Thermal Sleeves in C-Series Valves

DATA SHEET

ASME 600 – 2500 Class

Applications
Catalyst handling
- Spent catalyst withdrawal
- Withdrawal root isolation
- Regeneration dump
- First & second stage separation isolation

Temperature Ratings
800 to 1500°F (427 to 815°C)

Sizes
2 to 10 inch (50 to 250 DN)

End Connections
Raised-face flange
Clamped

Applicable Models
CA-1AS (purge recommended)
CA-DRI (purge not required)

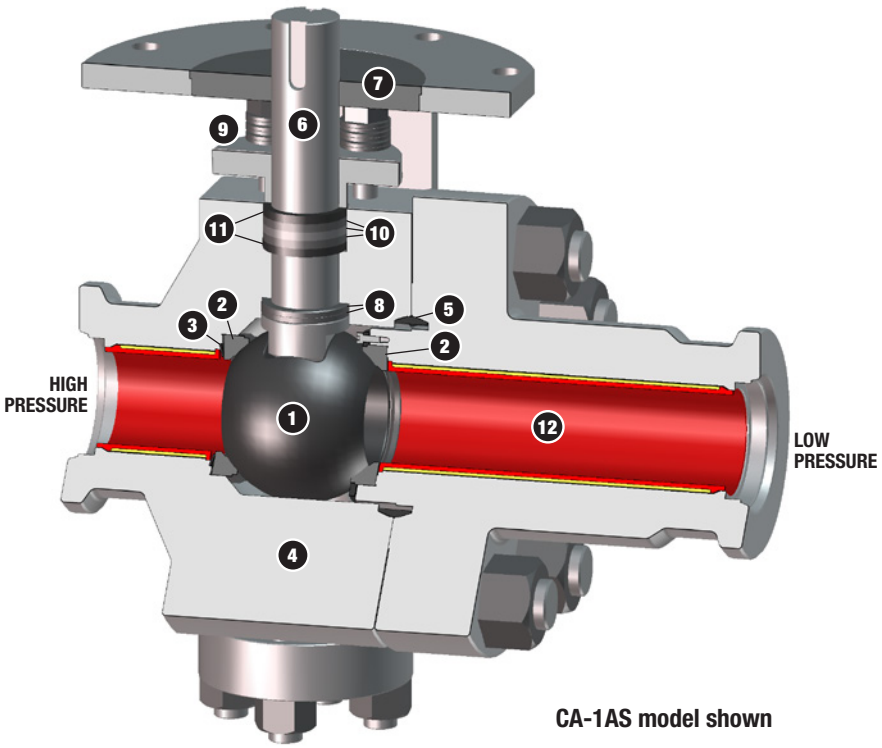
Valve Features
- Straight-through bore design
- Sealing surfaces not exposed to media
- Ball and seats are mate-lapped for total sealing contact
- Spring-assisted seating maintains constant sealing contact and accomodates thermal extremes
- Independent replaceable seats
- Blowout-proof stem design
- Inner stem seals serve as thrust bearing and prevent media migration
- Upper stem bushing extends packing life by preventing lateral stem movement
- Forged body and end connections
- Uni-directional or bi-directional sealing (based on seat configuration)

Thermal Sleeve Features
- Protects valve body or end-connect against cracking due to fatigue from severe temperature cycles
- Material matches body and end-connect material (or can be upgraded to Inconel 718 or 800H)
- Thermal barrier of Yttria-stabilized Zirconia ceramic coating is captured between outer wall of sleeve and inner bore of valve body
- Replaceable sleeves are press-fit into body and end-connect bores
- Sleeves are inspected and typically replaced at each maintenance cycle

Bill of Materials

Item No.	Description	Material
1	Ball	Inconel 718 / WCCoCr-SF
2	Seat	Inconel 718 / WCCoCr-SF
3	Seat Spring	Inconel 718
4	Body	A182-F316H
		A182-F321H
		A182-F347H
5	Body Gasket	
	600 to 1500 Class	Inconel 600 w/ Graphite Filler
	2500 Class	660 or Inconel 718 Delta Gaskets
6	Stem	ASTM A638 GR660
7	Stem Bushing	Coated Carbon Steel
8	Inner Stem Seal	Stellite 3
		Inconel 718 w/ WCCoCr-HVOF
9	Gland Flange	316SS w/ Molybdenum
10	Stem Packing	Expanded Graphite
11	Anti-Extrusion Rings	Braided Graphite w/ Inconel Wire
12	Thermal Sleeve	To match Body
		Inconel 718
		Inconel 800H

SS = Stainless Steel
WCCoCr = Tungsten Carbide Cobalt Chrome



CA-1AS model shown

MOGAS®
SEVERE SERVICE BALL VALVES

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Bore Sizes[1] (inches)				
Valve Size	ASME Class			
NPS	600	900	1500	2500
2	2.00	1.87	1.87	1.50
2-1/2	2.50	2.25	2.25	1.87
3	3.00	2.87	2.75	2.25
4	4.00	3.87	3.62	2.87
6	6.00	5.75	5.37	4.37
8	8.00	7.50	7.00	5.75
10	10.00	9.37	8.75	7.25

Bore Sizes[1] (mm)				
Valve Size	ASME Class			
DN	600	900	1500	2500
50	50.8	47.5	47.5	38.1
65	63.5	57.2	57.2	47.5
80	76.2	72.9	69.9	33.0
100	101.6	98.3	91.9	57.2
150	152.4	146.1	136.4	72.9
200	199.9	190.5	177.8	111.0
250	247.7	238.0	222.3	146.1

Dimensions — Face-to-Face[2] (inches)				
Valve Size	ASME Class			
NPS	600	900	1500	2500
2	11.50	14.50	14.50	17.75
2-1/2	13.00	16.50	16.50	20.00
3	14.00	15.00	18.50	22.75
4	17.00	18.00	21.50	26.50
6	22.00	24.00	27.75	36.00
8	26.00	29.00	32.75	40.25
10	31.00	33.00	39.00	50.00

Dimensions — Face-to-Face[2] (mm)				
Valve Size	ASME Class			
DN	600	900	1500	2500
50	292	368	368	451
65	330	419	419	508
80	356	381	470	578
100	432	457	546	673
150	559	610	705	914
200	660	737	832	1022
250	787	838	991	1270

Notes:
[1] Per ASME B16.34 Appendix A.
[2] Raised Face Flange, per ASME B16.10

MOGAS® SEVERE SERVICE BALL VALVES