

K150



11

KNURLED KNOB FOR INDICATOR

Control knobs with seat for gravity position 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.



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) (grub screw not supplied).

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.

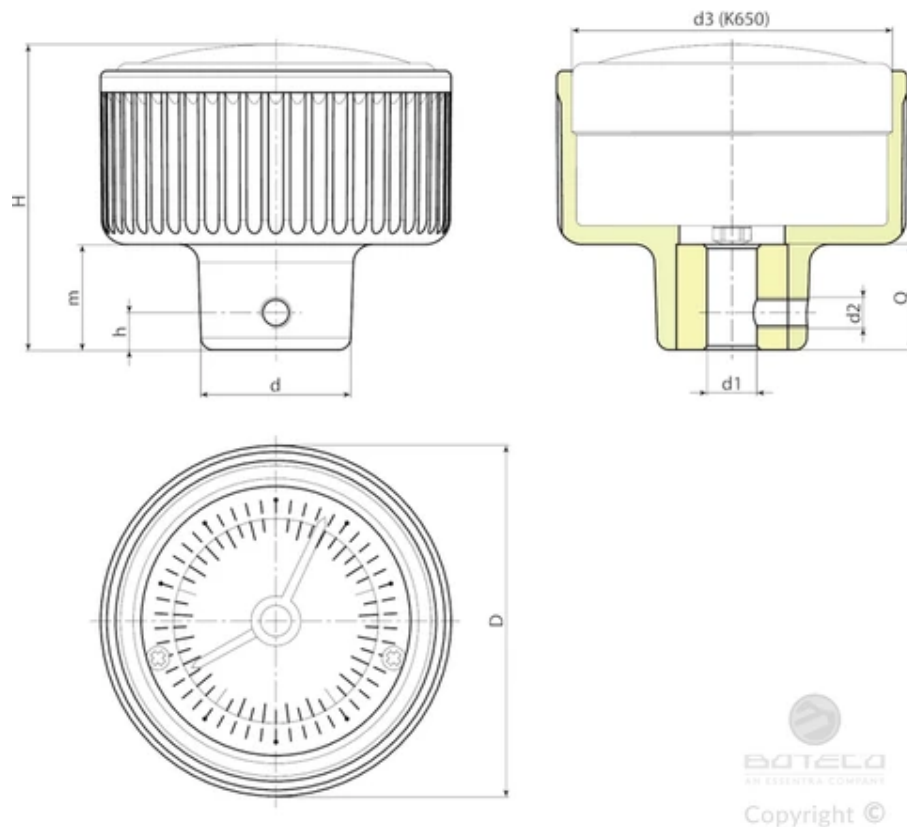
Upon request and for special quantities inserts can be supplied in different materials.

Combinations Diameters/Indicators:

d3=52.4 --> K650050

d3=66.8 --> K650070

d3=87.4 --> K650080 or K660080



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Code	art.	D	d	H	h	m	d3	d2	d1 H10	dm	Q	Weight (g)
-	K150057.TD0801...	57	24	50	6	17	52,4	M5	8	12	16	105
-	K150057.TD1001...	57	24	50	6	17	52,4	M5	10	12	16	104
-	K150057.TD1201...	57	24	50	6	17	52,4	M5	12	12	16	103
-	K150072.TD0801...	72	28	56	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	6	21	66,8	M5	12	12	20	161
-	K150094.TD1001...	94	36	60	6	24	87,4	M5	10	15	24	376
-	K150094.TD1201...	94	36	60	6	24	87,4	M5	12	15	24	373
-	K150094.TD1401...	94	36	60	6	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.

LOBED HANDWHEEL FOR INDICATOR

Control knobs with seat for gravity position indicator

Materials:

Reinforced polyamide. Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL 9011).

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 further information see article K650.

Insert:

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.

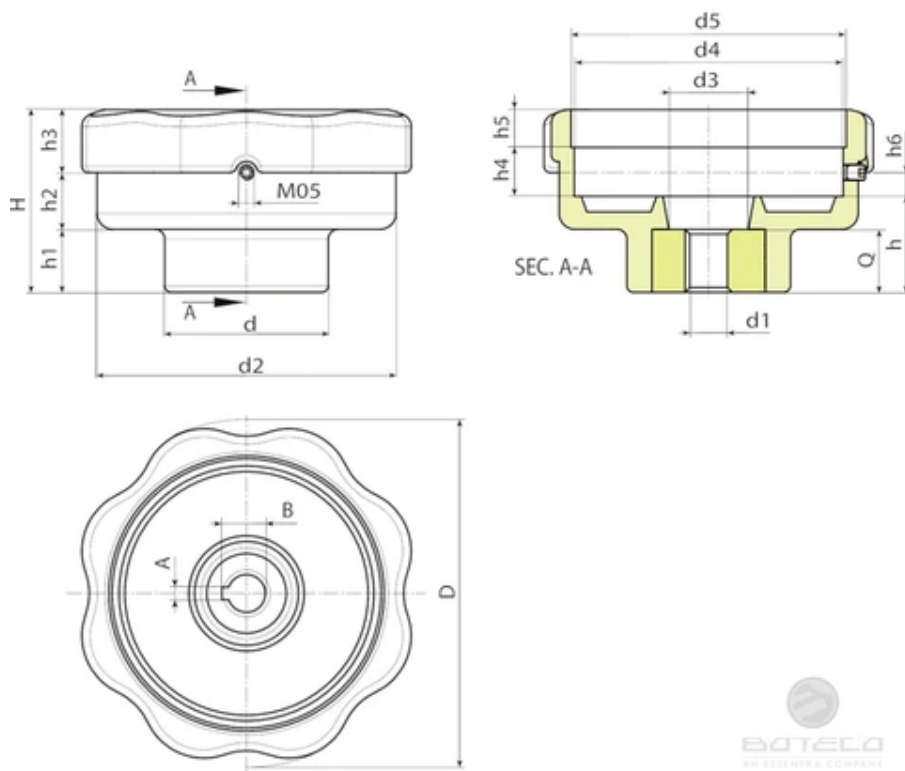
Upon request and for special quantities inserts can be supplied in different materials.

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
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

Code	art.	d1 H10	Q	Weight (g)
K170110.0001	K170110.T80D1201H	12	20	230

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SPOKE HANDWHEEL WITH INDICATOR SEAT

Control handwheels with seat for gravity position indicator

Materials:

Reinforced and stabilized polyamide. Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL 9011).

Insert:

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

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.

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

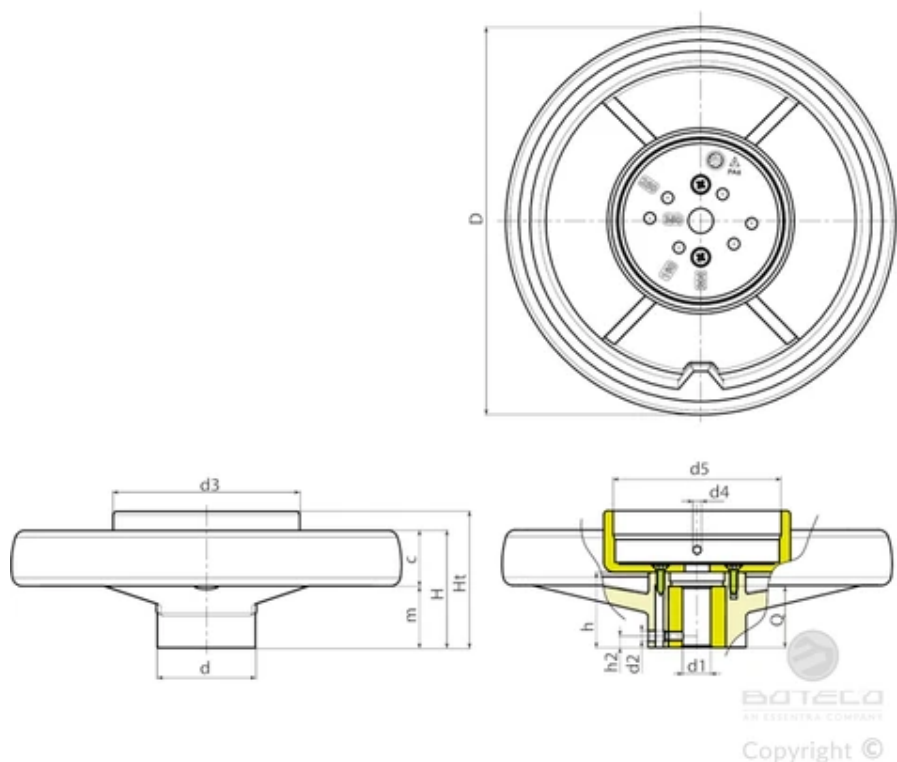
d5=87.4 --> K650080 or K660080



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Code	art.	D	d	m	c	H	Ht	h	h2	d2	d3	d4	d5 ±0,5	Dm	d1 H10	Q	Weight (g)
K405130.0001	K405130.T050D0801	129	32	32	18	50	65.5	36	8	M5	62	M5	52,7	18	8	24	314
K405160.0002	K405160.T050D0801	159	40	34	23	57	69	40.5	8	M5	62	M5	52,7	22	8	32	464
K405160.0003	K405160.T080D0801	159	40	34	23	57	72	40.5	8	M5	97	M5	87,6	22	8	32	485
K405200.0005	K405200.T080D0801	198	51	33	28.5	61.5	71	39.5	8	M5	97	M5	87,6	22	8 (*)	32	725
K405250.0001	K405250.T080D0801	252	55.5	38.5	31.5	70	79	47	8	M5	97	M5	87,6	28	8 (*)	36	1015
K405350.0001	K405350.T080D0801	346	67.5	43.5	36.5	80	81.5	49.5	8	M5	97	M5	87,6	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).

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SPOKE HANDWHEEL WITH HANDLE AND INDICATOR SEAT

Control handwheels with seat for gravity position indicator

Materials:

Reinforced and stabilized polyamide. Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL 9011).

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.

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.

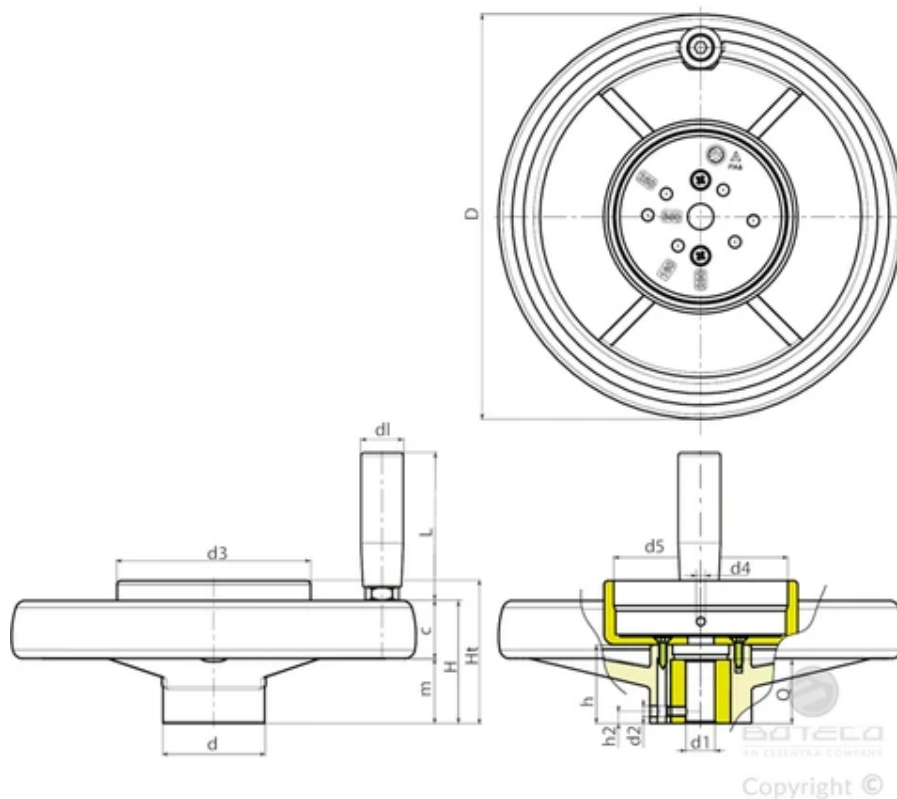


Upon request the handwheels can be supplied with indicator
(not assembled for transport).

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±0,5	Dm	d1 H10	d1	L
K406130.0001	K406130.T050D0801	129	32	32	18	50	65.5	36	8	M5	62	M5	52,7	18	8	21	65
K406160.0001	K406160.T050D0801	159	40	34	23	57	69	40.5	8	M5	62	M5	52,7	22	8	23	76
K406160.0002	K406160.T080D0801	159	40	34	23	57	72	40.5	8	M5	97	M5	87,6	22	8	23	76
K406200.0001	K406200.T080D0801	198	51	33	28.5	61.5	71	39.5	8	M5	97	M5	87,6	22	8 (*)	23	76
K406250.0001	K406250.T080D0801	252	55.5	38.5	31.5	70	79	47	8	M5	97	M5	87,6	28	8 (*)	25	86
K406350.0002	K406350.T080D0801	346	67.5	43.5	36.5	80	81.5	49.5	8	M5	97	M5	87,6	30	8 (*+)	25	86

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

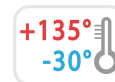
Dm = Maximum obtainable diameter for subsequent machining (widening).

Code	art.	Q	Weight (g)
K406130.0001	K406130.T050D0801	24	370
K406160.0001	K406160.T050D0801	32	532
K406160.0002	K406160.T080D0801	32	553
K406200.0001	K406200.T080D0801	32	795
K406250.0001	K406250.T080D0801	36	1125
K406350.0002	K406350.T080D0801	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



11

ADAPTER FOR INDICATOR

Gravity position indicators and accessories

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).



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Cap fixing method:

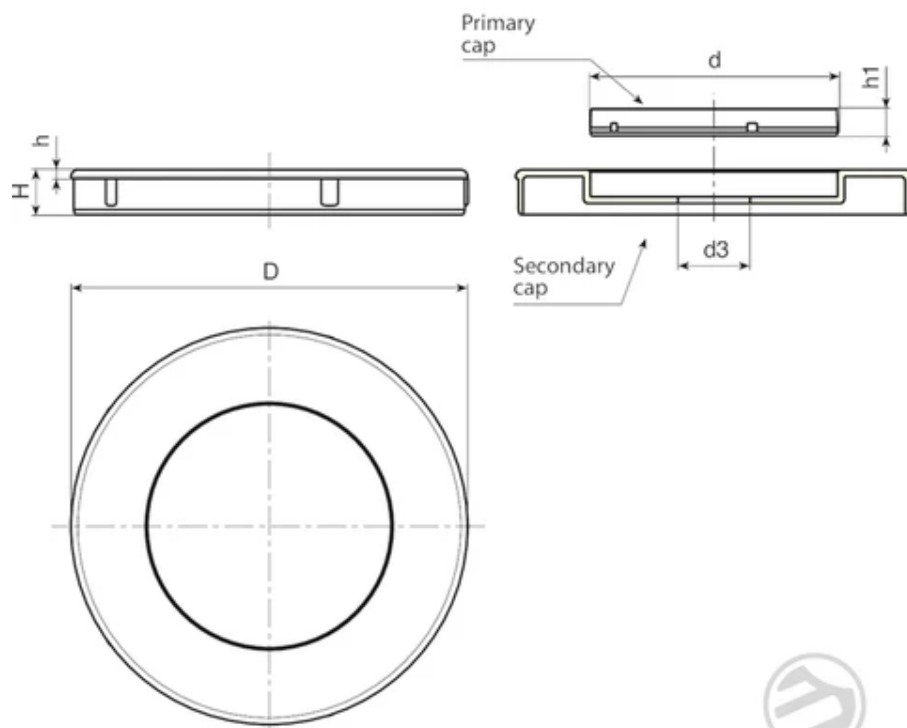
Push-fit. Removable.

Special Requests:

None.

Pad printing service:

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



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

K590



PA6

Zamak



11

FIXING PLATE FOR NUMERATOR BLOCK

Numerator blocks and accessories

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.

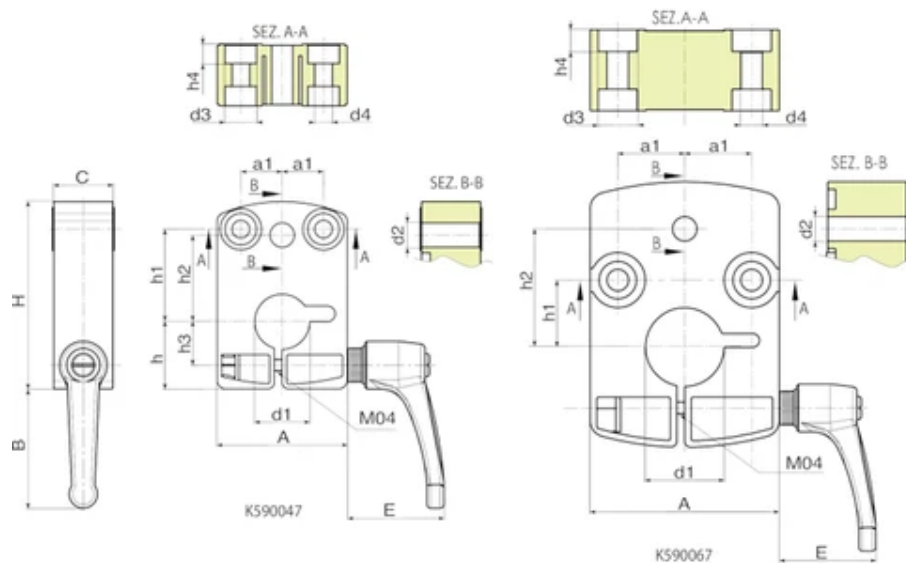
K590067: For block K620067.



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Code	art.	H	A	C	B	E	a1	h	h1	h2	h3	h4	d2	d3	d4	d1	Weight (g)
K590047.0001	K590047.TD14P1	47,5	33	15	38	33	10.5	17	23.5	22	11	4.9	6.2	8	4.5	14	105
K590067.0001	K590067.TD20P1	67.4	48	20	34	33	17	-	17	30	-	5.5	6.2	10	5.5	20	165

3-DIGIT NUMERATOR BLOCK

Numerator blocks and accessories

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) Case cover:

Black (RAL 9011 code 01)

(2) Case:

K600: Black (RAL 9011 code 01).

K602: Orange (RAL 2004 code 02).

K603: Grey (RAL 7035 cod. 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.

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 (000)

PD = 1 - one digit after decimal point (00.0)

PD = 2 - two digits after decimal point (0.00)

Base case seal:

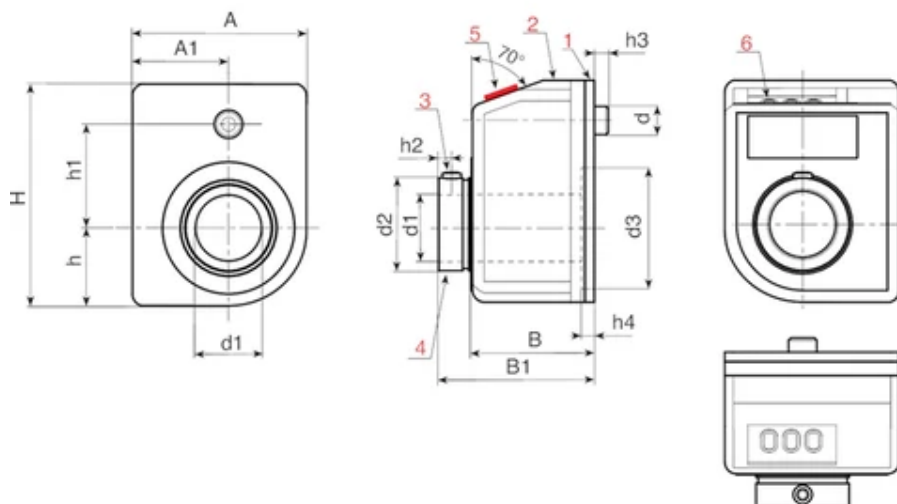
Each numerator comes with a base case seal in black polyurethane foam. For additional orders use code K607033.

Special requests:

Upon request a shaft reducing sleeve K605 can be supplied in black oxyde treated steel, diameters available: 06 - 07 - 08.

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





art.	H	A	h	h1	h2	h3	h4	A1	B	B1	d	d2	d3	d1 H7	GR	SR	PL
K600033.TD10.....	33	22	9,3	18	2,5	5	3,4	12,7	21	26	6	13,8	16	10	7/5 - 10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O- A	P1-P2- P3-P4
K602033.TD10.....	33	22	9.3	18	2.5	5	3.4	12.7	21	26	6	13.8	16	10	7/5 - 10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O- A	P1-P2- P3-P4
K603033.TD10.....	33	22	9.3	18	2.5	5	3.4	12.7	21	26	6	13.8	16	10	7/5 - 10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O- A	P1-P2- P3-P4
K600033.TD10.....CIN	33	22	9.3	18	2.5	5	3.4	12.7	21	26	6	13.8	16	10	7/5 - 10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O- A	P1-P2- P3-P4
K602033.TD10.....CIN	33	22	9.3	18	2.5	5	3.4	12.7	21	26	6	13.8	16	10	7/5 - 10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O- A	P1-P2- P3-P4
K603033.TD10.....CIN	33	22	9.3	18	2.5	5	3.4	12.7	21	26	6	13.8	16	10	7/5 - 10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 35 - 40 - 50 - 60 - 80 - 100	O- A	P1-P2- P3-P4

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.

art.	H	PD	Weight (g)
K600033.TD10.....	33	0-1-2	20
K602033.TD10.....	33	0-1-2	20
K603033.TD10.....	33	0-1-2	20
K600033.TD10.....CIN	33	0-1-2	20
K602033.TD10.....CIN	33	0-1-2	20
K603033.TD10.....CIN	33	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:

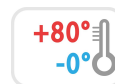
Example 1: for a numerator block with 3 digits (K600033) with shaft of 10mm (d1), - orange colour (K602), - with gear ratio (GR) 15; - with clockwise rotation (SR) O, - with reading position (PL) P2, - with one decimal place (PD) 1, the complete code is thus formed:

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



PA6

PPMA



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4-DIGIT NUMERATOR BLOCK

Numerator blocks and accessories

Materials:

(1-2) Numerator case:

Glass fiber reinforced polyamide. Resistant to oils and greases.

(3) Grub screw:

K610: Steel C45

K610CIN: Stainless steel (Aisi 304).

(4) Shaft connector:

K610: Free-cutting steel.

K610CIN: 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) Case cover:

Black (RAL 9011 code 01)

(2) Case:

K610: Black (RAL 9011 code 01).

K612: Orange (RAL 2004 code 02).

K613: Grey (RAL 7035 cod. 13).

(3) Grub screw:

K610: Black-oxide treated.

K610CIN: Natural.

(4) Connector

K610: Black-oxide treated.

K610CIN: Natural.

(5) Window:

Transparent.

(6) Number wheels:

Black wheel with white numbers.

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



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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.

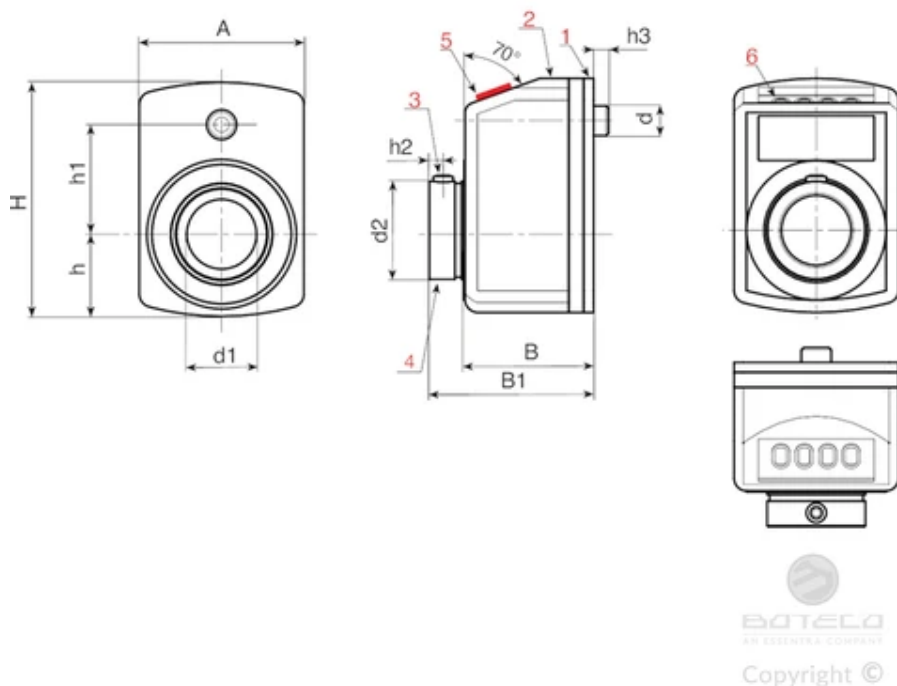
Special requests:

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).





art.	H	A	h	h1	h2	h3	B	B1	d	d2	d1 H7	GR	SR	PL	PD	Weight (g)
K610047.TD14.....	47	33	16,5	22	2,5	5	24	31	6	19,7	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.....	47	33	16,5	22	2,5	5	24	31	6	19,7	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
K613047.TD14.....	47	33	16,5	22	2,5	5	24	31	6	19,7	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
K610047.TD14.....CIN	47	33	16,5	22	2,5	5	24	31	6	19,7	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	19,7	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
K613047.TD14.....CIN	47	33	16,5	22	2,5	5	24	31	6	19,7	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

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) 3, the complete code is thus formed: K613047.TD14125AP23CIN.

4-DIGIT NUMERATOR BLOCK WITH CONTROL KNOB

Numerator blocks and accessories

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

Black (RAL 9011 code 01).

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.

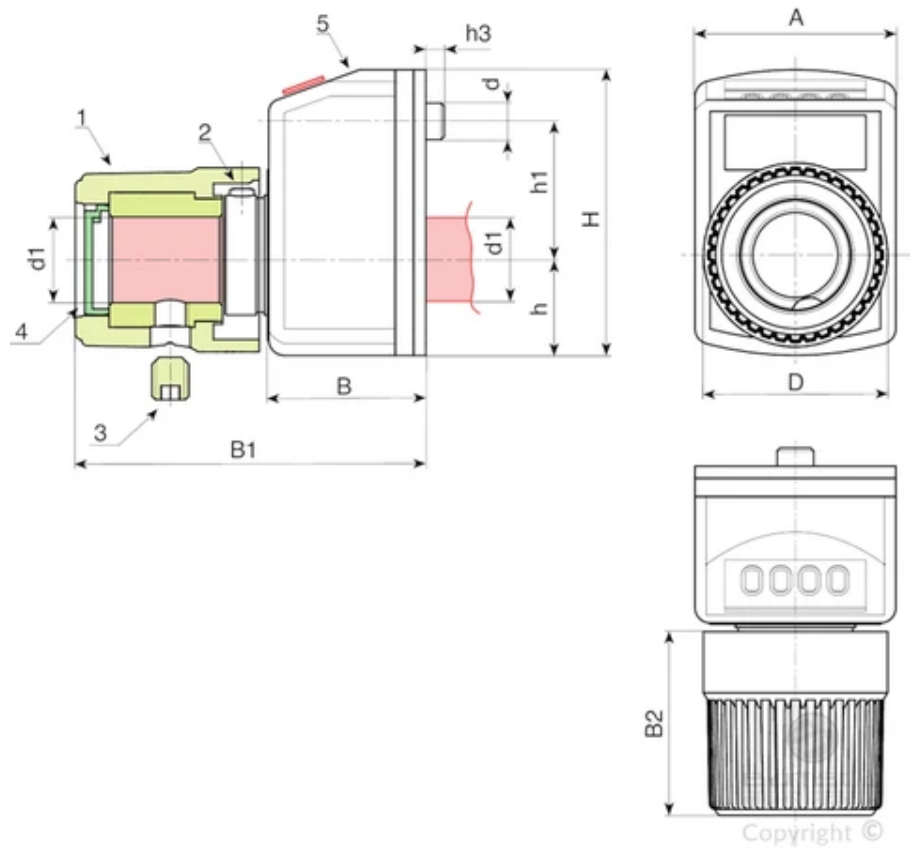


Numerator block features:

For the technical characteristics of the numerator block see article K610.

Special requests

Only related to the numerator block.



Code	art.	A	H	B	B1	B2	h	h1	h3	D	d	d1	H10	Weight (g)
-	ART_K617047.TD140102.....	33	47	24	55	32	16,5	22	5	30	6	14		130

K620



PA6

PPMA



11

5-DIGIT NUMERATOR BLOCK

Numerator blocks and accessories

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) Case cover:

Black (RAL 9011 code 01)

(2) Case:

K620: Black (RAL 9011 code 01).

K622: Orange (RAL 2004 code 02).

K623: 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.

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



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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 oxyde 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).



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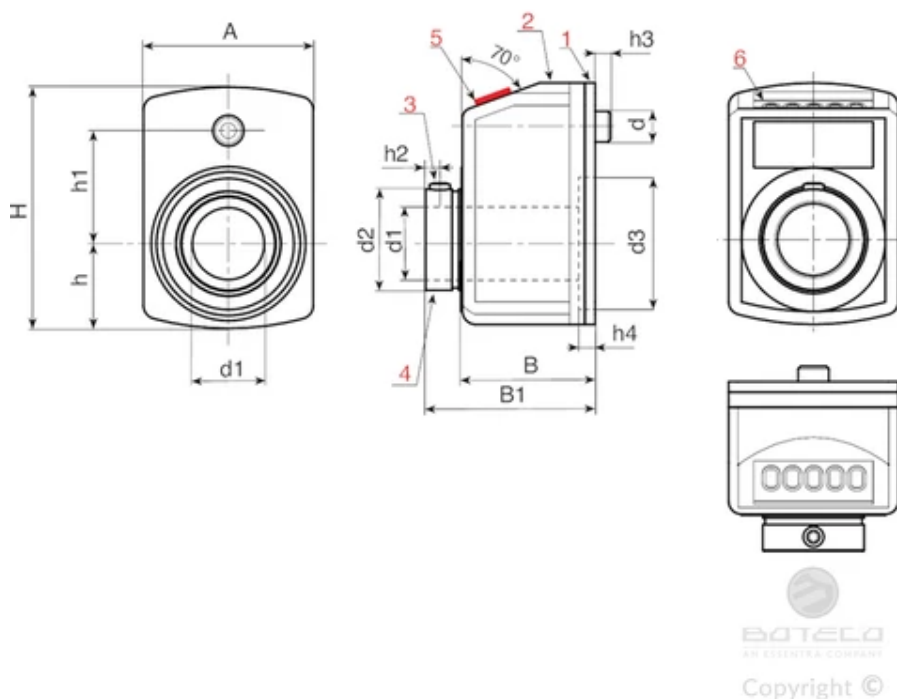
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art.	H	A	h	h1	h2	h3	h4	B	B1	d	d2	d3	d1 H7	GR	SR	PL	PD
K620067.TD20.....	67,5	48	25,5	30	3,5	6	2	30	38,5	6	27	40	20	10 - 12/5 - 15 - 17/5 - 20 - 25 - 30 - 39/375 - 40 - 50 - 60 - 78/75 - 80 - 100	O- A	P1- P2- P3- P4	0-1-2-2-4
K622067.TD20.....	67,5	48	25,5	30	3,5	6	2	30	38,5	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
K623067.TD20.....	67,5	48	25,5	30	3,5	6	2	30	38,5	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
K620067.TD20.....CIN	67,5	48	25,5	30	3,5	6	2	30	38,5	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
K622067.TD20.....CIN	67,5	48	25,5	30	3,5	6	2	30	38,5	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
K623067.TD20.....CIN	67,5	48	25,5	30	3,5	6	2	30	38,5	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

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.TD20050OP24.

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.

art.	H	Weight (g)
K620067.TD20.....	67,5	100
K622067.TD20.....	67,5	100
K623067.TD20.....	67,5	100
K620067.TD20.....CIN	67,5	100
K622067.TD20.....CIN	67,5	100
K623067.TD20.....CIN	67,5	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.TD20050OP24.

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.

5-DIGIT NUMERATOR BLOCK - WITH INCREASED BORE FOR SHAFT

Numerator blocks and accessories

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) Case cover:

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



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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)

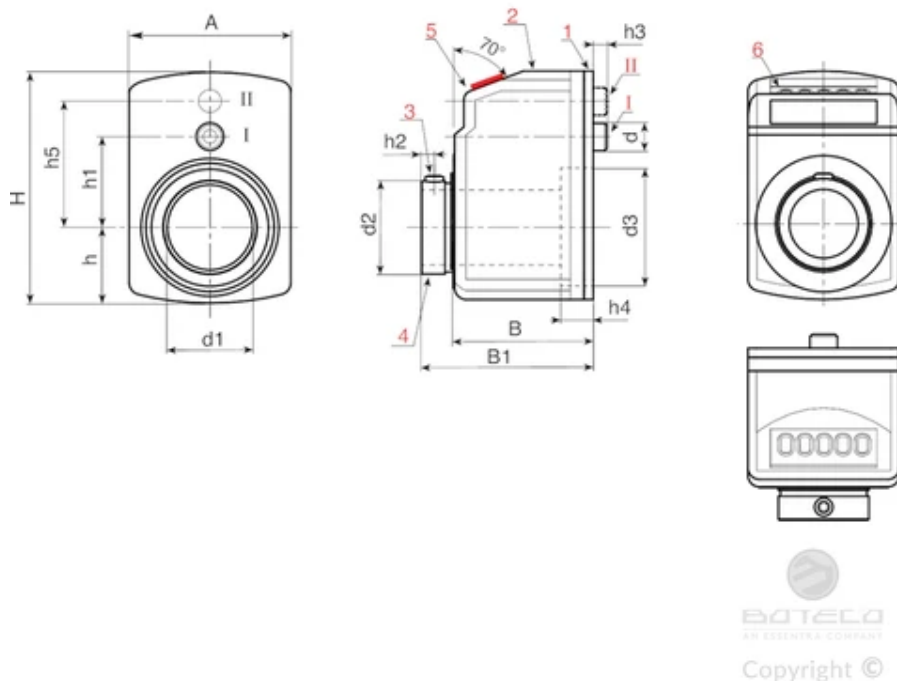
Base case seal:

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.



art.	H	A	h	h1	h2	h3	h4	h5	B	B1	d	d2	d3	d1 H7	GR	SR	PL
K630075.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
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
K630075.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
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

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.

art.	H	PD	Weight (g)
K630075.TD30.....	75	0-1-2-2-4	100
K632075.TD30.....	75	0-1-2-2-4	100
K630075.TD30.....CIN	75	0-1-2-2-4	100
K632075.TD30.....CIN	75	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: 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.

11

GRAVITY POSITION INDICATOR

Gravity position indicators and accessories

Materials:

Indicator case:

Glass fiber reinforced polyamide. Resistant to oils and greases.

Transparent cover:

Polymethylmethacrylate (PMMA).

Surface finish:

All smooth.

Colour:

Indicator case:

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:

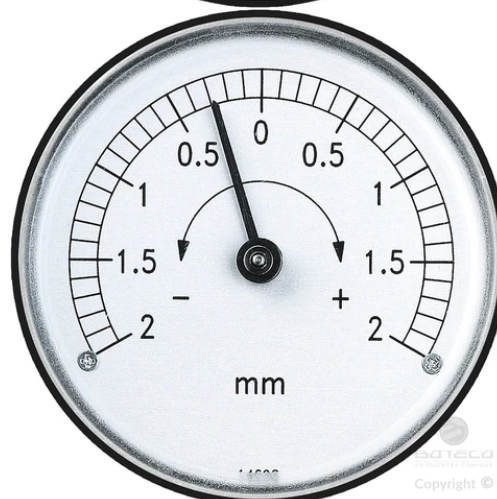
One pointer that spins according to the gear ratio.

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:

Upon request and for special quantities, only for position indicators K650-50 and K650-80, the transparent cover can be supplied in acetone resistant PA6.

Upon request and for special quantities, only for position indicator 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.

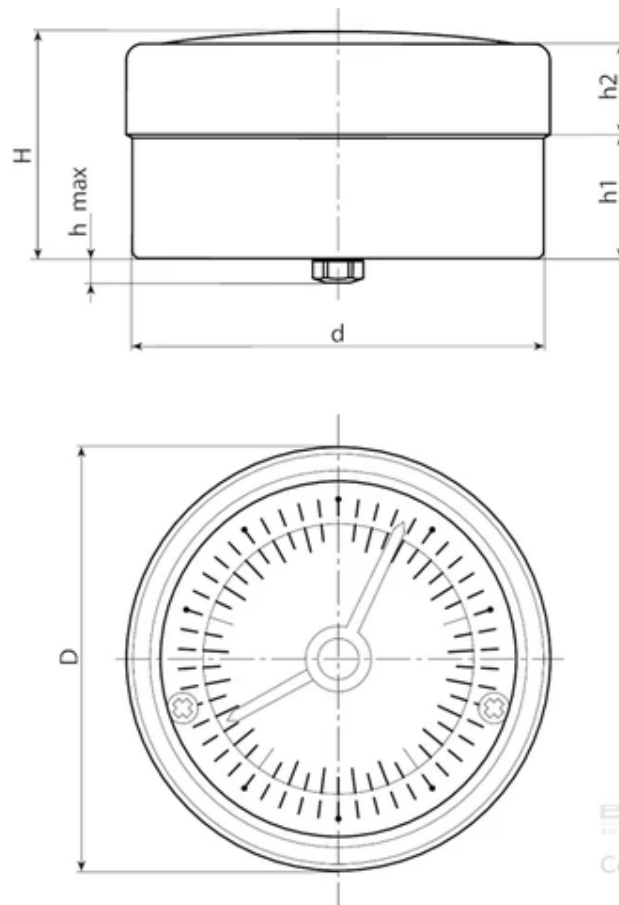
Upon request and for special quantities, only for position indicator K650-80, it can be supplied with the possibility of having a zero reset function.

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.





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art.	D	d	H	h	h1	h2	GR	SR	F1	F2	Weight (g)
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: 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.

GRAVITY POSITION INDICATOR WITH DIGITAL COUNTER

Gravity position indicators and accessories

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.

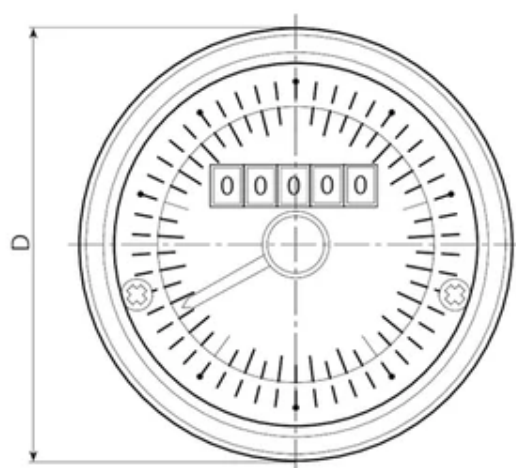
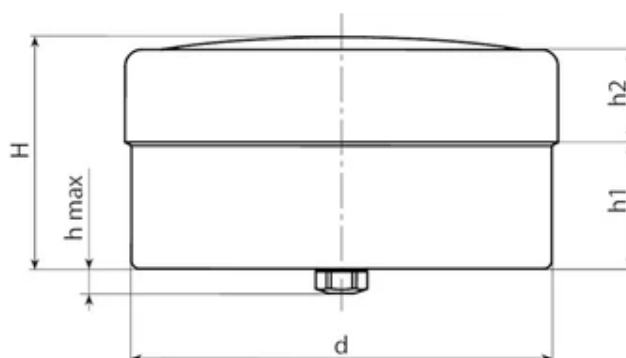
Special Requests:

Upon request and for special quantities the transparent cover can be supplied in acetone resistant PA6.

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.




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art.	D	d	H	h	h1	h2	GR	PD	SR	F0	F1	Weight (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: 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

Gravity position indicators and accessories

Materials:

Reinforced polyamide. Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL 9011).

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 example, 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. 160-200-250-350

Le serie di articoli su cui è possibile montare l'adattatore sono: D205-D206-D208.

Richieste Speciali:

Nessuna.

Corrispondenze Diametri/Indicatori:

d1=52,4 --> K650050

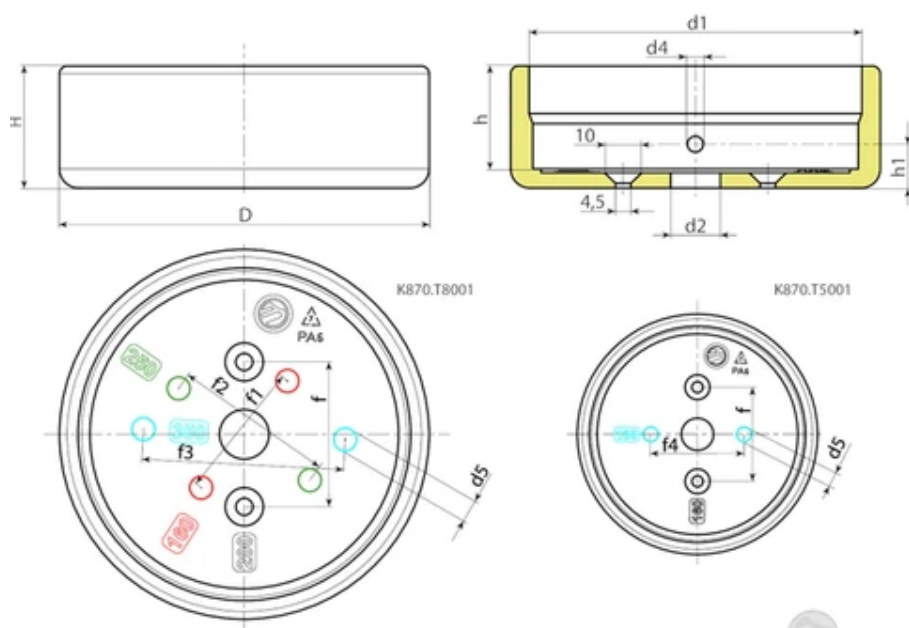
d1=87,4 --> K650080 o K660080



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Code	art.	D	H	h	h1	d1±0,5	d2	d3	d4	d5	f	f1	f2	f3	f4	Weight (g)
K870.TS5001BASE1	K870.TS5001BASE1	62	29.5	24	12	52,7	13	4.5	M5	6	36	-	-	-	25	74
K870.TS8001BASE1	K870.TS8001BASE1	97	32	27	11.5	87,6	13	4.5	M5	6	36	38	42	53	-	95

SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT

Control handwheels with seat for gravity position indicator

Materials:

Reinforced and stabilized polyamide.
Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL 9011).

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.

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.

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

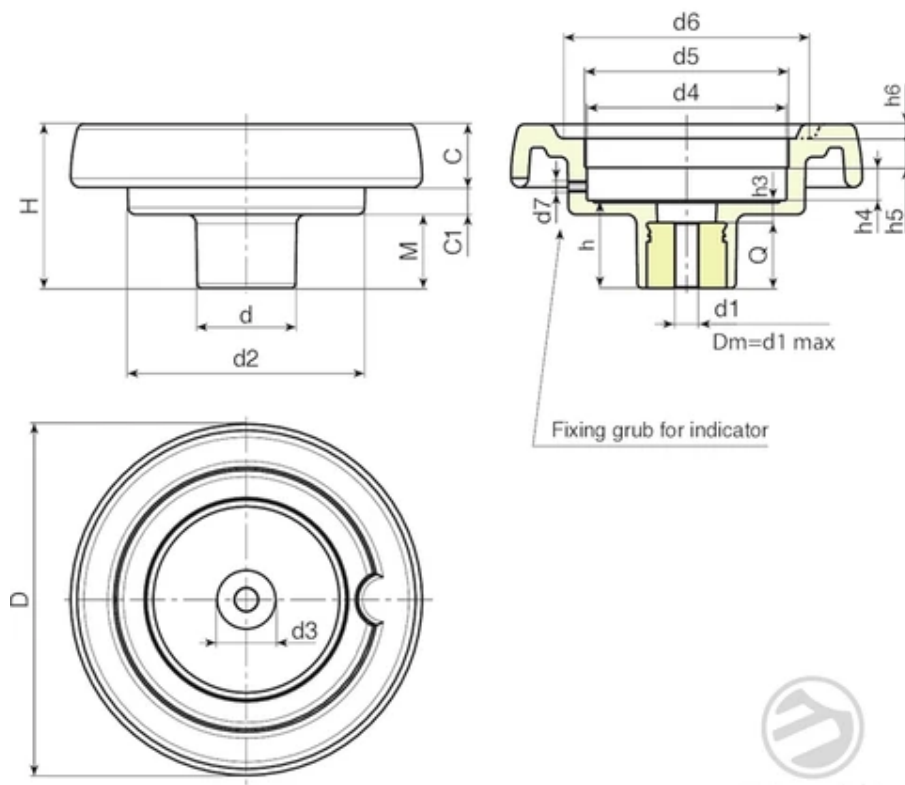
d5=80 --> K650080 or K660080



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Code	art.	D	H	d	d2	M	C	C1	d3	d4	d5	d6	d7	h	h3	h4	h5
K900087.0004	K900087.T050P5.801P	86	53	32	62	21	17	15	20	50.8	50	63	M6	26.5	6.5	11.5	12
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
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
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
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
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

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).

Code	art.	h6	Dm	d1	Q	Weight (g)
K900087.0004	K900087.T050P5.801P	3	12	5.8	20	155
K900100.0003	K900100.T050P6.801P	3.5	12	6.8	20	170
K900130.0005	K900130.T080P6.801P	5	20	6.8	24	350
K900150.0002	K900150.T080P6.801P	6.5	20	6.8	28	430
K900175.0002	K900175.T080P6.801P	8	20	6.8	28	650
K900200.0001	K900200.T080P6.801P	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).

SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT AND LOCKING KNOB

Control handwheels with seat for gravity position indicator

Materials:

Reinforced and stabilized polyamide.

Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL 9011).

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.

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

Locking handwheel:

Cylindrical handwheel G793-36 with threaded stud.

Fixing method:

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

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.

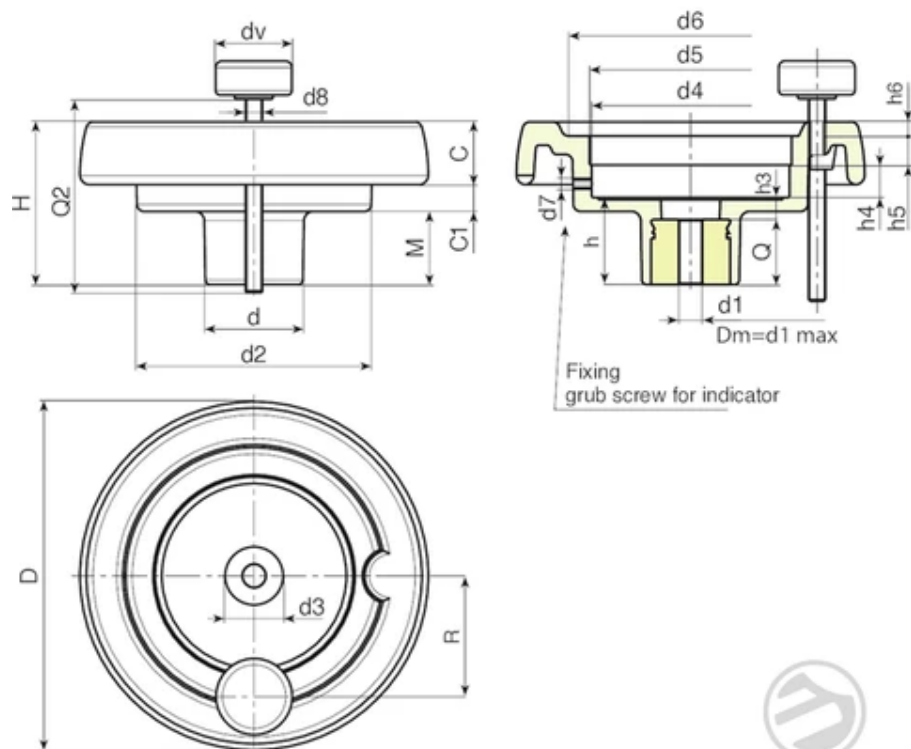
Upon request and for special quantities it is possible to change the indicator seat.

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
K901130.0001	K901130.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
K901150.0001	K901150.T080P6.801P	149	69	42	101	31	25.5	12.5	29	85.2	80*	106	M6	37	9	13.5	12.5
K901175.0001	K901175.T080P6.801P	174	73	41	114	30	31.5	11.5	26	85.2	80*	126	M6	39	11	13.5	12.5
K901200.0001	K901200.T080P6.801P	201	71	46	136	24.5	32	14.5	30	85.2	80*	145	M6	35	12	13.5	12.5

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)

Code	art.	h6	R	d8	Dm	d1	Q	Weight (g)
K901130.0001	K901130.T080P6.801P	5	54	M8	20	6.8	24	370
K901150.0001	K901150.T080P6.801P	6.5	57	M8	20	6.8	28	470
K901175.0001	K901175.T080P6.801P	8	60	M8	20	6.8	28	690
K901200.0001	K901200.T080P6.801P	10	71	M8	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)

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SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT AND REVOLVING HANDLE

Control handwheels with seat for gravity position indicator

Materials:

Reinforced and stabilized polyamide.

Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL 9011).

Insert:

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

Lateral insert:

Brass insert with threaded through hole.

Lateral handle:

Revolving handle art. M144.

Mountable indicator:

Utilizzare Indicatori gravitazionali modelli serie K650 o K660. L'indicatore può essere usato solo in posizione verticale (asse macchina orizzontale). L'indicatore e il relativo grano di fissaggio d7 sono da acquistare separatamente. Per informazioni ulteriori sugli indicatori consultare le pagine relative agli articoli K650 e K660.

(*) 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.

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.

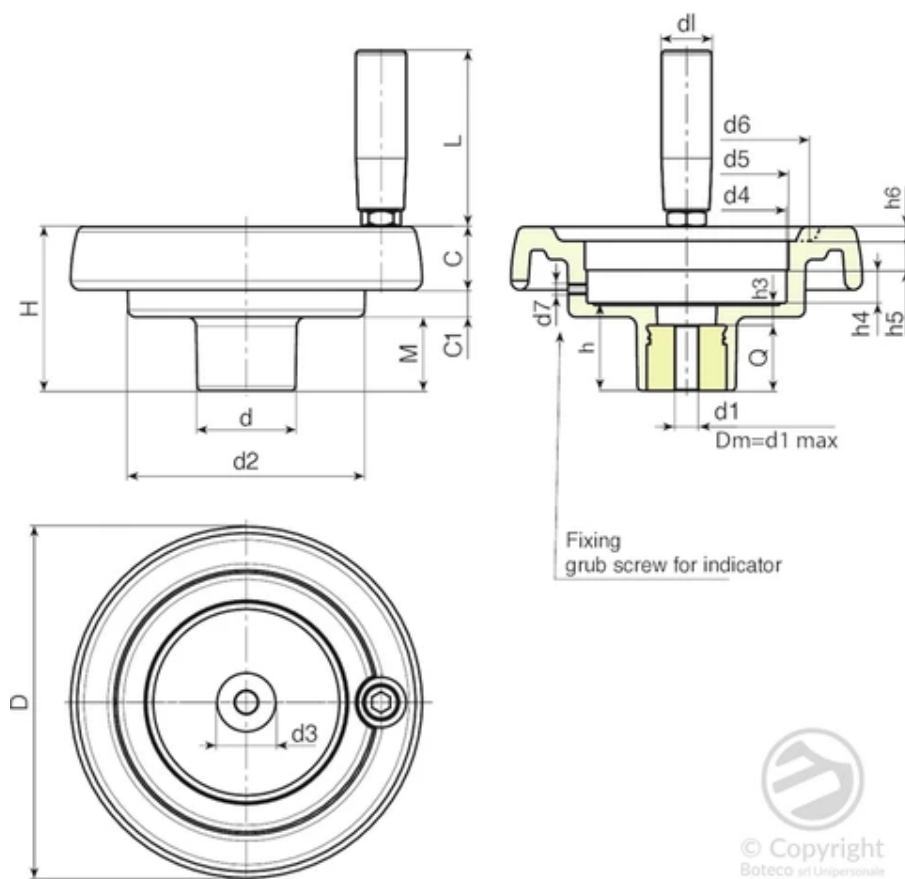
Upon request and for special quantities it is possible to change the indicator seat.



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
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
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
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
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
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
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

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).

Code	art.	h6	d1	L	Dm	d1	Q	Weight (g)
K902087.0002	K902087.T050P5.801P	3	20	56	12	5.8	20	185
K902100.0003	K902100.T050P6.801P	3.5	20	56	12	6.8	20	200
K902130.0002	K902130.T080P6.801P	5	22	65	20	6.8	24	406
K902150.0005	K902150.T080P6.801P	6.5	23	76	20	6.8	28	530
K902175.0002	K902175.T080P6.801P	8	25	86	20	6.8	28	760
K902200.0001	K902200.T080P6.801P	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).

SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT, REVOLVING HANDLE AND LOCKING KNOB

Control handwheels with seat for gravity position indicator

Materials:

Reinforced and stabilized polyamide.

Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL 9011).

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.

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

Lateral insert:

Brass insert with threaded through hole.

Lateral handle:

Revolving handle art. M144.

Locking handwheel:

Cylindrical handwheel G793-36 with threaded stud.

Fixing method:

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

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.

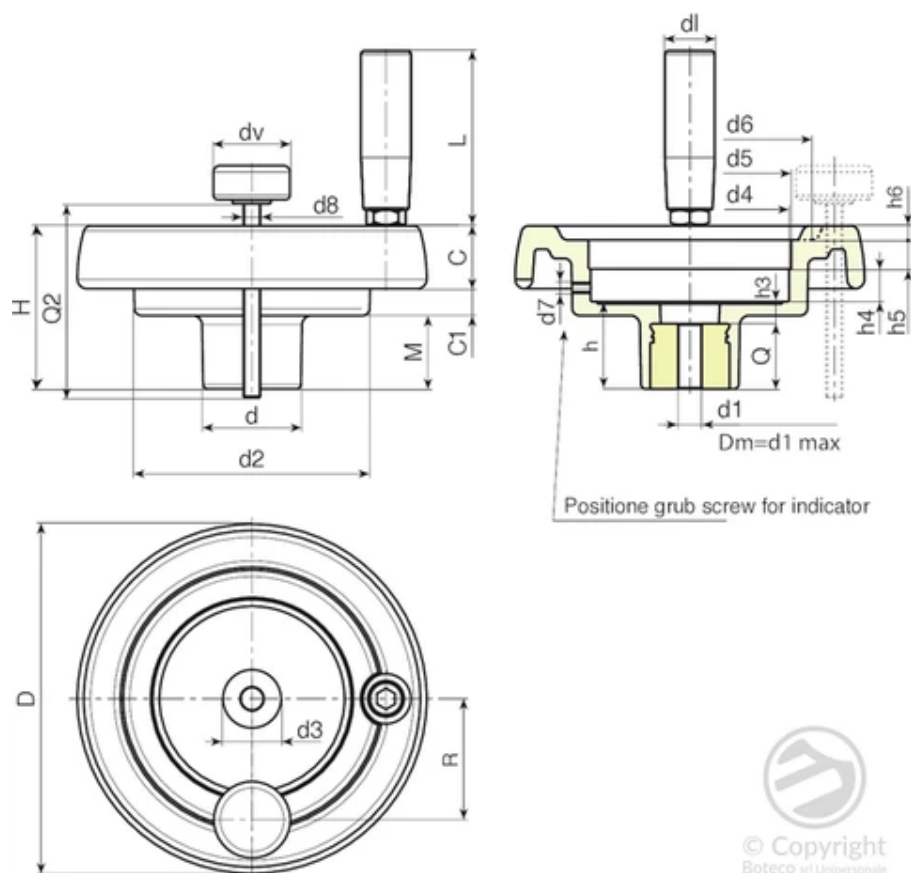


Upon request and for special quantities it is possible to change the indicator seat.

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
K903130.0002	K903130.T080P6.801P	130	65.5	42	98	87.5	23,5	13,5	29	85.2	80*	90	M6	34	10	13.5	12.5
K903150.0001	K903150.T080P6.801P	149	69	42	101	31	25.5	12.5	29	85.2	80*	106	M6	37	9	13.5	12.5
K903175.0001	K903175.T080P6.801P	174	73	41	114	30	31.5	11.5	26	85.2	80*	126	M6	39	11	13.5	12.5
K903200.0001	K903200.T080P6.801P	201	71	46	136	24.5	32	14.5	30	85.2	80*	145	M6	35	12	13.6	12.5

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)

Code	art.	h6	R	d8	dl	L	Dm	d1	Q	Weight (g)
K903130.0002	K903130.T080P6.801P	5	54	M8	22	65	20	6.8	24	426
K903150.0001	K903150.T080P6.801P	6.5	57	M8	23	76	20	6.8	28	555
K903175.0001	K903175.T080P6.801P	8	60	M8	25	86	20	6.8	28	782
K903200.0001	K903200.T080P6.801P	10	71	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)

SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT AND REVOLVING, FOLDING HANDLE

Control handwheels with seat for gravity position indicator

Materials:

Reinforced and stabilized polyamide.

Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL 9011).

Insert:

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

Lateral insert:

Brass insert with threaded through hole.

Lateral handle:

Revolving handle art. M136.

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.

(*) 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.

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.

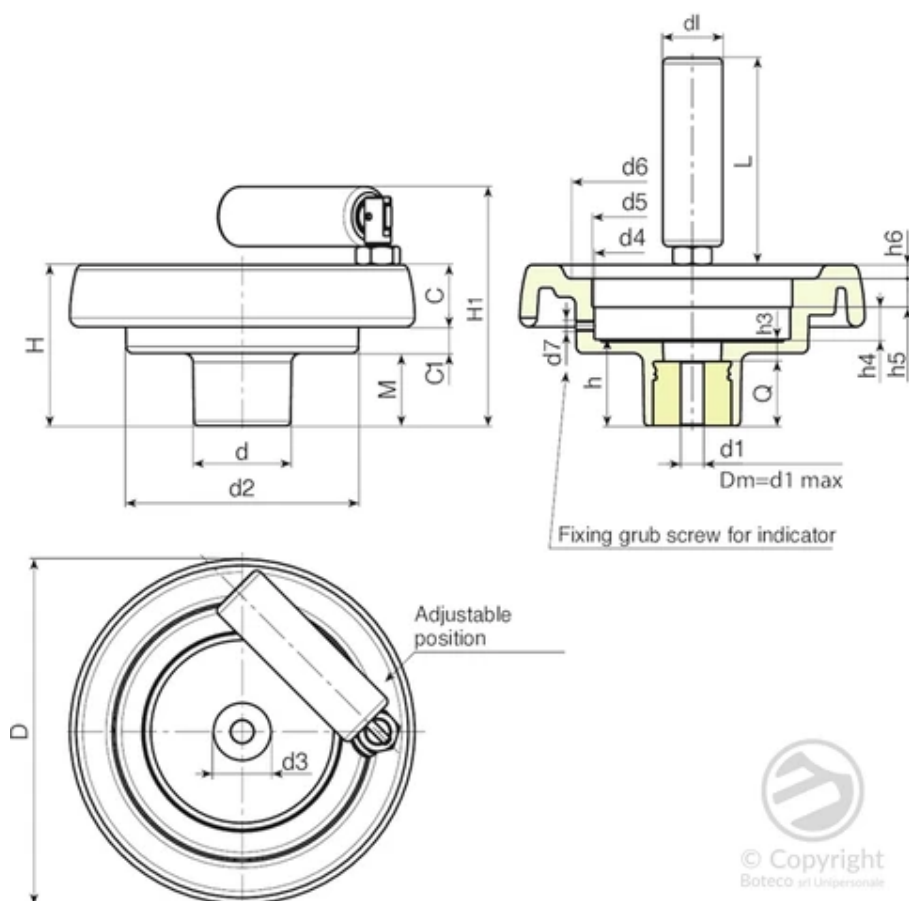
Upon request and for special quantities it is possible to change the indicator seat.



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
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
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
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
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
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
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

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).

Code	art.	h5	h6	d1	L	Dm	d1	Q	Weight (g)
K904087.0001	K904087.T050P5.801P	12	3	20	56	12	5,8	20	195
K904100.0001	K904100.T050P6.801P	12	3,5	20	56	12	6,8	20	210
K904130.0005	K904130.T080P6.801P	12,5	5	25	76	20	6,8	24	420
K904150.0002	K904150.T080P6.801P	12,5	6,5	26	89	20	6,8	28	580
K904175.0001	K904175.T080P6.801P	12,5	8	26	89	20	6,8	28	800
K904200.0002	K904200.T080P6.801P	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).

SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT, REVOLVING, FOLDING HANDLE AND LOCKING KNOB

Control handwheels with seat for gravity position indicator

Materials:

Reinforced and stabilized polyamide.

Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL 9011).

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.

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

Lateral insert:

Brass insert with threaded through hole.

Lateral handle:

Revolving handle art. M136.

Locking handwheel:

Cylindrical handwheel G793-36 with threaded stud.

Fixing method:

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

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.



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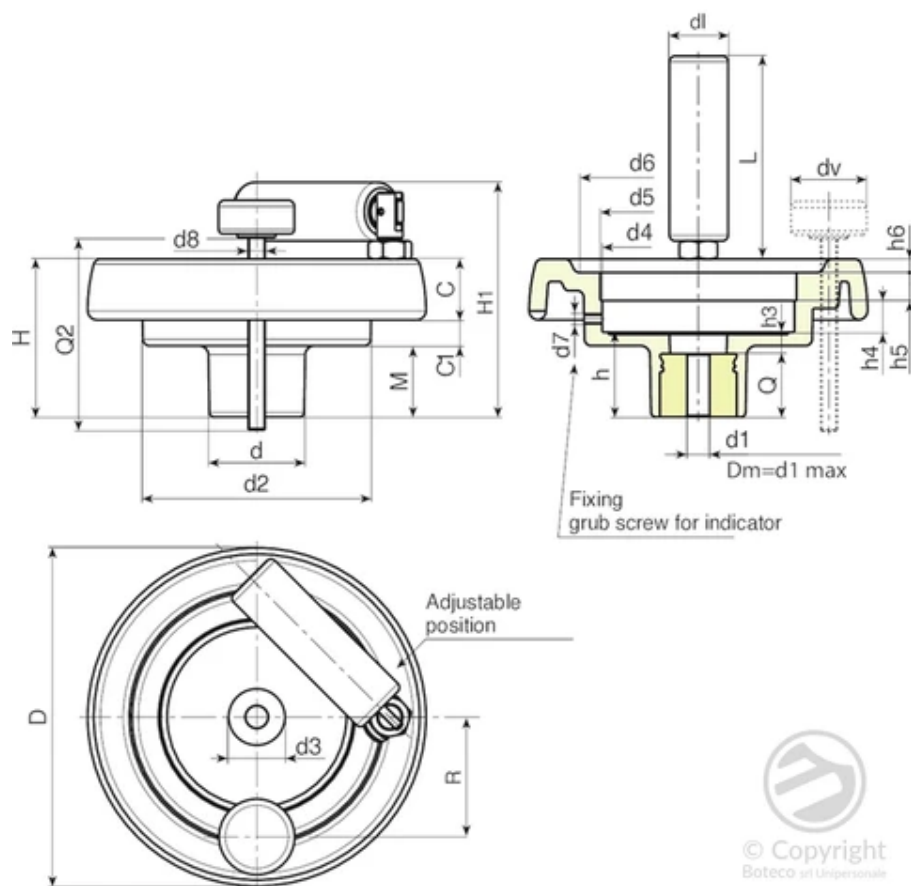
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Upon request and for special quantities it is possible to change the indicator seat.

Combinations Diameters/Indicators:

d5=50 --> K650050

d5=80 --> K650080 or K660080




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Code	art.	D	H	H1	d	d2	M	C	C1	d3	d4	d5	d6	d7	h	h3	h4
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
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
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
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

Code	art.	h5	h6	R	d8	dl	L	Dm	d1	Q	Weight (g)
K905130.0002	K905130.T080P6.801P	12.5	5	54	M8	25	76	20	6.8	24	430
K905150.0003	K905150.T080P6.801P	12.5	6.5	57	M8	26	89	20	6.8	28	615
K905175.0006	K905175.T080P6.801P	12.5	8	60	M8	26	89	20	6.8	28	835
K905200.0001	K905200.T080P6.801P	12.5	10	71	M8	26	97	22	6.8	23	999

SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT AND REVOLVING HANDLE M129

Control handwheels with seat for gravity position indicator

Materials:

Reinforced and stabilized polyamide.

Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL 9011).

Insert:

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

Lateral insert:

Brass insert with threaded through hole.

Lateral handle:

Revolving handle art. M129.

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.

(*) 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.

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.

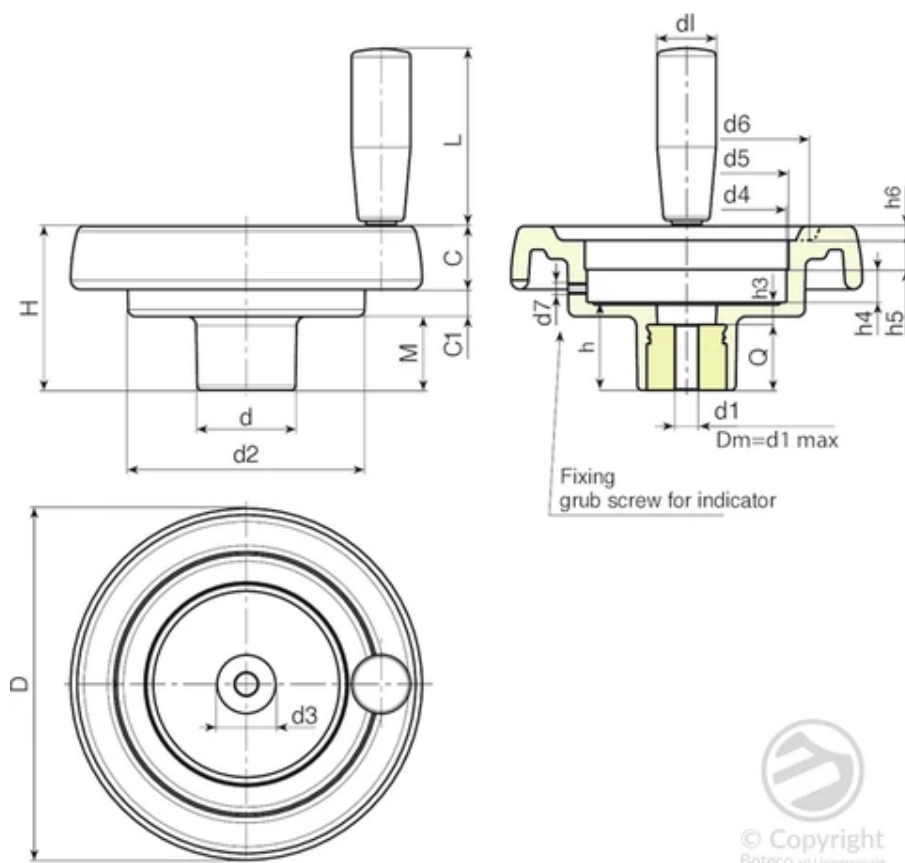
Upon request and for special quantities it is possible to change the indicator seat.



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
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
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
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
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
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
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

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).

Code	art.	h6	d1	L	Dm	d1	Q	Weight (g)
K906087.0002	K906087.T050P6.801P	3	20	52	12	5.8	20	197
K906100.0002	K906100.T050P6.801P	3.5	20	52	12	6.8	20	212
K906130.0001	K906130.T080P6.801P	5	23	62	20	6.8	24	410
K906150.0004	K906150.T080P6.801P	6.5	25	72	20	6.8	28	522
K906175.0001	K906175.T080P6.801P	8	25	81	20	6.8	28	750
K906200.0001	K906200.T080P6.801P	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).

SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT AND REVOLVING HANDLE M145

Control handwheels with seat for gravity position indicator

Materials:

Reinforced and stabilized polyamide.

Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL 9011).

Insert:

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

Lateral insert:

Brass insert with threaded through hole.

Lateral handle:

Revolving handle art. M145.

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.

(*) 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.

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.

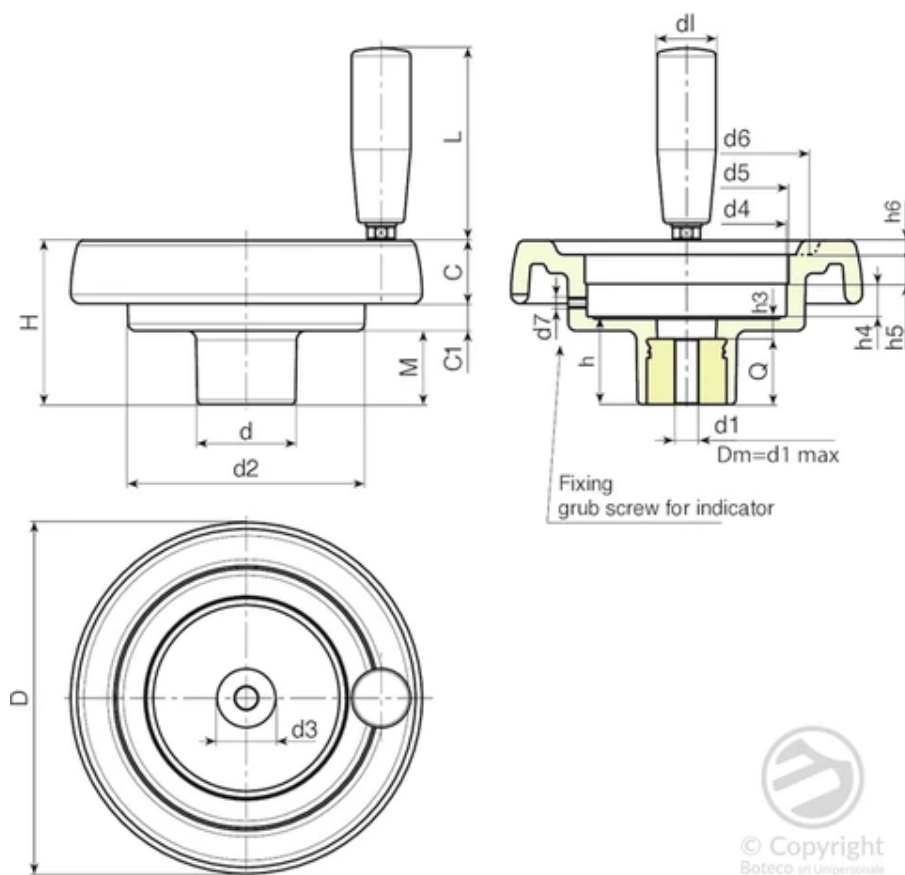
Upon request and for special quantities it is possible to change the indicator seat.



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
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
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
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
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
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
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

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).

Code	art.	h6	dl	L	Dm	d1	Q	Weight (g)
K907087.0001	K907087.T050P5.801P	3	20	55	12	5.8	20	187
K907100.0002	K907100.T050P6.801P	3.5	20	55	12	6.8	20	205
K907130.0001	K907130.T080P6.801P	5	23	66	20	6.8	24	424
K907150.0001	K907150.T080P6.801P	6.5	25	76	20	6.8	28	516
K907175.0001	K907175.T080P6.801P	8	25	87	20	6.8	28	745
K907200.0001	K907200.T080P6.801P	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).

SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT AND REVOLVING HANDLE M202

Control handwheels with seat for gravity position indicator

Materials:

Reinforced and stabilized polyamide.

Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL 9011).

Insert:

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

Lateral insert:

Brass insert with threaded through hole.

Lateral handle:

Revolving handle art. M202.

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.

(*) 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.

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.



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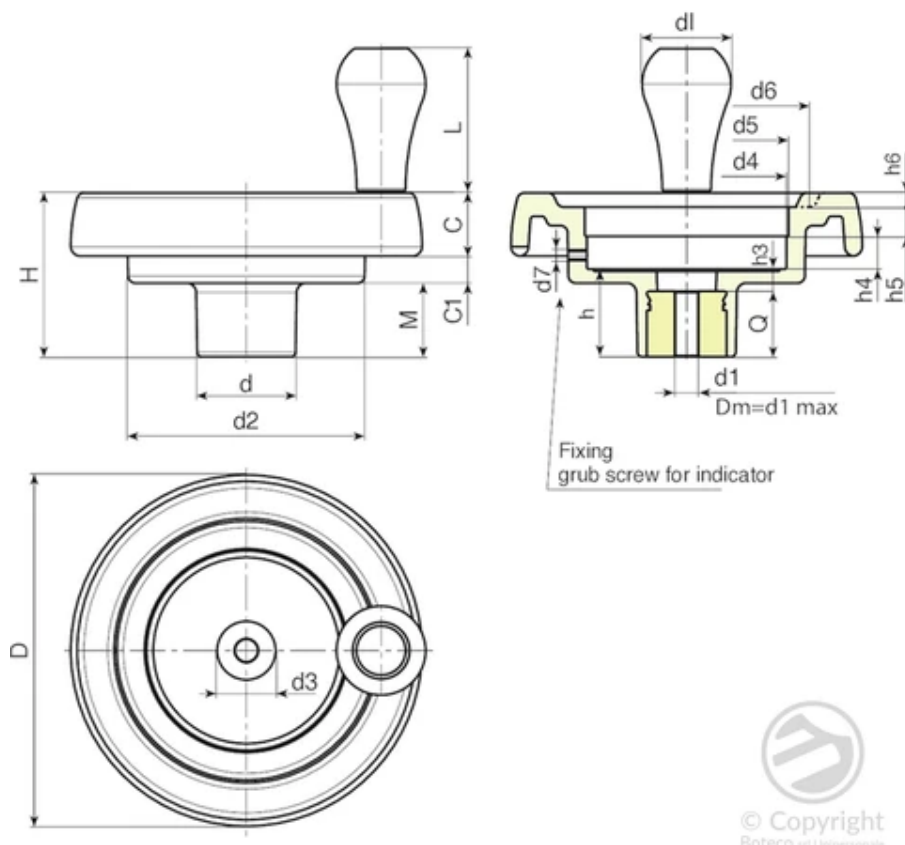


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Combinations Diameters/Indicators:

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
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
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
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

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).

Code	art.	h6	dl	L	Dm	d1	Q	Weight (g)
K908150.0001	K908150.T080P6.801P	6.5	40	64	20	6.8	28	525
K908175.0001	K908175.T080P6.801P	8	40	64	20	6.8	28	745
K908200.0001	K908200.T080P6.801P	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).

11

KNURLED CONTROL KNOB FOR INDICATOR K650-50

Control knobs with seat for gravity position 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.

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 (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.

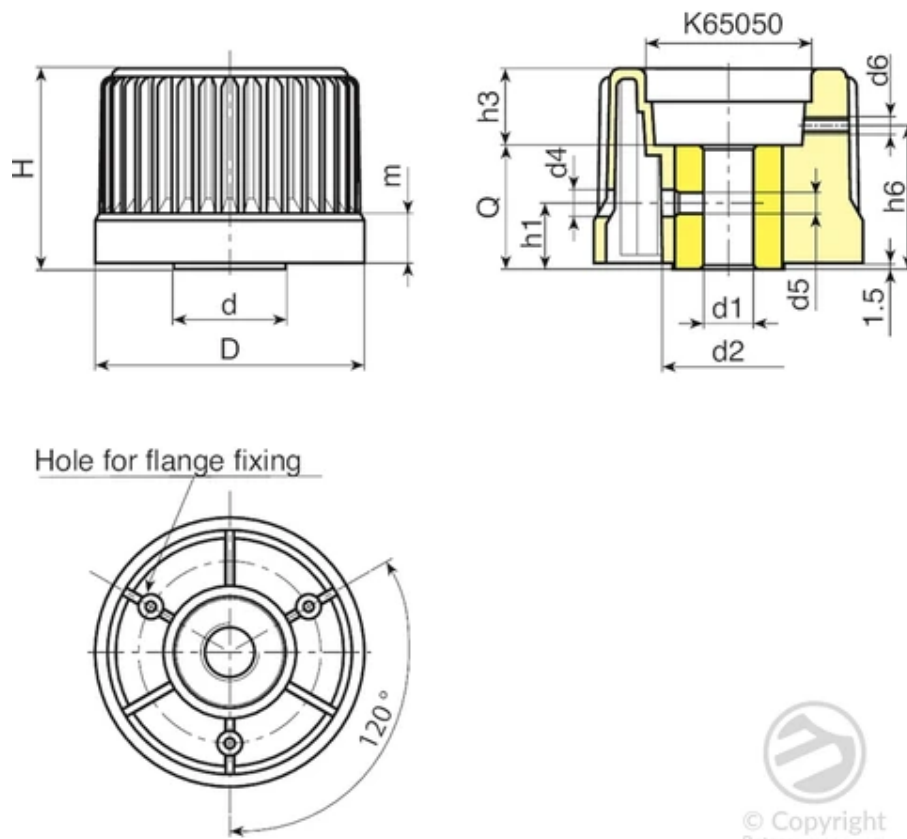
Upon request the control knob can be supplied with a grey ring. The code for this product is: K96178.TD080116.



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Code	art.	D	H	m	d	d2	d4	d5	d6	h1	h3	h6	Dm	d1 H10	Q	Weight (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).

11

BASE FOR SOLID CONTROL HANDWHEEL WITH INDICATOR SEAT AND PROVISION FOR HANDLE

Control handwheels with seat for gravity position indicator

Materials:

Reinforced and stabilized polyamide.

Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL 9011).

Insert:

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.

(*) 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.

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

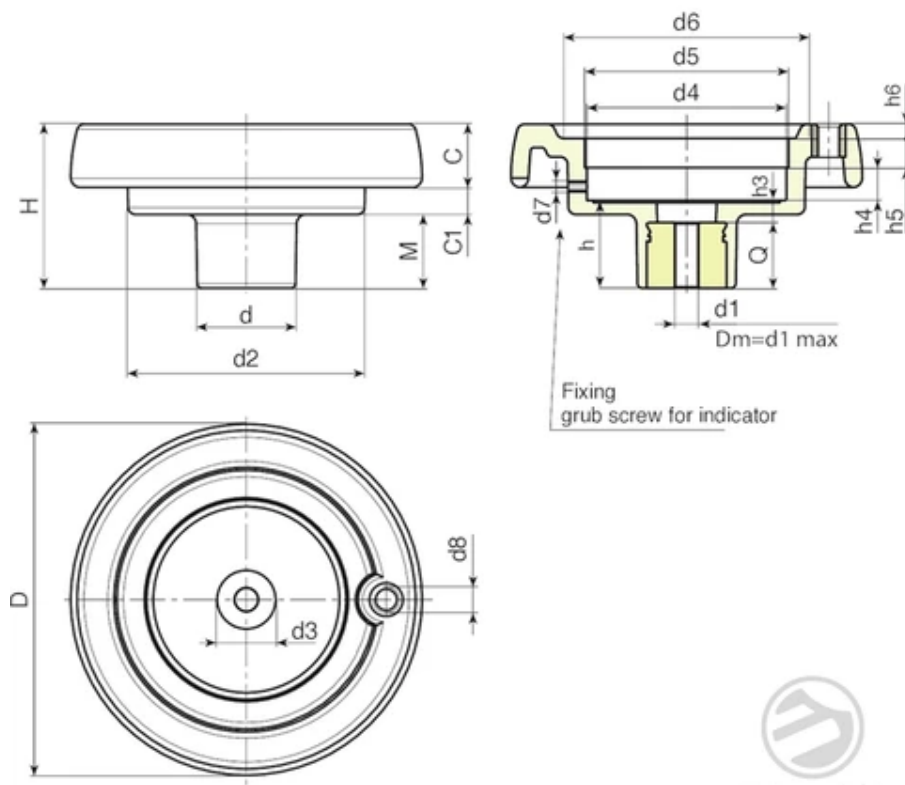
d5=80 --> K650080 or K660080



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Code	art.	D	H	d	d2	M	C	C1	d3	d4	d5	d6	d7	d8	h	h3	h4
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
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
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
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
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
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

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).

Code	art.	h5	h6	Dm	d1	Q	Weight (g)
K087.T050P5.801P	K087.T050P5.801P	12	3	12	5,8	20	155
K100.T050P6.801P	K100.T050P6.801P	12	3,5	12	6,8	20	170
K130.T080P6.801P	K130.T080P6.801P	12,5	5	20	6,8	24	350
K150.T080P6.801P	K150.T080P6.801P	12,5	6,5	20	6,8	28	430
K175.T080P6.801P	K175.T080P6.801P	12,5	8	20	6,8	28	650
K200.T080P6.801P	K200.T080P6.801P	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).

11

ADAPTER FOR INDICATOR

Gravity position indicators and accessories

Materials:

Reinforced and stabilized polyamide.

Resistant to oils and greases.

Surface finish:

Satin.

Colour:

Black (RAL 9011).

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:

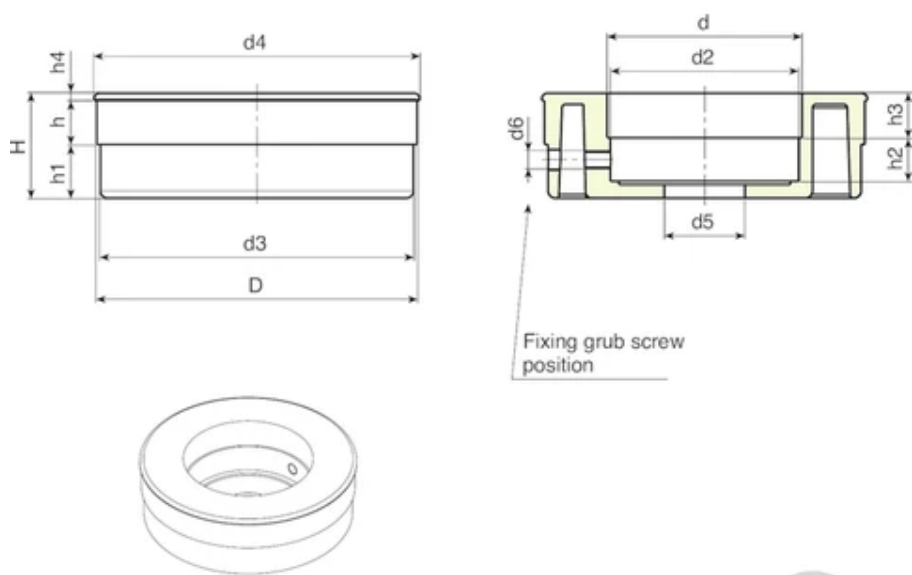
None.



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Code	art.	D	d	d2	d3	d4	d5	d6	H	h	h1	h2	h3	h4	Weight (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