



## baelz 340

### DESCRIPTION

The baelz 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)		Spindle diameter (mm)
DN 15 - DN 25	12	10 (12*)
DN 32 - DN 125	22	10 (16**)
DN 150	44	22
DN 200 - DN 300	66	

\* for baelz 340-ES

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

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

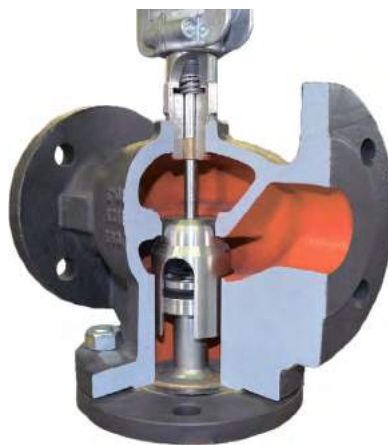
Housing material	T max. (°C) / P max. (bar)				Stainless steel 1.4313 PN 40
	Spheroid ductile iron GJS-400-18-LT - 5.3103		Cast steel GP240GH - 1.0619		
Nominal pressure	PN 16	PN 25	PN 25	PN 40	
baelz 340-B	240/12.3 ... 50/16	240/19.3 ... 50/25	-	-	
baelz 340-B-EMF			240/19.3 ... 50/25	240/30.9 ... 50/40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

		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	6.3	9	16	25	36	63	105	130	200	360	580	960	1340
		2													
Balancing cage plug (EMF-LK)		-	-	-	-	20	32	50	80	100	130	250	320	-	-
Reduced Kvs (Skr)		2	2.5	5	8	12.5	20	32	50	80	130	-	-	-	-
		1	1.6	3.2	4	6.3	10	16	25	40	63	-	-	-	-
		2.5	4	6.3	12.5	20	32	50	80	100	130	250	320	580	-
Cage plug (LK)	(LK)	3.2	5	10	16	25	40	63	80	100	200	-	-	-	-
		1.6	2.5	4	6.3	10	16	25	40	63	-	130	-	-	-

		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												200	240	425
	PN25	6.2	7.1	7.8	11.5	13.9	18.5	27.8	32.9	44.5	65.6	101			
	PN40												270	310	
Cooling tube (K)	PN16												250	300	470
	PN25	7.2	8.1	8.8	12.5	14.9	19.5	28.8	33.9	45.5	66.6	107			
	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													240	425
	PN25	-	-	-	-	14.4	19	28.4	32.9	46.3	71	101	200		
	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													300	470
	PN25	-	-	-	-	15.4	20	29.4	33.9	47.3	72	107	250		
	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

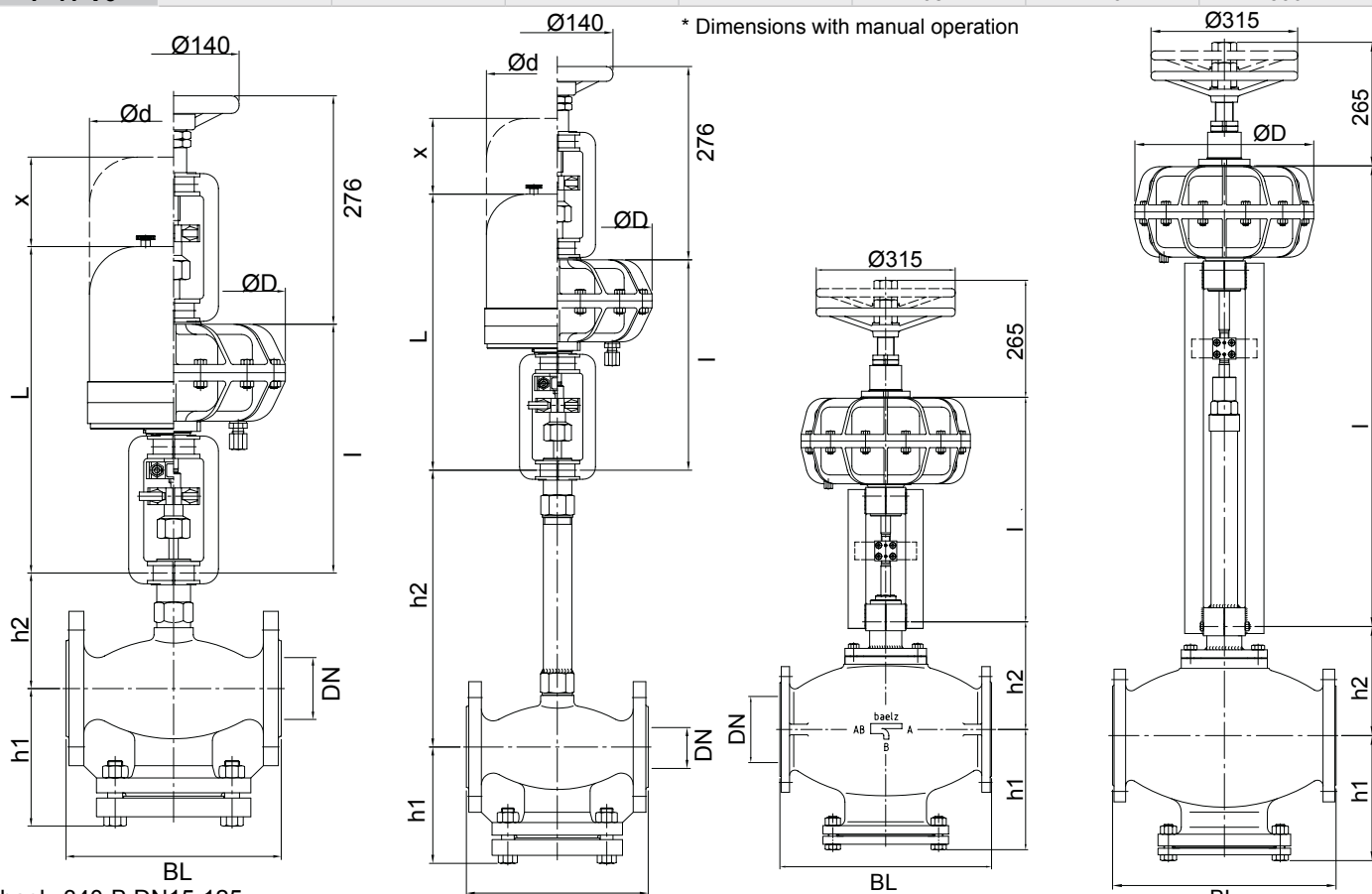
Dimensions of the baelz 340 valves (mm)

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-BK-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	384
P 32					525	1005	384
P 41					562	1042	506
P 41-V6					687	1167	506

\* Dimensions with manual operation



baelz 340-B DN15-125  
baelz 340-ES DN25, DN50  
baelz 340-B-EMF DN40-125

baelz 340-BK DN15-125  
baelz 340-BK-SS DN15-125

baelz 340-BB DN150-300  
baelz 340-BB-EMF DN150-300

baelz 340-BBK DN150-300  
baelz 340-BBK-SS DN150-300

**Maximum differential pressure  $\Delta P_{max}$  (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. baelz 340-B/BB, 340-BK/BBK, 340-BK-SS/BBK-SS, 340-B-ES. Plug closes against the flow.**

Actuator baelz 373-	Power (N)	DN (mm) / maximum differential pressure $\Delta P_{max}$ (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 baelz 340-B-EMF, 340-BB-EMF. Plug closes against the flow.**

Actuator baelz 373-	Power (N)	DN (mm) / maximum differential pressure $\Delta P_{max}$ (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 changeover valves baelz 340-B-EMF, 340-BB-EMF. Plug closes in direction of flow.**

Actuator baelz 373-	Power (N)	DN (mm) / maximum differential pressure $\Delta P_{max}$ (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	0.6				
E65- 11-	1100	0.6	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	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	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  $\Delta P_{max}$  (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)	req. feed pressure (bar)	DN (mm) / maximum differential pressure $\Delta P_{max}$ (bar)													
			15	20	25	32	40	50	65	80	100	125	150	200	250	300
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.**

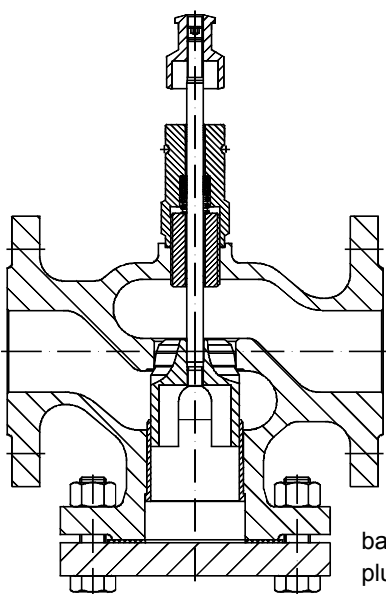
Actuator baelz 373-	Power (N)	req. feed pressure (bar)	DN (mm) / maximum differential pressure $\Delta P_{max}$ (bar)													
			15	20	25	32	40	50	65	80	100	125	150	200	250	300
P21- 3	1020	1.2	7	7	4.5	2.8	1.8	1.1	0.6	0.4	-	-				
		3.0	40	40	40	40	31	19	12	8	5	3				
		6.0	40	40	40	40	40	40	30	20	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				
P31- 3	2480	1.2											0.6			
		3.0											6			
		6.0											14.8			
P31- 6	4960	3.0											3			
		6.0											12			
P41- 3	3765	1.2											1.2	0.7	0.4	0.3
		3.0											12	6.8	4.3	3
		6.0											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: baelz 340-B-EMF, 340-BB-EMF**

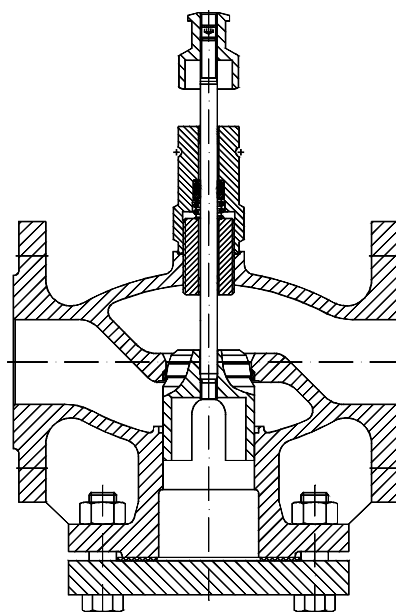
**Pneumatic actuators (OPG) closed without compressed air. Plug closes against the flow.**

Actuator baelz 373-	Power (N)	req. feed pressure (bar)	DN (mm) / maximum differential pressure $\Delta P_{max}$ (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

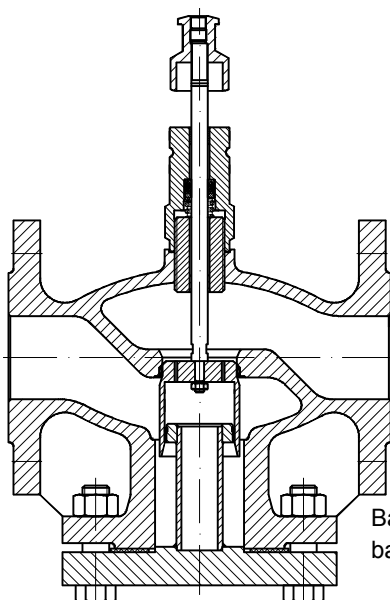
Sectional drawings of the baelz 340 plug



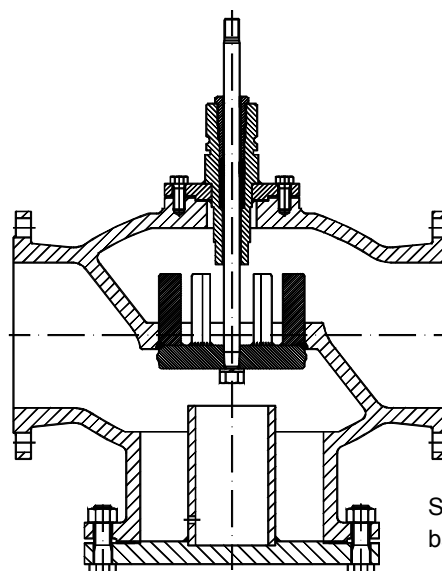
baelz 340-ES parabolic plug with slot guides



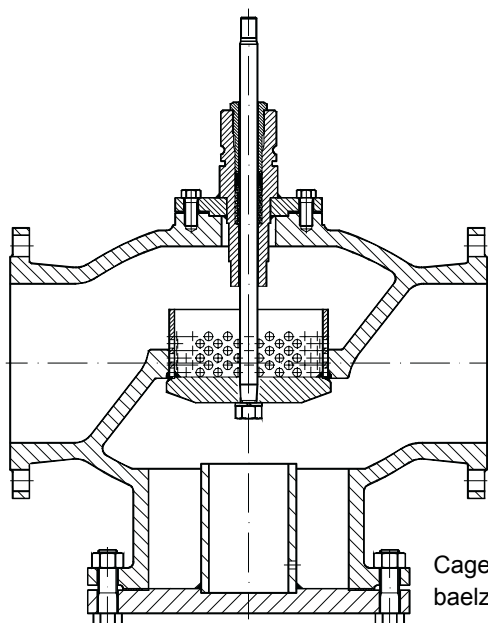
baelz 340-B parabolic plug with slot guides



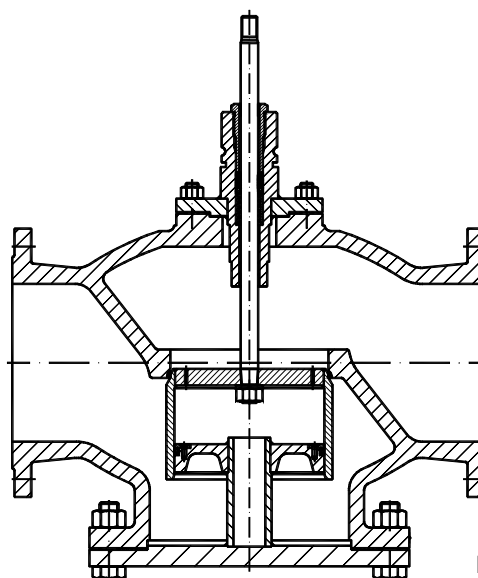
Balanced plug  
baelz 340-B-EMF



Slit plug  
baelz 340-BB



Cage plug  
baelz 340-BB-LK



Balanced plug  
baelz 340-BB-EMF