IMI CCI®

100DLC

Engineering
GREATSolutions

DRAG® control valve for
level control applications

IMI Critical Engineering

100DLC

IMI CCI is able to offer a one valve solution for drum or boiler level control with the 100DLC DRAG ® valve, which meets both the high and low Cv requirements as an alternative to the two valve system. This configuration is only possible due to DRAG ® high rangeability trim providing excellent controllability at all flows, from start-up through to normal operation.

One valve solution

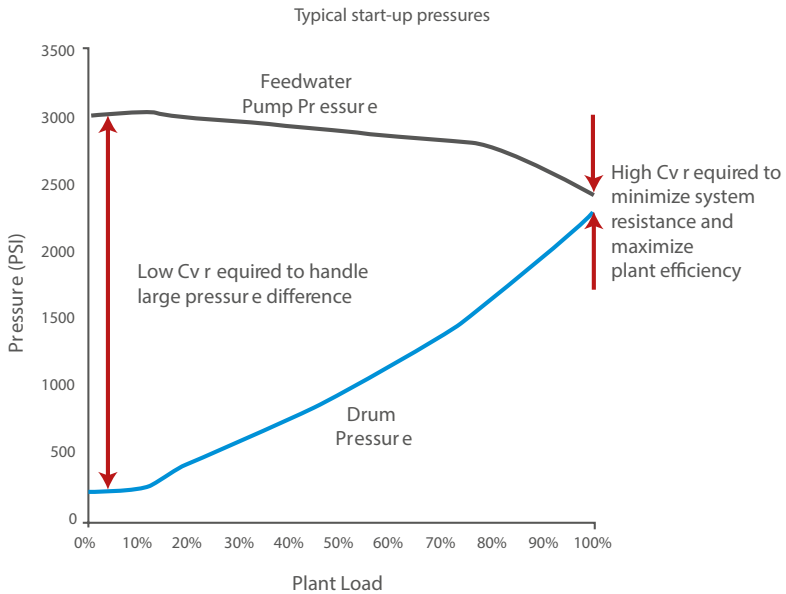
Key features

> Multi-stage DRAG ® disk stack technology
  - Limits trim fluid exit velocity and kinetic energy
  - Multi-stage pressure drop
> Multiple ring Teflon packing design
> Customisable flow characterisation
> High integrity spring energised teflon balance seal or graphite seal
> Class V metal seat shut-off with 500 PLI loading force achieves tight shut-off
> Custom designs available for high-temperature and other applications
> Disk stack labyrinth groove design breaks up clearance flow preventing seat ring damage

Benefits

Drum or boiler level control is crucial at plant start-up, when the pressure differential between the Boiler Feed Pump (BFP) and boiler is very high and control is difficult. Boiler Feedwater Control Valves must achieve a smooth start-up and maintain required drum level for safe, reliable and efficient plant operation. The high pressure differential at start-up/low-load, and sensitive control requirement, requires a high-performance severe service control valve

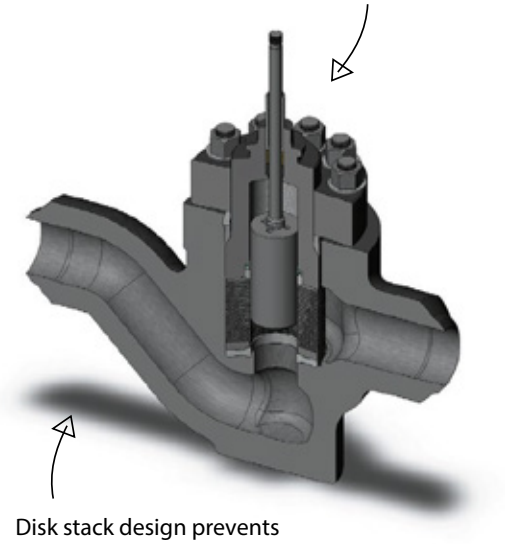
> DRAG ® reduces costs and improves performance over the alternative two valve solution
  - The “change over” is eliminated, providing a quick, smooth start-up
  - Limits fluid velocities, controls vibration and erosion
  - Reduced plant-trip risk resulting in peace of mind and efficiency improvements regarding maintenance, revenues and fuel
  - Prevents cavitation damage
  - Seat replacement and maintenance costs significantly reduced
  - Eliminates cost of additional second valve and associated system
> Stem packing provides low packing friction and long-term leak-free service
> Balance seal uses split gland design for easy assembly and long service life
> Working with our industry leading valve specialists who have completed our comprehensive Valve Doctor programme



Typical applications

- Drum level control of conventional fossil fired plants (combined and start-up)
- Start-up feedwater regulator valve on large sub-critical and supercritical boilers
- Boiler circulation valves, used on supercritical once-through boilers to maintain minimum flow through the boile

DRAGreduces costs and improves performance



Disk stack design prevents seat ring damage

Product Specification

Body material
ASTM A216-WCB/WCC or A217-WC6

Trim material
Disk stack: 400 series heat treated
Plug/stem: 400 series heat treated/174PH heat treated
Seat ring: 400 series heat treated with hard seat
Packing/seals: Glass-filled TFE or graphite
Gaskets: Graphite/stainless

Body styles
Globe

Velocity controlling stages
Up to 20

Sizes
2" to 9" (50mm to 225mm)

Pressure ratings
ASME B16.34 1500 to 2500

Guiding
Disk stack

Plug design
Balanced

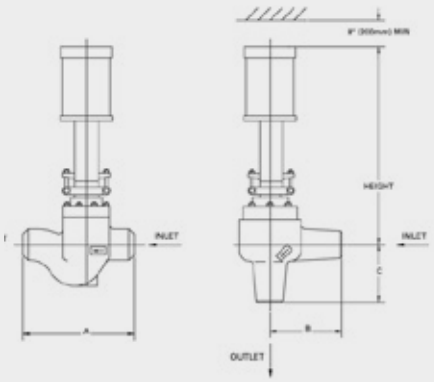
Characteristic
Equal percentage

Rangeability
Designed to meet application needs; minimum of 30:1; over 80:1 possible

Shut-off capabilities
ANSI FCI 70-2 class IV, class V

Full valve selection available on our website

www.imi-critical.com



Other body styles available
Angle

Standard 100DLC DRAG ° valve dimensions

	1500 ANSI						2500 ANSI					
	Globe		Angle		Height	Weight	Globe		Angle		Height	Weight
Trim size	Buttweld	"A"	"B"	"C"			Buttweld	"A"	"B"	"C"		
2.0"	Use 2500 ANSI	Use 2500 ANSI	13.00" (330mm)		50" (1270mm)	400ibs (180kg)	3", 4"	22.75 (578mm)	13.00" (330mm)		50" (2030mm)	450ibs (200kg)
							6"	24.00" (610mm)				
2.5" or 3.0"	4", 6"	21.50" (546mm)	13.75" (330mm)		65" (1650mm)	800ibs (360kg)	4", 6"	26.50" (673mm)	17.88" (454mm)		65" (1650mm)	1100ibs (500kg)
	8"	25.50" (648mm)					8"	29.25" (743mm)				
4.0"	6", 8"	27.75" (705mm)	16.25" (413mm)		65" (1650mm)	1000ibs (450kg)	6", 8"	36.00" (914mm)	20.00" (508mm)		65" (1650mm)	2000ibs (900kg)
	10"	33.00" (838mm)					10"	38.50" (978mm)				
5.0"	8", 10"	42.50" (1080mm)	Contact CCI for these options		54" (1370mm)	2500ibs (1150kg)	8", 10"	42.50" (1080mm)	Contact CCI for these options		54" (1370mm)	2500ibs (1150kg)
6.0"	10", 12", 14"	50.00" (1270mm)			74" (1880mm)	5000ibs (2300kg)	10", 12", 14"	50.00" (1270mm)			74" (1880mm)	5000ibs (2300kg)
7.0"	10", 12", 14"	50.00" (1270mm)			74" (1880mm)	5000ibs (2300kg)	10", 12", 14"	50.00" (1270mm)			74" (1880mm)	5000ibs (2300kg)
9.0"	12", 14", 16"	63.40" (1610mm)			76" (1920mm)	7500ibs (3400kg)	12", 14", 16"	63.40" (1610mm)			76" (1920mm)	7500ibs (3400kg)

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