



FLOWSERVE

Schmidt Armaturen

FlowTop™

Class 150 / 300, 1/2" - 12"

Application

Control of gases, vapours and liquids.

The modular concept of valve, multi spring actuator and our standard Positioner facilitates trouble free expansion to allow for the communication capability of the FLOWTOP Valve System.

With its simple design the FLOWTOP modular concept has a wide range of application.

Product features

Body shape gives optimum flow characteristic

- Excellent flow dynamics when correctly selected
- Heavy top resp. top and bottom guided plug
- Largest possible cv-values

Long service life and operational reliability

- With aggressive or evaporating media due to sturdy design
- Strong guides, give minimum vibration and wear

Replaceable trim

- Simple maintenance as the valve body remains in the piping when trim is replaced
- Seat = DN, screwed seat

Wide range of application

- Up to 17 cv-values are available per size
- Trims are generally interchangeable
- "TA-Luft" design
- Special materials on request

Quick delivery

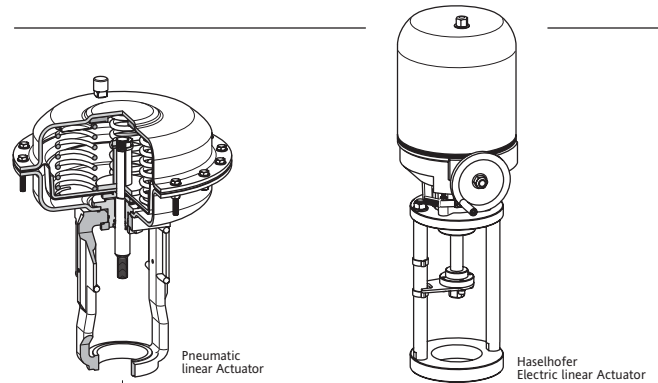
- FLOWTOP Control Valves are available within shortest delivery times.

Certificates and Licenses

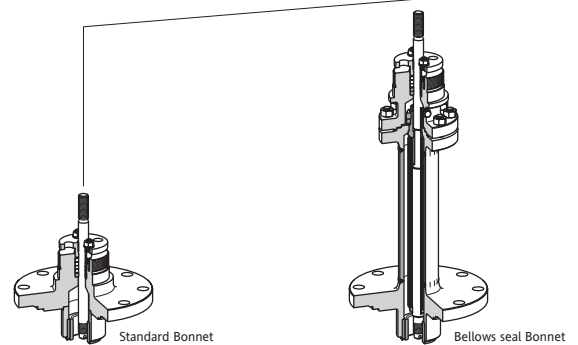
- Quality assurance system certified acc. EN ISO 9001 : 2000 including product development
- EC-Type-Examination acc. to PED 97/23/EC Module B + D
- AK 7 Design acc. to DIN V19250/51 for Valves
- TA-Luft

The System

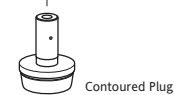
Actuators



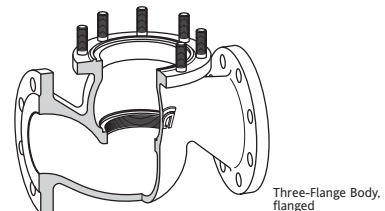
Bonnets



Trim

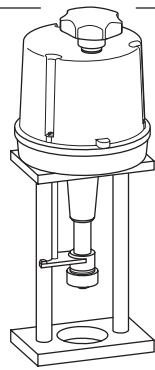


Bodies

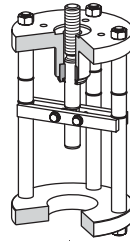


Covers

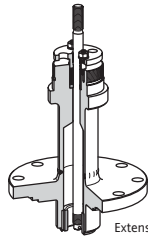
Within the series following combinations of bodies, trim, bonnets and actuators for each valve size are possible:



PSL
Electric linear Actuator



Linear thrust Unit for
Electric rotary Actuators



Extension Bonnet



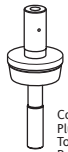
Flat Gasket



Disk Plug



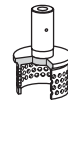
Perforated
Plug



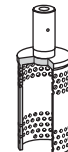
Contoured
Plug,
Top and
Bottom
Guiding



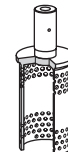
Perforated
Plug,
Top and
Bottom
Guiding



RLS
two-step
Series 1



RLS
two-step
Series 2



RLS
three-step
Series 2

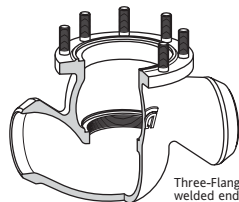


Silentpack

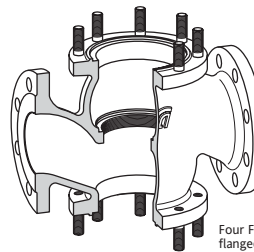


Screwed Seat

Profil Ring



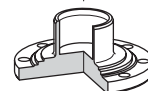
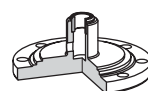
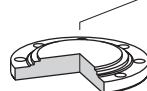
Three-Flange Body,
welded ends



Four Flange Body,
flanged



Flat Gasket



Bottom Flange with
control edge for RLS,
Series 2

Body with Flange Connection

Body	Material	Certificate		Nominal Size												
		without	with	1/2"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	12"			
Three-Flange	A216 WCB	Material resp. Pressure/leakage certificate Schmidt minimal Valve Standards acc. to PED 97/23EC Kat. III	Material resp. Pressure/leakage certificate acc. to EN 10 204 2.2 3.1B 3.1A Schmidt valves acc. to Customer Standard PED 97/23EC Kat. IV	•	•	•	•	•	•	•	•					
	A351 CF8M			•	•	•	•	•	•	•	•					
	A217 WC6			•	•	•	•	•	•	•	•					
Three-Flange with Heating Jacket	A216 WCB	PED 97/23EC Kat. III	Schmidt valves acc. to Customer Standard PED 97/23EC Kat. IV		•	•	•	•	•	•	•					
	A351 CF8M				•	•	•	•	•	•	•					
Four-Flange	A216 WCB	PED 97/23EC Kat. IV	Customer Standard PED 97/23EC Kat. IV									•	•	•		
	A351 CF8M												•	•	•	
	A217 WC6													•	•	•
Four Flange with Heating Jacket	A216 WCB	PED 97/23EC Kat. IV	Customer Standard PED 97/23EC Kat. IV										•	•	•	
	A351 CF8M													•	•	•

Form of Connection, Nominal Pressure Range

Form of Connection			ANSI Class	Nominal Size									
				1/2"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	12"
Flanges acc. to ANSI B16.5	Form RF	•	150	•	•	•	•	•	•	•	•	•	•
	Form RTJ	•	300	•	•	•	•	•	•	•	•	•	•
Smoothfinish	Form RFS	•											

Body with Welded End Connection

Body	Material	Certificate		Nominal Size						
		without	with	1/2"	1"	1 1/2"	2"	3"	4"	6"
Three-Flange	A216 WCB	Material resp. Pressure/leakage certificate Schmidt minimal Valve Standards acc. to PED 97/23EC Kat. III	Material resp. Pressure/leakage certificate acc. to EN 10 204 2.2, 3.1B, 3.1A Schmidt valves acc. to Customer Standard PED 97/23EC Kat. IV	•	•	•	•	•	•	•
	A351 CF8M			•	•	•	•	•	•	•
	A217 WC6			•	•	•	•	•	•	•
Three-Flange with Heating Jacket	A216 WCB	PED 97/23EC Kat. III	Customer Standard PED 97/23EC Kat. IV		•	•	•	•	•	•
	A351 CF8M				•	•	•	•	•	•

Form of Connection, Nominal Pressure Range

Form of Connection	Class	Dimension	Nominal Size						
			1/2"	1"	1 1/2"	2"	3"	4"	6"
Standard Welded Ends based on ANSI/ASME B36.10 M - 1985 Buttwelding ends acc. to ASME B 16.25 - 1997, Fig. 2 (b)	150 to 300	Outside Diameter in.	0.840	1.315	1.900	2.375	3.500	4.500	6.625
		Wall Thickness in.	0.109	0.133	0.145	0.154	0.216	0.237	0.280
		Outside Diameter mm	21,3	33,4	48,3	60,3	88,9	114,3	168,3
		Wall Thickness mm	2,8	3,4	3,7	3,9	5,5	6,0	7,1

Pressure-Temperature Ratings (acc. to ASME B 16.34a - 1998)

ANSI Class	Body Material	Service Temperature in	Pressure-Temperature Ratings															
			°F	-51	-20	100	212	302	392	482	572	662	752	800	842	932	1000	
150	A216 WCB	Working Pressures in	psi		285	285	256	229	202	175	148	121	94	80				
			bar		20	20	18	16	14	12	10	8,4	6,5	5,5				
	A351 CF8M	Working Pressures in	psi	275	275	275	233	215	197	174	148	121	94	80				
			bar	19	19	19	16	15	14	12	10	8,4	6,5	5,5				
	A217 WC6	Working Pressures in	psi	290	290	256	229	202	175	148	121	94	80	67	40	20		
			bar		20	20	18	16	14	12	10	8,4	6,5	5,5	4,6	2,8	1,4	
300	A216 WCB	Working Pressures in	psi	740	740	672	654	636	606	564	535	501	410					
			bar		51	51	46	45	44	42	39	37	35	28				
	A351 CF8M	Working Pressures in	psi	720	720	720	613	559	518	486	458	441	425	420				
			bar	50	50	50	42	39	36	34	32	30	29	29				
	A217 WC6	Working Pressures in	psi	750	750	746	719	697	670	622	585	529	510	488	367	215		
			bar		52	52	51	50	48	46	43	40	36	35	34	25	15	

Bonnet

Pressure Balancing	Body Material	Nominal Size	Bonnet			
			Standard Bonnet Use: general, up to 482 °F resp. 250 °C	Bellows seal Bonnet Use: toxic, smell strong, fleeting, costly media, up to 752 °F resp. 400 °C	HT-Extension Bonnet Use: in case of possible overheating of packing and/or linear actua- tor, without pressure balancing up to 1000 °F resp. 538 °C	LT-Extension Bonnet Use: for reducing the danger of icing of the packing box up to -51 °F resp. -46 °C
Unbalanced, shaft guided suitable for linear actuators	A216 WCB	1/2" to 12"	•	•	•	•
	A351 CF8M		•	•	•	•
	A217 WC6				•	
V-Ring balanced, suitable for linear actuators, up to 482 °F resp. 250 °C	A216 WCB	6" to 12"	•			•
	A351 CF8M		•			•
Piston-Ring balanced, suitable for linear actuators, up to 842 °F resp. 450 °C	A216 WCB	6" to 12"			•	
	A217 WC6				•	

Packing Box

Type of Packing		Bonnet			
		Standard Bonnet	Bellows seal Bonnet	HT-Extension Bonnet	LT-Extension Bonnet
standard	PTFE-Rings -20 °F up to 482 °F resp. -29 °C up to 250 °C, general use, BAM ¹⁾	•	•		•
	Pure Grafite-Rings -20 °F up to 1000 °F resp. -29 °C up to 538 °C, general use, BAM		•	•	
loaded	PTFE-Rings -20 °F up to 482 °F resp. -29 °C up to 250 °C, general use, BAM	•			•
	Pure Grafite-Rings -20 °F up to 1000 °F resp. -29 °C up to 538 °C, general use, BAM			•	
	PTFE-Rings (Latty) -20 °F up to 482 °F resp. -29 °C up to 250 °C, general use	•			•
	PTFE-Rings (Merkel) -20 °F up to 482 °F resp. -29 °C up to 250 °C, general use	•			•
	PTFE-V-Rings -20 °F up to 482 °F resp. -29 °C up to 250 °C, general use	•			•

Plug

Plug Type	Characteristic	Design						Guide of Plug		Flow	
		standard	partial stellite	full stellite	soft seated	hardened	nitrided	Top guided Seat 3 - 250	Top and bot- tom guided (only Four-Flange) Seat 100 - 250	Flow Action tends to open valve	Flow Action tends to close valve
Contoured Plug general use	mod. equal percentage	•	•	•	•	•		•	•	•	
	linear	•	•		•			•	•	•	
Contoured Plug with Silentpack for gases, vapours, for reducing noise ≤ 18 dB(A)	mod. equal percentage	•	•	•	•			•	•	•	
	linear	•	•		•			•	•	•	
Disk Plug	on / off	•			•			•		•	•
Perforated Plug in case of cavitation, high differential pressure for gases, vapours, for reducing noise ≤ 18 dB(A)	mod. equal percentage	•				•	•	•	•	•	•
	linear	•				•	•	•	•	•	•
RLS -Units for reducing noise ≤ 30 dB(A)	mod. equal percentage	•				•	•	•	•	•	•
	linear	•				•	•	•	•	•	•

Disk Plug

Characteristic: on / off

C _v (gpm)	k _{vs} (m ³ /h)	Port Size	Guide of plug	Material / Design			Incorporable seat diameter depends on nominal size										
				316 SS		1.4122	1/2"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	12"	
				standard	soft seated	standard	Stroke = 20 mm			40 mm		60 mm	80 mm				
7.3	6.3	16	1	•	•	•	•										
18.5	16	25	1	•	•	•		•									
41	35,5	40	1	•	•	•			•								
61	53	50	1	•	•	•			•								
162	140	80	1	•	•	•				•							
231	200	100	1	•	•	•					•						
462	400	130	1	•	•	•						•					
728	630	150	1	•	•	•							•				
1156	1000	200	1	•	•	•									•		
1850	1600	250	1	•	•	•											•

¹⁾ BAM = Approved for gaseous oxygen service by Bundesanstalt für Materialforschung und Prüfung - Berlin

Contoured Plug

Characteristic: modified - equal percentage

C _v (gpm)	without with Silentpack ²⁾	K _{vs} (m ³ /h)	without with Silentpack ²⁾	Port Size	Guide of plug	Material / Design						Incorporable seat diameter depends on nominal size														
						stand- ard	partial stellite	full stellite	soft seated	stand- ard	hard- ened	Stroke = 20 mm					40 mm		60 mm	80 mm						
												1/2"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	12"					
0.012	-	0,010	-	3	1			●				●	●													
0.018	-	0,016	-	3	1			●				●	●													
0.029	-	0,025	-	3	1			●				●	●													
0.046	-	0,040	-	3	1			●				●	●													
0.073	-	0,063	-	4	1			●				●	●													
0.116	-	0,10	-	4	1			●				●	●													
0.18	-	0,16	-	4	1			●			●	●	●													
0.29	-	0,25	-	4	1			●			●	●	●													
0.46	-	0,40	-	4	1	●		●			●	●	●													
0.73		0,63		6	1	●	●	●		●	●	●	●													
1.16		1,0		8	1	●	●	●		●	●	●	●													
1.8		1,6		8	1	●	●	●		●	●	●	●													
2.9		2,5		10	1	●	●	●		●	●	●	●													
4.6	-	4,0	-	12	1	●	●	●	●	●	●	●	●													
-	4.6	-	4,0	12	1	●	●	●	●	●	●	●	●													
6.5	-	5,6	-	16	1	●	●	●	●	●	●	●	●													
7.3	-	6,3	-	16	1	●	●	●	●	●	●	●	●													
-	7.3	-	6,3	16	1	●	●	●	●	●	●	●	●													
11.6	-	10,0	-	20	1	●	●	●	●	●	●	●	●													
-	11.6	-	10,0	20	1	●	●	●	●	●	●	●	●													
16.2	-	14,0	-	25	1	●	●	●	●	●	●	●	●													
-	14.5	-	12,5	25	1	●	●	●	●	●	●	●	●													
18.5		16,0		25	1	●	●	●	●	●	●	●	●													
29	-	25	-	34	1	●	●	●	●	●	●	●	●													
-	23	-	20	34	1	●	●	●	●	●	●	●	●													
-	29	-	25	34	1	●	●	●	●	●	●	●	●													
36	25	31,5	22,4	40	1	●	●	●	●	●	●	●	●													
46	-	40	-	42	1	●	●	●	●	●	●	●	●													
-	36	-	31,5	42	1	●	●	●	●	●	●	●	●													
-	46	-	40	42	1	●	●	●	●	●	●	●	●													
55	41	47,5	35,5	50	1	●	●	●	●	●	●	●	●													
73		63		53	1	●	●	●	●	●	●	●	●													
116	-	100	-	67	1	●	●	●	●	●	●	●	●													
-	104	-	90	67	1	●	●	●	●	●	●	●	●													
-	116	-	100	67	1	●	●	●	●	●	●	●	●													
145	116	125	100	80	1	●	●	●	●	●	●	●	●													
185	-	160	-	84	1	●	●	●	●	●	●	●	●													
-	145	-	125	84	1	●	●	●	●	●	●	●	●													
-	185	-	160	84	1	●	●	●	●	●	●	●	●													
208	145	180	125	100	1	●	●	●	●	●	●	●	●													
231	-	200	-	100	1/2	●	●	●	●	●	●	●	●													
-	231	-	200	100	1/2	●	●	●	●	●	●	●	●													
289	-	250	-	105	1	●	●	●	●	●	●	●	●													
-	259	-	224	105	1	●	●	●	●	●	●	●	●													
410	-	355	-	125	1/2	●	●	●	●	●	●	●	●													
-	364	-	315	125	1/2	●	●	●	●	●	●	●	●													
-	410	-	355	125	1/2	●	●	●	●	●	●	●	●													
410	-	355	-	130	1	●	●	●	●	●	●	●	●													
-	324	-	280	130	1	●	●	●	●	●	●	●	●													
520	-	450	-	150	1/2	●	●	●	●	●	●	●	●													
-	410	-	355	150	1/2	●	●	●	●	●	●	●	●													
-	520	-	450	150	1/2	●	●	●	●	●	●	●	●													
820	-	710	-	200	1/2	●	●	●	●	●	●	●	●													
-	728	-	630	200	1/2	●	●	●	●	●	●	●	●													
1156	-	1000	-	250	1/2	●	●	●	●	●	●	●	●													
-	925	-	800	250	1/2	●	●	●	●	●	●	●	●													

Contoured Plug

Characteristic: linear

C _v (gpm)	k _{vs} (m ³ /h)		Port Size	Guide of plug	Material / Design					Incorporable seat diameter depends on nominal size												
	without Silentpack ²⁾	with Silentpack ²⁾			stand- ard	316 SS partial stellited	soft seated	1.4122 ¹⁾		1/2"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	12"			
								stand- ard	hard- ened											Stroke = 20 mm		
4.6	-	4,0	-	12	1	•	•	•	•	•	•											
-	4.6	-	4,0	12	1	•	•	•	•	•	•											
6.5	-	5,6	-	16	1	•	•	•	•	•	•											
7.3	-	6,3	-	16	1	•	•	•	•	•	•											
-	7.3	-	6,3	16	1	•	•	•	•	•	•											
11.6	-	10,0	-	20	1	•	•	•	•	•	•											
-	11.6	-	10,0	20	1	•	•	•	•	•	•											
16.2	-	14,0	-	25	1	•	•	•	•	•	•											
-	14.5	-	12,5	25	1	•	•	•	•	•	•											
18.5	-	16,0	-	25	1	•	•	•	•	•	•											
29	-	25	-	34	1	•	•	•	•	•	•											
-	23	-	20	34	1	•	•	•	•	•	•											
-	29	-	25	34	1	•	•	•	•	•	•											
36	25	31,5	22,4	40	1	•	•	•	•	•	•											
46	-	40	-	42	1	•	•	•	•	•	•											
-	36	-	31,5	42	1	•	•	•	•	•	•											
-	46	-	40	42	1	•	•	•	•	•	•											
55	41	47,5	35,5	50	1	•	•	•	•	•	•											
73	-	63	-	53	1	•	•	•	•	•	•											
116	-	100	-	67	1	•	•	•	•	•	•											
-	104	-	90	67	1	•	•	•	•	•	•											
-	116	-	100	67	1	•	•	•	•	•	•											
145	116	125	100	80	1	•	•	•	•	•	•											
185	-	160	-	84	1	•	•	•	•	•	•											
-	145	-	125	84	1	•	•	•	•	•	•											
-	185	-	160	84	1	•	•	•	•	•	•											
208	145	180	125	100	1	•	•	•	•	•	•											
231	-	200	-	100	1/2	•	•	•	•	•	•											
-	231	-	200	100	1/2	•	•	•	•	•	•											
289	-	250	-	105	1	•	•	•	•	•	•											
-	259	-	224	105	1	•	•	•	•	•	•											
410	-	355	-	125	1/2	•	•	•	•	•	•											
-	364	-	315	125	1/2	•	•	•	•	•	•											
-	410	-	355	125	1/2	•	•	•	•	•	•											
410	-	355	-	130	1	•	•	•	•	•	•											
-	324	-	280	130	1	•	•	•	•	•	•											
520	-	450	-	150	1/2	•	•	•	•	•	•											
-	410	-	355	150	1/2	•	•	•	•	•	•											
-	520	-	450	150	1/2	•	•	•	•	•	•											
820	-	710	-	200	1/2	•	•	•	•	•	•											
-	728	-	630	200	1/2	•	•	•	•	•	•											
1156	-	1000	-	250	1/2	•	•	•	•	•	•											
-	925	-	800	250	1/2	•	•	•	•	•	•											

Rangeability

Standard Rangeability: Seat ≤ 20 mm - Rangeability 1 : 30 Seat > 20 mm - Rangeability 1 : 50	Special Rangeability at Contoured Plug and modified-equal percentage Characteristic: Seat 4, kvs ≥ 0,16 - Seat 20 mm - Rangeability 1 : 70 Seat > 20 mm - Rangeability 1 : 100
--	--

Perforated Plug

Characteristic: modified - equal percentage

C _v (gpm)	k _{vs} (m ³ /h)	Port Size	Guide of plug	Material / Design			Incorporable seat diameter depends on nominal size										
				316 SS nitrided	1.4122 ¹⁾		1/2"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	12"	
					standard	hardened											Stroke = 20 mm
2.9	2.5	20	1	•	•	•	•	•									
4.6	4.0	20	1	•	•	•	•	•									
7.3	6.3	20	1	•	•	•		•	•								
11.6	10.0	25	1	•	•	•		•	•	•							
18.5	16	34	1	•	•	•			•	•							
23	20	40	1	•	•	•			•								
29	25	42	1	•	•	•				•							
32	28	50	1	•	•	•				•							
65	56	53	1	•	•	•					•						
82	71	67	1	•	•	•					•	•					
92	80	80	1	•	•	•					•						
116	100	84	1	•	•	•						•					
145	125	84	1	•	•	•							•				
129	112	100	1	•	•	•						•					
231	200	100	1/2	•	•	•								•			
185	160	105	1	•	•	•							•				
324	280	125	1/2	•	•	•								•	•		
231	200	130	1	•	•	•							•				
462	400	150	1/2	•	•	•								•	•	•	
578	500	200	1/2	•	•	•									•	•	
820	710	250	1/2	•	•	•										•	•

Perforated Plug

Characteristic: linear

C _v (gpm)	k _{vs} (m ³ /h)	Port Size	Guide of plug	Material / Design			Incorporable seat diameter depends on nominal size										
				316 SS nitrided	1.4122 ¹⁾		1/2"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	12"	
					standard	hardened											Stroke = 20 mm
2.9	2.5	20	1	•	•	•	•	•									
4.6	4.0	20	1	•	•	•	•	•									
7.3	6.3	20	1	•	•	•		•	•								
11.6	10.0	25	1	•	•	•		•	•	•							
18.5	16	34	1	•	•	•			•	•							
23	20	40	1	•	•	•			•								
29	25	42	1	•	•	•				•							
41	35.5	50	1	•	•	•				•							
73	63	53	1	•	•	•					•						
104	90	67	1	•	•	•					•	•					
116	100	80	1	•	•	•					•						
145	125	84	1	•	•	•						•					
185	160	84	1	•	•	•							•				
162	140	100	1	•	•	•						•					
231	200	100	1/2	•	•	•								•			
231	200	105	1	•	•	•							•				
364	315	125	1/2	•	•	•								•	•		
324	280	130	1	•	•	•							•				
578	500	150	1/2	•	•	•								•	•	•	
728	630	200	1/2	•	•	•									•	•	
1040	900	250	1/2	•	•	•										•	•

¹⁾ Only in combination with body material A216 WCB and A217 WCG

RLS-Design

Characteristic: modified - equal percentage / linear

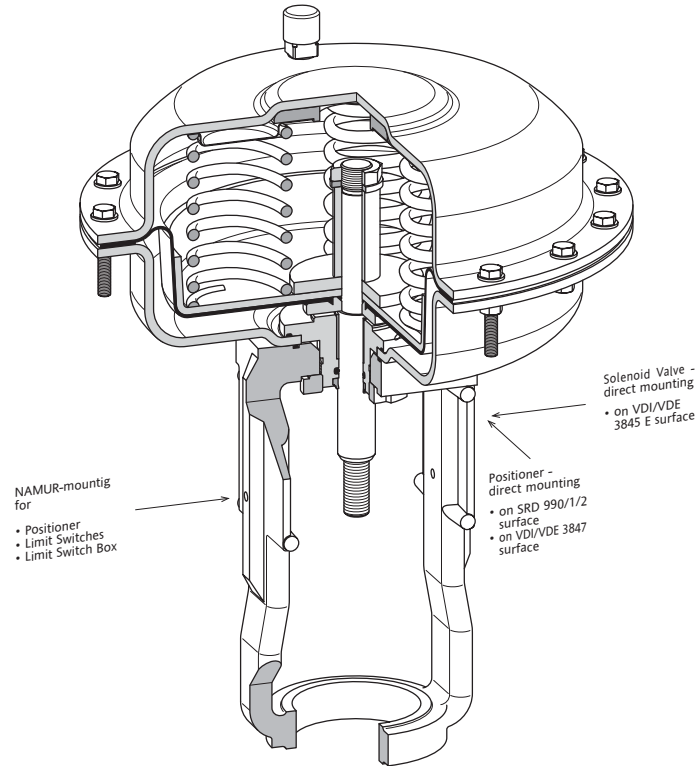
Plug Type	K _{vq} (m ³ /h)	Port Size	Guide of plug	Material / Design			Incorporable seat diameter depends on nominal size							
				316 SS nitrided	1.4122 ¹⁾		1/2"	1"	1 1/2"	2"	3"	4"	6"	8"
RLS 2-step	4,0	20	1	●	●	●	Stroke = 20 mm		40 mm		60 mm	80 mm		
RLS 2-step	to	to	2	●	●	●	The kvq-values will be adapted on the operating conditions !							
RLS 3-step	600	250	2	●	●	●								

Leakage-class acc. DIN/IEC 534 Teil 4 resp. ANSI/FCI 70-2 - 1991

Plug with Pressure Balancing	Plug Design	Leakage-class acc. DIN/IEC 534	Test Medium	Test Pressure (bar)	max. Seat Leakage in % of c _v
Unbalanced	metal-to-metal seated (mtm)	IV	Water	Working Pressure, max. 4	0,01
	metal-to-metal seated, reseated	IV-S1	Water	Working Pressure, max. 4	0,0005
	mtm-seated, reseated, heightened seal force	IV-S2	Air	Working Pressure, max. 4	0,0001
	mtm-seated, reseated, heightened seal force	V	Water	Working Pressure	0,000001
	soft seated	VI	Air	Working Pressure, max. 4	0,0 - bubble-tight
V-Ring balanced	metal-to-metal seated	IV	Water	Working Pressure, max. 4	0,01
Piston-Ring balanced	metal-to-metal seated	III	Water	Working Pressure, max. 4	0,1

Multi-Spring Actuator

Actuators are selected for use on FLOWTOP:



Effective Area (cm ²)	Stroke (mm)	Spring Ranges (bar)																								
		Stem retracts by air failure						both	Stem extends by air failure																	
		0.2 - 1.0	0.2 - 1.2	0.2 - 1.5	0.4 - 1.2	0.4 - 1.4	0.4 - 1.7	0.5 - 1.9	0.8 - 1.6	0.8 - 1.8	0.8 - 2.1	1.0 - 2.4	1.2 - 2.0	1.2 - 2.2	1.2 - 2.5	1.3 - 2.3	1.3 - 2.6	1.4 - 2.4	1.5 - 2.3	1.5 - 2.7	1.8 - 2.7	2.0 - 4.8	2.2 - 3.8	2.6 - 3.8	2.7 - 4.1	
125	10								•									•							•	
	20	•						•				•								•			•			•
250	10								•																	•
	20	•						•				•							•				•			•
500	20	•						•				•							•				•			•
	40	•						•				•							•				•			•
700	20																				•					
	40	•						•				•											•			
	60	•						•				•									•			•		
1500	20								•																	
	40	•			•				•			•								•						
	60		•			•			•			•								•						
	80			•			•		•			•								•					•	
3000	40								•																	
	60		•			•			•											•						
	80			•			•		•											•						

Pressure Rating: Class 300 Standard: ANSI-Units		Operation: Spring extracted Stem, Air retracted Flow: Tends to open Valve, without Pressure Balancing, p ₂ = 0		Packing Box: PTFE Bonnet: Standard-, Extension-Bonnet																									
Seat ø (mm)	Size	Effective Area (inch ²)	19.4				38.8				77.5				109				233				465						
		Spring Ranges (psig)	12 - 23	39 - 60	22 - 39	29 - 70	12 - 23	39 - 60	22 - 39	29 - 70	22 - 39	29 - 70	26 - 39	22 - 39	15 - 35	29 - 70	12 - 23	17 - 29	22 - 33	17 - 32	38 - 55	17 - 36	32 - 55	12 - 23	12 - 26	19 - 33	12 - 30	19 - 38	
		Air (psig)	26	62	42	73	26	62	42	73	42	73	42	42	38	73	26	32	36	35	58	39	58	26	29	36	33	41	
3, 4	1/2", 1"	10	719	719			719	719																					
4, 6, 8, 10, 12						719	719			719	719	719	719	719			719												
16	1/2", 1", 1 1/2"	Stroke 20 (mm)			719	719			719	719	719	719	719			719													
20	1", 1 1/2", 2"				548	719			719	719	719	719	719			719													
25					328	512			719	719	719	719	719			719													
34	1 1/2", 2"				154	254			453	651	719	719	719			719													
40	1 1/2"				100	173			316	460	719	719	719			719													
42	2"				88	152			283	413	673	719	719			719													
50					52	99			190	281	466	650	719			719													
42	3"		40								651	719	719	719		719	719							719					
53	3", 4"											397	561	593	719	719	719								719				
67													239	342	363	505	669	719								719			
80	3"										162	234	248	348	463	592									635				
84	4"										145	210	223	315	418	535										574			
100											97	144	152	218	290	373										400			
67	6"	60												213	499			663	719					719	719				
84															129	310			415	719					571	719			
105																77	193			260	609					360	609		
130																45	122			165	393					231	393		
100	8"	80																			287	563				397	673		
125	8", 10"																					180	355				249	426	
150	8", 10", 12"																										170	293	
200			10", 12"																				65	133				93	161
250	12"																							39	83			57	100

Pressure Rating: Class 300 Standard: ANSI-Units		Operation: Spring retracted Stem, Air extracted Flow: Tends to open Valve, without Pressure Balancing, p ₂ = 0		Packing Box: PTFE Bonnet: Standard-, Extension-Bonnet																									
Seat ø (mm)	Size	Effective Area (inch ²)	19.4				38.8				77.5				109				233				465						
		Spring Ranges (psig)	20 - 35	20 - 35	3 - 15	3 - 15	20 - 35	20 - 35	3 - 15	3 - 15	3 - 15	3 - 15	3 - 15	3 - 15	12 - 23	12 - 23	3 - 15	3 - 15	3 - 17	3 - 17	3 - 22	3 - 22	12 - 23	12 - 23	3 - 17	3 - 17	3 - 22	3 - 22	
		Air (psig)	44	73	44	73	44	73	44	73	44	73	44	73	36	60	36	51	36	54	36	58	29	42	29	36	29	41	
3, 4	1/2", 1"	10	719	719			719	719																					
4, 6, 8, 10, 12						719	719			719	719	719	719			719													
16	1/2", 1", 1 1/2"	Stroke 20 (mm)			719	719			719	719	719	719			719														
20	1", 1 1/2", 2"				719	719			719	719	719	719			719														
25						512	719			719	719	719	719			719													
34	1 1/2", 2"				254	651			651	719	719	719			719														
40	1 1/2"				173	460			460	719	719	719			719														
42	2"				152	413			413	719	719	719			719														
50					99	281			281	650	650	719	719			719													
42	3"		40								719	719	719			719								719					
53	3", 4"											561	719	719			719								692				
67													342	719	505			719								424			
80	3"										234	521	348			592									292				
84	4"										210	470	315			535										263			
100											144	328	218			373										180			
67	6"	60												505	719			719	719						719	719			
84															315	674			457	719						574	719		
105																196	426			287	587						363	612	
130																123	274			183	379							232	395
100	8"	80																			234	645					235	676	
125	8", 10"																					144	409					146	428
150	8", 10", 12"																											99	294
200			10", 12"																				97	280					52
250	12"																											30	102

Positioner System

Product features

SRI990 Analog Positioner (direct mounting !)

Product Specification PSS EVE 0107 A

- Configuration by means of switches and potentiometers
- Low air consumption
- Supply air pressure up to 6 bar (90 psig)
- Attachment to stroke actuators directly or acc. to IEC 534 part 6 (NAMUR)
- Protection class IP 65 and NEMA 4X
- Explosion protection: EEx ia IIC acc. to CENELEC or "Intrinsic safety" acc. to FM and CSA
- Additional equipments
- Integrated inductive limit switches
- Gauge attachment
- Booster relay

SRD992 Digital Positioner (direct mounting !)

Product Specification PSS EVE 0106 A

Technical data same as SRI990 with additional features

- Autostart with self-calibration
- Selfdiagnostics
- Configuration by means of local keys and LEDs
- Position feedback

SRD991 Intelligent Positioner (direct mounting !)

Product Specification PSS EVE 0105 A

Technical data same as SRD992 with additional features

- Self diagnostics, status- and diagnostic messages
- Communication HART, FoxCom, PROFIBUS-PA or FOUNDATION Fieldbus H1
- Configuration by means of local keys, hand-held terminal, PC or I/A Series system
- Sensors for supply air pressure and output pressure optional
- Additional Inputs / outputs

SRP981 Pneumatic Positioner

Product Specification PSS EVE 0101 A

- Input signal range 0,2 - 1,0 bar (split range up to 4-fold possible)
- Independent adjustment of stroke range and zero
- Low vibration effect in all directions
- Supply pressure up to 6 bar
- Single or double-acting
- Mounting according to IEC 534, part 6 (NAMUR)
- Electrical limit switches optional
- Connection manifold optional
- Booster optional

FRS 107 Airset

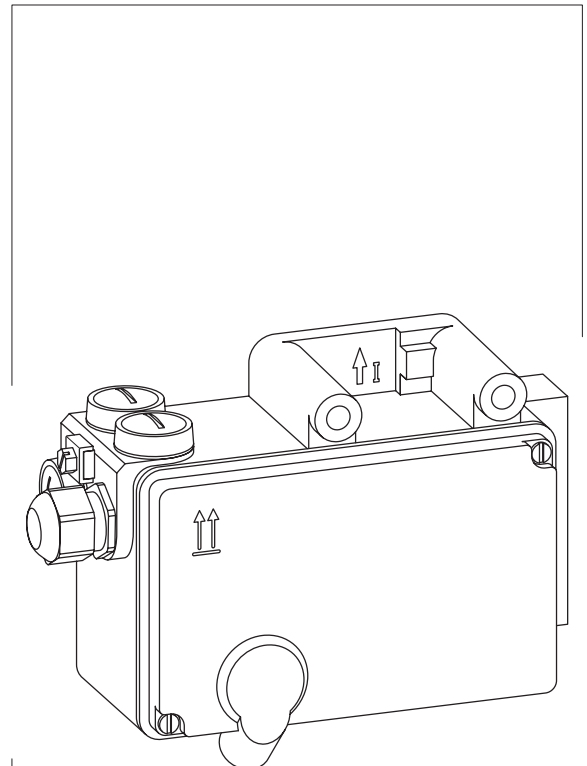
- Max. supply pressure up to 10 bar
- Output range 0,3 - 10 bar
- Filter 5 µm
- Manually operated drain
- With gauge

MV - valve (direct mounting !)

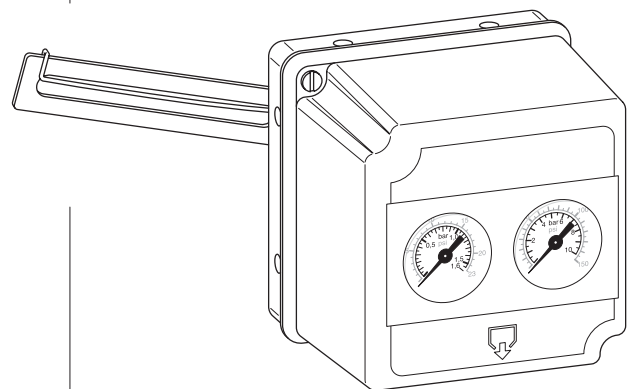
Tubing

- without, by direct mounting
- Steel, chromatised
- Stainless steel

Any further information see product specifications sheet.

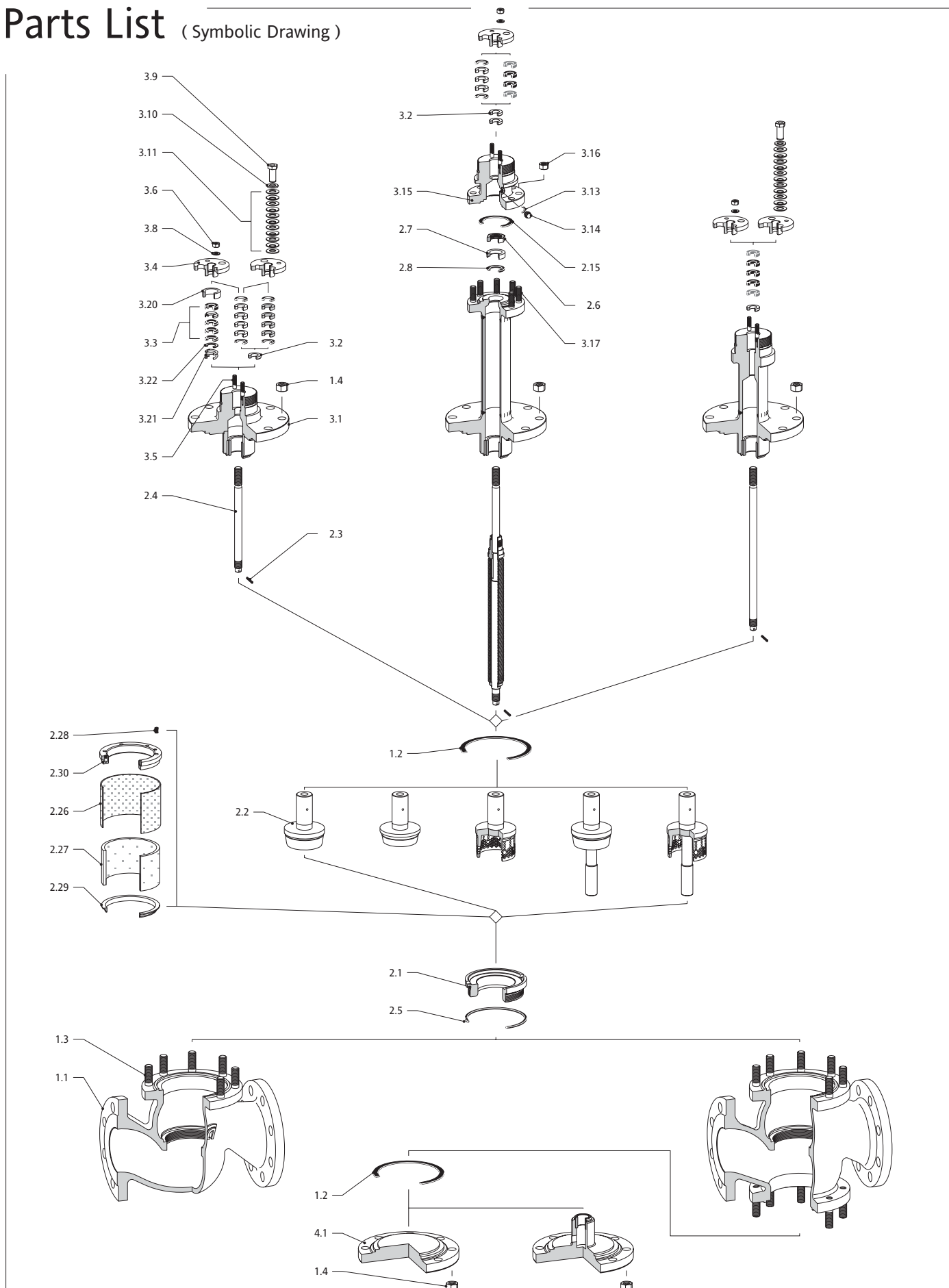


SRD992 Digital Positioner



SRP 981 Pneumatic Positioner

Parts List (Symbolic Drawing)



Designation	Part	Materials			Spare Parts
Body	1.1	A216 WCB	A217 WC6	A351 CF8M	
Flat Gasket	1.2	Pure Grafite ¹⁾			D
Stud Bolt	1.3	A193 B5		A193 B8 M2	
Hex Nut	1.4	A194 3		A194 8 M	
Screwed Seat	2.1	316 SS / 1.4122	316 SS / 1.4122	316 SS	S
Contoured Plug	2.2	316 SS			K
Disk Plug		316 SS			
Perforated Plug		316 SS / 1.4122	316 SS / 1.4122	316 SS	
Spring Pin	2.3	304			
Stem	2.4	316 SS Cold-finished			
Bellows		316 SS	-	316 SS	
Profil Ring	2.5	Pure Grafite			S
Hex Nut	2.6	316 SS	-	316 SS	
Seal Carrier	2.7	316 SS	-	316 SS	
Profil Ring	2.8	Pure Grafite	-	Pure Grafite	D
Flat Gasket	2.15	Pure Grafite ¹⁾	-	Pure Grafite ¹⁾	
Perforated Cage	2.26	316 SS			K
Wire Netting	2.27	1.4404			
Spring	2.28	1.4310			
Internal Ring	2.29	316 SS			
Distance Bush	2.30	316 SS			
Standard Bonnet	3.1	A 105	A 182 F11	A 182 F 316 L	
Bellows-Seal Bonnet			-		
Finned Bonnet			A 182 F11		
Bottom Ring	3.2	316 SS			
Packing Box	unloaded	3.3	PTFE-Rings		D
	Spring loaded		Pure-Grafite Rings		
Gland Flange	3.4	PTFE-Rings			
		Pure-Grafite Rings			
Stud Bolt	3.5	A193 B8 M2			
Hex Nut	3.6	A194 8 M			
Plain Washer	3.8	304			
Hex Nut	3.9	316 SS			
Plain Washer	3.10	316 SS			
Belleville Spring	3.11	301			
Gasket	3.13	Pure Grafite ²⁾	-	Pure Grafite ²⁾	D
Locking Screw	3.14	304	-	304	
Head	3.15	A 105	-	A 182 F 316 L	
Hex Nut	3.16	A194 3	-	A194 8 M	
Stud Bolt	3.17	A193 B5	-	A193 B8 M2	
Cover	4.1	A 105	A182 F11	A 182 F 316 L	

¹⁾ Pure Grafite on Support Plate from 316 SS

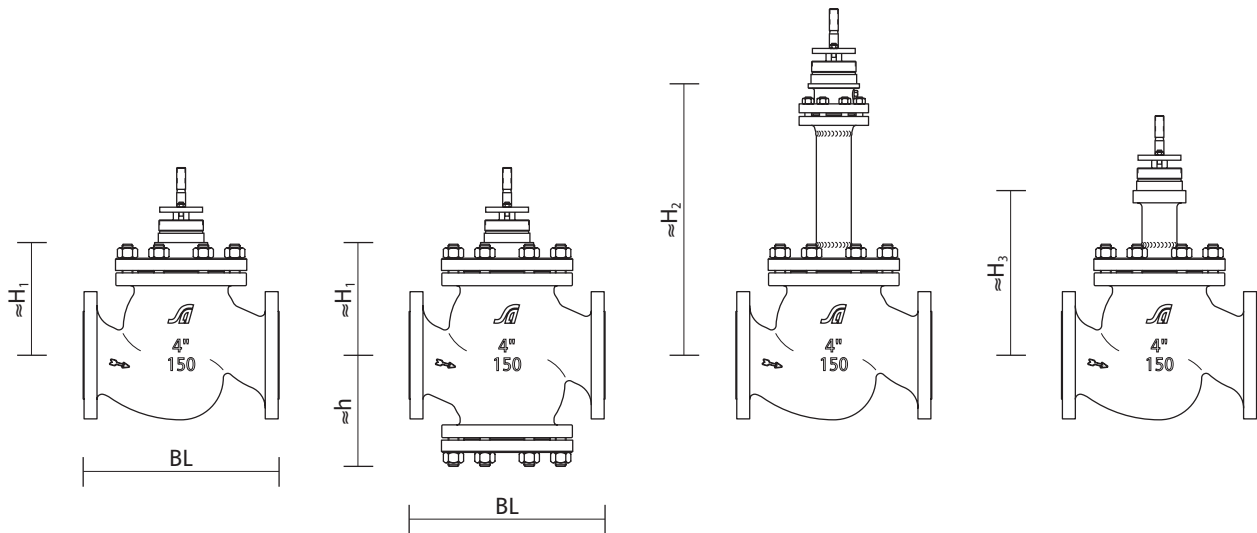
²⁾ Pure Grafite on Support Plate from MYLAR

K Plug Set
S Seat Set
D Gasket Set

Special Materials on request !

Dimensions and Weights

Dimensions ANSI 150



Valve with Standard Bonnet

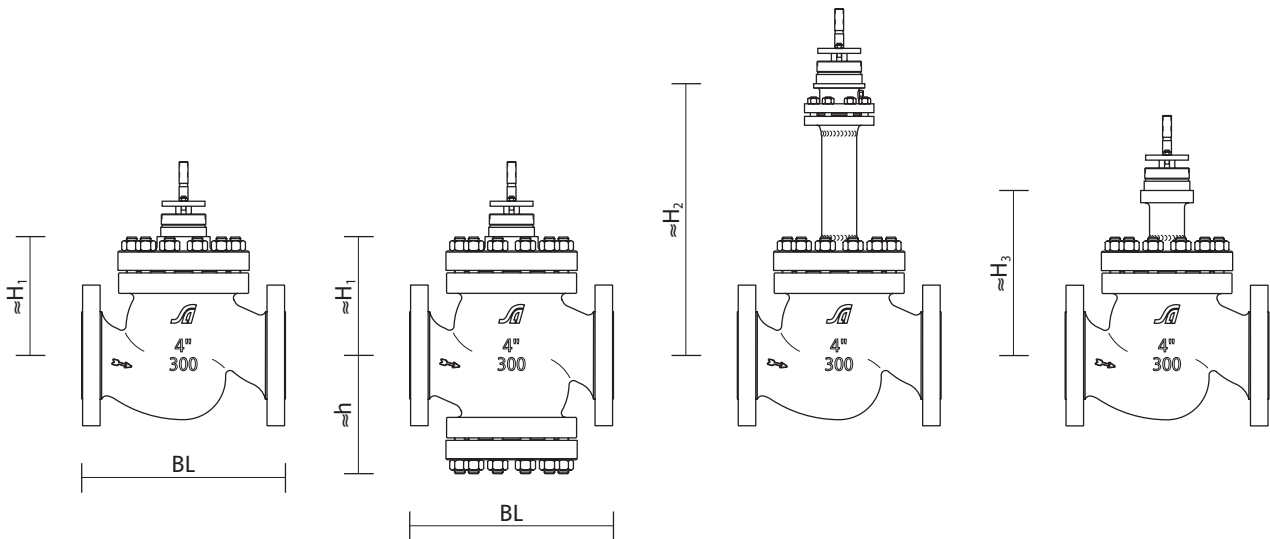
Valve with Standard Bonnet

Valve with Bellows Seal Bonnet

Valve with Extension Bonnet

Designations		Nominal Size										
		1/2 "	1 "	1 1/2 "	2 "	3 "	4 "	6 "	8 "	10 "	12 "	
		Stroke 20 mm				40 mm		60 mm	80 mm			
BL Face to Face Dimensions acc. to ANSI / ISA S75.03	in.	7.25	7.25	8.75	10	11.75	13.88	17.75	21.38	26.50	29.00	
	mm	184,2	184,2	222,3	254	298,5	352,6	450,8	543,1	673,1	736,6	
≈ h	in.								13.66	16.85	18.50	
	mm								347	428	470	
≈ H ₁ for Standard Bonnet	in.	4.6	4.6	5.4	5.5	8	8.1	10.7	14.5	17.9	19.2	
	mm	116	116	137	138	203	204	270	369	456	488	
≈ H ₂ for Bellows Seal Bonnet	in.	10.3	10.3	10.3	10.4	16.4	16.5	25.9	29.9	30.1	30.2	
	mm	261	261	262	264	417	419	657	760	764	768	
≈ H ₃ for Extension Bonnet	in.	8.6	8.6	8.6	8.7	12.2	12.3	17.5	20.0	23.4	24.7	
	mm	217	217	218	220	310	311	443	509	596	628	
≈ Weight for Valves with Three-Flange Body	and Standard Bonnet	lbs	13.7	16.1	29.6	38.4	93	137	201	447		
		kg	6,2	7,3	13,4	17,4	42	62	91	203		
	and Bellows Seal Bonnet	lbs	22.0	24.3	37.5	46.3	108	152	231	492		
		kg	10,0	11,0	17,0	21,0	49	69	105	223		
	and Extension Bonnet	lbs	16.6	19	31.4	40.2	95	139	210	454		
		kg	7,5	8,6	14,2	18,2	43	63	95	206		
≈ Weight for Valves with Four-Flange Body	and Standard Bonnet	lbs							575	1100	1486	
		kg							261	499	674	
	and Bellows Seal Bonnet	lbs							617	1140	1523	
		kg							280	517	691	
	and Extension Bonnet	lbs							582	1104	1492	
		kg							264	501	677	
Flanges Drilled and Dimensioned acc. to		ANSI B16.5, Form RF										
Weld Ends acc. to ANSI B36.10 M-1985		Buttwelding Ends acc. to ASME B 16.25-1997, Fig. 2 (b)							-			

Dimensions ANSI 300



Valve with Standard Bonnet

Valve with Standard Bonnet

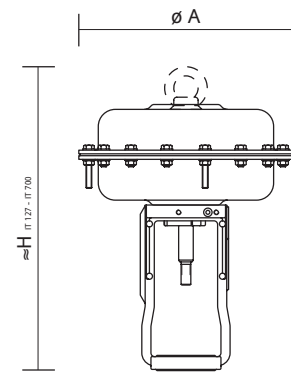
Valve with Bellows Seal Bonnet

Valve with Extension Bonnet

Designations		Nominal Size										
		1/2 "	1 "	1 1/2 "	2 "	3 "		4 "	6 "	8 "	10 "	12 "
		Stroke 20 mm				40 mm		60 mm	80 mm			
BL Face to Face Dimensions acc. to ANSI / ISA S75.03	300 lbs, RF	in.	7.5	7.75	9.25	10.5	12.5	14.5	18.62	22.38	27.88	30.50
		mm	190,5	196,9	235	266,7	317,5	368,3	472,9	568,5	708,2	774,7
	300 lbs, RTJ	in.	7.94	8.25	9.75	11.12	13.12	15.12	19.24	23.00	28.50	31.12
		mm	201,7	209,6	247,7	282,4	333,2	384	488,7	584,2	723,9	790,4
≈ h		in.								18,62	18,62	18,62
		mm								347	428	470
≈ H ₁ for Standard Bonnet		in.	4.6	4.6	5.4	5.5	8	8	10.7	14.5	17.9	19.2
		mm	116	116	137	138	203	204	270	369	456	488
≈ H ₂ for Bellows Seal Bonnet		in.	10.3	10.3	10.3	10.4	16.4	16.5	25.9	29.9	30.1	30.2
		mm	261	261	262	264	417	419	657	760	764	768
≈ H ₃ for Extension Bonnet		in.	8.6	8.6	8.6	8.7	12.2	12.3	17.5	20	23.5	24.7
		mm	217	217	218	220	310	311	443	509	596	628
≈ Weight for Valves with Three-Flange Body	and Standard Bonnet	lbs	13.9	17.9	34.2	41	104	159	296	509		
		kg	6.3	8.1	15.5	18.6	47	72	134	231		
	and Bellows Seal Bonnet	lbs	22.0	26.5	42	49	119	174	331	553		
		kg	10,0	12,0	19,0	22,0	54	79	150	251		
	and Extension Bonnet	lbs	16.8	20.8	36	42.8	108	164	305	516		
		kg	7,6	9,4	16,3	19,4	49	74	138	234		
≈ Weight for Valves with Four-Flange Body	and Standard Bonnet	lbs								637	1195	1596
		kg								289	542	724
	and Bellows Seal Bonnet	lbs								679	1235	1634
		kg								308	560	741
	and Extension Bonnet	lbs								644	1199	1603
		kg								292	544	727
Flanges Drilled and Dimensioned acc. to		ANSI B16.5, Form RF or RTJ										
Weld Ends acc. to ANSI B36.10 M-1985		Buttwelding Ends acc. to ASME B 16.25-1997, Fig. 2 (b)								-		

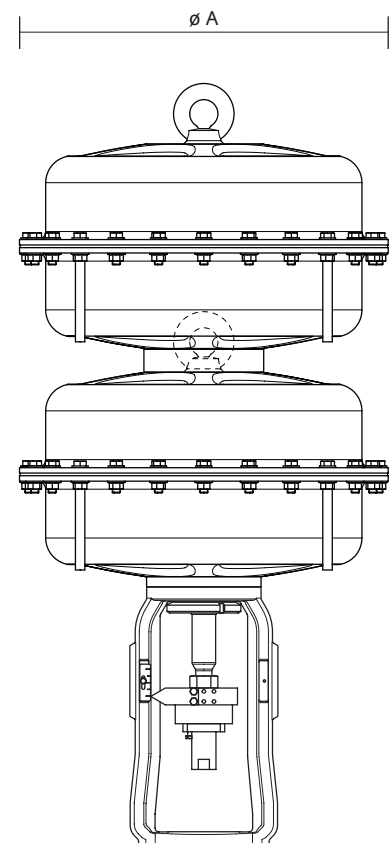
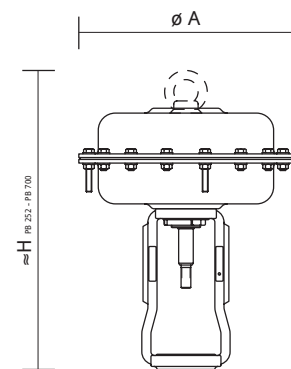
Pneumatic linear Actuator with direct-mounting Yoke

Designation	Area	125	250	500		700	
	Stroke	10, 20 mm		20 mm	40 mm	20 mm	40 mm
ø A	in.	7.80	10.43	13.86	13.86	15.94	15.94
	mm	198	265	352	352	405	405
≈ H	in.	12.60	13.20	17.91	22.05	21.46	21.65
	mm	320	335	455	560	545	550
≈ Weight	lbs	24	35	68	88	101	101
	kg	11	16	31	40	46	46



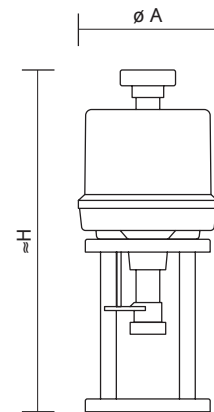
Pneumatic linear Actuator with NAMUR-Yoke

Designation	Area	250	500		700		
	Stroke	10, 20 mm	20 mm	40 mm	20 mm	40 mm	60 mm
ø A	in.	10.43	13.86	13.86	15.94	15.94	15.94
	mm	265	352	352	405	405	405
≈ H	in.	12.99	16.54	17.72	21.46	21.46	23.62
	mm	330	420	450	545	545	600
≈ Weight	lbs	35	68	88	101	101	101
	kg	16	31	40	46	46	46



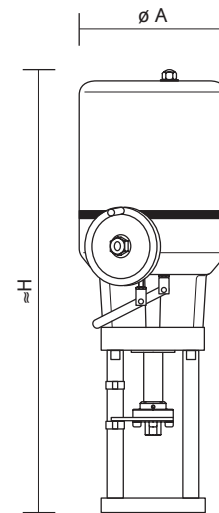
Designation	Area	1500	3000
	Stroke	20, 40, 60, 80 mm	
ø A	in.	21.57	21.57
	mm	548	548
≈ H	in.	31.49	44.88
	mm	800	1140
≈ Weight	lbs	273	529
	kg	124	240

PSL - Electric linear Actuator



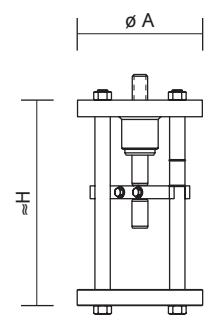
Designation	Actuator	AB 201	AB 102	AB 202	AB 204	AB 208	AB 210
	Stroke mm	20	20 / 40				
ø A	in.	8.62	8.62	8.62	8.62	9.29	9.29
	mm	219	219	219	219	236	236
≈ H	in.	18.19	18.19	18.19	18.19	23.03	23.03
	mm	462	462	462	462	585	585
≈ Weight	lbs	12	13	13	21	26	26
	kg	5,5	5,7	5,7	9,5	12	12

Haselhofer - Electric linear Actuator



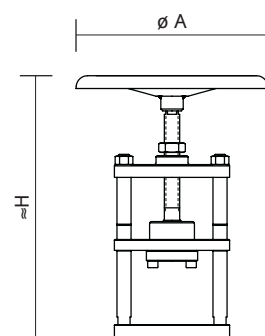
Designation	Actuator	EB 1,2	EB 4,5	EB 8	EB 12	EB 20	EB 25
	Stroke mm	10 / 20	20 / 40 / 60 / 80			40 / 60 / 80	
ø A	in.	5.71	5.71	7.24	7.24	8.50	8.50
	mm	145	145	184	184	216	216
≈ H	in.	19.88	21.06	22.44	22.44	25.98	25.98
	mm	505	535	570	570	660	660
≈ Weight	lbs	14	17	29	29	42	42
	kg	6,5	7,5	13	13	19	19

Linear thrust Unit



Designation	Linear Unit	LB 12	LB 16	LB 20
	Stroke mm	20	40	60 / 80
ø A	in.	7.72	7.72	7.72
	mm	196	196	196
≈ H	in.	9.45	12.60	16.02
	mm	240	320	407
≈ Weight	lbs	26	37	44
	kg	12	17	20

Manual Operation



Designation	Manual Operation	HB 12	HB 16	HB 20
	Stroke mm	20	40	60 / 80
ø A	in.	11.8	11.8	15.7
	mm	300	300	400
≈ H	in.	15.7	17.7	18.9
	mm	400	450	480
≈ Weight	lbs	37	37	40
	kg	17	17	18

SPM - Code

Type	DN	PN	Body/Cert.	Plug	Seat	kvs	Trim	Actuator
V738 DFNVA	2"	150	A216WCB/OAO	PONP1GG	42	40	316SS	

Valve Model	
ANSI 150	V738
ANSI 300	V740

Body Form	
Three-Flange	D
Three-Flange with Heating Jacket	H
Four-Flange	V
Four-Flange with Heating Jacket	G

Form of Connection	
Flange acc. to ANSI/ASME B16.5	Raised Face F Ring Joint J
Welded Ends acc. to ANSI/ASME B36.10 M-1985	W

Bonnet Form	
without Pressure Balancing	V
with V-Ring Balancing	O
with Piston-Ring Balancing	K

Bonnet Assembly	
Standard Bonnet	N
Bellows seal Bonnet	B
HT Extension Bonnet	R
Double seal Bonnet	L
LT Extension Bonnet	K
Insulating Bonnet	I

Packing Box Assembly	
Teflon-Rings, adjustable, BAM	A
Graphite-Rings, adjustable, BAM	B
Teflon-Rings, loaded, BAM	N
Graphite-Rings, loaded, BAM	O
Teflon with Graphite, loaded, "TA"	Q
Graphite-Rings, loaded, "TA"	V
V-Ring Packing	S

Nominal Size	1/2" - 12"
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Nominal Pressure	V738 Class 150 V740 Class 300
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Body Material	A216WCB A351CF8M A217WC6 A351CF8
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Materials acc. to international Standards for Pressure Stressed Parts	
Standards for Materials	
without DGRL (Standard)	O . . .
Certificates for Materials	
without	. O . . .
EN 10 204 2.2	. Z . . .
3.1B (Survey of Cert.)	. B . . .
3.1B (CMTR)	. D . . .
3.1A	. A . . .

316SS 1.4122	Plug, Seat Material
-----------------	---------------------

kvs - Value	0,01 - 1600
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Port Size	3 - 250
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Flow tends top open Valve	G
Flow tends to close Valve	I

Characteristic	
modified - equal percentage linear	G L
on / off	A
modified - equal percentage with Special Rangeability	H

Plug Guidance	
Top	1
Top and Bottom	2

Seat Leakage		
IEC	Class III	O
	Class IV	P
	Class IV - S1	Q
	Class IV - S2	R
	Class V	S
	Class VI	T
EN 12 266	LR A (DIN 3230 BN)	A
	LR A (DIN 3230 BO)	B

Plug Form	
standard	N
partial stellited	D
contour stellited	K
soft seated	W
hardened	H
nitrided	T

Plug	
Cont. Plug without Silent-Set	PO
with Silentpack	PK
with XStream Type C	PC
with XStream Type D	PD
with XStream Type E	PE
with XStream Type F	PF
with XStream Type G	PG
with XStream Type H	PH
with XStream Type I	PI
with XStream Type Q	PQ
with XStream Type W	PW
Disk Plug	TO
Multi-Hole Plug	LO
RLS-Unit, 2-step, Series I	AO
RLS-Unit, 2-step, Series II	BO
RLS-Unit, 3-step, Series II	DO

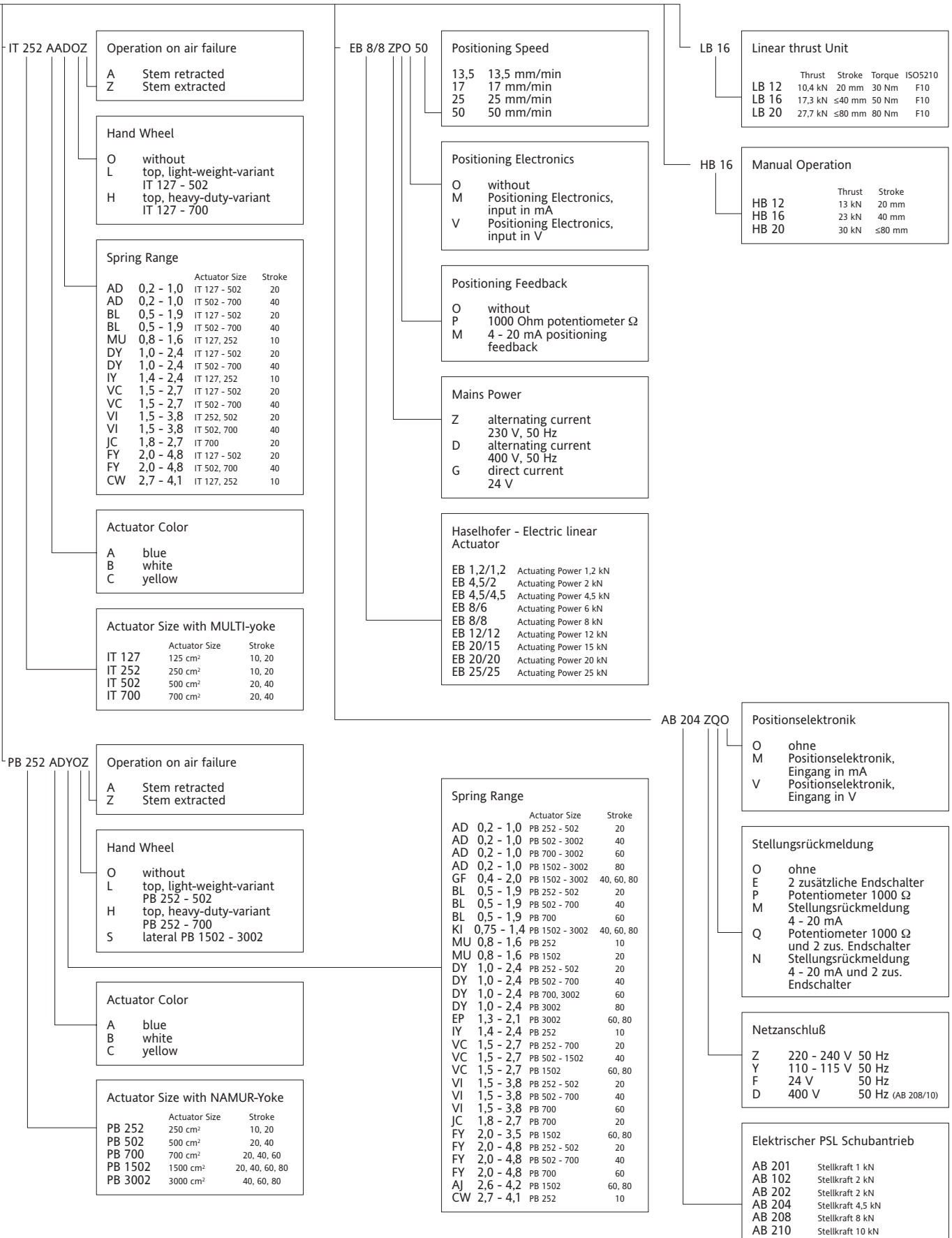
Standards and Certificates for final test	
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Standards for final test	
--------------------------	--

without	EN 1349 (Standard)	. . . A .
DGRL	Kat. IV	. . . M .

Certificates for final test	
-----------------------------	--

without	. . . O
EN 10 204 2.2	. . . Z
3.1B	. . . B
3.1A	. . . A



IT 252 AADOZ

Operation on air failure

A Stem retracted
Z Stem extracted

Hand Wheel

O without
L top, light-weight-variant IT 127 - 502
H top, heavy-duty-variant IT 127 - 700

Spring Range

	Actuator Size	Stroke
AD	0,2 - 1,0	IT 127 - 502 20
AD	0,2 - 1,0	IT 502 - 700 40
BL	0,5 - 1,9	IT 127 - 502 20
BL	0,5 - 1,9	IT 502 - 700 40
MU	0,8 - 1,6	IT 127, 252 10
DY	1,0 - 2,4	IT 127 - 502 20
DY	1,0 - 2,4	IT 502 - 700 40
IY	1,4 - 2,4	IT 127, 252 10
VC	1,5 - 2,7	IT 127 - 502 20
VC	1,5 - 2,7	IT 502 - 700 40
VI	1,5 - 3,8	IT 252, 502 20
VI	1,5 - 3,8	IT 502, 700 40
JC	1,8 - 2,7	IT 700 20
FY	2,0 - 4,8	IT 127 - 502 20
FY	2,0 - 4,8	IT 502, 700 40
CW	2,7 - 4,1	IT 127, 252 10

Actuator Color

A blue
B white
C yellow

Actuator Size with MULTI-yoke

	Actuator Size	Stroke
IT 127	125 cm ²	10, 20
IT 252	250 cm ²	10, 20
IT 502	500 cm ²	20, 40
IT 700	700 cm ²	20, 40

PB 252 ADYOZ

Operation on air failure

A Stem retracted
Z Stem extracted

Hand Wheel

O without
L top, light-weight-variant PB 252 - 502
H top, heavy-duty-variant PB 252 - 700
S lateral PB 1502 - 3002

Actuator Color

A blue
B white
C yellow

Actuator Size with NAMUR-Yoke

	Actuator Size	Stroke
PB 252	250 cm ²	10, 20
PB 502	500 cm ²	20, 40
PB 700	700 cm ²	20, 40, 60
PB 1502	1500 cm ²	20, 40, 60, 80
PB 3002	3000 cm ²	40, 60, 80

EB 8/8 ZPO 50

Positioning Speed

13,5 13,5 mm/min
17 17 mm/min
25 25 mm/min
50 50 mm/min

Positioning Electronics

O without
M Positioning Electronics, input in mA
V Positioning Electronics, input in V

Positioning Feedback

O without
P 1000 Ohm potentiometer Ω
M 4 - 20 mA positioning feedback

Mains Power

Z alternating current 230 V, 50 Hz
D alternating current 400 V, 50 Hz
G direct current 24 V

Haselhofer - Electric linear Actuator

EB 1,2/1,2	Actuating Power 1,2 kN
EB 4,5/2	Actuating Power 2 kN
EB 4,5/4,5	Actuating Power 4,5 kN
EB 8/6	Actuating Power 6 kN
EB 8/8	Actuating Power 8 kN
EB 12/12	Actuating Power 12 kN
EB 20/15	Actuating Power 15 kN
EB 20/20	Actuating Power 20 kN
EB 25/25	Actuating Power 25 kN

LB 16

Linear thrust Unit

	Thrust	Stroke	Torque	ISO5210
LB 12	10,4 kN	20 mm	30 Nm	F10
LB 16	17,3 kN	≤40 mm	50 Nm	F10
LB 20	27,7 kN	≤80 mm	80 Nm	F10

HB 16

Manual Operation

	Thrust	Stroke
HB 12	13 kN	20 mm
HB 16	23 kN	40 mm
HB 20	30 kN	≤80 mm

AB 204 ZQO

Positionselektronik

O ohne
M Positionselektronik, Eingang in mA
V Positionselektronik, Eingang in V

Stellungsrückmeldung

O ohne
E 2 zusätzliche Endschalter
P Potentiometer 1000 Ω
M Stellungsrückmeldung 4 - 20 mA
Q Potentiometer 1000 Ω und 2 zus. Endschalter
N Stellungsrückmeldung 4 - 20 mA und 2 zus. Endschalter

Netzanschluß

Z 220 - 240 V 50 Hz
Y 110 - 115 V 50 Hz
F 24 V 50 Hz
D 400 V 50 Hz (AB 208/10)

Elektrischer PSL Schubantrieb

AB 201	Stellkraft 1 kN
AB 102	Stellkraft 2 kN
AB 202	Stellkraft 2 kN
AB 204	Stellkraft 4,5 kN
AB 208	Stellkraft 8 kN
AB 210	Stellkraft 10 kN

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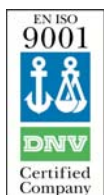
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