



Engineering Master

GX30

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Revised: 22 November 2017

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Revision AM

Design GX Valve Body and Actuator Assembly, Size NPS 1/2 DN15, NPS 3/4 DN20 & NPS 1 DN25

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Pneumatic Spring & Diaphragm Actuator GX30 - A B C E G H J K L M N P Q R S 9A 9C 9D 9E 9F 9G 9K 9N 9P

Electric Actuator GX30 - A B C E F G H J K L M N Q R 9C 9D 9E 9F 9G 9J 9K 9N 9P

Temperatures per ASME B31.3, EN1092-1, EN13445-2, PS59.1:021(C), ES161, EN1515-1, PE0

CWP per ASME B16.34, EN1092-1, PS59.1:021(C), ES161, EN12516-1, JIS B2220



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Item	Parts contained in Item	Find Number
A	Valve Body	1
B	Plug/Stem, Equal Percent	3
C	Seat Ring or Seat Ring Assembly	2
E	Bonnet	4
F	Packing Nut	29
	Packing Set	33, 42 & 43
	Belleville Spring	34
	Anti-extrusion Washer	32
	Packing Washer	44
G	Packing Spacer	30
	Packing Box Ring	31
H	Gasket	5, 47 & 50
	Packing Washer	120
J	Stud Bolt, Continuous Thread	6
	Hex Nut	7
K	Yoke/Casing Assembly	8
L	Upper Casing Assembly	9
	Diaphragm	10
	Diaphragm Plate Assembly	11
	Actuator Spacer	13
	Screw Cap, Hex Head	14, 16 & 17
	Diaphragm Washer	15
	Hex Nut	18
	Actuator Rod	22
	Non-Threaded Cap	72
	Travel Indicator Scale	74
	O-Ring	109
	Rod Adaptor	110
	Stud	111
	Nut	112
	Electric Actuator Spacer	114
M	Hex Nut	28
	Stem Connector, Lower	27
N	Yoke Bushing	19
	O-Ring	20
	Vent	21
	Stem Connector Nut	23
	Stem Connector Bolt	24
	Screw Cap, Hex Head	25
	Travel Indicator	26
	Warning Label	36
	Lubricant, Grease	70
	Lubricant, Anti-Seize/Lub-3	71
	Pipe Plug	78
P	Spring	12
Q	Nameplate	35
	Drive Screw	113
	Wire	115

Item	Parts contained in Item	Find Number
R	Bushing Assembly	41
	Insert	48
	Stem/Bellows Assembly	49
	Nut	51
	Pipe Plug	52
	Warning Tag	73
	Sealant	79
	Bushing	93
	Thrust Ring	94
	Liner	95
	Washer	98
S	Drive Screw	56
	Handwheel	76
T	Handjack Body	53
	Handjack Lever	54
	Operating Nut	55
	Washer, Drive Screw	57
	Retaining Ring, Extension	58 & 62
	Thrust Bearing	59
	Pin Pivot	60
	Bushing	61
	Lever Spacer	63
	Screw Cap, Hex Head	64 & 66
	Stud Bolt, Continuous Thread	68
	Lubricant, Grease	70
	Lubricant Fitting, Straight	75
	Hex Nut, Lock	77
U	Travel Stop Assembly	99
	Hex Nut	28
	Hex Nut	69
	Lubricant, Grease	70
	Bracket	85
	Lever	86
	Shaft	87
	Retainer Ring	88
	Cap Screw	89
	Stud	92
	Travel Stop Warning Tag	101
V	Protection Plate	91
	Cap Screw	96
	Warning Label	97



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Item	Parts contained in Item
9A	Actuator Diaphragm Operating Pressure Air Supply Opens & Closes Valve
9C	Hydro Test per FGS 4L1
9D	Seat Leak Test per FGS 4L5
9E	Plug & Trim Style (Characteristic)
9F	Flow Cv/Kv
9G	Remove Lower Portion of Warning Tag
9H	Travel Stop Style
9J	Maximum Allowable Thrust
9K	Side Mounted Handwheel Orientation Position Per Drawing GE52353
9N	NACE Indicator
9P	Reverse Flow Arrow on Body per GG03639



Design GX Valve Body and Actuator Assembly, Size NPS 1/2 DN15, NPS 3/4 DN20 & NPS 1 DN25

Item 9N – NACE Service Indicator

NACE Service Metallurgical Requirements Indicator	NACE Indicator	9N
Non-NACE	N/A	N
NACE MR0175-2002	1	1
NACE MR0103	2	2
NACE MR0175-2003	3	3
NACE MR0175/ISO 15156	4	4

Item A – Valve Body

Standard Face to Face Dimension

Body Material	End Connection Face to Face	Rating	CWP		Process Temperature		Body Size	NACE Indicator	A
			PSI	BAR	°F	°C			
WCC & 1.0619	RF (ASME B16.5) ANSI/ISA-75.08.01	Class 150	290	20	-20+800	-29+427	NPS 1/2 (DN15)	1,2,3,4	1
							NPS 3/4 (DN20)	1,2,3,4	2
							NPS 1 (DN25)	1,2,3,4	3
		Class 300	750	51.7	-20+800	-29+427	NPS 1/2 (DN15)	1,2,3,4	4
							NPS 3/4 (DN20)	1,2,3,4	5
							NPS 1 (DN25)	1,2,3,4	6
	RTJ (ASME B16.5)	Class 150	290	20	-20+800	-29+427	NPS 1 (DN25)	1,2,3,4	68
		Class 300	750	51.7	-20+800	-29+427	NPS 1 (DN25)	1,2,3,4	69
	JPI (ASME B16.5) ANSI/ISA-75.08.01	Class 150	290	20	-20+800	-29+427	NPS 1/2 (DN15)	1,2,3,4	70
							NPS 3/4 (DN20)	1,2,3,4	71
							NPS 1 (DN25)	1,2,3,4	72
		Class 300	750	51.7	-20+800	-29+427	NPS 1/2 (DN15)	1,2,3,4	73
	RF (EN1092-1/21 B) EN558						NPS 3/4 (DN20)	1,2,3,4	74
							NPS 1 (DN25)	1,2,3,4	75
	Groove (EN1092-1/21 D) EN558	PN10-40	N/A	40	-20+752	-29+400	DN15	1,2,3,4	7
							DN20	1,2,3,4	8
							DN25	1,2,3,4	9
	Spigot (EN1092-1/21 E) EN558	PN10-40	N/A	40	-20+752	-29+400	DN15	1,2,3,4	10
							DN20	1,2,3,4	11
							DN25	1,2,3,4	12
	Recess (EN1092-1/21 F) EN558	PN10-40	N/A	40	-20+752	-29+400	DN15	1,2,3,4	13
							DN20	1,2,3,4	14
							DN25	1,2,3,4	15
	JIS (JIS B2220) JIS B2002	PN10-40	N/A	40	-20+752	-29+400	DN15	1,2,3,4	96
							DN20	1,2,3,4	97
							DN25	1,2,3,4	98
		JIS 10K	203	14	-20+572	-29+300	NPS 1/2 (DN15)	1,2,3,4	76
							NPS 3/4 (DN20)	1,2,3,4	77
							NPS 1 (DN25)	1,2,3,4	78
		JIS 20K	493	34	-20+797	-29+425	NPS 1/2 (DN15)	1,2,3,4	79
							NPS 3/4 (DN20)	1,2,3,4	80
							NPS 1 (DN25)	1,2,3,4	81

Design GX Valve Body and Actuator Assembly, Size NPS 1/2 DN15, NPS 3/4 DN20 & NPS 1 DN25

Item A – Valve Body (Continued)

Body Material	End Connection Face to Face	Rating	CWP		Process Temperature		Body Size	NACE Indicator	A
			PSI	BAR	°F	°C			
LCC	RF (ASME B16.5) ANSI/ISA-75.08.01	Class 150	290	20	-50+650	-46+343	NPS 1/2 (DN15)	1,2,3,4	16
							NPS 3/4 (DN20)	1,2,3,4	17
							NPS 1 (DN25)	1,2,3,4	18
		Class 300	750	51.7	-50+650	-46+343	NPS 1/2 (DN15)	1,2,3,4	19
							NPS 3/4 (DN20)	1,2,3,4	20
							NPS 1 (DN25)	1,2,3,4	21
	RF (EN1092-1/21 B) EN558	PN10-40	N/A	40	-50+650	-46+343	DN15	1,2,3,4	22
							DN20	1,2,3,4	23
							DN25	1,2,3,4	24
	Groove (EN1092-1/21 D) EN558	PN10-40	N/A	40	-50+650	-46+343	DN15	1,2,3,4	25
							DN20	1,2,3,4	26
							DN25	1,2,3,4	27
	Spigot (EN1092-1/21 E) EN558	PN10-40	N/A	40	-50+650	-46+343	DN15	1,2,3,4	28
							DN20	1,2,3,4	29
							DN25	1,2,3,4	30
	Recess (EN1092-1/21 F) EN558	PN10-40	N/A	40	-50+650	-46+343	DN15	1,2,3,4	99
							DN20	1,2,3,4	100
							DN25	1,2,3,4	101
CF3M & 1.4409	RF (ASME B16.5) ANSI/ISA-75.08.01	Class 150	275	18.9	-425+850	-254+454	NPS 1/2 (DN15)	1,2,3,4	31
							NPS 3/4 (DN20)	1,2,3,4	32
							NPS 1 (DN25)	1,2,3,4	33
		Class 300	720	49.6	-425+850	-254+454	NPS 1/2 (DN15)	1,2,3,4	34
							NPS 3/4 (DN20)	1,2,3,4	35
							NPS 1 (DN25)	1,2,3,4	36
	RTJ (ASME B16.5)	Class 150	275	18.9	-425+850	-254+454	NPS 1 (DN25)	1,2,3,4	82
		Class 300	720	49.6	-425+850	-254+454	NPS 1 (DN25)	1,2,3,4	83
	JPI (ASME B16.5) ANSI/ISA-75.08.01	Class 150	275	18.9	-425+850	-254+454	NPS 1/2 (DN15)	1,2,3,4	84
							NPS 3/4 (DN20)	1,2,3,4	85
							NPS 1 (DN25)	1,2,3,4	86
		Class 300	720	49.6	-425+850	-254+454	NPS 1/2 (DN15)	1,2,3,4	87
	RF (EN1092-1/21 B) EN558	PN10-40	N/A	40	-321+932	-196+500	DN 15	1,2,3,4	37
							DN 20	1,2,3,4	38
							DN25	1,2,3,4	39
	Groove (EN1092-1/21 D) EN558	PN10-40	N/A	40	-321+932	-196+500	DN15	1,2,3,4	40
							DN20	1,2,3,4	41
							DN25	1,2,3,4	42
	Spigot (EN1092-1/21 E) EN558	PN10-40	N/A	40	-321+932	-196+500	DN15	1,2,3,4	43
							DN20	1,2,3,4	44
							DN25	1,2,3,4	45
	Recess (EN1092-1/21 F) EN558	PN10-40	N/A	40	-321+932	-196+500	DN15	1,2,3,4	102
							DN20	1,2,3,4	103
							DN25	1,2,3,4	104
	JIS (JIS B2220) JIS B2002	JIS 10K	203	14	-50.8+572	-46+300	NPS 1/2 (DN15)	1,2,3,4	90
							NPS 3/4 (DN20)	1,2,3,4	91
							NPS 1 (DN25)	1,2,3,4	92
		JIS 20K	493	34	-50.8+797	-46+425	NPS 1/2 (DN15)	1,2,3,4	93
							NPS 3/4 (DN20)	1,2,3,4	94
							NPS 1 (DN25)	1,2,3,4	95



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Item A – Valve Body (Continued)

Body Size NPS 1 (DN 25)

Standard Face to Face Dimension

Body	End Connection Face to Face	Rating	CWP		Process Temperature		NACE Indicator	A
			PSI	BAR	°F	°C		
CD3MN (Duplex SST)	RF (ASME B16.5) ANSI/ISA-75.08.01	Class 150	290	20	-60+600	-51+316	N/A	46
		Class 300	750	51.7	-60+600	-51+316	N/A	47
	RF (EN1092-1/21 B) EN558	PN 10-40	N/A	40	+14+600	-10+316	N/A	48
CF3 (304L SST)	RF (ASME B16.5) ANSI/ISA-75.08.01	Class 150	275	18.6	-425+800	-254+427	1,2,3	49
		Class 300	720	49.6	-425+800	-254+427	1,2,3	50
	RF (EN1092-1/21 B) EN558	PN10-40	N/A	36.8	+14+800	-10+427	1,2,3	51
CN7M & CN3MCU (Alloy 20)	RF (ASME B16.5) ANSI/ISA-75.08.01	Class 150	230	15.8	-325+600	-198+316	1,2	52
		Class 300	600	41.4	-325+600	-198+316	1,2	53
	RF (EN1092-1/21 B) EN558	PN 10-40	N/A	32.7	+14+600	-10+316	1,2	54
CW2M (Hast C)	RF (ASME B16.5) ANSI/ISA-75.08.01	Class 150	290	20	-325+1000	-198+538	1,2,3,4	55
		Class 300	750	51.7	-325+1000	-198+538	1,2,3,4	56
	RF (EN1092-1/21 B) EN558	PN 10-40	N/A	40	+14+1000	-10+538	1,2,3,4	57
M35-2 (Monel)	RF (ASME B16.5) ANSI/ISA-75.08.01	Class 150	270	18.6	-325+800	-198+427	1,2	58
		Class 300	700	48.2	-325+800	-198+427	1,2	59
N7M (Hast B2)	RF (ASME B16.5) ANSI/ISA-75.08.01	Class 150	290	20	-325+1000	-198+538	N/A	60
		Class 300	750	51.7	-325+1000	-198+538	N/A	61

Long Face to Face Dimension

Body Material	End Connection Face to Face	Rating	CWP		Process Temperature		NACE Indicator	A
			PSI	BAR	°F	°C		
WCC	RF (ASME B16.5) ANSI/ISA-75.08.07	Class 150	290	20	-20+800	-29+427	N/A	62
		Class 300	750	51.7	-20+800	-29+427	N/A	63
CF3M	RF (ASME B16.5) ANSI/ISA-75.08.07	Class 150	275	18.9	-425+850	-254+454	1,2,3	64
		Class 300	720	49.6	-425+850	-254+454	1,2,3	65
CW2M (Hast C)	RF (ASME B16.5) ANSI/ISA-75.08.07	Class 150	290	20	-325+1000	-198+538	1,2,3,4	66
		Class 300	750	51.7	-325+1000	-198+538	1,2,3,4	67



Design GX Valve Body and Actuator Assembly, Size NPS 1/2 DN15, NPS 3/4 DN20 & NPS 1 DN25

Item B – Valve Plug/Stem
Item C – Seat Ring
Item 9E – Plug and Trim Style
Item 9J – Maximum Allowable Thrust (Use only with Electric Actuator)

Plain Bonnet

Process temperature limits for PTFE Seat rings: -73+204 °C (-100+400 °F), other construction: N/A

Body Size	Available Port Size
NPS 1/2 (DN 15)	4.8-9.5mm
NPS 3/4 (DN 20)	4.8-14mm
NPS 1 (DN 25)	4.8-22mm

LCC, WCC/1.0619 & CF3M/1.4409 Body Material

					Max Allow Thrust	Seat Ring or Cage			NACE Ind	B	C	9E	9J		
Port	Plug Style	Travel	Valve Plug	Stem			Characteristic								
4.8mm	Unbal M-Flow Flat	20mm	R31233	316L SST	17000 N	CF3M	Linear	1°8’	N/A	1	N	3	1		
								2°15’	N/A	2	1	4	1		
								4°39’	N/A	3	1	5	1		
				S20910	17000 N	316L SST/ HF Seat	Linear	9°30’	N/A	4	1	6	1		
								1°8’	1,2,3,4	62	N	3	1		
								2°15’	1,2,3,4	63	2	4	1		
				N06022	7600 N	CW2M	Linear	4°39’	1,2,3,4	64	2	5	1		
								9°30’	1,2,3,4	65	2	6	1		
								1°8’	1,2,3,4	6	N	3	2		
					2°15’	1,2,3,4	7	3	4	2					
					4°39’	1,2,3,4	8	3	5	2					
					9°30’	1,2,3,4	9	3	6	2					
9.5mm	Unbal Full Capacity	20mm	S31603	316L SST	17000 N	CF3M	Equal Percent Linear	N/A N/A	10 11	4 4	1 2	1 1			
			S31603/ HF Seat	S20910	17000 N	CF3M/ HF Seat	Equal Percent Linear	1,2,3,4 1,2,3,4	12 13	5 5	1 2	1 1			
								N06022	N06022	7600 N	CW2M	Equal Percent Linear	1,2,3,4 1,2,3,4	14 15	6 6
			Unbal Reduced Capacity		S31603	316L SST	17000 N						CF3M	Equal Percent	N/A
					S31603/HF Seat	S20910	17000 N	CF3M/ HF Seat	Equal Percent	1,2,3,4	17	5	1	1	
					N06022	N06022	7600 N	CW2M	Equal Percent	1,2,3,4	18	6	1	2	
	14mm	Unbal Full Capacity	20mm	S31603	316L SST	17000 N	CF3M	Equal Percent Linear	N/A N/A	19 20	7 7	1 2	1 1		
				S31603/HF Seat	S20910	17000 N	CF3M/ HF Seat	Equal Percent Linear	1,2,3,4 1,2,3,4	21 22	8 8	1 2	1 1		
									N06022	N06022	7600 N	CW2M	Equal Percent Linear	1,2,3,4 1,2,3,4	23 24
22mm				Unbal Full Capacity	20mm	S31603	316L SST	17000 N						CF3M	Equal Percent Linear
									CF3M/ PTFE Seat	Equal Percent Linear	N/A N/A	25 26	11 11	1 2	1 1
						S31603/HF Seat	S20910	17000 N	CF3M/ HF Seat	Equal Percent Linear	1,2,3,4 1,2,3,4	27 28	12 12	1 2	1 1
	S17400	Cavitrol III	1,2,3,4						61	31	7	1			
	N06022	N06022	7600 N			CW2M	Equal Percent Linear	1,2,3,4 1,2,3,4	29 30	13 13	1 2	2 2			
						CW2M/ PTFE Seat	Equal Percent Linear	N/A N/A	29 30	14 14	1 2	2 2			



**Design GX Valve Body and Actuator Assembly,
Size NPS 1/2 DN15, NPS 3/4 DN20 & NPS 1 DN25**

Item B – Valve Plug/Stem (Continued)**Item C – Seat Ring** (Continued)**Item 9E – Plug and Trim Style** (Continued)**Item 9J – Maximum Allowable Thrust** (Use only with Electric Actuator) (Continued)

Plain Bonnet

Process temperature limits for PTFE Seat rings: -73+204 °C (-100+400 °F), other construction: N/A

Body Size NPS 1 (DN25)

CD3MN Body Material

					Max Allow					NACE				
Port	Plug Style	Travel	Valve Plug	Stem	Thrust	Seat Ring	Characteristic		Ind	B	C	9E	9J	
4.8mm	Unbal M-Flow Flat	20mm	R31233	S31803	7600 N	CD3MN	Linear	1°8'	N/A	31	N	3	2	
								2°15'	N/A	32	15	4	2	
								4°39'	N/A	33	15	5	2	
								9°30'	N/A	34	15	6	2	
9.5mm	Unbal Full Cap	20mm	S31803	S31803	7600 N	CD3MN	Equal Percent	N/A	35	16	1	2		
	Reduced Cap	20mm	S31803	S31803	7600 N	CD3MN	Linear	N/A	36	16	2	2		
14mm	Unbalanced Full Capacity	20mm	S31803	S31803	7600 N	CD3MN	Equal Percent	N/A	38	17	1	2		
							Linear	N/A	39	17	2	2		
22mm	Unbalanced Full Capacity	20mm	S31803	S31803	7600 N	CD3MN	Equal Percent	N/A	40	18	1	2		
							Linear	N/A	41	18	2	2		
						CD3MN/ PTFE Seat	Equal Percent	N/A	40	19	1	2		
							Linear	N/A	41	19	2	2		

CF3 Body Material

					Max Allow Thrust				NACE Ind	B	C	9E	9J
Port	Plug Style	Travel	Valve Plug	Stem		Seat Ring	Characteristic						
4.8mm	Unbalanced M-Flow Flat	20mm	R31233	S31803	7600 N	304L	Linear	1°8'	N/A	42	N	3	2
								2°15'	N/A	43	20	4	2
								4°39'	N/A	44	20	5	2
								9°30'	N/A	45	20	6	2
9.5mm	Unbalanced Full Capacity	20mm	S30403	S31803	7600 N	304L	Equal Percent Linear	1	1	46	21	1	2
	Unbalanced Reduced Cap	20mm	S30403	S31803	7600 N	304L	Equal Percent	1	1	47	21	2	2
14mm	Unbalanced Full Capacity	20mm	S30403	S31803	7600 N	304L	Equal Percent Linear	1	1	49	22	1	2
22mm	Unbalanced Full Capacity	20mm	S30403	S31803	7600 N	304L	Equal Percent Linear	1	1	51	23	1	2
						304L/ PTFE Seat	Equal Percent Linear	N/A	N/A	51	24	1	2
										52	24	2	2



Design GX Valve Body and Actuator Assembly, Size NPS 1/2 DN15, NPS 3/4 DN20 & NPS 1 DN25

Item B – Valve Plug/Stem (Continued)

Item C – Seat Ring (Continued)

Item 9E – Plug and Trim Style (Continued)

Item 9J – Maximum Allowable Thrust (Use only with Electric Actuator) (Continued)

Plain Bonnet

Process temperature limits for PTFE Seat rings: -73+204 °C (-100+400 °F), other construction: N/A

Body Size DN25

CN7M & CN3MCU, CW2M Body Material

					Max Allow Thrust				NACE Ind	B	C	9E	9J
Port	Plug Style	Travel	Valve Plug	Stem		Seat Ring	Characteristic						
4.8mm	Unbalanced M-Flow Flat	20mm	R31233	N06022	7600 N	CW2M	Linear	1°8'	N/A	6	N	3	2
								2°15'	N/A	7	3	4	2
								4°39'	N/A	8	3	5	2
								9°30'	N/A	9	3	6	2
9.5mm	Unbalanced Full Capacity	20mm	N06022	N06022	7600 N	CW2M	Equal Percent Linear	1,2,3,4 1,2,3,4	14 15	6 6	1 2	2 2	
	Unbalanced Reduced Cap	20mm	N06022	N06022	7600 N	CW2M	Equal Percent	1,2,3,4	18	6	1	2	
14mm	Unbalanced Full Capacity	20mm	N06022	N06022	7600 N	CW2M	Equal Percent Linear	1,2,3,4 1,2,3,4	23 24	9 9	1 2	2 2	
22mm	Unbalanced Full Capacity	20mm	N06022	N06022	7600 N	CW2M	Equal Percent Linear	1,2,3,4 1,2,3,4	29 30	13 13	1 2	2 2	
						CW2M/ PTFE Seat	Equal Percent Linear	N/A N/A	29 30	14 14	1 2	2 2	

M35-2 Body Material

Port	Plug Style	Travel	Valve Plug	Stem	Max Allow Thrust	Seat Ring	Characteristic	NACE Ind	B	C	9E	9J
9.5mm	Unbalanced Full Capacity	20mm	N05500	N05500	17000 N	N05500	Equal Percent	1	53	25	1	1
	Unbalanced Reduced Cap	20mm	N05500	N05500	17000 N	N05500	Equal Percent	1	54	25	1	1
14mm	Unbalanced Full Capacity	20mm	N05500	N05500	17000 N	N05500	Equal Percent	1	55	26	1	1
22mm	Unbalanced Full Capacity	20mm	N05500	N05500	17000 N	N05500	Equal Percent	1	56	27	1	1

N7M Body Material

Port	Plug Style	Travel	Valve Plug	Stem	Max Allow Thrust	Seat Ring	Characteristic	NACE Ind	B	C	9E	9J
9.5mm	Unbalanced Full Capacity	20mm	N10675	N10675	7600 N	N7M	Equal Percent	N/A	57	28	1	2
	Unbalanced Reduced Cap	20mm	N10675	N10675	7600 N	N7M	Equal Percent	N/A	58	28	1	2
14mm	Unbalanced Full Capacity	20mm	N10675	N10675	7600 N	N7M	Equal Percent	N/A	59	29	1	2
22mm	Unbalanced Full Capacity	20mm	N10675	N10675	7600 N	N7M	Equal Percent	N/A	60	30	1	2



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Design GX Valve Body and Actuator Assembly, Size NPS 1/2 DN15, NPS 3/4 DN20 & NPS 1 DN25

Item B – Valve Plug/Stem (Continued)**Item C – Seat Ring** (Continued)**Item 9E – Plug and Trim Style** (Continued)**Item 9J – Maximum Allowable Thrust** (Use only with Electric Actuator) (Continued)

Extension Bonnet

Body Size	Available Port Size
DN 15	4.8-9.5mm
DN 20	4.8-14mm
DN 25	4.8-22mm

LCC, WCC/1.0619 & CF3M/1.4409 Body Material

ECC, WCC/1.0017 & G15M/14409 Body Material															
Port	Plug Style	Travel	Valve Plug	Stem	Max Allow Thrust	Seat Ring	Characteristic		NACE Ind	B	C	9E	9J		
4.8mm	Unbalanced M-Flow Flat	20mm	R31233	316L SST	11400 N	CF3M	Linear	1°8'	N/A	1	N	3	3		
								2°15'	N/A	2	1	4	3		
								4°39'	N/A	3	1	5	3		
								9°30'	N/A	4	1	6	3		
			S20910	11400 N	316L SST/ HF Seat	Linear	1°8'	1,2,3,4	62	N	3	3			
							2°15'	1,2,3,4	63	2	4	3			
							4°39'	1,2,3,4	64	2	5	3			
							9°30'	1,2,3,4	65	2	6	3			
9.5mm	Unbalanced Full Capacity	20mm	S31603	316L SST	11400 N	CF3M	Equal Percent Linear	N/A	10	4	1	3			
								N/A	11	4	2	3			
			S31603/ HF Seat	S20910	11400 N	CF3M/ HF Seat	Equal Percent Linear	1,2,3,4	12	5	1	3			
								1,2,3,4	13	5	2	3			
	Unbalanced Reduced Capacity	20mm	S31603	316L SST	11400 N	CF3M	Equal Percent	N/A	16	4	1	3			
			S31603/ HF Seat	S20910	11400 N	CF3M/ HF Seat	Equal Percent	1,2,3,4	17	5	2	3			
			14mm	Unbalanced Full Capacity	20mm	S31603	316L SST	11400 N	CF3M	Equal Percent Linear	N/A	19	7	1	3
											N/A	20	7	2	3
S31603/ HF Seat	S20910	11400 N				CF3M/ HF Seat	Equal Percent Linear	1,2,3,4	21	8	1	3			
								1,2,3,4	22	8	2	3			
22mm	Unbalanced Full Capacity	20mm	S31603	316L SST	11400 N	CF3M	Equal Percent Linear	N/A	25	10	1	3			
								N/A	26	10	2	3			
				316L SST	11400 N	CF3M/ PTFE Seat	Equal Percent Linear	N/A	25	11	1	3			
							N/A	26	11	2	3				
			S31603/ HF Seat	S20910	11400 N	CF3M/ HF Seat	Equal Percent Linear	1,2,3,4	27	12	1	3			
								1,2,3,4	28	12	2	3			



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Design GX Valve Body and Actuator Assembly, Size NPS 1/2 DN15, NPS 3/4 DN20 & NPS 1 DN25

Item B – Valve Plug/Stem (Continued)**Item C – Seat Ring** (Continued)**Item 9E – Plug and Trim Style** (Continued)**Item 9J – Maximum Allowable Thrust** (Use only with Electric Actuator) (Continued)

Bellows Bonnet

Process temperature limits for PTFE Seat rings: -73+204 °C (-100+400 °F), other construction: N/A

Body Size	Available Port Size
DN 15	4.8-9.5mm
DN 20	4.8-14mm
DN 25	4.8-22mm

LCC, WCC/1.0619 & CF3M/1.4409 Body Material

					Max Allow Thrust				NACE Ind	B	C	9E	9J
Port	Plug Style	Travel	Valve Plug	Stem		Seat Ring	Characteristic						
4.8mm	Unbalanced M-Flow Flat	20mm	R31233	316L SST	11400 N	CF3M	Linear	1°8'	N/A	1	N	3	3
								2°15'	N/A	2	1	4	3
								4°39'	N/A	3	1	5	3
								9°30'	N/A	4	1	6	3
			S20910	11400 N	316L SST/ HF Seat	Linear	1°8'	1,2,3,4	62	N	3	3	
							2°15'	1,2,3,4	63	2	4	3	
							4°39'	1,2,3,4	64	2	5	3	
							9°30'	1,2,3,4	65	2	6	3	
			N06022	6700 N	CW2M	Linear	1°8'	1,2,3,4	6	N	3	4	
							2°15'	1,2,3,4	7	3	4	4	
							4°39'	1,2,3,4	8	3	5	4	
							9°30'	1,2,3,4	9	3	6	4	
9.5mm	Unbalanced Full Capacity	20mm	S31603	316L SST	11400 N	CF3M	Equal Percent Linear	N/A	10	4	1	3	
								N/A	11	4	2	3	
			S31603/ HF Seat	S20910	11400 N	CF3M/ HF Seat	Equal Percent Linear	1,2,3,4	12	5	1	3	
								1,2,3,4	13	5	2	3	
			N06022	N06022	6700 N	CW2M	Equal Percent Linear	1,2,3,4	14	6	1	4	
								1,2,3,4	15	6	2	4	
	Unbalanced Reduced Cap	20mm	S31603	316L SST	11400 N	CF3M	Equal Percent	N/A	16	4	1	3	
								S31603/ HF Seat	S20910	11400 N	CF3M/ HF Seat	Equal Percent	1,2,3,4
14mm	Unbalanced Full Capacity	20mm	S31603	316L SST	11400 N	CF3M	Equal Percent Linear	N/A	19	7	1	3	
								N/A	20	7	2	3	
			S31603/ HF Seat	S20910	11400 N	CF3M/ HF Seat	Equal Percent Linear	1,2,3,4	21	8	1	3	
								1,2,3,4	22	8	2	3	
22mm	Unbalanced Full Capacity	20mm	S31603	316L SST	11400 N	CF3M	Equal Percent Linear	N/A	25	10	1	3	
								N/A	26	10	2	3	
						CF3M/ PTFE Seat	Equal Percent Linear	N/A	25	11	1	3	
								N/A	26	11	2	3	
			S31603/ HF Seat	S20910	11400 N	CF3M/ HF Seat	Equal Percent Linear	1,2,3,4	27	12	1	3	
								1,2,3,4	28	12	2	3	
			N06022	N06022	6700 N	CW2M	Equal Percent Linear	1,2,3,4	29	13	1	4	
								1,2,3,4	30	13	2	4	
CW2M/ PTFE Seat	Equal Percent Linear	N/A				29	14	1	4				
		N/A				30	14	2	4				



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Design GX Valve Body and Actuator Assembly, Size NPS 1/2 DN15, NPS 3/4 DN20 & NPS 1 DN25

Item B – Valve Plug/Stem (Continued)
Item C – Seat Ring (Continued)
Item 9E – Plug and Trim Style (Continued)
Item 9J – Maximum Allowable Thrust (Use only with Electric Actuator) (Continued)

Bellows Bonnet

Process temperature limits for PTFE Seat rings: -73+204 °C (-100+400 °F), other construction: N/A

Body Size DN25

CW2M Body Material

					Max Allow Thrust				NACE Ind	B	C	9E	9J
Port	Plug Style	Travel	Valve Plug	Stem		Seat Ring	Characteristic						
4.8mm	Unbalanced M-Flow Flat	20mm	R31233	N06022	6700 N	CW2M	Linear	1°8'	1,2,3,4	6	N	3	4
								2°15'	1,2,3,4	7	3	4	4
								4°39'	1,2,3,4	8	3	5	4
								9°30'	1,2,3,4	9	3	6	4
9.5mm	Unbalanced Full Capacity	20mm	N06022	N06022	6700 N	CW2M	Equal Percent Linear	1,2,3,4	14	6	1	4	
								1,2,3,4	15	6	2	4	
	Unbalanced Reduced Cap	20mm	N06022	N06022	6700 N	CW2M	Equal Percent	1,2,3,4	18	6	1	4	
14mm	Unbalanced Full Capacity	20mm	N06022	N06022	6700 N	CW2M	Equal Percent Linear	1,2,3,4	23	9	1	4	
								1,2,3,4	24	9	2	4	
22mm	Unbalanced Full Capacity	20mm	N06022	N06022	6700 N	CW2M	Equal Percent Linear	1,2,3,4	29	13	1	4	
								1,2,3,4	30	13	2	4	
						CW2M/PTFE Seat	Equal Percent Linear	N/A	29	14	1	4	
								N/A	30	14	2	4	

Item E – Bonnet

Bonnet Style	Body Size	Body Material	NACE Indicator	E
Plain	NPS 1/2-3/4 (DN15-20)	WCC/1.0619	1,2,3,4	1
		LCC	1,2,3,4	2
		CF3M/1.4409	1,2,3,4	3
	NPS 1 (DN25)	WCC/1.0619	1,2,3,4	1
		LCC	1,2,3,4	2
		CF3M/1.4409	1,2,3,4	3
		CD3MN	N/A	4
		CN7M & CN3MCU	1,2	5
		CF3	1,2,3	6
		CW2M	1,2,3,4	7
		N04400	1,2,3,4	8
		N7M	N/A	9
Bellows	NPS 1/2-3/4 (DN15-20)	WCC/1.0619	1,2,3,4	10
		LCC	1,2,3,4	11
		CF3M/1.4409	1,2,3,4	12
	NPS 1 (DN25)	WCC/1.0619	1,2,3,4	10
		LCC	1,2,3,4	11
		CF3M/1.4409	1,2,3,4	12
		CW2M	1,2,3,4	13
Extension	NPS 1/2-1 (DN15-25)	WCC/1.0619	1,2,3,4	14
		LCC	1,2,3,4	15
		CF3M/1.4409	1,2,3,4	16



Design GX Valve Body and Actuator Assembly, Size NPS 1/2 DN15, NPS 3/4 DN20 & NPS 1 DN25

Item F – Packing and Packing Parts

* Consult PS sheet 51.1.GX(K) Low Temperature GX Application Guidelines

Live Load Packing	Bonnet Style	Process Temperature Limits for Packing		NACE Indicator	F
		°F	°C		
PTFE (NACE not exposed)	Plain	-50+450	-45+232	1,2,3,4	1
	Bellows & Extension	-50+800	-46+427	1,2,3,4	1
	Cryogenic Extension	*	*	1,2,3,4	1
PTFE/Glass Oxygen (NACE not exposed)	Plain	-50+450	-45+232	1,2,3,4	2
Graphite ULF (NACE not exposed)	Plain	-325+700	-198+371	1,2,3,4	3
	Bellows & Extension	-325+1050	-198+566	1,2,3,4	3
	Cryogenic Extension	-325+1050	-198+566	1,2,3,4	3
ISO-Seal PTFE (NACE not exposed)	Plain	-325+450	-198+232	1,2,3,4	4
	Bellows & Extension	-325+800	-198+427	1,2,3,4	4
	Cryogenic Extension	-325+800	-198+427	1,2,3,4	4

Item G – Packing Box Ring and Spacer

Bonnet Style	Live Load Packing	Stem Material	NACE Indicator	G
Plain	PTFE	316L SST & S20910	1,2,3,4	1
		S31803	1	2
		N06022	1,2,3,4	3
		N05500	1,2,3,4	4
		N10675	N/A	5
	Graphite ULF	316L SST & S20910	1,2,3,4	6
		N06022	1,2,3,4	7
	ISO-Seal PTFE	316L SST & S20910	1,2,3,4	6
		N06022	1,2,3,4	7
Bellows	PTFE	316L SST & S20910	1,2,3,4	1
		N06022	1,2,3,4	3
	Graphite ULF	316L SST & S20910	1,2,3,4	6
		N06022	1,2,3,4	7
	ISO-Seal PTFE	316L SST & S20910	1,2,3,4	6
		N06022	1,2,3,4	7
Extension	PTFE	316L SST & S20910	1,2,3,4	1
	Graphite ULF	316L SST & S20910	1,2,3,4	6
	ISO-Seal PTFE	316L SST & S20910	1,2,3,4	6

Item H – Body/Bonnet Gasket

Process temperature limits:

Graphite: Upper limit: 454 °C (850 °F)

No Lower limit

PTFE coated: -40+232 °C (-100+500 °F)

Bonnet Style	Gasket	NACE Indicator	H
Plain	Standard Service	Graphite FMS 17F28	1,2,3,4
		PTFE Coated N10276	1,2,3,4
		PTFE Coated S30403	1,2,3
	Oxygen Service	PTFE Coated N04400	1,2,3,4
			4
Bellows	Graphite FMS 17F28	1,2,3,4	5
	PTFE Coated N10276	1,2,3,4	9
Extension	Graphite FMS 17F28	1,2,3,4	7



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Item J – Body/Bonnet Bolting

Studs	Nuts	Bonnet Style	Body Material	Process Temperature		NACE Indicator		J
				°F	°C	Non Exposed	Exposed	
B7 NCF2	2H NCF2	Plain	WCC/1.0619 & CF3M/1.4409 & LCC	-54+800	-48+427	1,2,3,4	N/A	1
		Extension & Bellows	WCC/1.0619 & LCC	-54+800	-48+427	1,2,3,4	N/A	2
S20910 Hot Rolled	S20910 Hot Rolled	Plain	CW2M, CD3MN, CF3, LCC, CN7M & CN3MCU, N7M, M35-2, WCC/1.0619 & CF3M/1.4409	-325+1100	-198+593	1,2,3,4	1,2,3,4	8
		Extension, Bellows & Cryogenic Extension	CW2M	-325+500	-198+260	1,2,3,4	1,2,3,4	9
			CF3M/1.4409	-325+1100	-198+593	1,2,3,4	1,2,3,4	9

Item K – Yoke (NACE standards not applicable)

Process temperature limits for Actuator:

Bonnet Style	Yoke material	Process Temperature	
		°F	°C
Plain	LCC	-50+450	-46+232
	CF3M	-76+450	-60+232
Extension or Bellows	LCC	-50+800	-46+427
	CF3M	-76+800	-60+427
Cryogenic Extension	LCC & CF3M	*	*

* Consult PS sheet 51.1.GX(K) Low Temperature GX Application Guidelines

Pneumatic Spring & Diaphragm Actuator

Port Diameter (mm)	Actuator Size	Travel (mm)	Bonnet Style	Yoke	K
4.8, 9.5, 14 & 22	225	20	Plain	SST	1
				Steel	2
			Bellows & Extension	SST	3
				Steel	4

Electric Actuator

ISO 5210 Mtg	Yoke Material	Travel	Bonnet Style	K
F7	LCC	20 mm	Plain	5
			Bellows & Extension	6



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Item L – Actuator Parts (NACE standards not applicable)

Pneumatic Spring & Diaphragm Actuator

Actuator Size	L
225	1

Electric Actuator

Electric Actuator	ISO 5210 Mtg	Travel	L
Rotork CVL1000 & 1500	F7	20 mm	2
Rotork CVL500	F7	20 mm	3

Item M – Stem Connector Parts (NACE standards not applicable)

M
1

Item N – Actuator Common Parts (NACE standards not applicable)

Actuator	Type	Ambient Temperature		N
		°F	°C	
Pneumatic Spring & Diaphragm	N/A	-50 +180	-46 +82	1
Electric	Rotork	N/A	N/A	2
Pneumatic S & D – PSA service	N/A	-50 +180	-46 +82	3
Pneumatic Spring & Diaphragm	N/A	-76 +180	-60 +82	4

Item P – Actuator Spring (Use only with Pneumatic Spring & Diaphragm Actuator) (NACE Standards not applicable)

Actuator Size	Characteristic	Air Action	Actuator Construction	Spring Assembly per GG00398	P
225	Linear & Equal Percent	Air to Open	4 Bar	View A6	1
			3 Bar	View A4	2
			2 Bar	View A3	3
		Air to Close	4 Bar	View A3	3
			3 Bar	View A3	3
			2 Bar	View A2	4
	Cavitrol III	Air to Close or Open	4 Bar	View A4	2

Item Q – Nameplate (NACE standards not applicable)

Actuator	Characteristic	Flow	Valve Action	Q
Pneumatic Spring & Diaphragm	Linear & Equal Percent	Up	PDTC	1
	Cavitrol III	Down	PDTC	2
Electric	Linear & Equal Percent	Up	PDTC	3
	Cavitrol III	Down	PDTC	4
Electric w/o Actuator (Bare Stem)	Linear & Equal Percent	Up	PDTC	5
	Cavitrol III	Down	PDTC	6



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Design GX Valve Body and Actuator Assembly, Size NPS 1/2 DN15, NPS 3/4 DN20 & NPS 1 DN25

Item R – Bellows and Extension Stem**Item 9G – Remove Lower Portion of Warning Tag GF00483**

Bonnet Style	Body	Bellows	Extension Stem	Bushing	Valve Size	NACE Indicator	R	9G
Plain	All	N/A	N/A	N/A	All	N/A	N	N
Extension	LCC , WCC/1.0619 & CF3M/1.4409	N/A	S20910	S31600/Ultimet	NPS 1/2-1 (DN15-DN25)	N/A	1	N
Cryogenic Extension	CF3M/1.4409	N/A	S20910	S31600/Ultimet	NPS 1/2-1 (DN15-DN25)	N/A	2	N
Bellows	LCC, WCC/1.0619 & CF3M/1.4409	1.4571 (316TI) N10276	S31603	S31600/Ultimet	NPS 1/2-1 (DN15-DN25)	N/A	3	N
				S31600/PTFE Carbon	NPS 1/2-1 (DN15-DN25)	N/A	4	N
			N06022	S31600/Ultimet	NPS 1/2-1 (DN15-DN25)	N/A	5	1
				S31600/PTFE Carbon	NPS 1/2-1 (DN15-DN25)	N/A	6	1
				N10276/Ultimet	NPS 1 (DN25)	N/A	7	1
				N10276/PTFE Carbon	NPS 1 (DN25)	N/A	8	1
	CW2M	N10276	N06022	N10276/Ultimet	NPS 1 (DN25)	N/A	7	1
				N10276/PTFE Carbon	NPS 1 (DN25)	N/A	8	1

Item S – Handwheel (When Specified) (Use only with Pneumatic Spring & Diaphragm Actuator) (NACE standards not applicable)

Item T – Handwheel Common Parts (When Specified) (Use only with Pneumatic Spring & Diaphragm Actuator) (NACE standards not applicable)

Note: Hangwheel cannot be combined with Travel Stop Assembly if positioner or other yoke mounted accessory is used.

Actuator Size	S	T
225	1	1

Item U – Travel Stop Assembly (When Specified) (Use only with Pneumatic Spring & Diaphragm Actuator) (NACE standards not applicable)

Item 9H – Travel Stop Style (Up Stop or Down Stop) (Use only with Pneumatic Spring & Diaphragm Actuator)

Note: Cannot be combined with Handwheel if positioner or other yoke mounted accessory is used.

Actuator Size	Handwheel	Air Action	Travel Stop	U	9H
225	Yes	ATO	Up Stop	1	1
			Down Stop	N	N
		ATC	Up Stop	N	N
			Down Stop	1	2
	No	ATC/ATO	Up Stop	1	1
			Down Stop	1	2



Design GX Valve Body and Actuator Assembly, Size NPS 1/2 DN15, NPS 3/4 DN20 & NPS 1 DN25

Item V – Travel Stop Protection Plate (When Specified) (Use only with Pneumatic Spring & Diaphragm Actuator)
(NACE standards not applicable)

Note: Only specify when Travel Stop Assembly is used alone with no positioner, Handwheel, or other yoke mounted accessory.

V
1

Item 9A – Maximum/Minimum Actuator Diaphragm Operating Pressure and Spring Action (Use only with Pneumatic Spring & Diaphragm Actuator)

Linear & Equal Percent Valve Plug Style

Actuator Size	Bonnet Style	Stem Material	Air Action	Actuator Construction	Operating Pressure (Bar)		9A
					Minimum	Maximum	
225	Plain	316L SST or S20910	Air to Close	4 Bar	4	6	13
				3 Bar	3	6	14
				2 Bar	2	6	15
			Air to Open	4 Bar	4	6	16
				3 Bar	3	6	17
				2 Bar	2	6	18
		N06022, S31803 or N10675	Air to Close	4 Bar	4	4.6	19
				3 Bar	3	4.6	20
				2 Bar	2	4.1	21
			Air to Open	4 Bar	4	6	16
				3 Bar	3	6	17
				2 Bar	2	6	18
	Extension	316L SST or S20910	Air to Close	4 Bar	4	6	13
				3 Bar	3	6	14
				2 Bar	2	5.6	22
			Air to Open	4 Bar	4	6	16
				3 Bar	3	6	17
				2 Bar	2	6	18
	Bellows	316L SST or S20910	Air to Close	4 Bar	4	6	13
				3 Bar	3	6	14
				2 Bar	2	5.6	22
			Air to Open	4 Bar	4	6	16
				3 Bar	3	6	17
				2 Bar	2	6	18
		N06022	Air to Close	4 Bar	4	4.1	23
				3 Bar	3	4.1	24
				2 Bar	2	3.7	25
			Air to Open	4 Bar	4	6	16
				3 Bar	3	6	17
				2 Bar	2	6	18

Cavitrol III Valve Plug Style

Actuator Size	Bonnet Style	Stem Material	Air Action	Actuator Construction	Operating Pressure (Bar)		9A
					Minimum	Maximum	
225	Plain	S20910	Air to Close	4 Bar	4	6	13
			Air to Open	4 Bar	4	6	16



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Design GX Valve Body and Actuator Assembly, Size NPS 1/2 DN15, NPS 3/4 DN20 & NPS 1 DN25

Item 9C – Hydro Test per FGS 4L1

BAR test pressure converted from PSI units for Class 150 & 300

Body Material	Valve Size	Rating	Hydro/Minute		9C
			PSI	BAR	
WCC/1.0619, LCC, CF3M/1.4409, CF3, CD3MN, N7M & CW2M	NPS 1/2-1 (DN15-DN25)	Class 150	450/1	31/1	1
		Class 300	1125/1	77.6/1	2
		PN10/16/25/40	875/1	60/1	3
CN7M & CN3MCU	NPS 1 (DN25)	Class 150	350/1	24/1	4
		Class 300	900/1	62/1	5
		PN10/16/25/40	875/1	60/1	3
M35-2 (Monel)	NPS 1 (DN25)	Class 150	425/1	29/1	6
		Class 300	1050/1	72/1	7



Design GX Valve Body and Actuator Assembly, Size NPS 1/2 DN15, NPS 3/4 DN20 & NPS 1 DN25

Item 9D – Seat Leak Test per FGS 4L5

Seat Type	Seat Leak Test Class	Body Size	Port (mm)	Plug Style	Travel (mm)	Char		Seat leakage	9D							
Metal	IV	NPS 1/2 (DN15)	4.8	Unbalanced M-Flow Flat	20	Linear	1° 8'	0.008 SCFH/3.6 mL/min	1							
							2° 15'	0.027 SCFH/12.6 mL/min	2							
							4° 39'	0.056 SCFH/26.5 mL/min	3							
							9° 30'	0.150 SCFH/70.9 mL/min	4							
			9.5	Unbalanced Full Capacity	20	Equal Percent Linear	0.75 SCFH/354 mL/min	5								
				Unbalanced Reduced Capacity		Equal Percent	0.75 SCFH/354 mL/min	5								
		NPS 3/4 (DN20)	4.8	Unbalanced M-Flow Flat	20	Linear	1° 8'	0.008 SCFH/3.6 mL/min	1							
							2° 15'	0.027 SCFH/12.6 mL/min	2							
							4° 39'	0.056 SCFH/26.5 mL/min	3							
							9° 30'	0.150 SCFH/70.9 mL/min	4							
			9.5	Unbalanced Full Capacity	20	Equal Percent Linear	0.75 SCFH/354 mL/min	5								
						Equal Percent	0.75 SCFH/354 mL/min	5								
				Unbalanced Reduced Capacity		Equal Percent	0.28 SCFH/133 mL/min	6								
			14	Unbalanced Full Capacity	20	Equal Percent Linear	1.45 SCFH/683 mL/min	7								
							1.65 SCFH/779 mL/min	8								
				NPS 1 (DN25)	4.8	Unbalanced M-Flow Flat	20	Linear	1° 8'	0.008 SCFH/3.6 mL/min	1					
									2° 15'	0.027 SCFH/12.6 mL/min	2					
			4° 39'						0.056 SCFH/26.5 mL/min	3						
		9° 30'	0.150 SCFH/70.9 mL/min						4							
		9.5	Unbalanced Full Capacity	20	Equal Percent Linear	0.75 SCFH/354 mL/min	5									
					Equal Percent	0.75 SCFH/354 mL/min	5									
			Unbalanced Reduced Capacity	20	Equal Percent	0.31 SCFH/148 mL/min	9									
		14	Unbalanced Full Capacity	20	Equal Percent Linear	1.6 SCFH/755 mL/min	10									
						1.63 SCFH/770 mL/min	11									
			22	Unbalanced Full Capacity	20	Equal Percent Linear	3.08 SCFH/1452 mL/min	12								
						3.58 SCFH/1688 mL/min	13									
		V	All	4.8	Unbalanced Full Capacity	20	N/A	0.9 mL/min		14						
								9.5	Unbalanced Full & Reduced Capacity	20	N/A	1.8 mL/min		15		
14	Unbalanced Full Capacity											20	N/A	2.6 mL/min		16
														22	Unbalanced Full Capacity	20
VI	All	4.8	Unbalanced Full Capacity	20	N/A	0.15 mL/min		18								
						9.5	Unbalanced Full & Reduced Capacity	20	N/A	0.15 mL/min		18				
										14	Unbalanced Full Capacity	20	N/A	0.15 mL/min		18
Comp	VI	All	22	Unbalanced Full Capacity	20	N/A		0.15 mL/min	18							



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Item 9F – Flow Cv/Kv

Body Size	Port (mm)	Plug Style	Travel (mm)	Char		Flow		9F
						Cv	Kv	
NPS 1/2 (DN15)	4.8	Unbalanced M-Flow Flat	20	Linear	1° 8'	0.0389	0.0336	1
					2° 15'	0.139	0.120	2
					4° 39'	0.294	0.254	3
					9° 30'	0.785	0.679	4
	9.5	Unbalanced Full Capacity	20	Equal Percent	3.338	2.887	5	
				Linear	3.450	2.984	6	
NPS 3/4 (DN20)	4.8	Unbalanced M-Flow Flat	20	Linear	1° 8'	0.0389	0.0336	1
					2° 15'	0.139	0.120	2
					4° 39'	0.294	0.254	3
					9° 30'	0.785	0.679	4
	9.5	Unbalanced Full Capacity	20	Equal Percent	3.753	3.246	8	
				Linear	3.845	3.326	9	
	14	Unbalanced Reduced Capacity	20	Equal Percent	1.652	1.429	10	
		Unbalanced Full Capacity	20	Equal Percent	6.412	5.546	11	
					7.576	6.553	12	
NPS 1 (DN25)	4.8	Unbalanced M-Flow Flat	20	Linear	1° 8'	0.0389	0.0336	1
					2° 15'	0.139	0.120	2
					4° 39'	0.294	0.254	3
					9° 30'	0.785	0.679	4
	9.5	Unbalanced Full Capacity	20	Equal Percent	3.57	3.09	13	
				Linear	3.70	3.20	14	
	14	Unbalanced Reduced Capacity	20	Equal Percent	1.652	1.429	10	
		Unbalanced Full Capacity	20	Equal Percent	6.89	5.96	15	
	7.80				6.75	16		
	22	Unbalanced Full Capacity	20	Equal Percent	13.7	11.9	17	
					Linear	15.5	13.4	18
					Cavitrol III	7.1	6.14	19

Item 9K - Side Mounted Handwheel Orientation Position per Drawing GE52353 (When Specified) (Factory Mounted Unit Only)

Side Mounted Handwheel	Side Mounted Handwheel Orientation Position	9K
With	Position 3 (Standard)	1
	Position 1	2
W/O	None	N



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Item 9P – Flow Direction Arrow on Valve Body

Characteristic	9P
Cavitrol III	1
Equal Percent & Linear	N

Description		Assembly Drawing
Valve & Pneumatic Actuator Assembly	Air to Open (Fail Closed)	GE02171
	Air to Closed (Fail Open)	GE03515
Port Guided Trim		GE07153
Balanced Trim		GE07161
Cryogenic Extension Bonnet Assembly	DN15-DN25	GE23746
Extension Bonnet Assembly	DN15, DN20, DN25	GF00337
Bellows Bonnet Assembly	DN15, DN20, DN25	GF00338
Handwheel Assembly	Air to Close, Spring to Open	GE05810
	Air to Open, Spring to Close	GE05809
Packing Assembly	PTFE Packing	GE28943
	ULF Packing	GE28944
	ISO-Seal Packing	GF11007
Travel Stop Assembly	225	GE24017
	225 kit	GE26229
Valve & Electric Actuator Assembly	Actuator Mounting	GG12175

Revision Change Record

The date recorded on this document reflects the effective date of this revision.

ECRN: 20172015**Matrix Section:**

On page 1, change the 9Q to 9G in the Pneumatic Spring & Diaphragm Actuator GX30 and Electric Actuator GX30 EM strings.

On page 3, added the Item 9G Remove Lower Portion of Warning Tag in the Find Number Table.

On page 16, change the Item “9Q” to Item “9G” in the Item title and the modules list table.

Item	Module	Change
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ECRN: 20171974**Matrix Section:**

On page 2, in the find number table added 120 Packing Washer for the Item H.

Item	Module	Change
H	9	New – PTFE Coated N10276 Gasket for Bellows Bonnet with 1,2,3,4 NACE Indicator.