

INTEGRAL VCA VALVES

I. FEATURES

- Fixed cracking pressure
- Pressure rating up to 207 bar (3000 psig) 21°C (70°F)
- Temperature rating up to 191°C (375°F) with Viton O-ring
- Variety of end connections
- Each and every valves are tested at the factory

O-Ring

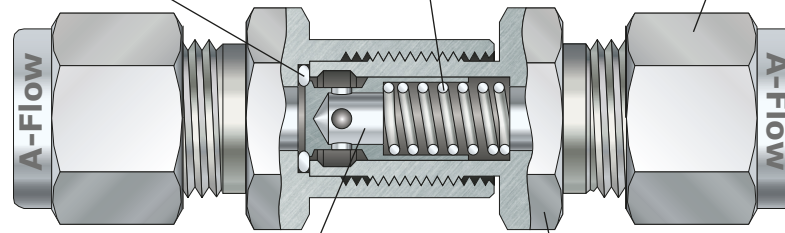
- provides leak tight shut-off.

Variety of Springs

- are available for the cracking pressure In the range from 1/2 psi to 100 psi.

Variety of End Connections

- Include Hy-Lok tube fittings, male/female NPT threads, male/female ISO threads.



Back Stopped Poppet

- prevents the spring from being overstressed.

Wide Range of Body Sizes

- allow Cv choices from 0.16 to 8.8

II. MATERIAL OF CONSTRUCTION

Item	Component	Material	
1	Body Materials Inlet & Outlet	316S/A479	Brass
2	Poppet	316S/A479	Brass
3	O-Ring	Viton	
4	Spring	302SS	302S

Molybdenum dry film lubricant is used for outer body made of 316SS
Silicone based lubricant is used for poppet

Cracking and Reseal Pressure

From the graph, the actual cracking pressure of nominal 1.7bar (25psi) is shown to range between 1.5bar (22psi) to 1.9bar (28 psi), and the reseal pressure 1.1bar (16psi) to 1.5bar (22psi).

Back pressure may be required to reseal the valves with nominal cracking pressure of 5psi or lower.

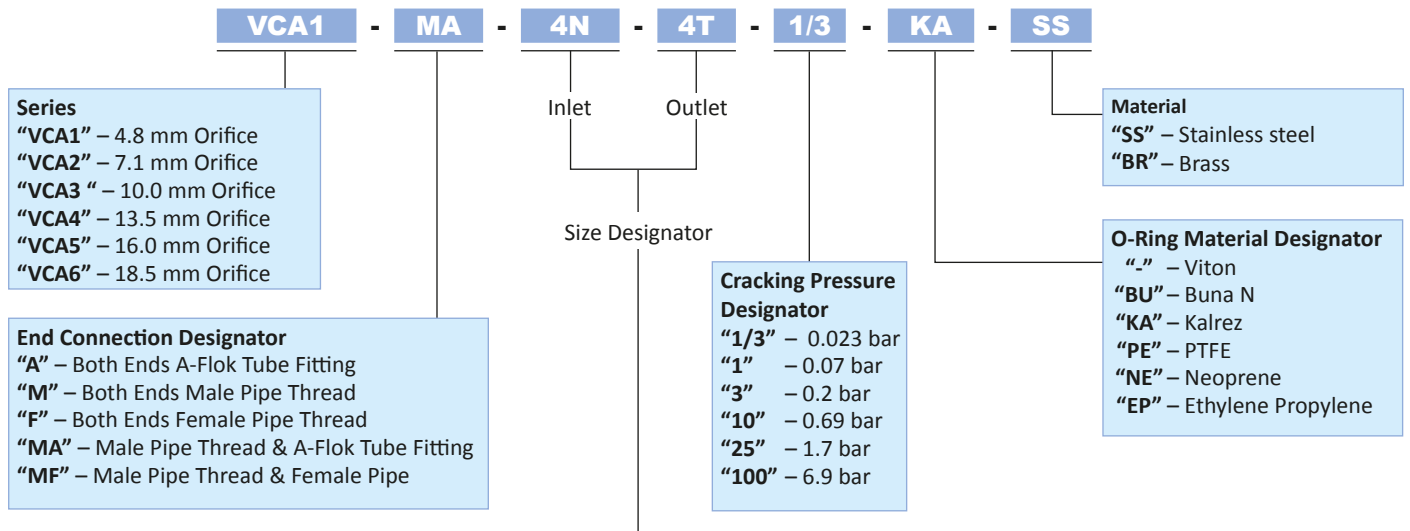
III. TECHNICAL DATA

End Connection Sizes	1/8", 1/4", 6 mm	3/8", 1/2", 5/8", 10 mm, 12mm	3/4", 1"
Max. Working Pressure 21°C (70°F)	206 bar (3000 psi)		Brass: 103 bar (1500 psi) 316S: 137 bar (2000 bar)
Operating Temperature Range	Viton: -23°C to 191°C (-10°F to 375°F) Buton-N: -23°C to 191°C (-10°F to 250°F)		
Nominal Cracking Pressure	0.03, 0.07, 0.2, 0.69, 1.7, 6.9 bar (1/3, 1, 3, 10, 25, 100 psi)		0.03, 0.07, 0.2, 0.69, 1.7 bar (1/3, 1, 3, 10, 25 psi)
Max Back Pressure	69 bar (1000 psi) for 0.7 bar (10 psi) or lower cracking pressure: 207 bar (3000 psi) for other		14 bar (200 psi)

IV. TABLE OF DIMENSIONS

Part number	Orifice, mm	Cv	End Connections		Dimensions, mm				
			Inlet	Outlet	L	I	H	H1	
VCA1	-A-2T	4.8	0.16	1/8" A-Flok	1/8" A-Flok	55.60	25.00	11.11	15.88
	-M-2N	4.8	0.47	1/8" NPT Male	1/8" NPT Male	44.40	25.00	-	15.88
	-F-2N	4.8	0.47	1/8" NPT Female	1/8" NPT Female	46.60	46.60	-	15.88
	-A-4T	4.8	0.47	1/4" A-Flok	1/4" A-Flok	60.00	25.00	14.29	15.88
	-A-6M	4.8	0.47	6mm A-Flok	6mm A-Flok	60.00	25.00	14.00	15.88
	-A-8M	4.8	0.47	8mm A-Flok	8mm A-Flok	62	29.5	15.8	15.88
	-MA-4N4T	4.8	0.47	1/4" NPT Male	1/4" A-Flok	56.40	25.00	14.29	15.88
	-M-4N	4.8	0.47	1/4" NPT Male	1/4" NPT Male	53.40	25.00	-	15.88
VCA2	-F-4N	4.8	0.47	1/4" NPT Female	1/4" NPT Female	54.60	25.00	-	19.05
	-A-6T	7.1	1.48	3/8" A-Flok	3/8" A-Flok	74.80	36.20	17.46	22.22
	-A-10M	7.1	1.48	10mm A-Flok	10mm A-Flok	74.80	36.20	19.00	22.22
VCA3	-M-6N	7.1	1.48	3/8" NPT Male	3/8" NPT Male	64.60	36.20	-	22.22
	-F-6N	10.0	1.7	3/8" NPT Female	3/8" NPT Female	63.80	63.80	-	22.22
	-A-8T	10.0	1.7	1/2" A-Flok	1/2" A-Flok	80.20	36.20	22.22	22.22
	-A-12M	10.0	1.7	12mm A-Flok	12mm A-Flok	80.20	36.20	22.00	22.22
	-A-14M	10.0	1.7	14mm A-Flok	14mm A-Flok		36.20		22.22
VCA4	-M-8N	10.0	1.7	1/2" NPT Male	1/2" NPT Male	74.40	36.20	-	22.22
	-F-8N	13.5	2.6	1/2" NPT Female	1/2" NPT Female	84.70	84.70	-	28.58
VCA5	-A-10T	13.5	2.6	3/8" A-Flok	3/8" A-Flok	91.80	48.10	25.40	28.58
	-A-12T	16.0	5.2	3/4" A-Flok	3/4" A-Flok	110.70	67.00	28.58	31.75
	-A-18M	16.0	5.2	18mm A-Flok	18mm A-Flok	110.70	67.00	28.58	31.75
	-M-12N	16.0	5.2	3/4" NPT Male	3/4" NPT Male	105.30	67.00	-	31.75
VCA6	-F-12N	16.0	5.2	3/4" NPT Female	3/4" NPT Female	103.00	103.00	-	31.75
	-A-16T	18.0	8.0	1" A-Flok	1" A-Flok	121.20	68.40	38.1	34.93
	-A-25M	18.0	8.0	25mm A-Flok	25mm A-Flok	121.20	68.40	38.1	34.93
	-M-16N	18.0	8.0	1" NPT Male	1" NPT Male	116.20	68.40	-	34.93
	-F-16N	18.0	8.0	1" NPT Female	1" NPT Female	111.40	68.40	-	41.28

ORDERING INFORMATION



NPT (ISO/BSP)							Tube A-Flok											
Thread	1/8	1/4	3/8	1/2	3/4	1	Metric Tube	O.D. (mm)	3	6	8	10	12	14	18	20	25	
NPT	2N	4N	6N	8N	12N	16N		Designator	3M	6M	8M	10M	12M	14M	18M	20M	25M	
RT (BSPT)	2R	4R	6R	8R	12R	16R	Fractional Tube	O.D. (in)	1/8	1/4	3/8	1/2	3/4	1				
G (BSPP)	2G	4G	6G	8G	12G	16G		Designator	2T	4T	6T	8T	12T	16T				