GUJARAT GAS

DATASHEET OF
CREEP RELIEF VALVE (CRV)

Document No.: GGL/TS/DS/CRV/2017/001-R1

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DATASHEET OF CREEP RELIEF VALVE (CRV)		
Sr. No.	**Technical Description**	**Specifications**
General		
1	Tag No.	Vendor to Furnish
2	Valve Inlet Size	Vendor to Furnish
3	Valve Outlet Size	Vendor to Furnish
4	Service	Dry Natural Gas
5	Governing Standard	PNGRB T4S – CGD (In line with requirement of discharge rate limited to maximum 1% of flow capacity)
6	Testing Standard	API 527 - Seat tightness of safety/relief valves with metal to metal & soft seats
7	Operation	To protect SSV from inadvertent operation due to failure of active regulator to "lock up" during periods of low demand for gas.
8	Type	Spring loaded type diaphragm valve
9	Mounting	Regulators Downstream
Service		
10	Design Pressure & Class	19 Barg for 150 #, 49 barg for 300#, 98 barg for 600#
11	Design Temperature	150# & 300# : 0 to 65 ˚C 600# : -10 to 65 ˚C
12	Operating Pressure	10 to 40 Barg (or as per user requirement)
13	Operating Temperature	150# / 300# : 0 to 50 ˚C 600# : -10 to 50 ˚C
14	Flow Capacity of Skid	As per user requirement
Construction of Valve		
15	Type	Spring diaphragm type back pressure regulator
16	Nozzle Type	Direct Operated
17	Bonnet Type	Closed
18	Inlet & Outlet End Connection	Flanged connection
19	Inlet & Outlet Connection : Facing	RF Serrated, 125-250 AARH
20	Inlet Pressure Rating	150#/ 300#/600# Class
21	Outlet Pressure Rating	150# Class
22	Test Gag	Not applicable
23	Cap Over Adjustable Nut	Yes
24	Screwed / Bolted	Bolted
Material of Construction		
25	Body Material	a) 150#/ 300#: ASTM A216 Gr. WCB (Charpy test at 0 deg.C) b) 600#: ASTM A 350 Gr. LF2
26	Bonnet Material	a) 150#/ 300#: ASTM A216 Gr. WCB (Charpy test at 0 deg.C) b) 600#: ASTM A 350 Gr. LF2
27	Cap Material	a) 150#/ 300#: ASTM A216 Gr. WCB (Charpy test at 0 deg.C) b) 600#: ASTM A 350 Gr. LF2

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28	Nozzle/Disc/Guide	ASTM A 479 Gr. SS 316
29	Diaphragm	Fabric NBR+PVC/Nitrile Rubber
30	Spring	Chrome Alloy/SS 316
Requirements		
31	Radiography	100%
32	Charpy V-Notch Test	Required (at 0 deg C)
33	Leakage Class	VI
34	Spring Set Range	3 to 6 Barg **(or as per user requirement)**
35	Spring Range Capacity	2 to 6 Barg **(or as per user requirement)**
36	Body Hydro Test	1.5 * Design Pressure
37	Seat Hydro Test	1.2 * Design Pressure
38	Pneumatic Test	1.1 * Design Pressure
Valve Calculation		
41	Corrosion Allowance	1.5 mm
40	Required Flow Capacity	Vendor to Furnish
41	Mol. Wt. / S.G.	17.7 g/mol/ 0.6
42	Gas Relief Capacity	should not exceed 1 % of skid design capacity
43	Cp/Cv	1.27
44	Compressibility	0.98 to 0.997
45	Viscosity at Relative Temperature	0.022 cp
46	Vessel Surface Area-m2/Wall Temp	Vendor to Furnish
47	Calculated Area m2	Vendor to Furnish
48	Selected Area - cm2	Vendor to Furnish
49	Orifice Design	Vendor to Furnish
50	No. of Valve Required for Capacity	Vendor to Furnish
51	Total Area - cm2	Vendor to Furnish
52	Actual Flow Capacity	Vendor to Furnish
Note:		
1. Vendor shall provide sizing Calculation sheet.		
2. 100% Radiography applicable on casting.		
3. In case diaphragm type valve, separate calculation should be submitted by Vendor to demonstrate the required valve sizing.		

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