


100 DPC



 Engineering
GREAT Solutions

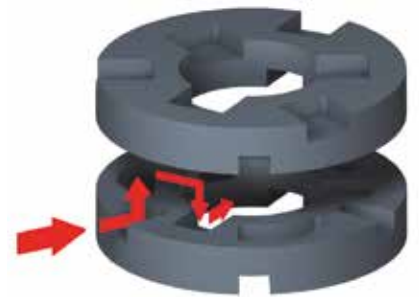
**DRAG[®] Wellhead Production
Choke Valve**

100 DPC DRAG[®] Wellhead Production Choke Valve

Today's gas field environment means higher wellhead pressures with aggressive fluids with entrained sand and other solid particles. A conventional single stage choke valve is not suitable for this kind of severe service. The need to maintain production rates means that frequent choke repair or replacement is no longer acceptable. IMI CCI has responded to this need by developing the world's first true severe service choke valve. IMI CCI has been solving severe service control valve problems in the oil and gas industry for over 30 years. The IMI CCI severe service choke uses a combination of proven DRAG[®] velocity control technology and the best grades of tungsten carbide material used in the industry to provide long trim life and precise process control.

Key features

- > **Seals, Gaskets & Stem**
Packing materials selected are explosive decompression resistant
- > **Dual Body Seals**
For high integrity toxic services
- > **Pressure Balancing Seals**
Reduces actuator/handwheel force
Provided with dual wiper rings to keep solids out of sealing areas
- > **Bolted Bonnet**
Easy maintenance
- > **Solid Tungsten Carbide Plug**
Solid tungsten carbide eliminates galling
Excellent erosion resistance. Large balance holes will not clog
- > **Solid Tungsten Carbide Disk Stack**
Solid tungsten carbide for erosion resistance. Multi-step letdown to control velocity, erosion and noise. Large flow passages, easily handle solids and dirty fluids
- > **Solid Tungsten Carbide Venturi Seat**
Solid tungsten carbide venturi seat in high turbulence zones. Venturi seat transition flows smoothly into valve outlet and piping
- > **DRAG[®] Disk Stack**
Up to six stages of velocity control



Exploded view of DRAG[®] choke disks showing flow path

Benefits

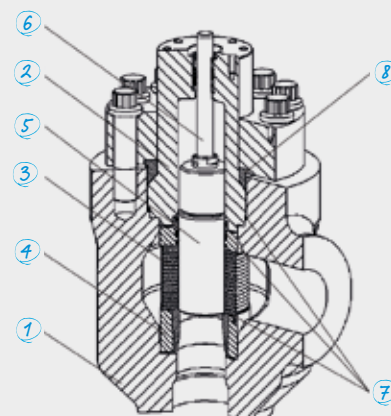
- > Solid tungsten carbide plug, seat and disk stack eliminates erosion and galling and extends performance life for maximum productivity
- > Large flow passages to easily handle solids means continued reliable performance
- > Multi-step letdown to control velocity, erosion, noise, and vibration for minimum down time and safety
- > Increased rangeability due to a longer stroke means superior performance and control.
- > Dual scrapers prevent solids from entering sealing areas for reduced maintenance.
- > Venturi seat transition assures smooth flow into valve outlet and piping for problems downstream
- > Easy maintenance, quick-change trim means no trim parts are welded or screwed into the body
- > One choke body can handle changing wellhead conditions by swapping trim for less down time
- > Up to 6 stages of DRAG[®] velocity control (with total velocity control trim disk stack)
- > All trim seals are PTFE. PTFE is explosive decompression resistant

Materials

Component	Item No.	Standard A*	Standard B**
Body <small>† = Optional Inconel 625 inlay</small>	1	ASTM A958-SC4130† ASTM A352-LCB† ASTM A216-WCC† A995-4A (Duplex)	ASTM A958-SC4130† ASTM A352-LCB† ASTM A216-WCC† A995-4A (Duplex)
Bonnet	2	AISI 4130 F51/S31803 A350-LF2	AISI 4130 F51/S31803 A350-LF2
Disk stack	3	Solid tungsten carbide	Solid tungsten carbide
Seat housing/insert	4	17-4/Solid tungsten carbide	Inconel 718/Solid tungsten carbide
Plug	5	Solid tungsten carbide	Solid tungsten carbide
Stem <small>Inconel 718 when API FF or HH specified</small>	6	17-4PH	Inconel 718
Seals <small>Explosive decompression resistant</small>	7	PTFE	PTFE
Body to bonnet seal	8	17-4PH	Inconel 625

* NACE MR0175-2002, NACE MR0103-2005

** NACE MR0175-2005 / ISO 15156-2 2003 / Cor.2.2004 (Dependent on fluid composition and temperature)



Performance data

Pressure rating

ANSI 1500-2500, API 5000-10000

Actuator types

Manual handwheel
Pneumatic diaphragm or piston
Pneumatic stepper
Electric
Hydraulic

Quality level

Standard API 61 PSLI
Optional PSL2/3 and NACE MR0175

Temperature rating

-50 to 250°F (-45 TO 121°C)
API 6A temperature classifications L,P,R,S,T,U

Valve characteristics

Modified equal percent

Shut-off class

Standard ANSI/FCI Class IV
Optional ANSI/Class V

Dimensions

Dimensions available on website and by request

Cv, stroke and end connections

DRAG® High Capacity Hybrid Trim (Cage and Disk Stack)		Standard End Connection Sizes for Specified Trims ¹				DRAG® Total Velocity Control Trim (Full Disk Stack)		Stroke Length (inches)
Trim size	Rated Cv	Body rating 1500 ANSI	Body rating 2500 ANSI	Body rating API 5000	Body rating API 10000	Trim size	Rated Cv	
1.0	18	1 1/2, 2, 3"	1 1/2, 2, 3"	2 1/16, 2 9/16, 3 1/8"	1 13/16, 2 1/16, 2 9/16, 3 1/16"	1.0	9	1.5
1.75	50	3, 4"	3, 4"	2 9/16, 3 1/8, 4 1/16"	2 9/16, 3 1/16, 4 1/16"	1.75	24	2.5
2.5	100	4, 6"	4, 6"	3 1/8, 4 1/16, 5 1/8"	3 1/8, 4 1/16, 5 1/8"	2.5	31	2.5
3.25	160	4, 6"	4, 6"	4 1/16, 5 1/8, 7 1/16"	4 1/16, 5 1/8, 7 1/16"	3.25	50	3.5
4.0	250	6, 8"	6, 8"	5 1/8, 7 1/16, 9"	5 1/8, 7 1/16, 9"	4.0	60	3.5
5.0	335	6, 8, 10"	6, 8, 10"	7 1/16, 9"	7 1/16, 9"	5.0	105	4.5



Full valve selection and product dimensions available on our website

www.imi-critical.com

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