



baelz 340 & 340-2

DESCRIPTION

The baelz 340 / 340-2 is a 2-way control valve in a 3-way housing for industrial applications. Several plug variants allow utilization for different control tasks.

TECHNICAL SPECIFICATIONS

Connection type: Flange EN 1092-2; EN 1092-1 Shapes D / E / F on request.

Plug type: parabolic plug, special plug, cage plug

Control characteristic: equal percentage, linear

Working fluids: liquids, gases, water, steam, thermal oil, etc.

Leakage class (EN 1349)

metal-to-metal seal: 0.004% Kvs (better than class IV)

with PTFE plug: 0.001% Kvs (better than class VI)

Stroke (mm)

DN 15 - DN 25

12

DN 32 - DN 125

22

DN 150

44

DN 200 - DN 300

66

Spindle diameter (mm)

10

10 (16*)

22

* for baelz 340-2-B-EMF DN 100, DN 125

Options		Designation**
Plug	Parabolic plug (standard)	baelz 340-2-B...
	Balanced	baelz 340-2-XX-EMF
	Cage plug	MP340-LK...
	Reduced Kvs	MP340-SKr...
	With PTFE soft seal plug (max. 200°C)	MP340-TK...
Spindle seal	V-rings in PFTE standard	baelz 340-2-B...
	Cooling tube	baelz 340-2-BK...
	Cooling tube + bellows seal	baelz 340-2-BK-SS...
Flanges	Flange facing: inlet groove, outlet tongue	MP340-NF...
	Flange facing: inlet/outlet: male/female	MP340-VR...
	Flange facing: groove both sides	MP340-ALL-N...
Additional options	V-shaped seal heating (for fluids at temperatures of - 10 to - 40°C) Pmax. 20 W; 12-24 V / 110-230 V AC/DC	baelz 85950...
	Construction without silicone	MP340-Silf...

** Designation: 340-2-B up to DN 125 and for spindle Ø up to 16 mm; 340-BB from DN 150 and for spindle Ø 22 mm

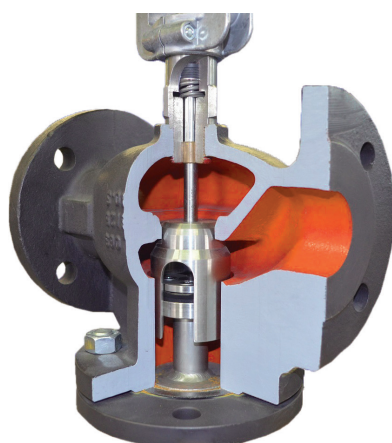
T max. (°C) / P max. (bar)			
Valve body material	Spheroidal ductile iron GJS-400-18-LT - 5.3103		Cast steel GP240GH - 1.0619
Nominal pressure	PN 16	PN 16/25	PN 16/25/40
baelz 340-2-B, 340-BB	240/12.3 ... 50/16	240/19.3 ... 50/25	240/25.7 ... 50/40
baelz 340-B-EMF-2, 340-BB-EMF			240/30.9 ... 50/40
baelz 340-2-BK, 340-BBK	350/10.2 ... 50/16	350/16 ... 50/25	350/25.7 ... 50/40
baelz 340-2-BK-SS, 340-BBK-SS			350/25 ... 50/25 ***
baelz 340-BK-EMF-2, 340-BBK-EMF	315/10.7...260/11.8 ... 50/16	315/16.8 ...260/18.6 ... 50/25	315/27...260/29.8 ... 50/40

*** For nominal diameters DN 15-25 values for PN 16/25 apply

Note: As we are constantly improving our products, there is more than one series of this article. When ordering spares or parts for an existing system, please state the old serial numbers and, if in doubt, contact Baelz. We'll be pleased to help.

		Kvs value (m³/h)													
DN		15	20	25	32	40	50	65	80	100	125	150	200	250	300
Standard plug (B/BB)		5,9	7,8	9,6	16	25	36	63	105	130	200	360	580	960	1340
Balanced plug (EMF)		-	-	-	-	25	36	63	105	130	200	360	580	960	1340
Balancing cage plug (EMF-LK)		-	-	-	-	20	32	50	80	100	130	250	320	-	-
Reduced Kvs (Skr)		2	2,5	5	10	14	23	38	50	80	130	-	-	-	-
		1	1,6	3,2	4	6,3	10	16	25	40	63	-	-	-	-
Cage plug (LK)		-	-	-	-	20	20	50	80	100	130	250	320	580	-
		-	-	-	-	16	16	40	63	80	100	200	-	-	-
		-	-	-	-	10	-	25	40	63	70	130	-	-	-

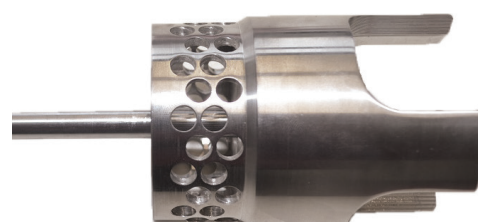
		Approximate weights of the bælz 340 & 340-2 valves													
		340-2-B										340-BB			
DN		15	20	25	32	40	50	65	80	100	125	150	200	250	300
Standard	PN16	6.2	7.1	7.8	11.5	13.9	18.5	27.8	32.9	44.5	65.6	101	200	240	425
	PN25												270	310	
	PN40														
Cooling tube (K)	PN16	7.2	8.1	8.8	12.5	14.9	19.5	28.8	33.9	45.5	66.6	107	250	300	470
	PN25														
	PN40	7.7	8.6	9.3	13.5	16.4	21.5	31.8	37.9	50.5	73.6	117	270	345	540
Cooling tube and bellows seal (K-SS)	PN16	7.5	8.4	9.1	12.8	15.2	19.8	29.1	34.2	45.8	66.9	107.7	250	300	470
	PN40	8	8.9	9.6	13.8	16.7	21.8	32.1	38.2	50.8	73.9	118	270	-	-
Balanced plug (EMF)	PN16	-	-	-	-	14.4	19	28.4	32.9	46.3	71	101	200	240	425
	PN25														
	PN40	-	-	-	-	15.9	21	31.4	36.9	51.3	78	111	252	310	518
Cooling tube and balanced plug (K-EMF)	PN16	-	-	-	-	15.4	20	29.4	33.9	47.3	72	107	250	300	470
	PN25													320	450
	PN25 steel														
	PN40	-	-	-	-	16.9	22	32.4	37.9	52.3	79	122	302	370	558



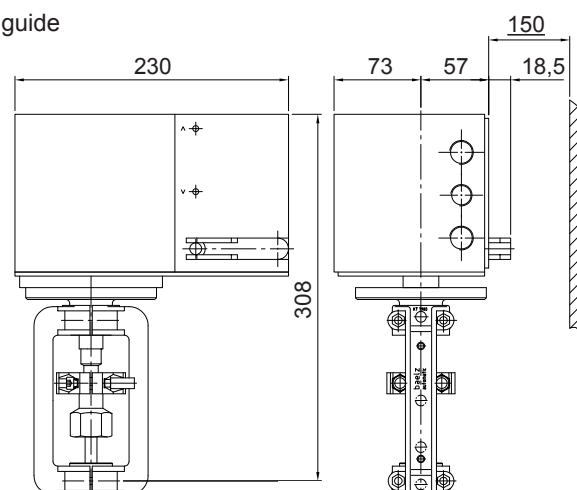
Sectional view of bælz 340-2-B-EMF plug



bælz 340-2-B-EMF balancing guide



bælz 340-2-B cage plug


Dimensions of
bælz 373-E65
actuator

Dimensions of the bælz 340 & 340-2 valves (mm)

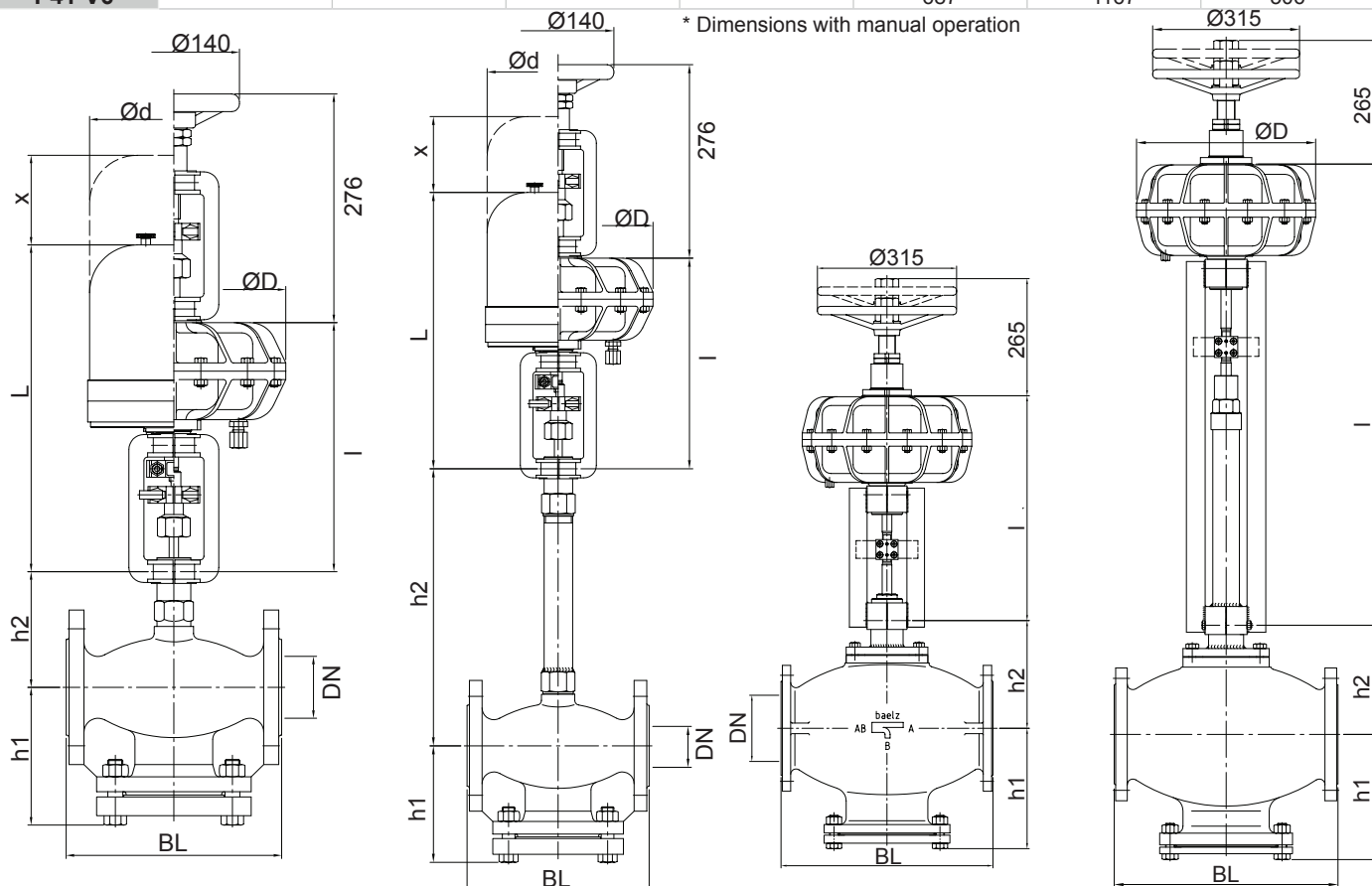
DN	BL	h1			h2	
					340-2-B	340-2-BK / 340-2-BK-SS
15	130	101			110 (105)*	236 (231)*
20	150	103			110 (105)*	236 (231)*
25	160	113			110 (105)*	236 (231)*
32	180	130			104	283 (283)*
40	200	135			114	283 (281)*
50	230	147			124	293 (277)*
65	290	159			144	313 (269)*
80	310	166			154	323 (269)*
100	350	189			169	338 (262)*
125	400	243			189	358 (252)*
		PN16	PN25	PN40	340-BB	340-BBK / 340-BBK-SS
150	480	269	277	277	244	234
200	600	272	280	288	268	258
250	730	314	322	332	317	307
300	850	327	335	345	361	351

* Dimension h2 for previous version of bælz 340

Dimensions of the bælz 373 actuators (mm)

Designation	L		x	Ød	I	ØD
E07	320 (OSX: L = 354)		145	129		
E45	560		150	175		
E65	see dimensional drawing on previous page					
P11					244	160
P21					268	242
P21-V6					304	242
P22					322	242
	340-BB/ 340-BB-EMF	340-BBK/ 340-BBK-SSF			340-BB/ 340-BB-EM	340-BBK/ 340-BBK-SS
E45	577	1057	150	175		
E66	614	1094	200	188 (258*)		
P31					509	989
P32					525	1005
P41					562	1042
P41-V6					687	1167

* Dimensions with manual operation



bælz 340-2-B DN15-125

bælz 340-2-B-EMF DN40-125

bælz 340-2-BK DN15-125

bælz 340-2-BK-SS DN15-125

bælz 340-BB DN150-300

bælz 340-BB-EMF DN150-300

bælz 340-BBK DN150-300

bælz 340-BBK-SS DN150-300

Maximum differential pressure ΔP_{max} (bar) at which the actuator closes the valve completely

The differential pressures specified here are limited by the nominal pressure of the valve bodies, if this is lower.

Electric actuators. bælz 340-2-B/340-BB, 340-2-BK/340-BBK, 340-2-BK-SS/340-BBK-SS. Plug closes against the flow.

Actuator bælz 373-	Power (N)	DN (mm) / maximum differential pressure ΔP_{max} (bar)													
		15	20	25	32	40	50	65	80	100	125	150	200	250	300
E07- OSX-	700	14	14	10	5	2.5	1.2	0.3							
E07- 20-	2000	40	40	32	20	12	8	4.8	3	2	1.2				
E65- 11-	1100	25	25	21	11	6.3	3.5	1.7	0.9	0.3					
E65- 20-	2000	40	40	32	20	12	8	4.8	3	2	1.2				
E45- 40-	4000	40	40	40	40	25	16	10	6.9	4.4	2.8	1.7			
E66- 80-	8000											3.1	1.6	0.9	
E66- 150-	15000											7.1	3.8	2.3	1.5
E88- 100-	10000							28	18	11	7.4	5	2.7	1.7	1.1
E88- 100-	13000							37	24	15	9.8	6.7	3.7	2.3	1.5
E88- 100-	16000							40	30	19	12	8.4	4.6	2.9	2
E88- 300-	30000											15.3	9	5.8	3.9
E88- 300-	35000											18.9	10.5	6.7	4.6
E88- 300-	40000											21.7	12.1	7.7	5.3

Balanced 2-way valves for liquids and steam bælz 340-2-B-EMF, 340-BB-EMF. Plug closes against the flow.

Actuator bælz 373-	Power (N)	DN (mm) / maximum differential pressure ΔP_{max} (bar)													
		15	20	25	32	40	50	65	80	100	125	150	200	250	300
E07- OSX-	700					40	40	40	40						
E07- 20-	2000					40	40	40	40	40	40				
E65- 11-	1100					40	40	40	40						
E65- 20-	2000					40	40	40	40	40	40				
E45- 40-	4000					40	40	40	40	40	40	8.2			
E66- 80-	8000											24.8	15	9.7	6.3
E66- 150-	15000											40	40	29.1	22.1
E63- 440-	4448											10.3			
E88- 100-	10000											36.7	23.4	16.1	11.5
E88- 100-	13000											40	33.5	23.9	17.9
E88- 100-	16000											40	40	31.7	24.2
E88- 300-	30000											40	40	40	40
E88- 300-	35000											40	40	40	40
E88- 300-	40000											40	40	40	40

Maximum differential pressure ΔP_{max} (bar) at which the actuator closes the valve completely

The differential pressures specified here are limited by the nominal pressure of the valve bodies, if this is lower.

2-way valves: bælz 340-2-B/340-BB, 340-2-BK/340-BBK, 340-2-BK/340-BBK-SS
Pneumatic actuators (OPG) closed without compressed air. Plug closes against the flow.

Actuator bælz 373-	Power (N)	required feed pressure (bar)	DN (mm) / maximum differential pressure ΔP_{max} (bar)													
			15	20	25	32	40	50	65	80	100	125	150	200	250	300
P11- 1	950	3.0	39.5	18.2	13.6	8.1	4.3	2.4	1.1	0.5						
P21- 3	1020	1.2	29	29	16	9.9	6.3	4.6	2.7	1.8	1	0.6				
P21- 6	2040	3.0	40	40	35	21	13.5	8.9	5.2	3.4	2.2	1.4				
P21- 12	3390	6.0	40	40	40	36	23	14	8	5	3.5	2.1				
P21- 18	4030	6.0	40	40	40	40	27	18	10	7	4.5	2.8				
P21- V6	7590	6.0	40	40	40	40	40	34	20	13	8	5				
P22- 3	1846	3.0	40	40	34.5	18.8	11	6.5	3.4	2	1.1	0.5				
P22- 6	3692	6.0	40	40	40	40	25.2	15.3	8.5	5.3	3.2	1.9				
P31- 3	2480	1.2											1.1			
P31- 6	4960	3.0											2.4			
P31- 18	10560	6.0											5.3			
P32- 6	4402	3.0												0.8		
P32- 18	8115	6.0												1.8		
P41- 3	3765	1.2											2.4	1	0.6	0.4
P41- 6	7530	3.0											5	2	1.3	0.9
P41- V6	31920	6.0											21	10.5	6.5	4.5

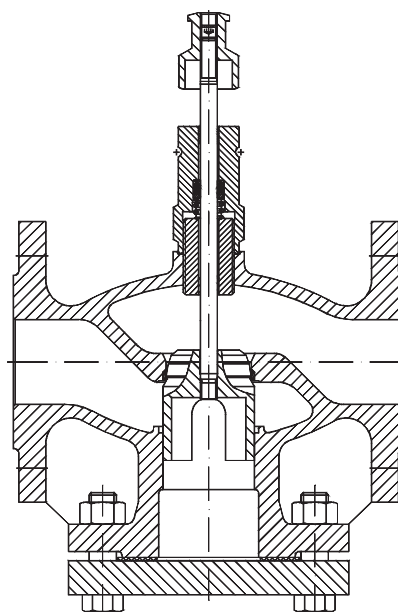
2-way valves: bælz 340-2-B/340-BB, 340-2-BK/340-BBK, 340-2-BK/340-BBK-SS
Pneumatic actuators (OPO) open without compressed air. Plug closes against the flow.

Actuator bælz 373-	Power (N)	required feed pressure (bar)	DN (mm) / maximum differential pressure ΔP_{max} (bar)													
			15	20	25	32	40	50	65	80	100	125	150	200	250	300
P11- 1	2111	6.0	40	40	40	29.2	17	10.5	5.8	3.7						
P21- 3	1020	1.2	7	7	4.5	2.8	1.8	1.1	0.6	0.4	-	-				
		3.0	40	40	40	40	31	19	12	8	5	3				
		6.0	40	40	40	40	40	40	30	20	12	8				
P21- 6	2040	3.0	40	40	35	21	14	8	5.3	3.5	2.2	1.4				
		6.0	40	40	40	40	40	39	24	16	10	6				
		1.2											0.6			
P31- 3	2480	3.0											6			
		6.0											14.8			
		1.2														
P31- 6	4960	3.0											3			
		6.0											12			
		1.2														
P41- 3	3765	3.0											1.2	0.7	0.4	0.3
		6.0											12	6.8	4.3	3
		1.2											30	17	11	7.5
P41- 6	7530	3.0												5	3	2
		6.0												15	10	6

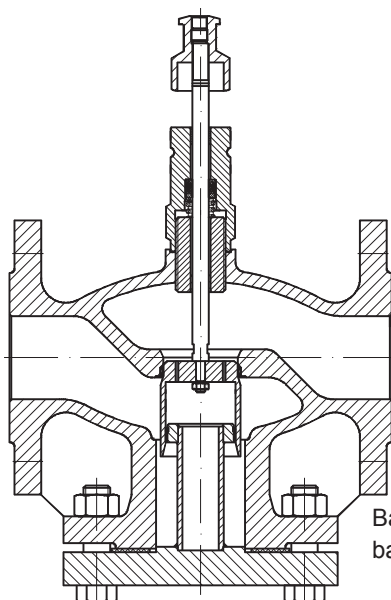
Balanced 2-way valves for liquids and steam: bælz 340-2-B-EMF, 340-BB-EMF
Pneumatic actuators (OPG) closed without compressed air. Plug closes against the flow.

Actuator bælz 373-	Power (N)	required feed pressure (bar)	DN (mm) / maximum differential pressure ΔP_{max} (bar)													
			15	20	25	32	40	50	65	80	100	125	150	200	250	300
P11- 1	950	3.0					40	40	40	40						
P21- 3	1020	1.2					40	40	40	40						
P21- 6	2040	3.0					40	40	40	40	40	40				
P22- 3	1846	3.0					40	40	40	40	40	40				
P22- 6	3692	6.0					40	40	40	40	40	40				
P31- 3	2480	3.0											1			
P31- 6	4960	3.0											12.8			
P31- 18	10560	6.0											39.4			
P32- 6	4402	3.0												4.6	1.6	
P32- 18	8115	6.0												17.1	11.2	7.5
P41- 3	3765	1.2											7.1	2.5		
P41- 6	7530	3.0											24.9	15.1	9.7	6.3
P41- V6	31920	6.0											40	40	40	40

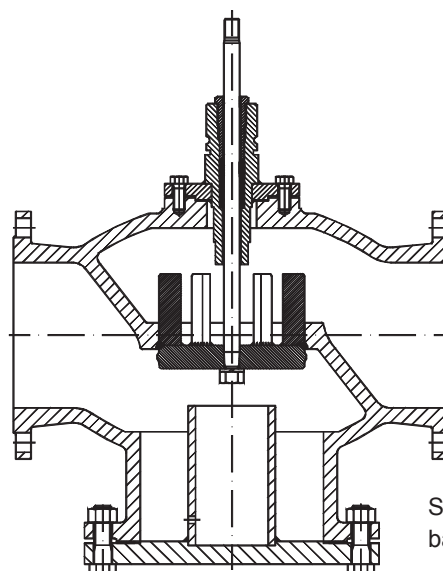
Sectional drawings of the baelz 340-2 plug



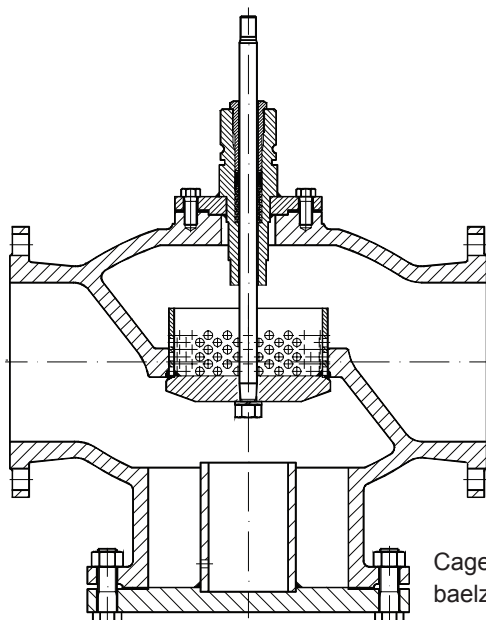
baelz 340-2-B parabolic
plug with slot guides



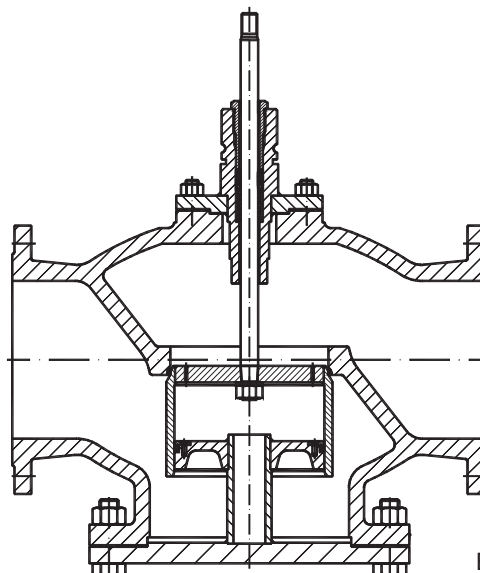
Balanced plug
baelz 340-2-B-EMF



Slit plug
baelz 340-BB



Cage plug
baelz 340-BB-LK



Balanced plug
baelz 340-BB-EMF