

Data sheet

Full bore JIP™ ball valves (PN 16/25/40)

Description



Danfoss JIP™ full bore ball valves are shut off valves developed for District Heating and District Cooling networks, with circulating medium.

It is a range of steel ball valves with fully welded body.

The valve design makes them ideal for building installation due to:

- Energy saving: with optimum flow design valves have highest k_v on the market and consequently lowest pump energy costs.

- Long lifetime and optimal tightness due to design and material selection in ball seal (carbon reinforced PTFE) and stem seal (graphite).
- The valves are maintenance free, besides the shut off valves in the core distribution network Danfoss offers a range of supplementary valves, e.g. hot tap valves, branching valves, house insertions and twin valves.

Main data:

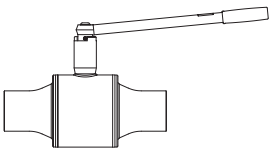
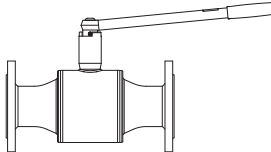
- DN 15-400
- $k_{vs} = 11-37500 \text{ m}^3/\text{h}$
- PN 16 / 25 / 40
- Leakage rate A (according to EN12266-1) - both directions
- Temperature: 0 ... 180 °C
- Medium: Circulation water / glycolic water up to 50 %
- Min. storage and transport temperature: -40 °C

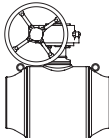
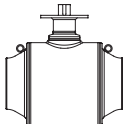
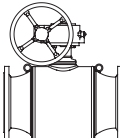
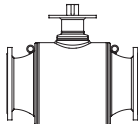
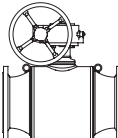
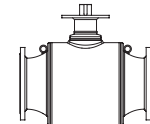
Approvals and norms:

- 100 % final inspection. Leak and shell test as well as dimension and functionality test is performed on each and every valve according to applicable standard (EN 12266 part 1 P10-P11-P12 & part 2 F20).
- PED Directive 2014/68/EU Modul H1
- Danfoss A/S is certified according to ISO 9001
- Furthermore certified according to ISO 14001 and ISO 45001.

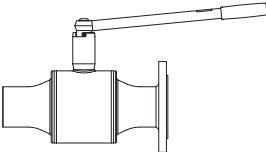
Ordering

JIP-WW welding
JIP-FF flange

					
JIP-WW welding			JIP-FF flange		
DN (mm)	Code No.		Code No.		
	PN25	PN40	PN16	PN25	PN40
15	-	065N0100	-	-	065N0300
20		065N1105			065N1305
25		065N1110			065N1310
32		065N1115			065N1315
40		065N1120			065N1320
50		065N1125			065N1325
65	065N1130	-	065N1230	065N1330	-
80	065N1135		065N1235	065N1335	
100	065N1740		065N1840	065N1940	
125	065N1745		065N1845	065N1945	
150	065N1751		065N1851	065N1951	

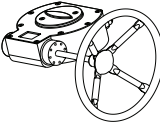
 			 		 	
JIP-WW welding			JIP-FF flange		JIP-FF flange	
DN (mm)	Code No. WW PN25		Code No. FF PN16		Code No. FF PN25	
	Valve with worm gear	Valve with gear flange	Valve with worm gear	Valve with gear flange	Valve with worm gear	Valve with gear flange
50	065N1123	065N1128	-	-	-	-
65	065N1131	065N1132				
80	065N1136	065N1137				
100	065N1141	065N1142				
125	065N1146	065N1147				
150	065N1151	065N1152	065N1251	065N1252	065N1351	065N1352
200	065N1156	065N1157	065N1256	065N1257	065N1356	065N1357
250	065N1161	065N1162	065N1261	065N1262	065N1361	065N1362
300	065N1166	065N1167	065N1266	065N1267	065N1366	065N1367
350	065N1173	065N1174	065N1273	065N1274	065N1373	065N1374
400	065N1176	065N1177	065N1276	065N1277	065N1376	065N1377

JIP-FW flange / welding

			
JIP-FW flange / welding			
DN (mm)	Code No.		
	PN16	PN25	PN40
15	-	-	065N0700
20			065N1705
25			065N1710
32			065N1715
40			065N1720
50			065N1725
65	065N1530	065N1630	-
80	065N1535	065N1635	
100	065N1955	065N1970	
125	065N1961	065N1975	
150	065N1965	065N1981	

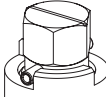
Ordering (continuous) Actuators

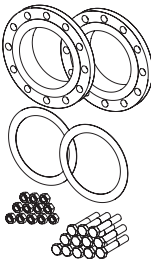
Worm gear

Picture	Description	Code No.	
		Worm gear	Position indicator with end switch
	Worm gear for DN50	065N0683	065N0694
	Worm gear for DN65-80	065N0684	065N0695
	Worm gear for DN 100/125/150 full bore	065N0685	065N0695
	Worm gear for DN 200 full bore	065N0691	065N0696
	Worm gear for DN 250 full bore	065N0687	065N0697
	Worm gear for DN 300 full bore	065N0688	065N0698
	Worm gear for DN 350 full bore	065N0689	065N0699
	Worm gear for DN 400 full bore	065N0690	065N0699

Accessories

Replacement handles		
Type of handle	Fixation	Code No.
L Steel DN 15-25 full bore with plastic grip	spring pin	065N8256
L Steel DN 32-40 full bore with plastic grip	spring pin	065N8257
L Steel DN 50 full bore with plastic grip	spring pin	065N3720
L Steel DN 65-80 full bore with plastic grip	spring pin	065N3721
L Steel DN 100 full bore with plastic grip HEX	spring pin	065N3725
L Steel DN 125-150 full bore with plastic grip HEX	spring pin	065N3726

External hexagon stem attachment			
Picture	Description	Details	Code No.
	JIP-ACC hex19 DN15-25FB	External Hexagon stem attachment for valve operation with manual ratchet with hex socket. Spring pin for hexagon fixation to the stem enclosed.	065N8330
	JIP-ACC hex27 DN32-40FB		065N8331
	JIP-ACC hex27 DN50FB		065N8332
	JIP-ACC hex27 DN65-80FB		065N8333

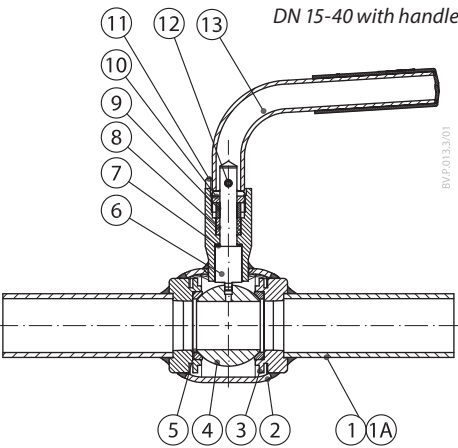
Counter flange sets (kits)			
Picture	Description	Details	Code No.
	JIP Counter flange Kit GBN DN15 PN40	Weld-neck flanges according to EN1092-1 (2 pcs) Klingerit gaskets, type IBC EN1514-1 (2pcs) Fastening material (bolts, nuts and washers)	065N2350
	JIP Counter flange Kit GBN DN20 PN40		065N2351
	JIP Counter flange Kit GBN DN25 PN40		065N2352
	JIP Counter flange Kit GBN DN32 PN40		065N2353
	JIP Counter flange Kit GBN DN40 PN40		065N2354
	JIP Counter flange Kit GBN DN50 PN40		065N2355
	JIP Counter flange Kit GBN DN65 PN25		065N2356
	JIP Counter flange Kit GBN DN80 PN25		065N2357
	JIP Counter flange Kit GBN DN100 PN25		065N2358
	JIP Counter flange Kit GBN DN125 PN25		065N2359
	JIP Counter flange Kit GBN DN150 PN25		065N2360
	JIP Counter flange Kit GBN DN200 PN25		065N2361
	JIP Counter flange Kit GBN DN250 PN25		065N2362
	JIP Counter flange Kit GBN DN300 PN25		065N2363
	JIP Counter flange Kit GBN DN350 PN25		065N2364
	JIP Counter flange Kit GBN DN400 PN25		065N2365
	JIP Counter flange Kit GBN DN450 PN25		065N2366
	JIP Counter flange Kit GBN DN500 PN25		065N2367

Technical data

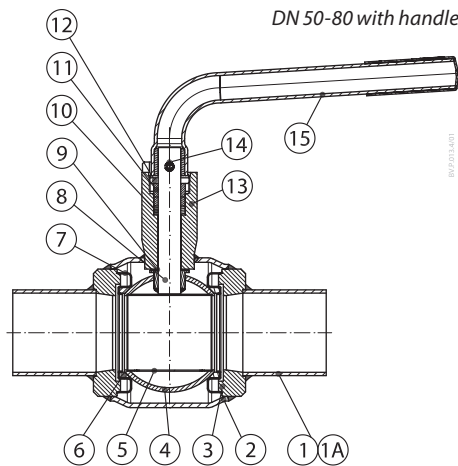
DN	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400
k _{vs}	m³/h	11	50	90	160	235	395	820	1100	2300	3700	6100	11000	17500	24000	30000	37500
PN		40						16/25									
Temp range		0 ... 180 °C															
Medium		Circulation water / glycolic water up to 50 %															

Design & material

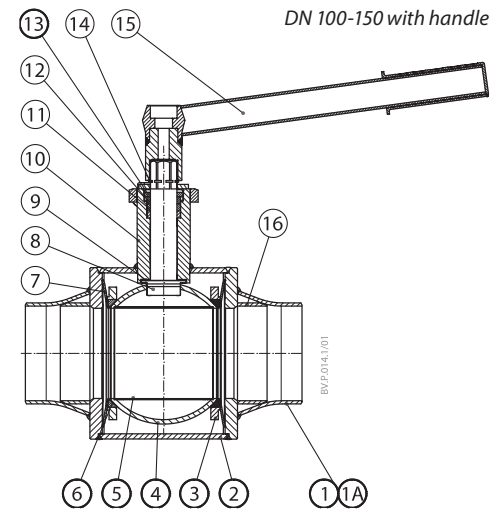
1	Welding end	*Weldable mild steel 20#
1A	Flange	*Weldable mild steel 20#
2	Shell	*Weldable mild steel 20#
3	Ball seal retainer	*Weldable mild steel 20#
4	Ball	Stainless steel
5	Ball seal	Carbon reinforced PTFE
6	Stem	Stainless steel
7	Washer	Carbon reinforced PTFE
8	Stem sealing	Graphite
9	Compression ring	Steel
10	Compression nut	Steel
11	Packing box	*Weldable mild steel 20#
12	Pin	Spring steel
13	Handle	Steel



1	Welding end	*Weldable mild steel 20#
1A	Flange	*Weldable mild steel 20#
2	Shell	*Weldable mild steel 20#
3	Ball seal retainer	*Weldable mild steel 20#
4	Ball	Stainless steel
5	Pipe insert	Stainless steel
6	Ball seal	Carbon reinforced PTFE
7	Spring	Stainless Steel
8	Stem	Stainless steel
9	Washer	Carbon reinforced PTFE
10	Stem sealing	Graphite
11	Compression ring	Steel
12	Compression nut	Steel
13	Packing box	*Weldable mild steel 20#
14	Pin	Spring steel
15	Handle	Steel



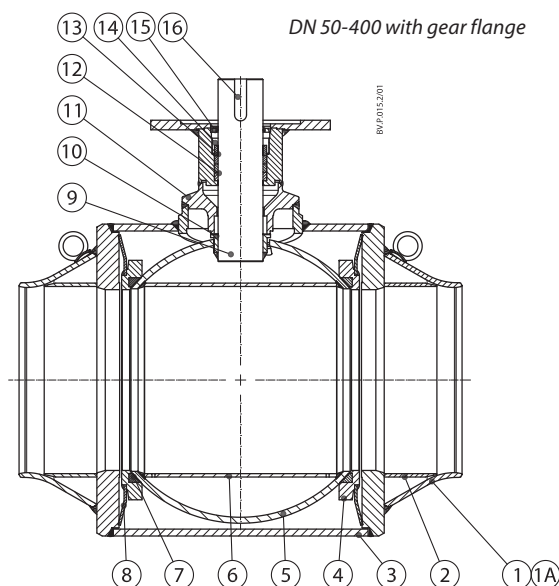
1	Welding end	*Weldable mild steel 20#
1A	Flange	*Weldable mild steel 20#
2	Shell	*Weldable mild steel 20#
3	Ball seal retainer	*Weldable mild steel 20#
4	Ball	Stainless steel
5	Pipe insert	Stainless steel
6	Ball seal	Carbon reinforced PTFE
7	Disc spring	Domex 650 MC
8	Stem	Stainless steel
9	Washer	Carbon reinforced PTFE
10	Packing box	*Weldable mild steel 20#
11	Stem sealing	Graphite
12	Compression ring	Steel
13	Compression nut	Steel
14	Retaining ring	Stainless steel
15	Handle	Steel
16	Guiding pipe	*Weldable mild steel 20#



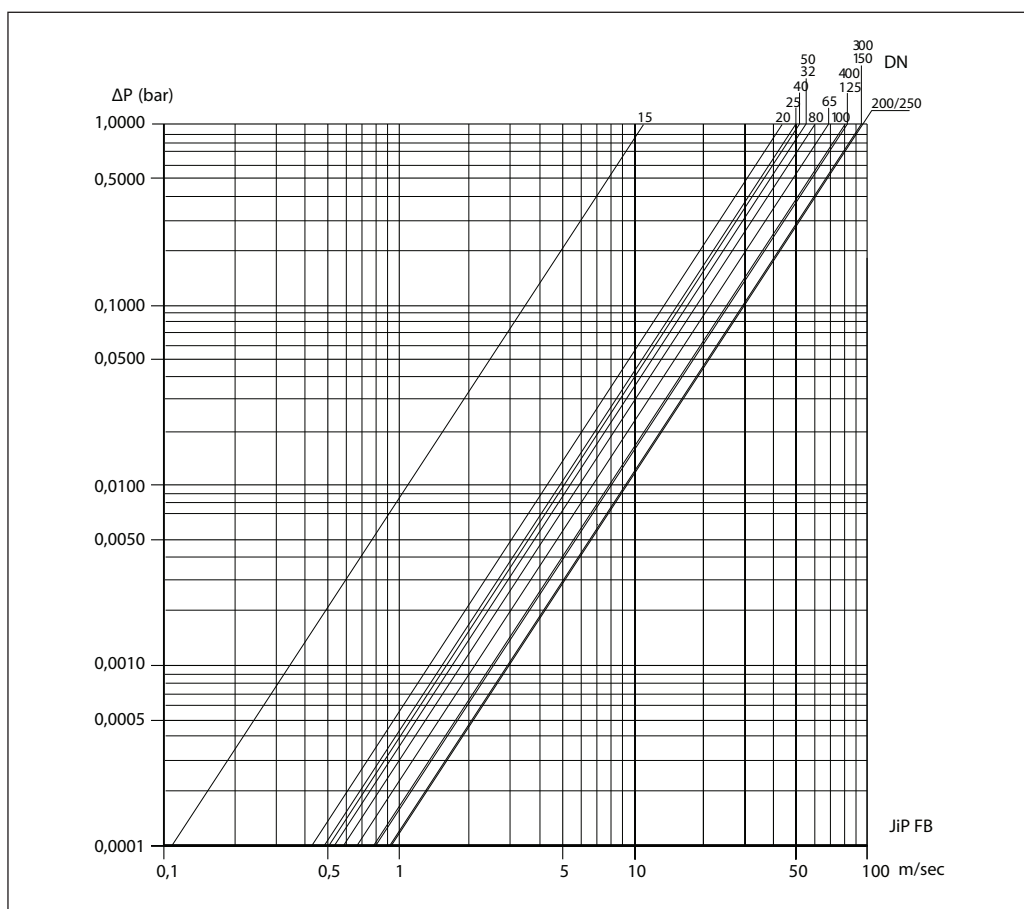
Design & material (continuous)

1	Welding end	*Weldable mild steel 20#
1A	Flange	*Weldable mild steel 20#
2	Guiding pipe	*Weldable mild steel 20#
3	Shell	*Weldable mild steel 20#
4	Ball seal retainer	*Weldable mild steel 20#
5	Ball	Stainless steel
6	Pipe insert	Stainless steel
7	Ball seal	Carbon reinforced PTFE
8	Disc spring	Domex 650 MC
9	Stem	Stainless steel
10	Washer	Carbon reinforced PTFE
11	Packing box	*Weldable mild steel 20#
12	Stem sealing	Graphite
13	Compression ring	Steel
14	Compression nut	Steel
15	Retaining ring	Stainless steel
16	Key	Steel

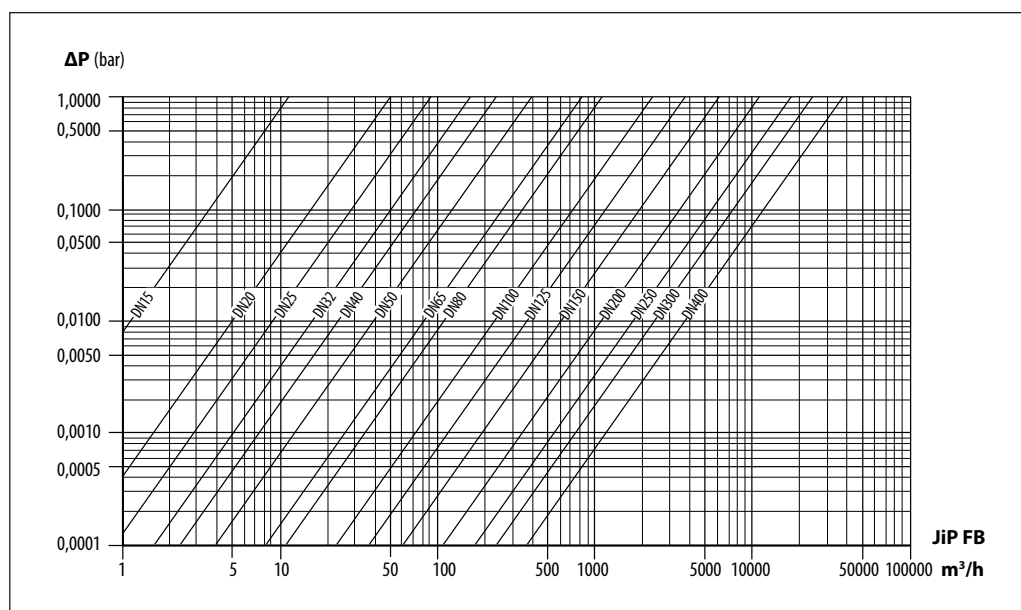
* According to the GB/T8163. Or equivalent mild steel in accordance with CE-PED



Pressure drop / velocity diagram

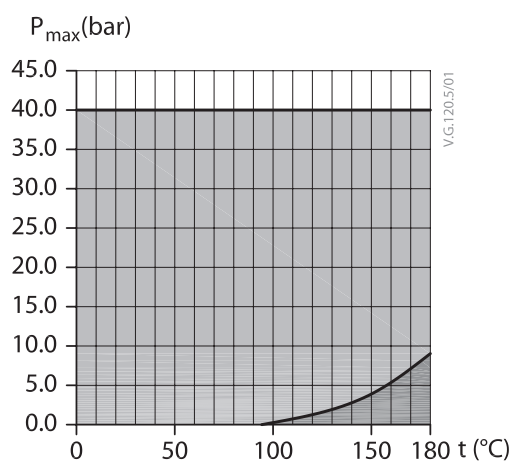


Pressure drop / flow diagram

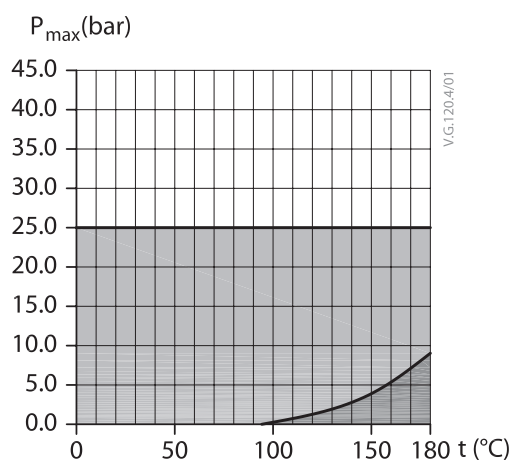


Pressure / temperature diagram
JIP-WW

DN 15-50



DN 65-400

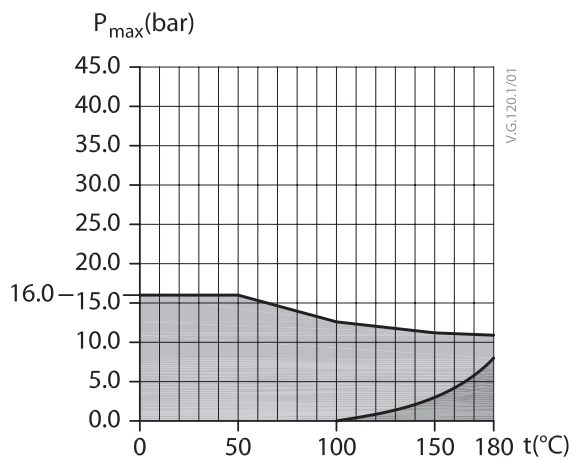


Legend:

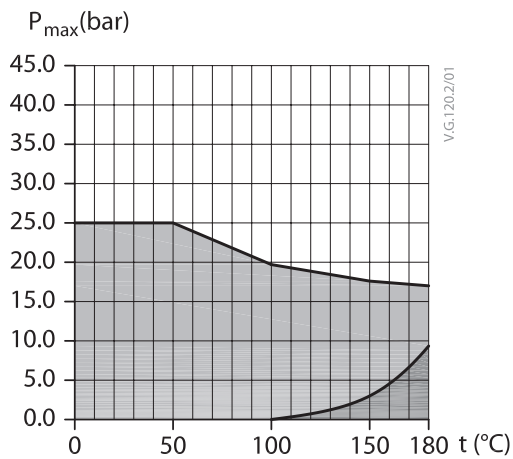
- Normal operating area (water)
- Steam area

Pressure / temperature
JIP-FF, FW

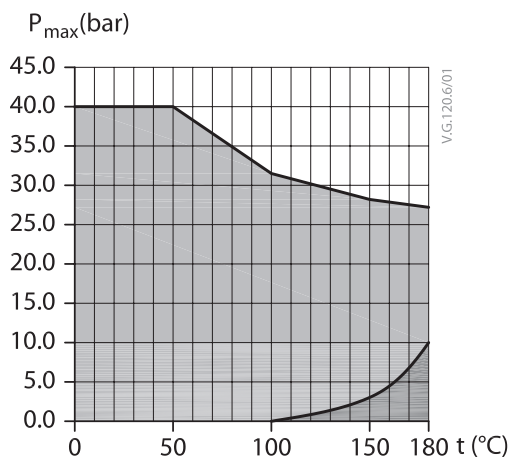
PN 16, DN 65-400



PN 25, DN 65-400



PN 40, DN 15-50

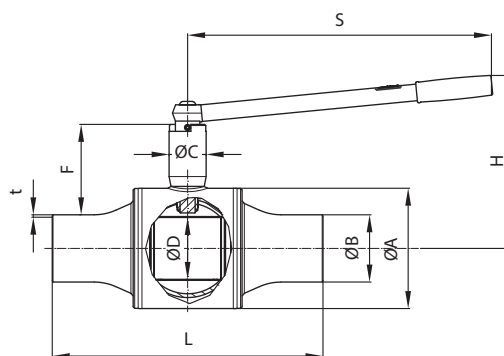


Legend:

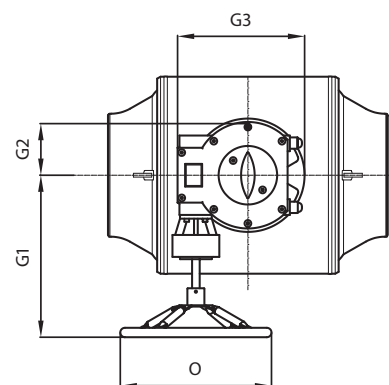
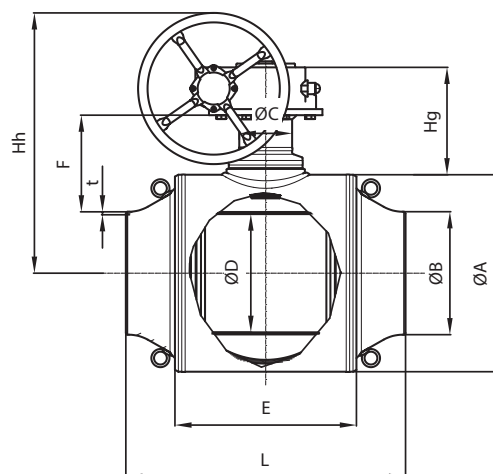
- Normal operating area (water)
- Steam area

Dimensions

JIP WW welding



DN (mm)	ØA	t	ØB	ØD	L	H	F	ØC	S	Weight (kg)
15	42.4	2.6	21.3	15	230	125	58	24.5	115	1
20	48.3	2.6	26.9	20	220	125	60	24.5	115	1.2
25	60.3	2.6	33.7	25	240	130	61	24.5	115	1.4
32	76.1	2.6	42.4	32	270	170	90	35	157	2.7
40	88.9	2.6	48.3	40	275	175	92	35	157	3.6
50	114.3	2.9	60.3	50	320	232	108	45	205	6
65	133	2.9	76.1	65	280	245	113	49	260	8
80	159	3.2	88.9	80	360	260	120	49	260	12
100	193.7	3.6	114.3	100	315	245	136	60	360	20
125	219.1	4	139.7	125	355	295	146	60	655	28
150	273	4.5	168.3	150	375	315	152	60	655	41

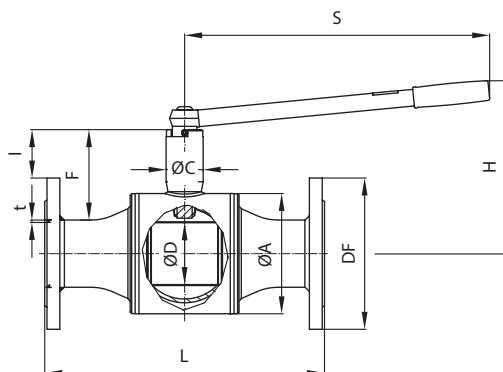


DN (mm)	ØA	t	ØB	ØD	L	Hh	Hg	E	F	ØC	O	G1	G2	G3	Weight (kg)
50	114.3	2.9	60.3	50	320	265	120	115	108	45	200	130	40	100	7
65	133	2.9	76.1	65	280	306	135	135	113	49	250	205	54	131	12
80	159	3.2	88.9	80	360	318	125	145	120	49	250	205	54	131	17
100	193.7	3.6	114.3	100	315	356	145	165	136	60	250	205	58	132	22
125	219.1	4	139.7	125	355	378	154	205	146	60	250	205	58	132	30
150	273	4.5	168.3	150	375	401	294	240	145	60	250	205	58	132	42
200	355.6	6.3	219.1	200	485	613	416	340	209	87	450	275	78	192	104
250	457	6.3	273	250	595	661	493	400	225	100	450	350	107	255	210
300	521	8	323.9	300	740	714	554	480	258	139.7	450	420	143	323	288
350	660	8	335.6	349	960	803	662	652	324	168.3	500	430	147	337	635
400	711	8.8	406.4	400	1030	831	693	690	322	168.3	500	430	147	337	831

All weights valid for valves with mounted worm gear

Dimensions (continuous)

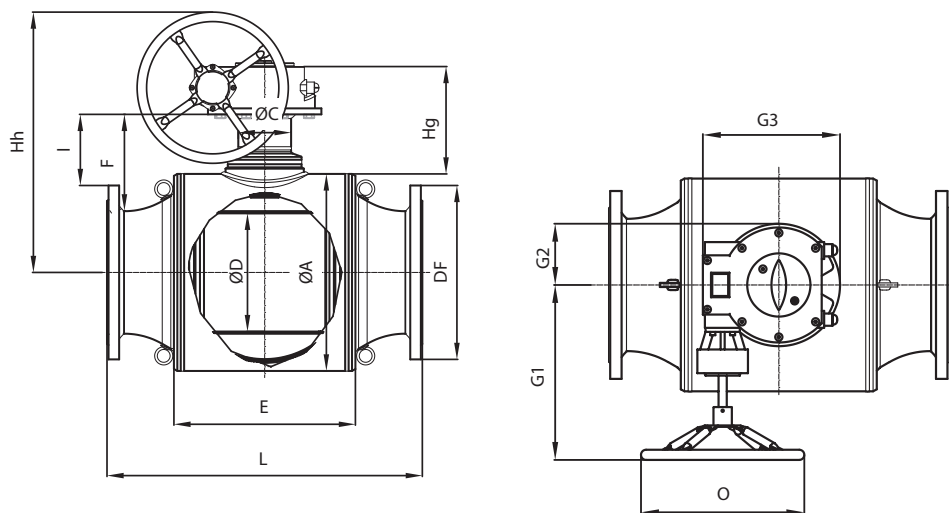
JIP FF flanged



DN (mm)	ØA	ØD	H	F	ØC	S	L	DF	I	kg	L	DF	I	Weight (kg)
15	42.4	15	125	58	24.5	115	130	95	23	2.3				
20	48.3	20	125	60	24.5	115	150	105	21	3				
25	60.3	25	130	61	24.5	115	160	115	20	3.7				
32	76.1	32	170	90	35	157	180	140	40	6.2				
40	88.9	40	175	92	35	157	200	150	41	7.4				
50	114.3	50	232	108	45	205	230	165	56	11				
PN 16 / 25							PN 16				PN 25			
65	133	65	245	113	49	260	290	185	59	17.1	290	185	59	17.5
80	159	80	260	120	49	260	370	200	64	18.8	310	200	64	20.2
100	193.7	100	245	136	60	360	325	220	83	28	325	235	76	31.4
125	219.1	125	295	146	60	655	365	250	91	38	490	270	81	43.4
150	273	150	315	152	60	655	385	285	94	53.8	510	300	86	61

Dimensions (continuous)

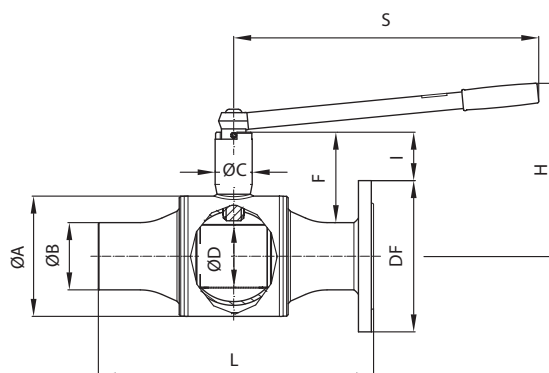
JIP FF flanged



DN (mm)	ØA	ØD	Hh	Hg	E	F	ØC	O	G1	G2	G3	L	DF	I	Weight (kg)	L	DF	I	Weight (kg)
PN 16/25												PN 16				PN 25			
150	273	150	401	294	240	152	60	250	205	58	132	385	285	94	57	510	300	86	57
200	355.6	200	613	416	340	209	87	450	275	78	192	500	340	148	136	635	360	138	136
250	457	250	661	493	400	225	100	450	350	107	255	720	405	158	256	720	425	149	266
300	521	300	714	554	480	258	139.7	450	420	143	323	835	460	190	329	835	485	178	329
350	660	349	803	662	652	324	168.3	500	430	147	337	980	520	242	690	980	550	227	690
400	711	400	831	693	690	322	168.3	500	430	147	337	1100	580	235	748	1100	620	215	748

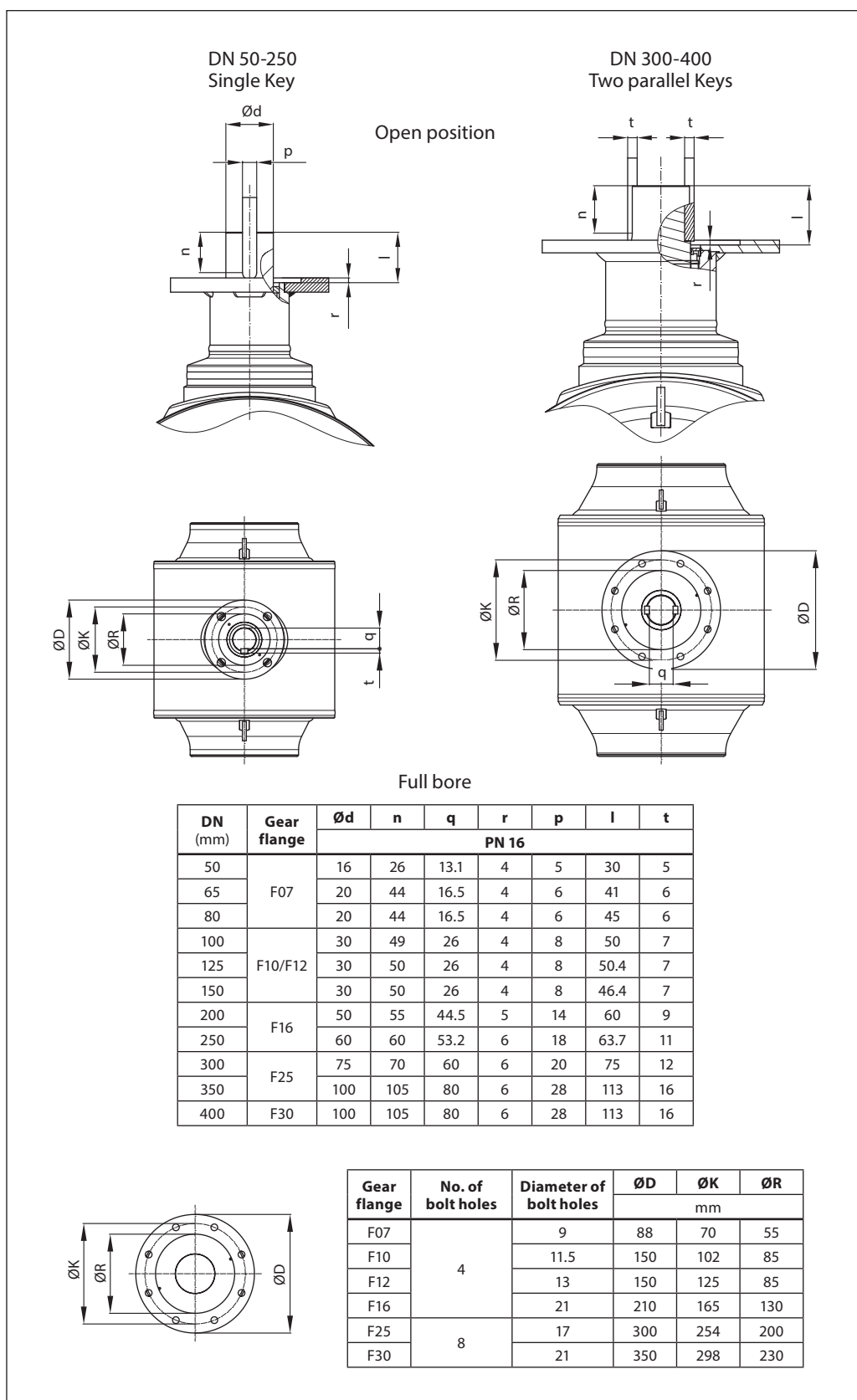
All weights valid for valves with mounted worm gear

Dimensions (continuous)
JIP FW flanged/welding



DN (mm)	ØA	ØB	H	F	ØC	S	L	DF	I	kg	L	DF	I	Weight (kg)
15	42.4	15	125	58	24.5	115	180	95	23	1.6				
20	48.3	20	125	60	24.5	115	185	105	21	2.1				
25	60.3	25	130	61	24.5	115	200	115	20	2.6				
32	76.1	32	170	90	35	157	230	140	40	4.5				
40	88.9	40	175	92	35	157	235	150	41	5.6				
50	114.3	50	232	108	45	205	275	165	56	8.5				
PN 16 / 25							PN 16				PN 25			
65	133	65	245	113	49	260	285	185	59	10.7	285	185	59	10.7
80	159	80	260	120	49	260	365	200	64	15.8	335	200	64	15.9
100	193.7	100	245	136	60	360	320	220	83	22.5	320	235	76	24
125	219.1	125	295	146	60	655	360	250	91	32.5	360	270	81	35.2
150	273	150	315	152	60	655	380	285	94	47.1	380	300	86	50.9

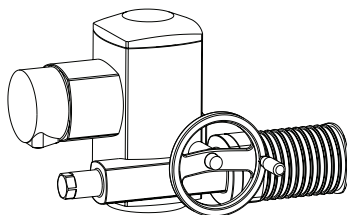
Dimensions (continuous)
Valve top and gear flange



Data sheet

Full bore JIP™ ball valves (PN 16/25/40)

AUMA NORM electrical
actuators for Danfoss
ball valves



Danfoss ball valves	Auma Actuators	
DN (mm)	Type	Operating time for 90° turn (s)
50-65	SQ 05.2	16
80	SQ 07.2	32
100-150	SQ 10.2	32
200	SA 7.6 (22) + GS 100.3 + VZ 4.3 i=208:1	142
250	SA 7.6 (22) + GS 125.3 + VZ 4.3 i=208:1	142
300	SA 10.2 (22) + GS 125.3 + VZ 4.3 i=208:1	142
350	SA 10.2 (32) + GS 160.3 + GZ 160.3 i=442:1	207
400	SA 10.2 (32) + GS 160.3 F30+ GZ 160.3 i=442:1	207

The actuators can be equipped with various accessories.
Control and regulating unit AUMA Matic in the basis design can be supplied.

When commissioning and under certain problematic system conditions, it can be necessary to choose slower actuators to avoid water hammering and oscillations.



For additional information related to the electric actuator ordering, please contact local Danfoss representative.

Features:

- 2 limit switches - opening/closing
- 2 torque switches - opening/closing
- Heater
- Blinker switch for operating phase
- Manual operation with hand wheel
- Thermo switch

Main Data:

- Nominal voltage: 3 × 400 VAC, 50Hz
- Grade of enclosure: IP 68
- Wiring diagram: TPA 00R1AA-000

Danfoss A/S

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