

TUNING KNOBS

AWARD-WINNING TUNING, CONTROL AND COLLET KNOBS IN ERGONOMIC, MODERN AND CLASSIC DESIGNS









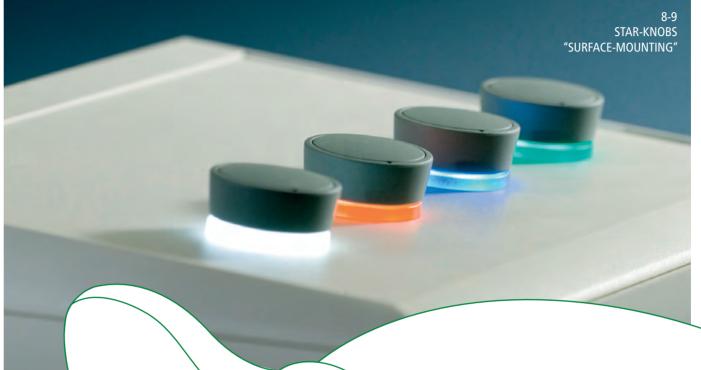














36-37 **CUSTOMISING TUNING KNOBS**

PROPERTIES OF MATERIAL AS WELL AS RECOMMENDED USE

POTENTIOMETER / TUNING KNOBS

OKW has over 70 years' experience in the development and production of potentiometer knobs. Today we can offer a wide range of modern and traditional tuning knob designs for spindles from 3 to 8 mm.

Our latest operating elements combine special technical features with a contemporary appearance. This includes optional LED illumination, flush-fitting installation, a main body which is slightly inclined towards the internal axis, function-oriented marking elements, modern colour selection etc.

The OKW range of tuning knobs is well tried and tested for rotary potentiometers with round and flattened shaft ends in accordance with DIN 41591 or 6/4.6 mm. The knobs are fitted using the proven collet fixture, lateral screw fixing or simply by pushing them on. Choose from round knobs, wing knobs, spindle-shaped knobs, pointer knobs or simple rotary switches. Different sizes and combinations offer a wide range of possible solutions.

TPE, nero

PC. translucent (can be illum)

PC, traffic white RAL 9016 (for applications without illumination)

PA 6, nero

KNOB SIZES (MM)

BACKLIGHT

with modern, energy-saving SMD LED technology.

RGB RGB backlight for individual colours You can display your own

FASTENING

Tried and tested collet fixture system with secure fit on the axle according to DIN 41591. Max. tightening torque: assembly = 1.5 Nm, function = 1.2 Nm.

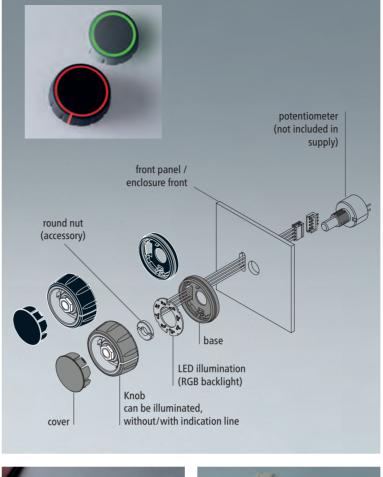
CUSTOMISING

- Machining*
 Printing*
 Laser marking*
 Installation/Assembly of accessori

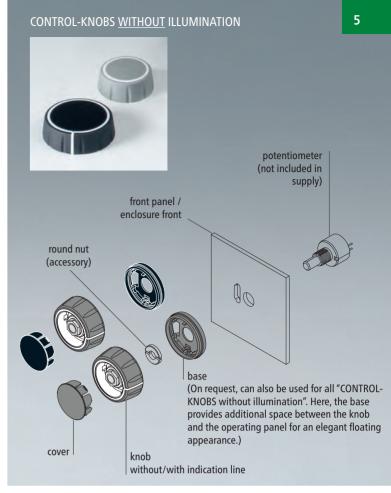








CONTROL-KNOBS WITH ILLUMINATION











Order data on pages 18-19

CONTROL-KNOBS

POTENTIOMETER TUNING KNOBS THAT ARE HIGHLY COMFORTABLE TO OPERATE

New ergonomic CONTROL-KNOBS have a soft-touch surface which is easy to grip and feels comfortable in operation.

The high-quality appearance – illuminated if required – distinguishes this advanced range of tuning knobs as the central element of menu-driven interfaces.

Designed as modern control knobs for rotary potentiometers or encoders; also suitable for rotary touch/click functions used on menu-driven interfaces – typically employed on devices made in high volumes.

YOUR ADVANTAGE

- soft-touch surface ensures good grip and anti-slip operation
- innovative two-part plastic tuning knob design comprises a hard inner knob body made of highquality PC and a soft-touch TPE outer shell with functional grooved appearance
- *** iF product design award 2022 ***
- available in two knob sizes, ø 36 mm and ø 46 mm, each in two standard TPE colours (nero and volcano)
- 16 different versions each size
- with/without pointer line on the side for fine scaling







YOUR ADVANTAGE

- with/without optional LED illumination
- illumination options:
- translucent optic ring on the top surface
- translucent optic ring on the top surface with a pointer line on the side

(note: order the CONTROL-KNOBS with optional illumination, plus the base and the LED illumination kit, see accessories)

• optional illumination uses modern, energy-saving SMD LED technology for 5 V power supply units (RGB LEDs allow individual illumination and colours)

APPLICATION FIELDS

For rotary potentiometers or rotary pulse generators with round shaft ends in accordance with DIN 41591, including touch function:

- Measuring and control technology
- Health Care
- Heating and air conditioning
- Communication devices
- Building management
- Smart Factory

MATERIAL / COLOUR

- PC, diamond (can be illuminated)
 PC, emerald (can be illuminated)
 PC, sapphire (can be illuminated)

FASTENING

Tried and tested collet fixture system with secure fit on the axle.

KNOB SIZES (MM)

ø 33 mm (boreholes 6 mm, 1/4")

ø 41 mm (boreholes 6 mm)

BACKLIGHT

with modern, energy-saving SMD LED technology.

With white backlight you can realize the colours diamond, ruby, emerald and sapphire.

For individual colours there is a RGB backlight available. In this way you can display your own

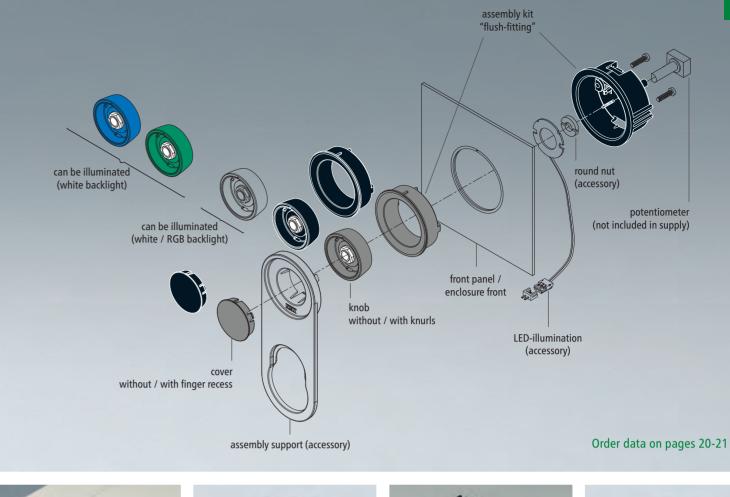
CUSTOMISING

- Printing / Laser marking
 Lacquering (only on request and according to sample)
 Installation / Assembly of acc.

















STAR-KNOBS "FLUSH-FITTING"

MODERN ILLUMINATED TUNING KNOBS

Our STAR-KNOBS are designed for menu driven interfaces, click rotation and click push-in for 'OK'. This reduces the number of knobs and controls required on the front panel. The illumination is a visual highlight and enhances user operation of the equipment.

INNOVATIVE DESIGN FOR FLUSH FITTING OR SURFACE MOUNTING

YOUR ADVANTAGE

- the flush-fitting version represents an attractive transition between the knob and the front of the device; the knob can be illuminated, that is, a ring lights up between the recess and the knob cover
- knob with or without knurls
- cover with or without finger recess for fine adjustments
- tried and tested collet fixture system with secure fit on the axle
- max. torques: assembly = 1.5 Nm, function = 1.2 Nm
- minimum components for 1 STAR-KNOB: 1 knob, 1 cover, 1 assembly kit

STAR-KNOBS "FLUSH-FITTING"

APPLICATION FIELDS

For rotary potentiometers or rotary pulse generators with round shaft ends in accordance with DIN 41591, including touch function:

- Measuring and control technology
- Health Care
- Heating and air conditioning
- · Communication devices
- · Building management
- Smart Factory

ILLUMINATION

Illumination possible with modern, energy-saving SMD LED technology for power supply units with 5 V: either white backlight for the colours diamond, ruby, emerald and sapphire or RGB backlight for individual colours as accessory.



MATERIAL / COLOUR

- PA, nero

- PC, diamondPC, sapphire

KNOB SIZES (MM)

ø 41 mm (boreholes 6 mm)

BACKLIGHT

with modern, energy-saving SMD LED technology.

With white backlight you can realize the colours diamond, ruby, emerald and sapphire.

RGB

For individual colours there is a RGB backlight available. In this way you can display your own

FASTENING

Tried and tested collet fixture system with secure fit on the axle.

CUSTOMISING

- Printing
 Laser marking
 Lacquering (only on request and according to sample)
 Installation / Assembly of acc.









without / with finger recess



assembly support (accessory)

can be illuminated (white backlight)

> can be illuminated (white / RGB backlight)

> > round nut



assembly kit

front panel /

enclosure front

potentiometer

(not included in supply)

LED-illumination

(accessory)



Order data on pages 20-21

STAR-KNOBS "SURFACE-MOUNTED"

MODERN ILLUMINATED TUNING KNOBS

Our STAR-KNOBS are designed for menu driven interfaces, click rotation and click push-in for 'OK'. This reduces the number of knobs and controls required on the front panel. The illumination is a visual highlight and enhances user operation of the equipment.

INNOVATIVE DESIGN FOR FLUSH FITTING OR SURFACE MOUNTING

YOUR ADVANTAGE

- with the surface-mounted version, the knob design makes a great impression thanks to the slight inclination of the body towards the inner axis, thus allowing ergonomically comfortable operation; the knob is mounted on an approx. 3 mm high ring, which can be illuminated if required
- knob with or without knurls
- cover with or without finger recess for fine adjustments
- tried and tested collet fixture system with secure
- max. torques: assembly = 1.5 Nm, function = 1.2 Nm
- minimum components for 1 STAR-KNOB: 1 knob, 1 cover, 1 assembly kit

STAR-KNOBS "SURFACE-MOUNTED"

APPLICATION FIELDS

For rotary potentiometers or rotary pulse generators with round shaft ends in accordance with DIN 41591, including touch function:

Measuring and control technology

without / with knurls

- Health Care
- Heating and air conditioning
- · Communication devices
- · Building management
- Smart Factory

ILLUMINATION

Illumination possible with modern, energy-saving SMD LED technology for power supply units with 5 V: either white backlight for the colours diamond, ruby, emerald and sapphire or RGB backlight for individual colours as accessory.





appearance.



COM-KNOBS

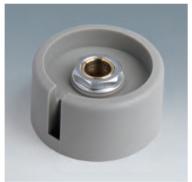
Aesthetic design, a modern selection of pastel colours,

and a secure collet fixing system are the main features

tuning knobs will give your application a high-quality

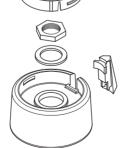
of our COM-KNOBS range. These very attractive

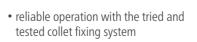
MODERN COLLET KNOB SYSTEM











• modern and innovative control knobs

• cover with a matt chrome finish for a

classy metallic look (sizes 23-40)

YOUR ADVANTAGE

- convenient assembly from the front with tight fitting on the axis
- with/without slot for arrow marking elements









Order data on pages 24-25

COM-KNOBS

YOUR ADVANTAGE

- clip-on covers with or without a finger recess for finer control and adjustment
- also suitable for fitting accessory disks, dials, stator and nut covers
- the design is similar to our innovative TOP-KNOBS series; this guarantees you a uniform appearance when using the two knob technologies
- modern colour combinations

APPLICATION FIELDS

For rotary potentiometers with shaft ends corresponding to DIN 41591.

- Measuring and control technology
- Medical and wellness devices
- Laboratory equipment
- Heating and air conditioning
- Communication equipment
- Building management



MATERIAL / COLOUR

- Knob
 PA 6, volcano
 PA 6, nero

- PA 6, sky
 PA 6, mineral
 PA 6, nero



ABS (UL 94 HB), matt chromed (only available for sizes ø 23-40)

KNOB SIZES (MM)

- ø 31 mm (boreholes 6 mm and 1/4")
- ø 40 mm / ø 50 mm (boreholes 6 mm and 8 mm)

FASTENING

With collet fixture system for rotary potentiometer with shaft ends according to DIN 41591.

CUSTOMISING

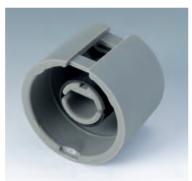
- Printing
 Laser marking
 Lacquering
 Installation / Assembly of acc.
 See pages 36-37.











TOP-KNOBS

UNIQUELY MODERN TUNING KNOBS

Our TOP-KNOBS are unique in design and are thus the ideal solution for users looking for that special something. Individual marking element define the function of the tuning knob and give your equipment a modern, contemporary appearance.

YOUR ADVANTAGE

- aesthetically pleasing knob design iF product design award
- lateral fixing screw for axis corresponding to DIN 41591 or for flattened ends







Order data see pages 22-23



YOUR ADVANTAGE

- the fixing technique rules out any possibility of contact with live parts
- recessed underside to allow for external potentiometer fixing nuts
- modern colour combinations
- individual, functional marking elements, e.g. for fine calibration, clip into the sides and hide the lateral fixing screw

APPLICATION FIELDS

For rotary potentiometers with shaft ends corresponding to DIN 41591 or with flattened ends ø 6/4.6 mm.

- Measuring and control technology
- Medical and wellness devices
- Laboratory equipment
- Heating and air conditioning
- Communication equipment
- Building management



MATERIAL / COLOUR

PA 6, nero

- PA 6, beach
 PA 6, lagoon
 PA 6, sky
 PA 6, mineral

KNOB SIZES (MM)

ø 16 mm (boreholes 4 mm, 6 mm, 6/4,6 mm)

CUSTOMISING

- Printing

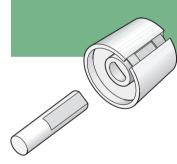
 Laser marking

 Installation / Assembly of acc.

FASTENING

With laterial screw fixing on shaft ends according to DIN 41591.

Pinned onto the axes with flattened shaft ends ø 6/4,6 mm.



















MATERIAL / COLOUR

- ABS (UL 94 HB),
 dusty grey (RAL 7037)
- ABS (UL 94 HB), black (RAL 9005)

ABS (UL 94 HB), red, yellow, green, light blue, pebble grey, dusty grey

Arrow disk* ABS (UL 94 HB), black, red, dusty grey

- ABS, black (RAL 9005)
- PC (UL 94 HB)

- ABS, black (RAL 9005)
- ABS, dusty grey (RAL 7037)

KNOB SIZES (MM)

ø 9 mm / ø 10 mm / ø 13,5 mm ø 16 mm / ø 20 mm / ø 23 mm ø 31 mm / ø 40 and ø 50 mm

FASTENING

With collet fixture system for rotary potentiometer with shaft ends according to DIN 41591.

Sizes 10 and 13 have blind holes and screw fixing. From knob size 23 up through holes ① (sizes 16 + 20 stepped ②, except for axes 4 mm).





CUSTOMISING

COMBINATION KNOBS

VERSATILE COLLET KNOB SYSTEM

Suitable for a huge number of applications, our COMBINATION KNOBS feature a reliable collet fixing system, and can be configured as round knobs, wing knobs and spindle-shaped knobs in combination with a large selection of accessories.

Collet Type

sizes 10 and 13: blind holes with screw fixing

sizes 16 and 20: brass collet with stepped counter-

bored hole, except for axes 4 mm from size 23 up: brass collet with through holes

VERSIONS

• Round Knobs: sizes ø 9, 10, 13.5, 16, 20, 23, 31, 40, 50 mm with boreholes 3, 4, 6, 8 mm, 1/8", 1/4" (depend from the size)

Wing Knobs: sizes ø 13,5, 16 mm with borehole 6 mm

 Spindle-shaped Knobs: sizes ø 16, 23, 31, 40 mm with boreholes 3, 4, 6 mm (depend from the size)

COMBINATION KNOBS

YOUR ADVANTAGE

- standard round, wing and spindle type design with matt surfaces
- secure operation by tried and tested collet fixing
- convenient assembly of knobs from the front; brass collet fixing system for tight fitting to the control
- clip-on covers in different colours, with or without indicator line
- also suitable for fitting accessory arrow disks, disks, dials, stator and nut covers

APPLICATION FIELDS

For rotary potentiometers with shaft ends corresponding to DIN 41591. Also suitable for profiled axes 6/4.6 mm in combination with the torsion protection (accessory).

- Medical, wellness devices and laboratory equipment
- Measuring and control technology
- Heating and air conditioning
- Communication equipment









MATERIAL / COLOUR

- Thermoplastic, blackDuroplast, black

Insert embellisher / embellisher cap (depending on the type)

KNOB SIZES (MM)

with spindle sizes 4 mm or 6 mm.

FASTENING

Lateral screw fixing type A or B for rotary potentiometer with shaft end

CUSTOMISING

- PrintingInstallation / Assembly of acc.









Order data see pages 32-35

TUNING KNOBS "CLASSIC"

PRACTICAL RANGE OF TUNING KNOBS

Choose a knob that meets your own special size and design requirements. OKW TUNING KNOBS are suitable for many different applications and are offered in thermoplastic for normal use and thermosetting plastic (Duroplast) for high temperature resistance requirements.

APPLICATION FIELDS

For rotary potentiometers with shaft ends corresponding to DIN 41591: Measuring and control technology, medical and wellness devices, laboratory equipment, heating and air conditioning and communication equipment.

YOUR ADVANTAGE

- different designs and sizes: practical, with a good grip
- high-grade metal effect with aluminium cap or insert embellisher; the colour and styling of your front panel thus forms a unified whole
- models with markings; advantageous for adjusting and
- lateral screw fixing for rotary potentiometer with shaft ends
- sizes from ø 12 to ø 38 mm with spindle sizes 4 mm or 6 mm
- accessory insert: reduces borehole from 6 to 4 mm









USB SDR VFO TUNING KNOB

CONTROL KNOBS FOR VIDEO MAGNIFIER

CONTROL UNIT FOR PHOTOVOLTAIC SOLAR INSTALLATIONS

APPLICATIONS



CONTROL-KNOBS III DESIGN AWARD 2022

Information in the product catalogue on pages 4-5









					KNOB					
NEW	Knob ø	Borehole D	Torque (Nm)) function	Dim. in mm	Colour 'Soft Touch'	with optional L	Part ED illumination	t-No. without LED	illumination
	36	6 mm	1.5	1.2	36.0 L 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		B 71 36 061 B 71 36 063	B 72 36 061 B 72 36 063	B 71 36 062 B 71 36 064	B 72 36 062 B 72 36 064
		1/4"	1.5 1.5	1.2			B 71 36 631 B 71 36 633	B 72 36 631 B 72 36 633	B 71 36 632 B 71 36 634	B 72 36 632 B 72 36 634
	46	6 mm 6 mm	1.5 1.5	1.2 1.2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		B 71 46 061 B 71 46 063	B 72 46 061 B 72 46 063	B 71 46 062 B 71 46 064	B 72 46 062 B 72 46 064
		1/4"	1.5 1.5	1.2			B 71 46 631 B 71 46 633	B 72 46 631 B 72 46 633	B 71 46 632 B 71 46 634	B 72 46 632 B 72 46 634

		COVER		
Cover	For knob ø	Dim. in mm a b	Colour	Part-No.
0	36 46	26 25 26 25 36 35 36 35		B 75 36 109 B 75 36 108 B 75 46 109 B 75 46 108
		BASE		
Base	For knob ø	Application	Colour	Part-No.
	36 46	Mandatory for CONTROL-KNOBS "with optional illumination" for installing the LED illumination. On request, can also be used for all CONTROL-KNOBS "without illumination". Here, the base provides additional space between the knob and the operating panel for an elegant floating appearance.		B 75 36 209 B 75 36 208 B 75 46 209 B 75 46 208
		LED ILLUMINATION KIT		
	For			

		LED ILLUMINATION KIT	
LED illumination kit	For knob ø	Version / Application	Part-No.
	36	For CONTROL-KNOBS 36 "with optional illumination". PCB D=27 mm with 8 LEDs (RGB backlight), without controller, SMD technology, connecting cable 120 mm long, 4-pin socket at the end, incl. connector. Installation in the bases available as accessories.	B 75 46 001
	46	For CONTROL-KNOBS 46 "with optional illumination". PCB D=37 mm with 12 LEDs (RGB backlight), without controller, SMD technology, connecting cable 120 mm long, 4-pin socket at the end, incl. connector. Installation in the bases available as accessories.	B 75 46 002

		PCB D=37 mm wong, 4-pin socke					
			OTHER ACCESSORIE	ES .			
Photo	Article	For knob ø	Version / Application				Part-No.
	Round nut	36, 46	For fixing the potentiometers to screens.	2.5	G	Ø	
				G	M 7 x 0.75	13.5	A 62 07 009
					M 10 x 0.75	12.5	A 62 10 009
				Ø -	3/8" - 32G	12.5	A 62 95 009
1000	Spanner	36, 46	For tightening the round nut.				A 63 00 000
4		,					71 05 00 000





Information in the product catalogue on pages 4-5

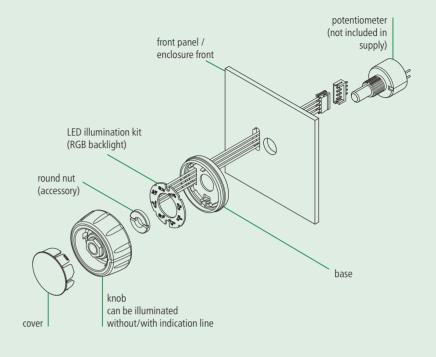
With optional LED illumination



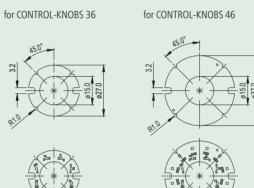


for 1 CONTROL-KNOB with optional LED illumination

- 1 knob (can be illuminated)
- 1 cover 1 base
- 1 LED illumination kit



PCB with LED illumination (RGB backlight) – for power supply units with 5 V



base for installing the LED illumination



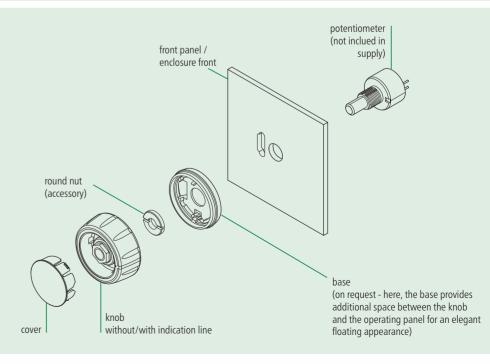
Without LED illumination



for 1 CONTROL-KNOB without illumination

1 cover

the accessory base can also be added if required



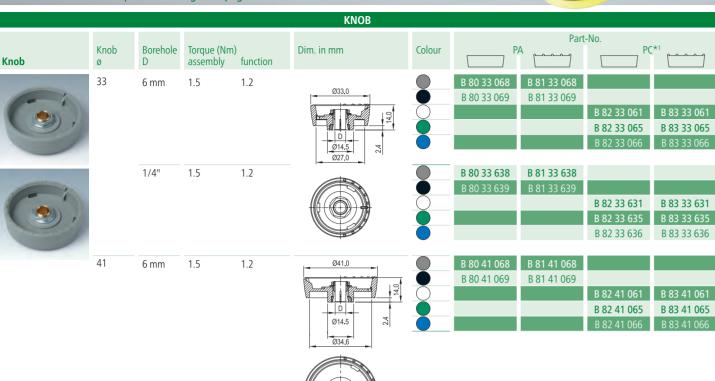
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STAR-KNOBS Information in the product catalogue on pages 6-9









For	Dim. in mm	Colour	Part-No.
	20 20 0 17		B 86 33 008 B 86 33 108
33			B 86 33 008 B 86 33 108 B 86 33 109
41	37 36 11 1.7 b	7	B 86 41 008 B 86 41 108
	ASSEMBLY KIT	_	B 86 41 009 B 86 41 109
For		Colour	Part-No.
knob ø	panel thickness min. 1 mm, max. 3 mm)	visible parts	
33	046.5 / 054.5		B 87 33 118
	<u> </u>		B 87 33 119
41			B 87 41 118 B 87 41 119
	048.4 / 056.4 054.0 / 062.0	·	
For knob ø	Dim. in mm (for front panel cutouts see drawings on the internet, panel thickness min. 1 mm, max. 3 mm)	Colour visible parts*2	Part-No.
33	Ø30.0 / Ø38.4		B 87 33 218
			B 87 33 219
			B 87 33 201
41			B 87 33 206 B 87 41 218 B 87 41 219 B 87 41 201
	For knob ø 33 41 For knob ø 33 41 33 41	ASSEMBLY KIT For knob ø Dim. in mm (for front panel cutouts see drawings on the internet, panel thickness min. 1 mm, max. 3 mm) 33 Dim. in mm (for front panel cutouts see drawings on the internet, panel thickness min. 1 mm, max. 3 mm) Dim. in mm (for front panel cutouts see drawings on the internet, panel thickness min. 1 mm, max. 3 mm) 34 Dim. in mm (for front panel cutouts see drawings on the internet, panel thickness min. 1 mm, max. 3 mm) 33 34 35 36 37 37 38 38 39 30 30 30 30 30 30 30 30 30	For knob ø a b c d without finger recess with finger recess 33 29 28 9 1.7 a a a a a a a a a a a a a a a a a a a



STAR-KNOBS

Information in the product catalogue on pages 6-9



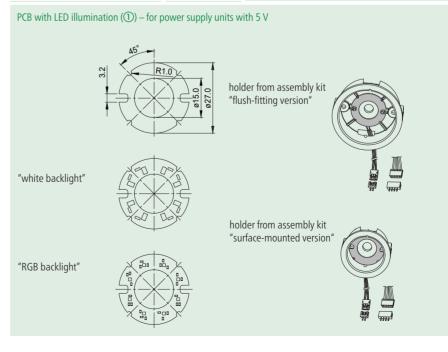
Minimum components for 1 STAR-KNOB: 1 knob, 1 cover and 1 assembly kit.

Colour STAR-KNOBS

volcano nero diamond emerald

sapphire

		STAR-KNOBS ACC	ESSORIES							
Article	For knob ø	Version / Application	Version / Application Part-No.							
① LED illumination	33, 41	"white backlight", PCB with 8 LEDs, 92-pin connector at the end, incl. PCB for knob/assembly kit in translucent	B 87 33 004							
		"RGB Backlight", PCB ø 27 mm with connecting cable 120 mm long, 4-pi for knob/assembly kit in translucent	B 75 46 001							
② Round nut	33, 41	for mounting of potentiometer	2.5	G	Ø					
		at the assembly kit		M 7 x 0.75	13.5	A 62 07 009				
				M 10 x 0.75	12.5	A 62 10 009				
			Ø	3/8" - 32G	12.5	A 62 95 009				
③ Spanner	33, 41	for tightening round nuts				A 63 00 000				
Assembly support	33	for assembly and adjusting of "flush	-fitting" and "surface-mou	nted" versions*3		B 87 33 001				
	41	for assembly and adjusting of "flush	-fitting" and "surface-mou	nted" versions*3		B 87 41 001				







*1 knob can be illuminated individually (flush-fitting version)

 $^{\star 2}\,\text{can be illuminated individually in translucent (diamond / ruby / emerald / sapphire)}\,\text{version (surface-mounted version)}$

*3 assembly instruction see our website www.okw.com

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TOP-KNOBS Information in the product catalogue on pages 12-13





			TOP-KNOB			
					Part	-No.
TOP-KNOB for "shaft end" *1	Knob ø	Dimensions in mm	Max. tightening torque	Borehole	nero	volcano
	16		0.4 Nm	4 mm	A 10 16 049	A 10 16 048
		0.6.0	0.4 Nm	6 mm	A 10 16 069	A 10 16 068
	20		0.5 Nm	4 mm	A 10 20 049	A 10 20 048
6		99 920.0 17.7 17.7	0.5 Nm 0.5 Nm	6 mm 1/4"	A 10 20 069 A 10 20 639	A 10 20 068 A 10 20 638
	24		0,5 Nm	4 mm	A 10 24 049	A 10 24 048
		15.7	0,5 Nm	6 mm	A 10 24 069	A 10 24 068
		Ø24.0 S	0,5 Nm	1/4"	A 10 24 639	A 10 24 638
	31		0.6 Nm	4 mm	A 10 31 049	A 10 31 048
		12.1	0.6 Nm	6 mm	A 10 31 069	A 10 31 068
		Ø31.0	0.6 Nm	1/4"	A 10 31 639	A 10 31 638
	40		0.65 Nm	4 mm	A 10 40 049	A 10 40 048
		12.1	0.65 Nm	6 mm	A 10 40 069	A 10 40 068
		Ø40.0 R	0.65 Nm	1/4"	A 10 40 639	A 10 40 638
TOP-KNOB for "flattened end" *2	Knob	Dimensions in man	Borehole		Part	
nattened end "2	Ø	Dimensions in mm			nero	volcano
	16	13.5	6/4.6 mm		A 10 16 649	A 10 16 648
	20	13.5	6/4.6 mm		A 10 20 649	A 10 20 648
	24	13.5	6/4.6 mm		A 10 24 649	A 10 24 648
6	31	25.	6/4.6 mm		A 10 31 649	A 10 31 648
	40	13.5	6/4.6 mm		A 10 40 649	A 10 40 648





TOP-KNOBS

Information in the product catalogue on pages 12-13



	MARKING ELEN	IENTS				
		Pin	Arrow	Globe	Disk	Wing
For TOP-KNOB ø 16 – 40	Colour					
Simple push-on marking elements,	Coral	A 11 01 003	A 11 05 003			A 11 04 003
subsequent replacement is also possible.	Beach	A 11 01 004	A 11 05 004	A 11 02 004	A 11 03 004	
	Lagoon	A 11 01 005	A 11 05 005			
	Sky	A 11 01 006	A 11 05 006			
	Mineral	A 11 01 007	A 11 05 007	A 11 02 007	A 11 03 007	

MODIFICATIONS AND FINISHING

With all conceivable technologies available in-house, we can adapt our enclosures and tuning knobs to your specific requirements.





^{*1} lateral screw fixing with hex-socket set scew (1.5 mm) and annular cutting edge

 $^{^{\}star_2}$ pinned onto the axes with flattened shaft ends

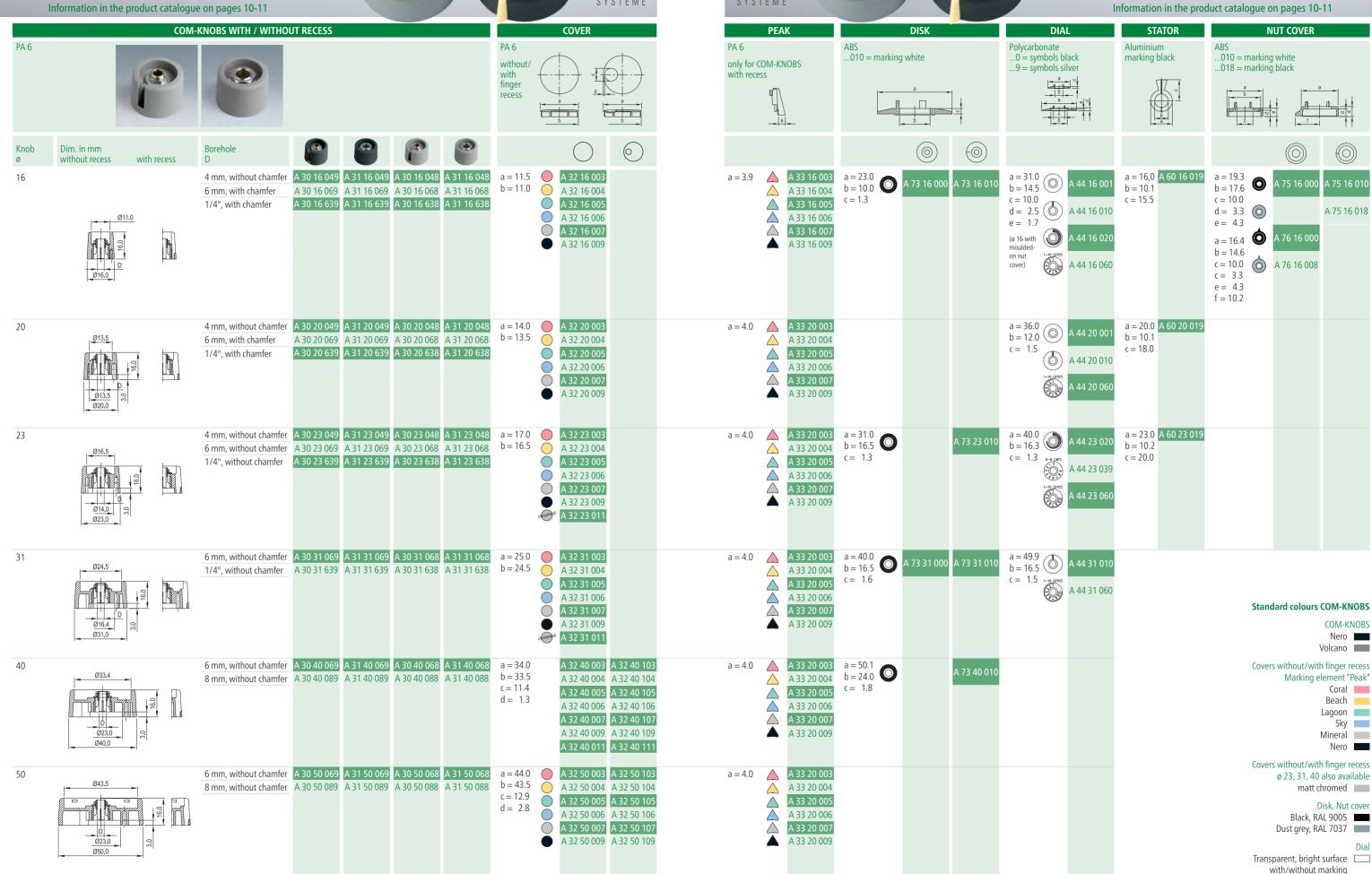
COM-KNOBS







Information in the product catalogue on pages 10-11



COMBINATION KNOBS

Information in the product catalogue on pages 14-15









GEHÄUSE SYSTEME





Information in the product catalogue on pages 14-15

	ROU	ND KNOB	WING KN	OB	SPINDLE-	SHAPED KNO	OB		COVER	_	ARRO	W DISK		DISK		DIA			ATOR		UT COVER	
ABS (UL								ABS (UL 94 HB)100 = indicato	r line white, oth	erwise in black	ABS (UL 94 HI		ABS010 = indicato			Polycarbonate 0 = symbols b 9 = symbols s	lack ilver	Aluminiur indicator l	n	ABS010 = indicato018 = indicato	line white	
	· ·							c	c	_		c			0		그리민			b		D 0
Knob	Shape		Borehole D						without indicator line	with indicator line												
9	06.5 0.9 0.9 0.9 0.9	ROUND KNOB	4 mm, with chamfer		A 26 09 040			a = 8.0 b = 6.5 c = 2.6	A 41 10 002 A 41 10 004 A 41 10 005	A 41 10 104 A 41 10 106	a = 7.0 b = 10.1 c = 7.0	A 42 10 002				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
10	9:	ROUND KNOB	3 mm, with chamfer 1/8", with chamfer 4 mm, with chamfer	A 25 10 320	A 26 10 030 A 26 10 320 A 26 10 040																	
	Ø10.5																					
13.5	Ø9.2	ROUND KNOB	4 mm, with chamfer 6 mm, with chamfer		A 26 13 040 A 26 13 060		A 26 13 048 A 26 13 068	a = 11.2 b = 9.2 c = 3.0	A 41 13 002	A 41 13 100 A 41 13 102 A 41 13 104	a = 9.0 b = 13.6 c = 8.0					a = 26.0 b = 8.0 c = 1.5				a = 17.5 b = 15.7 c = 9.0	A 75 13 000	
	935 072 013.5								A 41 13 005 A 41 13 006 A 41 13 007	A 41 13 105 A 41 13 106 A 41 13 107 A 41 13 108	Ĉ	A 42 13 002 A 42 13 008				0-11 (897 (A 44 13 020 A 44 13 049 A 44 13 060			d = 3.2 e = 4.3		A 75 13 018
	959 07 17.0	WING KNOB	6 mm, with chamfer		A 28 13 060																	
16	Ø11.2 Ø4.1	ROUND KNOB	4 mm, without chamfer 6 mm, with chamfer 1/4", with chamfer	A 25 16 040 A 25 16 060 A 25 16 630	A 26 16 040 A 26 16 060 A 26 16 630	A 25 16 068 A 25 16 638	A 26 16 068	a = 13.5 b = 11.2 c = 4.0	A 41 16 000 A 41 16 002 A 41 16 004	A 41 16 100 A 41 16 102	a = 10.5 b = 16.3 c = 10.0		a = 23.0 b = 16.5 c = 1.3	A 73 16 000	A 73 16 010	a = 31.0 b = 14.5 c = 10.0		a = 16.0 b = 10.1 c = 15.5	A 60 16 019	a = 19.3 b = 17.6 c = 10.0	A 75 16 000	
	7.0		,						A 41 16 005 A 41 16 006 A 41 16 007	A 41 16 106 A 41 16 107	Ĉ					e = 1.7 (ø 16 with moulded	A 44 16 010 A 44 16 020			d = 3.3 e = 4.3 a = 16.4 b = 14.6	A 76 16 000	A 75 16 018
	Ø16.0	WING KNOB	6 mm, with chamfer		A 28 16 060				A 41 16 008	A 41 16 108						on nut 1-10 (270°) cover	A 44 16 060				A 76 16 008	
	20.0																			f = 10.2		
		SPINDLE- SHAPED KNOB	3 mm, with chamfer 4 mm, with chamfer	A 23 16 040	A 24 16 030 A 24 16 040		A 24 16 048	a = 14.0 b = 1.2 c = 4.0	A 50 16 000	A 50 16 100 A 50 16 108										a = 16.0 b = 14.8 $c = 8.3$	A 51 16 000	
	0.00 0.00 0.00 0.00																			d = 3.3 e = 4.3		









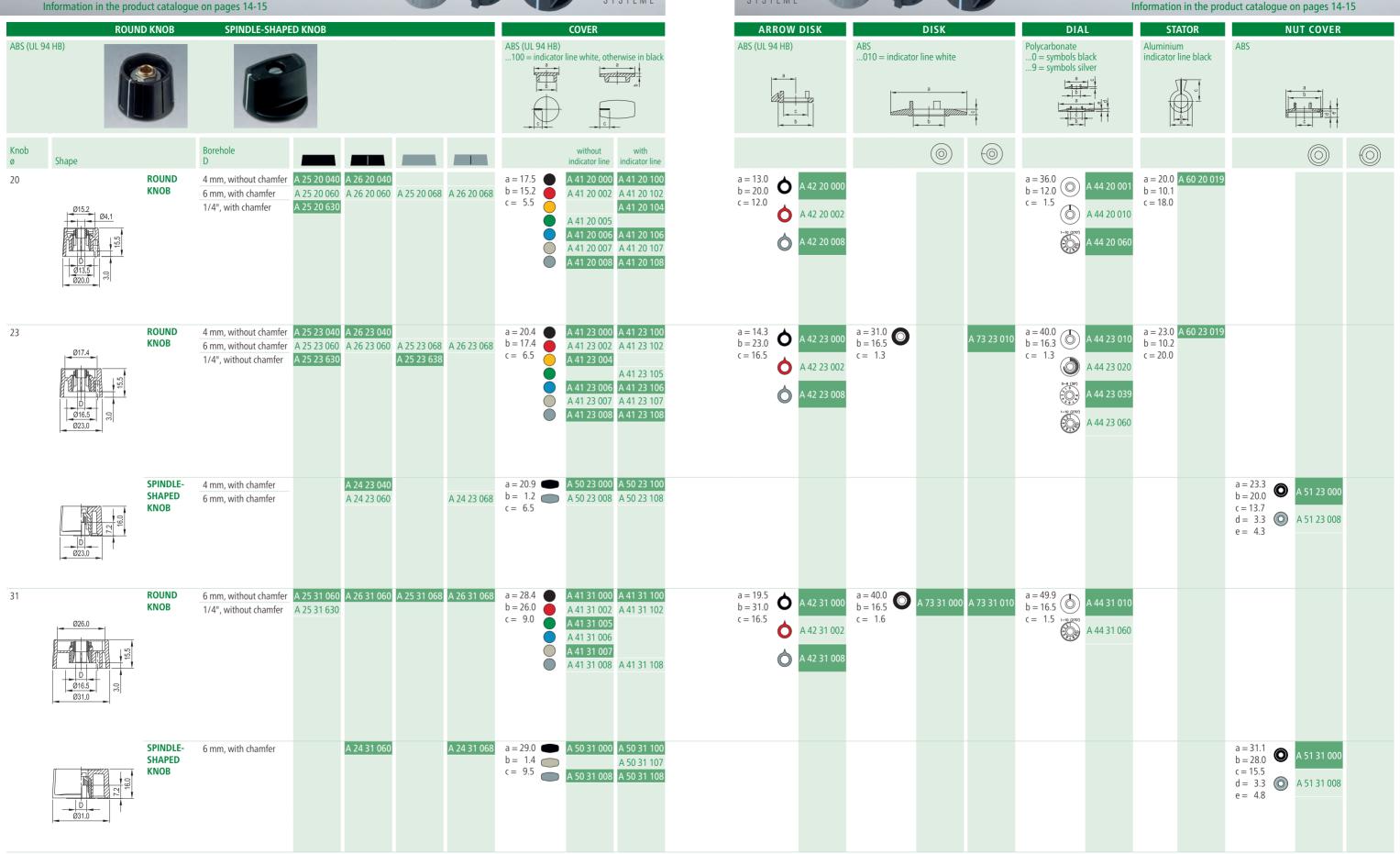
GEHÄUSE SYSTEME







COMBINATION-KNOBS



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COMBINATION KNOBS



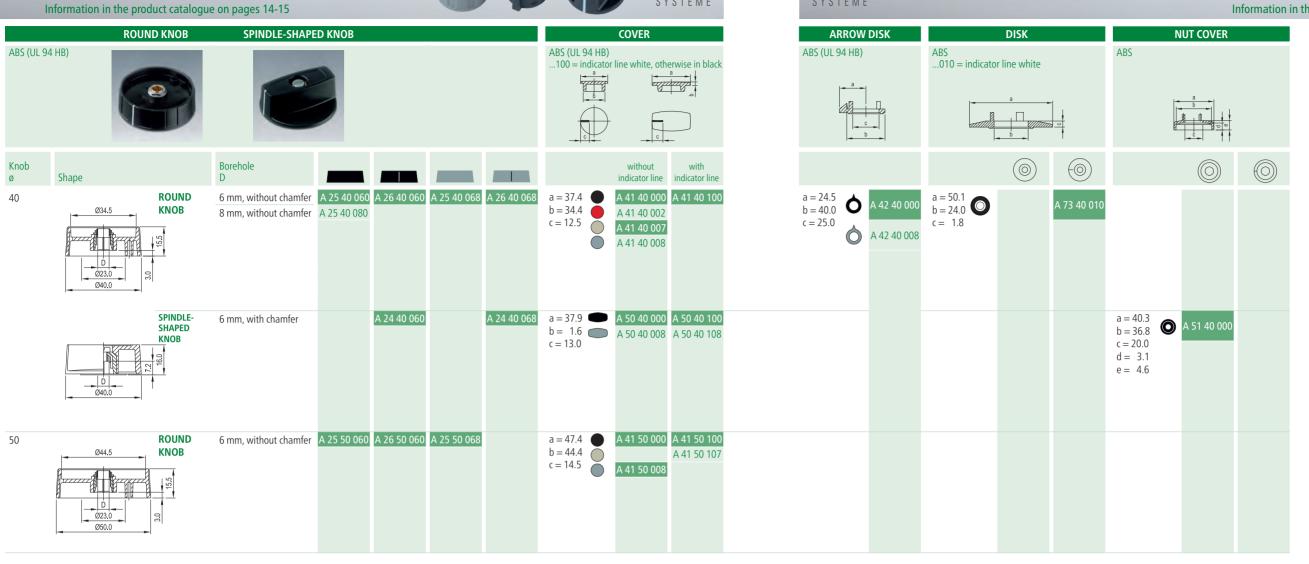


CKVV G E H Ä U S E S Y S T E M E

CKVV G E H Ä U S E S Y S T E M E

COMBINATION-KNOBS

Information in the product catalogue on pages 14-15



Standard colours knobs
Combination knobs

Combination knobs
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 dis

Black, RAL 9005
Red, RAL F12/0-10

Dust grey, RAL 7037

Black, RAL 9005

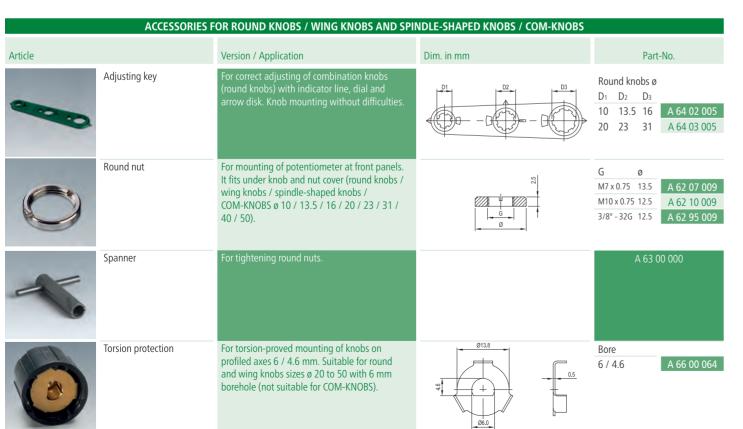
Dia

Transparent, bright surface with/without symbols

Nut cover (depends on size/type)

Black, RAL 9005

Dust grey, RAL 7037



MODIFICATIONS AND FINISHING

With all conceivable technologies available in-house, we can adapt our enclosures and tuning knobs to your specific requirements, see pages 36-37.





TUNING KNOBS





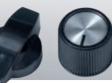




ation in the product catalogue on page 16	
WITH INCEPT ENABELLICHED DI ATE (CAD AND LA)	EDAL CODEWA

		llogue on page 16		
		WITH INSERT EMBELLISHE	R PLATE/CAP AND LATERAL SCREW FIXING	
icture	Material	Dim. in mm		Part-No.
	Duroplast black, insert embellisher plate aluminium.	T 22 T	D d1 r H h1 h2 28 6 10.5 16 3.5 13	A 13 28 160
	Duroplast black, insert embellisher plate aluminium.	22 x	D d1 r H h1 h2 20 6 5.3 16 3.5 13 24.3 6 9.5 16 3.5 13.2	A 13 20 260 A 13 24 260
	Duroplast black, marking element white, insert embellisher plate aluminium.		D d1 r H h1 h2 l 23.9 6 8.2 16 3.5 13 18	A 13 18 560
	Duroplast black, embellisher cap aluminium.		D d H h 21 6 10 8	A 13 21 260
8	Thermoplastic black, embellisher cap aluminium.		D d H h 24 6 12.4 10	A 16 24 260
	Thermoplastic black, embellisher cap aluminium.		D d1 d2 H h1 h2 18.2 6 15 14.2 2 12.4	A 13 18 260
	Duroplast black, embellisher cap aluminium.		D d1 d2 H h1 h2 14.1 4 11.4 14 2 12	A 13 14 240







		WITH INSERT EMBELLISHER I	PLATE/CAP	AND L	ATER/	AL SCF	REW FIXING	
Picture	Material	Dim. in mm						Part-No.
	ABS (UL 94 HB),		D d	Н	h			
	aluminium cap,		15.9 4	15	12.7			A 14 16 449
-	indicator line black.	<i>91240</i>	15.9 6	15.2	12.4			A 14 16 469
		d D						
	ABS (UL 94 HB),		D d	H1	h1	H2	h2	
	aluminium cap,		22.1 6	14.3	12	-	_	A 14 21 469
	indicator line black.	981/4410) I	22.2 6	_	12	17.9	15.5	 A 14 22 469
9		五 五 五 五 五 五 五 五 五 五 五 五 五 五 五 五 五 五 五						
	ABS (UL 94 HB),		D d	Н	h			
	aluminium cap,		31.9 6	14	12			A 14 32 469
	indicator line black.							N 14-32-403
	ABS (UL 94 HB),		D d	Н	h			
	aluminium cap,		12 4	7.2	5.5			A 14 12 441
	indicator line black.		12 6	7.1	5.6			A 14 12 461
	ABS (UL 94 HB),		D d1	d2	Н	h1	h2	
	aluminium cap,		17.8 6	13	12	3.6	10.1	A 14 18 461
	indicator line black.		22.5 6	14	13.3	3	11	A 14 22 461
			37.8 6	32.8	15.9	3	13.5	A 14 38 461
	ABS (UL 94 HB),		D d1	d2	Н	h1	h2	
	aluminium cap,		18.7 6	12.9		3.3	9.5	A 14 18 261
	indicator line black.		22.7 6	14	13.1	2.9	11.1	A 14 22 261
			32.8 6	15.5		3	12.3	A 14 32 261
		d1	38.9 6	33	16	3	13.5	A 14 38 261
		(<u>d2</u>) [E]						
	ABS (UL 94 HB),		D d1	d2	Н	h1	h2	
	aluminium cap black anodised,		18.6 6	13	12	3.3	9.5	A 14 18 260
	indicator line white.	T Z I	22.8 6	14	13	3	11	 A 14 22 260
	marcator fine Wille.		33 6	15.5	14.3	3	12.5	A 14 32 260

TUNING KNOBS Information in the product catalogue on page 16









WITH LATERAL SCREW FIXING									
Picture	Material	Dim. in mm						Part-No.	
	Duroplast black, indicator line white.	d1 d2 x	D d1 18.9 6	d2 14.9	H 13.5	h1 3.1	h2 10.8	A 13 19 260	
	Thermoplastic black, red marking.	d1	D d1 16.4 4	d2 12.5	H 12.3	h1 2	h2 10.4	A 13 16 240	
	Thermoplastic black.	1 2 E	D d1 20 6	d2 17	H 16	h1 3	h2 14	A 13 21 160	
	Thermoplastic black.		D d	H 13.2	h1 1.5	h2 9.9	I 11.6	A 13 10 560	
	Thermoplastic black.	d1 d2 E	D d1 11.4 4 19.9 6	d2 9.5 16	H 10.5 15.5	h1 1.3 3.5	H2 I 9 8.5 13.2 13.5	A 16 85 540 A 16 13 560	
	Duroplast black, indicator line white.	d d2 E	D d1 20 4 20 6	d2 13.7 13.6		h1 3.4 3.5	h2 l 13.5 13.5 13.5 13.5	A 13 13 540 A 13 13 560	
	Thermoplastic black, indicator line white.	d1	D d1 20.7 6	d2 16.9	H 19.7	h1 6.2	h2 l 18.3 13.5	A 13 12 560	
	Duroplast black. indicator line white.	1 2 T	D d1 29 6	d2 21	H 20.1	h1 3.2	h2 I 15 19	A 13 19 560	
	Duroplast black, indicator line white.		D d1 31 6	d2 21.4	H 20	h1 6.5	h2 l 17.5 20	A 13 21 060	







TUNING-KNOBS

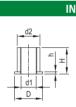
Information in the product catalogue on page 16

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WITH LATERAL SCREW FIXING												
Picture	Material	Dim. in mm										Part-No.
	Duroplast black.		D 18.8	d1 6	d2 16.4	H 12.5	h1 2.6	h2 10	l1 11.5	11.5	А	. 13 11 860
	Duroplast black.		D 20.3	d1 6	d2 14	H 18	h1 3	h2 14.5	l1 19	20	А	13 19 860
1	Duroplast black. indicator line white.		20.3	d1 6 6	d2 16.7 20.2	H 12.8 16	h1 3 3.4	h2 11 14.5	17 21	15 19		. 13 17 860 . 13 21 860
4	Duroplast black, indicator line white.	d1 d2 x	D 25	d1 6	d2 21.1	H 20	h1 2	h2 14.3	l1 24	24	А	. 13 24 860



Thermoplastic black. For universal use in order to reduce borehole from 6 to 4 mm.



INSERT – for axes with shaft ends D d1 d2 H h 7.4 4 6 7 0.6

A 13 00 040



PRODUCT SOLUTIONS TO SATISFY YOUR SPECIAL NEEDS AND REQUIREMENTS

Look at our comprehensive standard range and select the product that best matches your design ideas, your components and the needs of your customers.

In the next step you merely have to tell us what you still need for your own very personal product. Together with you we choose the necessary modifications from our wide range of services – ideal in terms of price, quality and delivery time – to meet your specific requirements.



MACHINING

We can perform individual machining processes for you, quickly and reliably, for sample or series production quantities. With our modern CNC machining facilities, we can produce individual solutions according to your design or a design proposed by us. We have detailed drawings of numerous enclosures and tuning knobs or 3D models for your ideas, ready to download.







PRINTING

You can use printing on your product to give it a personal touch. It is also possible to indicate the function and usage. With precision craftsmanship, we can carry out the required printing to your satisfaction.

Depending on the printing format and type of enclosure or tuning knob, we can offer you screen printing, tampo printing as well as digital printing.

LASER MARKING

We offer laser marking for numerous enclosures and components from our standard range.

Laser marking is ideal for individual labelling, identifying or marking. In particular, very small machine-readable markings, e.g. QR codes, barcodes, DataMatrix codes, consecutive numbering of individual parts and individual texts, can be carried out quickly and easily with laser marking.







LACQUERING

We can lacquer the enclosures and tuning knobs in any colour you wish so that it matches your application or your company CI. For special requirements, such as for improving the feel of your product, for metallic effects or for protection from electrostatic discharge, OKW offers a wide choice of lacquers.





INSTALLATION / ASSEMBLY

We offer you e.g. the assembly of the tuning knobs on your device, mounting of assemblies and installation of components, foils and display windows and much more.

If required we can support you in the development of the parts and components, and will help you plan suitable installation.



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BODY-CASE XL NEW WEARABLE ENCLOSURE SIZE



SLIM DESIGN HANDHELD ENCLOSURE, IP65

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PROPERTIES OF PLASTIC MATERIALS 39

		DUROPLAST				
Material groups	oups Styrene-Polymerisate Polycarbonate		rbonate	Polyamide PA	Elastomer TPE	Phenolharz
Abbreviation & Attribute	ABS	F	PC	PA 6x reinforced	TPE/TPV	PF
Application for the following tuning knobs	TUNING KNOBS "CLASSIC" COMBINATION KNOBS Accessories COMBINATION KNOBS	STAR-KNOBS (illuminated parts) Dials	CONTROL-KNOBS (knob body only)	TOP-KNOBS (knob body only) COM-KNOBS (knob body only) STAR-KNOBS (knob + assembly kit)	CONTROL-KNOBS (soft-touch outer shell)	TUNING KNOBS "LASSIC"
Properties for choice of material	Good resistance against medium temperature combined with good impact strength (only certain types) and antistatic adjustment. On the whole, good resistance against chemicals. UV-light may have a negative effect.	Thermoplastic with high temperature stability with excellent resistance to all kinds of temperature. On the whole, good resistance against chemicals and UV-light.		Thermoplastic with high temperature stability, extremely solid and tenacious. Good sliding properties and high capacity of resistance to wear. Contact with humidity may result in a change of properties.	Weather-resistant with good chemical properties. Depending on their Shore hardness, thermoplastic elastomers can have other properties.	High thermal and chemical resistance. Insoluble and non- fusible when cured, recyclable and reusable thanks to modern processes.
Recommended use	Cases and operating elements of all kinds. Suitable for use in enclosed rooms, also at low temperatures.	Recommended for enclosures in enclosed rooms and out of doors. Not recommen- ded for use with strong alkalis or for direct exposure to sunlight.	Ideal for LED compo- nents such as light guides, lenses, head- lights for cars, street lights, in TV studios.	Ideally suited for technical parts with complex geometry, e.g. outdoor applications and machine building.	Gives tuning knobs a pleasant touch sensation. Particularly suitable for hard/ soft connections with polycarbonate.	For components in chemically resistant environments.
Resistance of material to						
Gasoline Diesel oil	•	-	-	+	-	+
Sea water	+	+	+	+	+	+
Hydrochlorid acic 10%	•	+	+	_	+	+
Weak alkaline solutions Strong alkaline solutions	+ +	<u> </u>	<u> </u>	_ _	+	+
Atmospheric influences	•	+	+	+	+	+
Lactic acid	+	+	+	•	+	+
Acetone	-	-	=	+	-	•

Up-to-date material data sheets are also available in the Internet www.okw.com

The plastic properties are exclusively applicable for the specified standard test pieces. Variations may occur as far as cases and technical parts are concerned.

This does not exempt you from carrying out your own tests. The application, utilisation and subsequent processing are beyond our control and the responsibility for this therefore rests solely with you.

DESCRIPTION TO RESISTANCES OF MATERIALS

Values at room temperature:

+ = constant

○ = conditionally constant

- = inconstant

Simultaneous exposure to different media may alter the resitive properties of a material! To be safe, it is advisable to test the cases for sufficient resistance of the material under the conditions of the specific application.

MATERIAL **ABBREVIATION**

ABS Acrylnitrile-Butadiene-Styrene

PA Polyamide

Polycarbonate

Phenol-Formaldehyde Resin Thermoplastic Elastomer

TPV Thermoplastic Vulkanizate







Odenwälder Kunststoffwerke Gehäusesysteme GmbH Friedrich-List-Str. 3 74722 Buchen, Germany

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