

708HT Series with Finned Bonnet

Fractional Flow Control Valves

CRN Registration Number Available

FRACTIONAL FLOW CONTROL VALVES

The cooling fin bonnet option is for the protection of the stem packing from elevated temperature associated with steam, hot water, and high temperature oil, gas, and liquid services. The finned bonnet cools the area around the packing, which permits the use of standard packing materials that otherwise would not be suitable for the service temperature conditions.

Features:

- For steam, hot water, and high temperature, oil, gas and liquid services
- Provides cooling effect on bonnet, protecting the packing from higher than normal temperature conditions
- For precise control of higher temperature fractional flow services in pilot plants and low flow process applications

SPECIFICATIONS

Sizes: 1/4", 1/2", 3/4" (DN8, DN15, DN20)

End Connections

- Threaded – NPT
- Socket weld – 1/2" & 3/4" only (DN15 & DN20)
- Integral tube ends (max Cv of 0.2)
- Welded flanged ends – 1/2" & 3/4" only (DN15 & DN20)

Body/Bonnet Materials*

- 316 Stainless Steel

* Consult factory for other materials

Trim Material*

- Cv's 0.05 (0.04 Kv's) & above: 316SS stem, plug and seat
- Optional trim – 316 stem, Stellite plug and seat

* Consult factory for other materials



MK708HT SERIES WITH FINNED BONNET (CON'T)

Actuator Materials:

- Aluminum – 14M
- Steel – 35M

Diaphragm Material:

- 14M Actuator: Nylon/Nitrile
- Optional 35M Actuator: Buna-N fabric reinforced

Stem Packing Material

- Standard – Graphite/Grafoil with positioner on 14M

Standard Bolting: ASTM A320 B8 Class II Body Bolting STD

Bonnet/Body Seal Materials: Grafoil

Service: Steam, air, gas, chemicals, oil, water

- Standard – ANSI Class III (Class IV optional)

Ranges: 3-15 psi (0,2-1,0 bar); 3-9 psi (0,2-0,6 bar); 9-15 psi (0,6-1,0 bar); 6-30 psi (0,4-2,1 bar)

Valve Action

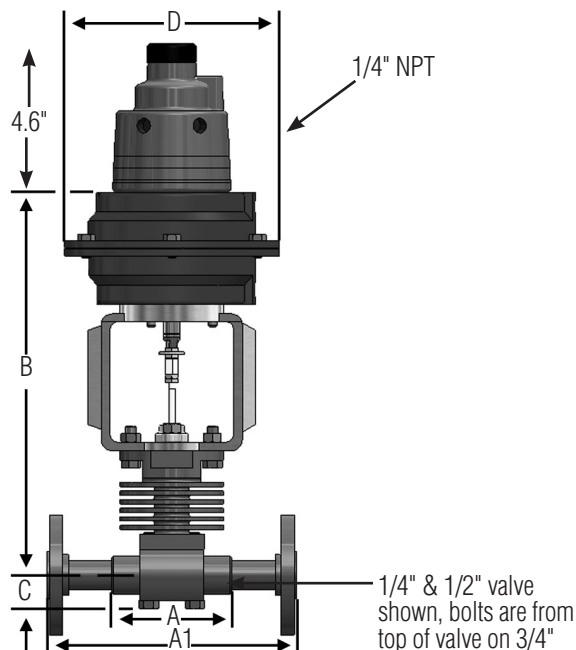
- Direct (ATC)
- Reverse (ATO)

Flow Characteristics: linear; equal percentage or quick opening for Cv's 0.05 (0,04 Kv) and larger

Shutoff

- Standard – Cv's 0.05 and greater: ANSI Class IV

Pressure/Temperature Limits: 5000 @ 100°F; 3250 @ 1000°F



Cv (Kv) Selection

4.0** (3,4)	2.0* (1,7)	1.25* (1,1)	1.0 (0,9)	0.5 (0,43)
0.2 (0,17)	0.1 (0,09)	0.05 (0,04)		

* Available in 1/2" & 3/4" sizes (DN15 & DN20) only

** Available in 3/4" size (DN20) only

Consult factory for lower Cv (Kv) values

* Rated at 100 psi (7 bar) at 2 psi (0,1 bar) ΔP. For sizing to your specific application parameters, we recommend the LowFlow Sizing & Selection Program

Maximum Allowable ΔP Ratings

Cv (Kv)	ATO 3-15	ATO 6-30	ATO w/pos. @ 40 psi (2,8 bar)	ATC3-15 @ 20 psi (1,4 bar)	ATC 6-30 @ 40 psi (2,8 bar)	ATC w/pos. @ 40 psi (2,8 bar)
4.0 (3,4)	264 (18)	532 (37)	532 (37)	432 (30)	864 (60)	1994 (137)
2.0 (1,7)	400 (26)	800 (55)	800 (55)	650 (45)	1300 (90)	3000 (207)
1.25 (1,1)	400 (26)	800 (55)	800 (55)	650 (45)	1300 (90)	3000 (207)
0.32-1.0 (0,3-0,9)	1275 (88)	2350 (162)	2350 (162)	2065 (142)	4100 (283)	5000 (345)
0.05-0.2 (0,04-0,2)	2700 (186)	5000 (345)	5000 (345)	5000 (345)	5000 (345)	5000 (345)

Mark 708HT Finned Bonnet Series Threaded & FSW Ends

VALVE SIZE	ACTUATOR	DIMENSIONS, INCHES				WEIGHT LBS
		A	B	C	D	
1/4"	14M	3.50	11.6	0.9	6.3	7.0
1/2"	14M	3.50	11.6	0.9	6.3	7.0
3/4"	14M	4.38	11.7	1.2	6.3	9.0
	35M	4.38	13.5	1.2	9.5	18.0

Mark 708HT Finned Bonnet Series Flanged Ends

VALVE SIZE	ANSI FLANGE	DIMENSIONS, INCHES				WEIGHT LBS
		A1	B	C	D	
1/2" (14M)	150#	7.25	11.6	0.9	6.3	10.5
	300#	7.50	11.6	0.9	6.3	11.5
3/4" (14M)	150#	7.25	11.7	1.2	6.3	13.5
	300#	7.62	11.7	1.2	6.3	15.5
3/4" (35M)	150#	7.25	13.5	1.2	9.5	22.5
	300#	7.62	13.5	1.2	9.5	24.5

MK708HT SERIES ORDERING SCHEMATIC

Model No.	Size	Body Mat'l	/	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

MODEL	
708HT	High Temperature Top Mount Positioner
708HTSP	Side Mount Positioner

SIZE	
025	1/4" (DN8)
050	1/2" (DN15)
075	3/4" (DN20)

BODY MATERIAL	
S6#	Stainless Steel (CF8M)

1 & 2 END CONNECTIONS	
PT	NPT
SW	FSW
F5	150# FE
F3	300# FE
TN	Integral Tube Nuts
ZZ	Non-standard

3 & 4 TRIM	
G6	316SS/Graphite
ZZ	Non-standard

5 & 6 PLUG SEAT			
	Material of Stem/Plug/Seat		Cv
A	Standard - Linear Hard	L	0.05
B	Standard =% Hard	M	0.1
C	Standard Q.O. Hard	N	0.2
		P	0.5
		Q	1.0
		R	2.0
M	316/Stellite/Stell-Lin. Hard	S	4.0
N	316/Stellite/Stell =% Hard	T	3.0
P	316/Stellite/Stell Q.O. Hard		
ZZ	Non-standard		

7 & 8 RANGE			
	Range/Action	Actuator	
A	3-15 DIR		
B	3-15 REV	4	14M
C	3-9 DIR	3	35M
D	3-9 REV		
E	9-15 DIR		
F	9-15 REV		
G	6-30 DIR		
H	6-30 REV		
ZZ	Non-standard		

9 & 10 DIAPHRAGM			
	Material	Size	
T	Nylon/Nitrile	4	14M
B	Buna-N	3	35M
ZZ	Non-standard		

11 & 12 ACTUATOR			
	Type	Size	
D	Air-to-close		
R	Air-to-open	4	14M
		3	35M
	708SP		
S	w/SMP		
ZZ	Non-standard		

13 & 14 ACCESSORIES	
00	None
A7	Air Regulator for 14M Actuator
A5	Air Regulator for 35M Actuator
G2	Two Gages on TMP
S2	3-way Solenoid Energize to Open
S3	3-way Solenoid Energize to Close
ZZ	Non-standard

15 ACTION	
D	Air-to-close
R	Air-to-open

16 I/P	
0	None
4	I/P 14M Act. 4-20Ma/3-15 psi
3	I/P 35M Act. 4-20Ma/3-15 psi
9	I/P 14M Act. 4-20Ma/6-30 psi
Z	Non-standard

17 708HTSP SMP ONLY	
G	SMP - 16IQ-S Dir/Rev
0	None
A	SMP - P/P Dir/Rev 3-15
D	SMP - I/P Dir/Rev 4-20
H	MK16IQ-B Dir/Rev
J	MK16IQ-FF Dir/Rev
Z	Non-standard