

CA CHOKE VALVE SERIES

TECHNICAL DATA SHEET FOR MAXIMUM TRIM SIZE OF 2.22"

The 'CA' product family of production choke valves utilizes a 0.75" To 2.22" body orifice and offers the ability to manually or remotely control well production flow at the wellhead and or flowline with a more conventional type choke body. The cage & plug flow trim is pressure balanced to minimize the stem loads and provide low operating torques. Standard end connections range in size from 2" to 6".



DESIGN	CAGE & PLUG TRIM			
TRIM SIZE:	0.75"	1.18"	1.75"	2.22"
CV:	11.2	28.2	67.4	103.38
MAX BEAN SIZE:	48/64"	76/64"	112/64"	142/64"
END CONNECTION:	CUSTOMER SPECIFIED			

VALVE MODEL	CA
BODY TYPE	Right Angle
BODY SIZE	Suitable for max. 2.22" orifice
BODY RATING	15,000 psi (max.), Limited by the rating of the body end connection.
INLET CONNECTION	See 'End Connection' table below
OUTLET CONNECTION	See 'End Connection' table below
BONNET TYPE	Lancaster Proprietary Bonnet
BODY / BONNET MATERIAL	See 'Material Options' table below
STEM MATERIAL	See 'Material Options' table below
SEAL MATERIAL	See 'Material Options' table below
TRIM STYLE	Equal Percentage Cage and Plug or Needle
BALANCED / UNBALANCED	Balanced
FLOW CHARACTERISTIC	Equal Percentage or Linear
TRIM MATERIAL	See 'Trim Options' table below
DESIGN CV	See the table above
LEAKAGE CLASSIFICATION	ANSI/FCI 70-2 Class IV (Standard)

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API SPEC. 6A MATERIAL CLASS DESIGNATIONS

Temperature Class	Certification Level	Material Class Designations						
		AA	BB	CC	DD	EE	FF	HH
P-U -20F to 250F -29C to 82C	STD/PSL-1	BB	BB	FF	EE	EE	FF	HH
	PSL-2	EE	EE	FF	EE	EE	FF	HH
	PSL-3	EE	EE	FF	EE	EE	FF	HH
L-U -50F to 250F -46C to 121C	STD/PSL-1	EE	EE	FF	EE	EE	FF	HH
	PSL-2	EE	EE	FF	EE	EE	FF	HH
	PSL-3	EE	EE	FF	EE	EE	FF	HH

NOTES: other temperature classes are available upon request

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	BB-GENERAL SERVICE	EE-SOUR SERVICE	FF- SOUR SERVICE	HH- SOUR SERVICE
RECOMMENDED SERVICE	General Oil, Corrosive (CO2)	Sour (H2S) Low Corrosive (CO2)	Sour (H2S) Corrosive (CO2)	High Sour (H2S) High Corrosive (CO2)
BODY	Carbon Steel (60K) Low Alloy Steel (75K)	Carbon Steel (60K) Low Alloy Steel (75K)	Carbon Steel (60K) Low Alloy Steel (75K)	Clad Low Alloy Steel Corrosion Resistant Alloy
BONNET	Carbon Steel (60K) Low Alloy Steel (75K) Stainless Steel (75K)	Carbon Steel (60K) Low Alloy Steel (75K) Stainless Steel (75K)	Carbon Steel (60K) Low Alloy Steel (75K) Stainless Steel (75K)	Clad Low Alloy Steel Corrosion Resistant Alloy
STEM	AISI 17-4PH Low Alloy Steel	AISI 17-4PH Low Alloy Steel	Inconel 625 or Inconel 718	Inconel 625 or Inconel 718
PLUG/CAGE ASSEMBLY	AISI 17-4PH Low Alloy Steel w/ TCC	AISI 17-4PH Low Alloy Steel w/ TCC	Inconel 718 w/ TCC	Inconel 718 w/ TCC
SEALS	PTFE/PEEK	PTFE/PEEK	PTFE/PEEK	PTFE/PEEK

NOTE: The materials supplied may change based on the customers NACE service designation (i.e.- "x.xx- NL")

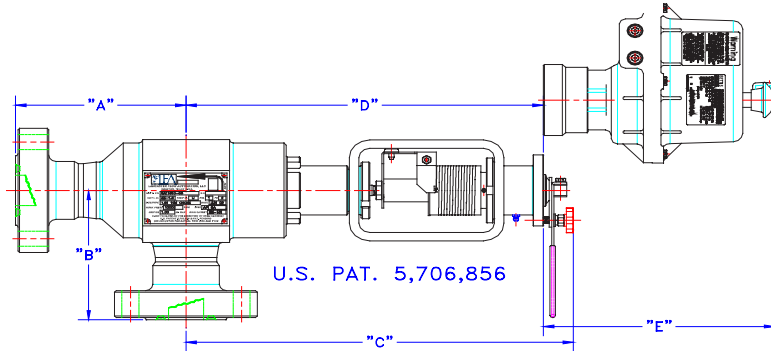
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Connection Size	Working Pressure psig	Dim. Ref.	A Outlet	B Inlet	C Manual Operator	D Mounting Flange
2.00" (50.8) Nom. Orifice (Adj.-Pos., multiple orifice sizes available), Max CV = 103.38						
3" NPS, RF	ANSI 600 LB.		8.00 (203)	8.00 (203)	20.03 (516.89)	18.81 (477.77)
4" NPS, RF	ANSI 600 LB.		8.75 (2.22)	8.75 (2.22)		
6" NPS, RF	ANSI 600 LB.		12.38 (314)	12.38 (314)		
3" NPS, RF	ANSI 900 LB.		8.75 (222)	8.75 (222)		
4" NPS, RF	ANSI 900 LB.		9.25 (235)	9.25 (235)		
6" NPS, RF	ANSI 900 LB.		13.25 (337)	13.25 (337)		
3" NPS, RTJ	ANSI 900 LB.		8.81 (224)	8.81 (224)		
4" NPS, RTJ	ANSI 900 LB.		9.31 (237)	9.31 (237)		
6" NPS, RTJ	ANSI 900 LB.		13.31 (338)	13.31 (338)		
3" NPS, RF	ANSI 1500 LB.		9.38 (238)	9.38 (238)		
4" NPS, RF	ANSI 1500 LB.		9.62 (244)	9.62 (244)		
6" NPS, RF	ANSI 1500 LB.		14.50 (368)	14.50 (368)		
3" NPS, RTJ	ANSI 1500 LB.		9.44 (240)	9.44 (240)		
4" NPS, RTJ	ANSI 1500 LB.		9.69 (246)	9.69 (246)		
6" NPS, RTJ	ANSI 1500 LB.		14.62 (371)	14.62 (371)		
3" NPS, RTJ	ANSI 2500 LB.		11.50 (292)	11.50 (292)		
4" NPS, RTJ	ANSI 2500 LB.		12.44 (316)	12.44 (316)		

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Connection Size	Working Pressure psig	Dim. Ref.	A Outlet	B Inlet	C Manual Operator	D Mounting Flange
2-1/16" (52.39)	API 5,000		7.86 (227)	11.46 (291)	20.35 (516.89)	18.81 (477.77)
2-9/16" (65.09)	API 5,000		8.88 (225)	11.75 (298)		
3-1/8" (79.38)	API 5,000		8.88 (225)	11.38 (289)		
4-1/16" (103.19)	API 5,000		10.12 (257)	12.64 (321)		
2-1/16" (52.39)	API 10,000		10.38 (264)	12.01 (305)		
2-9/16" (65.09)	API 10,000		10.38 (264)	11.76 (299)		
3-1/16" (77.79)	API 10,000		10.38 (264)	10.38 (264)		
4-1/16" (103.19)	API 10,000		9.92 (252)	11.50 (292)		
2-1/16" (52.39)	API 15,000		8.86 (225)	10.32 (262)		
2-9/16" (65.09)	API 15,000		11.51 (267)	11.75 (298)		
3-1/16" (77.79)	API 15,000		10.35 (263)	11.61 (295)		
4-1/16" (103.19)	API 15,000		9.92 (252)	11.50 (292)		

* "C" and "D" shown with 3" x 2" reduced orifice trim

- Using our 24vDC actuator shown, "E" is 11.97"; Pneumatic & Hydraulic units are also available as well as other Electric units
- For sizes or dimensions not shown, for ANSI flanges or hub connections, contact sales or engineering
- In addition to "C", provide clearance for bonnet and trim removal as follows (worse case – with trim in fully closed position): 1.0" (25.4) Nominal, add 7.81" (198.37) for needle trim; add 6.75" (171.45) for cage trim
- (xxx.xx) dimensions shown in parenthesis are in millimeters (mm)
- Orifices in X/64ths are openings with the equivalent area of a circle with the diameter of X/64ths of an inch; 64/64ths = 1.00"
- API 5,000 psig is equal to 34.473 MPa; 10,000 psig = 68.946 MPa; 15,000 psig = 103.420 MPa; 20,000 psig = 137.893 MPa.
- Dimensions shown above are subject to change without notice. Other dimensions are available, please consult the Lancaster engineering department.