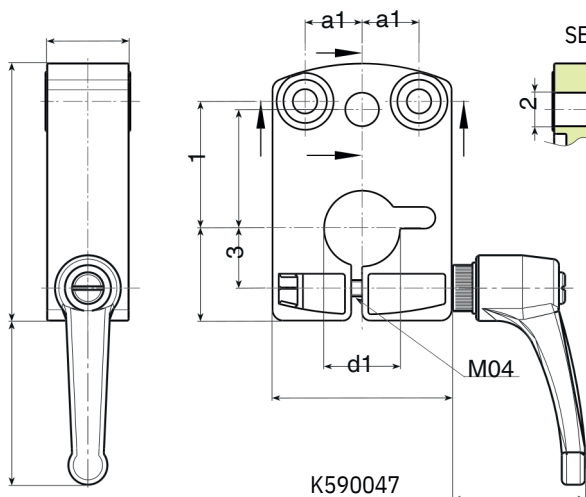
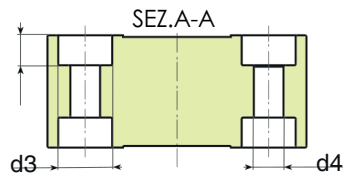
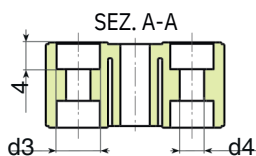
Fixing systems:

Hexagonal socket head cap screw (TCCE) M4 in galvanised steel.

Compatibility:

K590047: For block K610047.

K590067: For block K620067.



Code	art.	H	A	C	B	E	a1	h	h1	h2	h3	h4	d2	d3	d4	d1	g
-	K590047.TD14P1	47,5	33	15	38	33	10.5	17	23.5	22	11	4.9	6.2	8	4.5	14	105
-	K590067.TD20P1	67.4	48	20	34	33	17	-	17	30	-	5.5	6.2	10	5.5	20	165

K600

3-DIGITNUMERATOR BLOCK



PA6

PPMA

UL94
HB



Materials:

(1-2) Numerator case:

Glass fiber reinforced polyamide.
Resistant to oils and greases.

(3) Grub screw:

K600: Steel C45
K600CIN: Stainless steel (Aisi 304).

(4) Shaft connector:

K600: Free-cutting steel.
K600CIN: Stainless steel (Aisi 303).

(5) Window:

Polymethylmethacrylate (PMMA).

(6) Number wheels:

Polyamide.

Surface finish:

(1-2-6) Smooth. (4) Fine turned finish. (5) Glossy, enhanced reading effect.

Colour:

(1) Cascover:

Black (RAL 9011 code 01)

(2) Case:

K600: Black (RAL 9011 code 01).
Orange (RAL 2004 code 02).
K602: Grey (RAL 7035 cod. 02).

K603:

13).

(3) Grub screw:

K600: Black-oxide treated.
K600CIN: Natural.

(4) Connector

K600: Black-oxide treated.
K600CIN: Natural.

(5) Window:

Transparent.

(6) Number wheels:

Black wheel with white numbers.



Mounting or reading position (PL)

Rotation direction (SR)

Number wheel characters:

White pad printed. Characterheight 4 mm approx.

Gear ratio (GR):

The gear ratio establishes which number must appear on the counter after making a full turn (360°). For example, by choosing a gear ratio of 15, after one revolution on the window you will see digits 015. The position of the decimal point will help reduce the measure, because, choosing one decimal place, the 015 becomes 01.5.

Mounting / reading position (PL):

The numerator block can be applied in four different positions. Please choose the most suitable for your application:

P1 = Vertical, with numbers on upper side
P2 = Vertical, with numbers on vertical side
P3 = Horizontal, with numbers on inclined side
P4 = Horizontal, with numbers on vertical side.

Rotation direction (SR):

O = increase of values with clockwise rotation
A = increase of values with counter clockwise rotation

Decimal point (PD):

The numerator block can also be chosen with decimal point. In this case, with three digits, the decimal position is available in these formats:

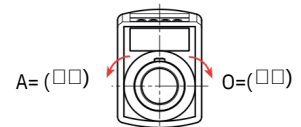
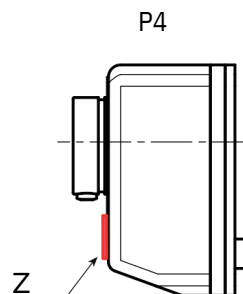
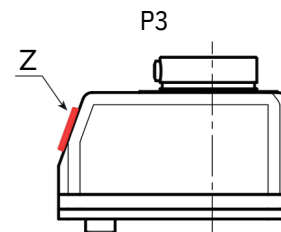
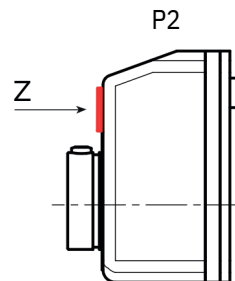
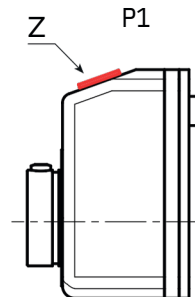
PD = 0 - no decimal point indicated (000)
PD = 1 - one digit after decimal point (00.0)
PD = 2 - two digits after decimal point (00.00)

Base case seal:

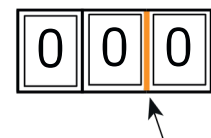
Each numerator comes with a base case seal in black polyurethane foam. For additional seal, see code K6070306 - 07 - 08.

• Upon request it can be supplied with the anti-rotation pin with backlash compensation.

• Upon request a shaft reducing sleeve K605 can be supplied in black oxyde



3-digit numerator block, 1 decimal place



Base case seal included K60733



Reducing sleeve K605



K600

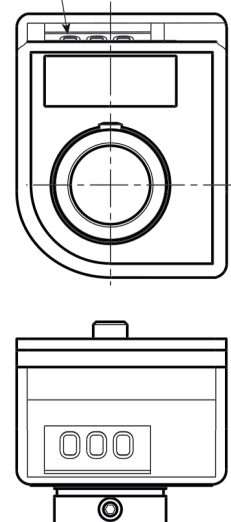
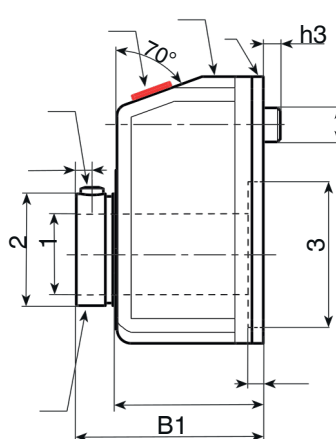
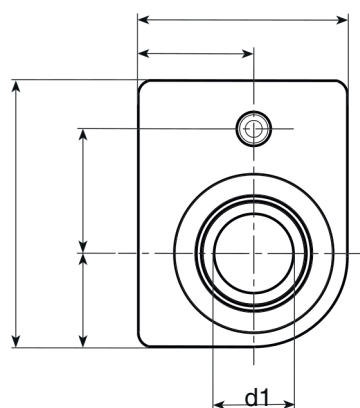
3-DIGITNUMERATOR BLOCK



PA6

PPMA

UL94
HB



11

Options to specify in the order (GR-SR-PL-PD)

art.	H	A	h	h1	h2	h3	h4	A1	B	B1	d	d2	d3	d4	H7	GR	SR	PL	DP	g
K600033.TD10.....	33	22	9,3													7/5 - 10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O-A	P1-P2-P3-P4	0-1-2	20
K602033.TD10.....	33	22	9,3	18	2,5	5		3.412.721	26	6	6	13.816		10		7/5 - 10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O-A	P1-P2-P3-P4	0-1-2	20
				18	2,5	5		3.412.721				13.816		10		7/5 - 10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O-A	P1-P2-P3-P4	0-1-2	20
K603033.TD10.....	33	22	9,3	18	2,5	5		3.412.721	26	6	6	13.816		10		7/5 - 10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O-A	P1-P2-P3-P4	0-1-2	20
K600033.TD10.....CIN	33	22	9,3	18	2,5	5		3.412.721	26	6	6	13.816		10		7/5 - 10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O-A	P1-P2-P3-P4	0-1-2	20
K602033.TD10.....CIN	33	22	9,3	18	2,5	5		3.412.721	26	6	6	13.816		10		7/5 - 10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O-A	P1-P2-P3-P4	0-1-2	20
K603033.TD10.....CIN	33	22	9,3	18	2,5	5		3.412.721	26	6	6	13.816		10		7/5 - 10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O-A	P1-P2-P3-P4	0-1-2	20

Notes: Note: For ratios "/5" the arithmetic values are not displayed.

When ordering, please insert the chosen options in the code points.

Example 1:

Example 1: for a numerator block with 3 digits (K600033) with shaft of 10mm (d1), - orange colour (K602), - with gear ratio (GR) 15; - with clockwise rotation (SR) O, - with reading position (PL) P2, - with one decimal place (PD) 1, the complete code is thus formed: K602033.TD10015OP21.

or

Example 2: for a numerator block with 3 digits (K600033) with stainless steel shaft of 10mm (d1), - black colour (K600), - with gear ratio (GR) 15; - with counterclockwise rotation (SR) A, - with reading position (PL) P3, - with two decimal places (PD) 2, the complete code is thus formed: K600033.TD10015AP32CIN.



K610

4-DIGIT NUMERATOR BLOCK



PA6

PPMA

UL94
HB



Materials:

(1-2) Numerator case:

Glass fiber reinforced polyamide.
Resistant to oils and greases.

(3) Grub screw:

K610: K610CIN: K610CIN (A803).

(4) Shaft connector: K610CIN (A803).

(5) Window: Polymethylmethacrylate (PMMA).

(6) Number wheels: Polyamide.

Surface finish: Free-cutting steel.

(1-2-6) Smooth.

(4) Fine turned finish.

(5) Glossy, enhanced reading effect.

Colour:

(1) Casecover:

Black (RAL 9011 code 01)

(2) Case:

K610: Black (RAL 9011 code 01).

K612: Orange (RAL 2004 code 02).

K613: Grey (RAL 7035 code 13).

(3) Grub screw:

K610:

K610CIN:

(4) Connector

K610: Black-oxide treated.

K610CIN: Natural.

(5) Window:

Transparent.

(6) Number wheels:

Black wheel with white numbers.



Mounting or reading position (PL)

Rotation direction (SR)

Number wheel characters:

White pad printed. Character height 4 mm approx.

Gear ratio (GR):

The gear ratio establishes which number must appear on the counter after making a full turn (360°). For example, by choosing a gear ratio of 15, after one revolution on the window you will see digits 015. The position of the decimal point will help reduce the measure, because, choosing one decimal place, the 015 becomes 01.5.

Mounting / reading position (PL):

The numerator block can be applied in four different positions. Please choose the most suitable for your application:

P1 = Vertical, with numbers on upper side

P2 = Vertical, with numbers on vertical side

P3 = Horizontal, with numbers on inclined side

P4 = Horizontal, with numbers on vertical side.

Rotation direction (SR):

O = increase of values with clockwise rotation

A = increase of values with counter clockwise rotation

Decimal point (PD):

The numerator block can also be chosen with decimal point. In this case, with three digits, the decimal position is available in these formats:

PD = 0 - no decimal point indicated (0000)

PD = 1 - one digit after decimal point (000.0)

PD = 2 - two digits after decimal point (00.00)

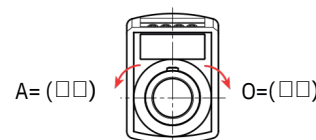
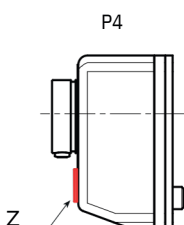
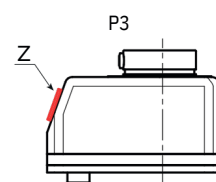
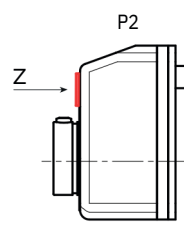
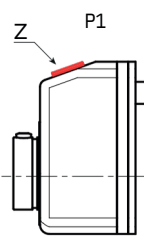
PD = 3 - three digits after decimal point (0.000)

Base case seal:

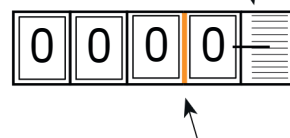
Each numerator comes with a base case seal in black polyurethane foam. For additional orders use code K607047.

Special requests:

- Upon request a shaft reducing sleeve K605 can be supplied in black oxide treated steel, diameters available: 04 - 06 - 08 - 10 - 12.
- Upon request it can be supplied with the anti-rotation pin with backlash compensation.
- Upon request an intermediate extension for base case can be supplied separately (K606047).



4-digit numerator block, 1 decimal place



Base case seal included K60747



Intermediate extension for base K60647

Reducing sleeve K605



K610

4-DIGITNUMERATOR BLOCK



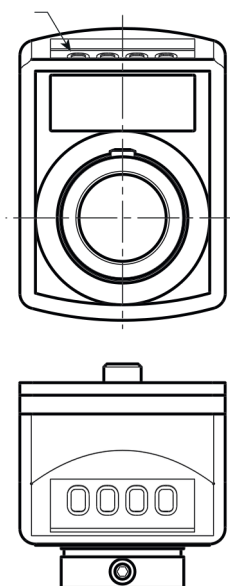
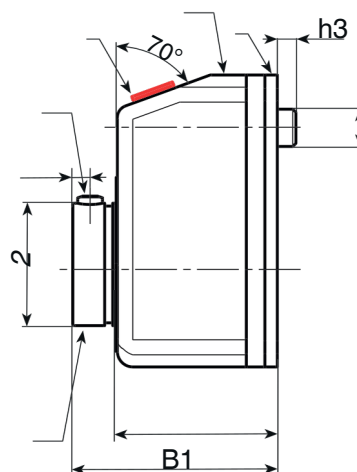
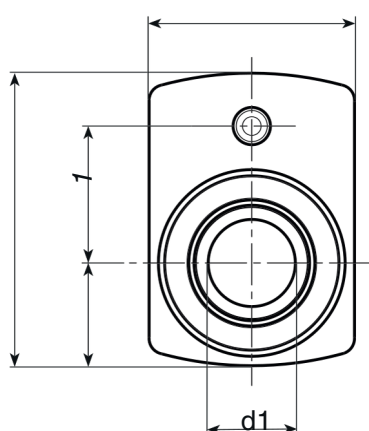
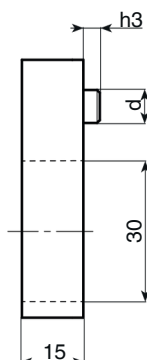
PA6

PPMA

UL94
HB



K606047



11

Options to specify in the order (GR-SR-PL-PD)

art.	H	A	h	h	h2	h3	B	B1	d	d2d1	H7	GR	SR	PL	PD	g
K610047.TD14.....	47	33	16,5	1	2,5	5	24	31	6	19,	14	10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O-A	P1-P2-P3-P4	0-1-2-3	50
K612047.TD14.....	47	33	16,5	22	2,5	5	24	31	6	19,	14	10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O-A	P1-P2-P3-P4	0-1-2-3	50
K613047.TD14.....	47	33	16,5	22	2,5	5	24	31	6	19,	14	10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O-A	P1-P2-P3-P4	0-1-2-3	50
K610047.TD14.....CIN	47	33	16,5	22	2,5	5	24	31	6	7	14	10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O-A	P1-P2-P3-P4	0-1-2-3	50
K612047.TD14.....CIN	47	33	16,5	22	2,5	5	24	31	6	19,	14	10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O-A	P1-P2-P3-P4	0-1-2-3	50
K613047.TD14.....CIN	47	33	16,5	22	2,5	5	24	31	6	7	14	10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O-A	P1-P2-P3-P4	0-1-2-3	50
			22							19,	14	10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100		P1-P2-P3-P4	0-1-2-3	50
										7						

Notes: Note: For ratios "/5" the arithmetic values are not displayed.

When ordering, please insert the chosen options in the code points.

Example 1:

Example 1: for a numerator block with 4 digits (K610047) with shaft of 14mm (d1), - orange colour (K612), - with gear ratio (GR) 60; - with clockwise rotation (SR) O, - with reading position (PL) P1, - with no decimal place (PD) 0, the complete code is thus formed: K612047.TD14060OP10.

or

Example 2: for a numerator block with 4 digits (K610047) with stainless steel shaft of 14mm (d1), - grey colour (K613), - with gear ratio (GR) 12/5, - with counterclockwise rotation (SR) A, - with reading position (PL) P2, - with three decimal places (PD) 8, the complete code is thus formed: K613047.TD14125AP23CIN.



K617

4-DIGIT NUMERATOR BLOCK WITH CONTROL KNOB



Materials:

(1) Knob:

Glass fiber reinforced polyamide. Resistant to oils and greases.

(5) Block

Polyamide and PMMA.

Shaft connector:

Free-cutting steel.

(2-3) Grub screw:

Steel C40.

Surface finish:

(1-4)Satin.

(5) Smooth.

Colour:

(1) Knob:

Black (RAL 9011 code 01).

(5) Block (RAL 9011 code 01).

Black

Orange (RAL 2004 code 02).

Grey (RAL 7035 cod. 13).

(2-3) Grub screw:

Black-oxide treated.

Shaft connector:

Black-oxide treated.

(4) Cap:

Black (RAL 9011 code 01).

Orange (RAL 2004 code 02).

Grey (RAL 7035 cod. 13).

Fixing system:

(2) Grub screw DIN 914 for fastening the bush of the numerator block to the shaft.

(2) Grub screw DIN 914 for fastening the knob to the shaft.

ATTENTION:

The block and the control knob are not attached to each other. First of all, the numerator block is secured to the shaft through the grub screw (2), then the control knob is mounted on the shaft by means of grub screw (3).

Inserts:

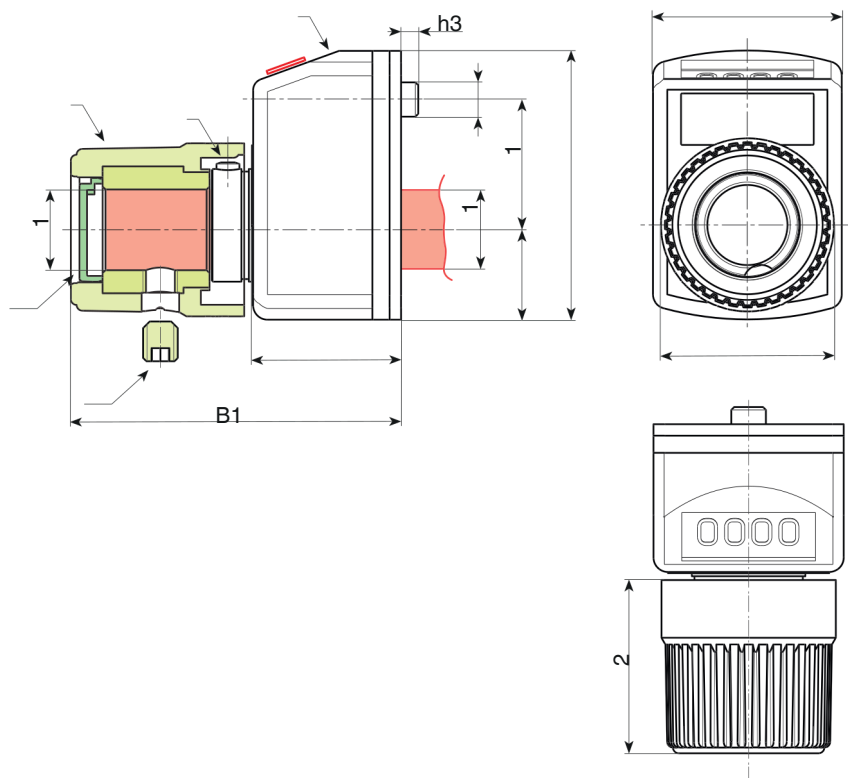
Bush with through hole in galvanized steel (hole tolerance H10), with the same diameter as the numerator block bush.

Numerator block features:

For the technical characteristics of the numerator block see article K610 [page].

Special requests

- Only related to the numerator block.



Code	art.	A	H	B	B1	B2	h	h1	h3	D	d	d1H10	g
-	ART_K617047.TD140102.....	33	47	24	55	32	16,5	22	5	30	6	14	130

K620

5-DIGIT NUMERATOR BLOCK



PA6

PPMA

UL94
HB



Materials:

(1-2) Numerator case:

Glass fiber reinforced polyamide.
Resistant to oils and greases.

(3) Grub screw:

K620: Steel C45
K620CIN: Stainless steel (Aisi 304).

(4) Shaft connector:

K620: Free-cutting steel.
K620CIN: Stainless steel (Aisi 303).

(5) Window:

Polymethylmethacrylate (PMMA).

(6) Number wheels:

Polyamide.

Surface finish:

(1-2-6) Smooth. (4) Fine turned finish. (5) Glossy, enhanced reading effect.

Colour:

(1) Cascover:

Black (RAL 9011 code 01)

(2) Case:

K620: Black (RAL 9011 code 01).
Orange (RAL 2004 code 02).
K622: Grey (RAL 7035 cod. 13).

(3) Grub screw:

K620: Black-oxide treated.
K620CIN: Natural.

(4) Connector

K620: Black-oxide treated.
K620CIN: Natural.

(5) Window:

Transparent.

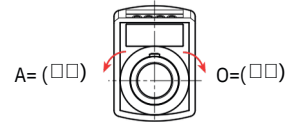
(6) Number wheels:

Black wheel with white numbers.



Mounting or reading position (PL)

Rotation direction (SR)



Number wheel characters:

White pad printed. Character height 4 mm approx.

Gear ratio (GR):

The gear ratio establishes which number must appear on the counter after making a full turn (360°). For example, by choosing a gear ratio of 15, after one revolution on the window you will see digits 015. The position of the decimal point will help reduce the measure, because, choosing one decimal place, the 015 becomes 01.5.

Mounting / reading position (PL):

The numerator block can be applied in four different positions. Please choose the most suitable for your application:

P1 = Vertical, with numbers on upper side
P2 = Vertical, with numbers on vertical side
P3 = Horizontal, with numbers on inclined side
P4 = Horizontal, with numbers on vertical side.

Rotation direction (SR):

O = increase of values with clockwise rotation
A = increase of values with counter clockwise rotation

Decimal point (PD):

The numerator block can also be chosen with decimal point. In this case, with three digits, the decimal position is available in these formats:

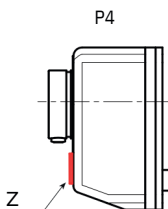
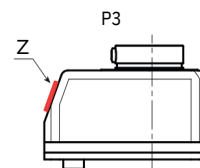
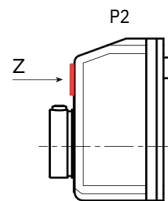
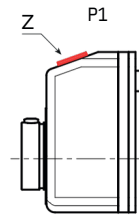
PD = 0 - no decimal point indicated (00000)
PD = 1 - one digit after decimal point (0000.0)
PD = 2 - two digits after decimal point (000.00)
PD = 3 - three digits after decimal point (00.000)
PD = 4 - four digits after decimal point (0.0000)

Base case seal:

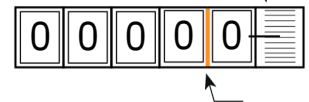
Each numerator comes with a base case seal in black polyurethane foam. For additional orders use code K607067.

Special requests:

- Upon request a shaft reducing sleeve K605 can be supplied in black oxide treated steel, diameters available: 08 - 10 - 12 - 14 - 18.
- Upon request it can be supplied with the anti-rotation pin with backlash compensation.
- Upon request an intermediate extension for base case can be supplied separately (K606067).



5-digit numerator block, 1 decimal place



Intermediate extension for base K60667



Base case seal included K60767

Reducing sleeve K605



K620

5-DIGITNUMERATOR BLOCK

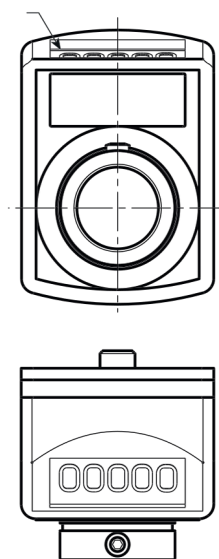
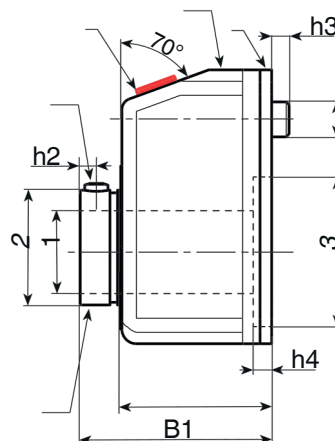
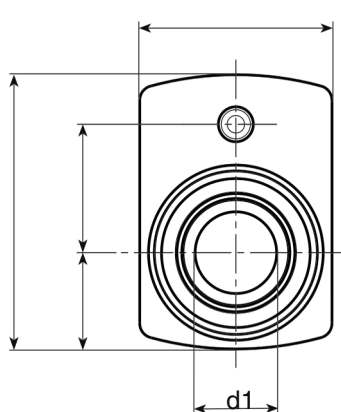
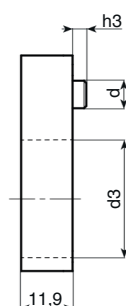
PPMA

UL94
HB

RoHS
COMPLIANT



K606067



11

Options to specify in the order (GR-SR-PL-PD)

art.	H	A	h	h1	h2	h3	h4	B	B1	d	d2	d3	d4	H7	GR	SR	PL	PD	g
K620067.TD20.....	67,54825,530				3,5	6	2	3038,5		6	27	40	20		10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 39/375 - 40 - 50 - 60 - 78/75 - 80 - 100	O-A	P1-P2- P3-P4	0-1-2-2-4 100	
K622067.TD20.....	67,54825,530				3,5	6	2	3038,5		6	27	40	20		10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 39/375 - 40 - 50 - 60 - 78/75 - 80 - 100	O-A	P1-P2- P3-P4	0-1-2-2-4 100	
K623067.TD20.....	67,54825,530				3,5	6	2	3038,5		6	27	40	20		10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 39/375 - 40 - 50 - 60 - 78/75 - 80 - 100	O-A	P1-P2- P3-P4	0-1-2-2-4 100	
K620067.TD20.....CIN67,54825,530					3,5	6	2	3038,5		6	27	40	20		10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 39/375 - 40 - 50 - 60 - 78/75 - 80 - 100	O-A	P1-P2- P3-P4	0-1-2-2-4 100	
K622067.TD20.....CIN67,54825,530					3,5	6	2	3038,5		6	27	40	20		10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 39/375 - 40 - 50 - 60 - 78/75 - 80 - 100	O-A	P1-P2- P3-P4	0-1-2-2-4 100	
K623067.TD20.....CIN67,54825,530					3,5	6	2	3038,5		6	27	40	20		10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 39/375 - 40 - 50 - 60 - 78/75 - 80 - 100	O-A	P1-P2- P3-P4	0-1-2-2-4 100	

Notes: Note: For ratios "/5" the arithmetic values are not displayed.

When ordering, please insert the chosen options in the code points.

Example 1:

Example 1: for a numerator block with 5 digits (K620067) with shaft of 20mm (d1), - orange colour (K622), - with gear ratio (GR) 50, - with clockwise rotation (SR) O, - with reading position (PL) P2, - with four decimal places (PD) 4, the complete code is thus formed: K622067.TD200500P24.

or

Example 2: for a numerator block with 5 digits (K620067) with stainless steel shaft of 20mm (d1), - grey colour (K620), - with gear ratio (GR) 15, - with counterclockwise rotation (SR) A, - with reading position (PL) P3, - with four decimal places (PD) 4, the complete code is thus formed: K620067.TD20015AP34CIN.



K630

5-DIGIT NUMERATOR BLOCK - WITH INCREASED BORE FOR SHAFT



PA6

PPMA

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RoHS
COMPLIANT

Materials:

(1-2) Numerator case:

Glass fiber reinforced polyamide.
Resistant to oils and greases.

(3) Grub screw:

K630: Steel C45
K630CIN: Stainless steel (Aisi 304).

(4) Shaft connector:

K630: Free-cutting steel.
K630CIN: Stainless steel (Aisi 303).

(5) Window:

Polymethylmethacrylate (PMMA).

(6) Number wheels:

Polyamide.

Surface finish:

(1-2-6) Smooth. (4) Fine turned finish. (5) Glossy, enhanced reading effect.

Colour:

(1) Cascover:

Black (RAL 9011 code 01)

(2) Case:

K630: Black (RAL 9011 code 01).
K632: Orange (RAL 2004 code 02).

(3) Grub screw:

K630: Black-oxide treated.
K630CIN: Natural.

(4) Connector

K630: Black-oxide treated.
K630CIN: Natural.

(5) Window:

Transparent.

(6) Number wheels:

Black wheel with white numbers.



Number wheel characters:

White pad printed. Character height 7 mm approx.

Gear ratio (GR):

The gear ratio establishes which number must appear on the counter after making a full turn (360°). For example, by choosing a gear ratio of 15, after one revolution on the window you will see digits 015. The position of the decimal point will help reduce the measure, because, choosing one decimal place, the 015 becomes 01.5.

Mounting / reading position (PL):

The numerator block can be applied in four different positions. Please choose the most suitable for your application:

- P1 = Vertical, with numbers on upper side
- P2 = Vertical, with numbers on vertical side
- P3 = Horizontal, with numbers on inclined side
- P4 = Horizontal, with numbers on vertical side.

Rotation direction (SR):

- O = increase of values with clockwise rotation
- A = increase of values with counter clockwise rotation

Decimal point (PD):

The numerator block can also be chosen with decimal point. In this case, with three digits, the decimal position is available in these formats:

- PD = 0 - no decimal point indicated (00000)
- PD = 1 - one digit after decimal point (0000.0)
- PD = 2 - two digits after decimal point (000.00)
- PD = 3 - three digits after decimal point (00.000)
- PD = 4 - four digits after decimal point (0.0000)

Base case seal:

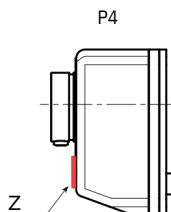
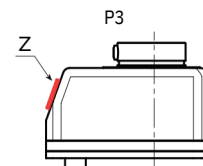
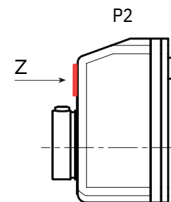
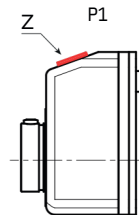
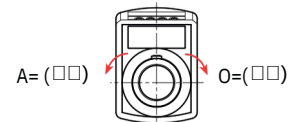
Each numerator comes with a base case seal in black polyurethane foam. For additional orders use code K607075.

Special requests:

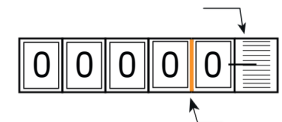
- Upon request a shaft reducing sleeve K605 can be supplied in black oxyde treated steel, diameters available: 25.
- Upon request it can be supplied with the anti-rotation pin with backlash compensation.

Mounting or reading position (PL)

Rotation direction (SR)



5-digit numerator block, 1 decimal place



Base case seal included K60775



Reducing sleeve K605



K630

5-DIGITNUMERATOR BLOCK - WITH INCREASED BORE FOR SHAFT

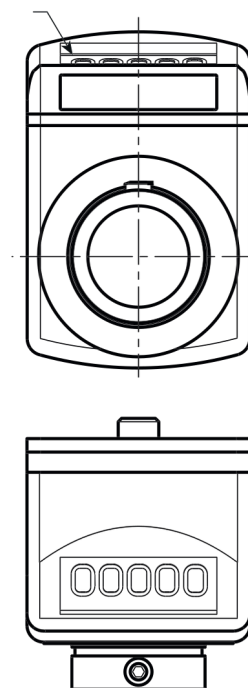
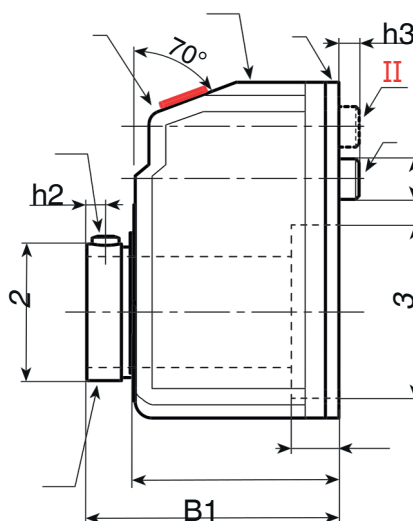
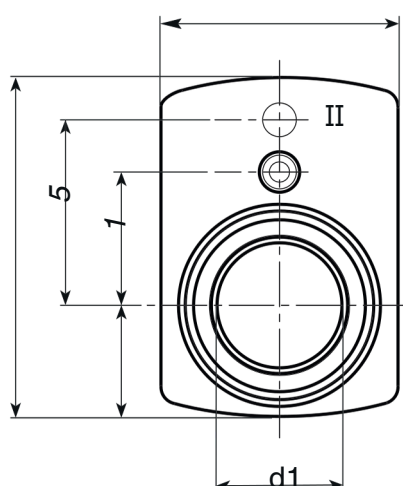


PA6

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11

Options to specify in the order (GR-SR-PL-PD)

art.	H	A	h	h1	h2	h3	h4	h5	B	B1	d	d2	d3	d1 H7	GR	SR	PL	PD	g
K630075.TD30.....	75	56	27						44	52	6	37	47	30	6/5 - 10 - 15 - 17/5 - 20 - 25 - 30 - 39/4 - 40 - 50 - 60 - 80 - 100	O-A	P1-P2 P3-P4 P5-P6	0-1-2-2-4100	
K632075.TD30.....	75	56	27	30	4	5	10	40	44	52	6	37	47	30	6/5 - 10 - 15 - 17/5 - 20 - 25 - 30 - 39/4 - 40 - 50 - 60 - 80 - 100	O-A	P1-P2 P3-P4 P5-P6	0-1-2-2-4100	
K630075.TD30.....CIN	75	56	27						44	52	6	37	47	30	6/5 - 10 - 15 - 17/5 - 20 - 25 - 30 - 39/4 - 40 - 50 - 60 - 80 - 100	O-A	P1-P2 P3-P4 P5-P6	0-1-2-2-4100	
K632075.TD30.....CIN	75	56	27	30	4	5	10	40	44	52	6	37	47	30	6/5 - 10 - 15 - 17/5 - 20 - 25 - 30 - 39/4 - 40 - 50 - 60 - 80 - 100	O-A	P1-P2 P3-P4 P5-P6	0-1-2-2-4100	
				30	4	5	10	40							6/5 - 10 - 15 - 17/5 - 20 - 25 - 30 - 39/4 - 40 - 50 - 60 - 80 - 100	O-A		0-1-2-2-4100	

Notes: Note: For ratios "/5" the arithmetic values are not displayed.

When ordering, please insert the chosen options in the code points.

Example 1: for a numerator block with 5 digits (K630075) with shaft of 30mm (d1), - orange colour (K632), - with gear ratio (GR) 50, - with clockwise rotation (SR) O, - with reading position (PL) P2, - with four decimal places (PD) 4, the complete code is thus formed: K632075.TD30050OP24.

or

Example 2: for a numerator block with 5 digits (K630075) with stainless steel shaft of 30mm (d1), - black colour (K630), - with gear ratio (GR) 15/75, - with counterclockwise rotation (SR) A, - with reading position (PL) P3, - with four decimal places (PD) 4, the complete code is thus formed: K632075.TD301575AP34CIN.



K650

GRAVITYPOSITION INDICATOR

**PA6****PPMA****UL94
HB**

Materials:

Indicator case:

Glass fiber reinforced polyamide. Resistant to oils and greases.

Transparent cover:

Polymethylmethacrylate (PMMA).

Surface finish:

All smooth.

Colour:

Indicatorcase:

Black.

Cover:

Transparent.

Type of case:

Normal:

Sealed to dust.

Gear ratio:

The gear ratio determines the distance to be covered in a given number of revolutions. For example, with a single indicator pointer and a gear ratio of 20, the gear-driven pointer will travel the 360° of the scale every 20 turns of the handwheel, that is, the total setting distance must fall within a single turn of the pointer.

Rotation direction (SR):

O = increase of values with clockwise rotation

A = increase of values with counter clockwise rotation

Pointers:

The indicator can be supplied with one or two pointers:

One pointer (F1) 1:

One pointer that spins according to the gear ratio.

Two pointers (F2) 2:

One pointer turns according to the gear ratio, whereas the second one turns with a ratio of 1:1.

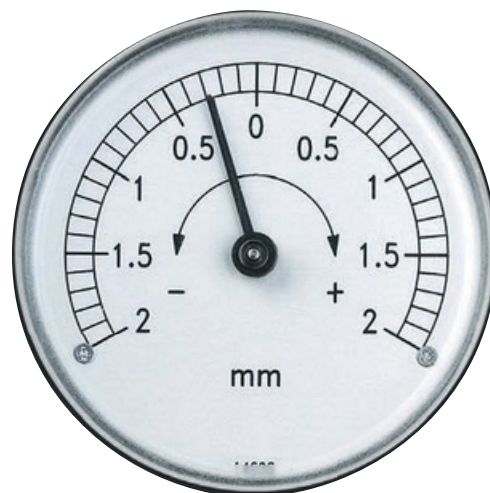
Graduated scale:

Graduated scale printed in black. With standard graduation, with start and end of the scale combined with the chosen gear ratio. For example, with a gear ratio of 20 the first number of the scale will be 0 and the last number will be 20. Progression of numbers clockwise or counterclockwise depending on the chosen direction of rotation.

Special Requests:

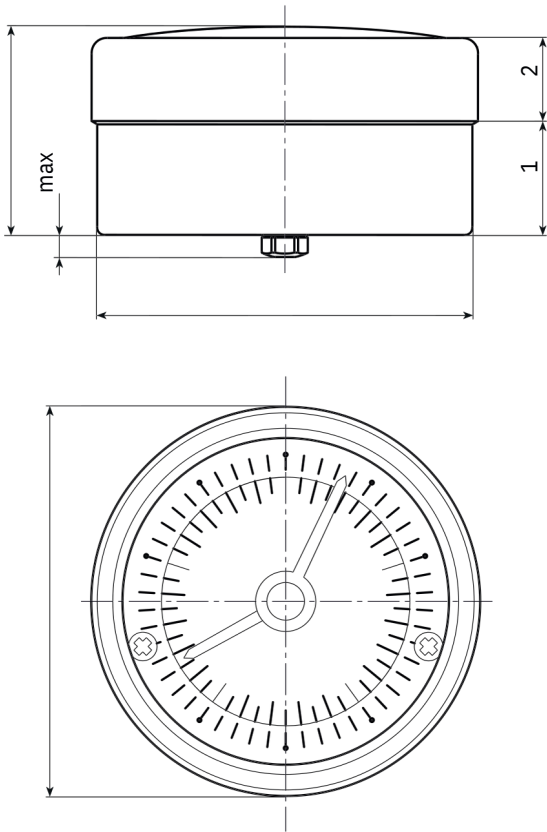
K650-80, the transparent cover can be supplied in acetone resistant PA6.

- Upon request and for special quantities, only for position indicators K650-50 and K650-80, the transparent cover can be replaced with one in mineral glass.
- Upon request and for special quantities, the position indicators can be supplied filled with paraffin oil with anti-condensation or anti-vibration function.
- Upon request and for special quantities, only for position indicator K650-80, it can be supplied with the possibility of having a zero reset function.
- Upon request and for special quantities, the position indicators can be supplied with a waterproof case.
- Upon request and for special quantities, the graduated scale can be supplied to customer's drawing (both the scale values and the addition of logos or graphics).
- Upon request and for special quantities, the graduated scale can be printed in two or three colours.



K650

GRAVITYPOSITION INDICATOR



11

Options to specify in the order (GR-SR-F1-F2)

art.	D	d	H	h	h1	h2	GR	SR	F1	F2	
K650050.....	51.7	50.2	29.2	4.2	14.7	11.5	1-2-3-6-10-12-15-18-20-24-30-36-48-50-60-72-84-96-100	O-A	1	2	100
K650070.....	66.8	65	28.5	5	16.2	11.3	1-2-3-6-10-12-15-18-20-24-30-36-48-50-60-72-84-96-100	O-A	1	2	100
K650080.....	86.8	84.8	29.8	5	15.6	12.7	1-2-3-6-10-12-15-18-20-24-30-36-48-50-60-72-84-96-100	O-A	1	2	100

When ordering, please insert the chosen options in the code points.

Example 1:
 Example 1: for a position indicator with 80mm diameter. (K650080), - with gear ratio (GR) 12,- with clockwise rotation (SR) O, with two pointers (F2) 2, the complete code is thus formed: K650080.012O2.

or

Example 2: for a position indicator with 70mm diameter. (K650070), - with gear ratio (GR) 100,- with counter clockwise rotation (SR) A, with one pointer (F1) 1, the complete code is thus formed: K650070.100A1.

Materials:

Indicator case:

Glass fiber reinforced polyamide. Resistant to oils and greases.

Transparent cover:

Polymethylmethacrylate (PMMA).

Number wheels:

Polyamide.

Surface finish:

All smooth.

Colour:

Indicator case:

Black.

Cover:

Transparent.

Number wheels:

Black wheel with white numbers.

Type of case:

Normal:

Sealed to dust.

Gear ratio (GR):

The gear ratio determines the distance to be covered in a given number of revolutions. For example, with a single indicator pointer and a gear ratio of 20, the gear-driven pointer will travel the 360° of the scale every 20 turns of the handwheel, that is, the total setting distance must fall within a single turn of the pointer.

Decimal point (PD):

The digital counter is also available with decimal points. In this case, with five digits the position of the decimal point is available as follows:

PD = 0 - no decimal point indicated (00000)

PD = 1 - one digit after decimal point (0000.0)

PD = 2 - two digits after decimal point (000.00)

PD = 3 - three digits after decimal point (00.000)

PD = 4 - four digits after decimal point (0.0000)

Rotation direction (SR):

O = increase of values with clockwise rotation

A = increase of values with counter clockwise rotation

Pointers:

The indicator can be supplied with one or no pointers:

No pointers (F0) 1:

No pointers, only the digital counter.

One pointer (F1) 2:

One pointer that turns with the ratio 1:1.

Graduated scale:

Graduated scale printed in black. With standard graduation, with start and end of the scale combined with the chosen gear ratio. For example, with a gear ratio of 20 the first number of the scale will be 0 and the last number will be 20. Progression of numbers clockwise or counterclockwise depending on the chosen direction of rotation.

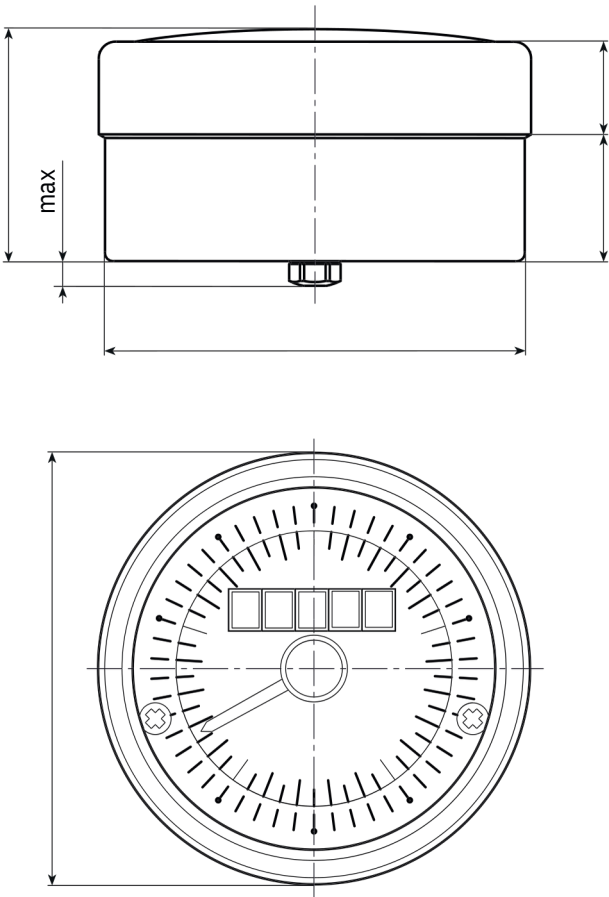
Special Requests:

- Upon request and for special quantities the transparent cover can be supplied in polycarbonate (PC).
- Upon request and for special quantities the indicators can be supplied filled with paraffin oil with anti-condensation or anti-vibration function.
- Upon request and for special quantities, the graduated scale can be supplied to customer's drawing (both the scale values and the addition of logos or graphics).
- Upon request and for special quantities, the graduated scale can be printed in two or three colours.



K660

GRAVITYPOSITION INDICATOR WITH DIGITAL COUNTER



11

Options to specify in the order (GR-PD-SR-F0-F1)

art.	D	d	H	h	h1	h2	GR	PD	SR	F0	F1	g
K660080.....	86.8	84.8	29.8	5	15.6	12.7	2-2/5-3-4-5-6-8-10-15	0-1-2-3-4	O-A	1	2	200

When ordering, please insert the chosen options in the code points.

Example 1:
Example 1: for a position indicator with 80mm diameter. (K660080), - with gear ratio (GR) 08, - with two digits after the decimal point (PD) 2,- with clockwise rotation (SR) O, with one pointer (F1) 2, the complete code is thus formed: K660080.0082O2.

or

Example 2: for a position indicator with 80mm diameter. (K660080), - with gear ratio (GR) 15, - with four digits after the decimal point (PD) 4,- with counter clockwise rotation (SR) A, with no pointers (F0) 1, the complete code is thus formed: K660080.0154A1.

INDICATOR ADAPTER FOR SPOKE HANDWHEEL



Materials:

Reinforced polyamide. Resistant to oils and greases.

Surface finish:

Satin.

(RAL 9011).

Colour:

Black

Fixing holes:

The same adapter can be used with several spoke handwheels.

To fix it firstly select the pair of holes suitable for the diameter of the handwheel in use (for user convenience the diameters are engraved next to one of the two holes); drill through with a normal 4.5 mm drill bit. Then countersink the hole to accommodate the countersunk screw. The two self-tapping screws (TPS 4X16) are supplied with the adapter. The drawing on the side shows, as an exemple, the countersunk holes obtained on a K870.T8001 for a Boteco spoke handwheel having a 200 mm diameter.



Indicator fixing method:

Fasten the indicator with a threaded grub screw M05 inserted in the bore d4, (screw supplied with adapter).

Adapter compatibility:

Adapter K870.T5001 with indicator K65050 for handwheels D.
130-160

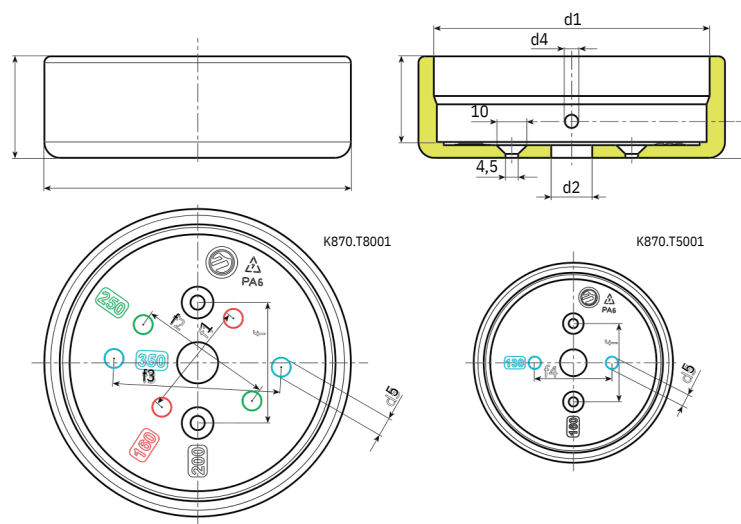
Adapter K870.T8001 with indicator K65080 for handwheels D.
140-200-250-350

The adapter can be mounted on the following articles:

Combinations of meters/Indicators:

d1=52.4 --> K650050

Special Requests: K650080 or K660080



Code	art.	D	H	h	h1	d1	d2	d3	d4	d5	f	f1	f2	f3	f4	g
K870.TS5001BASE1	K870.TS5001BASE1	62	29,5	24	12	52,4	13	4,5	M5	6	36	-	-	-	25	74
K870.TS8001BASE1	K870.TS8001BASE1	97	32	27	11,5	87,4	13	4,5	M5	6	36	38	42	53	-	95

K900

SOLIDCONTROL HANDWHEEL WITH INDICATOR SEAT



Materials:

Reinforced and stabilized polyamide.

Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL9011).

Insert:

Galvanised steel insert with smooth through bore (tolerance H10).

Mountable indicator:

Use gravity position indicators models K650 or K660. The indicator can be only used in a vertical position (horizontal machine axis). The indicator and the corresponding grub screw d7 must be purchased separately. For further information on the indicators see the pages of articles K650 and K660 [page and page].

Resistant to oils and greases.

(*) With adapter KS08050.T01 you can mount the indicator K650050.

Fixing method:

For fixing systems, or execution of keyways or square holes, please refer to the technical notes attached to the catalogue [page].

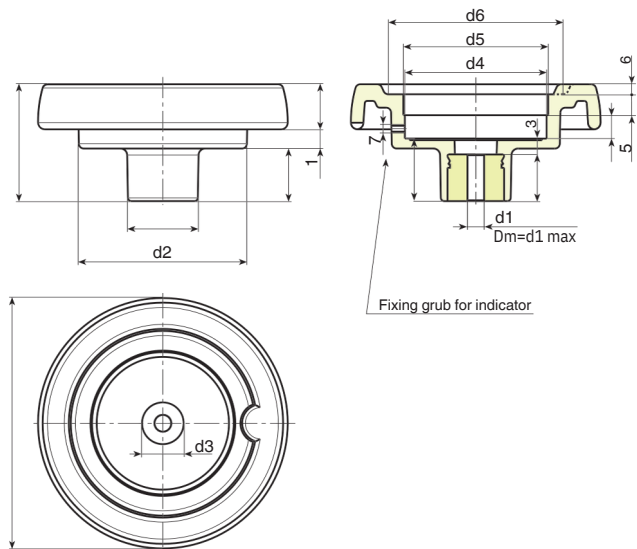
Special Requests:

- On request and with a minimum of 50 pieces, the inserts can be supplied with the hole d1 with H7 tolerance and black-oxide finish.
- Upon request and for special quantities inserts can be supplied with custom hole diameter d1.
- Upon request and for special quantities inserts can be supplied in different materials/with different coatings.
- **The indicator must be ordered separately.**
- Upon request and for special quantities it is possible to change the indicator seat.

Combinations Diameters/Indicators:

d5=50 --> K650050

d5=80 --> K650080 or K660080



Code	art.	D	H	d	d2	M	C	C1	d3	d4	d5	d6	d7	h	h3	h4	h5	h6	Dm	d1	Q	g	
K900087.0004	K900087.T050P5.801P	8653		32	62	21	17	15	20	50.8	50	63	M6	26.5	6.5	11.5	12	3		12	5.8	20	155
K900100.0003	K900100.T050P6.801P	99	55.5	32	63	23.5	20.5	11.5	20	50.8	50	68	M6	29	9	11.5	12	3.5		12	6.8	20	170
K900130.0005	K900130.T080P6.801P	130	65.5	42	98	28.5	23.5	13.5	29	85.2	80*	90	M6	34	10	13.5	12.5	5		20	6.8	24	350
K900150.0002	K900150.T080P6.801P	149	69	42	101	31	25.5	12.5	29	85.2	80*	106	M6	37	9	13.5	12.5	6.5		20	6.8	28	430
K900175.0002	K900175.T080P6.801P	174	73	41	114	30	31.5	11.5	26	85.2	80*	126	M6	39	11	13.5	12.5	8		20	6.8	28	650
K900200.0001	K900200.T080P6.801P	201	71	46	136	24.5	32	14.5	30	85.2	80*	145	M6	35	12	13.5	13.6	10		22	6.8	23	810

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).
Dm = Maximum obtainable diameter for subsequent machining (widening).

K901



SOLIDCONTROL HANDWHEEL WITH INDICATOR SEAT AND LOCKING KNOB

Materials:

Reinforced and stabilized polyamide.
Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black

Insert: (RAL 9011).

Galvanised steelinsert with smooth through bore (tolerance H10).

Mountable indicator:

Use gravity position indicators models K650 or K660. The indicator can be only used in a vertical position (horizontal machine axis). The indicator and the corresponding grub screw d7 must be purchased separately. For further information on the indicators see the pages of articles K650 and K660 [page and page].
(*) With adapter KS08050.T01 you can mount the indicator K650050.

Locking handwheel:

Cylindrical handwheel G793-36 with threaded stud [page]. Black (RAL 9011). ATTENTION: dimension Q2 of the locking handwheel must be chosen by the customer based on the dimensions of the machinery on which the handwheel is applied. For model K901-130 the locking handwheel is replaced by the wing nut L751-32 [page].

Fixing method:

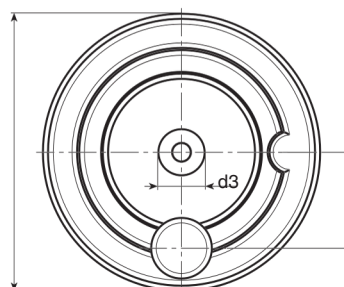
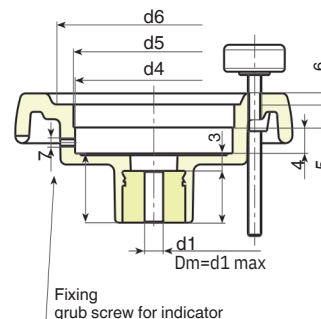
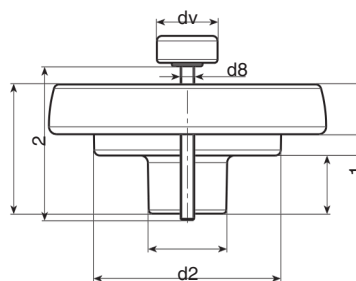
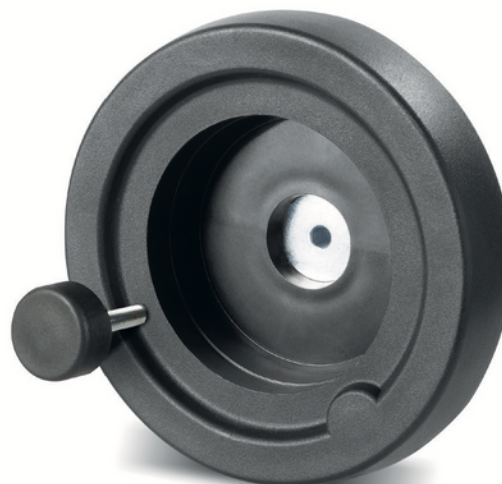
For special requests, or execution of keyways or square holes, please refer to the technical notes attached to the catalogue [page].

- On request and with a minimum of 50 pieces, the inserts can be supplied with the hole d1 with H7 tolerance and black-oxide finish.
- Upon request and for special quantities inserts can be supplied with custom hole diameter d1.
- Upon request and for special quantities inserts can be supplied in different materials/with different coatings.
- **The indicator must be ordered separately.**
- Upon request and for special quantities it is possible to change the indicator seat.

Combinations Diameters/Indicators:

d5=50 --> K650050

d5=80 --> K650080 or K660080



Code	art.	D	H	d	d2	M	C	C1	d3	d4	d5	d6	d7	h	h3	h4	h5	h6	R	d8	Dm	d1	Q	g		
K901130.0001	K901130.T080P6.801P	130	65.5	42	98	28.5	23,5	13,5	29	85.2	80*	90	M6	149	69	34	10	13.5	12.5	5	54M8	20	6.8	24	370	
K901150.0001	K901150.T080P6.801P	42	101	31	25.5	12.5	29	85.2	80*	106	M6	174	73	41	114	30	37	9	13.5	12.5	6.5	57M8	20	6.8	28	470
K901175.0001	K901175.T080P6.801P	31.5	11.5	26	85.2	80*	126	M6	201	71	46	136	24.5	32	14.5	39	11	13.5	12.5	8	60M8	20	6.8	28	690	
K901200.0001	K901200.T080P6.801P	30	85.2	80*	145	M6								35	12	13.5	12.5	10	74M8	22	6.8	23	850			

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).

Dm = Maximum obtainable diameter for subsequent machining (widening).

Q2 = Upon request.

dv = 36 mm. (K901130 dv=32 mm)

K902

SOLIDCONTROL HANDWHEEL WITH INDICATOR SEAT AND REVOLVING HANDLE

Materials:

Reinforced and stabilized polyamide. Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL9011).

Main insert:

Galvanised steel insert with smooth through bore (tolerance H10).

Lateral insert:

Brass insert with threaded through hole.

Lateral handle:

K902: Revolving handle art. M144 page ().

K906: Revolving handle art. M129 page ().

K907: Revolving handle art. M145 page ().

K908: Revolving handle art. M202 page ().

Mountable indicator:

Use gravity position indicators models K650 or K660. The indicator can be only used in a vertical position (horizontal machine axis). The indicator and the corresponding grub screw d7 must be purchased separately. For further information on the indicators see the pages of articles K650 and K660 [page and page].

(*) With adapter KS08050.T01 you can mount the indicator K650050.

Fixing method:

For fixing systems, or execution of keyways or square holes, please refer to the technical notes attached to the catalogue [page].

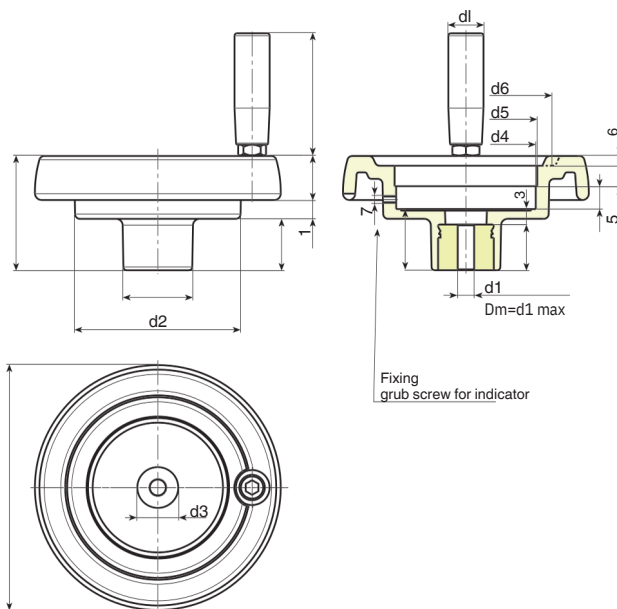
Special requests: With a minimum of 50 pieces, the inserts can be supplied with the hole d1 with H7 tolerance and black-oxide finish.

- Upon request and for special quantities inserts can be supplied with custom hole diameter d1.
- Upon request and for special quantities inserts can be supplied in different materials/with different coatings.
- The indicator must be ordered separately.
- Upon request and for special quantities it is possible to change the indicator seat.

Combinations Diameters/Indicators:

d5=50 --> K650050

d5=80 --> K650080 or K660080



Code	art.	D	H	d	d2	M	C	C1	d3	d4	d5	d6	d7	h	h3	h4	h5	h6	d1	L	Dm	d1	Q		
K902087.0002	K902087.T050P5.801P	86	53	32	62	21	17	15	20	50.8	50	63	M6	26.5	6.5	11.5	12	3	20	56	12	5.8	20	185	
K902100.0003	K902100.T050P6.801P	99	55.5	32	63	23.5	20.5	11.5	20	50.8	50	68	M6	29	9	11.5	12	3.5	20	56	12	6.8	20	200	
K902130.0002	K902130.T080P6.801P	130	65.5	42	98	28.5	23.5	13.5	29	85.2	80*	90	M6	34	10	13.5	12.5	5	21	65	20	6.8	24	406	
K902150.0005	K902150.T080P6.801P	149	69	42	101	31	25.5	12.5	29	85.2	80*	106	M6	37	9	13.5	12.5	6.5	23	76	20	6.8	28	530	
K902175.0002	K902175.T080P6.801P	174	73	41	114	30	31.5	11.5	26	85.2	80*	126	M6	39	11	13.5	12.5	8	25	86	20	6.8	28	760	
K902200.0001	K902200.T080P6.801P	201	71	46	136	24.5	32	14.5	30	85.2	80*	145	M6	35	12	13.6	12.5	10	25	86	22	6.8	23	920	

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).
Dm = Maximum obtainable diameter for subsequent machining (widening).

K903



SOLIDCONTROL HANDWHEEL WITH INDICATOR SEAT, REVOLVING HANDLE AND LOCKINGKNOB

Materials:

Reinforced and stabilized polyamide.
Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black

Insert: (RAL 9011).

Galvanised steelinsert with smooth through bore (tolerance H10).

Mountable indicator:

Use gravity position indicators models K650 or K660. The indicator can be only used in a vertical position (horizontal machine axis). The indicator and the corresponding grub screw d7 must be purchased separately. For further information on the indicators see the pages of articles K650 and K660 [page and page].
(*) With adapter KS08050.T01 you can mount the indicator K650050.

Lateral insert:

Brass insert with threaded through hole.

Lateral handle:

Revolving handle art. M144 [page].

Locking handwheel:

Cylindrical handwheel G793-36 with threaded stud [page]. Black (RAL 9011). ATTENTION: dimension Q2 of the locking handwheel must be chosen by the customer based on the dimensions of the machinery on which the handwheel is applied. For model K903-130 the locking handwheel is replaced by the wing nut L751-32 [page].

Fixing method:

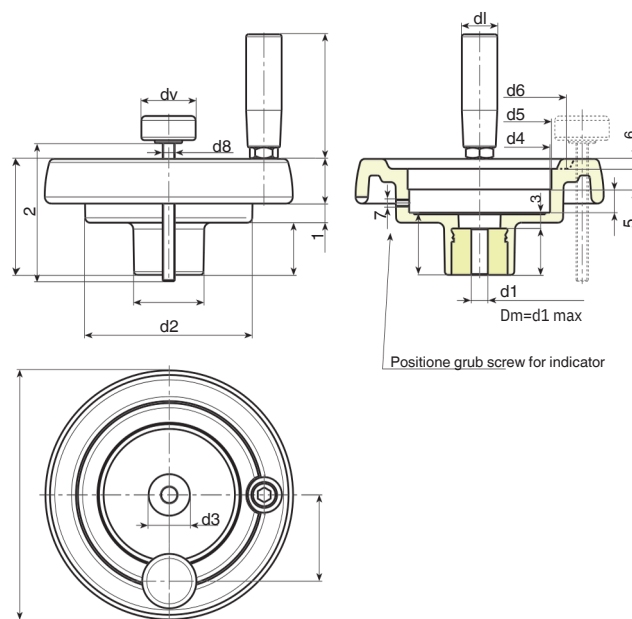
For fixing systems, or execution of keyways or square holes, please refer to the technical notes attached to the catalogue [page].

- On request and with a minimum of 50 pieces, the inserts can be supplied with the hole d1 with H7 tolerance and black-oxide finish.
- Upon request and for special quantities inserts can be supplied with custom hole diameter d1.
- Upon request and for special quantities inserts can be supplied in different materials/with different coatings.
- **The indicator must be ordered separately.**
- Upon request and for special quantities it is possible to change the indicator seat.

Combinations Diameters/Indicators:

d5=50 --> K650050

d5=80 --> K650080 or K660080



Positione grub screw for indicator

Code	art.	D	H	d	d2M	C	C1d3d4d5d6	h	h8	h4	h5	h6	L	Dm	d1	Q	g
K903130.0002	K903130.T080P6.801P	130	65.5	42	98	87.5	23.5 13.5 29 85.2 80* 90 34 149	10	13.5	12.5	5	54	M8 21	65	20	6.8	24 426
K903150.0001	K903150.T080P6.801P	69	42	101	31	25.5	12.5 29 85.2 80* 106 37 174 73 41	9	13.5	12.5	6.5	57	M8 23	76	20	6.8	28 555
K903175.0001	K903175.T080P6.801P	114	30	31.5	11.5	26	85.2 80* 126 39 201 71 46 136	11	13.5	12.5	8	60	M8 25	86	20	6.8	28 782
K903200.0001	K903200.T080P6.801P	24.5	32	14.5	30	85.2	80* 145 35	12	13.6	12.5	10	74	M8 25	86	22	6.8	23 950

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).

Dm = Maximum obtainable diameter for subsequent machining (widening).

Q2 = Upon request.

dv = 36 mm. (K903130 dv=32 mm)

K904



SOLIDCONTROL HANDWHEEL WITH INDICATOR SEAT AND REVOLVING, FOLDING HANDLE

Materials:

Reinforced and stabilized polyamide.
Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black

Insert: (RAL9011).

Galvanised steel insert with smooth through bore (tolerance H10).

Lateral insert:

Brass insert with threaded through hole.

Lateral handle:

Revolving handle art. M136 [page].

Mountable indicator:

Use gravity position indicators models K650 or K660. The indicator can be only used in a vertical position (horizontal machine axis). The indicator and the corresponding grub screw d7 must be purchased separately. For further information on the indicators see the pages of articles K650 and K660 [page and page].

(*) With adapter KS08050.T01 you can mount the indicator K650050.

Fixing method:

For fixing systems, or execution of keyways or square holes, please refer to the technical notes attached to the catalogue [page].

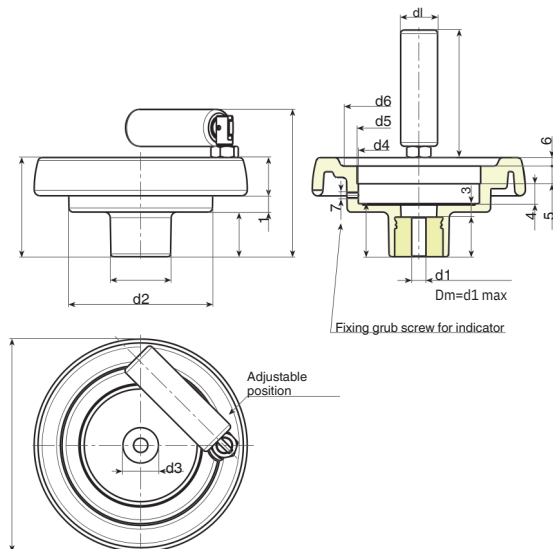
Special Requests:

- On request and with a minimum of 50 pieces, the inserts can be supplied with the hole d1 with H7 tolerance and black-oxide finish.
- Upon request and for special quantities inserts can be supplied with custom hole diameter d1.
- Upon request and for special quantities inserts can be supplied in different materials/with different coatings.
- **The indicator must be ordered separately.**
- Upon request and for special quantities it is possible to change the indicator seat.

Combinations Diameters/Indicators:

d5=50 --> K650050

d5=80 --> K650080 or K660080



Code	art.	D	H	H1	d	d2	M	C	C1	d3	d4	d5	d6	d7	h	h3	h4	h5	h6	dl	L	D	dm1	Q	g
K904087.0001	K904087.T050P5.801P	86	53	77	32	62	21	17	15	20	50,8	50	63	M6	26,5	6,5	11,5	12	3	20	56	12	5,8	20	195
K904100.0001	K904100.T050P6.801P	99	55,5	80	32	63	23,5	20,5	11,5	20	50,8	50	68	M6	29	9	11,5	12	3,5	20	56	12	6,8	20	210
K904130.0005	K904130.T080P6.801P	130	65,5	94	42	98	28,5	23,5	13,5	29	85,2	80*	90	M6	34	10	13,5	12,5	5	25	76	20	6,8	24	420
K904150.0002	K904150.T080P6.801P	149	69	104	42	101	31	25,5	12,5	29	85,2	80*	106	M6	37	9	13,5	12,5	6,5	26	89	20	6,8	28	580
K904175.0001	K904175.T080P6.801P	174	73	107	41	114	30	31,5	11,5	26	85,2	80*	126	M6	39	11	13,5	12,5	8	26	89	20	6,8	28	800
K904200.0002	K904200.T080P6.801P	201	71	106	46	136	24,5	32	14,5	30	85,2	80*	145	M6	35	12	13,6	12,5	10	26	97	22	6,8	23	970

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).
Dm = Maximum obtainable diameter for subsequent machining (widening).

K905



SOLIDCONTROL HANDWHEEL WITH INDICATOR SEAT, REVOLVING, FOLDING HANDLE AND LOCKING KNOB

Materials:

Reinforced and stabilized polyamide.
Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black

Insert: (RAL 9011).

Galvanised steelinsert with smooth through bore (tolerance H10).

Mountable indicator:

Use gravity position indicators models K650 or K660. The indicator can be only used in a vertical position (horizontal machine axis). The indicator and the corresponding grub screw d7 must be purchased separately. For further information on the indicators see the pages of articles K650 and K660 [page and page].
(*) With adapter KS08050.T01 you can mount the indicator K650050.

Lateral insert:

Brass insert with threaded through hole.

Lateral handle:

Revolving handle art. M136 [page].

Locking handwheel:

Cylindrical handwheel G793-36 with threaded stud [page]. Black (RAL 9011). ATTENTION: dimension Q2 of the locking handwheel must be chosen by the customer based on the dimensions of the machinery on which the handwheel is applied. For model K905-130 the locking handwheel is replaced by the wing nut L751-32 [page].

Fixing method:

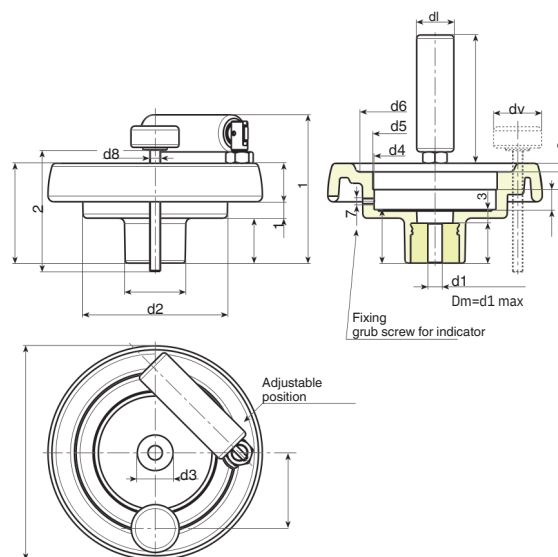
For fixing systems, or execution of keyways or square holes, please refer to special requests attached to the catalogue [page].

- On request and with a minimum of 50 pieces, the inserts can be supplied with the hole d1 with H7 tolerance and black-oxide finish.
- Upon request and for special quantities inserts can be supplied with custom hole diameter d1.
- Upon request and for special quantities inserts can be supplied in different materials/with different coatings.
- **The indicator must be ordered separately.**
- Upon request and for special quantities it is possible to change the indicator seat.

Combinations Diameters/Indicators:

d5=50 --> K650050

d5=80 --> K650080 or K660080



Code	art.	D	H	H1	d	d2M	C	C1d3d4d5d6d7	h	hR	h4	h5	h6	LD	md1	Q	g											
K905130.0002	K905130.T080P6.801P	130	65.5	94	42	98	28.5	23.5	13.5	29	85.2	80*	90	M6	34	10	13.5	12.5	5	54	M8	25	76	20	6.8	24	430	20
K905150.0003	K905150.T080P6.801P	149	69	104	42	101	31	25.5	12.5	29	85.2	80*	106	M6	37	9	13.5	12.5	6.5	57	M8	26	89	6.8	28	615	20	
K905175.0006	K905175.T080P6.801P	174	73	108	41	114	30	31.5	11.5	26	85.2	80*	126	M6	39	11	13.5	12.5	8	60	M8	26	89	6.8	28	835	22	
K905200.0001	K905200.T080P6.801P	201	71	106	46	136	24.5	32	14.5	30	85.2	80*	145	M6	35	12	13.6	12.5	10	74	M8	26	97	6.8	23	999		

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).

Dm = Maximum obtainable diameter for subsequent machining (widening).

Q2 = Upon request.

dv = 36 mm. (K905130 dv=32 mm)

K906

SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT AND REVOLVING HANDLE M129



Insert:

Galvanised steel insert with smooth through bore (tolerance H10).

Lateral handle:

Revolving handle art. M129 [page].

Code	art.	D	H	d	d2	M	C	C1	d3	d4	d5	d6	d7	h	h3	h4	h5	h6	dl	L	Dmd1	Q	g	
K906087.0002	K906087.T050P6.801P	86	53	32	62	21	17	15	20	50.8	50	63	M6	26.5	6.5	11.5	12	3	20	52	12	5.8	20	197
K906100.0002	K906100.T050P6.801P	99	55.5	32	63	23.5	20.5	11.5	20	50.8	50	68	M6	29	9	11.5	12	3.5	20	52	12	6.8	20	212
K906130.0001	K906130.T080P6.801P	130	65.5	42	98	28.5	23.5	13.5	29	85.2	80*	90	M6	34	10	13.5	12.5	5	23	62	20	6.8	24	410
K906150.0004	K906150.T080P6.801P	149	69	42	101	31	25.5	12.5	29	85.2	80*	106	M6	37	9	13.5	12.5	6.5	25	72	20	6.8	28	522
K906175.0001	K906175.T080P6.801P	174	73	41	114	30	31.5	11.5	26	85.2	80*	126	M6	39	11	13.5	12.5	8	25	81	20	6.8	28	750
K906200.0001	K906200.T080P6.801P	201	71	46	136	24.5	32	14.5	30	85.2	80*	145	M6	35	12	13.6	12.5	10	25	81	22	6.8	23	910

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).
Dm = Maximum obtainable diameter for subsequent machining (widening).

K907

SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT AND REVOLVING HANDLE M145



Insert:

Galvanised steel insert with smooth through bore (tolerance H10).

Lateral handle:

Revolving handle art. M145 [page].

Code	art.	D	H	d	d2	M	C	C1	d3	d4	d5	d6	d7	h	h3	h4	h5	h6	dl	L	Dmd1	Q	g	
K907087.0001	K907087.T050P5.801P	86	53	32	62	21	17	15	20	50.8	50	63	M6	26.5	6.5	11.5	12	3	20	55	12	5.8	20	187
K907100.0002	K907100.T050P6.801P	99	55.5	32	63	23.5	20.5	11.5	20	50.8	50	68	M6	29	9	11.5	12	3.5	20	55	12	6.8	20	205
K907130.0001	K907130.T080P6.801P	130	65.5	42	98	28.5	23.5	13.5	29	85.2	80*	90	M6	34	10	13.5	12.5	5	23	66	20	6.8	24	424
K907150.0001	K907150.T080P6.801P	149	69	42	101	31	25.5	12.5	29	85.2	80*	106	M6	37	9	13.5	12.5	6.5	25	76	20	6.8	28	516
K907175.0001	K907175.T080P6.801P	174	73	41	114	30	31.5	11.5	26	85.2	80*	126	M6	39	11	13.5	12.5	8	25	87	20	6.8	28	745
K907200.0001	K907200.T080P6.801P	201	71	46	136	24.5	32	14.5	30	85.2	80*	145	M6	35	12	13.6	12.5	10	27	87	22	6.8	23	900

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).
Dm = Maximum obtainable diameter for subsequent machining (widening).

K908

SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT AND REVOLVING HANDLE M202



Insert:

Galvanised steel insert with smooth through bore (tolerance H10).

Lateral handle:

Revolving handle art. M202 [page].

Code	art.	D	H	d	d2	M	C	C1	d3	d4	d5	d6	d7	h	h3	h4	h5	h6	dl	L	Dmd1	Q	g		
K908150.0001	K908150.T080P6.801P	149	69	42		101 31	25.5	12.5	29	85,2	80*	106	M6	37		9	13.5	12.5	6.5	40	64	20	6.8	28	525
K908175.0001	K908175.T080P6.801P	174	73	41		114 30	31,5	11.5	26	85,2	80*	126	M6	39		11	13,5	12,5	8	40	64	20	6.8	28	745
K908200.0001	K908200.T080P6.801P	201	71	46		136 24,5	32	14,5	30	85,2	80*	145	M6	35		12	13,6	12,5	10	40	64	22	6.8	23	905

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).
Dm = Maximum obtainable diameter for subsequent machining (widening).

K906

SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT AND REVOLVING HANDLE M129



Insert:

Galvanised steel insert with smooth through bore (tolerance H10).

Lateral handle:

Revolving handle art. M129 [page].

Code	art.	D	H	d	d2	M	C	C1	d3	d4	d5	d6	d7	h	h3	h4	h5	h6	dl	L	Dmd1	Q	g	
K906087.0002	K906087.T050P6.801P	86	53	32	62	21	17	15	20	50.8	50	63	M6	26.5	6.5	11.5	12	3	20	52	12	5.8	20	197
K906100.0002	K906100.T050P6.801P	99	55.5	32	63	23.5	20.5	11.5	20	50.8	50	68	M6	29	9	11.5	12	3.5	20	52	12	6.8	20	212
K906130.0001	K906130.T080P6.801P	130	65.5	42	98	28.5	23.5	13.5	29	85.2	80*	90	M6	34	10	13.5	12.5	5	23	62	20	6.8	24	410
K906150.0004	K906150.T080P6.801P	149	69	42	101	31	25.5	12.5	29	85.2	80*	106	M6	37	9	13.5	12.5	6.5	25	72	20	6.8	28	522
K906175.0001	K906175.T080P6.801P	174	73	41	114	30	31.5	11.5	26	85.2	80*	126	M6	39	11	13.5	12.5	8	25	81	20	6.8	28	750
K906200.0001	K906200.T080P6.801P	201	71	46	136	24.5	32	14.5	30	85.2	80*	145	M6	35	12	13.6	12.5	10	25	81	22	6.8	23	910

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).
Dm = Maximum obtainable diameter for subsequent machining (widening).

K907

SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT AND REVOLVING HANDLE M145



Insert:

Galvanised steel insert with smooth through bore (tolerance H10).

Lateral handle:

Revolving handle art. M145 [page].

Code	art.	D	H	d	d2	M	C	C1	d3	d4	d5	d6	d7	h	h3	h4	h5	h6	dl	L	Dmd1	Q	g	
K907087.0001	K907087.T050P5.801P	86	53	32	62	21	17	15	20	50.8	50	63	M6	26.5	6.5	11.5	12	3	20	55	12	5.8	20	187
K907100.0002	K907100.T050P6.801P	99	55.5	32	63	23.5	20.5	11.5	20	50.8	50	68	M6	29	9	11.5	12	3.5	20	55	12	6.8	20	205
K907130.0001	K907130.T080P6.801P	130	65.5	42	98	28.5	23.5	13.5	29	85.2	80*	90	M6	34	10	13.5	12.5	5	23	66	20	6.8	24	424
K907150.0001	K907150.T080P6.801P	149	69	42	101	31	25.5	12.5	29	85.2	80*	106	M6	37	9	13.5	12.5	6.5	25	76	20	6.8	28	516
K907175.0001	K907175.T080P6.801P	174	73	41	114	30	31.5	11.5	26	85.2	80*	126	M6	39	11	13.5	12.5	8	25	87	20	6.8	28	745
K907200.0001	K907200.T080P6.801P	201	71	46	136	24.5	32	14.5	30	85.2	80*	145	M6	35	12	13.6	12.5	10	27	87	22	6.8	23	900

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).
Dm = Maximum obtainable diameter for subsequent machining (widening).

K908

SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT AND REVOLVING HANDLE M202



Insert:

Galvanised steel insert with smooth through bore (tolerance H10).

Lateral handle:

Revolving handle art. M202 [page].

Code	art.	D	H	d	d2	M	C	C1	d3	d4	d5	d6	d7	h	h3	h4	h5	h6	dl	L	Dmd1	Q	g		
K908150.0001	K908150.T080P6.801P	149	69	42		101 31	25.5	12.5	29	85,2	80*	106	M6	37		9	13.5	12.5	6.5	40	64	20	6.8	28	525
K908175.0001	K908175.T080P6.801P	174	73	41		114 30	31,5	11.5	26	85,2	80*	126	M6	39		11	13,5	12,5	8	40	64	20	6.8	28	745
K908200.0001	K908200.T080P6.801P	201	71	46		136 24,5	32	14,5	30	85,2	80*	145	M6	35		12	13,6	12,5	10	40	64	22	6.8	23	905

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).
Dm = Maximum obtainable diameter for subsequent machining (widening).

K902

SOLIDCONTROL HANDWHEEL WITH INDICATOR SEAT AND REVOLVING HANDLE

Materials:

Reinforced and stabilized polyamide. Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL9011).

Main insert:

Galvanised steel insert with smooth through bore (tolerance H10).

Lateral insert:

Brass insert with threaded through hole.

Lateral handle:

K902: Revolving handle art. M144 page ().

K906: Revolving handle art. M129 page ().

K907: Revolving handle art. M145 page ().

K908: Revolving handle art. M202 page ().

Mountable indicator:

Use gravity position indicators models K650 or K660. The indicator can be only used in a vertical position (horizontal machine axis). The indicator and the corresponding grub screw d7 must be purchased separately. For further information on the indicators see the pages of articles K650 and K660 [page and page].

(*) With adapter KS08050.T01 you can mount the indicator K650050.

Fixing method:

For fixing systems, or execution of keyways or square holes, please refer to the technical notes attached to the catalogue [page].

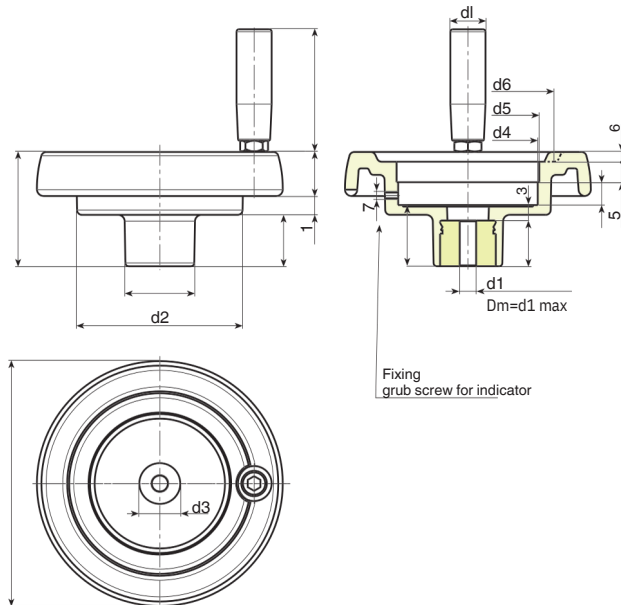
Special requests: For a minimum of 50 pieces inserts can be supplied with hole d1 with tolerance H7 and black oxide treated finish. Add letters ZB to the standard code. Example: K902100.T050D1001PZB.

- Upon request and for special quantities inserts can be supplied with custom hole diameter d1.
- Upon request and for special quantities inserts can be supplied in different materials/with different coatings.
- The indicator must be ordered separately.
- Upon request and for special quantities it is possible to change the indicator seat.

Combinations Diameters/Indicators:

d5=50 --> K650050

d5=80 --> K650080 or K660080



Code	art.	D	H	d	d2	M	C	C1	d3	d4	d5	d6	d7	h	h3	h4	h5	h6	d1	L	Dm	d1	Q		
K902087.0002	K902087.T050P5.801P	86	53	32	62	21	17	15	20	50.8	50	63	M6	26.5	6.5	11.5	12	3	20	56	12	5.8	20	185	
K902100.0003	K902100.T050P6.801P	99	55.5	32	63	23.5	20.5	11.5	20	50.8	50	68	M6	29	9	11.5	12	3.5	20	56	12	6.8	20	200	
K902130.0002	K902130.T080P6.801P	130	65.5	42	98	28.5	23.5	13.5	29	85.2	80*	90	M6	34	10	13.5	12.5	5	21	65	20	6.8	24	406	
K902150.0005	K902150.T080P6.801P	149	69	42	101	31	25.5	12.5	29	85.2	80*	106	M6	37	9	13.5	12.5	6.5	23	76	20	6.8	28	530	
K902175.0002	K902175.T080P6.801P	174	73	41	114	30	31.5	11.5	26	85.2	80*	126	M6	39	11	13.5	12.5	8	25	86	20	6.8	28	760	
K902200.0001	K902200.T080P6.801P	201	71	46	136	24.5	32	14.5	30	85.2	80*	145	M6	35	12	13.6	12.5	10	25	86	22	6.8	23	920	

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).
Dm = Maximum obtainable diameter for subsequent machining (widening).

K906

SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT AND REVOLVING HANDLE M129

Insert:

Galvanised steel insert with smooth through bore (tolerance H10).

Lateral handle:

Revolving handle art. M129 [page].



Code	art.	D	H	d	d2	M	C	C1	d3	d4	d5	d6	d7	h	h3	h4	h5	h6	dl	L	Dmd1	Q	g	
K906087.0002	K906087.T050P6.801P	86	53	32	62	21	17	15	20	50.8	50	63	M6	26.5	6.5	11.5	12	3	20	52	12	5.8	20	197
K906100.0002	K906100.T050P6.801P	99	55.5	32	63	23.5	20.5	11.5	20	50.8	50	68	M6	29	9	11.5	12	3.5	20	52	12	6.8	20	212
K906130.0001	K906130.T080P6.801P	130	65.5	42	98	28.5	23.5	13.5	29	85.2	80*	90	M6	34	10	13.5	12.5	5	23	62	20	6.8	24	410
K906150.0004	K906150.T080P6.801P	149	69	42	101	31	25.5	12.5	29	85.2	80*	106	M6	37	9	13.5	12.5	6.5	25	72	20	6.8	28	522
K906175.0001	K906175.T080P6.801P	174	73	41	114	30	31.5	11.5	26	85.2	80*	126	M6	39	11	13.5	12.5	8	25	81	20	6.8	28	750
K906200.0001	K906200.T080P6.801P	201	71	46	136	24.5	32	14.5	30	85.2	80*	145	M6	35	12	13.6	12.5	10	25	81	22	6.8	23	910

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).
Dm = Maximum obtainable diameter for subsequent machining (widening).

K907

SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT AND REVOLVING HANDLE M145

Insert:

Galvanised steel insert with smooth through bore (tolerance H10).

Lateral handle:

Revolving handle art. M145 [page].



Code	art.	D	H	d	d2	M	C	C1	d3	d4	d5	d6	d7	h	h3	h4	h5	h6	dl	L	Dmd1	Q	g	
K907087.0001	K907087.T050P5.801P	86	53	32	62	21	17	15	20	50.8	50	63	M6	26.5	6.5	11.5	12	3	20	55	12	5.8	20	187
K907100.0002	K907100.T050P6.801P	99	55.5	32	63	23.5	20.5	11.5	20	50.8	50	68	M6	29	9	11.5	12	3.5	20	55	12	6.8	20	205
K907130.0001	K907130.T080P6.801P	130	65.5	42	98	28.5	23.5	13.5	29	85.2	80*	90	M6	34	10	13.5	12.5	5	23	66	20	6.8	24	424
K907150.0001	K907150.T080P6.801P	149	69	42	101	31	25.5	12.5	29	85.2	80*	106	M6	37	9	13.5	12.5	6.5	25	76	20	6.8	28	516
K907175.0001	K907175.T080P6.801P	174	73	41	114	30	31.5	11.5	26	85.2	80*	126	M6	39	11	13.5	12.5	8	25	87	20	6.8	28	745
K907200.0001	K907200.T080P6.801P	201	71	46	136	24.5	32	14.5	30	85.2	80*	145	M6	35	12	13.6	12.5	10	27	87	22	6.8	23	900

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).
Dm = Maximum obtainable diameter for subsequent machining (widening).

K908

SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT AND REVOLVING HANDLE M202

Insert:

Galvanised steel insert with smooth through bore (tolerance H10).

Lateral handle:

Revolving handle art. M202 [page].



Code	art.	D	H	d	d2	M	C	C1	d3	d4	d5	d6	d7	h	h3	h4	h5	h6	dl	L	Dmd1	Q					
K908150.0001	K908150.T080P6.801P	149	69	42		101	31	25.5	12.5	29	85,2	80*	106	M6	37		9	13.5	12.5	6.5	40	64	20	6.8	28	525	
K908175.0001	K908175.T080P6.801P	174	73	41		114	30	31,5	11.5	26	85,2	80*	126	M6	39		11	13,5	12,5	8	40	64	20	6.8	28	745	
K908200.0001	K908200.T080P6.801P	201		71	46		136	24,5	32	14,5	30	85,2	80*	145	M6	35		12	13,6	12,5	10	40	64	22	6.8	23	905

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).
Dm = Maximum obtainable diameter for subsequent machining (widening).

K902

SOLIDCONTROL HANDWHEEL WITH INDICATOR SEAT AND REVOLVING HANDLE

Materials:

Reinforced and stabilized polyamide. Resistant to oils and greases.



Surface finish:

Satin.

Colour:

Black (RAL9011).

Main insert:

Galvanised steel insert with smooth through bore (tolerance H10).

Lateral insert:

Brass insert with threaded through hole.

Lateral handle:

K902: Revolving handle art. M144 page ().

K906: Revolving handle art. M129 page ().

K907: Revolving handle art. M145 page ().

K908: Revolving handle art. M202 page ().

Mountable indicator:

Use gravity position indicators models K650 or K660. The indicator can be only used in a vertical position (horizontal machine axis). The indicator and the corresponding grub screw d7 must be purchased separately. For further information on the indicators see the pages of articles K650 and K660 [page and page].

(*) With adapter KS08050.T01 you can mount the indicator K650050.

Fixing method:

For fixing systems, or execution of keyways or square holes, please refer to the technical notes attached to the catalogue [page].

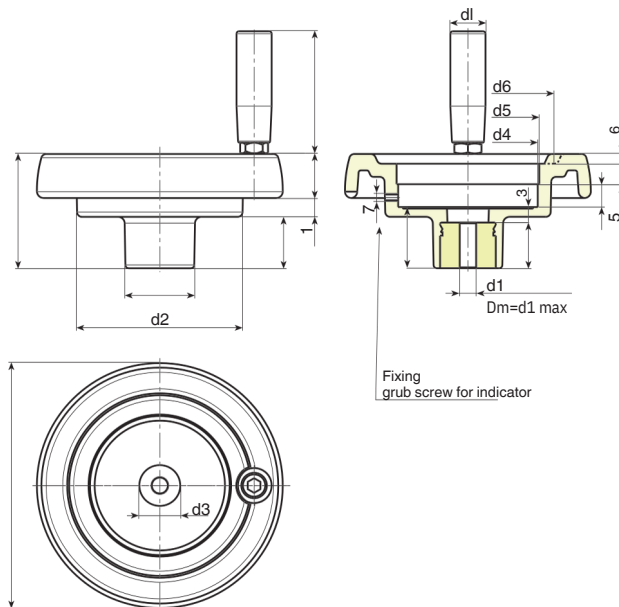
Special requests: for a minimum of 50 pieces inserts can be supplied with hole d1 with tolerance H7 and black oxide treated finish. Add letters ZB to the standard code. Example: K902100.T050D1001PZB.

- Upon request and for special quantities inserts can be supplied with custom hole diameter d1.
- Upon request and for special quantities inserts can be supplied in different materials/with different coatings.
- The indicator must be ordered separately.
- Upon request and for special quantities it is possible to change the indicator seat.

Combinations Diameters/Indicators:

d5=50 --> K650050

d5=80 --> K650080 or K660080



Code	art.	D	H	d	d2	M	C	C1	d3	d4	d5	d6	d7	h	h3	h4	h5	h6	d1	L	Dm	d1	Q	g	
K902087.0002	K902087.T050P5.801P	86	53	32	62	21	17	15	20	50.8	50	63	M6	26.5	6.5	11.5	12	3	20	56	12	5.8	20	185	
K902100.0003	K902100.T050P6.801P	99	55.5	32	63	23.5	20.5	11.5	20	50.8	50	68	M6	29	9	11.5	12	3.5	20	56	12	6.8	20	200	
K902130.0002	K902130.T080P6.801P	130	65.5	42	98	28.5	23.5	13.5	29	85.2	80*	90	M6	34	10	13.5	12.5	5	21	65	20	6.8	24	406	
K902150.0005	K902150.T080P6.801P	149	69	42	101	31	25.5	12.5	29	85.2	80*	106	M6	37	9	13.5	12.5	6.5	23	76	20	6.8	28	530	
K902175.0002	K902175.T080P6.801P	174	73	41	114	30	31.5	11.5	26	85.2	80*	126	M6	39	11	13.5	12.5	8	25	86	20	6.8	28	760	
K902200.0001	K902200.T080P6.801P	201	71	46	136	24.5	32	14.5	30	85.2	80*	145	M6	35	12	13.6	12.5	10	25	86	22	6.8	23	920	

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).
Dm = Maximum obtainable diameter for subsequent machining (widening).

K960

KNURLED CONTROL KNOB FOR INDICATOR K650-50



PA6
+G.F.

RoHS
COMPLIANT

Materials:

Reinforced polyamide. Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL9011).

Mountable indicator:

Gravity position indicator type K650050. The indicator can be only used in a vertical position (horizontal machine axis). The indicator must be purchased separately. For further information see article K650 [page].
Galvanised steel insert with smooth through bore (tolerance H10).

Fixing method:

The knob is fixed to the shaft by means of the threaded radial hole (d4) (grub screw not supplied).

Indicator fixing method:

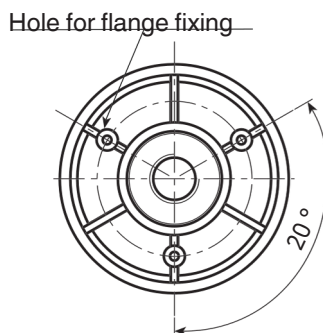
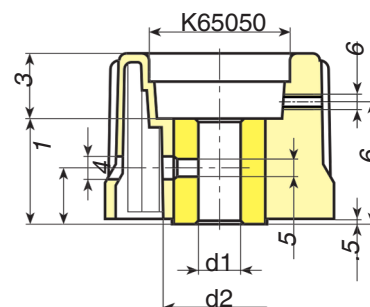
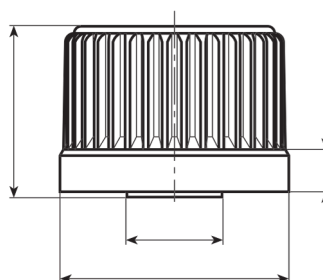
Fix the indicator with a threaded grub screw M4 (not supplied) to be inserted in the hole d6.

Special Requests:

- On request and with a minimum of 50 pieces, the inserts can be supplied with the hole d1 with H7 tolerance and black-oxide finish.
- Upon request and for special quantities inserts can be supplied with custom hole diameter d1.
- Upon request and for special quantities inserts can be supplied in different materials.
- Upon request the control knob can be supplied with a grey ring. The code for this product is: K96178.TD080116.



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Code	art.	D	H	m	d	d2	d4	d5	d6	h1	h3	h6	Dm	d1H10	Q	g
K96078.0002	K96078.TD0801	78	56	15	31	36	6.5	M6	M4	18	24	38.5	18	8	32	230

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).
Dm = Maximum obtainable diameter for subsequent machining (widening).

BASEFORSOLID CONTROL HANDWHEEL WITH INDICATOR SEAT AND PROVISION FOR HANDLE

Materials:

Reinforced and stabilized polyamide.
Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black

Insert: (RAL 9011).

Galvanised steel insert with smooth through bore (tolerance H10).

Lateral insert:

Brass insert with threaded through hole.
Mountable indicator:

Use gravity position indicators models K650 or K660. The indicator can be only used in a vertical position (horizontal machine axis). The indicator and the corresponding grub screw d7 must be purchased separately. For further information on the indicators see the pages of articles K650 and K660 [page and page].
(*) With adapter KS08050.T01 you can mount the indicator K650050.

Fixing method:

For fixing systems, or execution of keyways or square holes, please refer to the technical notes attached to the catalogue [page].

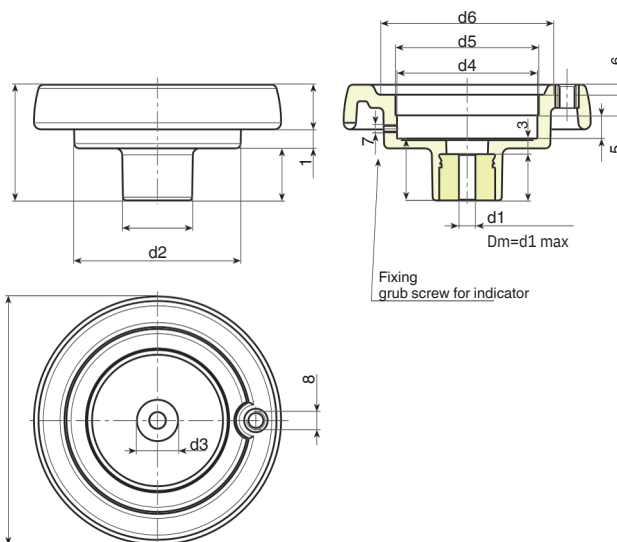
Special Requests:

- On request and with a minimum of 50 pieces, the inserts can be supplied with the hole d1 with H7 tolerance and black-oxide finish.
- Upon request and for special quantities inserts can be supplied with custom hole diameter d1.
- Upon request and for special quantities inserts can be supplied in different materials/with different coatings.
- **The indicator must be ordered separately.**
- Upon request and for special quantities it is possible to change the indicator seat.

Combinations Diameters/Indicators:

d5=50 --> K650050

d5=80 --> K650080 or K660080



Code	art.	D	H	d	d2	M	C	C1	d3	d4	d5	d6	d7	d8	h	h3	h4	h5	h6	Dm	d1	Q	g	
K087.T050P5.801P	K087.T050P5.801P	86	53	32	62	21	17	15	20	50,8	50	63	M6	M6	26,5	6,5	11,5	12	3		12	5,8	20	155
K100.T050P6.801P	K100.T050P6.801P	99	55,5	32	63	23,5	20,5	11,5	20	50,8	50	68	M6	M6	29	9	11,5	12	3,5		12	6,8	20	170
K130.T080P6.801P	K130.T080P6.801P	130	65,5	42	98	28,5	23,5	13,5	29	85,2	80*	90	M6	M8	34	10	13,5	12,5	5		20	6,8	24	350
K150.T080P6.801P	K150.T080P6.801P	149	69	42	101	31	25,5	12,5	29	85,2	80*	106	M6	M10	37	9	13,5	12,5	6,5		20	6,8	28	430
K175.T080P6.801P	K175.T080P6.801P	174	73	41	114	30	31,5	11,5	26	85,2	80*	126	M6	M10	39	11	13,5	12,5	8		20	6,8	28	650
K200.T080P6.801P	K200.T080P6.801P	201	71	46	136	24,5	32	14,5	30	85,2	80*	145	M6	M10	35	12	13,6	12,5	10		22	6,8	23	810

Attention: For a minimum of 50 pieces the diameter d1 can be customised (hole tolerance H10 galvanised and H7 black-oxide treated).
Dm = Maximum obtainable diameter for subsequent machining (widening).

KS

ADAPTER FOR INDICATOR



Materials:

Reinforced and stabilized polyamide.
Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL9011).

Alternative adapter colours:

Orange (RAL 2004 code 02).

Blue (RAL 5015 code 07).

Yellow (RAL 1021 code 10).

Red (RAL 3000 code 16).

Green (RAL 6024 code 17).

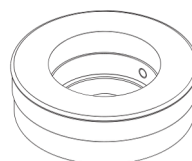
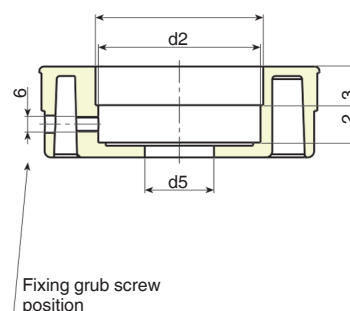
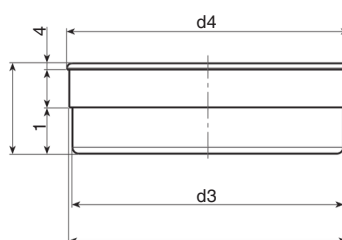
Grey (RAL 7035 cod. 13).

Attention:

Indicator grub screw not supplied.

Special Requests:

- None.



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Code	art.	D	d	d2	d3	d4	d5	d6	H	h	h1	h2	h3	h4	g
KS080.0001	KS080.05001	87,4	52,4	51.5	85.5	89	22	M6	28.5	14	14.5	11.8	12.2	2	80

