



SEMPELL

Sempell Control Valves for water and steam applications in Power Industry.

Features and Benefits

- Valve can be easily disassembled
- Exchangeable, screwed seat
- Low maintenance, gland (packing pure graphite) can be retightened
- Low friction by burnished valve stem
- Spacious body also for difficult operating conditions
- Universal connections by various design of welding ends and flanges as standard
- Various designs of welding ends in regard of dimension and material as well as designs with accessories according to TO 095.80xxxx DE or according to customers' request.

Use and Application of Control Valves

Type 171C can be generally used in globe valve to control pressure, temperature, level and flow.

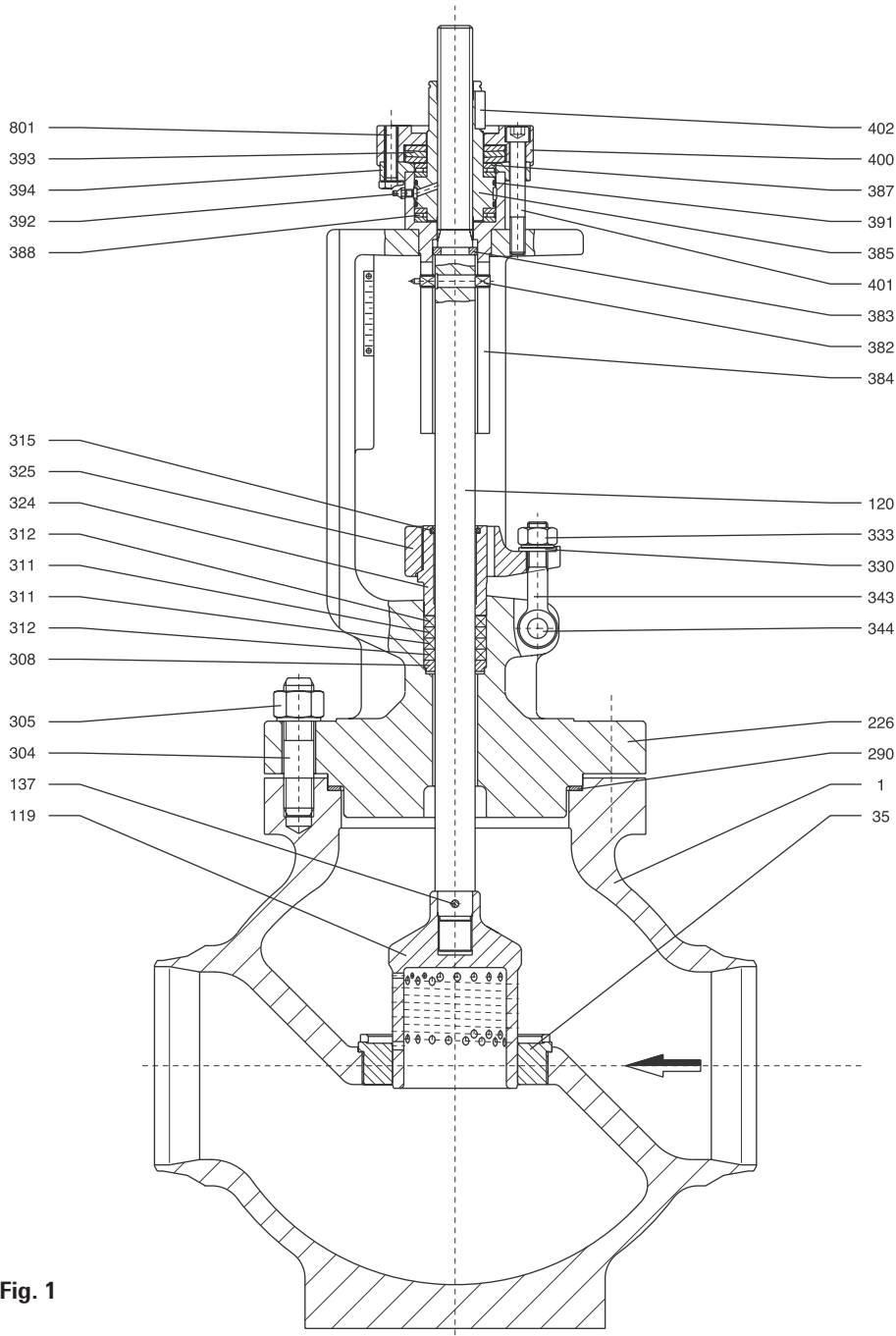
It is designed for a medium pressure range up to class 400 and is suitable to control non-aggressive, liquid or gaseous medium.

The cast steel body with flanged bonnet is spaciouly designed and thus can also be used for evaporating medium without difficulties.



Technical data

Size	: NVS 2 1/2" – 14"
Pressure Class	: Up to class 400
Connections	: Flanges up to class 150. Welding ends up to class 400
Body Material	: SA216WCB, special design SA217WC6
Material Internals	: stem 1.4057, seat screwed 1.4057, special design: - seat welded 1.5415, hardfaced with 1.4115 - without seat ring, body hardfaced with 1.4115, guide bush 1.4559 or 1.8550 gas nitrited (at PTFE)
Steam sealing	: PTFE-collar (up to 482°F / 250°C). Pure graphite.
Disc design	: Perforated disc (single stage)
Guide	: two guides at stem and seat ring
Characteristic	: linear, square
Control ratio	: Steam 1:25 , Water 1:40
Sealing seat/disc	: Metallic
Leakage class	: Class V ASME FCI 70-2
Flow medium	: Water, feedwater, condensate, steam



Basic design

(prepared for connecting an electric rotary actuator)

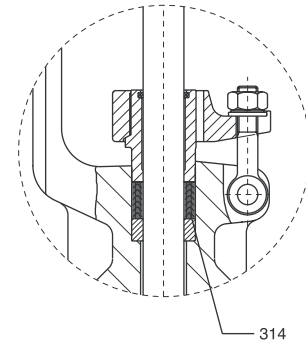


Fig. 1

Notes

- recommended spare parts
- * only on special request
- 1) design for accessory SN 185

Table 1 - Materials, material specification

Pos.	Name	ASME-Material		Pos.	Name	ASME-Material	
		51	60 *			51	60 *
Design with rotary actuator							
1	Body	SA216WCB	SA217WC6	333	Hexagonal nut	1.7258	
2	Pipe connection	SA105/SA106	SA182F12/P12	343	Eye bolt	1.7709	
20	Pipe connection	SA105/SA106	SA182F12/P12	344	Pin	1.7709	
35 •	Seat screwed	1.4057	1)	382	Pin	1.4057	
119 •	Plug	1.4057		383	Split ring	1.4057	
120 •	Stem	1.4057		384	Bush	1.8550	
137 •	Cylindrical pin	St		385 •	Threaded bush	2.0550	
226	Yoke	SA216WCB	SA217WC6	387 •	Travelling disc	1.3505	
290 •	Gasket	1.7335		388 •	Needle ring	1.3505	
304	Stud	1.7709		391 •	O-ring	NBR	
305	Hexagonal nut	1.7258		392	Lubrication nipple	5.8	
308	Guide bush	SINT-DOO	1.4021	393 •	Cup spring	1.8159	
311 •	Packing ring	Graphite		394	Clamp ring	1.0460	
312 •	Packing ring	Graphite/Aust.		400	Connection flange	1.0460	
(314) •	Packing V type	Teflon		401	Head cap screw	8.8	
315 •	Packing cord	RIVAC		402	Parallel key	1.0503	
324	Gland	1.4027		800	Actuator		
325	Gland flange	1.4317		801	Screw	8.8	
330	Washer	Ferrit					

Main dimensions

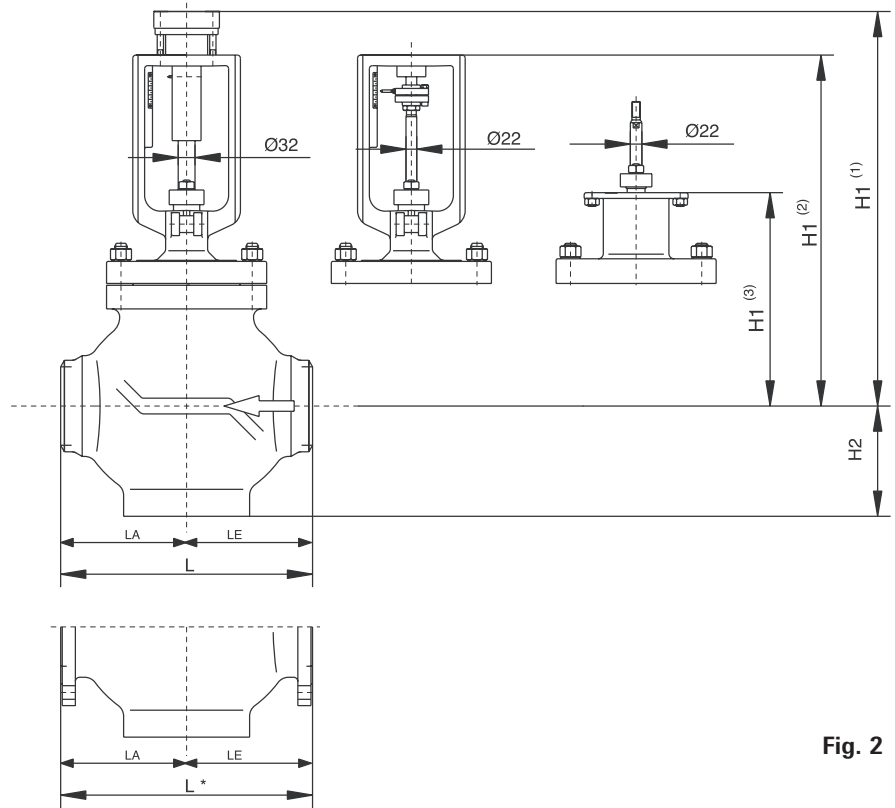


Fig. 2

Notes

- H1⁽¹⁾ prepared for mounting rotary actuator
- H1⁽²⁾ prepared for mounting linear actuator
- H1⁽³⁾ prepared for mounting pneumatic actuator
- * Flange class 150 on request

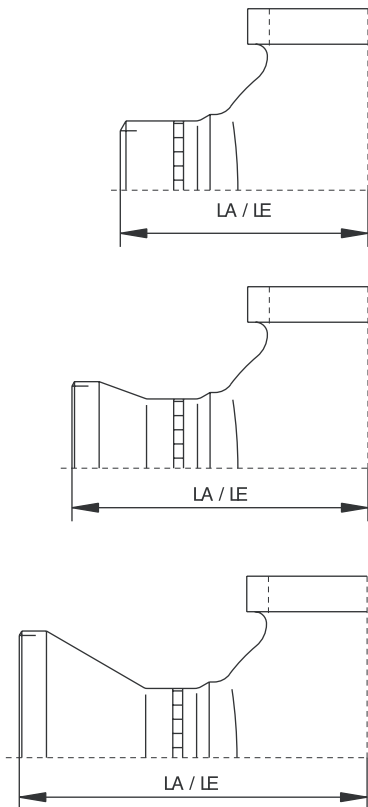


Fig. 3

Table 2 - Dimensions & weights

Dimensions [in]		Weight without actuator							
Class	NPS	L	L*	H2	H1 ⁽¹⁾	H1 ⁽²⁾	H1 ⁽³⁾	SE / lbs	FI / lbs
150 (flanges)	2 1/2"	11.42	11.42	5.51	25.43	21.85	11.8	143.3	156.5
	3"	12.20	12.20	5.91	25.43	21.85	11.8	156.5	172.0
	4"	13.78	13.78	5.91	25.43	21.85	11.8	220.5	242.5
	5"	15.75	15.75	7.48	30.28	26.69	15.2	363.8	396.8
400 (welding end)	6"	18.90	18.90	8.27	30.28	26.69	15.2	463.0	500.4
	8"	23.62	23.62	8.66	30.28	26.69	15.2	595.2	661.4
	10"	28.74	28.74	12.60	35.00	31.42	19.9	804.7	914.9
	12"	33.46	33.46	12.99	35.00	31.42	19.9	1.014.1	1168.4
	14"	33.46	33.46	12.99	35.00	31.42	19.9	1.014.1	1168.4

Table 3 - Lengths LA/LE in inch

	Pipe connection NPS										
	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"
2 1/2"											
3"											
4"											
5"											
6"											
8"											
10"											
12"											
14"											

Table 4 - Possible welding connections at body or pipe connections

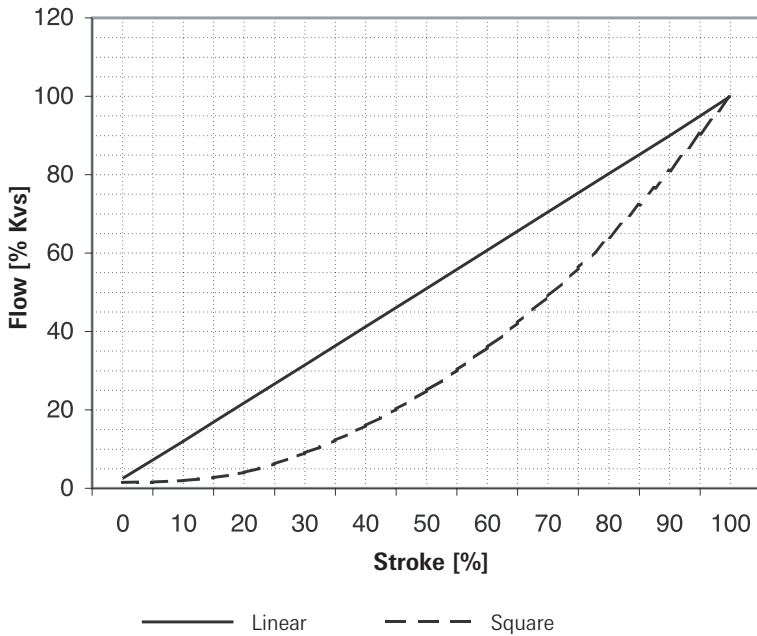
NPS	OD	SCHEDULE					
		5	10	20	30	STD	40
SE							
2 1/2"	73,00	—	3,05	—	—	5,16	5,16
3"	88,90	—	3,05	—	—	5,49	5,49
4"	114,30	—	3,05	—	—	6,02	6,02
5"	141,30	—	3,40	—	—	6,55	6,55
6"	168,28	—	3,40	—	—	7,11	7,11
8"	219,08	—	3,76	6,35	7,04	8,18	8,18
10"	273,05	—	4,19	6,35	7,80	9,27	9,27
12"	323,85	—	4,57	8,38	8,38	9,53	10,31
14"	355,60	—	6,35	7,92	9,53	9,53	11,13

Table 5

Seat-ø (mm)	30	35	40	50	60	70	80	90	100	130	160	170	200	250
Max. stroke (mm)	20	25	30	30	40	40	50	55	60	85	115	115	115	115
NVS	max. Cvs (GPM)													
2½"	12.87	18.72	29.25	46.8										
3"		18.72	29.25	46.8	73.71	93.6								
4"			29.25	46.8	73.71	93.6	117							
5"					73.71	93.6	117	146.25	187.2					
6"						93.6	117	146.25	187.2	351				
8"								146.25	187.2	351	468	649.35		
10"									187.2	351	468	649.35	844.74	
12"										351	468	649.35	844.74	1415.7
14"										351	468	649.35	844.74	1415.7

Kvs = Cvs / 1.17

Flow characteristics



Cvs-Values of the Control Valves

- Max. seat diameter, max. valve lifts and the pertaining max. Cvs-values.
- The named Cvs-values are valid for linear characteristic curves. For designs with square and equal per cent characteristic curves the next lower value is the max. realizable Cvs value.
- Up to seat diameter 100 mm the valves are only manufactured with Cvs-values according to table.
- From seat diameter 130 mm the manufactured Cvs-values and the valve strokes are adjusted to the application. The seat diameters are not changed and only executed according to table.

Characteristic Curves

The control valves can be delivered with different flow characteristics (see graph). As standard characteristic curves, linear or square characteristic curves are provided depending on application or customer's request.

Various equal per cent characteristic curves are also realizable.

Table 6 - Application limits subject to pressure and temperature

Table 6.1 - Application range ASTM materials (psig / °F)

Class	Body material	Design temperature (°F)														
		100	200	300	400	500	600	650	700	750	800	850	900	950	1000	1050
STANDARD CLASS																
150	SA216WCB	285	260	230	200	170	140	125	110	95	80					
	SA217WC6	290	260	230	200	170	140	125	110	95	80	65	50	35	20	20
300	SA216WCB	740	675	655	635	600	550	535	535	505	410					
	SA217WC6	750	750	720	695	665	605	590	570	530	510	485	450	320	215	145
400	SA216WCB	750	750	750	750	750	715	700	695	630	515					
	SA217WC6	1000	1000	965	925	885	805	785	755	710	675	650	600	425	290	190
SPECIAL CLASS																
150	SA216WCB	290	290	290	290	290	275	270	265	240	200					
	SA217WC6	290	290	290	290	290	290	290	280	280	275	260	225	155	105	70
300	SA216WCB	750	750	750	750	750	715	700	695	630	515					
	SA217WC6	750	750	750	750	750	750	735	730	720	720	680	585	400	270	180
400	SA216WCB	1000	1000	1000	1000	1000	950	935	925	840	685					
	SA217WC6	1000	1000	1000	1000	1000	1000	1000	980	970	960	905	785	530	360	240

Notes

- * Welding ends only
- Allowable working pressure (psig) test pressure acc. PED
Test pressure = 1,5 x allowable working pressure at 100°F

Table 6.2 - Application range ASTM materials (psi / °C)

Class	Body material	Design temperature (°C)														
		38	93	149	204	260	315	434	371	399	426	454	482	510	538	565
STANDARD CLASS																
150	SA216WCB	19.7	18	15.9	13.8	11.8	9.7	8.7	7.6	6.6	5.6					
	SA217WC6	20	18	15.9	13.8	11.8	9.7	8.7	7.6	6.6	5.6	4.5	3.5	2.5	1.4	1.4
300	SA216WCB	51.1	46.6	45.2	43.8	41.4	38	36.9	36.9	34.9	28.3					
	SA217WC6	51.8	51.8	49.7	48	45.9	41.8	40.7	39.3	36.6	35.2	33.5	31.1	22.1	14.9	10
400	SA216WCB	51.8	51.8	51.8	51.8	51.8	49.3	48.3	48	43.5	35.6					
	SA217WC6	69	69	66.6	63.8	61.1	55.6	54.2	52.1	49	46.6	44.9	41.4	29.4	20	13.1
SPECIAL CLASS																
150	SA216WCB	20	20	20	20	20	19	18.7	18.3	16.6	13.8					
	SA217WC6	20	20	20	20	20	20	20	19.4	19.4	19	18	15.6	10.7	7.3	4.9
300	SA216WCB	51.8	51.8	51.8	51.8	51.8	49.3	48.3	48	43.5	35.6					
	SA217WC6	51.8	51.8	51.8	51.8	51.8	51.8	51.8	50.7	50.4	49.7	46.9	40.4	27.6	18.7	12.5
400	SA216WCB	69	69	69	69	69	65.5	64.5	63.8	58	47.3					
	SA217WC6	69	69	69	69	69	69	69	67.6	66.9	66.2	62.4	54.2	36.6	24.9	16.6

Notes

- * Welding ends only
- Allowable working pressure (psi) test pressure acc. PED
Test pressure = 1,5 x allowable working pressure at 38 °C

On consultation with our engineering department the valves can be used for higher design pressures in special classes.

Fig. 4 - Pressure Reducing Valve with AUMA-NORM and AUMA-MATIC actuator

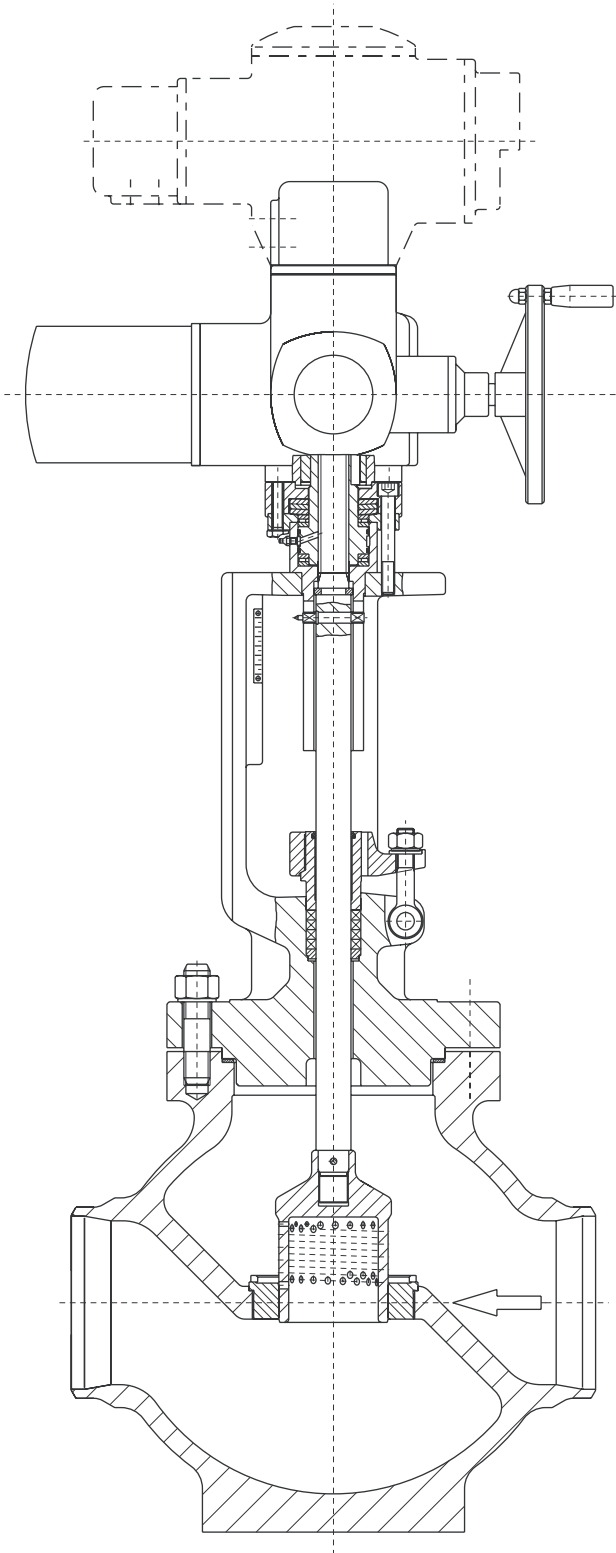


Fig. 5 - Pressure Reducing Valve with EMG actuator

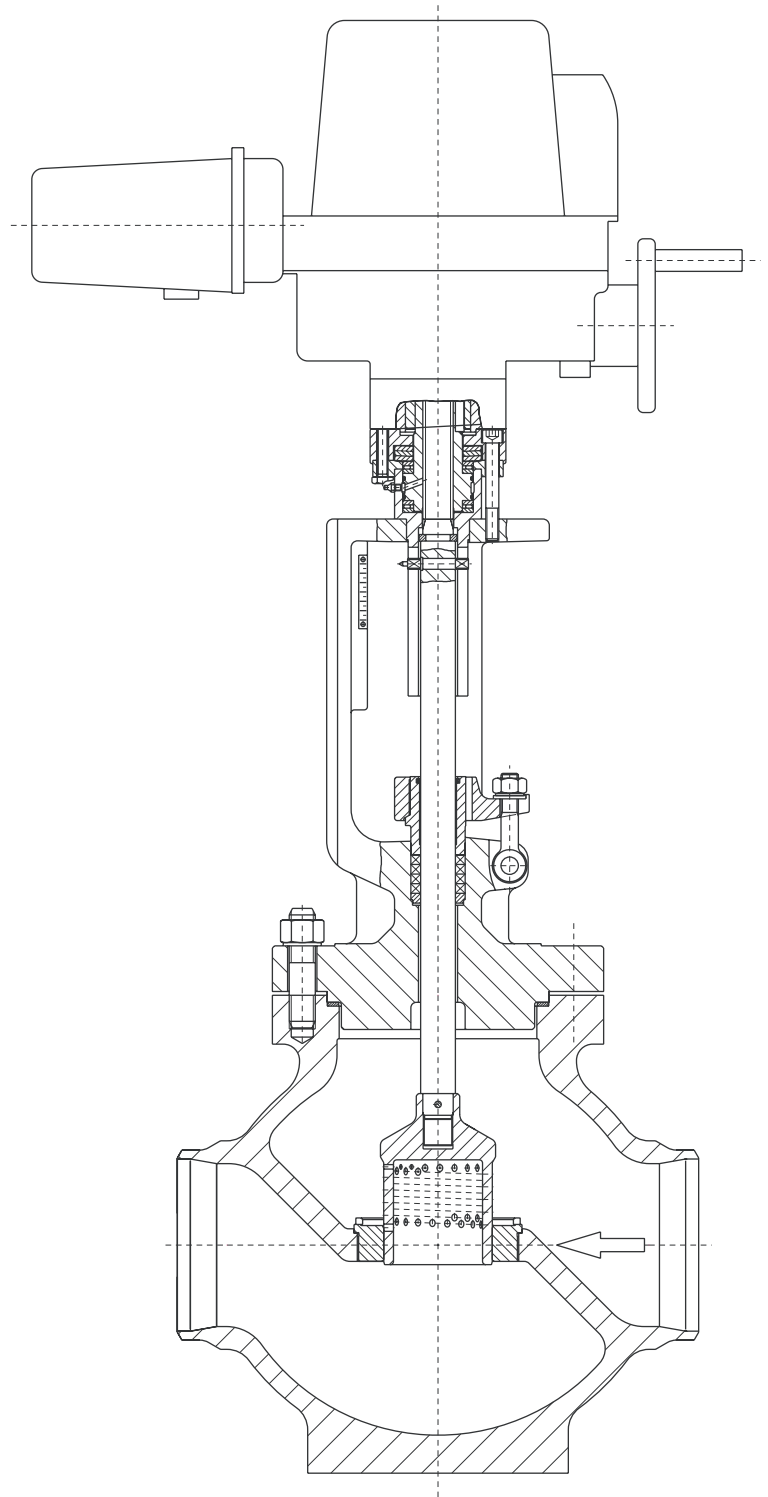


Table 7 - Selection of AUMA Actuator

Max. admissible difference pressures for per forated disc, flow direction tends to close																
NVS		2 1/2"					3"					4"				
Seat	mm	30	35	40	50	35	40	50	60	70	40	50	60	70	80	
Stroke	mm	20	25	30	30	25	30	30	40	40	30	30	40	40	50	
Cvs	GPM	12.9	18.7	29.3	46.8	18.7	29.2	46.8	73.7	93.6	29.3	46.8	73.7	93.6	117	
Auma 7.5	psi	close	914	914	914	914	914	914	914	914	914	914	914	914	914	914
		open	914	914	914	914	914	914	914	812	551	914	914	812	551	406
		control	914	914	551	247	914	551	247	145	102	551	247	145	102	72.5
Auma 10.1	psi	close			914	914		914	914	914	914	914	914	914	914	914
		open			914	914		914	914	914	914	914	914	914	914	914
		control			914	914		914	914	812	551	914	914	812	551	406
Auma 14.1	psi	close								914	914			914	914	914
		open								914	914			914	914	914
		control								914	914			914	914	914

NVS		5"					6"					8"						
Seat	mm	60	70	80	90	100	70	80	90	100	130	80	90	100	130	160	170	
		40	40	50	55	60	40	50	55	60	85	50	55	60	85	100	115	
Cvs	GPM	73.7	93.6	117	146	187	93.6	117	146	187	351	146	187.2	351	468	649	555	
			1813	1813	1291	1059	841	1508	1291	1059	841	450	914	841	450			
		812	551	406	305	247	551	406	305	247	145	305	247	145				
		145	102	72.5	58	43.5	102	72.5	58	43.5	14.5	58	43.5	14.5				
Auma 10.1	psi	close	914	914	914	914	914	914	914	914	870	914	914	812	537	464	32	
		open	914	914	914	827	653	914	914	827	653	377	827	653	377	247	218	15
		control	812	551	406	305	247	551	406	305	247	145	305	247	145	87	72.5	5
		914	914	914	914	914	914	914	914	914	812	914	914	914	914	914	63	
		914	914	914	914	914	914	914	914	914	885	914	914	885	580	508	35	
		914	914	914	827	653	914	914	827	653	377	827	653	377	247	218	15	

NVS		10"					12"					14"					
Seat	mm	100	130	160	170	200	130	160	170	200	250	130	160	170	200	250	
Stroke	mm	60	85	100	115	115	85	100	115	115	115	85	100	115	115	115	
Cvs	GPM	73.7	93.6	117	146	187	93.6	117	146	187	351	146	187	351	468	649	
Auma 7.5	psi	close	841	450			450					450					
		open	247	145			145					145					
		control	43.5	14.5			14.5					14.5					
Auma 10.1	psi	close	914	812	537	464	334	812	537	464	334	276	812	537	464	334	334
		open	653	377	247	218	145	377	247	218	145	87	377	247	218	145	145
		control	247	145	87	72.5	58	145	87	72.5	58	29	145	87	72.5	58	58
Auma 14.1	psi	close	914	914	914	914	667	914	914	914	667	421	914	914	914	667	667
		open	914	885	580	508	363	885	580	508	363	232	885	580	508	363	363
		control	653	377	247	218	145	377	247	218	145	87	377	247	218	145	145

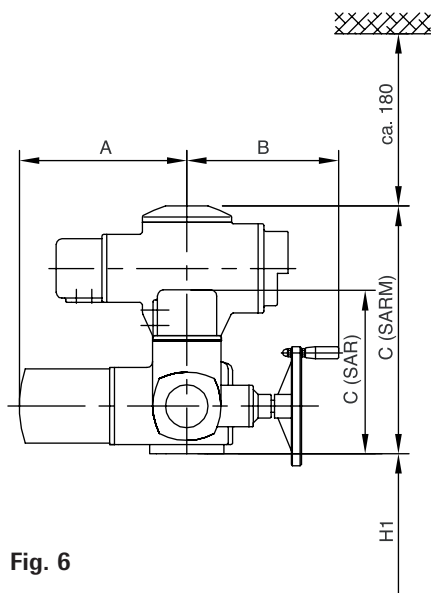


Fig. 6

Table 8 - data of AUMA actuator

Technical data and dimensions AUMA modulating actuators											
Type	DIN EN ISO 5210	Tripping torque		Torque for modulating max. lbf in	Hand-wheel Ø in	Dimensions and weights					
		min lbf in	max lbf in			SAR			SARM		
						A in	B in	C in	weight lbs	C in	weight lbs
AUMA 07.5	F10	266	531	266	6.3	10.4	9.8	10.7	46	16.5	62
AUMA 10.1	F10	531	1062	531	7.9	11.1	10	10.8	55	16.5	79
AUMA 14.1	F14	1062	2213	1062	12.4	15.1	13	13.2	112	20	146

Note

Operating time about 30 seconds.

Table 9 - Selection of EMG Actuator

Max. admissible difference pressures for per forated disc, flow direction tends to close																
NVS		2 1/2"				3"					4"					
Seat	mm	30	35	40	50	35	40	50	60	70	40	50	60	70	80	
Stroke	mm	20	25	30	30	25	30	30	40	40	30	30	40	40	50	
Cvs	GPM	12.9	18.7	29.3	46.8	18.7	29.3	46.8	73.7	93.6	29.3	46.8	73.7	93.6	117	
DM C R 59 + 60	psi	close	914	914	914	914	914	914	914	914	914	914	914	914	914	
		open	914	914	914	914	914	914	812	551	914	914	812	551	406	
		control	914	914	551	247	914	551	247	145	102	551	247	145	102	72.5
DM C R 120	psi	close			914	914			914	914	914	914	914	914	914	
		open			914	914			914	914	914	914	914	914	914	
		control			914	914			914	914	812	551	914	914	812	551
DM C R 250	psi	close							914	914				914	914	914
		open							914	914				914	914	914
		control							914	914				914	914	914

NVS		5"					6"					8"						
Seat	mm	60	70	80	90	100	70	80	90	100	130	80	90	100	130	160	170	
Stroke	mm	40	40	50	55	60	40	50	55	60	85	50	55	60	85	100	115	
Cvs	GPM	73.7	93.6	117	146	187	93.6	117	146	187	351	117	146	187	351	468	649	
DM C R 59 + 60	psi	close	1813	1813	1291	1059	841	1508	1291	1059	841	450	914	914	841	450		
		open	812	551	406	305	247	551	406	305	247	145	406	305	247	145		
		control	145	102	72.5	58	43.5	102	72.5	58	43.5	14.5	72.5	58	43.5	14.5		
DM C R 120	psi	close	914	914	914	914	914	914	914	914	870	914	914	914	812	537	464	
		open	914	914	914	827	653	914	914	827	653	377	914	827	653	377	247	218
		control	812	551	406	305	247	551	406	305	247	145	406	305	247	145	87	72.5
DM C R 250	psi	close	914	914	914	914	914	914	914	914	812	914	914	914	914	914	914	
		open	914	914	914	914	914	914	914	914	885	914	914	914	885	580	508	
		control	914	914	914	827	653	914	914	827	653	377	914	827	653	377	247	218

NVS		10"					12"					14"					
Seat	mm	100	130	160	170	200	130	160	170	200	250	130	160	170	200	250	
Stroke	mm	60	85	100	115	115	85	100	115	115	115	85	100	115	115	115	
Cvs	GPM	187	351	468	649	845	351	468	649	845	1416	351	468	649	845	1416	
DM C R 59 + 60	psi	close	841	450			450					450					
		open	247	145			145					145					
		control	43.5	14.5			14.5					14.5					
DM C R 120	psi	close	914	812	537	464	334	812	537	464	334	276	812	537	464	334	334
		open	653	377	247	218	145	377	247	218	145	87	377	247	218	145	145
		control	247	145	87	72.5	58	145	87	72.5	58	29	145	87	72.5	58	58
DM C R 250	psi	close	914	914	914	914	667	914	914	914	667	421	914	914	914	667	667
		open	914	885	580	508	363	885	580	508	363	232	885	580	508	363	363
		control	653	377	247	218	145	377	247	218	145	87	377	247	218	145	145

Table 10 - data of EMG actuator

Technical data and dimensions AUMA modulating actuators									
Type	DIN EN ISO 5210	Tripping torque		Torque for modulating	Hand-wheel	Dimensions and weights			
		min	max	max.	Ø	A	B	C	weight
		lbf in	lbf in	lbf in	in	in	in	in	lbs
DM C R 59	F10	266	531	266	6.3	9.9	11.1	11.2	55
DM C R 60	F10	266	531	266	6.3	10.3	12.8	16.4	65
DM C R 120	F10	531	1062	531	7.9	10.3	12.8	16.4	74
DM C R 250	F14	1062	2213	1062	9.8	11.2	14.3	28.4	153

Note

Operating time about 30 seconds.

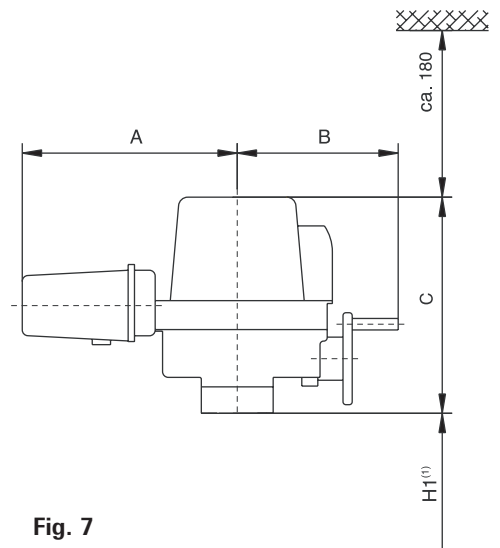


Fig. 7

Fig. 8 - Pressure Reducing Valve with STI actuator

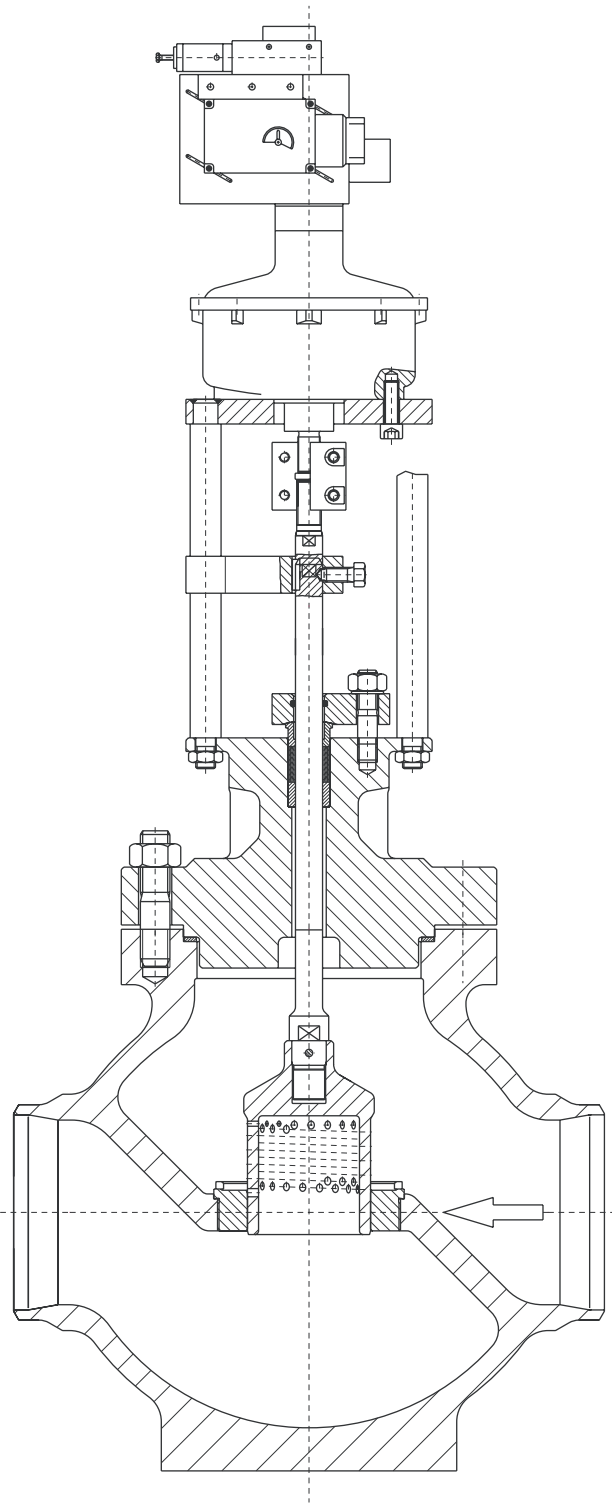


Fig. 9 - Pressure Reducing Valve with FlowAct actuator

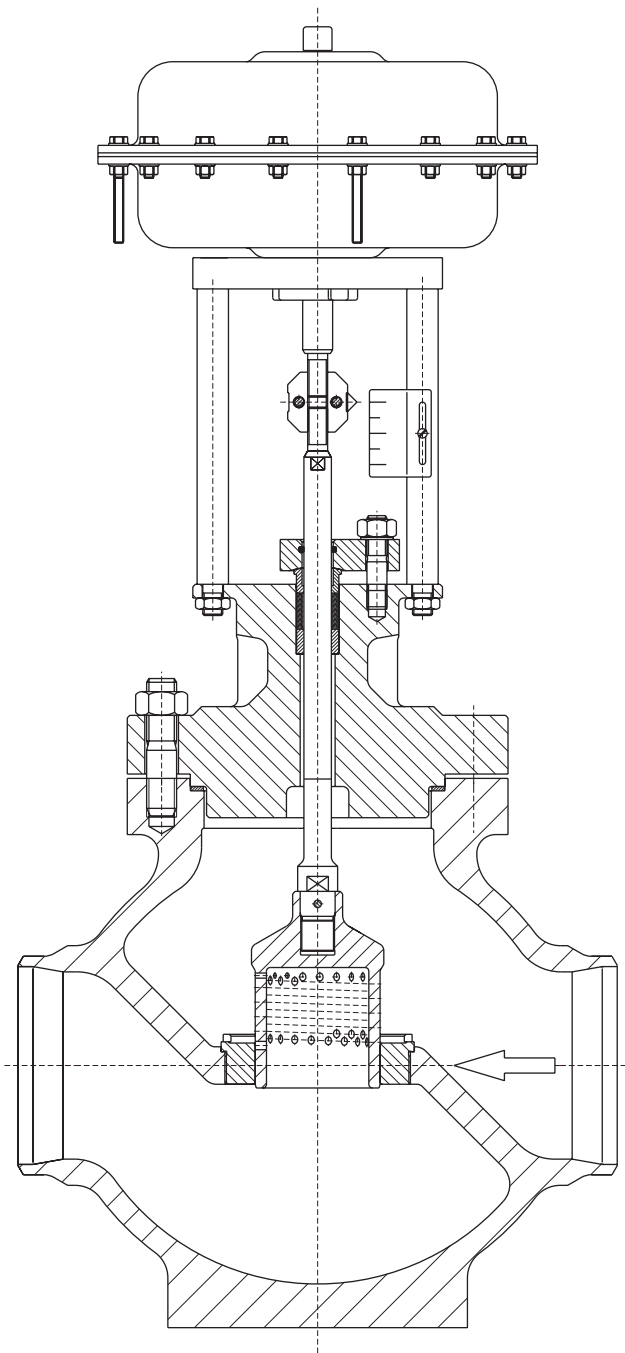


Table 11 - Selection of STI Actuator

Max. admissible difference pressures and technical data for perforated disc, flow direction tends to close, double acting

V-type packing (max. 482 °F / 250 °C)

Actuator size	Supply pressure psig	Active area in ²	Thrust lbs	Max. allowable difference pressure (psi)															
				Seat diameter															
				30	35	40	50	60	70	80	90	100	130	160	170	200	250		
150	72.5	27	39365	914	914	711	421	276	189										
200	72.5	49	70946			914	783	522	377	276	218	174	102	58	58	44	29		
250	72.5	77	110533				914	841	595	450	348	290	160	102	87	58	44		
320	72.5	123	176586					914	914	754	595	464	276						

Graphite packing

Actuator size	Supply pressure psig	Active area in ²	Thrust lbs	Max. allowable difference pressure (psi)																
				Seat diameter																
				30	35	40	50	60	70	80	90	100	130	160	170	200	250			
150	72.5	27	39365	914	580	406	232	160	102											
200	72.5	49	70946		914	914	609	406	290	218	174	131	73	44	44	29	15			
250	72.5	77	110533				914	725	522	392	305	247	145	87	73	58	29			
320	72.5	123	176586					914	870	653	493	392	232							

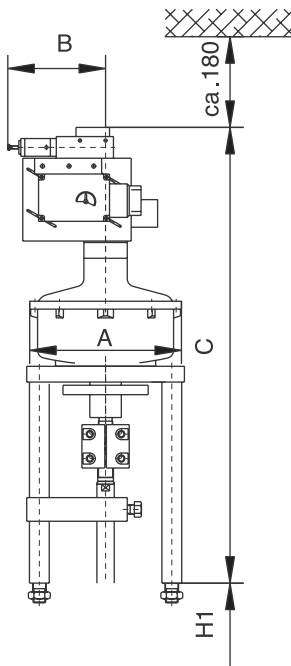


Fig. 10
Typ SC/V 150; 200; 250; 320
without handwheel

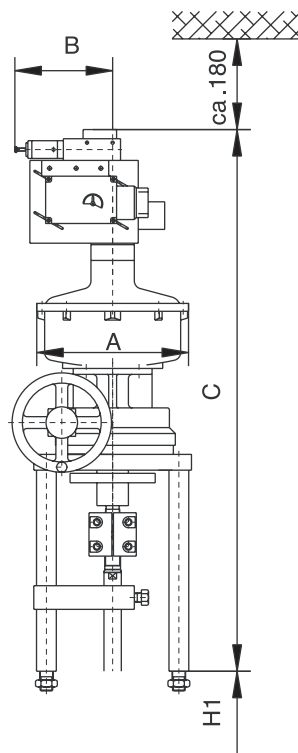


Fig. 11
Typ SC/V 150; 200; 250; 320
with handwheel (SMHV)

Table 12 - STI Pneumatic Actuator

Dimensions and weights

Actuator size	A (in)	B (in)	C (in)	Weight (lbs)
Without handwheel				
150/40	7.7	9.8	30.2	44
200/65	9.8	9.8	35.2	97
200/100	9.8	9.8	36.6	104
200/150	9.8	9.8	42.2	121
250/80	12	9.8	38.2	152
250/100	12	9.8	39.1	163
250/150	12	9.8	43.8	181
320/100	15	9.8	39.2	198
With handwheel				
150/40	7.7	9.8	36.5	73
200/65	9.8	9.8	41.5	126
200/100	9.8	9.8	44.1	137
200/150	9.8	9.8	51.9	154
250/80	12	9.8	46.2	181
250/100	12	9.8	47.1	194
250/150	12	9.8	54.4	232
320/100	15	9.8	47.2	243

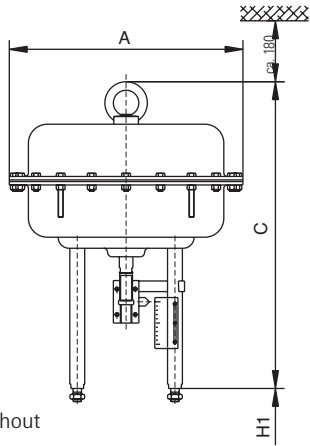


Fig. 13
Type 1500
standard
actuator without
handwheel

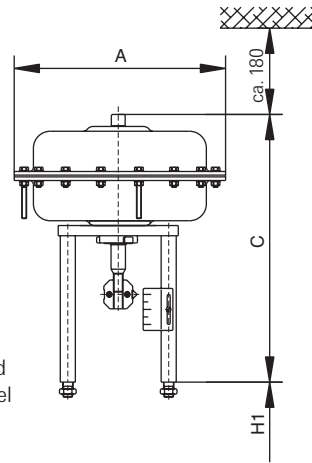


Fig. 12
Type 252/502/700 standard
actuator without handwheel

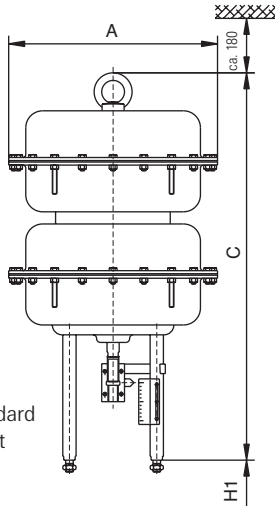


Fig. 14
Type 3000 standard
actuator without
handwheel

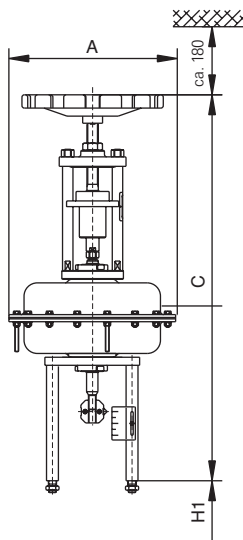


Fig. 15
Type 252/502/700
standard actuator
with top mounted
handwheel (light)

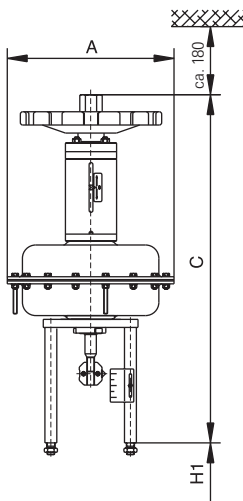


Fig. 16
Type 252/502/700
standard actuator
with top mounted
handwheel (heavy)

Table 13 - Selection of FlowAct actuator

Max. admissible difference pressures (psi) for perforated disc flow direction tends to close

Reverse acting actuators (Spring to close)												
Actuator size	Supply pressure psig	Seat diameter										
		30	35	40	50	60	70	80	90	100	130	160
V-type packing (max. 482 °F / 250 °C)												
252	72.5	711										
502	72.5	914	914	914	638	421	363					
700	72.5	914			914	653	522	392	305	247		
1500	72.5					914	914	870	682	537	247	160
3000	72.5							914	914	914	624	406
Graphite packing												
502	72.5	812	812	638	377	247	174					
700	72.5	914	914	914	682	479	348	261	203	160		
1500	72.5				914	914	914	725	624	508	218	145
3000	72.5							914	914	914	508	334

Direct acting actuators (Spring to open)												
Actuator size	Supply pressure psig	Seat diameter										
		30	35	40	50	60	70	80	90	100	130	160
V-type packing (max. 482 °F / 250 °C)												
252	72.5	566										
502	72.5	914	841	595	348	232	160					
700	72.5		914	856	508	334	232	131	102	87		
1500	72.5			914	914	812	566	276	203	160	87	58
3000	72.5					914	914	696	537	421	247	160
Graphite packing												
502	72.5	653	406	276	160	102	73					
700	72.5	914	783	551	319	218	145	73	58	44		
1500	72.5	914	914	914	914	696	479	203	160	131	73	44
3000	72.5					914	856	638	493	392	218	145

Table 14 - Data of FlowAct actuator

Dimensions and weights					
Actuator size	Dimensions (in)		Weight handwheel (lbs)		
	A	C	without	light	heavy
252	10.4	15.4	30.9		
252	10.4	25.6		41.9	
252	10.4	22.6			44.1
502	13.9	20.1	63.9		
502	13.9	31.3		79.4	
502	13.9	35.4			83.8
700	10.4	23.6	88.2		
700	10.4	32.2			127.9
1500	21.7	34.8	253.6		
3000	21.7	46.9	319.7		

Complete Coding System

171C	100	1	51	8	6	8	D	W	XXX
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Valve type

171 C Internal fitting
(perforated disc)

Valve Code

100 Standard

Flow Direction

1 Flow tends to close
2 Flow tends to open

Material Specification

51 body SA216WCB
60 body SA217WC6

Inlet nominal size

2 1/2" = NPS 2 1/2"
3" = NPS 3"
4" = NPS 4"
5" = NPS 5"
6" = NPS 6"
8" = NPS 8"
10" = NPS 10"
12" = NPS 12"
14" = NPS 14"

Accessories

see TO.095.80.xxxx D E

Pipe Connection

W Welding end acc. to ASME
A Flange acc. to ASME
U Plain ends

Body type

D Straight through type

Outlet nominal size

2 1/2" = NPS 2 1/2"
3" = NPS 3"
4" = NPS 4"
5" = NPS 5"
6" = NPS 6"
8" = NPS 8"
10" = NPS 10"
12" = NPS 12"
14" = NPS 14"

Nominal size body

2 1/2" = NPS 2 1/2"
3" = NPS 3"
4" = NPS 4"
5" = NPS 5"
6" = NPS 6"
8" = NPS 8"
10" = NPS 10"
12" = NPS 12"
14" = NPS 14"