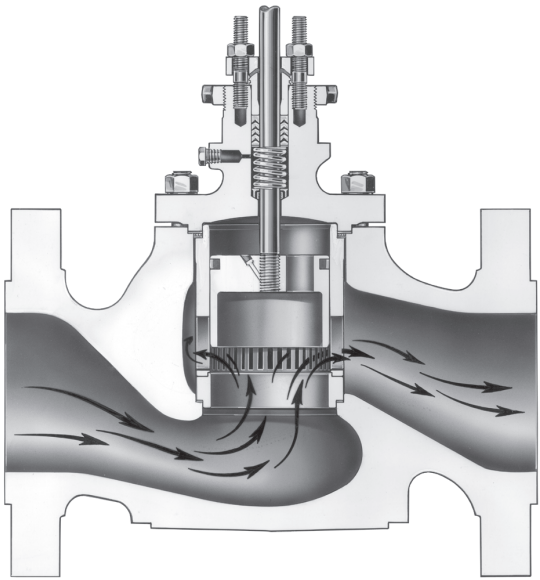
Fisher™ Whisper Trim™ I Cage

The Whisper Trim I cage offers proven aerodynamic noise control that is effective for vapor, gas, or steam flow applications.

The Whisper Trim I cage utilizes multiple orifices of a special shape, size, and spacing to minimize noise generated by the flow of vapor, gas, or steam through a control valve. Using a Whisper Trim I cage in conjunction with a properly sized valve body can substantially reduce the noise level below that of valves with standard trim.

Refer to the appropriate valve body bulletin for additional construction details and pressure drop limits.

Unless otherwise noted, all NACE references are to NACE MR0175-2002.



W0997-2

FISHER EWT METAL-SEAT VALVE WITH WHISPER TRIM I CAGE

W0961-2

WHISPER TRIM I CAGE

Specifications

Availability

See table 2.
For valve designs and sizes not listed, use a Whisper Trim III level A1 cage instead of a Whisper Trim I cage. Base the noise attenuation and velocity limits in accordance with Whisper Trim I cage performance.

Trim Material

See table 1

Trim Selection

See appropriate valve body bulletin

Flow Characteristic

Linear; (characterized cages available--consult with your Emerson sales office)

Flow Direction

Up through the seat ring and out the cage openings

Noise Attenuation

See Fisher Catalog 12, section 3 for calculation procedure

(Whisper Trim I is most effective when $\Delta P/P_1 \leq 0.65$. It can be used above this, but the addition of a diffuser is recommended to split the pressure drop.)

Sizing Coefficients

See Fisher Catalog 12, section 1 for actual values

Shutoff Classification

Soft seats are available. See appropriate valve body bulletin

Pressure/Temperature Capability

See appropriate valve body bulletin

Features

- Optimum Performance—The Whisper Trim I cage offers excellent noise reduction and high flow capacity. This combines with the well known control and durability offered by standard easy-e™ trims to give optimum overall performance at a minimum investment.

- Noise Control—Use of a Whisper Trim I cage in a properly sized valve can result in up to 18 dBA noise reduction compared to the same valve with standard trim. An 18 dBA reduction in noise represents approximately 98 percent reduction in sound intensity. This is similar to moving away from the noise source by 24m (78 feet).

- Easy Maintenance—Quick change trim allows fast and easy inspection or replacement of the cage without taking the valve body out of the pipeline. It is interchangeable with the cages in all standard easy-e control valve bodies.

- Long Trim Life—Hardened material is standard to provide exceptional wear resistance.

Table 1. Trim Material Selection for CL125-600 easy-e and CL125-900 Fisher EW Using a Whisper Trim I Cage

Trim Number	Valve Plug	Whisper Trim I Cage	Seat Ring
1	S41600 SST(1)	S17400 SST(2)	S41600 or S41000 SST(1)
3	S31600 SST alloy 6 (CoCr-A) faced seat and guide	Cast alloy 6	Cast alloy 6(3)
4	S31600 SST	S17400 SST(2)	S31600 SST
5(7)	S31600 SST alloy 6 (CoCr-A) faced seat and guide	R31233	Cast alloy 6(3)
6(8)	S31600 SST alloy 6 (CoCr-A) faced seat and guide	S31603 SST	Cast alloy 6(3)
27 & 87	S31600 SST alloy 6 faced seat and guide	S31600 SST with electroless nickel coating (ENC)(5)	Cast alloy 6(3)
28(6)	S31600 SST alloy 6 faced seat	S31600 SST with electroless nickel coating (ENC)(5)	S31600 SST(3)
29 & 85(6)	S31600 SST	S31600 SST with electroless nickel coating (ENC)(5)	S31600 SST
37	S31600 SST alloy 6 faced seat and guide	S17400 SST(2)	Cast alloy 6(3)
57	S41600 SST(1)	S17400 SST(2)	S31600 SST(4)

1. Hardened to 38 Rockwell C minimum.
2. Hardened to 40 Rockwell C minimum.
3. S31600 SST alloy 6 faced seat used on NPS 6x4, 8x4, 8x6, and 12x6 valves.
4. S31600 SST disk seat and disk retainer for soft seat construction.
5. S17400 NACE MR0175-2002 with ENC used on NPS 8 easy-e, NPS 10x8 and 12x8 Design EW valves.
6. These trims are not available for port sizes larger than 111 mm (4-3/8 inches).
7. Available only for NPS 8, 8x6, 12x6, 10x8, and 12x8 sizes of Whisper Trim I cages.
8. Available only for NPS 8, 10x8, and 12x8 sizes Whisper Trim I cages.

Table 2. Whisper Trim I Cage Availability

Pressure Rating	Available Valve Design	Valve Size, NPS
CL125 through 600	ED, ES, & ET	1, 1-1/2, 2, 2-1/2, 3, 4, 6, 8
CL300 through 600	EWD, EWS, & EWT	4x2(1), 6x4(1), 8x4(1), 8x6(1), 12x6(1), 10x8(1), 12x8(1)
CL900	EWD, EWS, & EWT	8x6(1), 12x8(1, 2)

1. The first number indicates both valve body inlet and outlet size. The second number indicates nominal trim size.
2. Will accept CL900 inlet pressure but limited to CL600 pressure drop.

Installation

In any installation, the valve must be oriented so the flow complies with the arrow on the side of the valve body. Flow is always up through the seat ring.

Because the Whisper Trim I cage design utilizes a multiple-orifice design, a strainer should be installed upstream of any Whisper Trim I application.

The cage has 1.6 mm (0.06 inch) width slots.

Ordering Information

When ordering, please specify:

1. Required C_v
2. Trim material
3. Valve body design
4. Valve body size
5. Valve body material
6. Service conditions

Emerson Process Management
Marshalltown, Iowa 50158 USA
Sorocaba, 18087 Brazil
Cernay 68700 France
Dubai, United Arab Emirates
Singapore 128461 Singapore

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