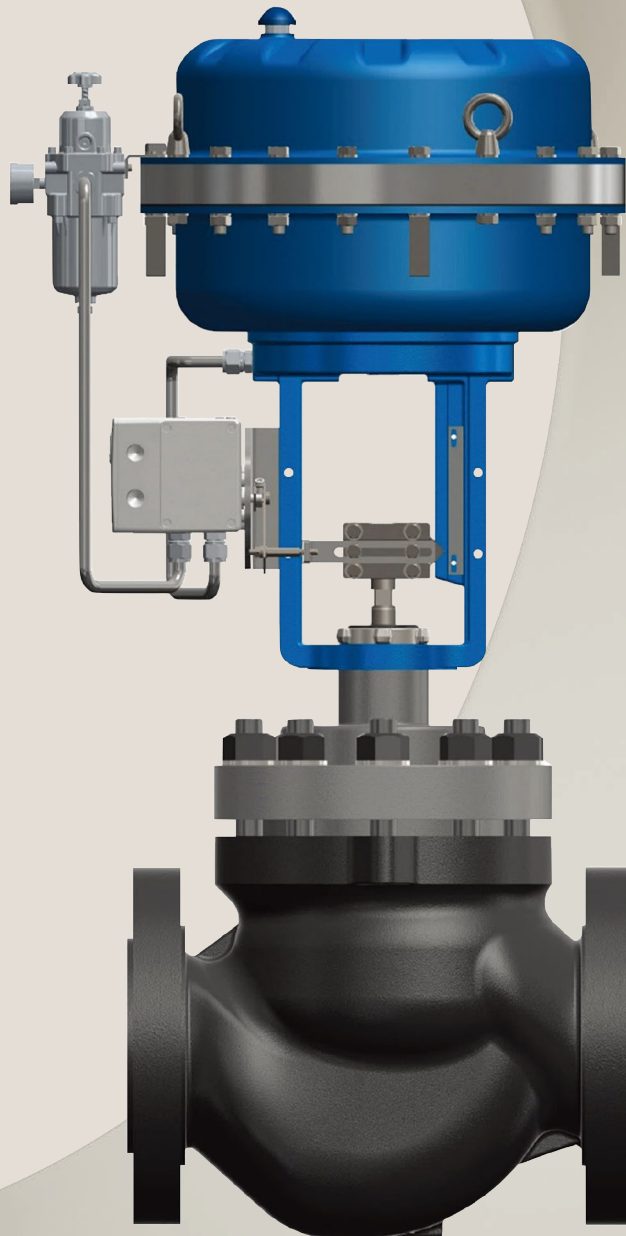


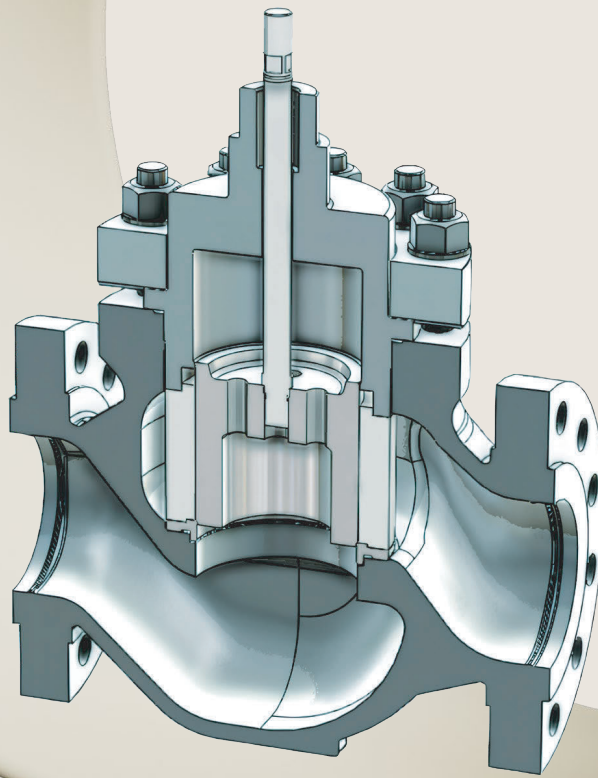
Process Automation

IMI CCI

840 | 860 Series



Breakthrough
engineering for
a better world



840 | 860 Series

Globe and angle control valves for general to severe applications

The 840 | 860 series control valve is specially designed based on advanced flow control technology. These globe (840) and angle (860) valves provide the complete solution for general service as well as highly critical processes that require precise control of liquids and gases at high pressure differentials.

The 840 | 860 series valve is flexible, allowing the installation of a variety of trim types in the body. The 840G | 860G standard cage valve serves a wider spectrum of applications across various industries. This optimised design is best suited to general service applications that require flow, pressure, and temperature control of a higher capacity and rangeability.

The 840H | 860H drilled-hole-cage valve is primarily designed for severe service applications requiring an anti-cavitation or low-noise trim in critical operating conditions. In most cases, high pressure drop in process conditions may cause erosion, noise or vibration, which can affect process control. The 840H | 860H boosts control performance while minimising any anticipated damage.

Key features and benefits

High Performance Design

- Heavy-duty body for high accuracy control in various applications
- Options for high pressure drop, low-noise, anti-cavitation, and tight shut-off
- 3D-printed trim options, custom engineering available for specific application needs

Quick Change Design

- Quick-change valve trims for easy maintenance
- Top-entry design and cage-retained seat ring for fast inspection and trim changes
- Simple cage change for capacity and characteristic adjustments

Wide Range Service

- Various body and trim options for different services
- Solutions for cryogenic temperatures, corrosive environments, sour gas, and flashing conditions

Flow Configuration

- Flow-to-Close (OTP) ideal for liquid service
- Flow-to-Open (UTP) suitable for steam and gas

Fugitive Emission Packing Solutions

- Packing options available to meet industrial demand
 - PlusOne Seal (ISO class B)
 - LiveSeal® B (ISO class B)
 - EEEasy-Seal™ (ISO class A)
 - EEEasy-Seal™ (Fire-safe)

All internal parts are designed for quick-change that enables easy replacement by removing the actuator and bonnet

Accessories

All types are available to meet requirements

Bonnet type

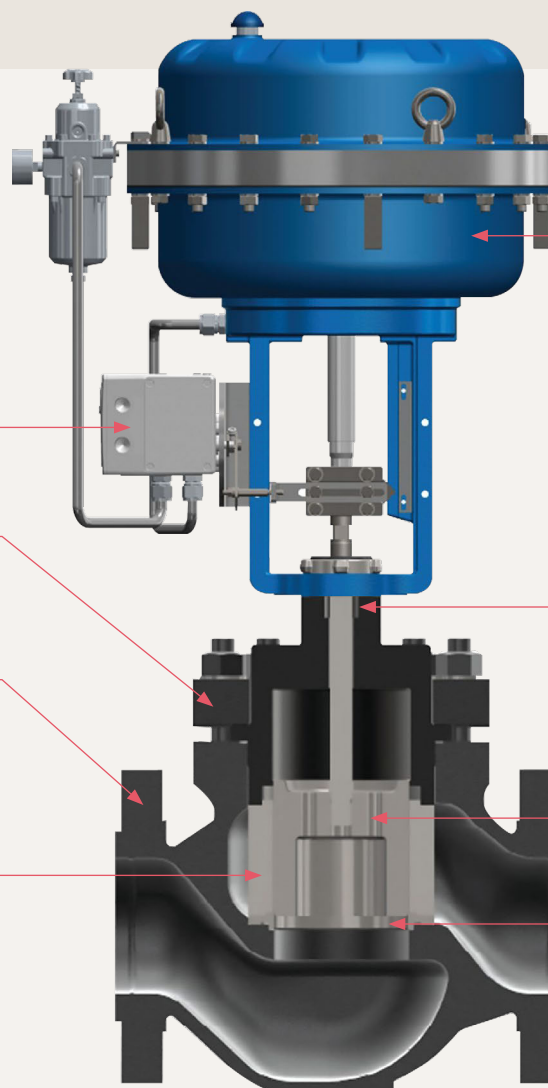
Gasket compression seal flanged bonnet

Body & bonnet

Casting or forging types available

3D-printed DRAG® trim option

Additive manufactured custom engineering trim options available



Actuator

Fail-to-close on loss of air; or fail-to-open on loss of air

Diaphragm, piston, hydraulic, or electric actuation available

Manual

Top handwheel or top mounted side handwheel available

Fugitive Emission (FE) packing options:

- PlusOne seal
- LiveSeal® B
- EEEasy-Seal™
- EEEasy-Seal™ (Fire-safe)

Plug design

Unbalanced or balanced

Seat type

Quick-change metal seat or soft seat available

Product specification

Valve size	Body	1" to 24"
	Trim	1/4" to 22"
Temperature range		-196 to 580°C
Pressure rating		150# - 2500# ASME B16.34 standard pressure rating * DIN and JIS are available upon request
End connection		Flanged ends (FF, RF, RTJ), Weld ends (BW, SW) *End connection types meet ISA S75.08 face-to-face dimensions
Seat leakage		ANSI/FCI 70.2 Leakage Class IV, V, VI
Noise level		Typically, <85 dBA
Flow characterisation		Linear, modified equal percentage or equal percentage
Max. Cv range		Linear: 3.0 to 5600 (globe), 3.0 to 6671 (angle) Equal %: 3.0 to 5040 (globe), 3.0 to 5823 (angle)
Materials	Body / bonnet	Carbon steel, stainless steel, alloy steel, monel, hastelloy B/C, alloy 20, titanium, bronze, al-bronze, duplex nickel, casting, forged
	Trim	316/316LSS, A20, 410SS, UNS31803, hastelloy B/C, 17-4PH, monel, ni-alloy, al-bronze, titanium
	Gasket	Spiral wound: 304 or 316SS with Teflon™, Grafoil™ Flat: Teflon™, Grafoil™, soft filters
	Balance seal	Reinforced Teflon™, Graphite™
	Packing	V-TFE, reinforced Teflon™, graphite, bellows seal

Product dimensions

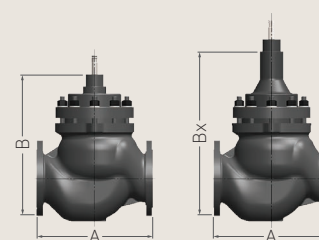
Dimensions in mm

A: Face-to-face

B: Height with standard bonnet

Bx: Height with extended bonnet

* IMI CCI standard

[illegible]

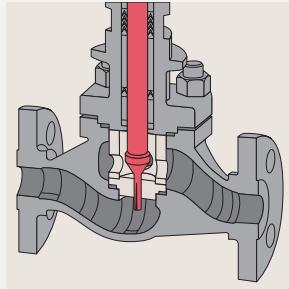
Trim design options

V-Notch

840G | 860G

1" – 1.5" | 150# to 600#

- Top-guided
- Under the plug
- Linear
- Cv min. 0.003 to max. 0.08
- Liquid, gas, steam applications

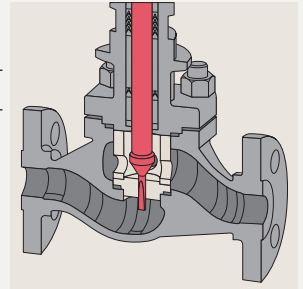


Micro plug

840G | 860G

1" | 150# to 600#

- Top-guided
- Under the plug
- Linear
- Cv min. 0.012 to max. 0.2
- Liquid, gas, steam applications

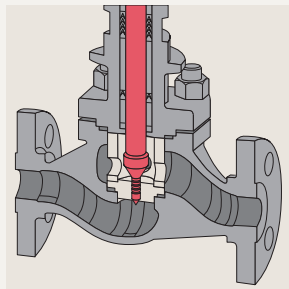


Multi-step

840G | 860G

1/2" – 2" | 150# to 600#

- Top-guided
- Under the plug
- Linear, EQ%
- Cv min. 0.5 to max. 50
- Liquid, gas, steam applications

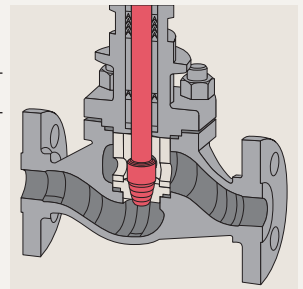


Contoured plug

840G | 860G

1/2" – 8" | 150# to 600#

- Top guided, cage guided
- Under the plug
- Linear, EQ%
- Cv min. 0.5 to max. 290
- Liquid, gas, steam applications

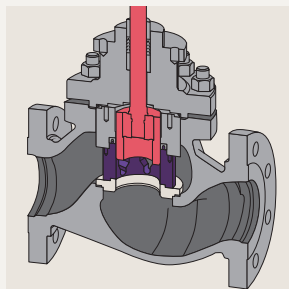


Ported cage

840G | 860G

6" – 24" | 150# to 2500#

- Cage-guided
- Under the plug, Over the plug
- Linear, EQ%
- Cv min. 370 to max. 6470
- Liquid, gas, steam applications



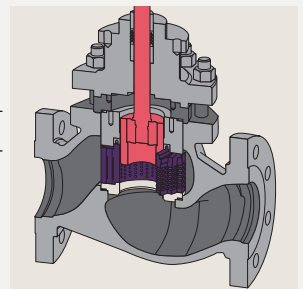
Drilled-hole cage

(anti-cavitation, 1/2/3-stage)

840H | 860H

1/2" – 24" | 150# to 2500#

- Cage-guided
- Over the plug
- Linear (1/3-stage), EQ% (1-stage)
- Cv min. 1.6 to max. 6470
- Liquid applications

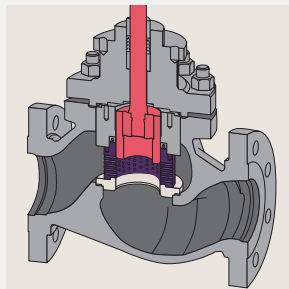


Drilled-hole cage (low noise, 1/2-stage)

840H | 860H

1/2" – 24" | 150# to 2500#

- Cage-guided
- Under the plug
- Linear (1/2-stage), EQ% (1-stage)
- Cv min. 1.6 to max. 5314
- Gas, steam applications

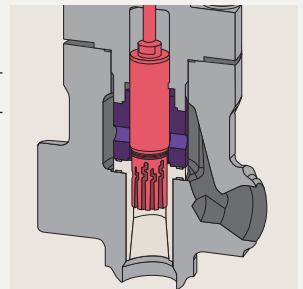


Anti-flashing trim

840H-ESF | 860G-ESF | 860H-ESF

1" – 12" | 150# to 2500#

- Angle and globe solutions
- Cage-guided; Over the plug
- Customised EQ%
- DRAG® design plug for angle
- Seat basket for globe
- Flashing applications

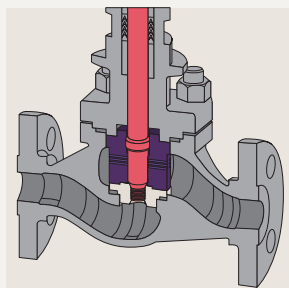


High rangeability trim

840-LST

1" – 8" | 150# to 2500#

- Globe solution
- 1/2-stage drilled hole cage
- Over the plug
- Customised EQ%
- Anti-cavitation design addressing minimum flow control

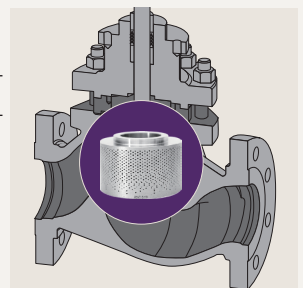


3D-printed DRAG® trim

840-3D | 860-3D

1" – 16" | 150# to 2500#

- 3D-printed DRAG® multi-path, multi-stage
- Over the plug
- Linear, EQ%
- Low noise, anti-cavitation



Process Automation

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