MODEL C-PRV

PRESSURE REDUCING REGULATOR

The Model C-PRV* is a 316L SST self-contained pressure reducing regulator designed for liquid or gaseous fluids utilized in sanitary biotechnological process piping systems. The unit is capable of controlling outlet pressure between 10-75 psig (.69-5.17 Barg) with a maximum inlet pressure of 150 psig (10.3 Barg).

1" MODEL C-PRV
with Investment Cast Body

⚠ CAUTION

DO NOT APPLY IN CONTINUOUS STEAM SERVICE!

APPLICATIONS

Used in pharmaceutical industry in production of many health care products for both human and animal consumption. Widely applied for processed food production — candy, beverages, nutritional supplements and artificial sweeteners. May also be used in cosmetics production and specialty chemicals.

Would be found supporting fermenters, batching tanks, cookers, dryers and other similar equipment.

FEATURES

Clean-in-Place (CIP): Patented lock-open feature on the spring chamber area allows the regulator to be cleaned with 50 psig (3.45 Barg) cleaning solution.

Steam-in-Place (SIP): The combination of materials allows for steam-in-place up to 20 psig (1.38 Barg) of saturated steam.

Self-Draining: Angle style body with bottom inlet and side outlet.

Readily Accessible: Unit can be easily and quickly disassembled in line for inspection and manual cleaning without the use of tools.

Polished Interior: Interior of body surface polished to 10 micro-inch R_a finish with electro-polished exterior.

Wetted Materials Construction: All metallic wetted parts of 316LSST. All diaphragms and some plug/stem selections are of non-metallic materials. Unit is cleaned to Cashco Spec. #S-1576.

Contained Guiding: All guiding for the plug is contained in the spring chamber area to eliminate particle generation.

3A Construction: Selection of the metallic plug/stem constructions meets 3A Sanitary Standards, Authorization No. 782.

ISO 9001 Registered

@SF

* Patented

SPECIFICATIONS

Body Connections: Sanitary "Tri-Clamp® " designed to seal against weld-type clamp liners per ISO 2852. (Lower inlet, side outlet connection.)

Body Size and Material: **1" and 1-1/2" (25 and 40 mm) size.** ASTM A182, Gr. F316L; Forged 316L SST for superior quality and finish. Interior and exterior of body material is electro-polished.

1" (25 mm) size only. ASTM A351, Gr. CF3M; Investment Cast 316L SST. Interior of standard body material is mechanically polished to 10 micro-inch R_a finish with electro-polished exterior.

See Table 4 for dimensions.

Spring Chamber: ASTM A351, Gr. CF8M; Cast 316 SST. Electro-polished.

Body Design Pressure Rating: 150 psig (10.3 Barg); inlet & outlet.

Range Springs: SST.

psig	(Barg)
10-30	(.69 - 2.07)
10-75	(.69-5.17)

NOTE: *Contact the factory for settings below 10 psig (.69 Barg).*

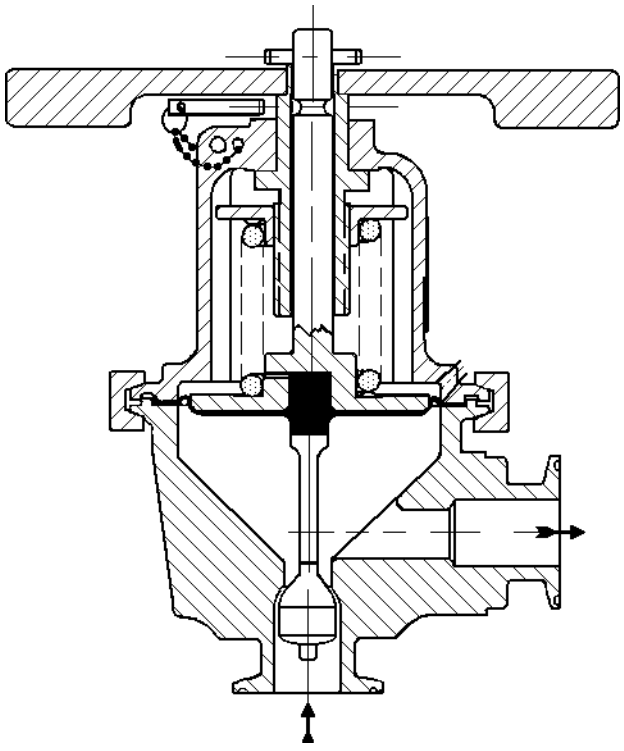


Figure 1: Forged Body, Model C-PRV

Operating Temperature: 40° to 300°F (4° to 149°C)

Maximum Pressure Drop: Function of range spring and set-point pressure utilized; *see Table 1.*

Maximum CIP Conditions: Maximum Cleaning Fluid: Pressure = 50 psig (3.45 Barg); Temperature = 300°F (149°C).

Maximum SIP Conditions: Maximum Steaming Fluid: Saturated; Recommended Pressure at 20 psig (1.38 Barg); Acceptable Pressure to 30 psig (2.07 Barg), but with reduced elastomer life.

Capacity: Up to 5.0 Cv. See Table 1.

Max C_v with Plug Locked Wide Open (Use for Relief Valve Sizing)

Body Size		
Inch	(mm)	Cv
1"	(25)	5.0
1-1/2"	(40)	9.5

Wetted Trim Materials:

Trim Material Combinations (Non-3A)		
	Trim Designation Nos.	
Part	R1	R3
Diaphragm *	EPDM	Silicone
Stem & Plug	Ryton® **	Ryton® **

* Diaphragms are molded to stem. These materials conform with FDA Code of Federal Regulations Title 21, Part 177.2600.

** Ryton® -polyphenylene sulfide - a thermoplastic, conforms with FDA Code of Federal Regulations Title 21, Part 177.2490. Both the Ryton® Stem, Plug and adhesive were submitted and approved as meeting the standards of USP XXII, Class V Biological Test for Plastics, Case Study #T91M0152 and #T91M0158, respectively, and are on file.

Trim Material Combinations (3A Approved)		
	Trim Designation Nos.	
Part	**LE**	**LC**
Diaphragm *	EPDM	Silicone
Stem & Plug	316LSST	316LSST

* Diaphragms are molded to stem. These materials conform with FDA Code of Federal Regulations Title 21, Part 177.2600.
The adhesive was submitted and approved as meeting the standards of USP XXII, Class V Biological Test for Plastics, Case Study #T91M0158 is on file.

Non-Wetted Trim Materials: Castings - CF8M (316SST)
Barstock - 18-8 SST
All cast parts electro-polished.

Special Cleaning: All units are cleaned per Cashco Spec. #S-1576.

APPLICATION AND SELECTION

Pressure reducing regulators are control devices intended for continuous duty in throttling service. These regulators are not designed for shutoff service. The following procedure will help determine the minimum suitable selection for an application.

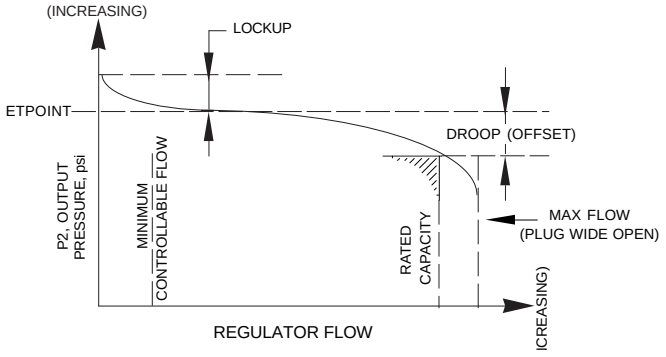
STEP 1. FIVE KNOWNS. The following minimal parameters / information must be available before a selection procedure can begin:

a. Service Fluid - What is it? Liquid or gas? SG (std. cond.).
b. Inlet Pressure - P_1 (upstream pressure).
c. Outlet Pressure - P_2 (downstream pressure). How much can P_2 vary as flow varies?
d. Desired capacity - Cv, GPM, SCFH; minimum & maximum.
e. Fluid temperature - T_1, SG (actual).

STEP 2. INLET PRESSURE. Assure that the actual design inlet pressure and temperature limits do not exceed the limits indicated in the Specifications section.

STEP 3. PRESSURE DROP. Check the maximum pressure drop (P_1- P_2) in Table 1.

STEP 4. OUTLET PRESSURE. All self-contained pressure reducing regulators "droop" or "falloff" from a setpoint pressure level at a given flow as the flow rate increases.



This deviation in setpoint is described as "% droop". Droop is expressed on increasing flow, starting from a minimum flow level.

The "% droop" must be known to enter the capacity tables. The acceptable level of setpoint deviation should be known for the min-to-max flow variation.

A regulator may have a setpoint up to 15% below the lower stated range spring level. (Tags will show the standard ranges.) A setpoint above the higher range spring level is not recommended. Setpoint at the upper limit of a range spring is acceptable. If final setpoint is questionable and expected near the upper limit, the next higher range spring should be utilized. Best performance will be obtained when the lowest range spring is utilized.

STEP 5. CAPACITY. Using the five knowns of Step 1, calculate the required C_v. If a liquid, determine the flow description – non-, partial, excess partial, or full cavitation. DO NOT APPLY MODEL C-PRV IN "EXCESSIVE PARTIAL CAVITATION" OR "FULL CAVITATION" CONDITIONS!!

For liquids that are cavitating, consideration should be given to use multiple units in series to state the pressure and prevent excessive partial or full cavitation from occurring.

For Example:

Fluid = Water
GPM = 10.0 Max., 4.0 Min.
P_1 = 120 psig
P_2 = 25 psig
T_1 = 180°F

Preliminary Calc. C_v = 1.09
Flow Description = FULL CAVITATION
.. Must Stage

1st Stage

P_1 = 120 psig
P_2 = 55 psig
Calc. C_v = 1.22
Flow Descript = Non-Cavitating
% Droop (deviation of setpoint) = 11%
10-75 psig range spring
Set 55 psig

2nd Stage

P_1 = 55 psig
P_2 = 25 psig
Calc. C_v = 1.8
Flow Descript = Non-Cavitating
% Droop (deviation of setpoint) = 15%
10-30 psig range spring
Set 25 psig

Spacing between in-series units must be a minimum of 2 feet (0.6 meters).

STEP 6. TRIM MATERIAL. Select the desired trim material with 3A Approval applying to LE and LC trims.

Refer to IOM-C-PRV for complete cleaning procedures and maintenance instructions.

TECHNICAL SPECIFICATIONS

TABLE 1
CAPACITY - Cv (F_L = .8)

Max. Inlet		Set Pressure		1" (25mm) SIZE		1-1/2" (40mm) SIZE			Max. Pressure Drop	
				Range Spring 10-30 psig		Range Spring 10-30 psig				
				Droop		Droop				
psig	Barg	psig	Barg	10%	20 %	10%	20%	30%	psid	(Bard)
60	(4.1)	10	(.69)	.56	.94	.94	1.52	2.04	52	(3.59)
65	(4.4)	15	(1.03)	.75	1.35	1.16	2.02	2.66	53	(3.65)
70	(4.8)	20	(1.38)	1.24	1.99	1.41	2.31	3.16	54	(3.72)
75	(5.1)	25	(1.72)	1.36	2.18	1.72	2.69	3.56	55	(3.79)
80	(5.5)	30	(2.07)	2.07	2.33	1.85	3.05	3.92	56	(3.86)
Max. Inlet		**Set Pressure**		**Range Spring 10-75 psig**		**Range Spring 10-75 psig**			**Max. Pressure Drop**	
				Droop		**Droop**				
psig	**Barg**	**psig**	**Barg**	**10%**	**20%**	**10%**	**20%**	**30%**	**psid**	**(Bard)**
110	(7.5)	10	(.69)	.35	.59	.41	.68	.99	102	(7.03)
115	(7.9)	15	(1.03)	.48	.75	.65	1.05	1.35	103	(7.10)
120	(8.2)	20	(1.38)	.59	.92	.76	1.28	1.70	104	(7.17)
125	(8.6)	25	(1.72)	.65	1.14	.91	1.47	1.99	105	(7.24)
130	(8.9)	30	(2.07)	.75	1.38	1.00	1.71	2.26	106	(7.31)
135	(9.3)	35	(2.41)	.86	1.55	1.10	1.86	2.51	107	(7.38)
140	(9.6)	40	(2.75)	.92	1.70	1.33	2.00	2.68	108	(7.45)
145	(10.0)	45	(3.10)	1.00	1.90	1.48	2.19	2.97	109	(7.51)
150	(10.3)	50	(3.45)	1.14	2.05	1.63	2.81	3.32	110	(7.59)
150	(10.3)	55	(3.79)	1.15	2.10	1.84	3.07	3.69	106	(7.31)
150	(10.3)	60	(4.14)	1.21	2.15	1.88	3.15	3.98	102	(7.03)
150	(10.3)	65	(4.48)	1.31	2.25	1.94	3.23	4.30	98	(6.76)
150	(10.3)	70	(4.83)	1.39	2.39	2.00	3.38	4.62	94	(6.48)
150	(10.3)	75	(5.17)	1.44	2.49	2.44	3.69	4.94	90	(6.20)

TABLE 2
WATER CAPACITY — GPM
S.G = 1.0 T = 60° F_L = 0.8

10-30 psig RANGE SPRING								
Outlet Pressure	Inlet Pressure	1" (25mm) SIZE			1-1/2" (40mm) SIZE			
		Droop			Droop			
P2, psig	P1, psig	10%	20%	Max. GPM	10%	20%	30%	Max. GPM
10	25	2.2	3.9	22.4	3.8	6.3	9.1	**42.5**
	30	2.6	4.4	**25.0**	4.3	7.1	**10.2**	**47.5**
	35	2.9	4.9	**27.4**	4.8	7.9	**11.2**	**52.0**
	40	**3.1**	**5.3**	**29.5**	**5.2**	**8.6**	**12.0**	**56.1**
	50	**3.6**	**6.0**	**32.1**	**6.0**	**9.8**	**13.1**	**61.0**
	60	**3.9**	**6.5**	HI DP	**6.5**	**10.5**	HI DP	HI DP
	70	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
15	25	2.5	4.9	20.9	3.9	7.3	11.1	**39.7**
	30	3.0	5.7	23.7	4.7	8.6	12.6	**45.1**
	35	3.5	6.5	**26.2**	5.4	9.7	**13.9**	**49.8**
	40	3.9	7.1	**28.5**	6.0	10.7	**15.2**	**54.2**
	50	**4.5**	**8.3**	**32.1**	**7.0**	**12.5**	**17.1**	**61.0**
	60	**5.1**	**9.3**	**34.5**	**7.9**	**13.9**	**18.4**	**65.6**
	70	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
20	25	3.3	6.0	19.4	3.7	6.9	12.2	**36.8**
	30	4.3	7.4	22.4	4.9	8.6	14.1	**42.5**
	35	5.1	8.7	25.0	5.8	10.1	15.8	**47.5**
	40	5.8	9.7	**27.4**	6.6	11.3	**17.3**	**52.0**
	50	7.0	11.6	**31.6**	8.0	13.5	**20.0**	**60.1**
	60	**8.0**	**13.2**	34.5	**9.1**	**15.3**	**21.8**	**65.6**
	70	**8.9**	**14.6**	HI DP	**10.2**	**17.0**	HI DP	HI DP
	80	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
25	30	3.7	6.9	20.9	4.7	8.5	14.9	**39.7**
	35	4.8	8.4	23.7	6.1	10.4	16.9	**45.1**
	40	5.7	9.7	26.2	7.2	12.0	18.7	**49.8**
	50	7.1	11.9	**30.6**	9.0	14.7	**21.8**	**58.2**
	60	8.3	13.8	**34.5**	10.5	17.0	**24.5**	65.5
	70	**9.4**	**15.4**	HI DP	**11.9**	**19.0**	HI DP	HI DP
	80	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
30	35	5.9	7.7	22.4	5.2	10.1	17.5	**42.5**
	40	7.5	9.3	25.0	6.7	12.2	19.6	**47.5**
	50	9.9	11.9	29.6	8.9	15.6	23.2	**56.2**
	60	11.9	14.0	**33.5**	10.6	18.3	**26.3**	**63.7**
	70	13.6	15.8	**36.8**	12.1	20.7	28.8	69.8
	80	**15.1**	**17.4**	HI DP	**13.5**	**22.8**	HI DP	HI DP

Moderate level of cavitation. *Full cavitation.*

NOTE: *Where "HI DP" is indicated, the actual pressure drop has exceeded the recommended limits in Table 1.*

TABLE 2 (cont.): WATER CAPACITY — GPM
S.G = 1.0 T = 60° F_L = 0.8

10-75 psig RANGE SPRING								
Outlet Pressure P2, psig	Inlet Pressure P1, psig	1" (25mm) SIZE Droop 10%	1" (25mm) SIZE Droop 20%	1" (25mm) SIZE Max. GPM	1-1/2" (40mm) SIZE Droop 10%	1-1/2" (40mm) SIZE Droop 20%	1-1/2" (40mm) SIZE Droop 30%	1-1/2" (40mm) SIZE Max. GPM
10	25	1.4	2.4	22.4	1.6	2.8	4.4	42.5
	30	1.6	2.8	25.0	1.9	3.2	5.0	47.5
	35	1.8	3.1	27.4	2.1	3.5	5.4	52.0
	40	1.9	3.3	29.5	2.3	3.8	5.8	56.1
	50	2.2	3.8	32.1	2.6	4.4	6.4	61.0
	60	2.4	4.1	34.5	2.8	4.7	6.8	65.6
	70	2.6	4.3	36.8	3.0	5.0	7.3	69.8
	80	2.7	4.6	38.9	3.2	5.3	7.7	73.9
	90	2.9	4.8	40.9	3.4	5.6	8.1	77.7
	100	3.0	5.0	42.8	3.5	5.8	8.5	81.3
	125	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
15	25	1.6	2.7	20.9	2.2	3.8	5.6	39.7
	30	1.9	3.2	23.7	2.6	4.5	6.4	45.1
	35	2.2	3.6	26.2	3.0	5.0	7.1	49.8
	40	2.5	4.0	28.5	3.3	5.6	7.7	54.2
	50	2.9	4.6	32.1	3.9	6.5	8.7	61.0
	60	3.3	5.2	34.5	4.4	7.2	9.3	65.6
	70	3.5	5.5	36.8	4.8	7.7	9.9	69.8
	80	3.7	5.8	38.9	5.1	8.2	10.5	73.9
	90	3.9	6.1	40.9	5.3	8.6	11.0	77.7
	100	4.1	6.4	42.8	5.6	9.0	11.6	81.3
	125	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
20	25	1.6	2.8	19.4	2.0	3.8	6.6	36.8
	30	2.0	3.4	22.4	2.6	4.8	7.6	42.5
	35	2.4	4.0	25.0	3.1	5.6	8.5	47.5
	40	2.8	4.5	27.4	3.6	6.3	9.3	52.0
	50	3.3	5.4	31.6	4.3	7.5	10.8	60.1
	60	3.8	6.1	34.5	4.9	8.5	11.7	65.6
	70	4.3	6.8	36.8	5.5	9.4	12.5	69.8
	80	4.6	7.2	38.9	5.9	10.0	13.2	73.9
	90	4.8	7.5	40.9	6.2	10.5	13.9	77.7
	100	5.0	7.9	42.8	6.5	11.0	14.5	81.3
	125	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
25	30	1.8	3.6	20.9	2.5	4.6	8.3	39.7
	35	2.3	4.4	23.7	3.2	5.7	9.4	45.1
	40	2.7	5.1	26.2	3.8	6.6	10.4	49.8
	50	3.4	6.2	30.6	4.8	8.1	12.2	58.2
	60	4.0	7.2	34.5	5.6	9.3	13.7	65.5
	70	4.5	8.1	36.8	6.3	10.4	14.6	69.8
	80	4.9	8.8	38.9	6.9	11.4	15.5	73.9
	90	5.3	9.3	40.9	7.4	12.0	16.3	77.7
	100	5.6	9.8	42.8	7.8	12.6	17.0	81.3
	125	6.1	10.8	HI DP	8.6	13.9	HI DP	HI DP
	150	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
30	35	2.1	4.6	22.4	2.8	5.7	10.1	42.5
	40	2.7	5.5	25.0	3.6	6.8	11.3	47.5
	50	3.6	7.0	29.6	4.8	8.7	13.4	56.2
	60	4.3	8.3	33.5	5.7	10.3	15.2	63.7
	70	4.9	9.4	36.8	6.6	11.6	16.6	69.8
	80	5.5	10.3	38.9	7.3	12.8	17.6	73.9
	90	6.0	11.2	40.9	7.9	13.9	18.5	77.7
	100	6.4	11.8	42.8	8.5	14.6	19.3	81.3
	125	7.1	13.0	HI DP	9.4	16.2	HI DP	HI DP
	150	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
35	40	2.5	5.4	23.7	3.2	6.4	11.9	45.1
	50	3.7	7.3	28.5	4.7	8.7	14.3	54.2
	60	4.6	8.8	32.6	5.9	10.5	16.4	61.9
	70	5.3	10.0	36.2	6.8	12.1	18.2	68.8
	80	6.0	11.2	38.9	7.7	13.4	19.5	73.9
	90	6.6	12.2	40.9	8.4	14.6	20.5	77.7
	100	7.1	13.2	42.8	9.1	15.8	21.5	81.3
	125	8.1	14.6	HI DP	10.4	17.6	HI DP	HI DP
	150	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
40	50	3.4	7.2	27.4	5.0	8.5	14.7	52.0
	60	4.5	9.0	31.6	6.5	10.6	16.9	60.1
	70	5.4	10.5	35.4	7.8	12.3	19.0	67.2
	80	6.1	11.8	38.7	8.8	13.9	20.8	73.6
	90	6.8	12.9	40.9	9.8	15.2	21.9	77.7
	100	7.4	14.0	42.8	10.6	16.5	22.9	81.3
	125	8.7	16.1	47.2	12.5	18.9	25.3	89.7
	150	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
45	50	3.1	7.1	26.2	4.6	8.2	15.6	49.8
	60	4.4	9.3	30.6	6.5	10.7	18.2	58.2
	70	5.4	11.1	34.5	8.0	12.8	20.5	65.5
	80	6.3	12.6	37.9	9.3	14.5	22.5	72.0
	90	7.0	14.0	40.9	10.4	16.1	24.3	77.7
	100	7.7	15.2	42.8	11.4	17.5	25.4	81.3
	125	9.2	17.9	47.2	13.6	20.7	28.1	89.7
	150	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
50	60	4.4	9.2	29.6	6.3	12.6	19.6	56.2
	70	5.7	11.2	33.5	8.2	15.4	22.3	63.7
	80	6.7	13.0	37.1	9.6	17.8	24.6	70.5
	90	7.6	14.5	40.3	10.9	19.9	26.8	76.6
	100	8.5	15.9	42.8	12.1	21.8	28.4	81.3
	125	10.2	18.9	47.2	14.6	25.9	31.4	89.7
	150	11.7	21.0	HI DP	16.7	28.8	HI DP	HI DP
60	70	4.8	10.1	31.6	7.5	14.8	25.2	60.1
	80	6.2	12.2	35.4	9.6	17.8	28.1	67.2
	90	7.3	13.9	38.7	11.3	20.4	30.8	73.6
	100	8.2	15.5	41.8	12.8	22.7	33.3	79.5
	125	10.2	18.9	47.2	15.8	27.6	37.6	89.7
	150	11.9	21.7	HI DP	18.4	31.8	HI DP	HI DP
75	80	5.1	11.1	32.6	8.6	16.5	32.2	61.9
	90	6.8	13.6	36.2	11.6	20.2	35.8	68.8
	100	8.2	15.7	39.5	13.9	23.3	39.1	75.1
	125	10.9	20.1	46.8	18.5	29.7	46.2	88.9
	150	13.1	23.6	HI DP	22.2	35.0	HI DP	HI DP

Moderate level of cavitation. *Full cavitation.*

NOTE: *Where "HI DP" is indicated, the actual pressure drop has exceeded the recommended limits in Table 1.*

TABLE 3
NITROGEN CAPACITY — SCFH
S.G = 0.987 T = 60° (F_L = 0.8)

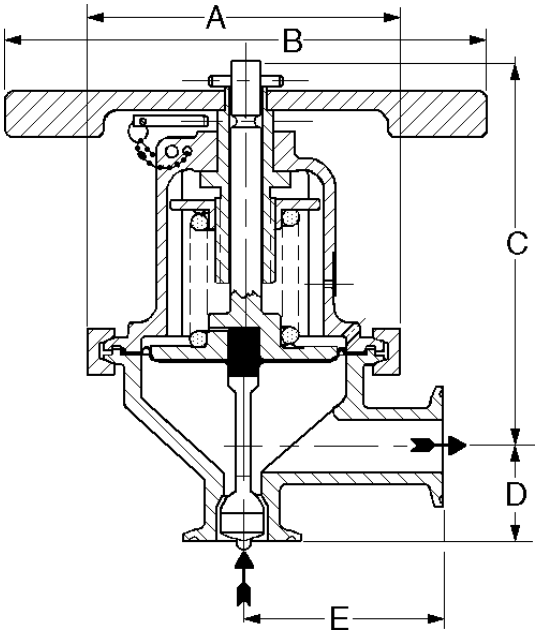
10–30 psig RANGE SPRING								
Outlet Pressure P2, psig	Inlet Pressure P1, psig	SCFH @ 1" (25 mm) SIZE			SCFH @ 1-1/2" (40 mm) SIZE			
		Droop			Droop			
		10%	20%	Max. SCFH	10%	20%	30%	Max. SCFH
10	25	660	1,110	5,880	1,110	1,790	2,400	11,180
	30	740	1,250	6,620	1,250	2,010	2,700	12,590
	35	820	1,380	7,370	1,380	2,240	3,010	14,000
	40	910	1,520	8,110	1,520	2,460	3,310	15,400
	50	1,070	1,800	9,590	1,800	2,920	3,910	18,220
	60	1,240	2,080	HI DP	2,080	3,370	HI DP	HI DP
	70	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
15	25	860	1,550	5,720	1,330	2,310	3,050	10,880
	30	990	1,790	6,610	1,530	2,670	3,520	12,560
	35	1,100	1,990	7,370	1,710	2,980	3,920	14,000
	40	1,220	2,190	8,110	1,880	3,280	4,310	15,400
	50	1,440	2,590	9,590	2,220	3,870	5,100	18,220
	60	1,660	2,990	11,070	2,570	4,470	5,890	21,030
	70	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
20	25	1,170	1,880	4,720	1,330	2,180	2,980	8,960
	30	1,540	2,470	6,210	1,750	2,870	3,920	11,790
	35	1,800	2,880	7,240	2,040	3,350	4,580	13,760
	40	2,010	3,220	8,090	2,280	3,740	5,110	15,370
	50	2,380	3,820	9,590	2,700	4,430	6,060	18,220
	60	2,750	4,410	11,070	3,120	5,110	7,000	21,030
	70	3,110	5,000	HI DP	3,540	5,800	HI DP	HI DP
	80	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
25	30	1,350	2,160	4,960	1,710	2,670	3,530	9,430
	35	1,800	2,890	6,630	2,280	3,570	4,720	12,590
	40	2,120	3,400	7,790	2,680	4,190	5,550	14,810
	50	2,600	4,170	9,570	3,290	5,150	6,810	18,180
	60	3,010	4,830	11,070	3,810	5,960	7,880	21,030
	70	3,410	5,470	HI DP	4,320	6,750	8,940	HI DP
	80	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
30	35	2,150	2,420	5,190	1,920	3,170	4,070	9,860
	40	2,900	3,270	7,010	2,590	4,270	5,490	13,310
	50	3,860	4,350	9,330	3,450	5,690	7,310	17,730
	60	4,570	5,150	11,050	4,090	6,740	8,660	21,000
	70	5,200	5,850	12,550	4,640	7,660	9,840	23,850
	80	5,810	6,540	HI DP	5,190	8,560	HI DP	HI DP

NOTE: *Where "HI DP" is indicated, the actual pressure drop has exceeded the recommended limits in Table 1.*

TABLE 3 (cont.): NITROGEN CAPACITY — SCFH
S.G = 0.987 T = 60° (F_L = 0.8)

10–75 psig RANGE SPRING								
Outlet Pressure	Inlet Pressure	SCFH @ 1" (25 mm) SIZE			SCFH @ 1-1/2" (40 mm) SIZE			
		Droop			Droop			
P2, psig	P1, psig	10%	20%	Max. SCFH	10%	20%	30%	Max. SCFH
10	25	410	690	5,880	480	800	1,160	11,180
	30	460	780	6,620	540	900	1,310	12,590
	35	520	870	7,370	600	1,000	1,460	14,000
	40	570	960	8,110	660	1,100	1,610	15,400
	50	670	1,130	9,590	790	1,300	1,900	18,220
	60	770	1,310	11,070	910	1,510	2,190	21,030
	70	880	1,480	12,550	1,030	1,710	2,490	23,850
	80	980	1,660	14,040	1,150	1,910	2,780	26,670
	90	1,090	1,830	15,520	1,270	2,110	3,070	29,480
	100	1,190	2,010	17,000	1,390	2,310	3,370	32,300
	125	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
15	25	550	860	5,720	740	1,200	1,550	10,880
	30	630	990	6,610	860	1,390	1,790	12,560
	35	710	1,100	7,370	960	1,550	1,990	14,000
	40	780	1,220	8,110	1,050	1,700	2,190	15,400
	50	920	1,440	9,590	1,250	2,010	2,590	18,220
	60	1,060	1,660	11,070	1,440	2,320	2,990	21,030
	70	1,210	1,880	12,550	1,630	2,640	3,390	23,850
	80	1,350	2,110	14,040	1,820	2,950	3,790	26,670
	90	1,490	2,330	15,520	2,020	3,260	4,190	29,480
	100	1,630	2,550	17,000	2,210	3,570	4,590	32,300
	125	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
20	25	560	870	4,720	720	1,210	1,600	8,960
	30	730	1,140	6,210	940	1,590	2,110	11,790
	35	850	1,330	7,240	1,100	1,850	2,460	13,760
	40	950	1,490	8,090	1,230	2,070	2,750	15,370
	50	1,130	1,760	9,590	1,460	2,450	3,260	18,220
	60	1,310	2,040	11,070	1,680	2,830	3,760	21,030
	70	1,480	2,310	12,550	1,910	3,210	4,270	23,850
	80	1,660	2,580	14,040	2,130	3,590	4,770	26,670
	90	1,830	2,860	15,520	2,360	3,970	5,280	29,480
	100	2,010	3,130	17,000	2,580	4,350	5,780	32,300
	125	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
25	30	640	1,130	4,960	900	1,460	1,970	9,430
	35	860	1,510	6,630	1,210	1,950	2,640	12,590
	40	1,010	1,780	7,790	1,420	2,290	3,100	14,810
	50	1,240	2,180	9,570	1,740	2,810	3,810	18,180
	60	1,440	2,520	11,070	2,010	3,250	4,410	21,030
	70	1,630	2,860	12,550	2,280	3,690	5,000	23,850
	80	1,820	3,200	14,040	2,550	4,130	5,590	26,670
	90	2,020	3,540	15,520	2,820	4,560	6,180	29,480
	100	2,210	3,880	17,000	3,090	5,000	6,770	32,300
	125	2,690	4,720	HI DP	3,770	6,090	HI DP	HI DP
	150	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
30	35	780	1,430	5,190	1,040	1,780	2,350	9,860
	40	1,050	1,930	7,010	1,400	2,400	3,170	13,310
	50	1,400	2,580	9,330	1,870	3,190	4,220	17,730
	60	1,660	3,050	11,050	2,210	3,780	4,990	21,000
	70	1,880	3,460	12,550	2,510	4,290	5,670	23,850
	80	2,110	3,870	14,040	2,810	4,800	6,340	26,670
	90	2,330	4,280	15,520	3,100	5,310	7,010	29,480
	100	2,550	4,690	17,000	3,400	5,810	7,680	32,300
	125	3,110	5,710	HI DP	4,140	7,080	9,360	HI DP
	150	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
35	40	930	1,680	5,410	1,190	2,010	2,720	10,280
	50	1,500	2,710	8,750	1,920	3,250	4,390	16,620
	60	1,860	3,360	10,840	2,390	4,030	5,440	20,600
	70	2,160	3,880	12,530	2,760	4,660	6,290	23,810
	80	2,410	4,350	14,040	3,090	5,220	7,050	26,670
	90	2,670	4,810	15,520	3,410	5,770	7,790	29,480
	100	2,920	5,270	17,000	3,740	6,320	8,530	32,300
	125	3,560	6,420	HI DP	4,550	7,700	10,390	HI DP
	150	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
45	50	1,160	2,210	5,820	1,720	2,550	3,460	11,060
	60	1,910	3,640	9,570	2,830	4,190	5,680	18,180
	70	2,390	4,540	11,950	3,540	5,230	7,100	22,700
	80	2,770	5,260	13,840	4,100	6,060	8,220	26,300
	90	3,100	5,890	15,490	4,580	6,780	9,200	29,430
	100	3,400	6,460	17,000	5,030	7,450	10,100	32,300
	125	4,140	7,870	20,700	6,130	9,070	12,300	39,340
	150	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP	HI DP
50	60	1,890	3,400	8,290	2,700	4,660	5,510	15,750
	70	2,580	4,630	11,300	3,680	6,350	7,500	21,460
	80	3,080	5,530	13,490	4,400	7,580	8,960	25,640
	90	3,500	6,290	15,330	5,000	8,620	10,180	29,130
	100	3,870	6,960	16,970	5,530	9,540	11,270	32,240
	125	4,720	8,490	20,700	6,750	11,640	13,750	39,340
	150	5,570	10,010	HI DP	7,960	13,720	HI DP	HI DP
60	70	2,140	3,800	8,850	3,330	5,570	7,040	16,810
	80	2,940	5,220	12,130	4,560	7,640	9,660	23,050
	90	3,520	6,250	14,540	5,470	9,160	11,570	27,630
	100	4,000	7,110	16,540	6,220	10,420	13,170	31,430
	125	5,010	8,900	20,700	7,780	13,040	16,470	39,320
	150	5,910	10,500	HI DP	9,180	15,380	HI DP	HI DP
75	80	1,990	3,440	6,900	3,370	5,090	6,820	13,110
	90	3,350	5,790	11,620	5,670	8,580	11,480	22,080
	100	4,230	7,320	14,690	7,170	10,840	14,520	27,920
	125	5,800	10,030	20,140	9,830	14,870	19,900	38,280
	150	7,020	12,130	HI DP	11,890	17,980	HI DP	HI DP

NOTE: *Where "HI DP" is indicated, the actual pressure drop has exceeded the recommended limits in Table 1.*



INVESTMENT CAST BODY
MODEL C-PRV

TABLE 4
DIMENSIONS & WEIGHTS

ENGLISH UNITS

Regulator Size (Inches)	FORGED BODY-inch					Shipping Weight lbs.
	A	B	C	D	E	
1"	7.50	8.00	6.72	2.00	3.31	18
1-1/2"	7.50	8.00	6.72	2.00	3.31	22
INVESTMENT CAST BODY						
1"	7.50	8.00	6.66	1.59	3.31	11

METRIC UNITS

Regulator Size (mm)	FORGED BODY-mm					Shipping Weight kgs.
	A	B	C	D	E	
(25)	190	203	171	50	84	8.1
(40)	190	203	171	50	84	9.9
INVESTMENT CAST BODY						
(25)	190	203	169	40	84	5.0

PRODUCT CODE 11/01/94

TABLE 2

SST BODY / SPRING CHAMBER	BODY SIZES	*CODE*
316L Forged Body / 316 Investment Cast	All	***F***
316L Investment Cast / 316 Investment Cast	1" only	***M***

TABLE 3

STAINLESS STEEL TRIM			
DESIG. NO.	*CODE*	DESIG. NO.	*CODE*
R1	***R1***	LE	***LE***
R3	***R3***	LC	***LC***
NON-3A APPROVED		3A APPROVED	

TABLE 1

SIZE	*CODE*
1"	***6***
1-1/2"	***8***

TABLE 4

SST RANGE SPRING	
PSIG	*CODE*
10-30	***1***
10-75	***2***

Body/Spg. Chamber Material

Trim Designation

Size

Tri-Clamp Fitting Connections

Range spring

CL □ – □ □□ 7 – 1 □ 0 0 0 0 0 0 B

MODEL "C-PRV"
PRESSURE REDUCING REGULATOR

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