

Motor Valve 8030



GS 3 series 1/2" up to 10"

Motor valve for control and switching of neutral through to highly aggressive media in process engineering, chemical industries and for plant equipment.

- Space saving wafer type construction
- Lowest possible weight (especially in larger sizes)
- Low operation noise level (quiet operation)
- Control of high differential pressures with small actuators
- Fast response time
- Precise control
- High duty cycle gear motor

Technical Information

Design	ANSI flange wafer (self-aligning)		
Nominal size	1/2" up to 10"		
Nominal pressure acc. DIN 2401 for flanges with facing type B	580 psi (fits also to 145-365 psi)	1/2" - 6"	
	1450 psi	1/2" - 3"	
	230 psi	8" - 10"	
Nominal pressure acc. ANSI for flanges acc. ASME B16.5 RF	ANSI 150	1/2" - 10"	
	ANSI 300	1/2" - 6"	
	ANSI 600	1/2" - 3"	
Nominal pressure for "raised face" flanges	10K	1/2" - 2"	
	20K	1/2" - 1 1/2"	
Media temperature	Carbon steel body	14°F up to +572°F	
	Stainless steel body	-76°F up to +662°F (+572°F for SFC)	
Leakage (% of Cv)	Carbon, FUY	SFC	STN 2
	< 0,0001	< 0,0005	< 0,001

Cvs-values see data sheet 8001.



Materials

Body	Stainless steel 316 Ti /318	Carbon steel 1.0570 /1.0619	
Head section	Stainless steel 316 Ti /318		
Packing	PTFE (carbon filled), spring SST 301		
Actuating stem	Stainless steel, roller burnished		
Bellow	Stainless steel 316 Ti		
Fixed plate	Stainless steel 1.4571, plated		STN2-disc
Sliding disc	Standard: special carbon material	SFC-disc	STN2-disc
Coupling ring for discs	Stainless steel 318		

Motor Valve 8030-GS3



Stroking times (sec.):

Driving force	200 lbf	450 lbf	990 lbf
1/2" - 1 1/2"	36	28	15
2" - 3"	47	38	20
4" - 10"	50	40	21

Power consumption (Watt):

24 VAC, 230 VAC	5	6,6	40/28
24 VDC	10	20	30
400 V, 50 Hz	10	10	35
110/120 V AC	5	6,6	28

Technical Information for the motor actuator

Driving force	200 lbf; 450 lbf; 990 lbf
Type of duty (according VDE 0530)	S 1 - 100 % ED (200 lbf; 450 lbf; 990 lbf DC) S 4 - 30 % ED 600c/h (200 lbf; 450 lbf) S 4 - 30 % ED 600c/h (990 lbf)
Power connections	24 V AC, 24 V DC 110/120V AC 230 V AC 400 V 3-phase-AC others on request
Ambient temperature	30°F up to +140°F; -4°F up to 140°F with heating resistor element
Mounting position	free choice, but motor not vertical down
Protection class (Din 40050)	IP 65

Options

Limit switches	max. 2	max. 2	max. 2
Potentiometer	1	1	max. 2*
Positioner, analogue	yes	yes	yes

* One potentiometer is required for positioner option

Optional high speed motors

Driving force	200 lbf				450 lbf		990 lbf	
Stroking speed inch/min.	0,53	0,31	0,20	0,11	0,60	0,30	0,22	1,97
Nominal size	Running time for full stroke (sec.)							
1/2" - 1 1/2"	28	47	74	129	25	50	67	7,5
2" - 3"	37	62	97	171	33	66	88	9,9
4" - 10"	39	66	103	181	35	70	94	10,5

Pressure Ratings

(For temperatures of up to 250°F)

**For temperatures exceeding 250°F:
consider operation limits**

Size	200 lbf	450 lbf	990 lbf
	maximum pressure (psi)		
	carbon/SFC - stainless steel coated		
1/2"	1130	1450	1450
3/4"	985	1450	1450
1"	825	1450	1450
1 1/4"	665	1450	1450
1 1/2"	510	1220	1450
2"	335	800	1450
2 1/2"	275	665	1160
3"	175	420	695
4"	115	260	480
5"	75	175	335
6"	60	130	230
8"	30	80	175
10"	20	50	115

200 lbf	450 lbf	990 lbf
maximum pressure (psi)		
STN2		
800	1450	1450
610	1450	1450
465	1100	1450
335	810	1450
230	550	1045
130	335	770
115	275	640
65	160	375
45	100	230
30	65	160
-	45	115
-	-	-
-	-	-

Pressure limits DIN and ANSI						
	PN16	PN40	PN100	ANSI 150	ANSI 300	ANSI 600
P max.	235	580	1450	235	580	1160

8	0	3	0	/				V	M						M							Z				S
Model								Size		Symbol: "V": Valve "R": Repair kit (sealings)																

6 - 16: Quote only if required.

Ordering example:	8030/100VME1-1M4 - - - - Z2 GS3-control valve with motor actuator, 4", ANSI#150, stainless steel, actuator 450 lbf, 120 V AC, PTFE-Packing, carbon-stainless steel 316 Ti stellite coated, linear characteristics, 2 stroke dependent limit switches
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Pressure - Temperature ratings for GS3 Valves

ANSI #150

Size	Sliding unit: carbon/SFC* - stainless steel, coated maximum diff. pressures for GS3-valves (psi)					
	210 °F	300 °F	400 °F	480 °F	570 °F	660 °F
1/2" - 5"	230	220	190	175	145	115
6"	230	220	190	175	145	115
8"	230	220	190	175	145	115
10"	150	145	140	120	105	100

Sliding unit: carbon - STN2 maximum diff. pressures for GS3-valves (psi)					
210 °F	300 °F	400 °F	480 °F	570 °F	660 °F
230	220	190	175	145	115
230	220	190	160	140	115
-	-	-	-	-	-

Limitation for SFC-sliding discs: 570°F

ANSI #300

Size	Sliding unit: carbon/SFC - stainless steel, coated maximum diff. pressures for GS3-valves (psi)					
	210 °F	300 °F	400 °F	480 °F	570 °F	660 °F
1/2" - 2 1/2"	580	550	510	480	450	435
3"	580	550	510	480	450	435
4"	480	450	420	390	365	350
5"	335	305	290	275	260	245
6"	230	220	205	190	175	175

Sliding unit: STN2 maximum diff. pressures for GS3-valves (psi)					
210 °F	300 °F	400 °F	480 °F	570 °F	660 °F
580	550	510	465	450	420
520	495	480	375	320	275
480	450	375	350	290	245
320	305	245	230	190	160
230	220	190	160	130	115

Limitation for SFC-sliding discs: 570°F

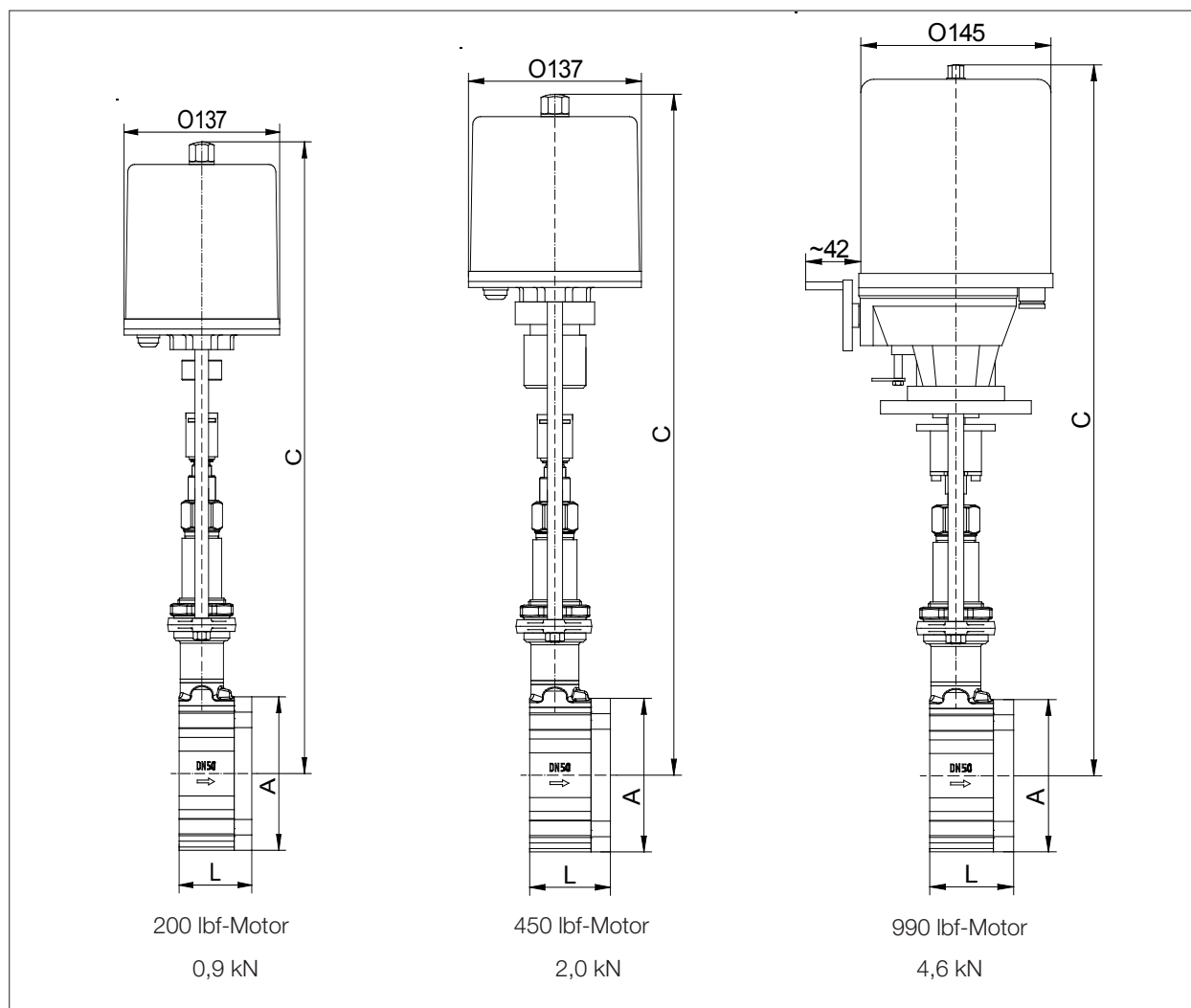
ANSI #600

Size	Sliding unit: carbon/SFC - stainless steel, coated maximum diff. pressures for GS3-valves (psi)					
	210 °F	300 °F	400 °F	480 °F	570 °F	660 °F
1/2" - 1 1/4"	1160	1115	1030	955	915	870
1 1/2"	1160	1115	1030	955	915	870
2"	1160	1115	1030	955	915	870
2 1/2"	1160	1100	1030	955	900	870
3"	695	655	625	580	535	520

Sliding unit: STN2 maximum diff. pressures for GS3-valves (psi)					
210 °F	300 °F	400 °F	480 °F	570 °F	660 °F
1160	1115	1030	955	915	870
1045	1000	945	770	625	535
1115	1060	1015	810	665	580
900	855	810	655	535	465
520	495	480	375	320	275

Limitation for SFC-sliding discs: 570°F

Dimensions and Weights



Size	A	C			L	Weight lbs			Stroke
		200 lbf	450 lbf	990 lbf		200 lbf	450 lbf	990 lbf	
1/2"	2.5	17.7	19.15	20.65	2.2	9.9	10.6	17.2	0.25
3/4"	2.85	17.9	19.35	20.85	2.2	10.3	11	17.6	0.25
1"	3.25	18.1	19.55	21.05	2.2	11	11.7	18.3	0.25
1 1/4"	3.5	18.3	19.75	21.25	2.2	11.4	12.1	18.7	0.25
1 1/2"	3.9	18.5	19.95	21.45	2.2	12.3	13	19.6	0.25
2"	4.55	18.9	20.35	21.85	2.5	15.6	16.3	22.9	0.3
2 1/2"	5.45	19.3	20.75	22.25	2.7	18.9	19.6	26.2	0.3
3"	6	19.5	20.95	22.45	2.75	21.8	22.4	29	0.3
4"	7.25	20.1	21.55	23.05	2.95	28.6	29.3	35.9	0.35
5"	8.35	20.65	22.15	23.6	3.15	33.9	34.5	41.1	0.35
6"	9.55	21.25	22.7	24.2	3.15	-	42.5	49.1	0.35
8"	11.9	22.45	23.9	25.4	3.65	-	79.2	85.8	0.35
10"	14.15	23.45	24.9	26.4	3.8	-	91.1	97.7	0.35

Dimensions in inch

Flow Coefficients - Cv-values

Ordering code		-	A	1	B	6	2	7	C	3	4	8	5	9
Size	Charact.	100 %	63 %	40 %	25 %	20%	16 %	12 %	10 %	6,3 %	2,5 %	2 %	1 %	0,4%
1/2"	(mod.) linear	4.6	3	2	1.6	-	0.82	0.57	0.51	0.3	0.16	0.09	0.05	-
	eq. perc.	2	-	1.3	-	-	-	-	-	0.12	-	-	-	-
3/4"	(mod.) lin.	7.4	-	-	-	-	1.16	-	-	-	-	0.15	-	-
	eq. perc.	3.5	-	-	-	-	-	-	-	-	-	-	-	-
1"	(mod.) linear	13	7.4	4.6	-	-	1.9	-	1.08	0.72	0.3	-	0.16	0.05
	eq. perc.	5.8	-	2.8	-	1.3	-	-	-	-	-	-	-	-
1 1/4"	(mod.) linear	19	12	-	-	-								
	eq. perc.	9.3	-	-	-	-								
1 1/2"	(mod.) lin.	30	19	13	8.1	-								
	eq. perc.	13	9.9	-	3.2	-								
2"	(mod.) linear	52	32	23	14	12								
	eq. perc.	22	14	-	-	-								
2 1/2"	(mod.) linear	60	41	-	17									
	eq. perc.	35	-	-	9.3									
3"	(mod.) linear	107	67	46										
	eq.perc.	56	41	-										
4"	(mod.) linear	179	110	72										
	eq.perc.	89	56	-										
5"	(mod.) linear	275	-	110										
	eq.perc.	135	-	-										
6"	(mod.) linear	392	246	-										
	eq.perc.	171	104	-										
8"	(mod.) linear	650	408	-										
	eq.perc.	-	-	-										
10"	(mod.) linear	1056												
	eq.perc.	-												