

Ball Valve

PROFIN SI3

PROFIN SI3IT
PROFIN SI3FIT
PROFIN SI3LIT
PROFIN SI33LIT

Type Series Booklet



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Type Series Booklet PROFIN SI3

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Ball Valves

Three-piece Ball Valves

PROFIN S13



Main applications

- Building services
- Industrial plants
- Water
- Air-conditioning systems
- Chemical industry
- Cooling circuits
- Pressure boosting
- Process engineering
- Snow-making systems
- Swimming pools
- Washing plants
- Water supply systems

Fluids handled

- Cleaning agents
- Condensate
- Cooling water
- Corrosive fluids
- Dipping paints
- Drinking water
- Fire-fighting water
- Heating water
- Lubricants
- Oil
- River water, lake water and groundwater
- Service water
- Solvents
- Wash water

Operating data

Operating data of PROFIN S13IT

Operating properties

Characteristic	Value
Nominal pressure	PN 40
Nominal size	DN 15 - 100
Nominal size [inch]	NPS ½ - 4
Max. permissible pressure [bar]	40
Min. permissible temperature [°C]	≥ -20
Max. permissible temperature [°C]	≤ +150

Selection as per pressure/temperature ratings (⇒ Page 5)

Operating data of PROFIN S13FIT

Operating properties

Characteristic	Value
Nominal pressure	PN 16/40
Nominal size	DN 15 - 100
Nominal size [inch]	NPS ½ - 4
Max. permissible pressure [bar]	40 (DN 15-50) 16 (DN 65-100)
Min. permissible temperature [°C]	≥ -20
Max. permissible temperature [°C]	≤ +150

Selection as per pressure/temperature ratings (⇒ Page 5)

Operating data of PROFIN S13LIT

Operating properties

Characteristic	Value
Nominal pressure	PN 40
Nominal size	DN 8 - 100
Nominal size [inch]	NPS ¼ - 4
Max. permissible pressure [bar]	40
Min. permissible temperature [°C]	≥ -20
Max. permissible temperature [°C]	≤ +150

Selection as per pressure/temperature ratings (⇒ Page 5)

Operating data of PROFIN S133LIT

Operating properties

Characteristic	Value
Nominal pressure	PN 40
Nominal size	DN 15 - 100
Nominal size [inch]	NPS ½ - 4
Max. permissible pressure [bar]	40
Min. permissible temperature [°C]	≥ -20
Max. permissible temperature [°C]	≤ +150

Selection as per pressure/temperature ratings (⇒ Page 5)

Valve body materials

Overview of available materials

Material	Material number	Temperature limit
ASTM A351 CF8M	1.4408	≤ 150 °C

Design details

Design

- Three-piece ball valve
- Full bore
- Locking lever
- Blowout-proof shaft
- Top flange to ISO 5211
- Anti-static design
- Spring-loaded shaft seal
- Design to ASME B16.34
- Solid ball

- Anti-static design prevents electrostatic charging during operation.
- Added safety by blowout-proof shaft
- Valve can be locked in open or closed position.
- Minimum pressure loss by hydraulically favourable flow passage

Product information

Product information as per Regulation No. 1907/2006 (REACH)

For information as per chemicals Regulation (EC) No. 1907/2006 (REACH), see <http://www.ksb.com/reach>.

Variants

- Pneumatic actuators
- Limit switches
- Model with short butt weld ends (for Profin SI3IT only)
- Long butt weld ends (standard for Profin SI3LIT)
- Flanges to DIN 3202 F-1 PN 40/16 (standard for PROFIN-SI3FIT)
- Threaded ends, BSP-DIN EN 10226-1 / ISO 7-1 (standard for Profin SI3IT)
- Long butt weld end / threaded end to BSP-DIN EN 10226-1 / ISO 7-1 (standard for PROFIN-SI33LIT)

Purchase order specifications

Please specify the following information in all enquiries or purchase orders:

1. Type
2. Nominal pressure
3. Nominal size
4. Operating pressure
5. Differential pressure
6. Operating temperature
7. Fluid handled
8. Pipe connection
9. Reference number

Product benefits

- Top flange to ISO 5211 for easy mounting of all actuator types.
- Square shaft end for easy mounting of all actuator types.
- Spring-loaded shaft seal

Pressure/temperature ratings

Permissible operating pressures [bar] (to ASME B16.34)

PN	Material	[°C]										
		-20 to 100	105	110	115	120	125	130	135	140	145	150
16 ¹⁾	ASTM A 351 CF8M	16	16	16	16	16	16	16	12	8	4	0
40		40	36	32	28	24	20	16	12	8	4	0

¹ Profin SI3FIT only

Materials

Materials of PROFIN SI3IT

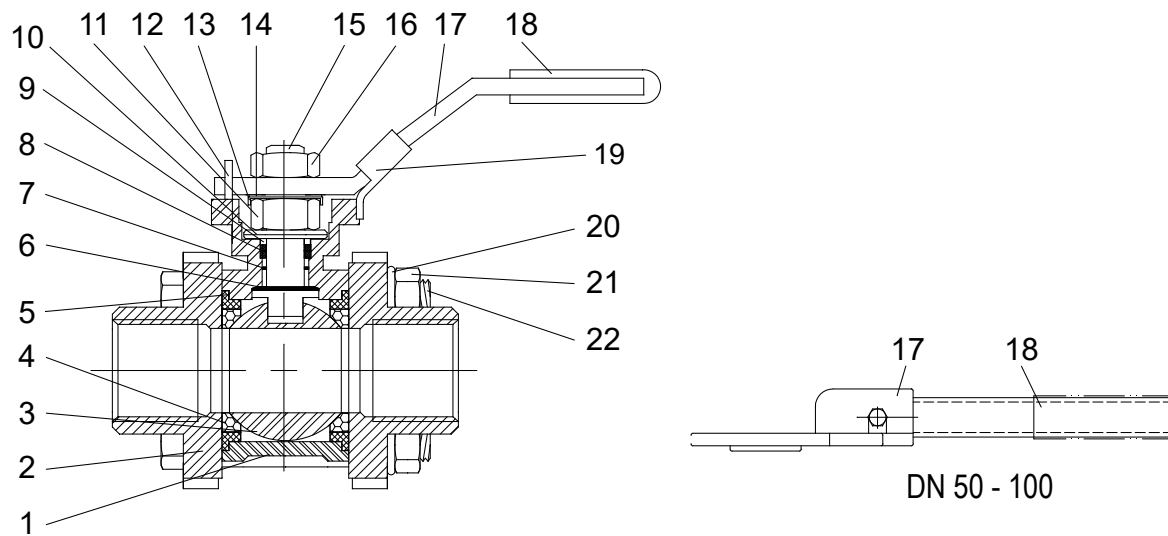


Fig. 1: Sectional drawings

Parts list

Part No.	Description	Material	Material number	Note
1	Body	ASTM A 351 CF8M	1.4408	-
2	End cap	ASTM A 351 CF8M	1.4408	-
3	Ball	ASTM A 351 CF8M	1.4408	-
4	Seat	RTFE	-	Standard
		PTFE	-	Variant
5	Joint ring	PTFE	-	-
6	Thrust washer	PTFE	-	-
7	O-ring	Viton	-	-
8	Shaft packing	PTFE	-	-
9	Ring	AISI 304	-	-
10	Disc spring	AISI 304	-	-
11	Shaft nut	AISI 304	-	-
12	Stop pin	AISI 304	-	-
13	Locking ring	AISI 304	-	-
14	Ring	AISI 304	-	-
15	Shaft	AISI 316	-	-
16	Lever nut	AISI 304	-	-
17	Lever	AISI 304	-	-
18	Lever sleeve	Plastic	-	-
19	Locking device	-	-	-
20	Spring washer	AISI 304	-	-
21	Nut	AISI 304	-	-
22	Bolt	AISI 304	-	-

Materials of PROFIN SI3FIT

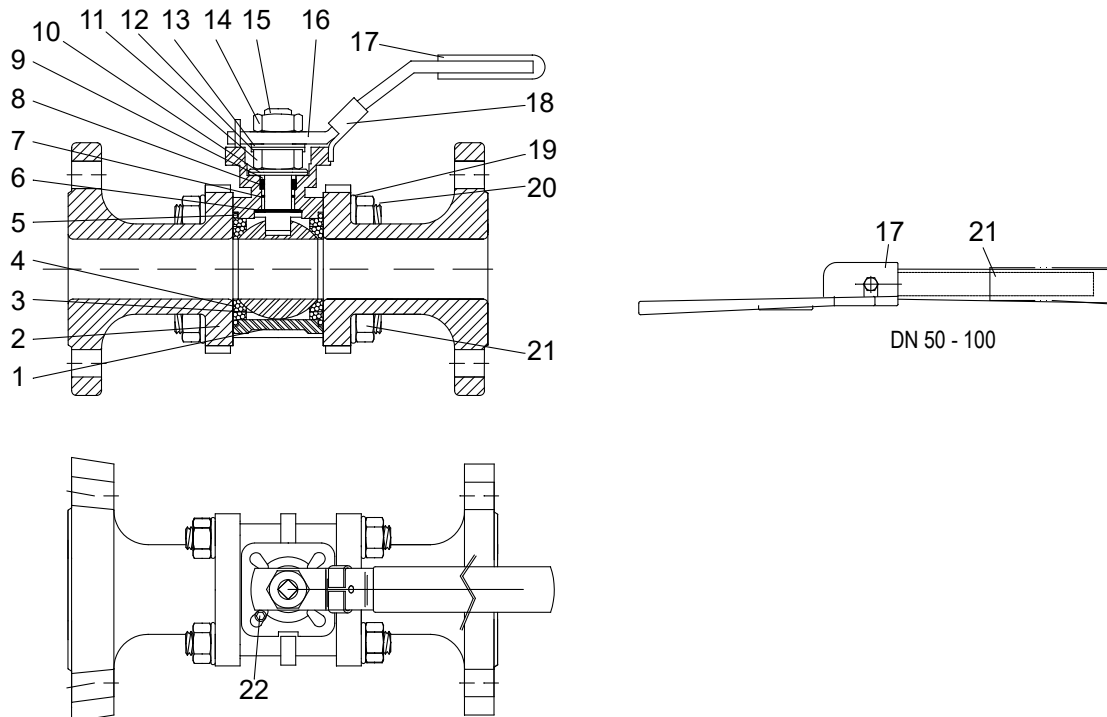


Fig. 2: Sectional drawings

Parts list

Part No.	Description	Material	Material number	Note
1	Body	ASTM A 351 CF8M	1.4408	-
2	End cap	ASTM A 351 CF8M	1.4408	-
3	Ball	ASTM A 351 CF8M	1.4408	-
4	Seat	RTFE	-	Standard
		PTFE	-	Variant
5	Joint ring	PTFE	-	-
6	Thrust washer	PTFE	-	-
7	O-ring	Viton	-	-
8	Shaft packing	PTFE	-	-
9	Ring	AISI 304	-	-
10	Disc spring	AISI 304	-	-
11	Shaft nut	AISI 304	-	-
12	Locking ring	AISI 304	-	-
13	Ring	AISI 304	-	-
14	Lever nut	AISI 304	-	-
15	Shaft	AISI 316	-	-
16	Lever	AISI 304	-	-
17	Lever sleeve	Plastic	-	-
18	Locking device	-	-	-
19	Spring washer	AISI 304	-	-
20	Bolt	AISI 304	-	-
21	Nut	AISI 304	-	-
22	Stop nut	AISI 304	-	-

Materials of PROFIN SI3LIT

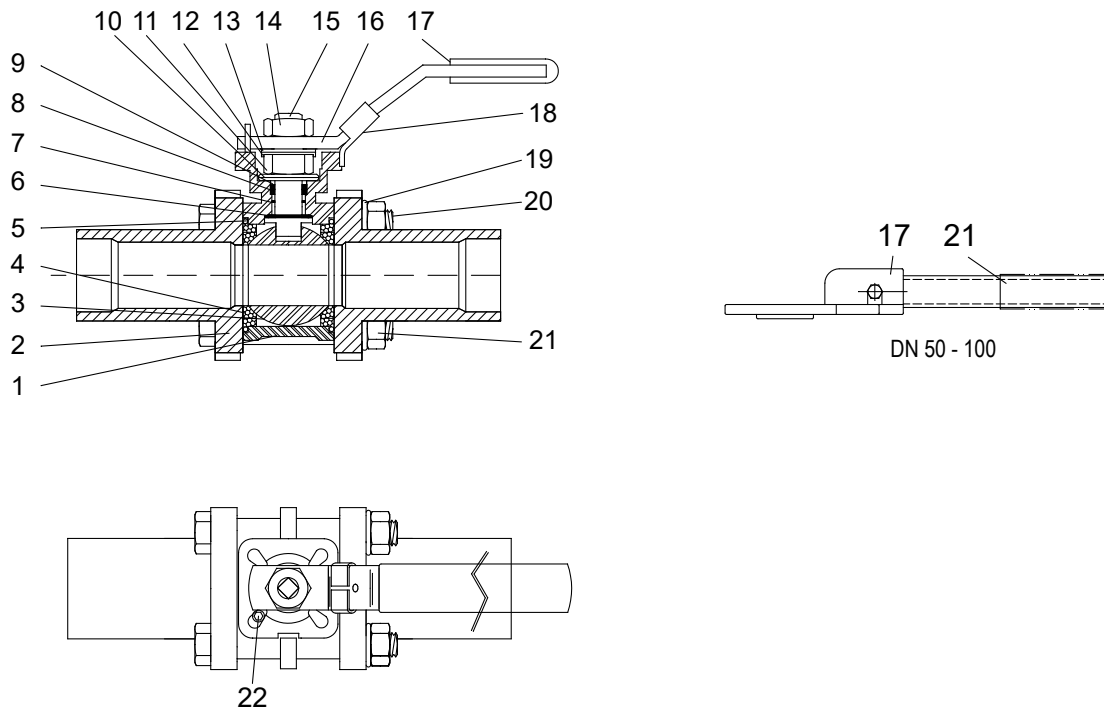


Fig. 3: Sectional drawings

Parts list

Part No.	Description	Material	Material number	Note
1	Body	ASTM A 351 CF8M	1.4408	-
2	End cap	ASTM A 351 CF8M	1.4408	-
3	Ball	ASTM A 351 CF8M	1.4408	-
4	Seat	RTFE	-	Standard
		PTFE	-	Variant
5	Joint ring	PTFE	-	-
6	Thrust washer	PTFE	-	-
7	O-ring	Viton	-	-
8	Shaft packing	PTFE	-	-
9	Ring	AISI 304	-	-
10	Disc spring	AISI 304	-	-
11	Shaft nut	AISI 304	-	-
12	Locking ring	AISI 304	-	-
13	Ring	AISI 304	-	-
14	Lever nut	AISI 304	-	-
15	Shaft	AISI 316	-	-
16	Lever	AISI 304	-	-
17	Lever sleeve	Plastic	-	-
18	Locking device	-	-	-
19	Spring washer	AISI 304	-	-
20	Bolt	AISI 304	-	-
21	Nut	AISI 304	-	-
22	Stop nut	AISI 304	-	-

Materials of PROFIN SI33LIT

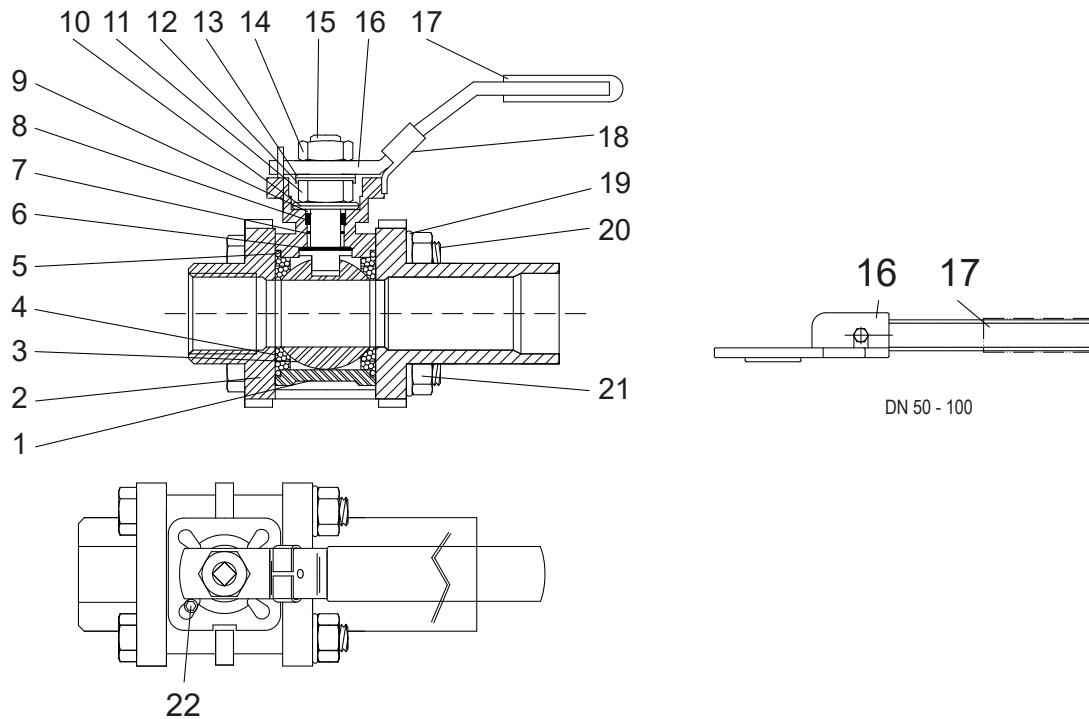


Fig. 4: Sectional drawings

Overview of available materials

Part No.	Description	Material	Material number	Note
1	Body	ASTM A 351 CF8M	1.4408	-
2	End cap	ASTM A 351 CF8M	1.4408	-
3	Ball	ASTM A 351 CF8M	1.4408	-
4	Seat	RTFE	-	Standard
		PTFE	-	Variant
5	Joint ring	PTFE	-	-
6	Thrust washer	PTFE	-	-
7	O-ring	Viton	-	-
8	Shaft packing	PTFE	-	-
9	Ring	AISI 304	-	-
10	Disc spring	AISI 304	-	-
11	Shaft nut	AISI 304	-	-
12	Locking ring	AISI 304	-	-
13	Ring	AISI 304	-	-
14	Lever nut	AISI 304	-	-
15	Shaft	AISI 316	-	-
16	Lever	AISI 304	-	-
17	Lever sleeve	Plastic	-	-
18	Locking device	-	-	-
19	Spring washer	AISI 304	-	-
20	Bolt	AISI 304	-	-
21	Nut	AISI 304	-	-
22	Stop nut	AISI 304	-	-

Dimensions and weights

Dimensions and weights of PROFIN SI3IT

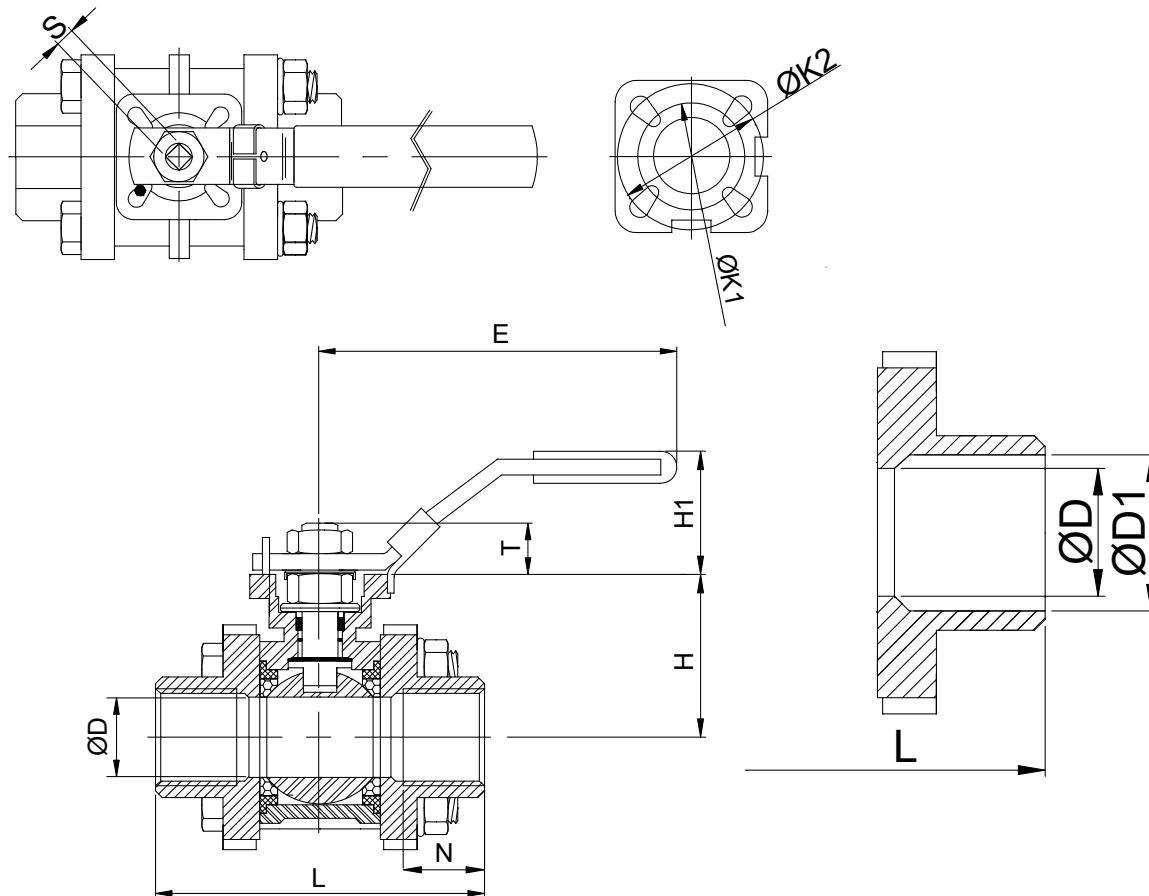


Fig. 5: Dimensions; 1) Threaded end; 2) Butt weld end

Dimensions and weights

PN	DN	ØD	L	H	E	T	S	ØD1	ØK1 ²⁾	ØK2 ²⁾	N	H1	[kg]
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
40	10	12,7	55	38	143	9	9	17,7	F03	F04	12,5	26	0,55
	15	15	75	38,0	143	9	9	21,8	F03	F04	20,0	26	0,60
	20	20	80	47,0	143	9	9	27,2	F03	F04	21,0	26	0,77
	25	25	90	57,2	160	11	11	34,0	F04	F05	21,0	32	1,25
	32	32	110	62,5	160	11	11	42,7	F04	F05	27,5	32	1,72
	40	38	120	77,5	187	14	14	48,8	F05	F07	26,5	42	2,55
	50	50	162	86,5	187	14	14	61,2	F05	F07	31,0	42	3,36
	65	65	162	108,0	350	17	17	74,0	F07	F10	28,0	32	9,00
	80	80	184	115,0	350	17	17	90,0	F07	F10	33,5	32	13,20
	100	100	228	135,0	350	22	22	115,6	F10	F12	41,0	37	21,40

Mating dimensions as per standard

Face-to-face lengths: See table

Threaded ends: BSP DIN EN 10226-1/ISO 7/1

² ISO 5211

Dimensions and weights of PROFIN S13FIT

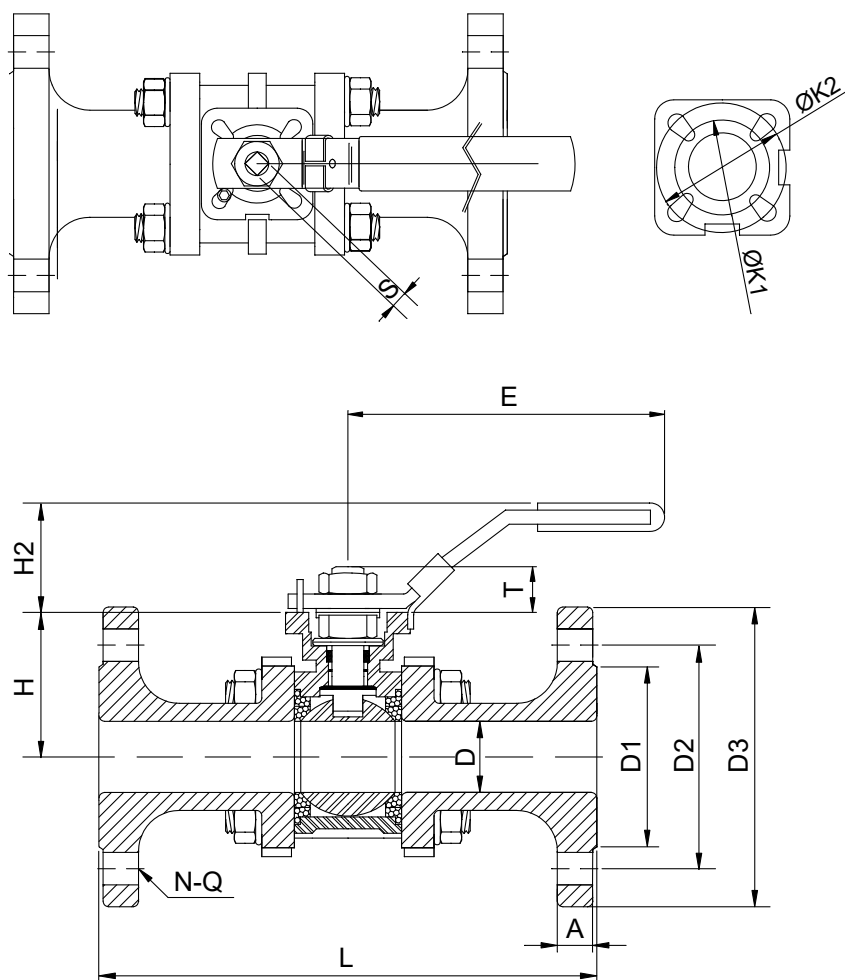


Fig. 6: Dimensions

Dimensions and weights

PN	DN	D	L	H	H2	E	T	D1	D2	D3	A	N	Q	ØK1 ³⁾	ØK2 ³⁾	S	[kg]
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
40	15	15	130	38,0	26	143	9	45	65	95	14	4	14	F03	F04	9	2,07
	20	20	150	47,0	26	143	9	58	75	105	16	4	14	F03	F04	9	2,95
	25	25	160	57,2	32	160	11	68	85	115	16	4	14	F04	F05	11	4,00
	32	32	180	62,5	32	160	11	78	100	140	16	4	18	F04	F05	11	5,50
	40	38	200	77,5	42	187	14	88	110	150	16	4	18	F05	F07	14	7,20
	50	50	230	86,5	42	187	14	102	125	165	18	4	18	F05	F07	14	9,90
16	65	65	290	108,0	32	350	17	122	145	185	15	4	18	F07	F10	17	16,30
	80	80	310	115,0	32	350	17	138	160	200	17	8	18	F07	F10	17	18,50
	100	100	350	133,0	37	350	22	158	190	235	17	8	18	F10	F12	22	32,00

Mating dimensions as per standard

Face-to-face lengths: DIN EN 558-1/1; ISO 5752/T1

Flanges: DIN 3202 F-1 PN 40/16

³ ISO 5211

Dimensions and weights of PROFIN SI3LIT

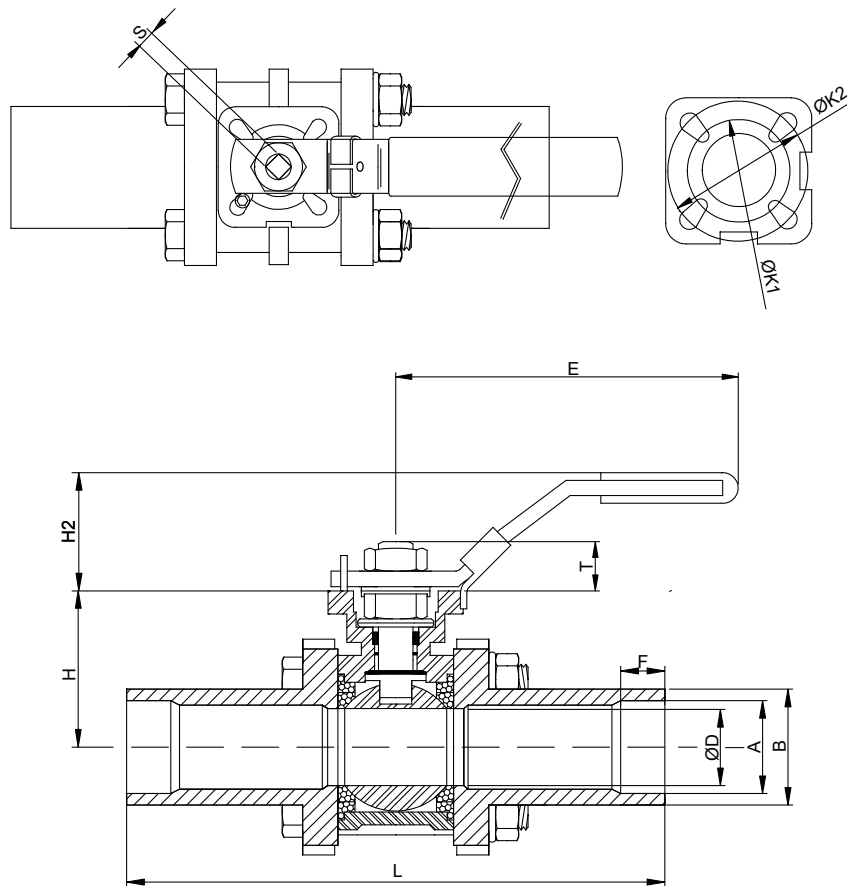


Fig. 7: Dimensions

Dimensions and weights

PN	DN	ØD	L	H	E	F	T	S	H2	A	B	ØK1 ⁴⁾	ØK2 ⁴⁾	[kg]
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
40	8	11,6	160	38,0	143	25	9	9	26	13,5	16,8	F03	F04	0,46
	10	12,6	160	38,0	143	25	9	9	26	13,5	16,8	F03	F04	0,45
	15	15,0	180	38,0	143	25	9	9	26	18,3	21,3	F03	F04	0,61
	20	20,0	180	47,0	143	25	9	9	26	23,7	26,9	F03	F04	0,84
	25	25,0	192	57,2	160	25	11	11	32	30,1	33,7	F04	F05	1,31
	32	32,0	205	62,5	160	25	11	11	32	38,4	42,4	F04	F05	2,12
	40	38,0	230	77,5	187	25	14	14	42	44,3	48,3	F05	F07	2,70
	50	50,0	243	86,5	187	25	14	14	42	55,3	60,3	F05	F07	4,16
	65	65,0	294	108,0	350	25	17	17	32	70,1	76,1	F07	F10	8,80
	80	80,0	320	115,0	350	25	17	17	32	83,1	89,1	F07	F10	11,75
	100	100,0	346	135,0	350	25	22	22	37	108,6	114,6	F10	F12	20,40

Mating dimensions as per standard

Face-to-face lengths: See table

Butt weld ends: See table

⁴ ISO 5211

Dimensions and weights of PROFIN SI33LIT

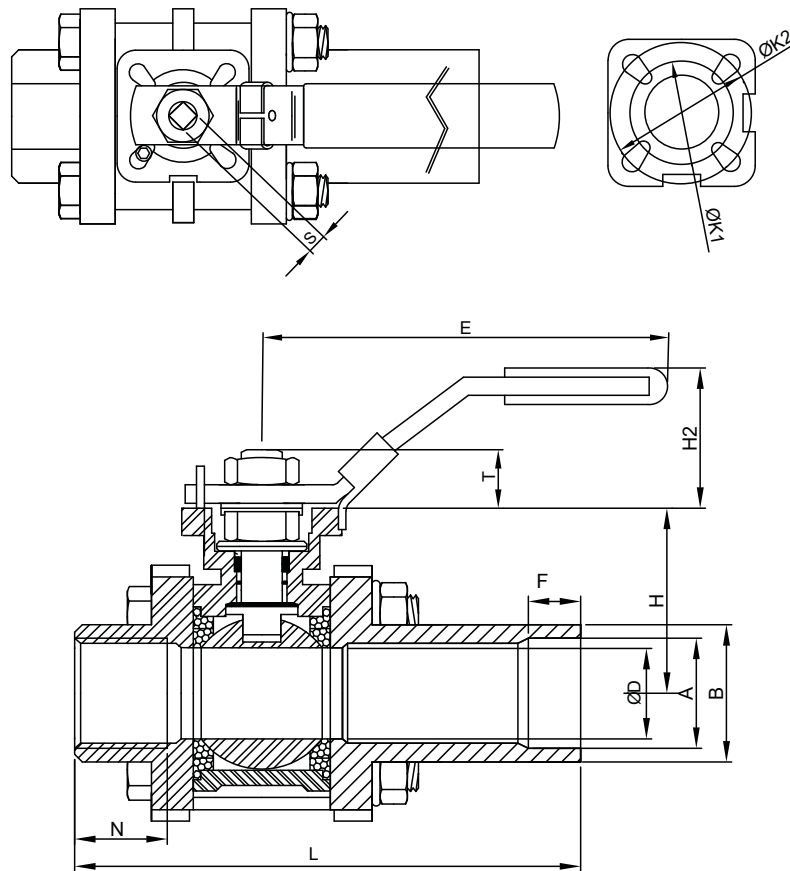


Fig. 8: Dimensions

Dimensions and weights

PN	DN	$\varnothing D$	L	H	E	F	T	S	H2	A	B	$\varnothing K1^{5)}$	$\varnothing K2^{5)}$	N	[kg]
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
40	8	12,4	107,5	38,0	143	25	9	9	26	13,5	16,8	F03	F04	10,5	0,50
	10	12,4	110,0	38,0	143	25	9	9	26	13,5	16,8	F03	F04	12,5	0,49
	15	15,0	127,5	38,0	143	25	9	9	26	18,3	21,3	F03	F04	20,0	0,63
	20	20,0	130,0	47,0	143	25	9	9	26	23,7	26,9	F03	F04	21,0	0,80
	25	25,0	141,0	57,2	160	25	11	11	32	30,1	33,7	F04	F05	21,0	1,27
	32	32,0	157,5	62,5	160	25	11	11	32	38,4	42,4	F04	F05	27,5	1,83
	40	38,0	175,0	77,5	187	25	14	14	42	44,3	48,3	F05	F07	26,5	2,70
	50	50,0	191,5	86,5	187	25	14	14	42	55,3	60,3	F05	F07	31,0	3,70
	65	65,0	228,0	108,0	350	25	17	17	32	70,1	76,1	F07	F10	28,0	10,36
	80	80,0	252,0	115,0	350	25	17	17	32	83,1	89,1	F07	F10	33,5	12,65
	100	100,0	287,0	133,0	350	25	22	22	37	108,6	114,6	F10	F12	41,0	21,20

Mating dimensions as per standard

Face-to-face lengths: See table
Threaded end: BSP DIN EN 10226-1/ISO 7-1
Butt weld end: See table

8800.57/03-EN

⁵ ISO 5211



KSB Finland Oy
Savirunninkatu 4 • 04260 Kerava
Puh. : +358 10288-411 • Faksi +358 10288-5685
www.ksb.fi