

Check valve (Z16) butt welding / flange PN40

Z16 127 540 PN40 DN15-DN300 / Tmax.400°C
Z16 127 240 PN40 DN15-DN300 / Tmax.550°C (575°C)
Z16 117 540 PN40 DN15-DN300 / Tmax.400°C
Z16 117 240 PN40 DN15-DN300 / Tmax.550°C (575°C)

Check valve (Z16) butt welding / flange PN63

Z16 127 463 PN63 DN15-DN25 / Tmax.400°C
Z16 127 563 PN63 DN32-DN200 / Tmax.400°C
Z16 117 463 PN63 DN15-DN25 / Tmax.400°C
Z16 117 563 PN63 DN32-DN200 / Tmax.400°C

Z16 127 363 PN63 DN15-DN25 / Tmax.550°C (575°C)
Z16 127 263 PN63 DN32-DN200 / Tmax.550°C (575°C)
Z16 117 363 PN63 DN15-DN25 / Tmax.550°C (575°C)
Z16 111 263 PN63 DN32-DN200 / Tmax.550°C (575°C)

Check valve (Z16) butt welding / flange PN100

Z16 127 463 PN100 DN15-DN25 / Tmax.400°C
Z16 127 563 PN100 DN32-DN200 / Tmax.400°C
Z16 117 463 PN100 DN15-DN25 / Tmax.400°C
Z16 117 563 PN100 DN32-DN200 / Tmax.400°C

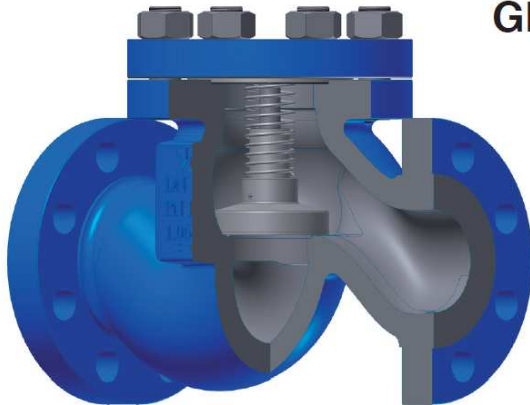
Z16 127 363 PN100 DN15-DN25 / Tmax.550°C (575°C)
Z16 127 263 PN100 DN32-DN200 / Tmax.550°C (575°C)
Z16 117 363 PN100 DN15-DN25 / Tmax.550°C (575°C)
Z16 111 263 PN100 DN32-DN200 / Tmax.550°C (575°C)

Check valve (Z16) butt welding / flange PN160

Z16 127 4160 PN160 DN15-DN25 / Tmax.400°C
Z16 127 5160 PN160 DN32-DN200 / Tmax.400°C
Z16 117 4160 PN160 DN15-DN25 / Tmax.400°C
Z16 117 5160 PN160 DN32-DN200 / Tmax.400°C

Z16 127 3160 PN160 DN15-DN25 / Tmax.550°C (575°C)
Z16 127 2160 PN160 DN32-DN200 / Tmax.550°C (575°C)
Z16 117 3160 PN160 DN15-DN25 / Tmax.550°C (575°C)
Z16 111 2160 PN160 DN32-DN200 / Tmax.550°C (575°C)

.. 127 ... butt welding
.. 111 ... flange



Globe Lift Check Valves [CLEN]

Standard: EN 14341

DN 15 ÷ DN 300

PN 25 ÷ PN 160

Design

- Forged or casted body and cover
- Bolted cover (BC)
- Self acting operation
- Guided disc pressed with spring on the body seat (Lift type)
- Seats are integral or welded on

Applications

- Power plant, Chemical, Petrochemical, Refining, water supply and other

Media

- Depending on the valve materials: water, steam, gas, oil and oil derivatives and other non aggressive media

Pressure and temperature (table B.1.7)

- Pressure up to 160 bar
- Temperature up to 600 °C

Materials (table B.1.1)

- Carbon, heat resistant alloy and stainless steels

Advantages

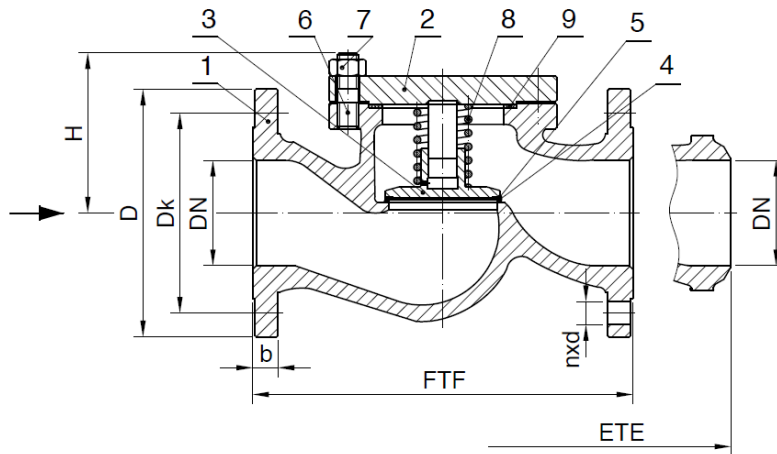
- Possibility of installation in any position
- Long service life
- Respect to emission standards
- Easy handling and maintenance

Options

- Check valve without spring (horizontal installation only)
- Seats and sealing made of elastic materials
- Flanges and welding ends according to : GOST, DIN, ANSI.
- Other paint finishes are available upon customer's request
- Valve complete with counter flanges, bolting and gaskets

Testing

- Every produced valve was tested according to EN 12266, Part 1 and Part



Drawing B.1.1 Parts and dimensions

List of materials

Table B.1.1

Item	Part	Material Group acc. to EN 12516-1						
		3E0	4E0	5E0	6E0	11E0	14E0	
		Application						
		up to 400°C	up to 500°C	up to 550°C	up to 575°C	-196°C±500°C	-196°C±600°C	
		Material Code						
		10 or 11	20 or 21	22 or 23	24 or 25	40 or 41	42 or 43	
1	Body	up to DN 25	1.0460	1.5415	1.7335	1.7383	1.4301	1.4401
		over DN 25	1.0619	1.5419	1.7357	1.7379	1.4308	1.4408
2	Cover	up to DN 25	1.0460	1.5415	1.7335	1.7383	1.4301	1.4401
		over DN 25	1.0619	1.5419	1.7357	1.7379	1.4308	1.4408
3	Disc	up to DN 50	1.4021	1.5415	1.7335	1.7383	1.4301	1.4401
		over DN 50	1.0619	1.5419	1.7357	1.7379	1.4308	1.4408
4	Trim	Body Seat	13Cr	17Cr (up to 450°C) or Stellite 6			Basic material or Stellite 6	
5		Disc Seat	13Cr	17Cr (up to 450°C) or Stellite 6			Basic material or Stellite 6	
6	Stud Bolts		1.7225	1.7709		1.4301	1.4401	
7	Nuts		1.1191	1.7709		1.4301	1.4401	
8	Spring		45CrMoV6-7			AISI 316		
9	Covert Gasket		reinforced pure graphite					

Standards

Table B.1.2

Globe Lift Check Valves according to EN 14341	PN 25 / PN 40	PN 63 / PN 100 / PN 160
Face-to-face dimensions according to	EN 558-1, Serie 1	EN 558-1, Serie 2
Flanged ends according to	EN 1092-1, Type B1	
End-to-end dimensions according to	EN 12982, Serie 64	EN 12982, Serie 65
Welding ends according to	EN 12627	

Z16

Z16 CHECK VALVE LIFT BUTT WELDING PN40 - PN160 Z16 CHECK VALVE LIFT FLANGE PN16 - PN160

[CLEN] Dimensions PN 25 and PN 40

Table B.1.3

DN	FTF	ETE	D	\Leftrightarrow (mm)					H	\updownarrow (kg)	
				b	Dk	d	n	FTF		ETE	
15	130	130	95	16	65	14	4	80	4	2,3	
20	150	130	105	18	75	14	4	80	4,5	2,4	
25	160	130	115	18	85	14	4	80	5	2,6	
32	180	160	140	18	100	18	4	105	8,4	3,8	
40	200	180	150	18	110	18	4	105	10	6	
50	230	210	165	20	125	18	4	117	15	7	
65	290	290	185	22	145	18	8	125	21	12	
80	310	310	200	24	160	18	8	136	31	23	
100	350	350	235	24	190	22	8	170	45	31	
125	400	400	270	26	220	26	8	180	60	45	
150	480	480	300	28	250	26	8	215	87	65	
200	600	600	360	30	310	26	12	285	140	116	
			375*	34*	320*	30*			150*		
250	730	730	425	32	370	30	12	360	212	168	
			450*	38*	385*	33*			223*		
300	850	850	485	34	430	30	16	410	380	231	
			515*	42*	450*	33*			407*		

* PN 40

[CLEN] Dimensions PN 63

Table B.1.4

DN	FTF	ETE	D	\Leftrightarrow (mm)					H	\updownarrow (kg)	
				b	Dk	d	n	FTF		ETE	
15	210	150	105	20	75	14	4	80	5,1	2,5	
20	230	150	130	22	90	18	4	80	6,5	2,7	
25	230	160	140	24	100	18	4	80	8,5	3	
32	260	180	155	26	110	22	4	110	15	8	
40	260	210	170	28	125	22	4	110	16	9	
50	300	250	180	26	135	22	4	143	27	15	
65	340	340	205	26	160	22	8	173	35	24	
80	380	380	215	28	170	22	8	192	58	43	
100	430	430	250	30	200	26	8	235	71	63	
125	500	500	295	34	240	30	8	260	143	123	
150	550	550	345	36	280	33	8	315	150	108	
200	650	650	415	42	345	36	12	380	275	209	

[CLEN] Dimensions PN 100

Table B.1.5

DN	FTF	ETE	D	\Leftrightarrow (mm)					H	\updownarrow (kg)	
				b	Dk	d	n	FTF		ETE	
15	210	150	105	20	75	14	4	80	5,1	2,5	
20	230	150	130	22	90	18	4	80	6,5	2,7	
25	230	160	140	24	100	18	4	80	8,5	3	
32	260	180	155	26	110	22	4	110	15	8	
40	260	210	170	28	125	22	4	110	16	9	
50	300	250	195	30	145	26	4	143	28	15	
65	340	340	220	34	170	26	8	173	36	24	
80	380	380	230	36	180	26	8	192	64	43	
100	430	430	265	40	210	30	8	235	96	73	
125	500	500	315	40	250	33	8	260	156	123	
150	550	550	355	44	290	33	12	315	240	201	
200	650	650	430	52	360	36	12	380	415	346	

[CLEN] Dimensions PN 160

Table B.1.6

DN	FTF	ETE	D	\Leftrightarrow (mm)					H	\updownarrow (kg)	
				b	Dk	d	n	FTF		ETE	
15	210	150	105	20	75	14	4	80	5,1	2,5	
20	230	150	130	22	90	18	4	80	6,5	2,7	
25	230	160	140	24	100	18	4	80	8,5	3	
32	260	180	155	26	110	22	4	110	16	8	
40	260	210	170	28	125	22	4	110	17	9	
50	300	250	195	30	145	26	4	143	28	15	
65	340	340	220	34	170	26	8	173	37	24	
80	380	380	230	36	180	26	8	192	66	43	
100	430	430	265	40	210	30	8	235	98	73	
125	500	500	315	44	250	33	8	260	160	123	
150	550	550	355	50	290	33	12	315	246	201	
200	650	650	430	60	360	36	12	380	425	346	

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Z16 CHECK VALVE LIFT BUTT WELDING PN40 - PN160 Z16 CHECK VALVE LIFT FLANGE PN16 - PN160

Range of application for valves with flanged ends

Table B.1.7

Material Group (Code)	Materials	PN	Pressure (bar) / temperature (° C) ratings according to EN 12516-1																					
			RT	50	100	150	200	250	300	350	375	400	425	450	475	500	510	520	530	550	575	600		
3E0 (10,11)	1.0460 1.0619	16	16	15	14	13	11	10	9	9	9	8												
		25	24	23	21	20	18	16	15	14	14	13												
		40	39	37	34	32	28	26	24	22	22	21												
		63	61	59	54	50	45	41	37	35	34	33												
		100	97	93	85	79	71	65	59	55	54	53												
		160	156	149	136	127	114	104	94	88	86	84												
4E0 (20,21)	1.5415 1.5419	16	16	16	16	15	14	13	11	10	10	10	9	9	7									
		25	26	26	25	24	22	20	17	16	16	15	15	15	11									
		40	41	41	40	38	35	32	28	26	25	24	24	24	23	18								
		63	64	64	63	60	55	51	43	41	40	38	38	37	37	29								
		100	102	102	100	95	87	81	69	65	63	61	60	59	58	46								
		160	163	163	160	151	140	130	110	104	101	97	96	94	93	73								
5E0 (22,23)	1.7335 1.7357	16	16	16	16	16	15	14	13	12	12	12	11	11	10	9	8	7	6	4				
		25	26	26	25	25	23	22	21	19	19	18	17	17	16	14	13	11	9	6				
		40	41	41	41	40	37	36	33	31	30	29	28	27	25	22	21	17	14	9				
		63	64	64	64	62	59	56	52	49	47	45	44	42	39	35	33	27	22	14				
		100	102	102	102	99	93	89	83	77	75	72	69	67	62	56	52	42	35	22				
		160	163	163	163	158	149	143	133	123	120	115	111	107	100	89	84	68	56	35				
6E0 (24,25)	1.7383 1.7379	16	16	16	16	16	15	15	14	13	12	12	11	11	10	9	8	7	6	5	3			
		25	26	26	25	25	24	23	21	20	19	18	17	17	16	14	13	12	10	8	5			
		40	41	41	41	40	39	37	34	32	31	29	28	27	25	22	21	19	16	12	9			
		63	64	64	64	62	61	58	53	50	48	45	44	42	39	35	33	29	26	19	14			
		100	102	102	102	99	96	91	85	79	77	72	69	67	62	56	53	46	41	31	21			
		160	163	163	163	158	154	146	135	127	123	115	111	107	100	89	84	74	65	49	34			
11E0 (40,41)	1.4301 1.4308	16	15	13	12	11	10	9	8	8	8	7	7	7	7	7								
		25	24	21	18	17	15	14	13	12	12	12	11	11	11	11								
		40	38	33	29	27	24	22	21	20	19	19	18	18	18	17								
		63	60	52	46	42	38	35	33	31	30	29	29	28	28	27								
		100	95	83	73	66	60	56	52	49	48	46	46	45	45	44								
		160	152	133	117	106	96	89	83	79	77	74	74	72	71	70								
14E0 (42,43)	1.4401 1.4408	16	16	15	13	12	11	10	10	9	9	9	9	8	8	8	7	7	7	7	6			
		25	24	23	21	19	17	16	15	14	14	14	14	13	13	13	12	11	11	11	11	10		
		40	39	37	33	30	27	26	24	23	22	22	22	21	21	21	20	18	17	17	17	16		
		63	61	58	52	47	43	40	38	36	35	34	34	34	33	33	31	29	27	27	26	26		
		100	97	92	83	75	69	64	60	57	56	54	54	54	53	52	49	45	44	43	42	41		
		160	155	148	133	120	110	102	96	91	89	87	86	86	85	83	78	73	70	68	67	65		