

# 100DLC



*Engineering  
GREAT Solutions*

**DRAG® control valve for  
level control applications**

# 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.

## 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

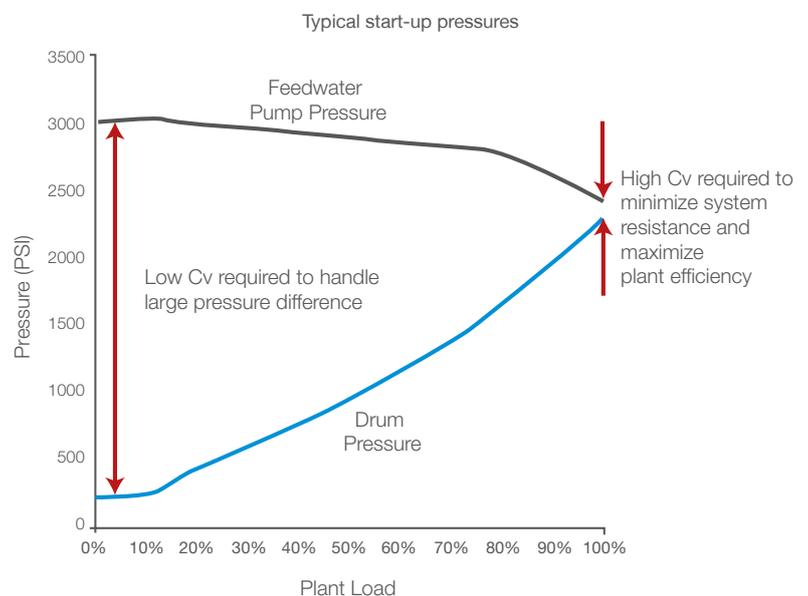
Drum or boiler level control is crucial at plant start-up, when the pressure differential between the Boiler Feed Pump (BFP) and boiler is very high and control is difficult. Boiler Feedwater Control Valves must achieve a smooth start-up and maintain required drum level for safe, reliable and efficient 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



One valve solution



## 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 boiler

## 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

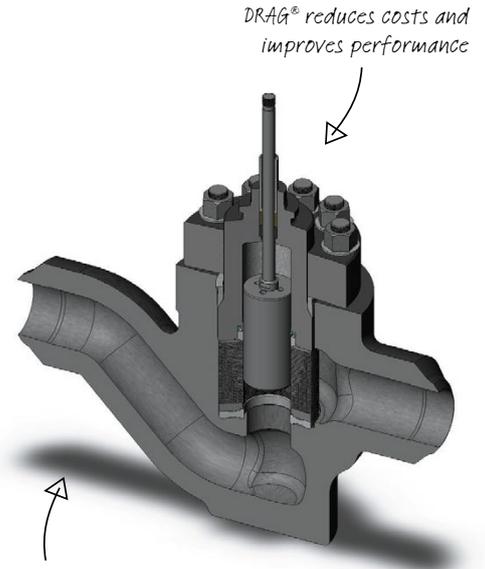
Equal percentage

### Rangeability

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

### Shut-off capabilities

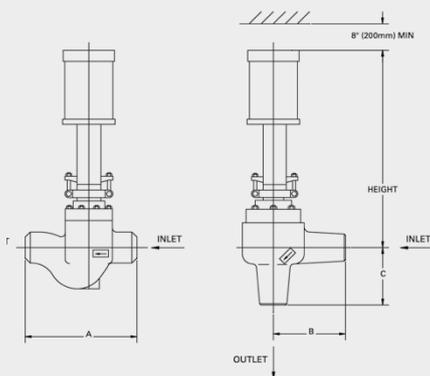
ANSI FCI 70-2 class IV, class V



Disk stack design prevents seat ring damage

Full valve selection available on our website

[www.imi-critical.com](http://www.imi-critical.com)



## Standard 100DLC DRAG® valve dimensions

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

### Other body styles available

Angle

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