



bælz 340

DESCRIPTION

The bælz 340 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 media: liquids, gases, water, steam, thermal oil, etc.

Leakage class (EN 1349)

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

with Teflon 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 (12*)

10 (16**)

22

* for bælz 340-ES

** for bælz 340-B-EMF DN 100, DN 125

Options		Designation***
Plug	Parabolic plug (standard)	bælz 340-B
	Balanced	bælz 340-B-EMF
	Cage plug	bælz 340-B-LK
	Reduced Kvs	bælz 340-B-SKr
	With Teflon soft seal plug (max. 200°C)	bælz 340-B-TK
Stem seal	V-rings in PFTE standard	bælz 340-B
	Cooling tube	bælz 340-BK
	Cooling tube + bellows seal	bælz 340-BK-SS
Additional options	V-shaped seal heating (for media at temperatures of - 10 to - 40°C) Pmax. 20 W; 12-24 V / 110-230 V AC/DC	bælz 85950...
	Construction without silicone	bælz 340-B...-Silf

*** Designation: 347-B up to DN 125 and for spindle Ø up to 16 mm; 347-BB from DN 150 and for spindle Ø 22 mm

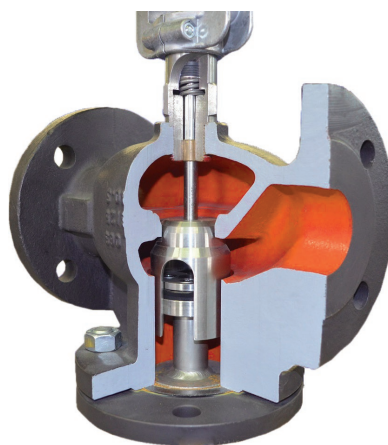
T max. (°C) / P max. (bar)					
Housing material	Spheroid ductile iron GJS-400-18-LT - 5.3103		Cast steel GP240GH - 1.0619		Stainless steel 1.4313
Nominal pressure	PN 16	PN 25	PN 25	PN 40	PN 40
baelz 340-B	240/12.3 ... 50/16	240/19.3 ... 50/25	-	-	-
baelz 340-B-EMF			240/19.3 ... 50/25	240/30.9 ... 50/40	
baelz 340-BK	350/10.2 ... 50/16	350/16 ... 50/25	350/16 ... 50/25	350/25.7 ... 50/40	
baelz 340-BK-SS		-	-	350/25 ... 50/25	
baelz 340-BK-EMF	315/10.7...260/ 11.8 ... 50/16	315/16.8 ...260/ 18.6 ... 50/25	315/16.8 ...260/ 18.6 ... 50/25	315/27...260/ 29.8 ... 50/40	240/30.9 ... 50/40
baelz 340-ES (DN 25 and DN 50)	-				

		Kvs value (m³/h)													
DN		15	20	25	32	40	50	65	80	100	125	150	200	250	300
Standard plug (B/BB)	5.6														
Balanced plug (EMF)	3 2	6.3	9	16	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 1	2.5 1.6	5 3.2	8 4	12.5 6.3	20 10	32 16	50 25	80 40	130 63	-	-	-	-	
Cage plug (LK)	2.5 (LK) 1.6	4 3.2 2.5	6.3 5 4	12.5 10 6.3	20 16 10	32 25 16	50 40 25	80 63 40	100 80 63	130 100 100	250 200 130	320 - -	580 - -	-	-

		Weight of the baelz 340 valves													
		340-B										340-BB			
DN		15	20	25	32	40	50	65	80	100	125	150	200	250	300
Standard	PN16														
	PN25	6.2	7.1	7.8	11.5	13.9	18.5	27.8	32.9	44.5	65.6	101	200	240	425
	PN40												270	310	
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 (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	-	-
Made of stainless steel ES PN40	PN40	-	-	7.8	-	-	18.5	-	-	-	-	-	-	-	-
Balanced plug (EMF)	PN16														
	PN25	-	-	-	-	14.4	19	28.4	32.9	46.3	71	101	200	240	425
	PN25 steel													277	440
	PN40	-	-	-	-	15.9	21	31.4	36.9	51.3	78	111	252	310	518
Cooling tube and balanced plug (K-EMF)	PN16														
	PN25	-	-	-	-	15.4	20	29.4	33.9	47.3	72	107	250	300	470
	PN25 steel													320	450
	PN40	-	-	-	-	16.9	22	32.4	37.9	52.3	79	122	302	370	558



baelz 340-B-EMF balancing guide



Sectional view of baelz 340-B-EMF plug



baelz 340-B cage plug

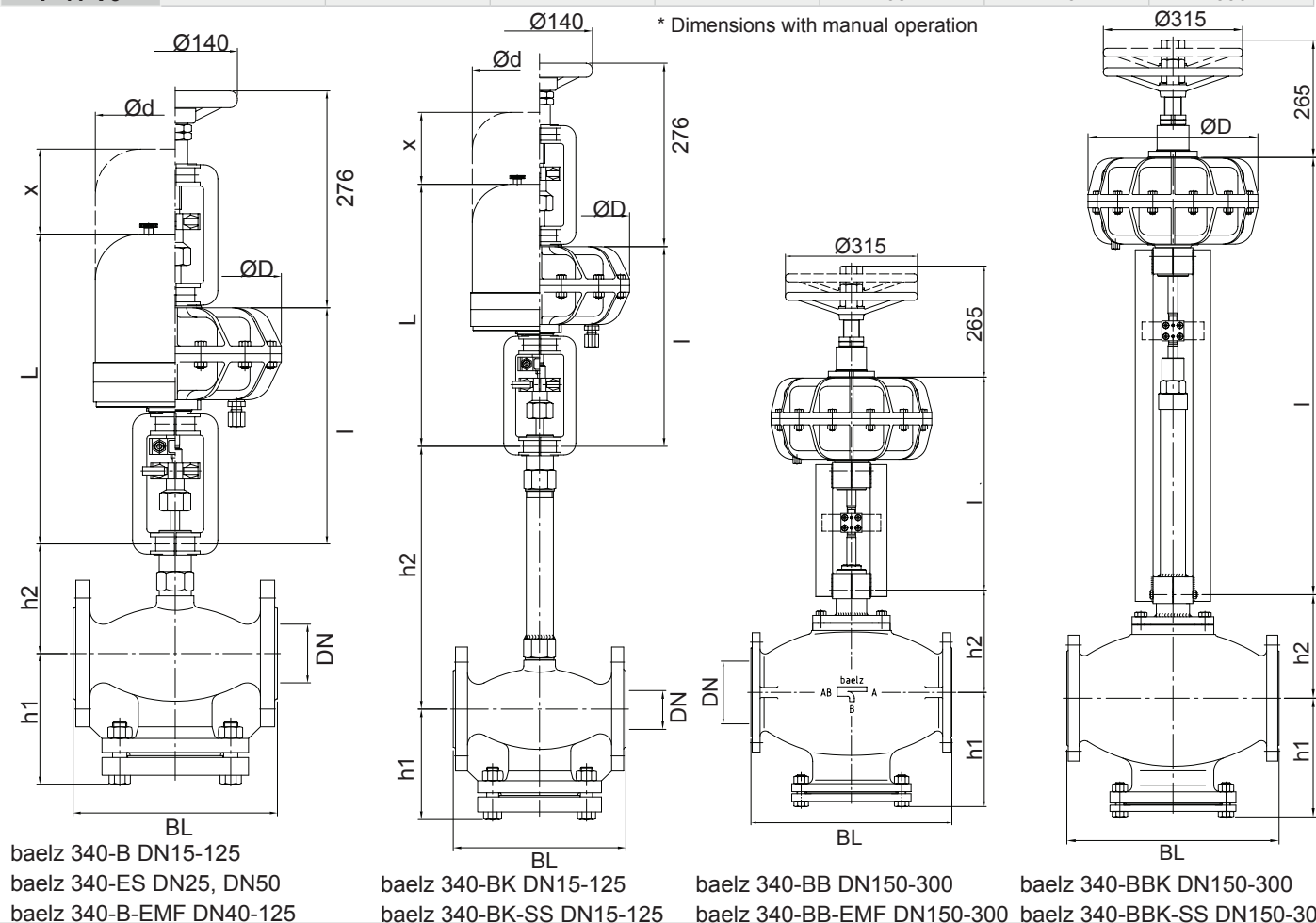
Dimensions of the bælz 340 valves (mm)

DN	BL	h1			h2	
					340-B / 340-ES	340-BK / 340-BK-SS
15	130	101			105	231
20	150	103			105	231
25	160	113			105	231
32	180	130			104	283
40	200	135			114	281
50	230	147			124	277
65	290	159			144	269
80	310	166			154	269
100	350	189			169	262
125	400	243			189	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

Dimensions of the actuators

Designation	L	x	Ød	I	ØD
E 07	320	145	129		
E 45	560	150	175		
P 21				268	242
P 21V6				304	242
P 22				322	242
	340-BB/ 340-BB-EMF	340-BBK/ 340-BBK-SSF		340-BB/ 340-BB-EM	340-BBK/ 340-BBK-SS
E 45	577	1057	150	175	
E 66	614	1094	200	188 (258*)	
P 31				509	989
P 32				525	1005
P 41				562	1042
P 41-V6				687	1167

* Dimensions with manual operation



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 housings, if this is lower.

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

Actuator balez 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- 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-ALS-25-	2500											0.5			
E88-ALS-75-	7500											3.1	1.6	0.9	
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 balez 340-B-EMF, 340-BB-EMF. Plug closes against the flow.

Actuator balez 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- 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			
E63- 660-	6672											20.9			
E88-ALS-25-	2500											1.1			
E88-ALS-75-	7500											24.8	15	9.7	6.3
E88- 100-	10000											36.7	23.4	16.1	11.5
E88- 130-	13000											40	33.5	23.9	17.9
E88- 160-	16000											40	40	31.7	24.2
E88- 300-	30000											40	40	40	40
E88- 350-	35000											40	40	40	40
E88- 400-	40000											40	40	40	40

3-way valves as diverting valves balez 340-B-EMF, 340-BB-EMF. Plug closes in direction of flow.

Actuator balez 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- 20-	2000	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6				
E65- 11-	1100	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5				
E65- 20-	2000	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6				
E45- 40-	4000	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6				
E66- 150-	15000											1	0.6	0.6	0.6
E88- 100-	10000											1	0.6	0.6	0.6
E88- 300-	30000											1	0.6	0.6	0.6

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 housings, if this is lower.

2-way valves: baelz 340-B/BB, 340-BK/BBK, 340-BK/BBK-SS, 340-ES

Pneumatic actuators (OPG) closed without compressed air. Plug closes against the flow.

Actuator baelz 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	1.2	23.2	23.2	16.4	8.4	4.6	2.5	1.1							
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: baelz 340-B/BB, 340-BK/BBK, 340-BK/BBK-SS, 340-ES

Pneumatic actuators (OPO) open without compressed air. Plug closes against the flow.

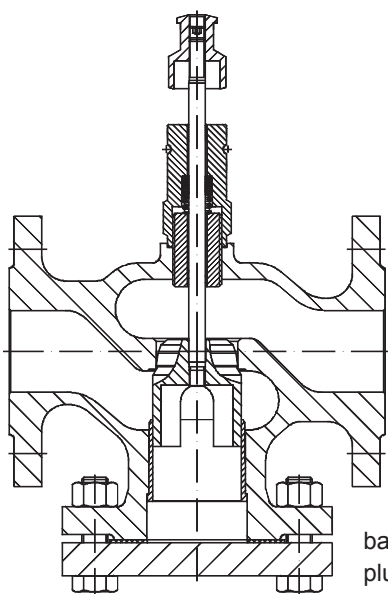
Actuator baelz 373-	Power (N)	required feed pressure (bar)	DN (mm) / maximum differential pressure ΔP_{max} (bar)													
			15	20	25	32	40	50	65	80	100	125	150	200	250	300
P21- 3	1020	1.2	7	7	4.5	2.8	1.8	1.1	0.6	0.4	-	-				
		3.0	40	40	40	40	31	19	12	8	5	3				
		6.0	40	40	40	40	40	40	30	20	12	8				
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
		1.2														

Balanced 2-way valves for liquids and steam: baelz 340-B-EMF, 340-BB-EMF

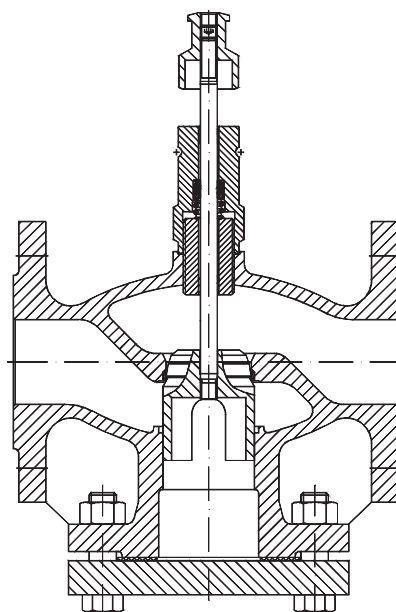
Pneumatic actuators (OPG) closed without compressed air. Plug closes against the flow.

Actuator baelz 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
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

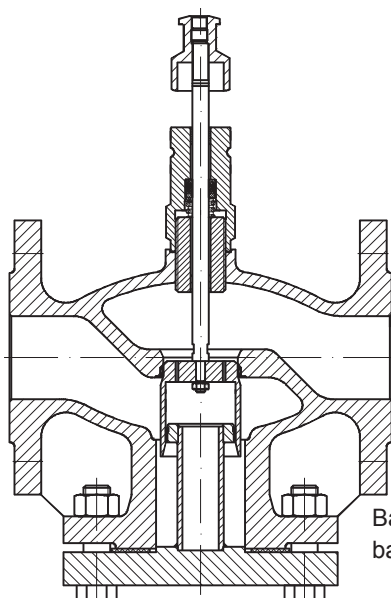
Sectional drawings of the baelz 340 plug



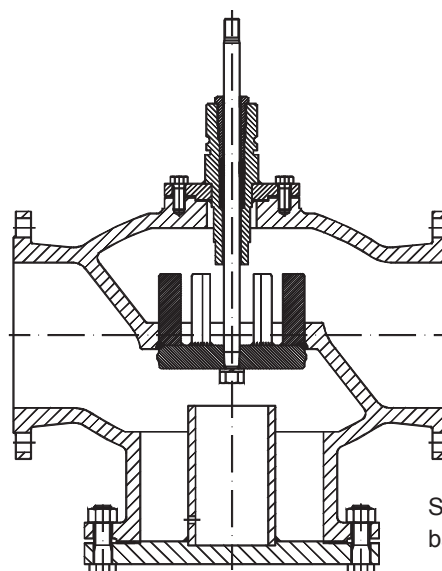
baelz 340-ES parabolic
plug with slot guides



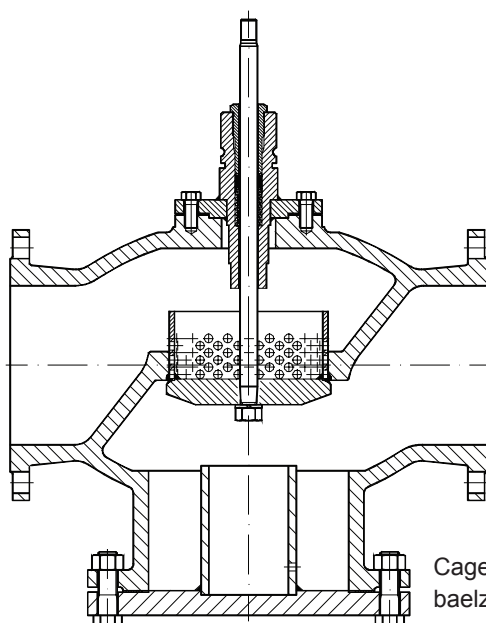
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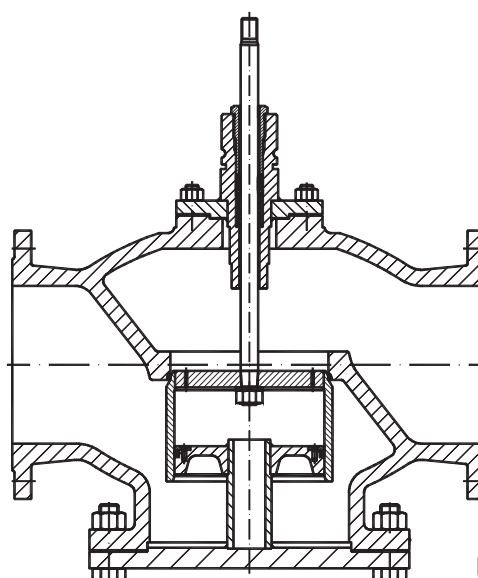
Balanced plug
baelz 340-B-EMF



Slit plug
baelz 340-BB



Cage plug
baelz 340-BB-LK



Balanced plug
baelz 340-BB-EMF