baelz 590

DESCRIPTION

The baelz 590 is a steam/steam ejector (thermocompressor) with flange connection for recirculation and compression of exhaust vapor.

Housing: GJS-400-18-LT - 5.3103 / GP240GH - 1.0619 (PN 40)
Diffuser: DN 15: X14CrMoS17
DN 25...125: GJS-400-18-LT
≥ DN 150 and all PN 40: steel, welded
Plug Spindle and nozzle: stainless steel

TECHNICAL SPECIFICATIONS

Flange: Special design according to EN 1092-1 possible

The plug type and the control characteristic are designed and manufactured to order.
Spindle seal: V-rings in PFTE, DN 15-125 with wiper set
- Option: baelz 590-K - with cooling tube (MP590-*stem*-Ø-K)
- Option: silicone-free version (MP590-Silf-)

Working fluids: steam

Leakage class (EN 1349)
metal-to-metal seal: 0.004% Kvs (better than class IV)

Spindle Ø (mm)	
DN 15 DN 25 - DN 80	10
DN 100 - DN 125*	16
DN 150	16 / 22
DN 200– DN 250	22

Nozzle Ø (mm)	Stroke
2,5 - 6,5	12
8 – 23	22
25-65	40
25-50	44
65-120	66

**recommended actuators for DN 100 and DN 125:*
Stroke 22, Actuator 373-P21-L...; Stroke 40. Actuator 373-P22-L...

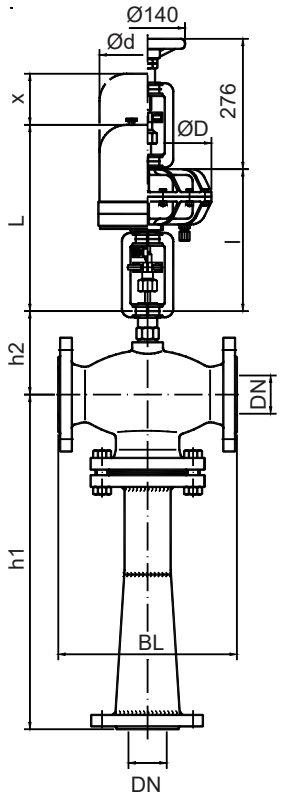
T max. (°C) / P max. (bar)			
Housing material	GJS-400-18-LT - 5.3103		GP240GH - 1.0619
	PN 16	**PN 25**	**PN 40 / DN 250 for all nominal pressures**
baelz 590 DN 15 - DN 125	240/14 … 50/16	240/22 … 50/25	240/30.9 … 50/40
baelz 590 DN 150 - DN 200	240/12.3 … 50/16	240/19.3 … 50/25	
baelz 590-K DN 15 - DN 200	350/11.2 … 50/16	350/17.5 … 50/25	350/25.7 … 50/40

Material diffusor		
Designation	**Nominal pressure**	**Material**
590 DN 15	PN 16 / 25	X14CrMoS17 - 1.4104
590 DN 25...DN 125	PN 16 / 25	GJS-400-18-LT - 5.3103
590-DG. ab DN 150	PN 16 / 25	Welded steel, diffusor stainless steel
590 DN 15...DN 250	PN 40	Welded steel, diffusor stainless steel

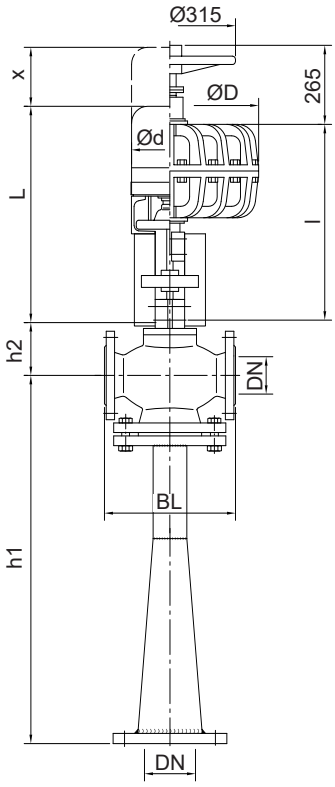
Available nozzle diameters (mm)												
DN	**15**	**25**	**32**	**40**	**50**	**65**	**80**	**100**	**125**	**150**	**200**	**250**
Ø	2.5	2.5	5	6.5	8	10	12.4	16	20	25	65	80
	3.2	3.2	6.5	8	10	12.5	16	20	25	32	80	100
	4	4	8	10	12.5	16	20	25	32	40	92	120
	5	5	10	12.5	16	20	25	32	40	50		
	6.5	6.5	12.5	16	20	25	32	40	50	65		
		8			23	30	37	47	55	76		
		10										

DN 150 - DN 250: The indicated nozzle diameters are our default values.
Any desired intermediate sizes are also possible (without additional cost).

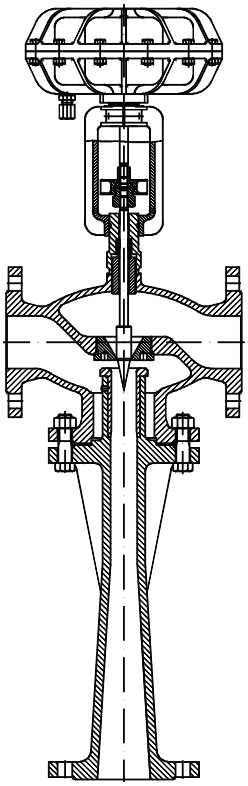
Approximate weights of the baelz 590 (kg)												
DN	**15**	**25**	**32**	**40**	**50**	**65**	**80**	**100**	**125**	**150**	**200**	**250**
Spheroidal ductile iron	6.3	9.1	14.9	19.3	25.3	40.4	50.6	68	104.3	145	300	460
Steel	7.4	10.2	16	20.4	27	42	52.6	70	106.3	148	310	470



baelz 590 DN15-125



baelz 590 DN150-300



baelz 590

baelz 590 dimensions (mm)					
DN	**BL**	**h1**		**h2**	
		PN16/25	**PN40**	**590**	**590-K**
15	130	175	176	109	261
25	160	202	229	110	263
32	180	302	302	104	339
40	200	358	358	114	349
50	230	402	429	124	359
65	290	539	573	144	379
80	310	600	695	154	389
100	350	624	912	204	439
125	400	1066		224	459
150	480	1364		244	234
200	600	1651		268	258
250	730	2070		398	398

Dimensions of the Baelz actuators (mm)							
	L		**x**	**Ød**	**l**		**ØD**
E07	320		145	129			
E45	560		150	175			
P11					244		160
P21					268		242
P21-V6					304		242
P22					322		242
E45	577	1057	150	175			
E66	614	1094	200	188 (258*)	* with manual operation		
P31					509	989	384
P32					525	1005	384
P41					562	1042	506
P41-V6					687	1167	506

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

Electric actuators baelz 480, 590 - DN 15 to DN 125. Plug closes in direction of flow.

Actuator baelz 373-	Power (N)	Nozzle Ø (mm) / Maximum differential pressure ΔPmax (bar)												
		≤ 12,5	16	20	23	25	30	32	37	40	47	50	60	72
E07- OSX-	700	64.2	26.7	16.9	12.8	10.8	7.6	6.7	5.1	4.8	3.4	3	2.1	1.5
E07-	2000	183.3	76.4	48.1	36.4	30.9	21.7	19.2	14.5	13.6	9.8	8.6	6.0	4.2
E65- 11-	1100	100.8	42	26.5	20	17	11.9	10.5	8	7.5	5.4	4.7	3.3	2.3
E65- 20-	2000	183.3	76.4	48.1	36.4	30.9	21.7	19.2	14.5	13.6	9.8	8.6	6.0	4.2
E45-	4000			96.3	72.9	61.9	43.4	38.3	29	27.3	19.5	17.2	11.9	8.3
E66- 80-	8000					123.7	86.8	76.6	58	54.6	39.1	34.5	23.9	16.6

Electric actuators baelz 480, 590 - ≥ DN 150. Plug closes in direction of flow.

Actuator baelz 373-	Power (N)	Nozzle Ø (mm) / Maximum differential pressure ΔPmax (bar)									
		40	50	60	65	70	80	90	100	110	120
E63-	4448	37.3	21.9	14.6	11.9	10.2	7.8	6.1	4.9	4.1	3.4
E64-	7000	58.8	34.5	23	18.8	16.1	12.2	9.6	7.8	6.4	5.4
E66- 80-	8000	67.2	39.4	26.3	21.4	18.4	13.9	11	8.9	7.3	6.2
E88- 100-	10000	83.9	49.3	32.9	26.8	23	17.4	13.7	11.1	9.2	7.7
E64-	14000	120.1	70.5	47.1	38.3	32.9	25	19.6	15.9	13.1	11
E66- 150-	15000	128.7	75.6	50.4	41.1	35.2	26.7	21	17	14	11.8
E88- 100-	16000	137.3	80.6	53.8	43.8	37.5	28.5	22.4	18	15	12.6
E88- 300-	30000	265.8	156.1	104.1	84.8	72.7	55.2	43.4	35.1	29	24.4

Pneumatic actuators baelz 480, 590 - DN 15 to DN 125. Plug closes in direction of flow.

Actuator baelz 373-	Power (N)	required feed pressure (bar)	Nozzle Ø (mm) / Maximum differential pressure ΔPmax (bar)										
			≤ 20	23	25	30	32	37	40	47	50	60	72
P11- 1-	950	6.0	85	65	55	39	34	26					
P21- 3-	1020	6.0	322	244	207	145	128	97	91	65	58	40	28
P21- 6-	2040	3.0	124	94	80	56	49	37	35	25	22	15	11
P21- 6-	2040	6.0	298	225	191	134	118	90	84	60	53	37	26
P21- 12-	3390	6.0	265	201	170	119	105	80	75	54	47	33	23
P21- 18-	4030	6.0	250	189	160	113	99	75	71	51	45	31	22
P21- V6-	7590	6.0	164	124	105	74	65	49	46	33	29	20	14
P22- 1-	800	3.0			99	69	61	46	44	31	28	19	13
P22- 3-	1846	6.0			194	136	120	91	86	61	54	37	26
P22- 6-	3692	6.0			166	116	103	78	73	52	46	32	22

Pneumatic actuators baelz 480, 590 - ≥ DN 150. Plug closes in direction of flow.

Actuator baelz 373-	Power (N)	required feed pressure (bar)	Nozzle Ø (mm) / Maximum differential pressure ΔPmax (bar)									
			40	50	60	65	70	80	90	100	110	120
P31- 3-	2480	6.0	291	171	114	93	80	61	48	39	32	27
P31- 6-	4960	6.0	271	159	106	86	74	56	44	36	30	25
P31- 18-	10560	6.0	224	131	88	71	61	46	37	30	24	20
P32- 3-	2201	6.0	294	172	115	94	80	61	48	39	32	27
P32- 6-	4402	6.0	275	162	108	88	75	57	45	36	30	25
P32- 18-	8115	6.0	244	143	96	78	67	51	40	32	27	22
P41- 3-	3765	6.0	598	351	234	191	164	124	98	79	65	55
P41- 6-	7530	6.0	566	333	222	181	155	118	93	75	62	52
P41- V6-	31920	6.0	382	224	150	122	104	79	62	50	42	35
P22- 1-	800	3.0	54	32	21	17	15	11	9	7	6	5
P22- 3-	1846	6.0	105	62	41	34	29	22	17	14	11	10
P22- 6-	3692	6.0	90	53	35	29	25	19	15	12	10	8