

Fisher™ GX Bulletin Supplement

Use this bulletin supplement in conjunction with Bulletin 51.1:GX, Fisher GX Control Valve and Actuator System, [D103171X012](#). This supplement provides additional information for the Fisher GX control valve and actuator.

The standard GX actuator comes with a supply pressure range of 4 to 6 bar (58 to 87 psi) for both air-to-open (ATO) and air-to-close (ATC) configurations. By selecting the appropriate option, the GX actuator will operate with a minimum supply pressure of 3 bar (44 psi) and 2 bar (29 psi) at the expense of maximum allowable shutoff pressure. **Note:** These options do not apply to the size 1200 actuator which operates on a standard pressure range of 3 to 6 bar.

The primary focus of this bulletin is to provide maximum pressure drop tables for the corresponding GX constructions.

Each of these tables includes air-to-open (standard) and air-to-close (optional) actuator configurations for varying supply pressure ranges, as well as the maximum actuator air supply pressure and associated pressure drop.

Tables are also provided for shutoff classification capability. These tables immediately follow their respective constructions. See table 1 for an index of these tables.

Table 1. Index to Trim Tables

Stem Material	Bonnet Style	Max Pressure Drop and Max Supply Pressure	Shutoff Capabilities
High Strength	Standard	Table 2	Table 3
	Extension / Bellows	Table 4	Table 5
Low Strength	Standard	Table 6	Table 7
	Bellows	Table 8	Table 9

High Strength Stem Material: S31603, S20910, N05500

Low Strength Stem Material: N06022, S31803, N10675



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Fisher GX Control Valve, Actuator, and FIELDVUE™ DVC2000 Digital Valve Controller

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GX Control Valve and Actuator

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Table 2 contains information regarding the maximum pressure drop capability of the GX with a standard bonnet and S31603 trim. Maximum pressure drop is

calculated at the maximum supply pressure for each construction. The allowable leakage classes are given in table 3.

Table 2. Maximum Pressure Drops with Standard Bonnet Construction and High Strength Stem

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL™ Packing	Air to Open	Air to Close											
					Max ΔP	Supply pressure										Max Pressure Limits	
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply			
						bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)			
DN15 to 25 (NPS 1/2 to 1)	4.8	20	225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)	51.7 (750)				51.7 (750)	6 (87)			
				PTFE		N/A			N/A								
			225 3Bar	ULF		N/A		51.7 (750)									
				PTFE		N/A		51.7 (750)									
	9.5	20	225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)	51.7 (750)								
				PTFE		N/A			51.7 (750)								
225 3Bar			ULF	N/A		51.7 (750)											
			PTFE	N/A		51.7 (750)											
DN20 to 40 (NPS 3/4 to 1-1/2)	14	20	225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)	51.7 (750)								
				PTFE		N/A			51.7 (750)								
			225 3Bar	ULF		N/A		51.7 (750)									
				PTFE		N/A		51.7 (750)									
	225 4Bar	20	225 2Bar	ULF	51.7 (750)	39.2 (569)		51.7 (750)	51.7 (750)								
				PTFE		51.7 (750)			51.7 (750)								
225 3Bar			ULF	N/A		51.7 (750)											
			PTFE	N/A		51.7 (750)											
DN40 to 50 (NPS 1-1/2 to 2)	22(1)	20	225 2Bar	ULF	N/A	10.2 (148)	14.6 (212)	25.3 (367)	35.9 (521)	45.3 (657)	51.7 (750)	51.7 (750)					
				PTFE		15.7 (750)	20.1 (292)	30.8 (447)	41.4 (600)	50.8 (737)		51.7 (750)					
			225 3Bar	ULF		16.2 (235)	N/A		25.9 (376)	35.3 (512)		47.2 (685)	51.7 (750)				
				PTFE		21.7 (315)	N/A		31.4 (455)	40.8 (592)		51.7 (750)	51.7 (750)				
			225 4Bar	ULF		28.3 (410)	N/A		N/A			47.2 (685)	51.7 (750)				
				PTFE		33.7 (489)	N/A		N/A			51.7 (750)	51.7 (750)				
	36(1)	20	750 2Bar	ULF	51.7 (750)	48.0 (696)	33.7 (489)	51.7 (750)	51.7 (750)		---	51.7 (750)					
				PTFE		51.7 (750)	39.2 (569)		51.7 (750)			3.5 (51)					
			750 3Bar	ULF		N/A		N/A		N/A							
				PTFE		N/A		N/A		N/A							
			750 4Bar	ULF		N/A		N/A		N/A							
				PTFE		N/A		N/A		N/A							

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Table 2. Maximum Pressure Drops with Standard Bonnet Construction and High Strength Stem (continued)

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open	Air to Close													
					Max ΔP	Supply pressure										Max Pressure Limits			
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply					
						bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)					
DN50 (NPS 2)	46 ⁽¹⁾	20	225 2Bar	ULF	---	9.0 (131)	15.5 (225)	22.0 (319)	27.8 (403)	35.1 (509)	48.1 (698)	51.7 (750)	51.7 (750)	6 (87)					
				PTFE		12.3 (178)	18.8 (273)	25.4 (368)	31.1 (451)	38.4 (557)	51.5 (747)								
			225 3Bar	ULF	9.9 (144)	N/A			15.9 (231)	21.6 (313)	28.9 (419)				42.0 (609)				
				PTFE	13.3 (193)				19.2 (278)	25.0 (363)	32.3 (468)				45.3 (657)				
			225 4Bar	ULF	17.3 (251)				N/A		28.9 (419)				42.0 (609)				
				PTFE	20.7 (300)						32.3 (468)				45.3 (657)				
			750 2Bar	ULF	29.4 (426)	20.7 (300)	42.4 (615)	51.7 (750)	N/A		51.7 (750)				3.5 (51)				
				PTFE	32.8 (476)	24.0 (348)	45.8 (664)												
			750 3Bar	ULF	46.5 (674)	N/A					---				51.7 (750)	3.5 (51)			
				PTFE	49.9 (724)														
			750 4Bar	ULF	46.5 (674)				N/A						N/A		N/A		
				PTFE	49.9 (724)														
			DN80 (NPS 3)	36	20	750 2Bar	ULF	46.4 (673)	32.1 (466)	51.7 (750)	51.7 (750)				51.7 (750)	51.7 (750)	6 (87)		
							PTFE	51.1 (741)	36.8 (534)										
750 3Bar	ULF	51.7 (750)				N/A		51.7 (750)											
	PTFE																		
750 4Bar	ULF							N/A		N/A									
	PTFE																		
DN80 -100 (NPS 3 to 4)	46	20	750 2Bar	ULF	28.4 (412)	19.7 (286)	41.5 (602)	51.7 (750)	51.7 (750)	51.7 (750)	6 (87)								
				PTFE	31.3 (454)	22.6 (328)	44.3 (643)												
			750 3Bar	ULF	45.5 (660)	N/A						51.7 (750)							
				PTFE	48.4 (702)														
			750 4Bar	ULF	45.5 (660)							N/A		N/A					
				PTFE	48.4 (702)														
			DN80 (NPS 3)	70 Bal	20	750 2Bar	ULF	51.7 (750)				51.7 (750)		51.7 (750)	51.7 (750)	51.7 (750)	6 (87)		
							PTFE												
750 3Bar	ULF	N/A				51.7 (750)													
	PTFE																		
750 4Bar	ULF					N/A			N/A										
	PTFE																		

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Table 2. Maximum Pressure Drops with Standard Bonnet Construction and High Strength Stem (continued)

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open	Air to Close													
					Max ΔP	Supply pressure										Max Pressure Limits			
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply					
						bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)					
DN80 -100 (NPS 3 to 4)	70	40	750 2Bar	ULF	11.5 (167)	17.2 (249)	26.6 (386)	35.9 (521)	44.2 (641)	51.7 (750)	51.7 (750)	51.7 (750)	6 (87)						
				PTFE	12.8 (186)	18.4 (267)	27.8 (403)	37.2 (540)	45.4 (658)										
			750 3Bar	ULF	23.0 (334)	N/A	N/A	35.9 (521)	44.2 (641)										
				PTFE	24.2 (351)			37.2 (540)	45.4 (658)										
			750 4Bar	ULF	31.9 (463)			N/A	N/A					36.9 (535)					
				PTFE	33.1 (480)									38.2 (554)					
	90 Bal	20	750 2Bar	ULF	51.7 (750)			46.8 (679)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	6 (87)					
				PTFE				51.7 (750)											
			750 3Bar	ULF		N/A	N/A	N/A											
				PTFE															
			750 4Bar	ULF					N/A						N/A				
				PTFE															
90	40	750 2Bar	ULF	7.0 (102)	10.4 (151)					16.1 (234)	21.7 (315)	26.7 (387)	33.1 (480)	44.4 (644)		51.7 (750)	51.7 (750)	6 (87)	
			PTFE	7.7 (112)	11.2 (162)					16.8 (244)	22.5 (326)	27.5 (399)	33.8 (490)	45.2 (656)					
		750 3Bar	ULF	13.9 (202)	N/A	N/A	21.7 (315)	26.7 (387)		33.1 (480)	44.4 (644)								
			PTFE	14.7 (213)			22.5 (326)	27.5 (399)		33.8 (490)	45.2 (656)								
		750 4Bar	ULF	19.3 (280)			N/A	N/A	22.3 (323)	33.7 (489)	45.0 (653)	45.0 (653)							
			PTFE	20.0 (290)					23.1 (335)	34.4 (499)	45.7 (663)	45.7 (663)							
		DN150 (NPS 6)	90	40			1200	ULF	26.4 (383)	N/A	18.9 (274)	26.9 (390)	37.2 (540)	---	51.7 (750)				5.4 (78)
								PTFE	27.8 (403)		20.3 (294)	28.4 (412)	38.7 (561)						
136 Bal	60		1200	ULF			51.7 (750)	51.7 (750)	51.7 (750)										
				PTFE			51.7 (750)	51.7 (750)	51.7 (750)										
136	60		1200	ULF	8.4 (122)	4.6 (67)	8.1 (117)	12.5 (181)	20.3 (294)		23.5 (341)								
				PTFE	9.1 (132)	5.2 (75)	8.7 (126)	13.1 (190)	20.9 (303)		24.1 (350)								

1. Cavitrol™ III trim limited to 27.6 bar (400 psid) maximum pressure drop and 4 bar (58 psi) minimum supply pressure.

Table 3. Shutoff Classification Capability for Standard Bonnet Construction and High Strength Stem⁽¹⁾

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open Shutoff	Air to Close Supply pressure						
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)
						Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff
DN15 to 25 (NPS 1/2 to 1)	4.8	20	225 2Bar	ULF	IV,V,VI ⁽²⁾	IV,V,VI		IV,V,VI		IV,V,VI		
				PTFE		N/A	IV,V,VI		IV,V,VI			
			225 3Bar	ULF	IV,V,VI		N/A		IV,V,VI		IV,V,VI	
	PTFE	N/A		IV,V,VI								
	9.5	20	225 2Bar	ULF	IV,V ⁽²⁾	IV,V,VI ⁽²⁾	IV,V,VI ⁽²⁾	IV,V,VI	IV,V,VI	IV,V,VI		
				PTFE		N/A	IV,V,VI	IV,V,VI		IV,V,VI		
225 3Bar			ULF	IV,V,VI ⁽²⁾	N/A		IV,V,VI ⁽²⁾	IV,V,VI	IV,V,VI			
	PTFE	N/A			IV,V,VI		IV,V,VI					
225 4Bar	20	225 2Bar	ULF	IV	IV,V ⁽²⁾	IV,V,VI ⁽²⁾	IV,V,VI ⁽²⁾	IV,V,VI	IV,V,VI			
			PTFE		N/A	IV,V,VI ⁽²⁾	IV,V,VI	IV,V,VI				
		225 3Bar	ULF	IV,V,VI ⁽²⁾		N/A		IV,V,VI ⁽²⁾		IV,V,VI		
PTFE	N/A		IV,V,VI									
225 4Bar	20	225 2Bar	ULF	IV,VI	IV,VI	IV,V ⁽²⁾ ,VI	IV,V,VI	IV,V,VI	IV,V,VI			
			PTFE		N/A		IV,V ⁽²⁾ ,VI		IV,V,VI	IV,V,VI		
		225 3Bar	ULF	IV,V ⁽²⁾ ,VI		N/A		IV,V ⁽²⁾ ,VI	IV,V,VI	IV,V,VI		
PTFE	N/A		IV,V,VI									
225 4Bar	20	225 2Bar	ULF	IV ⁽²⁾ ,VI	IV ⁽²⁾ ,VI	IV,VI	IV,V ⁽²⁾ ,VI	IV,V ⁽²⁾ ,VI	IV,V,VI	IV,V,VI		
			PTFE		N/A	IV,VI	IV,V ⁽²⁾ ,VI		IV,V ⁽²⁾ ,VI	IV,V,VI		
		225 3Bar	ULF	IV,VI		N/A		IV,VI	IV,V ⁽²⁾ ,VI	IV,V,VI		
PTFE	N/A		IV,V,VI									
225 4Bar	20	750 2Bar	ULF	IV,V ⁽²⁾ ,VI	IV,V ⁽²⁾ ,VI	IV,V,VI	IV,V,VI		---			
			PTFE		N/A		IV,V,VI					
		750 3Bar	ULF	IV,V,VI	N/A		IV,V,VI			---		
PTFE	N/A		IV,V,VI			---						
750 4Bar	20	750 2Bar	ULF	IV,V,VI	IV,VI	IV,V ⁽²⁾ ,VI ⁽²⁾	IV,V,VI		---			
			PTFE		IV,V ⁽²⁾ ,VI	IV,V,VI	IV,V,VI					
		750 3Bar	ULF	IV,V,VI	N/A		IV,V,VI			---		
PTFE	N/A		IV,V,VI			---						
750 4Bar	20	225 2Bar	ULF	---	IV ⁽²⁾ ,VI	IV,VI	IV,VI	IV,V ⁽²⁾ ,VI	IV,V ⁽²⁾ ,VI	IV,V,VI	IV,V,VI	
			PTFE		N/A	IV,V ⁽²⁾ ,VI	IV,VI	IV,V ⁽²⁾ ,VI		IV,V,VI		IV,V,VI
		225 3Bar	ULF	IV ⁽²⁾ ,VI		N/A		IV,VI	IV,VI	IV,V ⁽²⁾ ,VI	IV,V,VI	IV,V,VI
PTFE	N/A		IV,V ⁽²⁾ ,VI			IV,V,VI	IV,V,VI	IV,V,VI				
225 4Bar	20	225 2Bar	ULF	IV,VI	N/A		N/A		IV,V,VI			
			PTFE		N/A		IV,V,VI					
		750 2Bar	ULF	IV,V ⁽²⁾ ,VI	IV,VI	IV,V ⁽²⁾ ,VI ⁽²⁾	IV,V,VI		---			
PTFE	IV,V ⁽²⁾ ,VI		IV,V,VI		IV,V,VI							
750 3Bar	20	750 2Bar	ULF	IV,V,VI	N/A		IV,V,VI		---			
			PTFE		N/A		IV,V,VI					
		750 3Bar	ULF	IV,V,VI	N/A		IV,V,VI			---		
PTFE	N/A		IV,V,VI			---						
750 4Bar	20	750 2Bar	ULF	IV,V,VI	N/A		IV,V,VI		---			
			PTFE		N/A		IV,V,VI					
		750 3Bar	ULF	IV,V,VI	N/A		IV,V,VI			---		
PTFE	N/A		IV,V,VI			---						

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Table 3. Shutoff Classification Capability for Standard Bonnet Construction and High Strength Stem⁽¹⁾ (continued)

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open	Air to Close					
					Shutoff	Supply pressure					
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)
mm	mm	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff		
DN80 (NPS 3)	36	20	750 2Bar	ULF	IV,V ⁽²⁾ ,VI	IV,V ⁽²⁾ ,VI	IV,V,VI	IV,V,VI	IV,V,VI	IV,V,VI	
			750 3Bar	PTFE							IV,V,VI
			750 4Bar	ULF	N/A						
DN80 -100 (NPS 3 to 4)	46	20	750 2Bar	ULF	IV,V ⁽²⁾ ,VI	IV,VI	IV,V ⁽²⁾ ,VI	IV,V,VI	IV,V,VI	IV,V,VI	
			750 3Bar	PTFE							IV,V,VI
			750 4Bar	ULF	N/A						
DN80 (NPS 3)	70 Bal	20	750 2Bar	ULF	IV	IV	IV	IV	IV	IV	
			750 3Bar	PTFE							IV
			750 4Bar	ULF	N/A						
DN80 -100 (NPS 3 to 4)	70	40	750 2Bar	ULF	IV,VI	IV,V ⁽²⁾ ,VI	IV,V,VI	IV,V,VI	IV,V,VI	IV,V,VI	
			750 3Bar	PTFE							IV,V ⁽²⁾ ,VI
			750 4Bar	ULF	IV,V,VI	N/A					
DN100 (NPS 4)	90 Bal	20	750 2Bar	ULF	IV	IV ⁽²⁾	IV	IV	IV	IV	
			750 3Bar	PTFE							IV
			750 4Bar	ULF	N/A						
	90	40	750 2Bar	ULF	IV ⁽²⁾ ,VI	IV,VI	IV,V ⁽²⁾ ,VI	IV,V ⁽²⁾ ,VI	IV,V,VI	IV,V,VI	
			750 3Bar	PTFE							IV,V ⁽²⁾ ,VI
			750 4Bar	ULF	IV,V ⁽²⁾ ,VI	N/A	IV,V ⁽²⁾ ,VI				
DN150 (NPS 6)	90	40	1200	ULF	IV,V,VI	N/A	IV,V ⁽²⁾ ,VI	IV,V,VI	---	---	
	136 Bal	60	1200	PTFE							IV
			136	60	1200						ULF
				PTFE	IV,VI	IV ⁽²⁾ ,VI	IV,VI	IV,V ⁽²⁾ ,VI	IV,V,VI	IV,V,VI	

1. CLVI shutoff is achieved through the use of a soft seat in ports greater than or equal to 22mm.
2. Shutoff classification not available on hard-faced trim.

Table 4 contains information regarding the maximum pressure drop capability of the GX with an extension or bellows bonnet and S31603 trim. Maximum pressure

drop is calculated at the maximum supply pressure for each construction. The allowable leakage classes are given in table 5.

Table 4. Maximum Pressure Drops with Extension/Bellows Bonnet Construction with High Strength Stem

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open	Air to Close											
					Max ΔP	Supply pressure										Max Pressure Limits	
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply			
mm	mm	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)				
DN15 to 25 (NPS 1/2 to 1)	4.8	20	225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	5.6 (81)			
				PTFE		N/A											
			225 3Bar	ULF		N/A		51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	6 (87)				
	PTFE	N/A															
	9.5	20	225 2Bar	ULF		51.7 (750)	51.7 (750)		51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	5.6 (81)		
				PTFE			N/A										
225 3Bar			ULF	N/A			51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	6 (87)					
PTFE	N/A																
DN20 to 40 (NPS 3/4 to 1-1/2)	14	20	225 2Bar	ULF	51.7 (750)		51.7 (750)		51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	5.6 (81)		
				PTFE			N/A										
			225 3Bar	ULF		N/A		51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	6 (87)				
	PTFE	N/A															
	DN25 to 50 (NPS 1 to 2)	22	20	225 2Bar		ULF	51.7 (750)	27.3 (396)	39.2 (569)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	5.6 (81)	
						PTFE		42.0 (609)	51.7 (750)								
225 3Bar				ULF	N/A			51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	6 (87)				
PTFE		N/A															
DN40 to 50 (NPS 1-1/2 to 2)		36	20	225 2Bar	ULF	51.7 (750)		10.2 (148)	14.6 (212)	25.3 (367)	35.9 (521)	45.3 (657)	51.7 (750)	51.7 (750)	51.7 (750)	5.6 (81)	
					PTFE			15.7 (228)	20.1 (292)	30.8 (447)	41.4 (600)	50.8 (737)					
	225 3Bar			ULF	N/A		51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	6 (87)					
	PTFE	N/A															
	750 2Bar	ULF	48.0 (696)	33.7 (489)	51.7 (750)		51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	2.8 (41)				
		PTFE	33.7 (489)	39.2 (569)													
225 3Bar		ULF	N/A		51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	N/A						
PTFE	N/A																
750 4Bar	ULF	N/A		51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	N/A						
	PTFE	N/A															

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Table 4. Maximum Pressure Drops with Extension/Bellows Bonnet Construction with High Strength Stem (continued)

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open	Air to Close											
					Max ΔP	Supply pressure										Max Pressure Limits	
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply			
						bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)			
DN50 (NPS 2)	46	20	225 2Bar	ULF	---	9.0 (131)	15.5 (225)	22.0 (319)	27.8 (403)	35.1 (509)	48.1 (698)	---	51.7 (750)	5.6 (81)			
				PTFE		12.3 (178)	18.8 (273)	25.4 (368)	31.1 (451)	38.4 (557)	51.5 (747)						
			225 3Bar	ULF	9.9 (144)	N/A	15.9 (231)	21.6 (313)	28.9 (419)	42.0 (609)	51.7 (750)	6 (87)					
				PTFE	13.3 (193)		19.2 (278)	25.0 (363)	32.3 (468)	45.3 (657)							
			225 4Bar	ULF	17.3 (251)		N/A	28.9 (419)	42.0 (609)								
				PTFE	20.7 (300)			32.3 (468)	45.3 (657)								
			750 2Bar	ULF	29.4 (426)		20.7 (300)	42.4 (615)	---	51.7 (750)			2.8 (41)				
				PTFE	32.8 (476)		24.0 (348)	45.8 (664)									
			750 3Bar	ULF	46.5 (674)	N/A	---	N/A	N/A								
				PTFE	49.9 (724)												
			750 4Bar	ULF	46.5 (674)												
				PTFE	49.9 (724)												
DN80 (NPS 3)	36	20	750 2Bar	ULF	46.4 (673)	32.1 (466)	51.7 (750)	51.7 (750)	---	51.7 (750)	3.9 (57)						
				PTFE	51.1 (741)	36.8 (534)											
			750 3Bar	ULF	51.7 (750)	N/A	N/A										
				PTFE													
			750 4Bar	PTFE	N/A												
DN80 -100 (NPS 3 to 4)	46	20	750 2Bar	ULF	28.4 (412)	19.7 (286)	41.5 (602)	51.7 (750)	---	51.7 (750)	3.9 (57)						
				PTFE	31.3 (454)	22.6 (328)	44.3 (643)										
			750 3Bar	ULF	45.5 (660)	N/A	---										
				PTFE	48.4 (702)												
			750 4Bar	ULF	45.5 (660)												
				PTFE	48.4 (702)												
DN80 (NPS 3)	70 Bal	20	750 2Bar	ULF	51.7 (750)	51.7 (750)	51.7 (750)	---	51.7 (750)	3.9 (57)							
				PTFE													
			750 3Bar	ULF		N/A					N/A						
				PTFE													
			750 4Bar	ULF													
				PTFE													

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Table 4. Maximum Pressure Drops with Extension/Bellows Bonnet Construction with High Strength Stem (continued)

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open	Air to Close																
					Max ΔP	Supply pressure										Max Pressure Limits						
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply								
						bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)								
DN80 -100 (NPS 3 to 4)	70	40	750 2Bar	ULF	11.5 (167)	17.2 (249)	26.6 (386)	35.9 (521)	44.2 (641)	---	---	---	45.1 (654)	3.5 (51)								
				PTFE	12.8 (186)	18.4 (267)	27.8 (403)	37.2 (540)	45.4 (658)				46.4 (673)									
			750 3Bar	ULF	23.0 (334)	N/A	35.9 (521)	44.2 (641)	---	---	45.1 (654)											
				PTFE	24.2 (351)		37.2 (540)	45.4 (658)			46.4 (673)											
			750 4Bar	ULF	31.9 (463)		N/A	36.9 (535)			44.4 (644)	---	---		44.4 (644)							
				PTFE	33.1 (480)			38.2 (554)			45.6 (661)				45.6 (661)							
			DN100 (NPS 4)	90 Bal	20	750 2Bar	ULF	51.7 (750)	46.8 (679)	51.7 (750)	51.7 (750)	---	---		---	---	51.7 (750)	3.9 (57)				
							PTFE		51.7 (750)													
750 3Bar	ULF	N/A				N/A	N/A		N/A	N/A												
	PTFE																					
750 4Bar	ULF													N/A					N/A	N/A	N/A	N/A
	PTFE																					
90	40	750 2Bar		ULF	7.0 (102)	10.4 (151)	16.1 (234)	21.7 (315)	26.7 (387)	---	---	---	27.3 (396)	3.5 (51)								
				PTFE	7.7 (112)	11.2 (162)	16.8 (244)	22.5 (326)	27.5 (399)				28.0 (406)									
		750 3Bar		ULF	N/A	N/A	N/A	N/A	N/A	---	---	---	27.3 (396)									
				PTFE									14.7 (213)		22.5 (326)	27.5 (399)	28.0 (406)					
750 4Bar	ULF	N/A	N/A	N/A									N/A	N/A	---	---	---	26.9 (390)	4.4 (64)			
	PTFE																	20.0 (290)		23.1 (335)	27.6 (400)	

Table 5. Shutoff Classification Capability for Extension / Bellows Bonnet Construction and High Strength Stem⁽¹⁾

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open Shutoff	Air to Close								
						Supply pressure								
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)		
mm	mm					Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff			
DN15 to 25 (NPS 1/2 to 1)	4.8	20	225 2Bar	ULF	IV,V,VI ⁽²⁾	IV,V,VI		IV,V,VI		IV,V,VI		---		
				PTFE		IV,V,VI	N/A		N/A		IV,V,VI		IV,V,VI	
			225 3Bar	ULF	IV,V,VI ⁽²⁾		IV,V,VI ⁽²⁾		IV,V,VI		IV,V,VI		---	
		PTFE	IV,V,VI	N/A		IV,V,VI ⁽²⁾		IV,V,VI		IV,V,VI				
	225 4Bar	ULF		IV,V,VI	IV,V,VI		N/A		N/A		IV,V,VI		---	
		PTFE	IV,V,VI		N/A		IV,V,VI		IV,V,VI		IV,V,VI		IV,V,VI	
DN20 to 40 (NPS 3/4 to 1-1/2)	14	20		225 2Bar	ULF	IV	IV,V ⁽²⁾	IV,V,VI ⁽²⁾	IV,V,VI ⁽²⁾	IV,V,VI	IV,V,VI		---	
				PTFE	IV,V ⁽²⁾		N/A		IV,V,VI ⁽²⁾		IV,V,VI		IV,V,VI	
			225 3Bar	ULF		IV,V,VI ⁽²⁾	N/A		IV,V,VI ⁽²⁾		IV,V,VI		IV,V,VI	
		PTFE	IV,V,VI ⁽²⁾	N/A			IV,V,VI ⁽²⁾		IV,V,VI		IV,V,VI		IV,V,VI	
	225 4Bar	ULF		IV,V,VI	IV,V,VI ⁽²⁾		N/A		N/A		IV,V,VI		---	
		PTFE	IV,V,VI		IV,V,VI		N/A		IV,V,VI		IV,V,VI		IV,V,VI	
DN25 to 50 (NPS 1 to 2)	22	20		225 2Bar	ULF	IV,VI	IV,VI	IV,V ⁽²⁾ ,VI	IV,V,VI	IV,V,VI	IV,V,VI		---	
				PTFE	IV,V ⁽²⁾ ,VI		N/A		IV,V ⁽²⁾ ,VI		IV,V,VI		IV,V,VI	
			225 3Bar	ULF		IV,V ⁽²⁾ ,VI	N/A		IV,V ⁽²⁾ ,VI		IV,V,VI		IV,V,VI	
		PTFE	IV,V ⁽²⁾ ,VI	N/A			IV,V ⁽²⁾ ,VI		IV,V,VI		IV,V,VI		IV,V,VI	
	225 4Bar	ULF		IV,V,VI	IV,V ⁽²⁾ ,VI		N/A		N/A		IV,V,VI		---	
		PTFE	IV,V,VI		IV,V,VI		N/A		IV,V,VI		IV,V,VI		IV,V,VI	
DN40 to 50 (NPS 1-1/2 to 2)	36	20		225 2Bar	ULF	IV ⁽²⁾ ,VI	IV ⁽²⁾ ,VI	IV,VI	IV,V ⁽²⁾ ,VI	IV,V ⁽²⁾ ,VI	IV,V,VI	IV,V,VI		---
				PTFE	IV,VI		N/A		IV,VI		IV,V ⁽²⁾ ,VI		IV,V,VI	
			225 3Bar	ULF		IV,VI	N/A		IV,VI		IV,V ⁽²⁾ ,VI		IV,V,VI	
		PTFE	IV,V ⁽²⁾ ,VI	N/A			IV,V ⁽²⁾ ,VI		IV,V,VI		IV,V,VI		IV,V,VI	
	225 4Bar	ULF		IV,V ⁽²⁾ ,VI	IV,V ⁽²⁾ ,VI		N/A		N/A		IV,V,VI		---	
		PTFE	IV,V,VI		IV,V,VI		N/A		N/A		IV,V,VI		IV,V,VI	
DN50 (NPS 2)	46	20		225 2Bar	ULF	---	IV ⁽²⁾ ,VI	IV,VI	IV,VI	IV,V ⁽²⁾ ,VI	IV,V ⁽²⁾ ,VI	IV,V,VI	---	
				PTFE	IV ⁽²⁾ ,VI		N/A		IV,VI			IV,V ⁽²⁾ ,VI		IV,V,VI
			225 3Bar	ULF		IV,VI	N/A		IV,VI		IV,V ⁽²⁾ ,VI		IV,V,VI	
		PTFE	IV,VI	N/A			IV,VI		IV,V ⁽²⁾ ,VI		IV,V,VI		IV,V,VI	
	225 4Bar	ULF		IV,V ⁽²⁾ ,VI	IV,VI		IV,V ⁽²⁾ ,VI		N/A		IV,V,VI		---	
		PTFE	IV,V ⁽²⁾ ,VI		IV,V ⁽²⁾ ,VI		IV,V,VI		N/A		IV,V,VI		IV,V,VI	
750 2Bar	ULF	IV,V,VI		N/A		N/A		N/A		IV,V,VI		---		
	PTFE		IV,V,VI	N/A		N/A		N/A		IV,V,VI		IV,V,VI		
750 3Bar	ULF	IV,V,VI		N/A		N/A		N/A		IV,V,VI		---		
	PTFE		IV,V,VI	N/A		N/A		N/A		IV,V,VI		IV,V,VI		
750 4Bar	ULF	IV,V,VI		N/A		N/A		N/A		IV,V,VI		---		
	PTFE		IV,V,VI	N/A		N/A		N/A		IV,V,VI		IV,V,VI		

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Table 5. Shutoff Classification Capability for Extension / Bellows Bonnet Construction and High Strength Stem⁽¹⁾
(continued)

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open Shutoff	Air to Close Supply pressure						
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)
						Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff
DN80 (NPS 3)	36	20	750 2Bar	ULF	IV,V ⁽²⁾ ,VI	IV,V ⁽²⁾ ,VI	IV,V,VI	IV,V,VI	---	---		
			750 3Bar	PTFE							IV,V,VI	N/A
			750 4Bar	PTFE	N/A							
DN80 -100 (NPS 3 to 4)	46	20	750 2Bar	ULF	IV,V ⁽²⁾ ,VI	IV,VI	IV,V ⁽²⁾ ,VI	IV,V,VI	---	---		
			750 3Bar	PTFE							IV,V,VI	N/A
			750 4Bar	PTFE	N/A							
DN80 (NPS 3)	70 Bal	20	750 2Bar	ULF	IV	IV	IV	---	---	---		
			750 3Bar	PTFE							IV	N/A
			750 4Bar	PTFE	N/A							
DN80 -100 (NPS 3 to 4)	70	40	750 2Bar	ULF	IV,VI	IV,V ⁽²⁾ ,VI	IV,V,VI	---	---	---		
			750 3Bar	PTFE							IV,V ⁽²⁾ ,VI	N/A
			750 4Bar	PTFE	IV,V,VI	N/A						
DN100 (NPS 4)	90 Bal	20	750 2Bar	ULF	IV	IV ⁽²⁾	IV	IV	---	---		
			750 3Bar	PTFE							IV	N/A
			750 4Bar	PTFE	N/A							
	90	40	750 2Bar	ULF	IV ⁽²⁾ ,VI	IV,VI	IV,V ⁽²⁾ ,VI	IV,V ⁽²⁾ ,VI	IV,V,VI	---	---	
			750 3Bar	PTFE								IV,V ⁽²⁾ ,VI
			750 4Bar	PTFE	IV,V ⁽²⁾ ,VI	N/A	IV,V ⁽²⁾ ,VI					

1. CLVI shutoff is achieved through the use of a soft seat in ports greater than or equal to 22mm.
2. Shutoff classification not available on hard-faced trim.

Table 6 contains information regarding the maximum pressure drop capability of the GX with a standard bonnet and CW2M trim. Maximum pressure drop is

calculated at the maximum supply pressure for each construction. The allowable leakage classes are given in table 7.

Table 6. Maximum Pressure Drops with Standard Bonnet Construction and Low Strength Stem

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open	Air to Close											
					Max ΔP	Supply pressure										Max Pressure Limits	
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply			
						bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)			
DN15 to 25 (NPS 1/2 to 1)	4.8	20	225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)		51.7 (750)	---	51.7 (750)	4.1 (59)				
				PTFE		N/A							4.6 (67)				
			225 3Bar	ULF				N/A		51.7 (750)	---	51.7 (750)	4.1 (59)				
				PTFE		225 4Bar	ULF							N/A		51.7 (750)	---
	PTFE	225 2Bar	ULF	51.7 (750)			51.7 (750)	---	51.7 (750)	4.1 (59)							
	PTFE		225 3Bar	ULF	N/A						51.7 (750)	---	51.7 (750)	4.6 (67)			
PTFE	225 4Bar	ULF		N/A			51.7 (750)	---	51.7 (750)	4.6 (67)							
PTFE		225 2Bar	ULF			27.3 (396)					39.2 (569)		51.7 (750)	51.7 (750)	---	51.7 (750)	4.1 (59)
PTFE	225 3Bar		ULF	42.0 (609)		51.7 (750)		51.7 (750)	---	51.7 (750)	4.6 (67)						
PTFE		225 4Bar	ULF	43.4 (629)		N/A						51.7 (750)	---	51.7 (750)	4.6 (67)		
PTFE	225 2Bar		ULF	10.2 (148)				14.6 (212)		25.3 (367)						35.9 (521)	
PTFE		225 3Bar	ULF	15.7 (228)		20.1 (292)		30.8 (447)		41.4 (600)		50.8 (737)		51.7 (750)	4.6 (67)		
PTFE	225 4Bar		ULF	16.2 (235)		N/A		25.9 (376)		35.3 (512)		47.2 (685)				51.7 (750)	4.6 (67)
PTFE		225 2Bar	ULF	21.7 (315)				N/A		31.4 (455)		40.8 (592)		51.7 (750)			
PTFE	225 3Bar		ULF	28.3 (410)		N/A				N/A		N/A		47.2 (685)		51.7 (750)	4.6 (67)
PTFE		225 4Bar	ULF	33.7 (489)				N/A						N/A			

-continued-

Table 6. Maximum Pressure Drops with Standard Bonnet Construction and Low Strength Stem (continued)

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open	Air to Close																			
					Max ΔP	Supply pressure										Max Pressure Limits									
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply											
						bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)											
DN40 to 50 (NPS 1-1/2 to 2)	36	20	750 2Bar	ULF	48.0 (696)	33.7 (489)	---	---	---	---	---	---	51.7 (750)	2.3 (33)											
				PTFE	51.7 (750)	39.2 (569)																			
			750 3Bar	ULF	48.0 (696)	N/A	N/A								N/A	N/A	N/A	N/A							
				PTFE	51.7 (750)																				
			750 4Bar	ULF	48.0 (696)														N/A	N/A	N/A	N/A	N/A	N/A	
				PTFE	51.7 (750)																				
DN50 (NPS 2)	46	20	225 2Bar	ULF	---			9.0 (131)	15.5 (225)	22.0 (319)	27.8 (403)	35.1 (509)	---	36.4 (528)											4.1 (59)
				PTFE				12.3 (178)	18.8 (273)	25.4 (368)	31.1 (451)	38.4 (557)													
			225 3Bar	ULF	9.9 (144)	N/A	N/A	N/A	N/A	N/A	N/A														
				PTFE	13.3 (193)							19.2 (278)			25.0 (363)	32.3 (468)									
			225 4Bar	ULF	17.3 (251)							N/A			N/A	N/A	N/A	N/A	N/A						
				PTFE	20.7 (300)															28.9 (419)	32.3 (468)				
			750 2Bar	ULF	29.4 (426)								20.7 (300)	N/A						N/A	N/A	N/A	N/A		
				PTFE	32.8 (476)								24.0 (348)												
			750 3Bar	ULF	29.4 (426)	N/A	N/A	N/A	N/A	N/A	N/A														
				PTFE	32.8 (476)																				
			750 4Bar	ULF	29.4 (426)							N/A	N/A		N/A	N/A	N/A	N/A							
				PTFE	32.8 (476)																				
DN80 (NPS 3)	36	20	750 2Bar	ULF	46.4 (673)									32.1 (466)					51.7 (750)	51.7 (750)	---	---	---	51.7 (750)	3.9 (57)
				PTFE	51.1 (741)									36.8 (534)					51.7 (750)						
			750 3Bar	ULF	46.4 (673)	N/A	N/A	N/A	N/A	N/A	N/A														
				PTFE	51.1 (741)																				
			750 4Bar	ULF	46.4 (673)							N/A	N/A	N/A	N/A	N/A	N/A								
				PTFE	51.1 (741)																				

-continued-

Table 6. Maximum Pressure Drops with Standard Bonnet Construction and Low Strength Stem (continued)

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open	Air to Close																		
					Max ΔP	Supply pressure										Max Pressure Limits								
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply										
						bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)										
DN80 -100 (NPS 3 to 4)	46	20	750 2Bar	ULF	28.4 (412)	19.7 (286)	41.5 (602)	51.7 (750)	---	---	---	---	51.7 (750)	3.9 (57)										
				PTFE	31.3 (454)	22.6 (328)	44.3 (643)																	
			750 3Bar	ULF	28.4 (412)	N/A									N/A	N/A								
				PTFE	31.3 (454)																			
			750 4Bar	ULF	28.4 (412)	N/A											N/A	N/A						
				PTFE	31.3 (454)																			
DN80 (NPS 3)	70 Bal	20	750 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)	---	---	---	---	51.7 (750)	3.9 (57)										
				PTFE		N/A																		
			750 3Bar	ULF		N/A									N/A	N/A								
				PTFE		N/A																		
			750 4Bar	ULF		N/A											N/A	N/A						
				PTFE		N/A																		
DN80 -100 (NPS 3 to 4)	70	40	750 2Bar	ULF	11.5 (167)	17.2 (249)	26.6 (386)	35.9 (521)	44.2 (641)	---	---	---	44.2 (641)	3.44 (50)										
				PTFE	12.8 (186)	18.4 (267)	27.8 (403)	37.2 (540)	45.4 (658)				45.4 (658)											
			750 3Bar	ULF	23.0 (334)	N/A							35.9 (521)		44.2 (641)	44.2 (641)								
				PTFE	24.2 (351)	N/A							37.2 (540)		45.4 (658)	45.4 (658)								
			750 4Bar	ULF	23.0 (334)	N/A							N/A		36.9 (535)	42.5 (616)	4.3 (62)							
				PTFE	24.2 (351)	N/A							N/A		38.2 (554)	43.8 (635)								
			DN100 (NPS 4)	90 Bal	20	750 2Bar	ULF	51.7 (750)	46.8 (679)				51.7 (750)	51.7 (750)	---	---	---	---	51.7 (750)	3.9 (57)				
							PTFE		51.7 (750)				51.7 (750)											
						750 3Bar	ULF		N/A				N/A								N/A			
							PTFE		N/A															
750 4Bar	ULF	N/A				N/A	N/A																	
	PTFE	N/A																						
90	40	750 2Bar		ULF	7.0 (102)			10.4 (151)	16.1 (234)	21.7 (315)	26.7 (387)	---		---	---	---	26.7 (387)	3.44 (50)						
				PTFE	7.7 (112)			11.2 (162)	16.8 (244)	22.5 (326)	27.5 (399)						27.5 (399)							
		750 3Bar		ULF	13.9 (202)			N/A					21.7 (315)				26.7 (387)		26.7 (387)					
				PTFE	14.7 (213)			N/A					22.5 (326)				27.5 (399)		27.5 (399)					
750 4Bar	ULF	13.9 (202)	N/A				N/A		22.3 (323)	25.7 (373)	4.3 (62)													
	PTFE	14.7 (213)	N/A				N/A		23.1 (335)	26.5 (384)														

Table 7. Shutoff Classification Capability for Standard Bonnet Construction and Low Strength Stem⁽¹⁾

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open Shutoff	Air to Close						
						Supply pressure						
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)
mm	mm				Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	
DN15 to 25 (NPS 1/2 to 1)	4.8	20	225 2Bar	ULF	IV,V,VI	IV,V,VI		IV,V,VI	IV,V,VI	---		
				PTFE		IV,V,VI						
			225 3Bar	ULF		N/A						
	225 4Bar	ULF	N/A									
	9.5	20	225 2Bar	ULF		IV,V	IV,V,VI		IV,V,VI	IV,V,VI	---	
				PTFE			IV,V,VI					
225 3Bar			ULF	N/A								
225 4Bar	ULF	N/A										
DN20 to 40 (NPS 3/4 to 1-1/2)	14	20	225 2Bar	ULF	IV	IV,V		IV,V,VI	IV,V,VI	---		
				PTFE		IV,V,VI						
			225 3Bar	ULF	IV,V,VI	N/A						
			PTFE	N/A								
			225 4Bar	ULF		N/A						
			225 4Bar	PTFE	N/A							
DN25 to 50 (NPS 1 to 2)	22	20	225 2Bar	ULF	IV,VI	IV,VI	IV,V,VI	IV,V,VI	IV,V,VI	---		
				PTFE		IV,V,VI						
			225 3Bar	ULF	N/A							
			225 3Bar	PTFE	N/A							
			225 4Bar	ULF	N/A							
			225 4Bar	PTFE	N/A							
DN40 to 50 (NPS 1-1/2 to 2)	36	20	225 2Bar	ULF	IV,VI	IV,VI	IV,VI	IV,V,VI	IV,V,VI	---		
				PTFE		IV,V,VI						
			225 3Bar	ULF		N/A						
			225 3Bar	PTFE		N/A						
			225 4Bar	ULF		N/A						
			225 4Bar	PTFE		N/A						
	750	20	2Bar	ULF	IV,V,VI	IV,V,VI	---	---	---	---		
				PTFE		N/A						
			750 3Bar	ULF		N/A						
			750 3Bar	PTFE		N/A						
			750 4Bar	ULF		N/A						
			750 4Bar	PTFE		N/A						
DN50 (NPS 2)	46	20	225 2Bar	ULF	---	IV,VI		IV,VI	IV,V,VI	---		
				PTFE		IV,V,VI						
			225 3Bar	ULF		IV,VI	N/A					
			225 3Bar	PTFE			N/A					
			225 4Bar	ULF			N/A					
			225 4Bar	PTFE		N/A						
	750	20	2Bar	ULF	IV,V,VI	IV,VI	---	---	---	---		
				PTFE		IV,V,VI						
			750 3Bar	ULF		N/A						
			750 3Bar	PTFE		N/A						
			750 4Bar	ULF		N/A						
			750 4Bar	PTFE		N/A						

-continued-

Table 7. Shutoff Classification Capability for Standard Bonnet Construction and Low Strength Stem⁽¹⁾ (continued)

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open	Air to Close					
					Shutoff	Supply pressure					
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)
mm	mm	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff		
DN80 (NPS 3)	36	20	750	ULF	IV,V,VI	IV,V,VI		IV,V,VI	---		
			2Bar	PTFE							
			750	ULF		N/A		N/A			
			3Bar	PTFE							
750	ULF	IV,V,VI	IV,VI		IV,V,VI	---					
2Bar	PTFE		IV,V,VI								
750	ULF	N/A		N/A							
3Bar	PTFE										
750	ULF	IV	IV		IV	---					
2Bar	PTFE		IV								
750	ULF		N/A		N/A						
3Bar	PTFE										
DN80 (NPS 3)	70 Bal	20	750	ULF	IV	IV		IV	---		
			2Bar	PTFE		IV					
			750	ULF		N/A		N/A			
			3Bar	PTFE							
DN80 -100 (NPS 3 to 4)	46	20	750	ULF	IV,V,VI	IV,VI		IV,V,VI	---		
			2Bar	PTFE		IV,V,VI					
			750	ULF		N/A		N/A			
			3Bar	PTFE							
750	ULF	IV,VI	IV,V,VI		IV,V,VI	---					
2Bar	PTFE		IV,V,VI								
750	ULF		N/A		N/A						
3Bar	PTFE										
DN80 -100 (NPS 3 to 4)	70	40	750	ULF	IV,V,VI	IV,V,VI		IV,V,VI	---		
			2Bar	PTFE		IV,V,VI					
			750	ULF		N/A		N/A			
			3Bar	PTFE							
DN80 -100 (NPS 3 to 4)	70	40	750	ULF	IV,V,VI	IV,V,VI		IV,V,VI	---		
			2Bar	PTFE		IV,V,VI					
			750	ULF		N/A		N/A			
			3Bar	PTFE							
DN100 (NPS 4)	90 Bal	20	750	ULF	IV	IV		IV	---		
			2Bar	PTFE		IV					
			750	ULF		N/A		N/A			
			3Bar	PTFE							
	90	40	750	ULF	IV,V,VI	IV,VI		IV,V,VI	---		
			2Bar	PTFE		IV,V,VI					
			750	ULF		N/A		N/A			
			3Bar	PTFE							
90	40	750	ULF	IV,V,VI	IV,VI		IV,V,VI	---			
		2Bar	PTFE		IV,V,VI						
		750	ULF		N/A		N/A				
		3Bar	PTFE								
90	40	750	ULF	IV,V,VI	IV,VI		IV,V,VI	---			
		2Bar	PTFE		IV,V,VI						
		750	ULF		N/A		N/A				
		3Bar	PTFE								
90	40	750	ULF	IV,V,VI	IV,VI		IV,V,VI	---			
		2Bar	PTFE		IV,V,VI						
		750	ULF		N/A		N/A				
		3Bar	PTFE								

1. CLVI shutoff is achieved through the use of a soft seat in ports greater than or equal to 22mm.

Table 8 contains information regarding the maximum pressure drop capability of the GX with a bellows bonnet and CW2M trim. Maximum pressure drop is

calculated at the maximum supply pressure for each construction. The allowable leakage classes are given in table 9.

Table 8. Maximum Pressure Drops with Bellows Bonnet Construction and Low Strength Stem

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open	Air to Close												
					Max ΔP	Supply pressure										Max Pressure Limits		
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply				
						bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)				
DN15 to 25 (NPS 1/2 to 1)	4.8	20	225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)	---	---	51.7 (750)	3.7 (54)						
				PTFE		N/A	51.7 (750)						---					
			225 3Bar	ULF				N/A	51.7 (750)					---				
				PTFE														
	9.5	20	225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)	---	---	51.7 (750)	3.7 (54)						
				PTFE		N/A	51.7 (750)						---					
225 3Bar			ULF	N/A				51.7 (750)	---									
			PTFE															
225 4Bar	20	225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)	---	---	51.7 (750)	3.7 (54)							
			PTFE		N/A	51.7 (750)						---						
		225 3Bar	ULF				N/A	51.7 (750)					---					
			PTFE															
DN20 to 40 (NPS 3/4 to 1-1/2)	14	20	225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)	---	---	51.7 (750)	3.7 (54)						
				PTFE		N/A	51.7 (750)						---					
			225 3Bar	ULF				N/A	51.7 (750)					---				
				PTFE														
	225 4Bar	20	225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)	---	---	51.7 (750)	3.7 (54)						
				PTFE		N/A	51.7 (750)						---					
225 3Bar			ULF	N/A				51.7 (750)	---									
			PTFE															
DN25 to 50 (NPS 1 to 2)	22	20	225 2Bar	ULF	27.3 (396)	39.2 (569)	51.7 (750)	51.7 (750)	---	---	51.7 (750)	3.7 (54)						
				PTFE	42.0 (609)	51.7 (750)												
			225 3Bar	ULF	43.4 (629)	N/A	51.7 (750)						---					
				PTFE														
	225 4Bar	20	225 2Bar	ULF	51.7 (750)			51.7 (750)		51.7 (750)	---	---		51.7 (750)	3.7 (54)			
				PTFE				N/A	51.7 (750)							---		
225 3Bar			ULF	N/A		51.7 (750)	---											
			PTFE															
DN40 to 50 (NPS 1-1/2 to 2)	36	20	225 2Bar	ULF	10.2 (148)	14.6 (212)	25.3 (367)	35.9 (521)	45.3 (657)	---	---	50.9 (738)	3.7 (54)					
				PTFE	15.7 (228)	20.1 (292)	30.8 (447)	41.4 (600)	50.8 (737)			51.7 (750)						
			225 3Bar	ULF	16.2 (235)	N/A	25.9 (376)	35.3 (512)	47.2 (685)			49.3 (715)						
				PTFE	21.7 (315)													
			225 4Bar	ULF	28.3 (410)									N/A	31.4 (455)	40.8 (592)	51.7 (750)	51.7 (750)
				PTFE	33.7 (489)													
	225 4Bar	20	225 2Bar	ULF	51.7 (750)					51.7 (750)			51.7 (750)	---	---	51.7 (750)	3.7 (54)	
				PTFE						N/A	51.7 (750)							---
			225 3Bar	ULF		N/A	51.7 (750)	---										
				PTFE														
			225 4Bar	20		225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)	---	---	51.7 (750)				3.7 (54)
							PTFE		N/A	51.7 (750)								
225 3Bar	ULF	N/A	51.7 (750)	---														
	PTFE																	
225 4Bar	20	225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)		---	---	51.7 (750)	3.7 (54)						
			PTFE		N/A	51.7 (750)									---			
225 3Bar	ULF	N/A	51.7 (750)				---											
	PTFE																	

-continued-

Table 8. Maximum Pressure Drops with Bellows Bonnet Construction and Low Strength Stem (continued)

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open	Air to Close																																																		
					Max ΔP	Supply pressure										Max Pressure Limits																																								
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply																																										
						bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)																																										
DN40 to 50 (NPS 1-1/2 to 2)	36	20	750 2Bar	ULF	48.0 (696)	33.7 (489)	---	---	---	---	---	---	---	---	---	---	47.9 (695)	2.2 (32)																																						
				PTFE	51.7 (750)	39.2 (569)											51.7 (750)																																							
			750 3Bar	ULF	48.0 (696)	N/A	N/A										N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																												
				PTFE	51.7 (750)																																																			
			750 4Bar	ULF	48.0 (696)																								N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A														
				PTFE	51.7 (750)																																																			
DN50 (NPS 2)	46	20	225 2Bar	ULF	---			9.0 (131)	15.5 (225)	22.0 (319)	27.8 (403)	---	---	---	---	---																											---	---	31.2 (453)	3.7 (54)										
				PTFE				12.3 (178)	18.8 (273)	25.4 (368)	31.1 (451)																																		34.5 (500)											
			225 3Bar	ULF	9.9 (144)	N/A	N/A	N/A	N/A	N/A	N/A	N/A					N/A	N/A	N/A	N/A	N/A	N/A	N/A	30.2 (438)	4.1 (59)																															
				PTFE	13.3 (193)																			19.2 (278)		25.0 (363)	32.3 (468)	33.6 (487)																												
			225 4Bar	ULF	17.3 (251)																			N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30.2 (438)																	
				PTFE	20.7 (300)																																		28.9 (419)	32.3 (468)	33.6 (487)															
			750 2Bar	ULF	29.4 (426)																																		20.7 (300)	N/A	N/A	N/A			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	29.4 (426)	2.2 (32)
				PTFE	32.8 (476)																																		24.0 (348)																32.7 (474)	
			750 3Bar	ULF	29.4 (426)	N/A	N/A	N/A	N/A	N/A	N/A	N/A					N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A																															
				PTFE	32.8 (476)																																																			
			750 4Bar	ULF	29.4 (426)																			N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																	
				PTFE	32.8 (476)																																																			
DN80 (NPS 3)	36	20	750 2Bar	ULF	46.4 (673)								32.1 (466)	51.7 (750)	51.7 (750)	---																								---	---	---	---	---	---	---	---	51.7 (750)	3.2 (46)							
				PTFE	51.1 (741)								36.8 (534)																																					51.7 (750)						
			750 3Bar	ULF	46.4 (673)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			N/A	N/A	N/A	N/A	N/A	N/A																																		
				PTFE	51.1 (741)																																																			
			750 4Bar	ULF	46.4 (673)																		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																			
				PTFE	51.1 (741)																																																			

-continued-

Table 8. Maximum Pressure Drops with Bellows Bonnet Construction and Low Strength Stem (continued)

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open	Air to Close											
					Max ΔP	Supply pressure										Max Pressure Limits	
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply			
						bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)			
DN80 -100 (NPS 3 to 4)	46	20	750 2Bar	ULF	28.4 (412)	19.7 (286)	41.5 (602)	51.7 (750)	---	---	---	51.7 (750)	3.2 (46)				
				PTFE	31.3 (454)	22.6 (328)	44.3 (643)										
			750 3Bar	ULF	28.4 (412)	N/A								N/A	N/A		
				PTFE	31.3 (454)												
			750 4Bar	ULF	28.4 (412)	N/A								N/A	N/A		
				PTFE	31.3 (454)												
DN80 (NPS 3)	70 Bal	20	750 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)	---	---	---	51.7 (750)	3.2 (46)				
				PTFE		N/A											
			750 3Bar	ULF	51.7 (750)	N/A		N/A	N/A								
				PTFE													
			750 4Bar	ULF	51.7 (750)	N/A		N/A	N/A								
				PTFE													
DN100 (NPS 4)	90 Bal	20	750 2Bar	ULF	51.7 (750)	46.8 (679)	51.7 (750)	51.7 (750)	---	---	---	51.7 (750)	3.2 (46)				
				PTFE		51.7 (750)											
			750 3Bar	ULF	51.7 (750)	N/A		N/A	N/A								
				PTFE													
			750 4Bar	ULF	51.7 (750)	N/A		N/A	N/A								
				PTFE													

Table 9. Shutoff Classification Capability for Bellows Bonnet Construction and Low Strength Stem⁽¹⁾

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open Shutoff	Air to Close					
						Supply pressure					
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)
mm	mm					Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff
DN15 to 25 (NPS 1/2 to 1)	4.8	20	225 2Bar	ULF	IV,V,VI	IV,V,VI		IV,V,VI	---	---	
				PTFE		N/A					IV,V,VI
			225 3Bar	ULF		N/A		IV,V,VI			
	PTFE	N/A									
	9.5	20	225 2Bar	ULF		IV,V,VI	IV,V,VI		IV,V,VI		---
				PTFE			N/A				
225 3Bar			ULF	N/A			IV,V,VI				
	PTFE	N/A									
DN20 to 40 (NPS 3/4 to 1-1/2)	14	20	225 2Bar	ULF	IV	IV,V	IV,V,VI	IV,V,VI	---		
				PTFE		N/A				IV,V,VI	
			225 3Bar	ULF		IV,V,VI	N/A		IV,V,VI		
	PTFE	N/A									
	225 4Bar	ULF	N/A		IV,V,VI						
		PTFE	N/A								
DN25 to 50 (NPS 1 to 2)	22	20	225 2Bar	ULF	IV,VI	IV,VI	IV,V,VI	IV,V,VI	---		
				PTFE		N/A				IV,V,VI	
			225 3Bar	ULF		IV,V,VI	N/A		IV,V,VI		
	PTFE	N/A									
	225 4Bar	ULF	N/A		IV,V,VI						
		PTFE	N/A								
DN40 to 50 (NPS 1-1/2 to 2)	36	20	225 2Bar	ULF	IV,VI	IV,VI	IV,VI	IV,V,VI	---		
				PTFE		N/A				IV,V,VI	
			225 3Bar	ULF		IV,V,VI	N/A		IV,V,VI		
	PTFE	N/A									
	225 4Bar	ULF	N/A		IV,V,VI						
		PTFE	N/A								
DN50 (NPS 2)	46	20	225 2Bar	ULF	---	IV,VI		IV,V,VI	---		
				PTFE		N/A				IV,V,VI	
			225 3Bar	ULF		IV,VI	N/A		IV,V,VI		
	PTFE	N/A									
	225 4Bar	ULF	N/A		IV,V,VI						
		PTFE	N/A								
DN50 (NPS 2)	46	20	750 2Bar	ULF	IV,V,VI	IV,VI	---	---	---		
				PTFE		N/A				IV,V,VI	
			750 3Bar	ULF		IV,V,VI	N/A		IV,V,VI		
	PTFE	N/A									
	750 4Bar	ULF	N/A		IV,V,VI						
		PTFE	N/A								

-continued-

Table 9. Shutoff Classification Capability for Bellows Bonnet Construction and Low Strength Stem⁽¹⁾ (continued)

Valve Size	Port Size	Max Travel	Actuator construction	ENVIRO-SEAL Packing	Air to Open	Air to Close					
					Shutoff	Supply pressure					
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)
mm	mm	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff		
DN80 (NPS 3)	36	20	750 2Bar	ULF	IV,V,VI	IV,V,VI		IV,V,VI	---	---	
				PTFE		N/A					
			750 3Bar	ULF		N/A					
				PTFE		N/A					
DN80 -100 (NPS 3 to 4)	46	20	750 2Bar	ULF	IV,V,VI	IV,VI	IV,V,VI	IV,V,VI	---	---	
				PTFE		N/A					
			750 3Bar	ULF		N/A					
				PTFE		N/A					
DN80 (NPS 3)	70 Bal	20	750 2Bar	ULF	IV	IV		IV	---	---	
				PTFE		N/A					
			750 3Bar	ULF		N/A					
				PTFE		N/A					
DN100 (NPS 4)	90 Bal	20	750 2Bar	ULF	IV	IV		IV	---	---	
				PTFE		N/A					
			750 3Bar	ULF		N/A					
				PTFE		N/A					

1. CLVI shutoff is achieved through the use of a soft seat in ports greater than or equal to 22mm.

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GX Control Valve and Actuator

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