Datasheet
3-piece full bore ball valve
H3-T, H3-BW/EB, H3-F1

Si-704 EN

Edition: 2023-06

H3-T	**Threaded ends**
H3-BW/EB	**Short/long weld ends**
H3-F1	**Flanged ends**

Nominal pressure	**PN 63**	**PN40**
Nominal size (H3-T)	**DN 15 - 50**	
Nominal size (H3-BW/EB)	**DN 15 - 50**	**DN 65 - 100**
Nominal size (H3-F1)		**DN 15 - 100**

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Product Information

3-piece full bore ball valve type H3 consists of two pipe ends between which the valve body is bolted in. The valve body is equipped with mounting flange where actuators could be mounted in accordance with ISO standard.

The valve is suitable for shut-off applications of most liquids and gases in the process industry. The pipe ends are available with threaded connection (H3-T), with short welding ends (BW H3), with long welding ends (H3-EB) or with flanges (H3-F1). It is also possible to combine different types of pipe ends.

The ball valve has a maintenance free design, but is at the same time the valves main parts are easy to disassemble for replacement or inspection.

When disassembling the valve only one of the two bolt under the mounting flange (going through guide holes under the flange) is removed. When the other bolts are loosened (DN15 - 80) the valve body can be turned out and internal parts (seats, ball and sealings) can be accessed.

On the DN100 valve one of the two bolts under the mounting flange is removed, but also the bolt directly below is removed. When the other bolts loosened valve body then can be turned out and internal parts (seats, ball and sealings) can be accessed.

The seat is available in two different materials: PTFE that is standard or carbon filled PTFE (PTFE 25) for steam. The valves meet the requirements of the PED and are marked CE 0035.

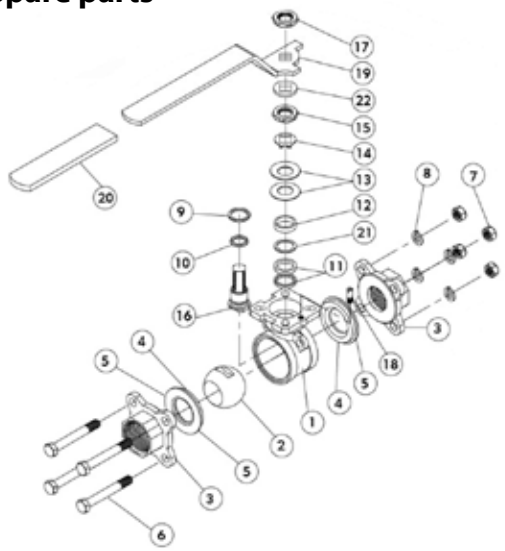
Types and materials

Type	DN	Connection	Body/Ball/End cap	Seat
H3-T	15-50	Threaded ends (BSP)	CF8M	PTFE
H3-BW	15-100	Weld ends (Butt weld)	CF8M	PTFE
H3-EB	15-100	Long welds ends	CF8M	PTFE
H3-F1	15-100	Flanged end caps (DIN PN 40)	CF8M	PTFE

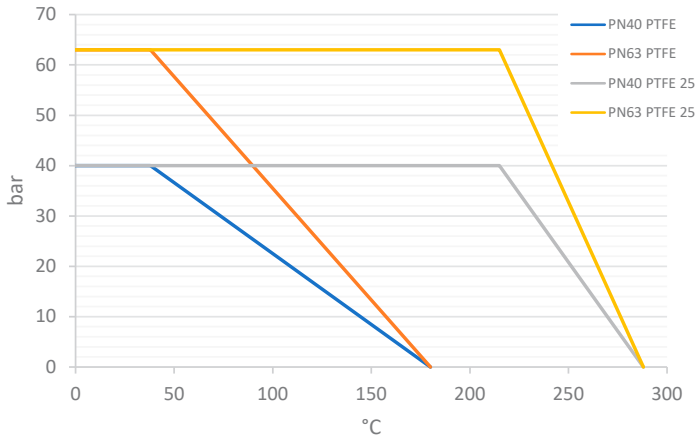
Type	DN	Connection	Body/Ball/End cap	Seat
H3-25-T	15-50	Threaded ends (BSP)	CF8M	PTFE 25
H3-25-BW	15-100	Weld ends (Butt weld)	CF8M	PTFE 25
H3-25-EB	15-100	Long welds ends	CF8M	PTFE 25
H3-25-F1	15-100	Flanged end caps (DIN PN 40)	CF8M	PTFE 25

CF8M is equivalent to A 351 CF8M which is comparable to SS 2343, AISI 316.

Spare parts

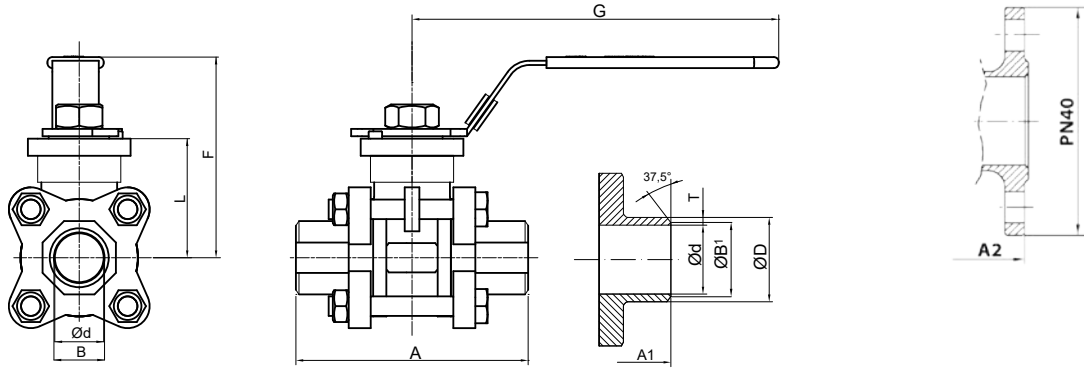


Pressure and temperature curve PTFE seat



Pos No.	DN 15-80 Q'ty	DN 100 Q'ty	Detail	Material
1	1	1	Body	CF8M
2	1	1	Ball	CF8M
3	2	2	End cap	CF8M
4	2	2	Seat	PTFE/PTFE 25
5	2	2	Sealing ring	Viton
6	4	6	Scew	Stainless steel AISI 304
7	4	6	Nut	Stainless steel AISI 304
8	4	6	Spring washer	Stainless steel AISI 304
9	1	1	Sealing washer	PTFE
10	1	1	O-ring	Viton
11	1	1	Stuffing box kit	PTFE
12	1	1	Bushing	AISI 304
13	2	2	Spring washer	Stainless steel AISI 301
14	1	1	Locking washer	Stainless steel AISI 304
15	1	1	Nut	Stainless steel AISI 304
16	1	1	Shaft	Stainless steel AISI 316
17	1	1	Nut	Stainless steel AISI 304
18	1	1	Stop screw	Stainless steel AISI 304
19	1	1	Lever	Stainless steel AISI 304
20	1	1	Lever	Vinyl
21	1	1	Sealing washer	PTFE
22	1	1	Washer w. square hole	Stainless steel AISI 304

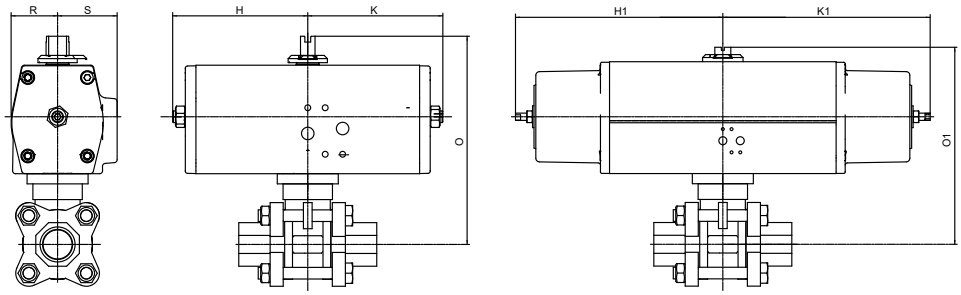
Spare parts is only available as Sealing Kit.
The following Pos No. and parts are included in the Sealing kit:
4 Seat,
5 Sealing ring,
9 Sealing washer,
10 O-ring,
11 Stuffing box,
21 Sealing washer.



DN	A H3-T	A1 H3-BW	A1 H3-EB	A2 H3-F1	B BSP	ød	F	G	L	Standard BW B¹	Standard BW øD	Standard EB B¹	Standard EB øD	ISO BW1/EB1 øD	ISO BW1/EB1 T	mm BW2/EB2 øD	mm BW2/EB2 T
15	66	73	220	130	½"	15	73	111	36	18	22	15	22,8	21,3	2	20	2
20	70.5	84	220	150	¾"	20	78	111	41	23	28	20	28,2	26,9	2	25	2
25	87	95	240	160	1"	25	87.5	186	49.5	28	31,5	25	36	33,7	2	30	2
32	96	100	254	180	1¼"	32	94	186	56	35	40	32	44,9	42,4	2	38	2
40	113.5	119.5	260	200	1½"	40	109	197	70	41	46	40	49	48,3	2	44,5	2
50	129	134.5	270	230	2"	50	117	197	78	53	60	50	63,1	60,3	2	54	2
65	–	167	338	290	–	65	139	265.5	98	69	78	65	77	76,1	2	69	2
80	–	182	350	310	–	80	149.5	265.5	108.5	84	91,5	80	91	88,9	2	84	2
100	–	225	350	350	–	100	195	321	140	104	121,5	100	117,1	114,3	2	104	2

Mounting flange	Shaft connection (FK))	Weight H3-T	Weight H3-BW	Weight H3-EB	Weight H3-F1
F03/F04	9	0,7	0,7	1	3,5
F03/F04	9	0,9	0,9	1,3	3,8
F04/F05	11	1,3	1,3	1,8	4
F04/F05	11	1,6	1,6	2,9	5,1
F05/F07	14	2,8	2,8	3,8	6,6
F05/F07	14	3,9	3,9	5	10,2
F07/F10	17	–	8,5	9,8	14,7
F07/F10	17	–	12,7	13,2	24
F10/F12	22	–	20	24	34

ISO BW1/EB1 = weld ends acc. to ISO-pipe.
mm BW2/EB2 = weld ends acc. to mm-pipe.



Ball valve with actuator type Remote

DN	Actuator Type	H	K	O	R	S	Weight H3-T	Weight H3-BW	Weight H3-EB	Weight H3-F1	Actuator Type-SR/SRF	H1	K1	O1	Weight HT-3	Weight H3-BW	Weight H3-EB	Weight H3-F1
15[1]	RC210-DA	45	98	133	32	41	1.9	1.9	2.2	5.1	RC210-SR087	45	150	133	2.2	2.2	2.5	5.4
20[1]	RC210-DA	45	98	138	32	41	2.1	2.1	2.5	5.4	RC210-SR087	45	150	138	2.4	2.4	2.8	5.5
25[1]	RC210-DA	45	98	147	32	41	2.5	2.5	3	5.7	RC220-SR087	150	150	147	3.5	3.5	4	6.7
32[1]	RC210-DA	45	98	153	32	41	2.8	2.8	4.1	6.8	RC220-SR087	150	150	153	3.8	3.8	5.1	7.8
40[1]	RC210-DA	45	98	167	32	41	4	4	5	8.3	RC230-SR087	65	200	203	7	7	8	11.3
50[1]	RC220-DA	98	98	175	32	41	5.5	5.5	6.6	12.3	RC230-SR087	65	200	211	8.1	8.1	9.2	14.9
65	RC230-DA	65	135	231	49	55	–	12	13.3	18.2	RC240-SR087	200	200	231	–	15.5	16.8	21.7
80	RC230-DA	65	135	242	49	55	–	16.2	16.7	27.5	RC250-SR087	90	285	287	–	25.1	25.6	36.4
100	RC240-DA	135	135	273	49	55	–	23.5	27.5	37.5	RC250-SR087	90	285	318	–	32.4	36.4	46.4

SR 087 = Supply pressure 5,5 bar/80 psi and springs for 87 psi (spring to close). SRF 087 = Supply pressure 5,5 bar/80 psi and springs for 87 psi (spring to open). [1] Direct mounting not possible for H3-F1.

Actuating

The 3-piece full bore ball valve H3 is designed primarily as a hand-operated valve or actuated on/off valve.

When manually operated, the valve is provided with a lever, which can be easily locked in the open or closed position. The lock can be further secured with a padlock.

The valve can be remotely operated with actuators.

The valves mounting flange is designed according to ISO standards and in such a way that the actuator can be mounted directly without mounting bracket with the exception of flange version.

The valves are delivered as tested and ready to use units. In the documents library on www.somas.se there is also information about limit switches and solenoid valves.

In control applications recommended Somas segment valves type KVT/KVX, KVTW/KVXW or KVTF/KVXF.

The valves can be equipped with other makes of actuators and accessories as desired.

Ordering

State desired valve according to the valve specification system below as well as type of actuator, limit switches and accessories.

Note

Approved for PED ategory II.

PA Ventiler AB

TG TARGET VALVE

SOMAS®

Valve specification system

H3 T - DN50 - FK14 - F05/F07
1 2 3 4 5

1 Valve type
H3 - 3- piece ball valve with standard PTFE seat
H3-25 - 3-piece ball valve with PTFE-25 seat

2 T = Threaded ends
BW = Weld ends
BW1 = Weld ends ISO-pipe
BW2 = Weld ends mm-pipe
EB = Long weld ends
EB1 = Long weld ends ISO-pipe
EB2 = Long weld ends mm-pipe
F1 =Flanged design

3 Nominal size, DN

4 Shaft dimension

5 Actuating
HL = Hand lever - lockable design (H3)
Actuator mounting (acc. to ISO 5211)

Somas reserves the right to make improvements without prior notice.

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