



APPLICATION

Pressure relief valve manifold RG is designed especially for use as a primary relief device on large stationary unfired pressure storage vessels with flanged openings.

DESIGN FEATURES

These manifolds incorporate an additional relief valve, not included in the flow rating, but also openable in normal operating mode, allowing for servicing or replacement of any of the relief valves without evacuating the vessel. The square ending of the spindle, makes easy to open or close each valve individually, while the remaining relief valves provide protection for the vessel and its contents.

Flow ratings are based on flow through relief valves after one has been closed.

Unfired pressure vessel min. required discharge capacity of air at 20% overpressure

A (m ²)	Q(m ³ /s)	A (m ²)	Q(m ³ /s)	A (m ²)	Q(m ³ /s)
< 2,00	0.313	17	1.812	60	5.097
2.50	0.376	17.5	1.856	65	5.442
3.00	0.437	18	1.899	70	5.783
3.50	0.496	18.5	1.942	75	6.12
4.00	0.553	19	1.985	80	6.453
4.50	0.609	19.5	2.028	85	6.781
5.00	0.664	20	2.07	90	7.107
5.50	0.718	21	2.155	95	7.429
6.00	0.771	22	2.239	100	7.748
6.50	0.824	23	2.322	105	8.064
7.00	0.875	24	2.404	110	8.378
7.50	0.926	25	2.486	115	8.689
8.00	0.977	26	2.567	120	8.998
8.50	1.026	27	2.648	125	9.304
9.00	1.076	28	2.728	130	9.608
9.50	1.124	29	2.808	135	9.91
10.00	1.173	30	2.887	140	10.21
10.50	1.221	31	2.966	145	10.508
11.00	1.268	32	3.044	150	10.804
11.50	1.315	33	3.122	155	11.099
12.00	1.362	34	3.199	160	11.391
12.50	1.408	35	3.276	165	11.682
13.00	1.454	36	3.352	170	11.972
13.50	1.5	37	3.429	175	12.26
14.00	1.545	38	3.504	180	12.546
14.50	1.59	39	3.58	185	12.832
15.00	1.635	40	3.655	190	13.115
15.50	1.68	45	4.026	195	13.398
16.00	1.724	50	4.389	200	13.679
16.50	1.768	55	4.746		

A – total outside area of vessel (m²)

Q – required capacity of air (m³/s) at normal conditions 1,013bar and 15°C

Capacity of LPG can be calculated

$$\left[Q_{LPG} = \frac{Q}{k} \right]$$

absolute vessel pressure (bar)	6.9	8.6	10	12.1	13.8
k	1.162	1.142	1.113	1.078	1.010

Other capacity values can be interpolate

For vessels which area is greater than 200 m², capacity can be calculated

$$\left[Q = 0,1775 \cdot A^{0,82} \right]$$

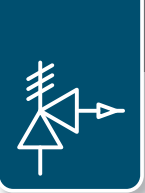
APPLIED STANDARDS, CODES & DIRECTIVES

EN ISO 4126-1 "Safety devices for protection against excessive pressure. Safety valves"

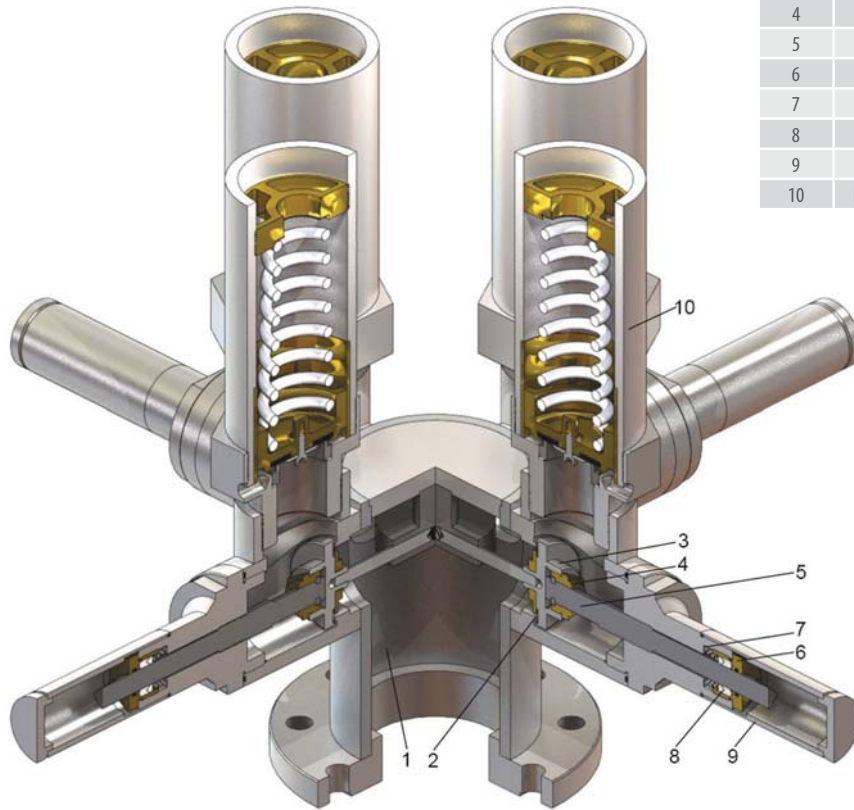
EN 12266-1 "Industrial valves. Testing of metallic valves. Pressure tests, test procedures and acceptance criteria. Mandatory requirements"

94/9 EC (ATEX) "Equipment and protective systems intended for use in potentially explosive atmospheres"

Pressure relief valve manifold type RG



Pos.	Part name	Material	Standard
1	Housing	P265GH	EN10273
2	Plate seal	FKM	
3	Plate	1.4301	EN10088-3
4	Nut	CW614N	EN12164
5	Spindle	1.4301	EN10088-3
6	Cover nut	P265GH	EN10273
7	Spring	1.4301	EN10270-3
8	Gasket	PTFE	
9	Bonnet	S355	EN10277-2
10	Pressure relief valve		SPO



DN	50 - 100
PN	40
ANSI	300lb
pmax	25 bar
t	-20°C / +90°C
acceptable media	LPG, natural gas, air, non-aggressive gasses
connections	ANSI B 16.5, EN1092, DIN2633, DIN2634

CODE	DN	pressure relief valves					
		dimension	outlet connection	number of items		discharge capacity(m ³ /s) of air at 20% overpressure	
				total	active		
031301	50 (2")	2" NPT	2,5" NPT	2	1	2.975	
031302	65 (2,5")	2" NPT	2,5" NPT	2	1	2.975	
031303	80 (3")	2" NPT	2,5" NPT	2	1	2.975	
031304	100 (4")	2,5" NPT	3" NPT	2	1	4.336	
031305	100 (4")	2,5" NPT	3" NPT	4	3	13.10	