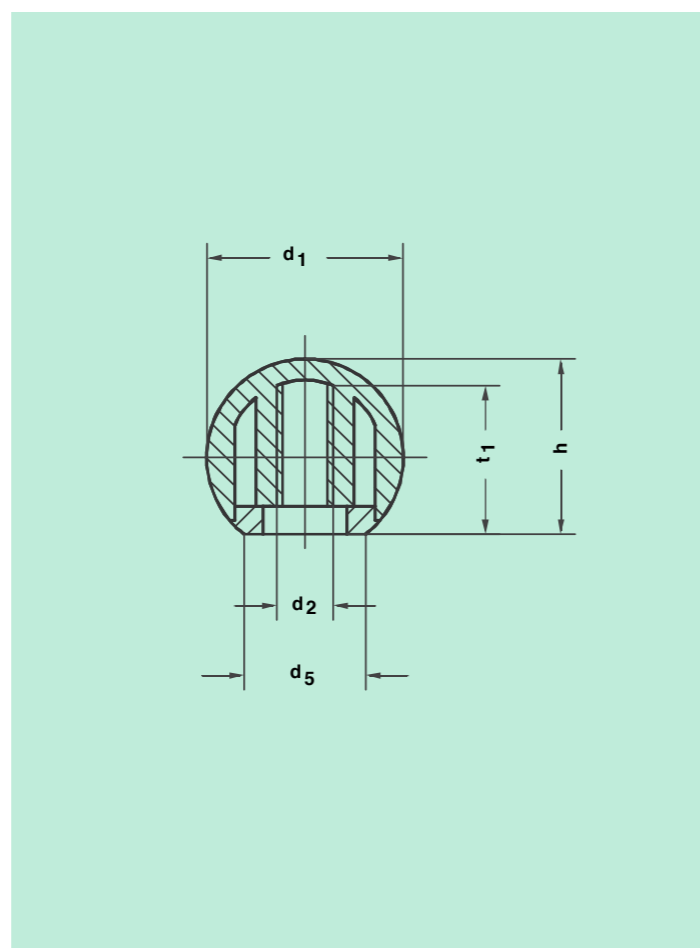


Ball Knobs

from reinforced ABS

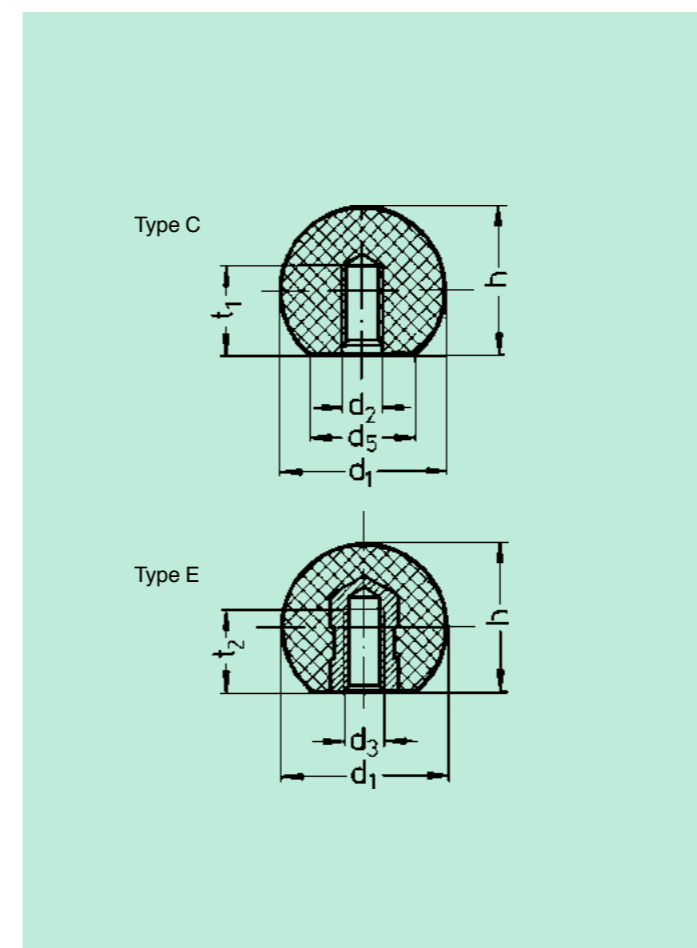


Model: ABS, black. Other colours on request.

Steel, stainless steel and aluminium version on request.

Ball Knobs from ABS

Order No.	Thread d ₂	t ₁ mm	Size d ₁ mm	d ₅ mm	h mm
22 20 05 C	M 5	15,5	20	12	18
22 20 06 C	M 6				
22 25 06 C	M 6	20	25	15	22,5
22 25 08 C	M 8				
22 32 06 C	M 6				
22 32 08 C	M 8	26,5	32	18,6	29
22 32 10 C	M 10				
22 40 08 C	M 8				
22 40 10 C	M 10	34,5	40	21	37
22 40 12 C	M 12				



Ball Knobs

similar to DIN 319



Model: Duroplastic FS 31, black, deburred and polished. Bush from steel, zinc plated.

Type C: with plastic thread.

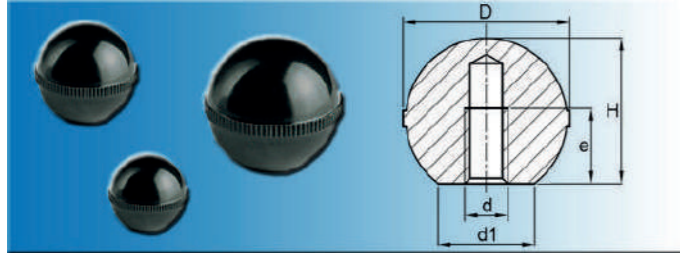
Type E: with bush thread.

Matt surface and red colour on request
Steel, stainless steel and aluminium version on request.

Ball Knobs similar to DIN 319

Order No.	Thread d ₂	t ₁ mm	Order No.	Thread d ₃	t ₂ mm	Size d ₁ mm	d ₅ mm	h mm
* 20 10 03 C	M 3	5				10	5	9,5
20 12 04 C	M 4	8				12	6	11
20 16 04 C	M 4	8				16	8	15
20 20 05 C	M 5	10,5	20 20 05 E	M 5	10,5	20	12	18
20 20 06 C	M 6	13,5						
20 25 06 C	M 6	13,5	20 25 06 E	M 6	13,5	25	15	22,5
20 25 08 C	M 8	16						
20 32 06 C	M 6	13,5						
20 32 08 C	M 8	16	20 32 08 E	M 8	16	32	18	29
20 32 10 C	M 10	21						
20 36 08 C	M 8	16	20 36 08 E	M 8	16	36	16	34
20 36 10 C	M 10	21	20 36 10 E	M 10	21			
20 40 10 C	M 10	21	20 40 10 E	M 10	21	40	22	37
20 40 12 C	M 12	25	20 40 12 E	M 12	25			
20 50 12 C	M 12	25	20 50 12 E	M 12	25	50	29	46

Ball knobs / round | knurled, with threaded hole

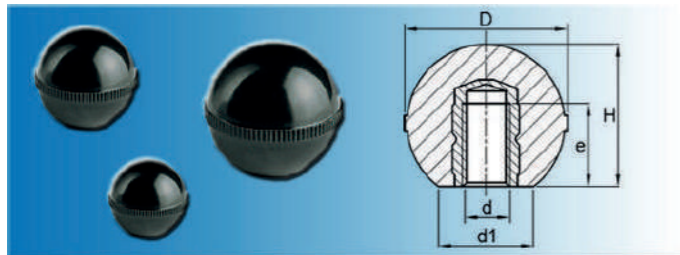


Material: thermoset material FS 31 DIN 7708
Colour: black

Part no.	D	d	d1	e	H
6111120101	20	M5	12	8	18
6111125101	25	M6	15	10	23
6111130101	30	M8	16	14	27
6111135101	35	M10	19	16	32

Part no.	D	d	d1	e	H
6111140101	40	M10	22	16	37
6111145101	45	M12	20	18	43
6111150101	50	M12	20	18	47
6111155101	55	M12	20	18	53

Ball knobs / round | knurled, with brass insert



Material: thermoset material FS 31 DIN 7708
Colour: black

Part no.	D	d	d1	e	H
6111120301	20	M5	12	9	18
6111125301	25	M6	15	10	23
6111130301	30	M8	16	14	27
6111135301	35	M10	19	17	32

Part no.	D	d	d1	e	H
6111140301	40	M10	22	17	37
6111145301	45	M12	20	19	43
6111150301	50	M12	20	19	47
6111155301	55	M12	20	19	53

Revolving ball knobs

Shaft Steel

SPECIFICATION

Types

- Type **A**: with male thread
- Type **B**: with female thread

Plastic
Duroplast (Phenolic PF)

- temperature resistant up to 110 °C
- black, shiny finish

Shaft Steel
zinc plated, blue passivated

INFORMATION

Revolving ball knobs GN 319.2 can be utilized instead of revolving handles i.e. with handwheels.

Revolving ball knobs

Shaft Stainless Steel



SPECIFICATION

Types

- Type **A**: with male thread
- Type **B**: with female thread

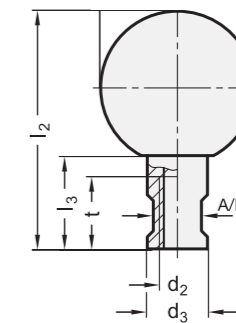
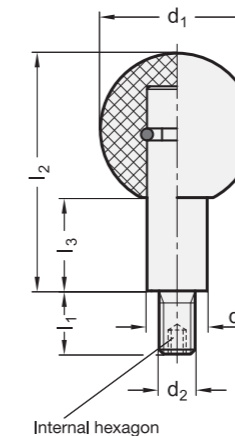
Plastic
Duroplast (Phenolic PF)

- temperature resistant up to 110 °C
- black, shiny finish

Shaft
Stainless Steel AISI 303
matt shot-blasted

INFORMATION

Revolving ball knobs GN 319.5 can be utilized instead of revolving handles i.e. with handwheels.



GN 319.2

Description	d1	d2	d3	l1	l2 ±1	l3 ±1	A/F	t min.	⚖
GN 319.2-25-M6-A	25	M 6	10	11	37.5	15	-	29	
GN 319.2-32-M8-A	32	M 8	13	13	48	19	-	63	
GN 319.2-40-M10-A	40	M 10	16	14	61	24	-	119	
GN 319.2-50-M12-A	50	M 12	20	21	78	31	-	237	
GN 319.2-25-M6-B	25	M 6	10	-	37.5	15	8	10	24
GN 319.2-32-M8-B	32	M 8	13	-	48	19	10	12	51
GN 319.2-40-M10-B	40	M 10	16	-	61	24	14	16	99
GN 319.2-50-M12-B	50	M 12	20	-	78	31	17	16	198

GN 319.5

STAINLESS STEEL

Description	d1	d2	d3	l1	l2 ±1	l3 ±1	A/F	t min.	⚖
GN 319.5-25-M6-A	25	M 6	10	11	37.5	15	8	-	29
GN 319.5-32-M8-A	32	M 8	13	13	48	19	10	-	63
GN 319.5-40-M10-A	40	M 10	16	14	61	24	14	-	120
GN 319.5-50-M12-A	50	M 12	20	21	78	31	17	-	190
GN 319.5-25-M6-B	25	M 6	10	-	37.5	15	8	10	24
GN 319.5-32-M8-B	32	M 8	13	-	48	19	10	12	52
GN 319.5-40-M10-B	40	M 10	16	-	61	24	14	16	100
GN 319.5-50-M12-B	50	M 12	20	-	78	31	17	16	200

Spherical handles

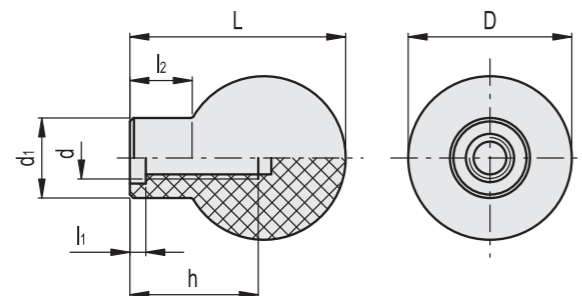
Duroplast

MATERIAL

Phenolic based (PF) Duroplast, black colour, glossy finish.

STANDARD EXECUTION

Threaded blind hole.



Code	Description	D	L	d	d1	h	l1	l2	⚖
45971	P.111/37-M8	37	47	M8	18	16	4	13	38
45991	P.111/47-M10	47	62	M10	23	26	5	17	80

Spherical handles

Duroplast

MATERIAL

Phenolic based (PF) Duroplast, black colour, glossy finish with equatorial groove.

MAGNIFYING LENS

Transparent polyamide based (PA-T) technopolymer. Press-fit assembly. It improves the visibility of the labels.

STANDARD EXECUTION

Glass-fibre reinforced polyamide based (PA) technopolymer self-locking boss, plain blind hole.

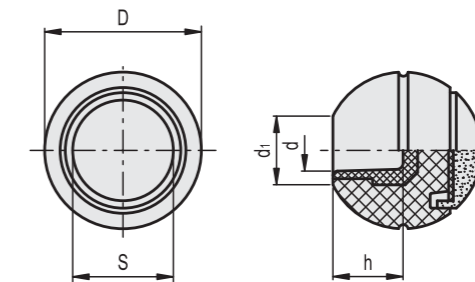
The elastic coupling, by press-fit assembly on h9 tolerance drawn stock bars, is not affected by vibrations and prevents the handle from slipping off (see Technical Data on page A13).

ACCESSORIES ON REQUEST

Self-adhesive labels MA. (on page 551) with standard marks and symbols to be ordered separately.

ASSEMBLY INSTRUCTIONS

1. Fit the handle, without the magnifying lens, onto slight chamfered shaft end and push as far as possible by hand or by means of a small press. Alternatively it is possible to tap the handle with a plastic or wooden mallet until firmly in place. In this case we strongly recommend to use a cloth or other suitable soft material over the product to avoid any surface damage.
2. Stick the self-adhesive label (printed on the adhesive side) to the inner surface of the magnifying lens by pressing from the centre to the external side to avoid air bubbles. Assemble the magnifying lens to the handle face recess by gently tapping with a wooden or plastic mallet, until firmly in place. The label is therefore protected by the watertight magnifying lens.



Code	Description	D	d	S	d1	h	⚖
55001	SH.35 N-8	35	8	20	15	14	27
55011	SH.35 N-10	35	10	20	15	18	26
55101	SH.40 N-10	40	10	25	18	18	40
55111	SH.40 N-12	40	12	25	18	21	38
55201	SH.45 N-12	45	12	25	21	21	60
55211	SH.45 N-14	45	14	25	21	24	58

Grips from Steel resp. Stainless Steel

INOX



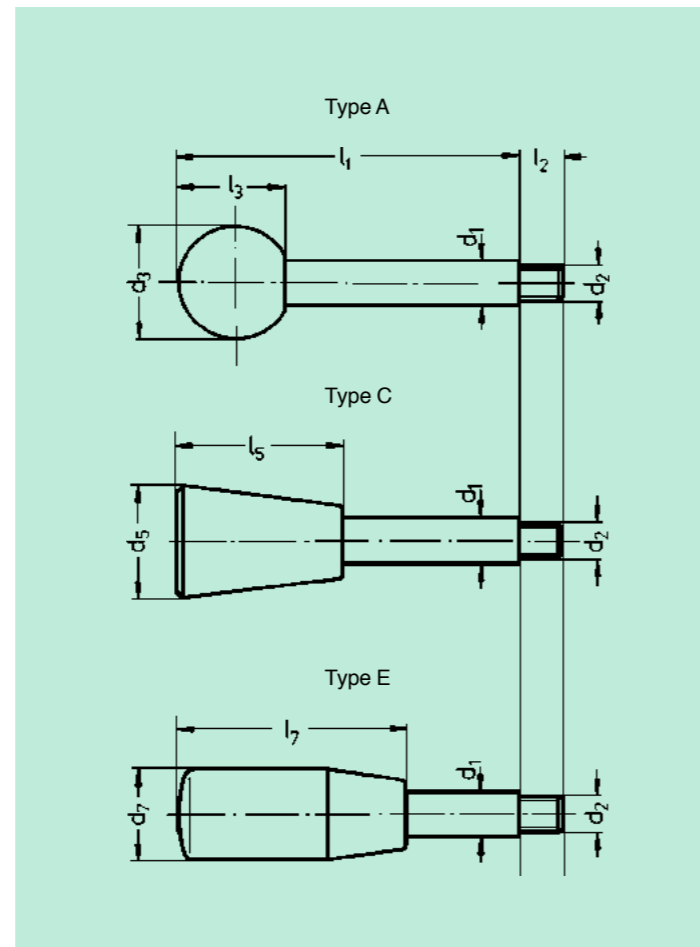
Grips are simple operating elements suitable for various types of applications.

Model: Handle from steel, black oxide finish, resp. stainless steel 1.4305, matt.
Plastic knobs Duroplastic FS 31, black polished.

Type A: with ball knob DIN 319

Type C: with taper knob

Type E: with cylindric knob



Grips - Steel

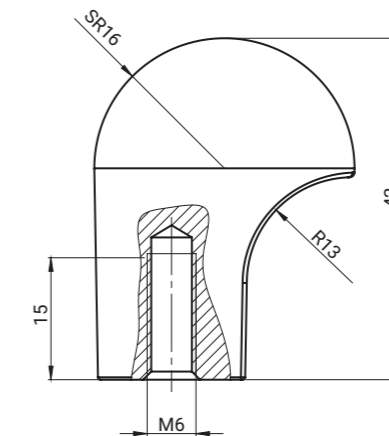
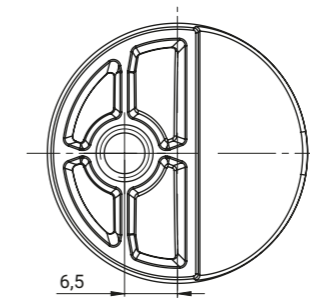
Order No.	d ₃	l ₃	Order No.	d ₅	l ₅	Order No.	d ₇	l ₇	Size	Thread	Length of Screw l ₁ (mm)		l ₂
Type A	mm	mm	Type C	mm	mm	Type E	mm	mm	d ₁	d ₂			mm
35 08 ... A	20	18	35 08 ... C	20	30	35 08 ... E	18	40	8	M 6	63	100	9
35 10 ... A	25	22,5	35 10 ... C	25	38	35 10 ... E	21	50	10	M 8	80	125	11
35 12 ... A	32	29	35 12 ... C	30	46	35 12 ... E	23	65	12	M 10	100	160	14
35 14 ... A	35	32,5	35 14 ... C	35	53	35 14 ... E	26	80	14	M 12	125	200	16

... Please indicate here the desired length e.g. 100 for l₁ = 100 mm.

Grips - Stainless Steel

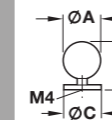
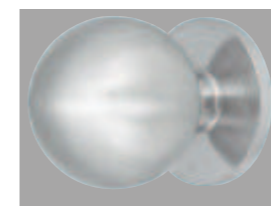
Order No.	d ₃	l ₃	Order No.	d ₇	l ₇	Size	Thread	Length of Screw l ₁ (mm)		l ₂
Type A	mm	mm	Type E	mm	mm	d ₁	d ₂			mm
35 08 ... A E0A	20	18	35 08 ... E E0A	18	40	8	M 6	63	100	9
35 10 ... A E0A	25	22,5	35 10 ... E E0A	21	50	10	M 8	80	125	11
35 12 ... A E0A	32	29	35 12 ... E E0A	23	65	12	M 10	100	125	14
35 14 ... A E0A	35	32,5	35 14 ... E E0A	26	80	14	M 12	125	200	16

... Please indicate here the desired length e.g. 080 for l₁ = 80 mm.



CATALOGUE NO.	DETAL	MATERIAL	FINISH [C]	
4.250.001	Handle	ZAMAK 5	Chrome	01
			Brass	12
			No coating	0

Furniture knob



A = Knob Ø
B = Height
C = Base Ø

> Material: Stainless steel, quality 1.4305/AISI 303
> Colour/finish: Matt brushed

Knob Ø mm	Height mm	Base Ø mm	Cat. No.
20	27	20	135.13.601
25	32	25	135.13.602
30	38	30	135.13.603

Packing: 1 or 10 Piece