



## baelz 356-1 & 356-2

### DESCRIPTION

The baelz 356 is a 2-way control valve with a heat resistant steel or stainless steel housing for industrial applications. Several plug shapes allow utilization for various control tasks under demanding operating conditions.

### TECHNICAL SPECIFICATIONS

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

Plug type: parabolic plug / conical

Control characteristic: equal percentage, linear, OPEN / CLOSED

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

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		Spindle diameter
DN 15 - DN 25	16 mm	10mm
DN 32 - DN 65	22mm	

	Options	Description
<b>Plug</b>	Parabolic plug, stainless steel (standard)	baelz 356-1... / baelz 356-2...
	cage plug	MP356-LK...
	PTFE plug	MP356-TK...
	several Kvs values available	baelz 356-1...Kvs XX / baelz 356-2...Kvs XX
<b>Spindle seal</b>	V-rings in PTFE (Standard)	baelz 356-1... / baelz 356-2...
	Cooling tube	baelz 356-1(-VA)-K... / baelz 356-2-VA-K...
	Double-walled stainless steel bellows seal	MP356-SS
<b>Additional options</b>	V-ring seal heating (for fluids at temperatures of - 10 to - 40 °C) Pmax. 20 W; 12-24 V / 110-230 V AC/DC	baelz 85950...
	Silicone free version	MP356-Silf
	Version for drinking water	MP356-Twg

Model	T max. (°C) / P max. (bar)			
	Stainless steel 1.4571		Heat resistant steel 1.0460	
Housing material				
Nominal pressure	PN 25/40		PN 25/40	PN 16
Nominal diameter	DN 15-25	DN 32-65	DN 32-50	DN 65
baelz 356-1	-	-	240/35...50/40	240/12.3...50/16
baelz 356-1-K	-	-	350/25.7...50/40	350/10.2...50/16
baelz 356-1-VA	240/40...100/40	240/35.7...100/40	-	-
baelz 356-1-VA-K <sup>1)</sup>	350/40...100/40	350/32.1...100/40	-	-
baelz 356-2-VA-K <sup>2)</sup>				
baelz 356-1-K + MP356-SS	-	-	-	350/10.2...50/16
baelz 356-1-VA-K <sup>1)</sup> + MP356-SS	350/25...100/25		-	-
baelz 356-2-VA-K <sup>2)</sup> + MP356-SS			-	-

1) DN 32 - DN 65; 2) DN 15 - DN 25

**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.

Housing	Kvs value (m <sup>3</sup> /h)										
	1.4571						1.0460				
DN	15	20	25	32	40	50	65	32	40	50	65
Standard	3.8	7.3	9.3	15	25	40	63	15	25	42	63
	2	4	6.5	10	14	23	38	10	14	23	38
	1	2	4	7	10	15	23	7	10	15	23
Cage plug LK	2.5	4	6.3	12.5	18.5	25	40	12.5	18.5	25	40
	2	2.5	4	6.3	12.5	18.5	25	6.3	12.5	18.5	25
	1.4	2.0	2.5	4	6.3	12.5	18.5	4	6.3	12.5	18.5
	0.6										

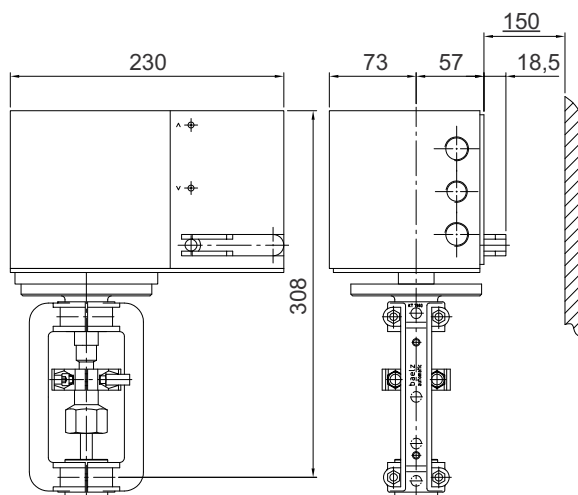
Approximate weights of the baelz 356 valves (kg)							
DN	15	20	25	32	40	50	65
baelz 356	5.5	6.1	6.6	10	11.8	15.6	19
baelz 356-K	5.7	6.4	7.2	10.5	12.3	16.1	19.5

Dimensions of the baelz 356 valves (mm)				
DN	BL	h1	h2	
			356	356-K/K-SS
15	130	40	106	331
20	150	45	106	331
25	160	55	106	331
32	180	62	111	358
40	200	73	132	372
50	230	90	142	382
65	290	101	182	425

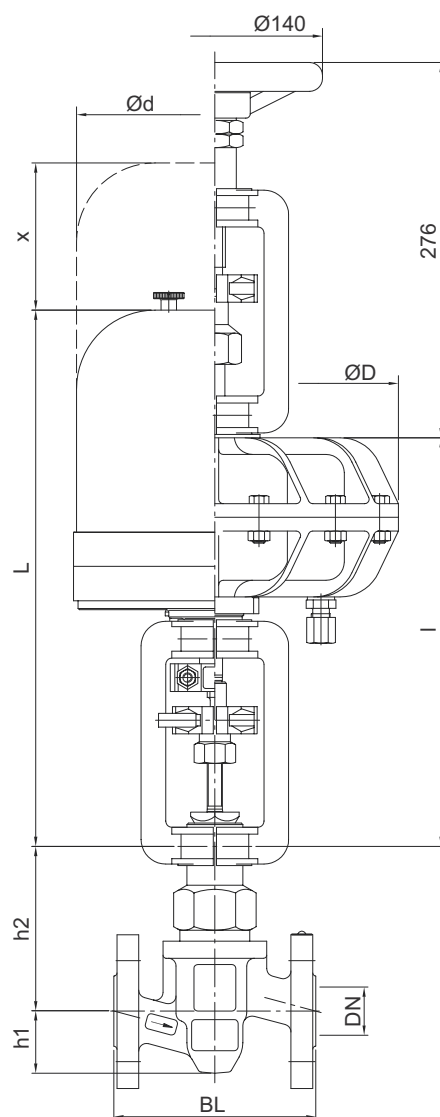
Dimensions of the baelz 373 actuators (mm)					
Designation	L	x	Ød	l	ØD
E07	320	145	129		
E07-OSX	354	145	129		
E45	560	150	175		
E65	see dimensional drawing below				
P11				244	160
P21				268	242
P21-V6				304	242
P22				322	242

Electric actuators: baelz 373-E

Pneumatic actuators: baelz 373-P



Dimensions of the baelz 373-E65 actuator



baelz 356 DN15-65 dimensions

# baelz 356-1 & 356-2 2-way control valve differential pressure tables



## 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. 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- 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

### 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 $\Delta P_{max}$ (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- 1	950	1.2	40	18.3	13.7	8.2	4.3	2.4	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

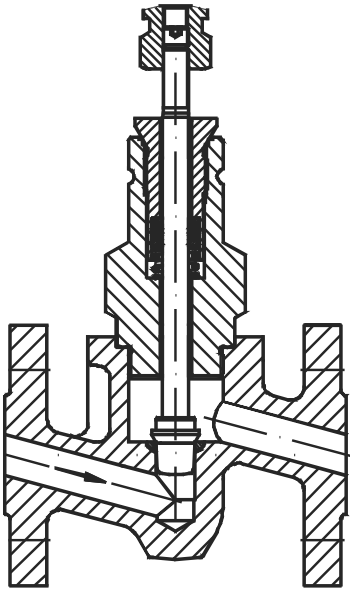
### Pneumatic actuators (OPO) open without compressed air. Plug closes against the flow.

Actuator baelz 373-	Power (N)	required feed pressure (bar)	DN (mm) / maximum differential pressure $\Delta P_{max}$ (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							
		1.2	7	7	4.5	2.8	1.8	1.1	0.6	0.4							
P21- 3	1020	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

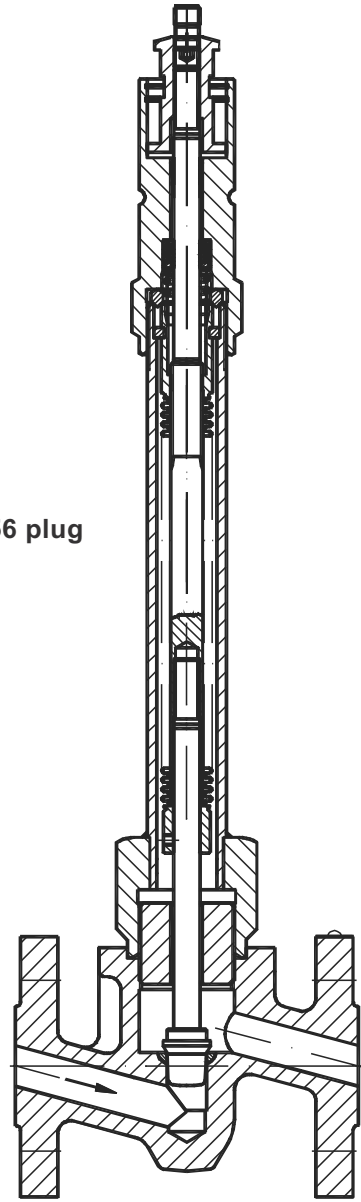


baelz 356  
cage plug

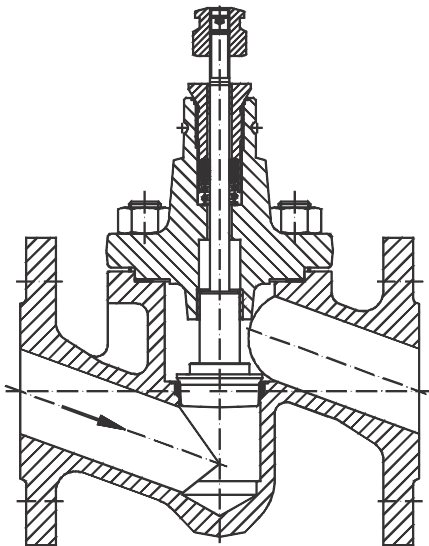
Sectional drawings of the baelz 356 plug



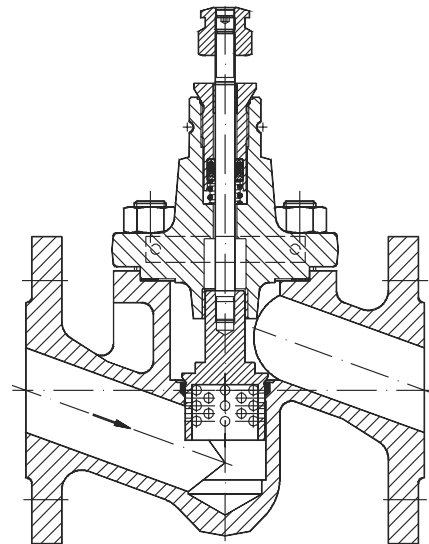
Parabolic plug  
baelz 356-1-VA



Parabolic plug  
baelz 356-1-VA-K-SS



Parabolic plug  
baelz 356-1



Cage plug  
baelz 356-1-LK