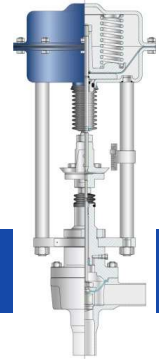


Technical data sheet; Sterile control valve series 9

General data

Series	9
Nominal bore DN / NPS	8 – 50 / 1/4“ – 2“
Nominal pressure PN / ANSI	10 / Class 100
Characteristics	equal percentage, linear, On / Off
Rangeability	50:1 (kvs- values > 4 to ≤ 40), 30:1 (kvs- values ≤ 4)
Plug guide	stem guided, optional: plug guided
Leakage rate	metallic sealing: IEC 60534-4 leakage rate class IV (0.01% kvs-value); others on request
Connections	welding ends, SMS-, tri-clamp-, flange-, milk pipe connection. Other connections possible on request
Surface	electrolytically polished (Ra≤0.8 µm)
Ferrite content	≤0,5%
Diaphragm	FDA-EPDM or PTFE
Bellows seal bonnet	up to +250°C, made of material 1.4571/1.4435
Material certificates	ferrite verification, roughness verification, material verification according to EN10204- 3.1
Approvals	FDA, ADI-free, USP Class VI, RoHS
Range of application	maximum operating temperature: diaphragm FDA-EPDM up to 135°C, Diaphragm PTFE up to 160°C
Special executions	Multistage version, T- version with lateral steam connection



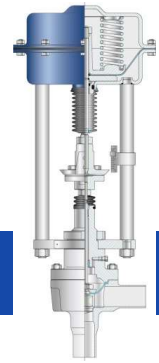
Technical data sheet; Sterile control valve series 9

Materials

Body material		EN	Temperatures	ASTM	Temperatures
		1.4435 X2CrNiMo18-14-3	- 10 bis 250°C	-	-
other materials possible on request					
Bonnet material		material according to body material			
Material inner parts					
Var.	Parabolic plug	Seat	Seat type	Max. permissible medium temperature ° C	
1	1.4435	1.4435	metallic	acc. to diaphragm	
other materials possible on request					

Pressure- temperature table according to DIN EN, pressures in bar

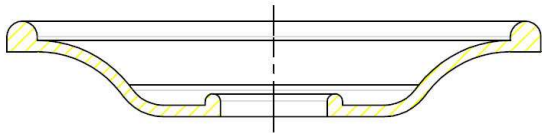
Stainless cast steel, 1.4435, X2CrNiMo18-14-3													
T °C	-200	-100	-10	100	150	200	250	300	350	400	450	500	
PN 10	-	-	10	9	8	7	7	-	-	-	-	-	



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Diaphragm

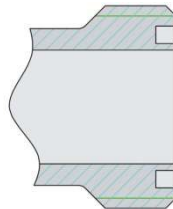
Type	Diaphragm	Certificate	max. T °C
M04 / M14	FDA - EPDM	FDA compliant, USP Class VI, ADI-Free, RoHS	135°C
M15	PTFE	FDA compliant, USP Class VI, ADI-Free, RoHS	160°C



Connections



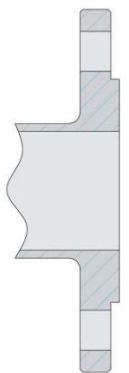
Welding ends



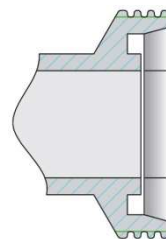
Threaded connection acc. to SMS-standard



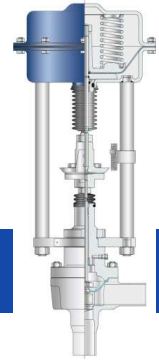
Tri-Clamp connections



Flanges acc. to DIN EN 1092-1



milk pipe connection



Technical data sheet; Sterile control valve series 9

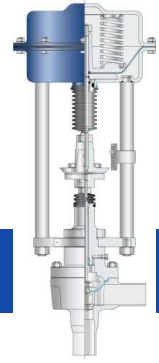
Actuator allocation and admissible differential pressures Δp

Sterile control valves with FDA-EPDM diaphragm and Ps actuator

Flow against closing direction, spring opens

Actuator Ps		Minimum air pressure setting (bar)															
		Actuator size MA2/3...															
		No. Of springs.															
		Spring type															
Valve												Permissible differential pressures (in bar) for each type of seal					
Nominal bores								kvs m ³ /h	cv gpm	Size mm	Stroke ↑ mm	Actuator size MA2/3...	metallic seat	metallic seat	metallic seat	metallic seat	metallic seat
8 1/4"	10 3/8"	15 1/2"	20 3/4"	25 1"	40 1 1/2"	50 2"	Actuator size MA2/3...										
							0.1	0.12	4	10	16 A6	10					
							0.16	0.19	4	10	16 A6	10					
							0.25	0.29	5	10	16 A6	10					
							0.4	0.46	5	10	16 A6	10					
							0.63	0.73	8	10	16 A6	10	10				
							1	1.2	8	10	16 A6	10	10				
							1.6	1.9	10	10	16 A6	10	10				
											21 A6	10	10				
							2.5	2.9	12	10	16 A6	10	10	10			
											21 A6	10	10	10			
							4	4.7	15	10	16 A6	10	10	10			
											21 A6	10	10	10			
							6.3	7.3	20	10	16 A6	8	10	10			
											21 A6	10	10	10			
							10	11.5	25	10	16 A6	4	10	10	10		
											21 A6	10	10	10	10		
							16	19	30	10	16 A6	2	8	10	10		
											21 A6	10	10	10	10		
							25	29	32	10	16 A6	1	7	9	10		
											21 A6	10	10	10	10		
							40	46	46	10	16 A6	-	2	4	9	10	
											21 A6	5	10	10	10		
											31 A6	10	10	10	10		

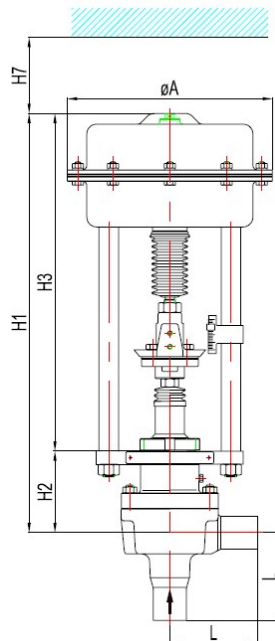
Pipe connections DN32 possible on request

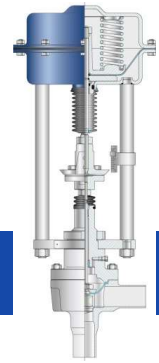


Technical data sheet; Sterile control valve series 9

Dimensions and weights (in mm and kg)

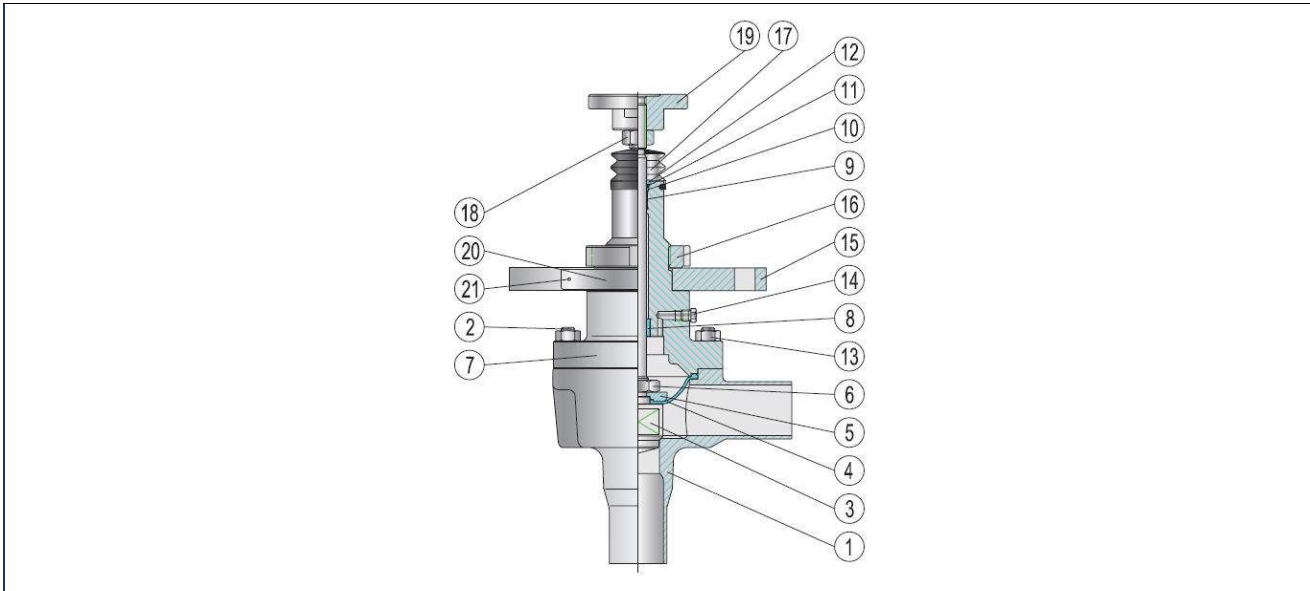
Valve series 9 (dimensions with welding ends)											
DN (mm)		8	10	15	20	25	40	50			
ANSI NPS (Inch)		1/4"	3/8"	1/2"	3/4"	1"	1 1/2"	2"			
L	leg length	90	90	90	90	90	105	115			
H2	(mm)	81	81	81	88	88	92	98			
G	Weight (kg)	6	6	6	6	6.5	9.5	10			
Actuator											
Type	G	ØA	H3	H7	H1						
3.16 A6...	4	162	266	40	347	347	347	354	354	358	364
2.21 A6...	7	210	343	40	424	424	424	431	431	435	441
3.31 A6...	16	310	372	40	453	453	453	460	460	464	470





Technical data sheet; Sterile control valve series 9

Spare parts



Pos	Image	Stainless steel X2CrNiMo18-14-3	
		1	
1	Body		1.4435
2	Bolt		A2 – 70
3	Stem with plug		1.4435
4	Diaphragm	FDA-EPDM	PTFE
5	Diaphragm plate		1.4435
6	Hexagon nut		A4 – 70
7	Bonnet		1.4435
8	Lower bearing bush		PTFE / glass
9	Upper bearing bush		1.4401 / PTFE / glass
10	Ring		PTFE
11	O-Ring		viton
12	Washer		1.4435
13	Hexagon nut		A2 – 70
14	Sealing screw		1.4436
15	Traverse		1.4301
16	Grooved nut		A2 – 70
17	Bellows		neoprene
18	Hexagon nut		A2 – 70
19	Coupling		1.4308
20	Type plate		1.4301
21	Hammer bolt		A2 – 70

9_TD_D_03/20_Technical changes reserved

Swiss precision for fluids and flow control