

500M SERIES

Velocity Control Trim For KOSO Hammel Dahl Valves



KOSO Hammel Dahl

Severe services, often associated with high pressure and/or high temperature, are common applications in today's process and utility power plants. End users, looking to obtain greater plant efficiencies and higher plant yields, are operating at elevated pressure and temperature pushing the upper limits of conventional control valve technology. This, often times results in pipeline vibration, environmentally unfriendly noise, and cavitation erosion of critical valve components. These needs have led to the development of a new generation of control valves that are dramatically different from conventional designs.

Koso's velocity control trim (Pat.) delivers accurate control and long life, free from cavitation, erosion, vibration, and noise problems. The design evolved through many decades of experience in solving severe service applications where durability, reliability and control precision are required.



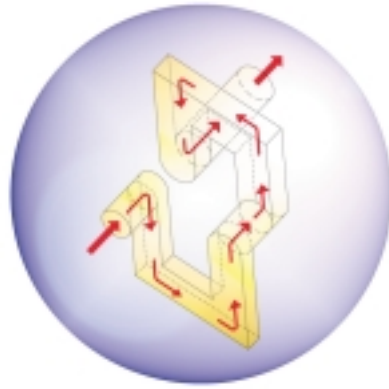
Velocity Control Trim for Severe Service Control Valves



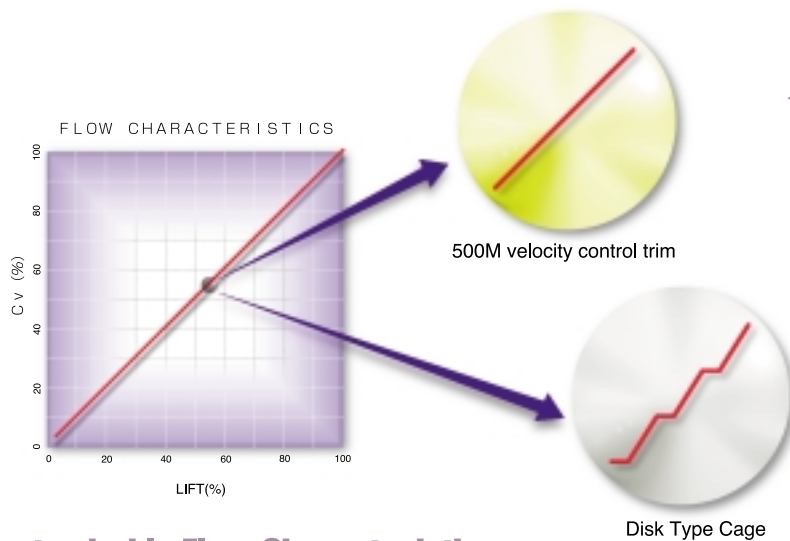
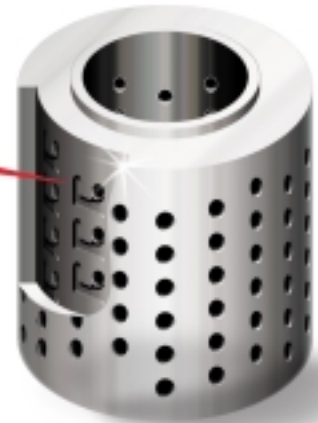
Velocity control trim is suitable for compressible and incompressible fluids and provides many advantages that result in improved performance, reduced maintenance and system simplification. This advanced design "velocity control" trim prevents the generation of noise and/or cavitation at the source, eliminating the need for supplementary devices such as diffusers and silencers, and the related expense.

Basic Construction >>>

As implied in the name, the trim is based on velocity control principles. The tortuous fluid path is formed by the number of concentric cages, radial flow paths and the number of axial flow changes along the milled cavities. The cylinders are firmly connected by vacuum brazing, eliminating external leakage, or short circuiting, while permitting sufficient inter-stage clearance flow. As fluid passes through each passage, velocity is "controlled", followed by a correspondingly "controlled" pressure reduction.



500M velocity control trim

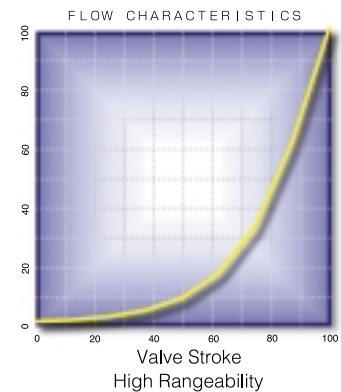
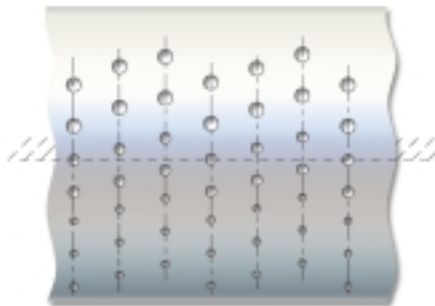


<<< Improved Flow Profile

The positioning of the neighboring fluid paths is such that additional holes are exposed with each increment of stroke. This allows for smooth continuously increasing flow along the entire stroke length eliminating the stepped flow characteristic inherent in most stacked disc designs.

Customizable Flow Characteristics >>>

The "velocity control" cylindrical cage with changing flow area along its stroke length allows for custom characterization of flow (or Cv) versus stroke. Equal percentage, modified percentage, and quick opening flow characteristics are easily accomplished. These options are not always available in stacked disc designs.



Specifications

Model	510M	520M	530M	540M
Body Styles	Globe	Angle	Globe	Angle
Body Sizes	1" - 18"		1" - 36"	
Body Ratings	ANSI Class 150 - 2500		ANSI Class 150 - 4500	
Temperature Range	-320F to +1000F		-320F to +1050F	
End Connections	RF Flange, RTJ Flange, Butt Weld, Socket Weld			
Body Materials	WCB, WC6, LCB, CF8, CF8M, etc...			
Trim Materials	410SS, 316SS, Inconel, etc...			
Flow Characteristics	Linear, Equal Percentage, Modified Equal Percentage, custom			
Trim Levels	Up to Level 8		Up to Level 32	
Shut-off Capabilities	ANSI Class IV, V, MSS-SP61 or VI (requires soft seat)			



Shown with REXA Electraulic™ Actuator

◀◀ The Widest Range of Solutions Available

The 500M velocity control trim incorporates years of experience solving some of industries most severe service problems. Boiler feedwater start-up and recirculation and turbine bypass valves for the power industry, and well injection for pressure recovery in the oil and gas industries are just a few of the solutions we offer.

The 500M series is available in a full complement of sizes and ratings to meet your application needs. Standard pressure reduction levels from 2 to 32, and the ability to design for additional levels, makes the 500M highly configur-

able and allows the customer to balance performance and price in the selection process.

The product is available with traditional spring diaphragm and piston type operators where air is the power of choice or self-contained electrohydraulics when a high degree of control performance is a part of the valve specification. For more information on this and other Koso America products, please contact your nearest Koso America - Hammel Dahl sales representative or any of our operations worldwide.

KOSO Hammel Dahl

KOSO America

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