

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)

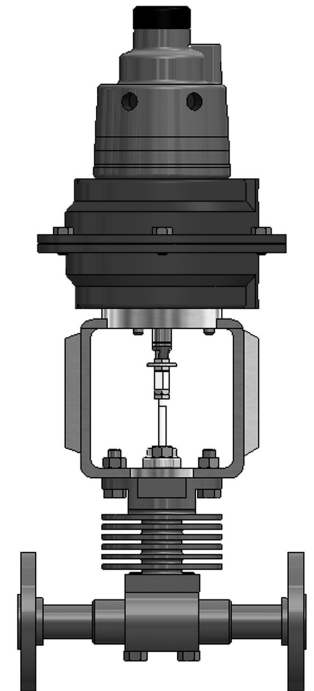
Actuator: 14M (14in²)

Body/Bonnet Materials

- Carbon Steel
- Stainless Steel
- Hastelloy C
- Hastelloy B
- Alloy 20
- Monel
- Titanium

Trim Material

- Cv's 0.05 (0,04 Kv's) & above: 17-4 plug, 316SS stem and seat
- Optional trim – 17-4 plug, 416SS seat; Stellite plug and seat; 316SS stem, plug and seat



MK708HT SERIES WITH FINNED BONNET (CON'T)

Actuator Material: Aluminum

Diaphragm Material:

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

Stem Packing Material

- Standard – Graphite/Grafoil with positioner on 14M

Bonnet/Body Seal Materials: Grafoil

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

- Standard – ANSI Class III (Class IV optional)
- Optional – ANSI Class VI (with PEEK seats)

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

Valve Action

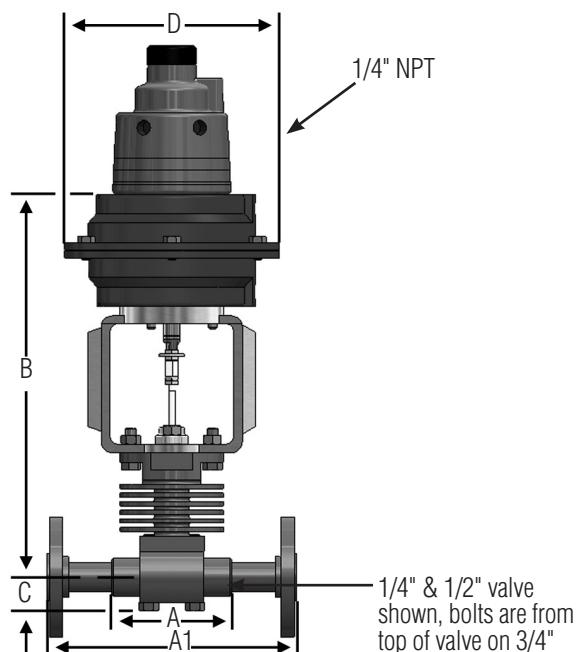
- Direct (ATC)
- Reverse (ATO)

Flow Characteristics: linear (available for all Cv's/Kv's); 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; Cv's 0.02 and lower: ANSI Class VI
- Optional – Cv's 0.05 and greater: ANSI Class VI (with PEEK seats)

Pressure/Temperature Limits: 5000 @ 100°F; 3460 @ 800°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

ORDERING SCHEMATIC



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

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

BODY MATERIAL	
CB*	Carbon Steel (A105)
S6*	Stainless Steel (CF8M)
HC*	Hastelloy C
MN*	Monel
A2*	Alloy 20

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

3 & 4	TRIM
T6	316SS/Teflon Packing
TM	Monel/Teflon Packing
TA	Alloy 20/Teflon Packing
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
D	Standard Linear Soft (PEEK)	P 0.5
E	Standard =% Soft (PEEK)	Q 1.0
F	Standard Q.O. Soft (PEEK)	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	

7,8,9,10,11,12	ACTUATOR		
	Range	Diaphragm	Actuator
N4Q4N4	3-15 DIR	Nylon/Nitrile	14M
Q4Q4N4	3-15 REV		
G4T4D4	6-30 DIR		
H4T4R4	6-30 REV	Buna-N	35M
A3B3D3	3-15 DIR		
B3B3R3	3-15 REV		
G3B3D3	6-30 DIR		
H3B3R3	6-30 REV		
ZZ	Non-standard		

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

13 & 14	ACCESSORIES
00	None
A7	Air Regulator for 14M Actuator
A5	Air Regulator for 35M Actuator
G2	Two Gages on TMP
SH	304SS Strain Hardened
S2	3-way Solenoid Energize to Open
S3	3-way Solenoid Energize to Close
ZZ	Non-standard

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

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