

SEVERN GLOCON Multi Port Choke Trim Design

Trim Performance at Start-up / Significant Pressure drop

- **Large section, rugged Tungsten Carbide components**
 - **High capacity balance ports**
- **Large cross section extrusion resistant balance seal**
 - **High degree of guiding throughout travel**

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M.P. Choke Trim Design

The MP choke valve trim has been developed to satisfy the particular applications requiring a choke design with the ability to handle significant pressure drops during well start up, whilst providing minimum flow restriction during production.

The trim is a combination of field proven technology, incorporating features developed through years of providing solutions to choke applications throughout the world. This Information Module outlines some of these features.

General Features

- Large section, rugged Tungsten Carbide components
- High capacity balance ports
- Large cross section extrusion resistant balance seal
- High degree of guiding throughout travel

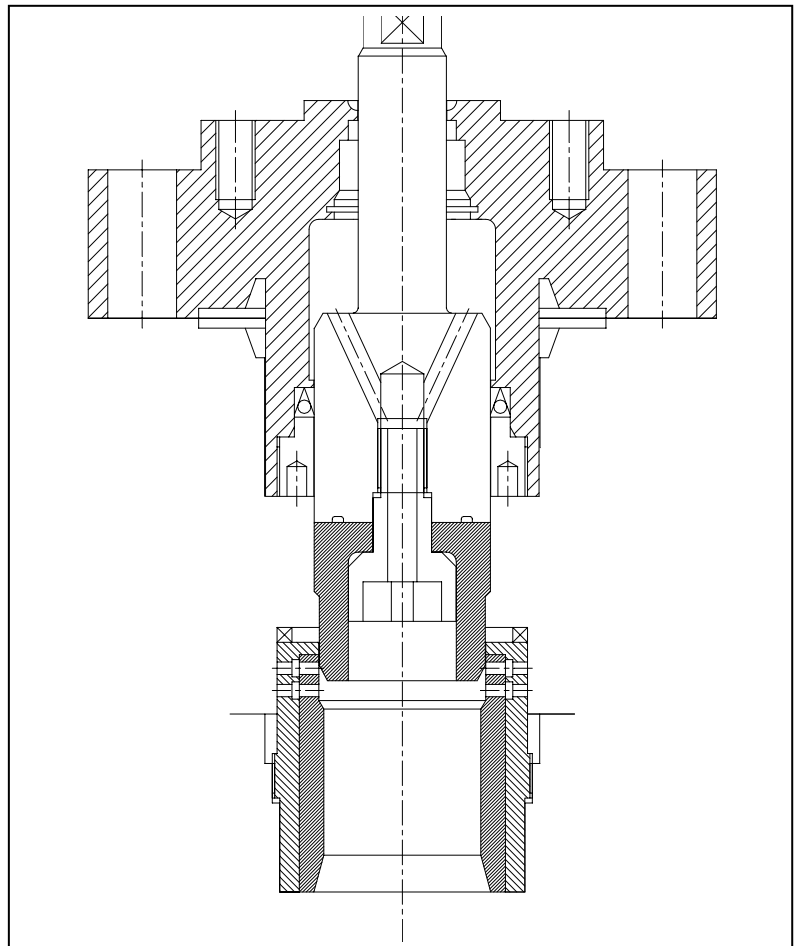
Trim Performance at Start-up / Significant Pressure drop

During periods of significant pressure drop over the choke, flow is directed through the hole pattern formed in the Cage section of the Seat Ring.

These holes, unlike the commonly available large diameter ports often used for this purpose, have a large length to diameter ration. This high L/D ration forms a flow path which imparts significant friction on the fluid and results in lower velocities and reduced pressure recovery characteristics.

This reduced fluid velocity results in the reduction of valve noise, erosion and vibration, thus the operating life of the choke is increased.

The start-up section of the valve trim comprises the first 30% of rated travel.





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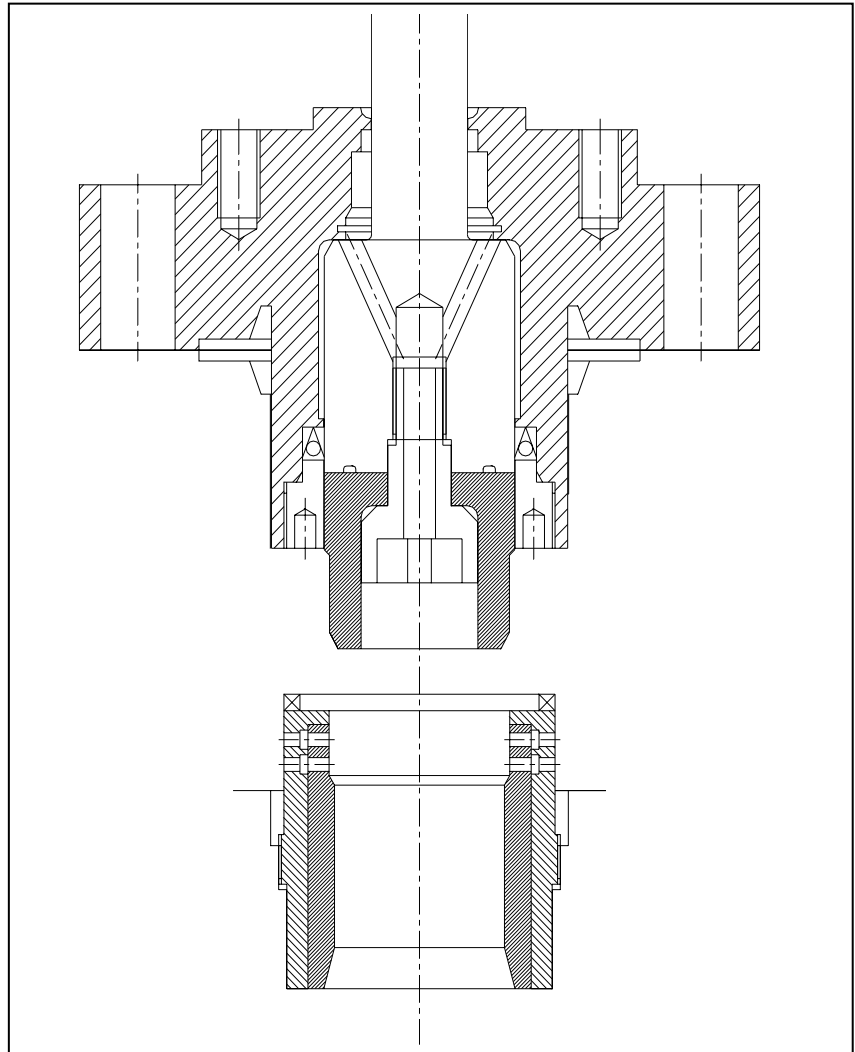
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Trim Performance during Production

During production when pressure has normalized and pressure drop across the choke is reduced, the operational requirements are for a high capacity choke.

The M.P. choke trim provides this high capacity through the maximization of flowing area, both in the inlet body cavity, through the trim and valve outlet section.

Many choke designs utilize a cage or similar to clamp the valve seat in place, this cage provides a restriction to flow and uses up valuable valve body space, the net result being increased fluid velocity and reduced capacity.



The M.P. Choke valve trim secures the seat via a screw thread, and maximises the seat bore in order to increase capacity and therefore throughput.

The M.P. choke design compliments the maximum capacity L.P. design and the severe service H.P. designs available from Severn Unival.

The trims are available both fitted to new valves supplied by the company as well as retrofitted¹ into existing valve bodies. Valve bodies from virtually all choke valve manufacturers can be readily retrofitted, affording significant savings in the time and cost of upgrading.

¹ For further information on Severn Unival's upgrade program, see information module IM-11 Retrofit Valve Solutions.

PRESS RELEASE



Choke valve trim meets specific demands of wellhead

Choke valve trim meets specific demands of wellhead start-up and production

News story from: **Severn Glocon**
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News released
 31/10/05:

Severn Glocon has introduced a new choke valve trim specifically designed to cope with the significant pressure drop inherent in wellhead start-up, whilst also providing minimum flow restriction during production.

Designated MP, the trim can be specified with new Severn Glocon globe control valves or retrofitted to existing valve bodies from Severn Glocon or virtually any other choke valve manufacturer. In all cases the MP trim secures the valve seat without the use of a clamping cage, increasing the seat bore to maximise capacity and throughput.

Developed during years of providing choke valve application solutions throughout the world, the MP trim consists of two well-defined sections. The start-up section, comprising approximately the first 30% or so of travel, determined by the well pressure/flow profile, directs the flow through ports designed to impart significant friction on the fluid, resulting lower velocities and reduced pressure recovery characteristics. Valve noise, erosion and vibration are all reduced, increasing the operating life of the choke.

During production, when the pressure drop has reduced, the MP trim ensures high capacity by maximising the flow area in the inlet body cavity, through the trim and in the valve outlet section.

The MP is one of a range of three new choke trim designs from Severn Glocon, designed to overcome specific operating characteristics in wellhead and associated applications. The LP trim provides maximum capacity whilst the HP is designed for the demands of especially severe service. All the designs can be specified for new valves or retrofitted.

END

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