THE PRODUCT

The name COMBINATION KNOBS stands for an exceedingly functional range of rotary buttons with a reliable collet fixture system. They offer a versatile range of possible applications as round knobs, wing knobs and spindle-shaped knobs with a large selection of accessories.

APPLICATIONS

Well-proven for electro-mechanical rotary potentiometers with shaft ends corresponding to DIN 41 591.
Measuring and control technology, heating and air conditioning.

YOUR ADVANTAGE

Tried and tested collet fixture system. Convenient assembly of knobs from the front, easy adjusting (by means of an adjusting key – see accessory page 18). Tight fitting of knobs on the axis. Sizes 10 and 13 have blind holes and screw fixing. From knob size 23 up, through holes ① (sizes 16 + 20 steppt ②, except for axes 4 mm.

Round, wing and spindle-shaped knobs with the same standardized design and with matt surface.

A large variety of functional accessories, e.g. covers in seven colours and transparent dials. Easy push-on assembly.

We also produce our COMBINATION KNOBS in special colours, moq reserved. Please advise us of the colour and quantity you require.

MATERIAL

Knobs, covers, arrow disks and nut covers: ABS (UL 94 HB).
Dials: Polycarbonate.
Stator: Al-sheet 0.5 mm
with self-adhesive film.

Please refer to specifications on page 29.

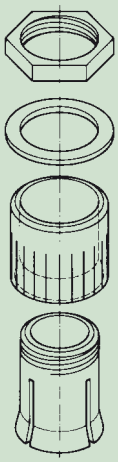
Combination knobs, Disk, Nut cover
Black, RAL 9005
Dust grey, RAL 7037

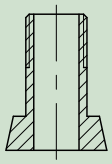
Covers (depends on size/type)
Black, RAL 9005
Red, RAL F12/0-10
Yellow, RAL F12/0-1
Green, RAL F12/0-43
Blue, RAL 5012
Pebble grey, RAL 7032
Dust grey, RAL 7037

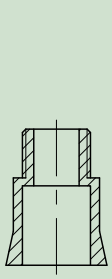
Arrow disk
Black, RAL 9005
Red, RAL F12/0-10
Dust grey, RAL 7037

Dial
Transparent, bright surface with/without symbols

Stator
Aluminium, marking black







COMBINATION KNOBS

TYPES

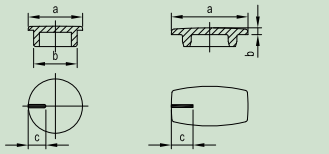
Knob ø	Torque (Nm) assembly	Torque (Nm) function	ROUND KNOB borehole		WING KNOB borehole		SPINDLE-SHAPED KNOB borehole	
9	0.4	0.4	4 mm		–		–	
10	0.4	0.4	3 mm		–		–	
	0.4	0.4	4 mm					
	0.4	0.4	1/8"					
13.5	0.5	0.5	4 mm		–		–	
	0.7	0.6	6 mm		6 mm			
16	0.5	0.5	–		–		3 mm	
	0.6	0.5	4 mm		–		4 mm	
	0.8	0.7	6 mm		6 mm		–	
	0.8	0.7	1/4"		–		–	
20	0.8	0.7	4 mm		–		–	
	1.0	0.9	6 mm					
	1.0	0.9	1/4"					
23	1.0	0.8	4 mm		–		4 mm	
	1.2	1.0	6 mm				6 mm	
	1.2	1.0	1/4"				–	
31	1.8	1.6	6 mm		–		6 mm	
	1.8	1.6	1/4"				–	
40	2.5	1.6	6 mm		–		6 mm	
	2.8	1.8	8 mm				–	
50	3.0	1.8	6 mm		–		–	
	3.5	2.0	8 mm					

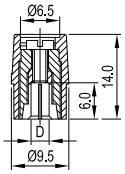
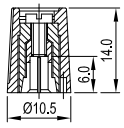
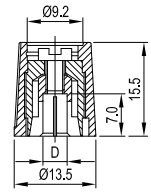
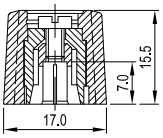
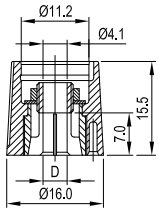
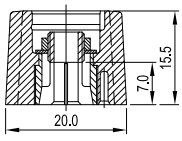
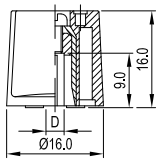
COMBINATION KNOBS 9/10/13.5/

ROUND KNOB | **WING KNOB** | **SPINDLE-SHAPED KNOB** | **COVER**

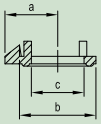
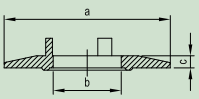
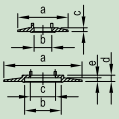
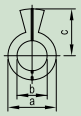
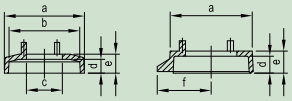


…100 = indicator line white, otherwise in black



Knob ø	Shape		Borehole D						without indicator line	with indicator line
9		ROUND KNOB	4 mm, with chamfer		A 26 09 040			a = 8.0 b = 6.5 c = 2.6	A 41 10 000	A 41 10 100
									A 41 10 002	A 41 10 102
									A 41 10 004	A 41 10 104
									A 41 10 005	
									A 41 10 006	A 41 10 106
									A 41 10 007	
									A 41 10 008	A 41 10 108
10		ROUND KNOB	3 mm, with chamfer	A 25 10 030	A 26 10 030	A 25 10 038	A 26 10 038			
			1/8", with chamfer	A 25 10 320	A 26 10 320					
			4 mm, with chamfer	A 25 10 040	A 26 10 040	A 25 10 048	A 26 10 048			
13.5		ROUND KNOB	4 mm, with chamfer	A 25 13 040	A 26 13 040	A 25 13 048	A 26 13 048	a = 11.2 b = 9.2 c = 3.0		
			6 mm, with chamfer	A 25 13 060	A 26 13 060	A 25 13 068	A 26 13 068			
									A 41 13 000	A 41 13 100
									A 41 13 002	A 41 13 102
									A 41 13 004	A 41 13 104
									A 41 13 005	A 41 13 105
									A 41 13 006	A 41 13 106
									A 41 13 007	A 41 13 107
									A 41 13 008	A 41 13 108
		WING KNOB	6 mm, with chamfer		A 28 13 060					
16		ROUND KNOB	4 mm, without chamfer	A 25 16 040	A 26 16 040			a = 13.5 b = 11.2 c = 4.0		
			6 mm, with chamfer	A 25 16 060	A 26 16 060	A 25 16 068	A 26 16 068			
			1/4", with chamfer	A 25 16 630	A 26 16 630	A 25 16 638				
									A 41 16 000	A 41 16 100
									A 41 16 002	A 41 16 102
									A 41 16 004	
									A 41 16 005	
									A 41 16 006	A 41 16 106
									A 41 16 007	A 41 16 107
									A 41 16 008	A 41 16 108
		WING KNOB	6 mm, with chamfer		A 28 16 060					
		SPINDLE-SHAPED KNOB	3 mm, with chamfer		A 24 16 030			a = 14.0 b = 1.2 c = 4.0	A 50 16 000	A 50 16 100
			4 mm, with chamfer	A 23 16 040	A 24 16 040		A 24 16 048			A 50 16 108

16 mm

ARROW DISK			DISK			DIAL			STATOR		NUT COVER			
			…010 = indicator line white			…0 = symbols black …9 = symbols silver			indicator line black		…010 = indicator line white …018 = indicator line black			
a = 7.0 b = 10.1 c = 7.0		A 42 10 000 A 42 10 002 A 42 10 008				a = 20.0 b = 7.0 c = 1.5 (only for knob ø 10)		A 44 10 060			a = 15.5 b = 14.0 c = 7.0 d = 2.9 e = 3.7 (only for knob ø 10)		A 75 10 000	A 75 10 010 A 75 10 018
a = 9.0 b = 13.6 c = 8.0		A 42 13 000 A 42 13 002 A 42 13 008				a = 26.0 b = 8.0 c = 1.5		A 44 13 010 A 44 13 020 A 44 13 049 A 44 13 060			a = 17.5 b = 15.7 c = 9.0 d = 3.2 e = 4.3		A 75 13 000	A 75 13 010 A 75 13 018
a = 10.5 b = 16.3 c = 10.0		A 42 16 000 A 42 16 002 A 42 16 008	a = 23.0 b = 10.0 c = 1.3		A 73 16 000	a = 31.0 b = 14.5 c = 10.0 d = 2.5 e = 1.7 (ø 16 with moulded-on nut cover)		A 44 16 001 A 44 16 010 A 44 16 020 A 44 16 060	a=16.0 b=10.1 c=15.5	A 60 16 019	a = 19.3 b = 17.6 c = 10.0 d = 3.3 e = 4.3 a = 16.4 b = 14.6 c = 10.0 d = 3.3 e = 4.3 f = 10.2		A 75 16 000 A 76 16 000 A 76 16 008	A 75 16 010 A 75 16 018
											a = 16.0 b = 14.8 c = 8.3 d = 3.3 e = 4.3		A 51 16 000	

COMBINATION KNOBS

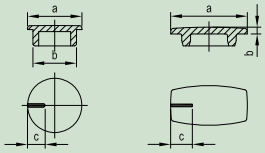
additional accessory see page 22

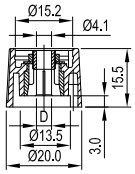
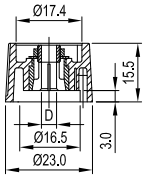
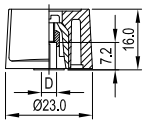
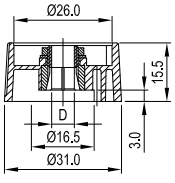
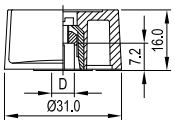
COMBINATION KNOBS 20/23/31 m

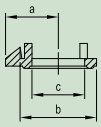
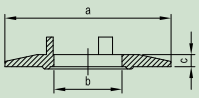
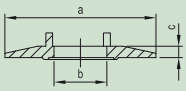
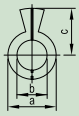
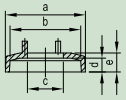
ROUND KNOB | **WING KNOB** | **SPINDLE-SHAPED KNOB** | **COVER**



…100 = indication line white, otherwise in black



Knob ø	Shape		Borehole D						without indication line	with indication line
20		ROUND KNOB	4 mm, without chamfer	A 25 20 040	A 26 20 040			a = 17.5 b = 15.2 c = 5.5	A 41 20 000	A 41 20 100
			6 mm, with chamfer	A 25 20 060	A 26 20 060	A 25 20 068	A 26 20 068		A 41 20 002	A 41 20 102
			1/4", with chamfer	A 25 20 630						A 41 20 104
									A 41 20 005	
									A 41 20 006	A 41 20 106
									A 41 20 007	A 41 20 107
									A 41 20 008	A 41 20 108
23		ROUND KNOB	4 mm, without chamfer	A 25 23 040	A 26 23 040			a = 20.4 b = 17.4 c = 6.5	A 41 23 000	A 41 23 100
			6 mm, without chamfer	A 25 23 060	A 26 23 060	A 25 23 068	A 26 23 068		A 41 23 002	A 41 23 102
			1/4", without chamfer	A 25 23 630		A 25 23 638			A 41 23 004	
										A 41 23 105
									A 41 23 006	A 41 23 106
									A 41 23 007	A 41 23 107
									A 41 23 008	A 41 23 108
		SPINDLE-SHAPED KNOB	4 mm, with chamfer		A 24 23 040			a = 20.9 b = 1.2 c = 6.5	A 50 23 000	A 50 23 100
			6 mm, with chamfer		A 24 23 060		A 24 23 068		A 50 23 008	A 50 23 108
31		ROUND KNOB	6 mm, without chamfer	A 25 31 060	A 26 31 060	A 25 31 068	A 26 31 068	a = 28.4 b = 26.0 c = 9.0	A 41 31 000	A 41 31 100
			1/4", without chamfer	A 25 31 630					A 41 31 002	A 41 31 102
									A 41 31 005	
									A 41 31 006	
									A 41 31 007	
									A 41 31 008	A 41 31 108
		SPINDLE-SHAPED KNOB	6 mm, with chamfer		A 24 31 060		A 24 31 068	a = 29.0 b = 1.4 c = 9.5	A 50 31 000	A 50 31 100
										A 50 31 107
									A 50 31 008	A 50 31 108

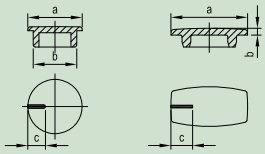
ARROW DISK			DISK			DIAL			STATOR		NUT COVER			
			…010 = indication line white 			…0 = symbols black …9 = symbols silver 			indication line black 					
															
a = 13.0 b = 20.0 c = 12.0	  	A 42 20 000 A 42 20 002 A 42 20 008				a = 36.0 b = 12.0 c = 1.5	  	A 44 20 001 A 44 20 010 A 44 20 060	a=20.0 b=10.1 c=18.0	A 60 20 019				
a = 14.3 b = 23.0 c = 16.5	  	A 42 23 000 A 42 23 002 A 42 23 008	a = 31.0 b = 16.5 c = 1.3		A 73 23 010	a = 40.0 b = 16.3 c = 1.3	   	A 44 23 010 A 44 23 020 A 44 23 039 A 44 23 060	a=23.0 b=10.2 c=20.0	A 60 23 019				
											a = 23.3 b = 20.0 c = 13.7 d = 3.3 e = 4.3	 	A 51 23 000 A 51 23 008	
a = 19.5 b = 31.0 c = 16.5	  	A 42 31 000 A 42 31 002 A 42 31 008	a = 40.0 b = 16.5 c = 1.6		A 73 31 000	A 73 31 010	a = 49.9 b = 16.5 c = 1.5	 	A 44 31 010 A 44 31 060						
											a = 31.1 b = 28.0 c = 15.5 d = 3.3 e = 4.8	 	A 51 31 000 A 51 31 008	

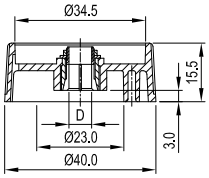
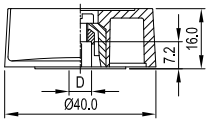
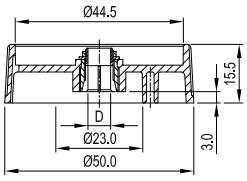
additional accessory see page 22

COMBINATION KNOBS 40/50 mm

ROUND KNOB | **SPINDLE-SHAPED KNOB** | **COVER**

…100 = indication line white, otherwise in black



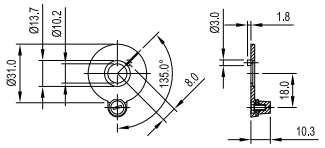
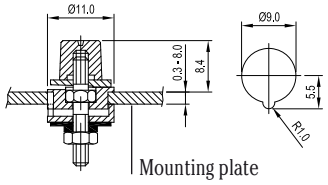
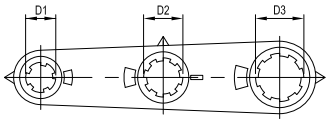
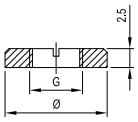
Knob ø	Shape	Borehole D						without indication line	with indication line
40	 **ROUND KNOB**	6 mm, without chamfer	A 25 40 060	A 26 40 060	A 25 40 068	A 26 40 068	a = 37.4 b = 34.4 c = 12.5	A 41 40 000 A 41 40 002 A 41 40 007 A 41 40 008	A 41 40 100
		8 mm, without chamfer	A 25 40 080						
	 **SPINDLE-SHAPED KNOB**	6 mm, with chamfer		A 24 40 060		A 24 40 068	a = 37.9 b = 1.6 c = 13.0	A 50 40 000 A 50 40 008	A 50 40 100 A 50 40 108
50	 **ROUND KNOB**	6 mm, without chamfer	A 25 50 060	A 26 50 060	A 25 50 068		a = 47.4 b = 44.4 c = 14.5	A 41 50 000 A 41 50 008	A 41 50 100 A 41 50 107

COMBINATION KNOBS

ARROW DISK		DISK		DIAL	STATOR	NUT COVER		
		…010 = indication line white						
a = 24.5 b = 40.0 c = 25.0	A 42 40 000 A 42 40 008	a = 50.1 b = 24.0 c = 1.8		A 73 40 010				
						a = 40.3 b = 36.8 c = 20.0 d = 3.1 e = 4.6	A 51 40 000	

additional accessory see page 22

FOR ROUND KNOBS / WING KNOBS / SPINDLE-SHAPED KNOBS / COM-KNOBS

Part-No.	Article	Version / Application	Dim. in mm	Picture
A 61 16 010	Locking device with stator	For round knobs and wing knobs size 16 with dial only. Transparent, marking black.		
A 61 00 000	Locking device	For universal use of round knobs, wing knobs and COM-KNOBS with dial.		
Round knobs ø D_1 D_2 D_3 A 64 02 005 10 13.5 16 A 64 03 005 20 23 31	Adjusting key	For correct adjusting of combination knobs (round knobs) with indicator line, dial and arrow disk. Knob mounting without difficulties.		
G ø A 62 07 009 M 7 x 0.75 13.5 A 62 10 009 M 10 x 0.75 12.5 A 62 95 009 3/8" - 32G 12.5	Round nut	For mounting of potentiometer at front panels. It fits under knob and nut cover (round knobs / wing knobs / spindle-shaped knobs / COM-KNOBS ø 10 / 13.5 / 16 / 20 / 23 / 31 / 40 / 50).		
A 63 00 000	Spanner	For tightening round nuts.		
Bore A 66 00 064 6 / 4.6	Torsion protection	For torsion-proved mounting of knobs on profiled axes 6 / 4.6 mm. Suitable for round and wing knobs sizes ø 20 to 50 with 6 mm borehole (not suitable for COM-KNOBS).