

# E P5E Choke 5CB

6 000 psig / Max Cv 300 / Max Bean Size 265

This choke valve uses a bolted bonnet to retain the flow trim in the valve body. The flow trim is pressure balanced to minimize the stem loads and provide low operating torques. Standard end connections range in size from 5" to 6".



## VALVE SPECIFICATIONS

Valve Model	P5E
Body Type	Right Angle
Body Rating	6 000 PSIG (Maximum C.W.P.)
Inlet Connection	see 'Standard End Connections'
Outlet Connection	see 'Standard End Connections'
Bonnet Type	Bolted
Body / Bonnet Material	see 'Material Options'
Stem Material	see 'Material Options'
Seal Material	see 'Material Options'
Trim Style	Ported Cage with External Sleeve
Balanced / Unbalanced	Balanced
Flow Characteristic	Equal Percentage
Trim Material	see 'Trim Options'
Design Cv	see 'Trim Options'
Leakage Class	Class V (Standard)

## TRIM OPTIONS

	Standard Trim Cage & External Sleeve 2 Row / 4 Hole	Multistage Trim	High-Pressure Multi-stage Trim
Material	UNS S17400, Stellite, Tungsten Carbide	Stellite, Tungsten Carbide	Stellite, Tungsten Carbide
Application	Liquid, Gas, Multiphase; Abrasive	Liquid, Gas, Multiphase	Liquid, Gas, Multiphase
Cv	300	77	50
Turns	22.5	16	16
Travel	3.83"	2.65"	2.65"

## STANDARD END CONNECTIONS

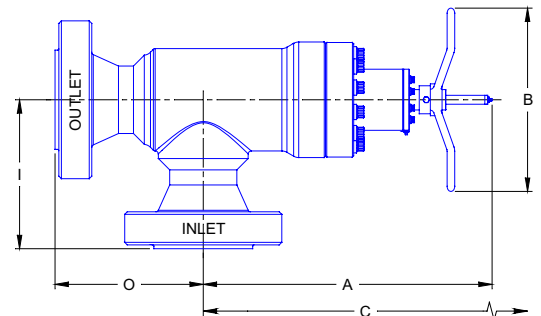
Connection Size ▶	Standard Dimensions & Estimated Weights							
	5" Nominal				6" Nominal			
	'I' or 'O'		Weight		'I' or 'O'		Weight	
Connection Type ▼	inch	mm	lbs.	kg	inch	mm	lbs.	kg
ASME 150 RF	11.00	279	516	234	11.00	279	516	234
ASME 300 RF	11.38	289	554	252	11.38	289	554	252
ASME 600 RF	12.25	311	575	261	12.38	314	610	277
ASME 600 RTJ	12.31	313	575	261	12.44	316	610	277
ASME 900 RF	12.75	324	625	284	13.25	337	684	311
ASME 900 RTJ	12.81	325	625	284	13.31	338	684	311
ASME 1500 RF	13.88	352	697	316	14.50	368	792	360
ASME 1500 RTJ	13.94	354	697	316	14.62	371	792	360
ASME 2500 RTJ	17.00	432	988	449	18.75	476	1220	554
2 000 API 6B	12.31	313	575	261	12.44	316	610	277
3 000 API 6B	12.81	325	625	284	13.31	338	684	311
5 000 API 6B	13.94	354	697	316	14.62	371	792	360

## ENVELOPE DIMENSIONS

Dimensions 'A', 'B', and 'C' apply to manually operated chokes and are tabulated below. 'I' (inlet) and 'O' (outlet) dimensions depend on the end connections and are tabulated above. Special dimensions and other end connections are available upon request.

Dimensions		
	inch	mm
A	28.50	724
B	18.00	457
C	40.75	1035

Note: "C" is the disassembly clearance.



**MATERIAL OPTIONS**

Temperature Class	Certification Level	API - 6A Material Class Designations						
		AA	BB	CC	DD	EE	FF	HH
PU -20F to 250F	STD / PSL-1	BB	BB	FF	EE	EE	FF	HH
PX -20F to 350F	PSL-2	EE	EE	FF	EE	EE	FF	HH
	PSL-3	EE	EE	FF	EE	EE	FF	HH
LU -50F to 250F	STD / PSL-1	EE	EE	FF	EE	EE	FF	HH
	PSL-2	EE	EE	FF	EE	EE	FF	HH
LU -50F to 350F	PSL-3	EE	EE	FF	EE	EE	FF	HH

	BB-General Service	EE-Sour Service	FF-Sour Service	HH-Sour Service
Body	AISI 8620	AISI 8620	UNS S31803	AISI 8620 / Inconel 625
Bonnet	AISI 4130	AISI 4130	AISI 4130 / UNS S31803	AISI 4130 / Inconel 625
Stem	UNS S17400	UNS S17400	UNS S17400	Inconel 718
Bolting	ASTM A320 L7M	ASTM A320 L7M	ASTM A320 L7M	ASTM A320 L7M
Retaining Sleeve	ASTM A743 CF8M	ASTM A743 CF8M	ASTM A743 CF8M	Inconel 625
Balance Sleeve	UNS S42400	UNS S42400	UNS S31803	Inconel 625
Seals	Buna - N	Viton	Viton	Teflon

Other materials available upon request.

**OTHER VALVE OPTIONS**

	Standard	Optional
Calibration Head / Serial Plaque	Aluminum	Stainless Steel
Outlet Sleeve	-	Stainless Steel , Tungsten Carbide
Body Bleed Port	-	1/2" NPT, API Autoclave

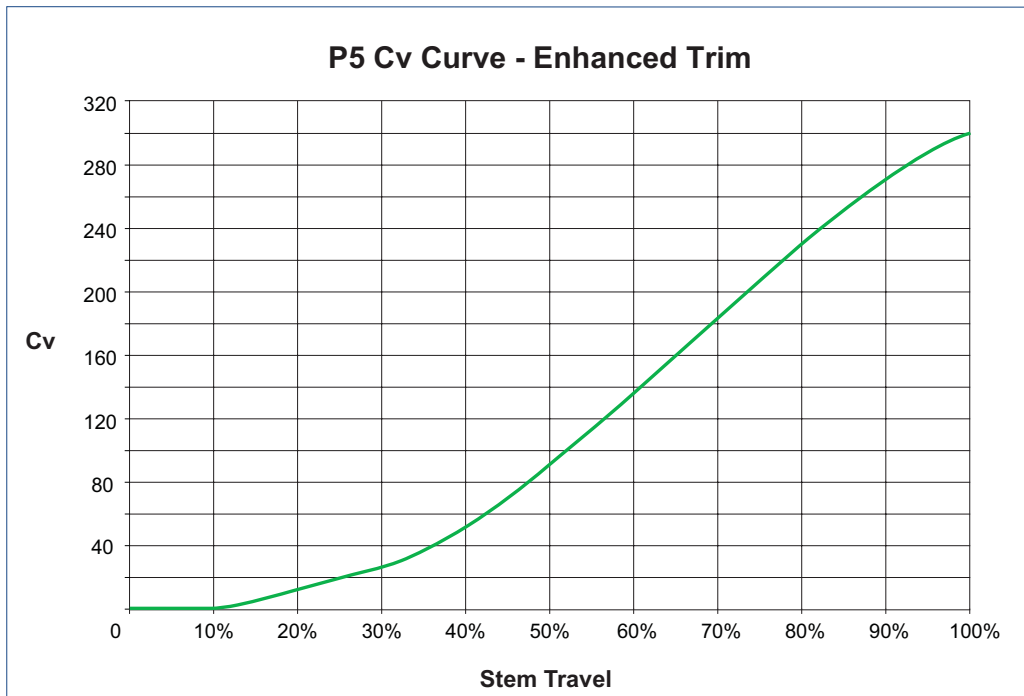
Some limitations may apply.

**ACTUATION OPTIONS**

Master Flo	Other
Manually Operated (Stemlock is optional)	Rotary Electric
Rotary Stepping (Pneumatic)	Pneumatic Diaphragm
Rotary Stepping (Hydraulic)	Electro-Hydraulic Piston
FC Hydraulic Piston	
Pneumatic Piston	

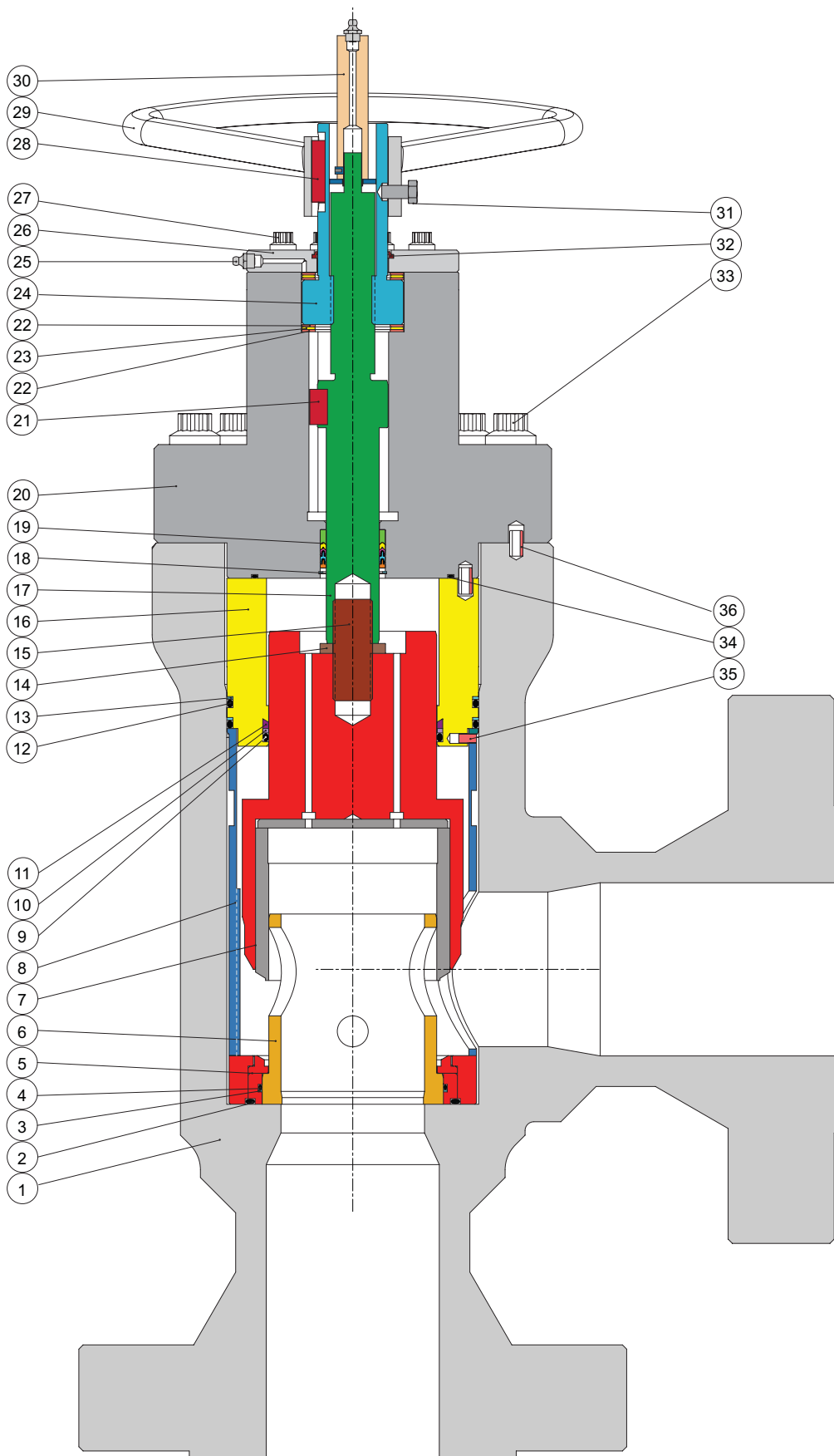
Other actuators available upon request.

**PERFORMANCE CHARACTERISTICS**



**LIQUID PRESSURE RECOVERY FACTOR (FL)**

Master Flo's trim geometry has been designed to achieve high  $F_L$  numbers. This results in a decreased cavitation potential, lower noise generation, increased flow capacity, and longer trim life. The high  $F_L$  numbers of Master Flo's trims have been verified experimentally as per the test procedures of ISA-S75.02-1996.



### PARTS LIST

1. Body
2. Seal: Seat - Body
3. B/U Ring: Cage - Seat
4. Seal: Cage - Seat
5. Seat
6. Cage
7. External Sleeve
8. Retaining Sleeve
9. Seal: Balance Sl. - External Sl.
10. B/U Ring: External Sl. - Balance Sl.
11. External Sleeve Bushing
12. Seal: Balance Sleeve - Body
13. B/U Ring: Balance Sleeve - Body
14. Lockwasher
15. Stud
16. Balance Sleeve
17. Stem
18. Retaining Ring
19. Seal Pack: Stem - Bonnet
20. Bonnet
21. Key
22. Thrust Washer
23. Thrust Bearing
24. Stem Nut
25. Grease Nipple
26. Cover Plate
27. Capscrew
28. Key
29. Handwheel
30. Calibration Head
31. Capscrew
32. Wiper
33. Capscrew
34. Seal: Body - Balance Sleeve
35. Groove Pin
36. Spring Pin

### P5 Product Family

Standard:  
 • P5E - Bolted Bonnet; 6 000 PSI

Other Options:  
 • P5E 10k - Bolted Bonnet; 10 000 PSI  
 • P5E 15k - Bolted Bonnet; 15 000 PSI

**chokes**  
for all applications

recycle lines



vent valves



manifold



production



blow down

overboard dumps



level controllers

glycol injection



subsea

water injection



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