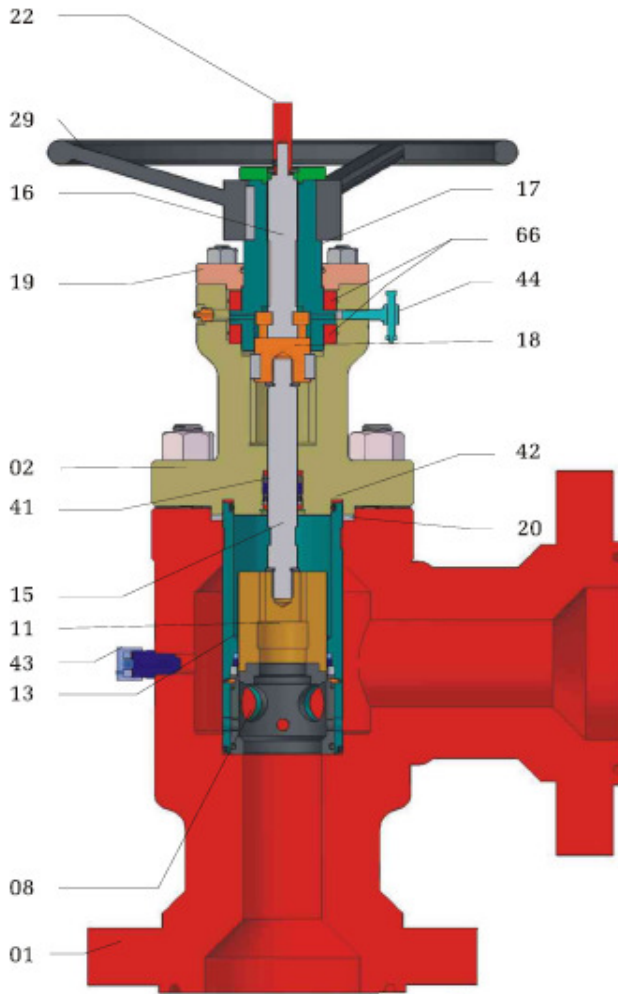




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- 01. Body
- 02. Upper Bonnet
- 08. Flow Cage Assembly
- 11. Flow Plug Assembly
- 13. Pressure Balance Sleeve
- 15. Valve Stem
- 16. Driving Stem
- 17. Stem Driving Bush
- 18. Stem Coupling
- 19. Bearing Cover
- 20. Body Bonnet Gasket
- 22. Micrometer Indicator
- 29. Handwheel
- 41. Stem Packing Assembly
- 42. Crush Ring
- 43. Body Bleed Nipple
- 44. Stem Lock Assembly
- 66. Cylindrical Roller Thrust Bearings

### High Flow Plug & Cage Trim

The plug and cage trim uses a solid plug with a pressure balancing holes moving inside a ported cage to control flow. This design provides the maximum flow capacity for a cage trim choke valve.

In closed position, the plug moves down closing the ports in the flow cage and makes contact with the seat ring to provide a positive shut off.

Flow is directed into the trim via ports and impinges in the centre of the flow cage.

The plug is guided internally in the flow cage controlling the opening of the ports and the flow rate.

The flow cage is supported at both ends by the body and bonnet providing a rigid and robust design.

Plug and flow cage are generally supplied in tungsten carbide to enhance erosion resistance of this robust trim.



Note: This is for understanding only. Please refer to JVS for detailed design & technical information.



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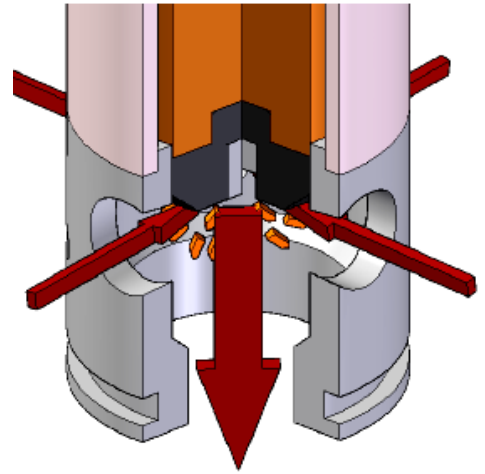
### 4x4 CONTROL CHOKE TRIM

Flow is directed through ports into the centre of the trim where it impinges on flow from the opposite port.

4 diametrically opposed ports can provide the highest wear resistance in a 'cage' type flow trim.

4 small ports in the lower section provide fine control at low openings while 4 larger ports provide capacity for higher flows.

4 Port flow geometry provides a balanced flow pattern, which starts as an equal percent type characteristic and moves towards linear. Flow rate is adjusted by the use of a plug moving inside the flow cage for 'Plug and Cage' type of valve or by use of a sleeve on the outside of the flow cage for 'External Sleeve' type of valve.



Accurate 'micrometer' style position indicator  
(Manual valves 3" and above)

Spring energized lip seals with scrapers and bearings used for dynamic seals enhance reliability of stem packing and pressure balance sealing.



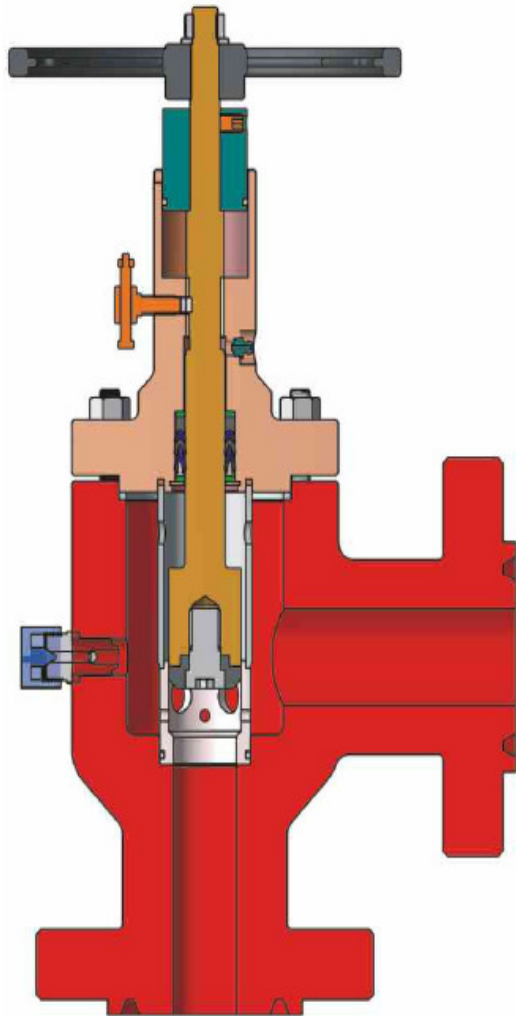
Stem lock allows valve to be 'locked' in any position.



Note: This is for understanding only. Please refer to JVS for detailed design & technical information.



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Model VPC25 2.5" nominal with Plug & Cage Trim

**Features**

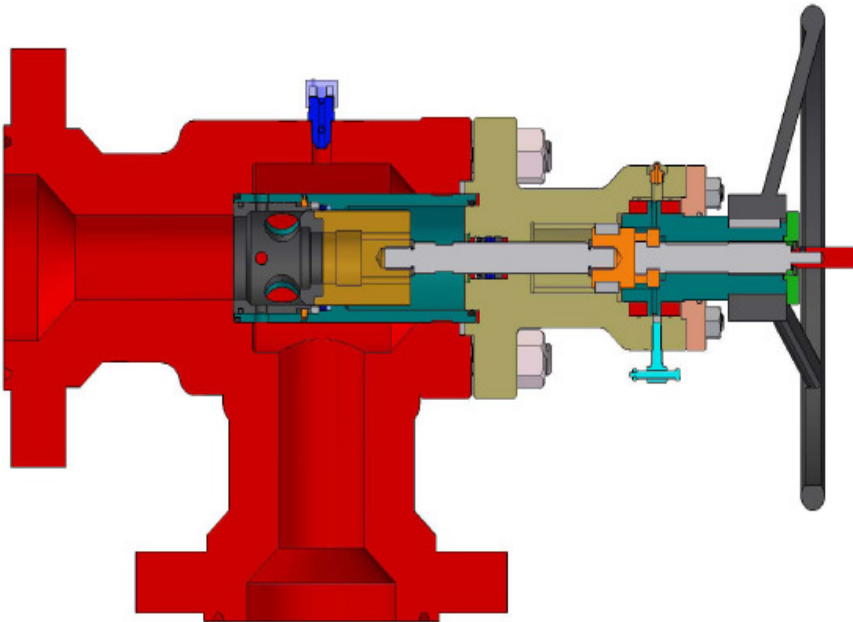
- Forged or cast body construction.
- Body materials from carbon steel, stainless steel, duplex stainless steel and corrosion resistant alloy.
- Pressure rating: 2K, 3K, 5K, 10K and ANSI classes up to 4500.
- Metal to metal shut off in accordance with ANSI class VI & V.
- Bonnet may be hammer union or bolted type.
- Micrometer indicator barrel calibrated in 1/64" 'Bean Size'.
- Standard trim, 64/64" with MEP flow profile.
- Optional in-line body.
- Various Inlet & Outlet distances can be kept as per client requirement.



Note: This is for understanding only. Please refer to JVS for detailed design & technical information.



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**Model VPC40 4" nominal with Plug & Cage Trim**

**Features**

- Forged or cast body construction.
- Body materials from carbon steel, stainless steel, duplex stainless steel and corrosion resistant alloy.
- Pressure rating: 2K, 3K, 5K, 10K and ANSI pressure classes up to 4500.
- Enlarged body gallery maximizes flow capacity and minimizes body & outlet erosion.
- Bolted bonnet enhances safety.
- Accurate 'micrometer' style position indicator.
- Linear non-rotating stem movement optimizes stem packing life.
- Shut off to ANSI Class IV, V (and Class VI).
- Cartridge style trim installation uses no internal threads or special tools – ease of field maintenance.
- Pressure balancing plug design reduces operating torque.
- Range of actuators and mounting kits for ease of automation.
- Spring energized lip seals with scrapers and bearings used for dynamic seals enhance reliability of stem packing and pressure balance sealing.
- Various Inlet & Outlet distances can be kept as per client requirement.

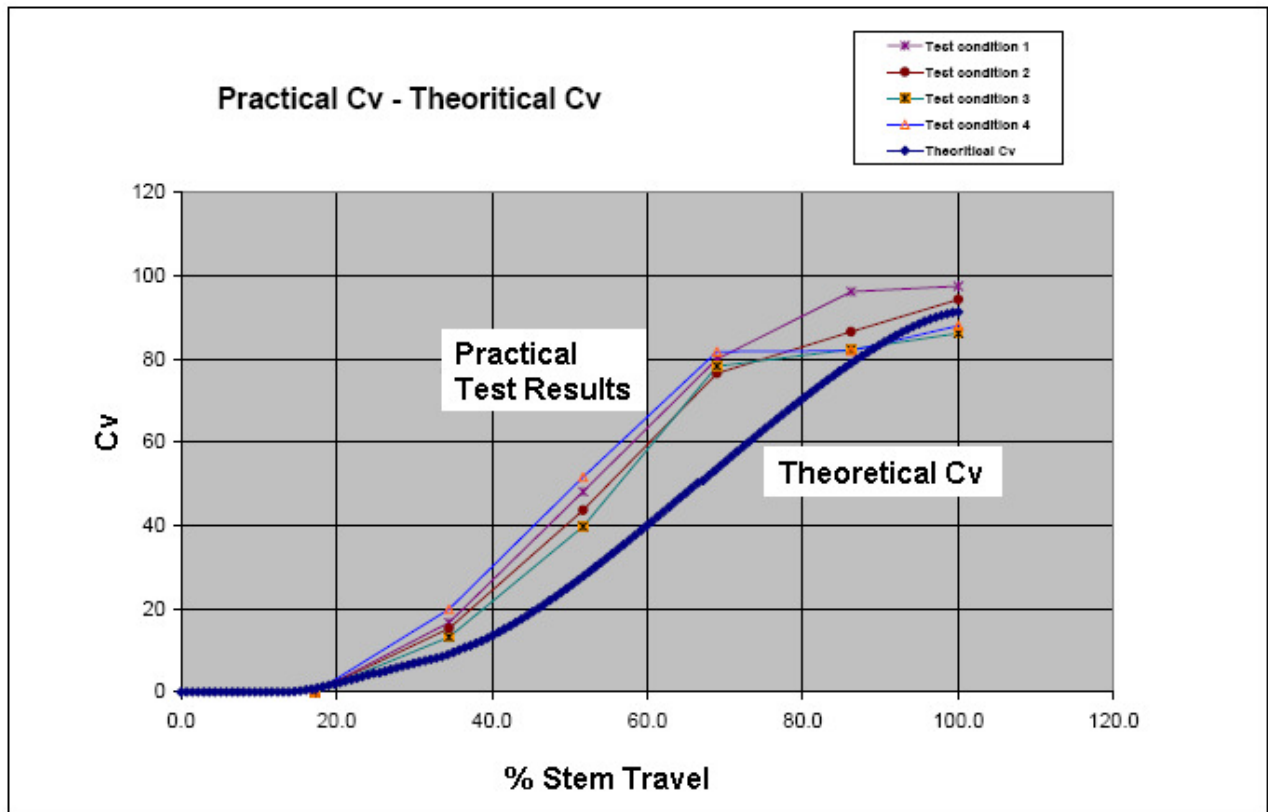
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### Standard end connection/Trim sizing

Nominal body size	Standard connection sizes	Plug & Cage Trim	
		Bean size	Cv
2.5"	2", 3", 4"	96/64"	45
3"	3", 4"	128/64"	61
4"	4", 6", 8"	192/64"	200
5"	4", 6", 8"	250/64"	250
6"	6", 8"	350/64"	400
8"	8", 10", 12"	480/64"	900
10"	10", 12"	600/64"	1200



Note: This is for understanding only. Please refer to JVS for detailed design & technical information.