



VariCool™ Desuperheater

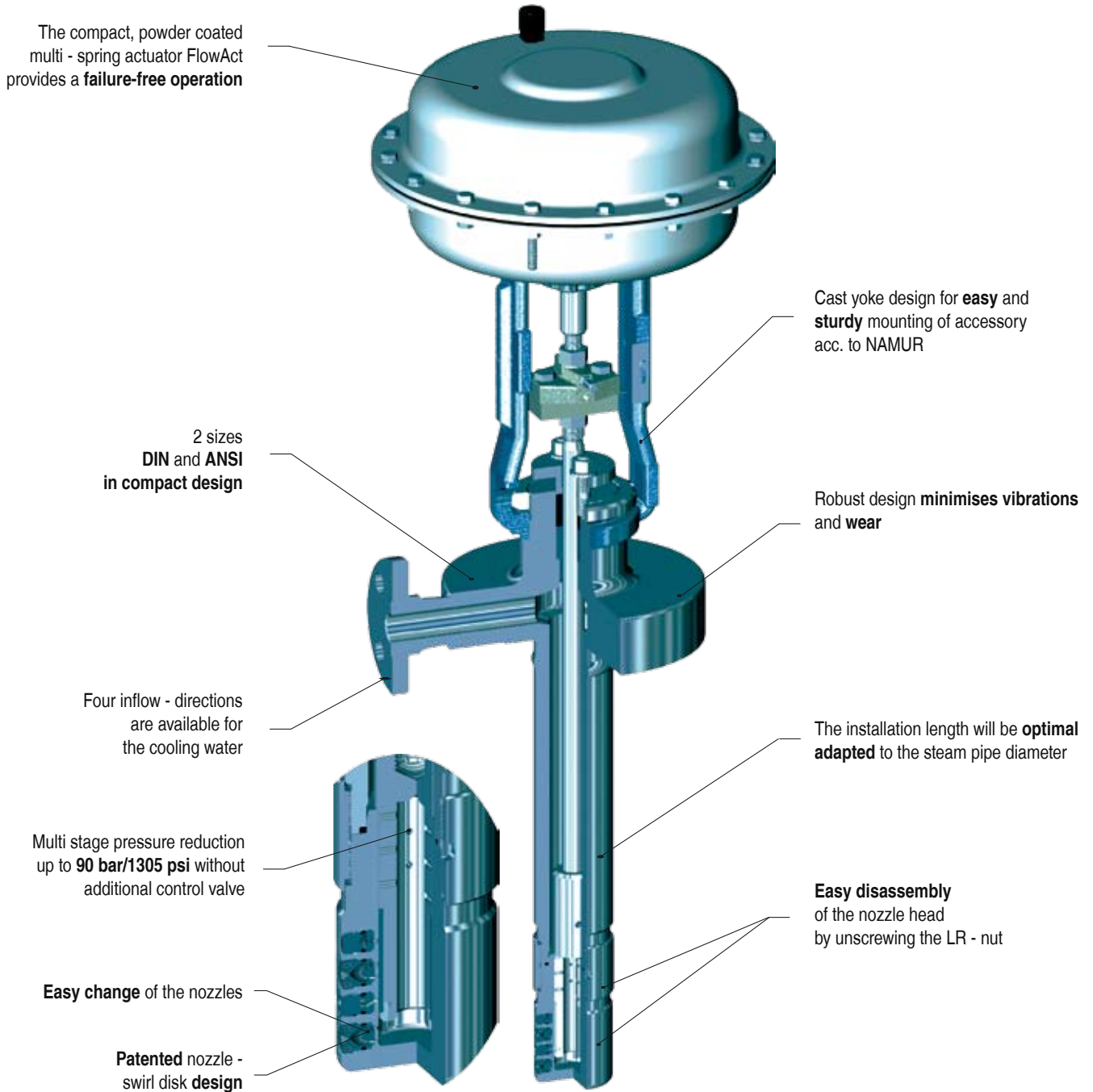
PN 40 - 160 / Class 300 - 2500



Experience In Motion

Product description and application range:

- Injection nozzle control valve for direct steam cooling acc. to the principle of secondary injection.
Advantages of secondary injection: **No thermo shock**
Higher life cycle and reliability in service
Enabled an **ideal design** of the pressure reducing and injection nozzle valve
- The high quality nozzle- swirl disk - piston tube design provides **ultrafine mist atomisation from minimum - up to maximum flow.**
- By the use of the modular design there are up to **14 kvs / cv** - values available per size
- Seatleakage: **Class IV and V** to DIN / IEC 534, part 4 resp. ANSI / FCI 70-2
- The **modular construction system** provides an **easy mounting** of the multi - spring actuator FlowAct, as well as electrical linear and rotary actuators.



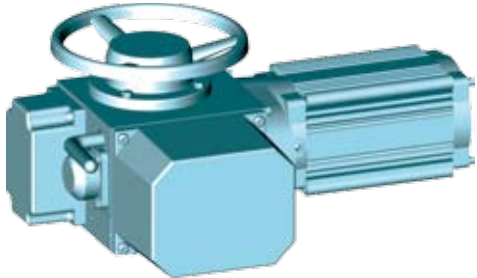
Actuators



Pneumatic linear Actuator (FlowAct)



Electric linear Actuator (Haselhofer)



Electric rotary Actuator (Schiebel)



Linear thrust Unit „light“ for Electric rotary Actuators



Linear thrust Unit „heavy“ for Electric rotary Actuators



Injection Nozzle Valve



Within the series the following combinations of valve and actuators for each valve size are possible:

Operation

The patented SCHMIDT - injection nozzle valve is designed for the requirements of the steam temperature control in power and procedural plants. The injection nozzle valves are designed in a modular construction system to fulfill the requirements of low, middle and high operating pressures. The cooling media will be injected directly into the steam as atomized spray, by controlled exchangeable nozzles. The piston tube opens proportionally the nozzle port in conjunction with the stroke. The SCHMIDT - injection nozzle valves are designed for minimal maintenance. The hardened piston tube and nozzles provide a failure-free operation.

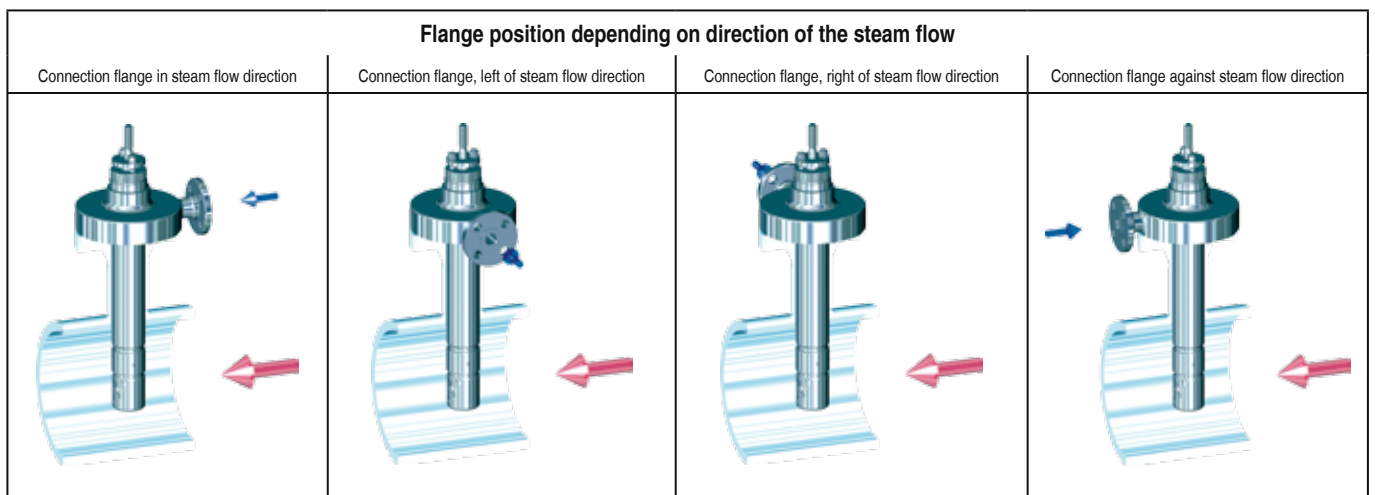
DIN Body / Material

Body	Material	Valve Connection		PN	Nominal Size DN (Steam Pipe)										
		Water DN	Steam DN		150	200	250	300	350	400	500	600	700	800	900
Size A	1.7335	25	80	40 - 160	•	•	•	•	•	•	•	•			
	1.4571														
Size B	1.7335	40	100				•	•	•	•	•	•	•	•	•
	1.4571														

DIN Pressure - Temperature Ratings

Body- Material	PN (bar)	Operating Temperature in °C	-10	50	100	150	200	250	300	350	400	450	500	530
			1.4571	40	Max. allowable operating pressure in bar	37	36	34	31	29	28	26	25	24
63	59	57		53		49	46	43	41	39	38	37	36	35,5
100	93	91		84		78	73	69	64	62	60	59	58	57
160	160	160		153		144	136	125	121	117	113	112	111	
1.7335	40	40	40	40		40	39	36	34	32	30	24	14	
	63	63	63	63		63	62	57	53	50	48	38	22	
	100	100	100	100		100	98	91	84	80	76	61	35	
	160	160	160	153		146	138	127	120	116	109	106	57	

Cooling Media - Flow Direction



ANSI Body / Material

Body	Material	Valve Connection		Class	Nominal Size DN (Steam Pipe)											
		Water DN	Steam DN		150	200	250	300	350	400	500	600	700	800	900	1000
					6"	8"	10"	12"	14"	16"	20"	24"	28"	32"	36"	40"
Size A	A 182 F12 A 182 F304	1"	3"	300 - 600	•	•	•	•	•	•	•	•	•			
			4"	900 - 1500	•	•	•	•	•	•	•	•	•			
				2500	•	•	•	•	•	•	•	•	•			
Size B	A 182 F12 A 182 F304	1 1/2"	4"	300 - 600			•	•	•	•	•	•	•	•	•	•
			6"	900 - 1500			•	•	•	•	•	•	•	•	•	•
				2500			•	•	•	•	•	•	•	•	•	•

ANSI Pressure - Temperature Ratings

Body- Material	Class	Operating Temperature in °C													
		-10	50	100	150	200	250	300	350	400	450	500	530		
		Operating Temperature in °F													
		14	122	212	302	392	482	572	662	752	842	932	986		
A 182 F12 Cl.2	300	Max. allowable operating pressure in bar	52	51.7	51	50	48	46	43	40	36	34	25	16.9	
		Max. allowable operating pressure in psi	750	750	746	719	697	670	622	585	529	488	367	244	
	600	Max. allowable operating pressure in bar	103	103	103	100	96	92	86	80	73	68	51	33.7	
		Max. allowable operating pressure in psi	1500	1500	1493	1443	1389	1340	1243	1165	1063	982	733	489	
	900	Max. allowable operating pressure in bar	155	155	154	149	144	139	129	121	110	101	76	50.7	
		Max. allowable operating pressure in psi	2250	2250	2239	2163	2086	2010	1865	1750	1592	1470	1097	735	
	1500	Max. allowable operating pressure in bar	259	259	257	249	240	231	214	201	183	169	126	84.4	
		Max. allowable operating pressure in psi	3750	3750	3732	3606	3476	3349	3108	2915	2655	2452	1829	1224	
	2500	Max. allowable operating pressure in bar	431	431	429	414	400	385	357	335	305	282	210	140.6	
		Max. allowable operating pressure in psi	6250	6250	6220	6009	5793	5581	5179	4862	4422	4089	3047	2039	
	A 182 F304	300	Max. allowable operating pressure in bar	50	47.8	41	37	34	32	31	30	29	27	26	23.2
			Max. allowable operating pressure in psi	720	694	593	539	498	470	443	429	415	397	384	337
600		Max. allowable operating pressure in bar	99	95.6	82	74	69	65	61	59	57	55	53	46.5	
		Max. allowable operating pressure in psi	1440	1387	1185	1078	1002	941	890	857	829	792	770	675	
900		Max. allowable operating pressure in bar	149	143.5	123	112	103	97	92	89	86	82	79	70	
		Max. allowable operating pressure in psi	2160	2081	1778	1617	1500	1412	1333	1286	1243	1193	1152	1015	
1500		Max. allowable operating pressure in bar	248	239.1	204	186	173	163	153	148	143	137	133	116.6	
		Max. allowable operating pressure in psi	3600	3468	2963	2695	2502	2357	2225	2144	2072	1985	1922	1690	
2500		Max. allowable operating pressure in bar	414	398.5	341	310	287	271	256	246	238	228	221	194.2	
		Max. allowable operating pressure in psi	6000	5780	4939	4492	4168	3926	3706	3570	3455	3309	3201	2816	

Calculation of the kv value (DIN)

The following information is required:

Steam:

Upstream pressure P_{D1} (bar)
 Upstream temperature t_{D1} (°C)
 Downstream temperature t_{D2} (°C)
 Mass flow rate W_D (kg/h)

Cooling water:

Upstream pressure P_{W1} (bar)
 Upstream temperature t_{W1} (°C)
 Upstream mass flow rate W_K (kg/h)

General information about the nozzle valve:

Size of the steam pipe DN
 Cooling media flange position Z, L, R, U

Calculation of the injection water flow rate:

$$W_K = W_D = \frac{h_1 - h_2}{h_2 - h_k}$$

Enthalpy of the superheated steam (t_{D1}, P_{D1}) h_1 (J)
 Enthalpy of the cooled steam (t_{D2}, P_{D2}) h_2 (J)
 Enthalpy of the cooling water h_k (J)

Calculation of the kv value:

$$k_v = \frac{Q_k}{31,6} \sqrt{\frac{\rho}{\Delta p}} \quad Q_k = 1000 * \frac{W_K}{\rho}$$

Flow rate coefficient k_v (m³/h)
 Cooling water density ρ (kg/dm³)
 Differential pressure cooling water/steam Δp (bar)

Trim Size A Characteristic: linear

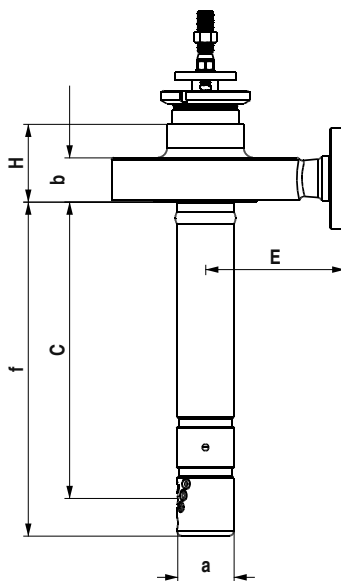
Nozzle Set	Seat \varnothing (mm)	Stroke (mm)	min. Δp Cooling Media/ Steam	kvs / cv - values depending on Δp - stage									
				A		B		C		D		E	
				up to 40 bar		> 40 - 55 bar		> 55 - 70 bar		> 70 - 85 bar		> 85 - 90	
				up to 580 psi		> 580 - 800 psi		> 800 - 1015 psi		> 1015 - 1230 psi		> 1230 - 1300 psi	
		kvs	cv	kvs	cv	kvs	cv	kvs	cv	kvs	cv		
A	35	40	5 bar 75 psi	0,13	0,15								
B				0,17	0,20								
C				0,20	0,23								
D				0,25	0,29	0,21	0,24						
E				0,30	0,35	0,26	0,30	0,24	0,28				
F				0,40	0,46	0,34	0,39	0,32	0,37				
G			0,50	0,58	0,45	0,52	0,42	0,49	0,38	0,44	0,34	0,39	
H			7 bar 100 psi	0,67	0,77	0,60	0,69	0,53	0,61	0,48	0,55	0,45	0,52
J				0,80	0,92	0,71	0,82	0,67	0,77	0,60	0,69	0,53	0,61
K				1,00	1,16	0,90	1,04	0,85	0,98	0,75	0,87	0,70	0,81
L				1,18	1,36	1,06	1,23	0,95	1,10	0,85	0,98	0,85	0,98
M			8 bar 115 psi	1,50	1,73	1,40	1,62	1,25	1,45	1,18	1,36	1,06	1,23
N				1,70	1,97	1,70	1,97	1,50	1,73	1,40	1,62	1,25	1,45
O				2,00	2,31	2,00	2,31	1,80	2,08	1,70	1,97	1,60	1,85

Trim Size B Characteristic: linear

Nozzle Set	Seat \varnothing (mm)	Stroke (mm)	min. Δp Cooling Media/ Steam	kvs / cv - values depending on Δp - stage									
				A		B		C		D		E	
				up to 40 bar		> 40 - 55 bar		> 55 - 70 bar		> 70 - 85 bar		> 85 - 90	
				up to 580 psi		> 580 - 800 psi		> 800 - 1015 psi		> 1015 - 1230 psi		> 1230 - 1300 psi	
		kvs	cv	kvs	cv	kvs	cv	kvs	cv	kvs	cv		
A	45	80	8 bar 115 psi	2,10	2,43	1,80	2,08	1,60	1,85	1,50	1,73	1,30	1,50
B				2,60	3,01	2,40	2,77	2,10	2,43	1,90	2,20	1,80	2,08
C			9 bar 130 psi	3,00	3,47	2,80	3,24	2,50	2,89	2,10	2,43	2,00	2,31
D				4,00	4,62	3,60	4,16	3,40	3,93	3,00	3,47	2,80	3,24
E				4,80	5,55	4,20	4,86	4,00	4,62	3,60	4,16	3,40	3,93
F			10 bar 145 psi	5,30	6,13	5,30	6,13	4,80	5,55	4,20	4,86	4,20	4,86
G				6,30	7,28	6,30	7,28	6,00	6,94	5,60	6,47	5,30	6,13

Dimensions and Weights

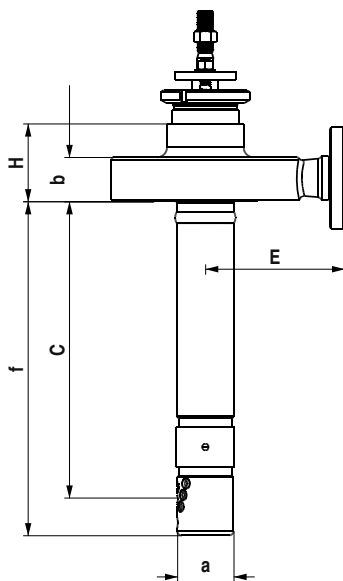
DIN PN 40 - 160



Designation		DN Steam Pipe												
		150	200	250	300	350	400	500	600	700	800	900	1000	
Size A Cooling Media Connection DN 25, PN 160 Steam Connection DN 80, PN 160 Stroke 40 mm	E width across corners	170												
	C installation depth	300			365			465		520				
	f installation length	345			410			510		565				
	b flange leaf strength	54												
	H overall height	95												
	a	71												
	≈ weight (kg)	31			33			36		37				
Size B Cooling Media Connection DN 40, PN 160 Steam Connection DN 100, PN 160 Stroke 80 mm	E width across corners	195												
	C installation depth				350			425		525		630		680
	f installation length				423			498		698		703		753
	b flange leaf strength	69												
	H overall height	110												
	a	92												
	≈ weight (kg)				57			61		66		71		74

Dimensions and Weights

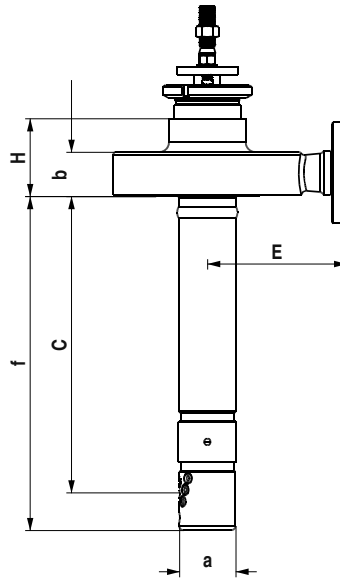
ANSI Class 300 - 600



Designation		DN Steam Pipe													
		150	200	250	300	350	400	500	600	700	800	900	1000		
		6"	8"	10"	12"	14"	16"	20"	24"	28"	32"	36"	40"		
Size A	E width across corners	mm	170												
		inch	6.7												
	C installation depth	mm	300			365			465		520				
		inch	11.8			14.4			18.3		20.5				
	f installation length	mm	345			410			510		565				
		inch	13.6			16.1			20.1		22.2				
	b flange leaf strength	mm	54												
		inch	2.1												
	H overall height	mm	95												
		inch	3.7												
a	mm	71													
	inch	2.8													
≈ weight	kg	31			33			36		37					
	lbs	68.3			1.3			1.4		1.5					
Size B	E width across corners	mm	194												
		inch	7.6												
	C installation depth	mm				350			425		525		630		680
		inch				13.8			16.7		20.7		24.8		26.8
	f installation length	mm				423			498		698		703		753
		inch				16.7			19.6		27.5		27.7		29.6
	b flange leaf strength	mm	69												
		inch	2.7												
	H overall height	mm	110												
		inch	4.3												
a	mm	92													
	inch	3.6													
≈ weight	kg				57			61		66		71		74	
	lbs				125.7			2.4		2.6		2.8		2.9	

Dimensions and Weights

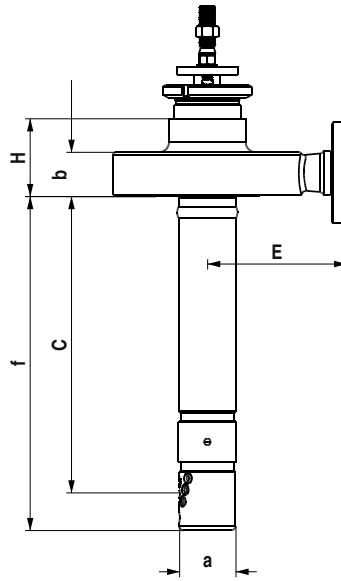
ANSI Class 900



Designation		DN Steam Pipe												
		150	200	250	300	350	400	500	600	700	800	900	1000	
		6"	8"	10"	12"	14"	16"	20"	24"	28"	32"	36"	40"	
Size A	E width across corners	mm	222,3											
		inch	8.8											
	C installation depth	mm	316,6		376,6		478,6		555,2					
		inch	12.5		14.8		18.8		21.9					
	f installation length	mm	361		421		523		599					
		inch	14.2		16.6		20.6		23.6					
	b flange leaf strength	mm	82.6											
		inch	3.3											
	H overall height	mm	124											
		inch	4.9											
a	mm	84												
	inch	3.3												
Stroke 40 mm	≈ weight	kg	57,5		59,5		63,5		67,5					
	lbs	2.3		2.3		2.5		2.7						
Size B	E width across corners	mm			285,8									
		inch			11.3									
	C installation depth	mm			408,2		484,2		606,2		686,2		736,2	
		inch			16.1		19.1		23.9		27		29	
	f installation length	mm			481		557		679		759		809	
		inch			18.9		21.9		26.7		29.9		31.9	
	b flange leaf strength	mm			95,3									
		inch			3.8									
	H overall height	mm			124									
		inch			4.9									
a	mm			114										
	inch			4.5										
Stroke 80 mm	≈ weight	kg			115		118		123		126		128	
	lbs				4.5		4.6		4.8		5		5	

Dimensions and Weights

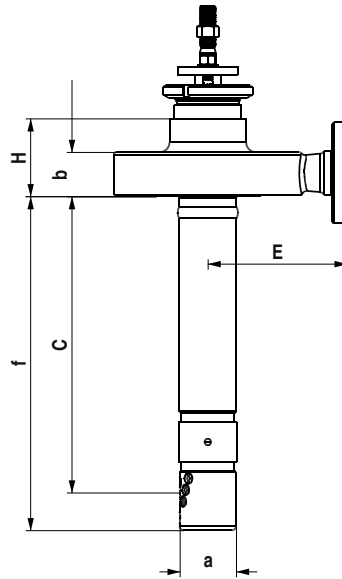
ANSI Class 1500



Designation		DN Steam Pipe													
		150	200	250	300	350	400	500	600	700	800	900	1000		
		6"	8"	10"	12"	14"	16"	20"	24"	28"	32"	36"	40"		
Size A	E width across corners	mm	235												
		inch	9.3												
	C installation depth	mm	316,6		376,6		478,6		555,2						
		inch	12.5		14.8		18.8		21.9						
	f installation length	mm	361		421		523		599						
		inch	14.2		16.6		20.6		23.6						
	b flange leaf strength	mm	82,6												
		inch	3.3												
	H overall height	mm	124												
		inch	4.9												
Stroke 40 mm	a	mm	84												
		inch	3.3												
≈ weight	kg	62		64		68		72							
	lbs	2.4		2.5		2.7		2.8							
Size B	E width across corners	mm			285,8										
		inch			11.3										
	C installation depth	mm			408,2		484,2		606,2		686,2		736,2		
		inch			16.1		19.1		23.9		27		29		
	f installation length	mm			481		557		679		759		809		
		inch			18.9		21.9		26.7		29.9		31.9		
	b flange leaf strength	mm			95,3										
		inch			3.8										
	H overall height	mm			124										
		inch			4.9										
Stroke 80 mm	a	mm			114										
		inch			4.5										
≈ weight	kg			115		118		123		126		128			
	lbs			4.5		4.6		4.8		5		5			

Dimensions and Weights

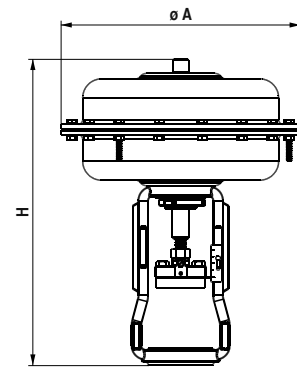
ANSI Class 2500



Designation		DN Steam Pipe												
		150	200	250	300	350	400	500	600	700	800	900	1000	
		6"	8"	10"	12"	14"	16"	20"	24"	28"	32"	36"	40"	
Size A	E width across corners	mm	333,4											
		inch	13.1											
	C installation depth	mm	493,2		543,2		643,2		713,2					
		inch	19.4		21.4		25.3		28.1					
	f installation length	mm	541,6		591,6		691,6		761,6					
		inch	21.3		23.3		27.2		30					
	b flange leaf strength	mm	136,4											
		inch	5.4											
	H overall height	mm	151,4											
		inch	6											
a	mm	114												
	inch	4.5												
Stroke 40 mm	kg	211		214		219		222						
	lbs	8.3		8.4		8.6		8.7						
Size B	E width across corners	mm			355,8									
		inch			14									
	C installation depth	mm			509,9		585,9		707,9		787,9		837,9	
		inch			20.1		23.1		27.9		31		33	
	f installation length	mm			582,6		659,6		780,6		860,6		910,6	
		inch			22.9		26		30.7		33.9		35.9	
	b flange leaf strength	mm			136,4									
		inch			5.4									
	H overall height	mm			151,4									
		inch			6									
a	mm			114										
	inch			4.5										
Stroke 80 mm	kg			219		222		227		230		232		
	lbs			8.6		8.7		8.9		9.1		9.1		

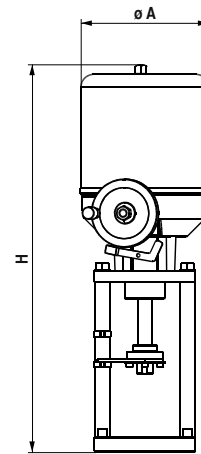
Pneumatic linear Actuator - FlowAct

Designation	Area (cm ²)	500	700	1500
	max. Positioning Force kN	7,5	10,5	22,5
	max. Positioning Force lbs	1685	2360	5060
	Stroke mm	40	40 / 80	
	Stroke inch	1.6	1.6 / 3.1	
ø A	mm	352	405	510
	inch	13.9	15.9	20.1
≈ H	mm	436	547	955
	inch	17.2	21.5	37.6
≈ Weight	kg	31	40	82
	lbs	68.3	88.2	180.8



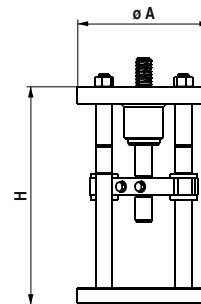
Electric linear Actuator - Haselhofer

Designation	Actuator	ED 4,5	ED 8	ED 12	ED 20
	max. Positioning Force kN	4,5	8	12	20
	max. Positioning Force lbs	1010	1800	2700	4500
	Stroke mm	40	40 / 80		
	Stroke inch	1.6	1.6 / 3.1		
ø A	mm	145	184	184	216
	inch	5.7	7.2	7.2	8.5
≈ H	mm	535	570	570	660
	inch	21.1	22.4	22.4	26.0
≈ Weight	kg	7,5	13	13	19
	lbs	16.5	28.7	28.7	41.9



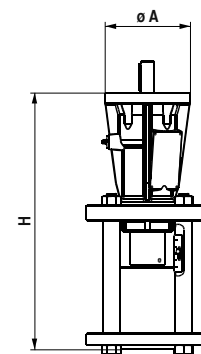
Linear Unit „light“

Designation	Linear Unit	LD 20
	max. Positioning Force kN	27,7
	max. Positioning Force lbs	6230
	Stroke mm	40 / 80
	Stroke inch	1.6 / 3.1
ø A	mm	196
	inch	7.7
≈ H	mm	407
	inch	16.0
≈ Weight	kg	20
	lbs	44.1



Linear Unit „heavy“

Designation	Linear Unit	SD 35	SD 36
	max. Positioning Force kN	35	35
	max. Positioning Force lbs	7870	7870
	Stroke mm	40	80
	Stroke inch	1.6	3.1
ø A	mm	125	175
	inch	4.9	6.9
≈ H	mm	380	590
	inch	15.0	23.2
≈ Weight	kg	20	40
	lbs	44.1	88.2



Operating Mode

The **VariCool** desuperheater integrates the precision of a control valve into a desuperheater to attain maximum rangeability, responsiveness and control.

The multi-stage design of the piston tube allows the **VariCool** to manage a wide spectrum of differential pressures as it directly injects atomized cooling liquid to cool process steam.

Temperature reduction occurs as the atomized cooling liquid rapidly vaporizes into the process steam.

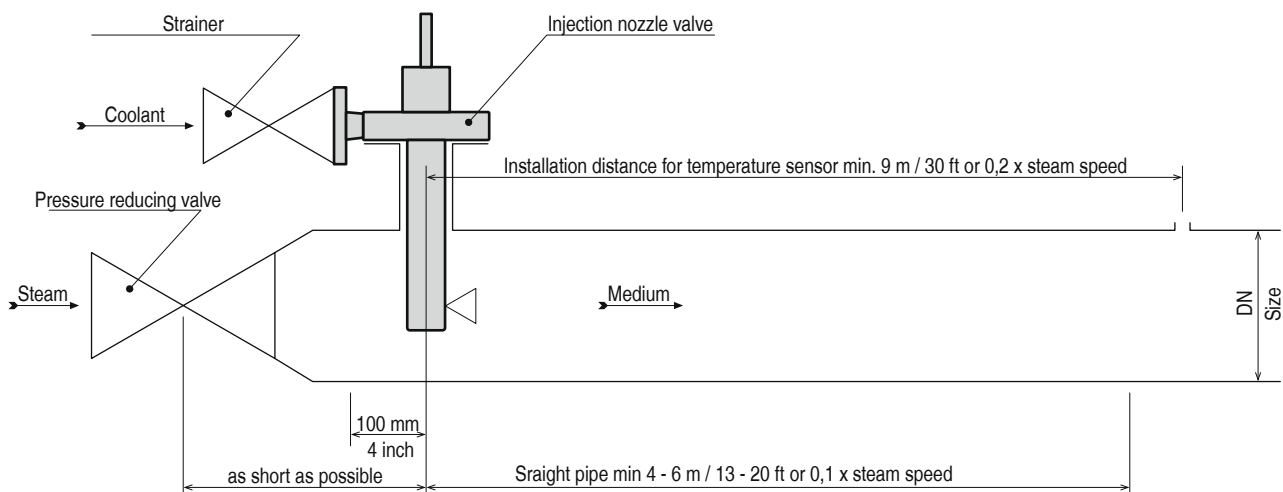
The patented perforated flow-to-close plug and the patented nozzle design maintain accurate control of varying process conditions through precise throttling of the cooling liquid control valve in response to feedback from a controller and downstream temperature sensor.

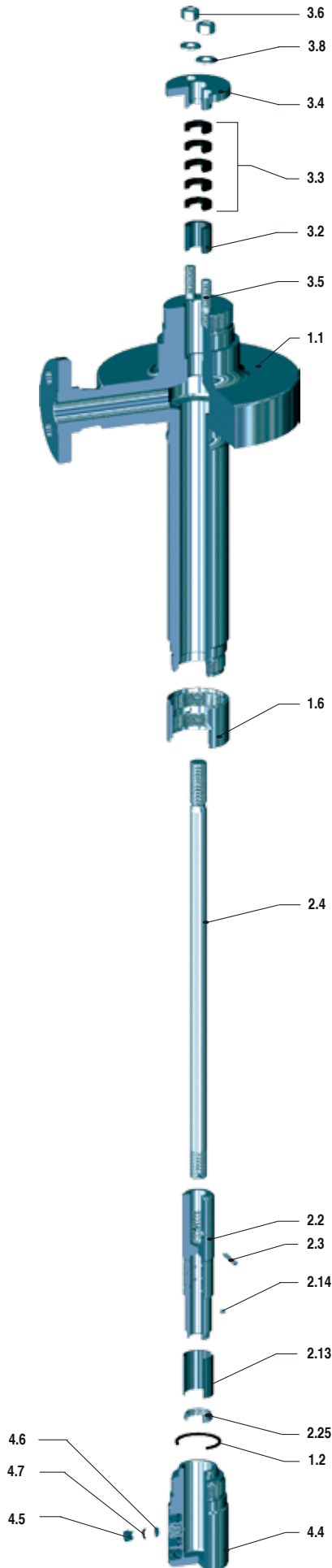
Physical Requirements

- For an optimal operation, the steam speed should be 10 to 100 m/s / 30 to 300 ft/s
- To avoid condensate the set temperature should be 5 to 10 °C / 41 to 50 °F above the saturated steam temperature.
- Max. operating temperature 530 °C / 986 °F
- Recommended cooling media temperature 120 °C / 248 °F
- Cooling media pressure 5 to 10 bar / 76 to 145 psi (see nozzle table) up to max. 90 bar / 1300 psi above steam pressure.
- We recommend the installation of a strainer into the cooling media pipe (mesh size 0,1mm / 0.004 inch)
- Minimum steam pipe diameter 150 mm / 6 inch
- Recommended straight pipe after injection nozzle valve: 0,1 x steam speed min. 4 to 6 m / 13 to 20 ft
- The distance of the temperature sensor should be 0,2 x steam speed or min. 9 m / 30 ft
- The position of the temperature sensor is important for the measuring quality
Pay attention to the mounting instruction of the sensor supplier

VariCool Advantages

- The injection with controlled nozzles ensures an optimal differential pressure for the cooling media.
- The ultrafine atomization provides a quick and complete vaporisation of the cooling water
- No thermo shock pipe and no separate cooling water control valve necessary by using a **VariCool** - injection nozzle valve
- High rangeability of 1:40
- Differential pressure of the cooling media up to 90 bar / 1305 psi (multi - stage pressure reduction)





Designation	Part	Materials				Spare Parts
		DIN		ANSI		
		1.7335	1.4571	A182 F12	A182 F304	
Body	1.1	1.7335	1.4571	A182 F12 Cl.2	A182 F304	
Spiral Woud Gasket	1.2	R901/B	R901/B	R901/B	R901/B	D
LR Nut	1.6	1.4922	1.4922	1.4922	1.4922	
Plug	2.2	1.4922	1.4922	1.4922	1.4922	K
Spring Pin	2.3	A2	A2	A2	A2	K
Stem	2.4	1.4922	1.4922	1.4922	1.4922	K
Piston Tube	2.13	1.4122	1.4122	1.4122	1.4122	K
Fuse Pin	2.14	1.4122	1.4122	1.4122	1.4122	K
Spring Nut	2.25	1.4922	1.4922	1.4922	1.4922	K
Guid Bush	3.2	1.4122	1.4122	1.4122	1.4122	
Packing	3.3	Pure Grafite	Pure Grafite	Pure Grafite	Pure Grafite	D
Stuffing Box	3.4	1.4571	1.4571	1.4571	1.4571	
Stud Bolt	3.5	A2 - 70	A2 - 70	A193 B8M2	A193 B8M2	
Hex Nut	3.6	A2 - 70	A2 - 70	A194 8M	A194 8M	
Washer	3.8	A2	A2	A2	A2	
Nozzle Body	4.4	1.4922	1.4922	1.4922	1.4922	
Nozzle	4.5	1.4122	1.4122	1.4122	1.4122	S
Swirl Disk	4.6	1.4122	1.4122	1.4122	1.4122	S
Profile Ring	4.7	R901/B	R901/B	R901/B	R901/B	S

K Plug, Stem, Piston Tube
 S Nozzle Set
 D Gasket Set

Type	DN	PN	Body./Cert.	Plug	Seat	kvs	Trim	Actuator	S
V901 AEVZB	350	160	1.4571/OAO	AHNP2LI	35	0,67	1.4922		

Body
Size A A
Size B B

Form of Connection
Flange acc. to EN 1092-1 Form B1 K
EN 1092-1 Form B2 M
DIN 2638 Form E
ANSI B 16.5 RF F
ANSI B 16.5 RJ J

Connection flange position
in steam flow direction Z
left of steam flow direction L
right of steam flow direction R
against steam flow direction U

Steam Pipe DN 150 - 1000
6" - 40"

Nominal Pressure PN 40 - 160
Class 300 - 2500

Body Material 1.4571
1.7335
A182F304
A182F12

Materials acc. to international Standards for Pressure Stressed Parts

Standards for Materials

without DGRL (Standard) O . . .
TRD AG 2 I . . .
TRB 801 AG A P . . .

Certificates for Materials

without . O . . .
EN 10 204 2.2 . Z . . .
3.1 (Survey of Cert.) . B . . .
3.1 (CMTR) . D . . .
3.2 . A . . .

Standards and Certificates for final test

Standards for final test

without EN 1349 (Standard) . . A .

Certificates for final test

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

Differential Pressure Range

up to 40 bar one-step A
> 40 - 55 bar two-step B
> 55 - 70 bar two-step C
> 70 - 85 bar three-step D
> 85 - 100 bar three-step E

Nozzle Set A - O

Seat Leakage
IEC Class IV P
Class V S

Seat Diameter 35 resp. 45

kvs Value 0,13 - 6,3

PD 502 BDYOZ
Operation on air failure
Z Stem extended

Hand Wheel
O without
H top, heavy-duty
S PD 502 - 700
lateral,
PD 1502

Spring Ranges
GF 0,4 - 2,0
DY 1,0 - 2,4
VC 1,5 - 2,7

Actuator Size
PD 502 Area 500 cm²
PD 700 Area 700 cm²
PD 1502 Area 1500 cm²

ED 8/8 ZPO 50
Positioning Speed
13,5 13,5 mm/min
17 17 mm/min
25 25 mm/min
50 50 mm/min

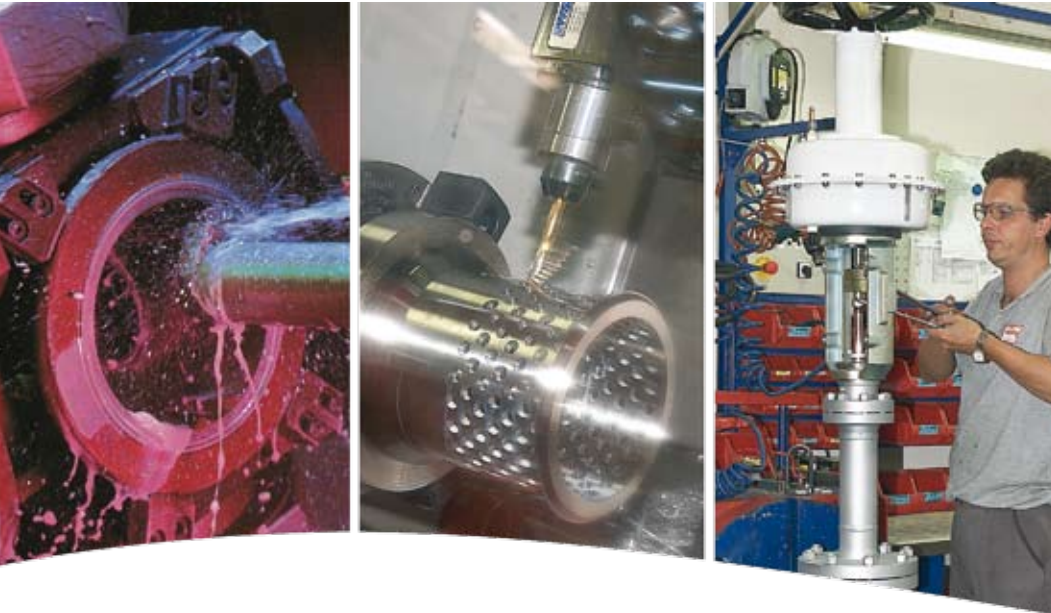
Positioning Electronics
O without
M Positioning electronics,
input in mA
V Positioning electronics,
input in V

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

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

Haselhofer-Electric linear Actuator
ED 4,5/4,5 actuating force 4,5 kN
ED 8/6 actuating force 6 kN
ED 8/8 actuating force 8 kN
ED 12/12 actuating force 12 kN
ED 20/15 actuating force 15 kN
ED 20/20 actuating force 20 kN

LD 20
Linear thrust Unit
LD 20 actuating power 27,7 kN



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Your contact:

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Information given in this product specification sheet is made in good faith and based upon specific testing but does not, however, constitute a guarantee.

Modifications without notice in line with technical progress.

PSS 108296 05/07 V901 en