Process Automation

IMI CCI 100DLC

Breakthrough engineering for a better world

100DLC

IMI CCI offers 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

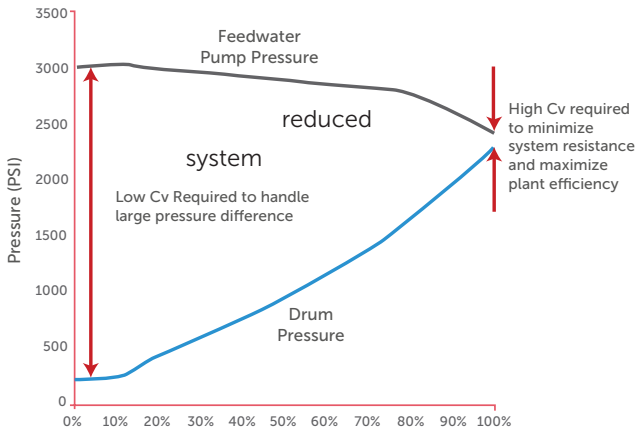
- Multi-stage DRAG® disk stack technology.
  - Limits trim fluid exit velocity and kinetic energy
  - Multi-stage pressure drop
- Multiple ring Teflon packing design.
- Customisable flow characterisation.
- High integrity spring energised teflon balance seal or graphite seal.
- Class V metal seat shut-off 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

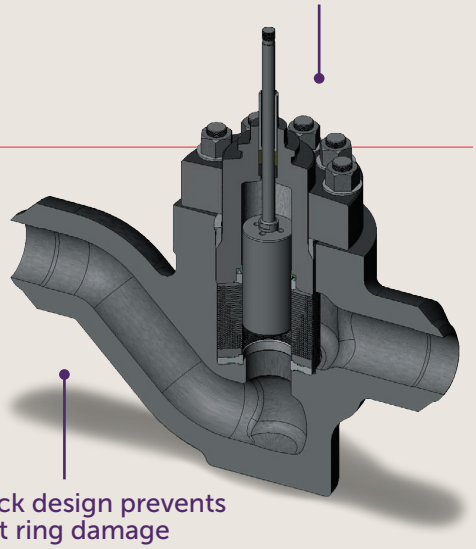
Drum or boiler level control is crucial at plant start-up when the pressure differential between the Boiler Feed Pump (BFP) and the boiler is very high, and control is difficult. Boiler Feedwater Control Valves must achieve a smooth start-up and maintain the required drum level for safe, reliable, and 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 ensures packing friction and long-term leak-free service.
- Balance seal uses split gland design for easy assembly and long service life.
- Work with our valve specialists, who have completed the comprehensive IMI Valve Doctor Program.

Typical Start-up Pressures



DRAG® reduces costs and improves performance



Disk stack design prevents seat ring damage

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 boilers.

Full valve selection available on our website

www.imiplc.com/process-automation

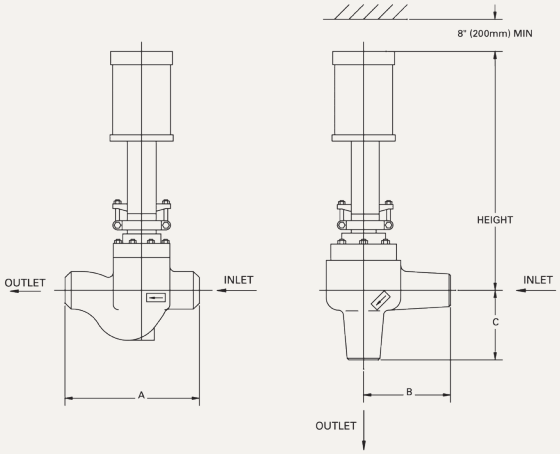
Product Specification

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
Guiding	Disk stack
Sizes	2" to 9" (50mm to 225mm)

Velocity controlling stages	Up to 20
Pressure ratings	ASME B16.34 1500 to 2500
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

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)



Other body styles available:

Angle

Process Automation

IMI CCI

22591 Avenida Empresa
Rancho Santa Margarita
California, 92688
USA
Tel: +1 949 858 1877
Fax: +1 949 858 1878

www.imiplc.com/process-automation

01001.03/24en

IMI