

Fisher™ Whisper Trim™ NXG Cages

Whisper Trim NXG cages provide effective attenuation of aerodynamic noise in vapor, gas, or steam applications involving high pressure drops or high pressure drop ratios. Using a Whisper Trim NXG cage in conjunction with a properly-sized valve body can substantially reduce the noise level of the control application.

Aerodynamic noise is generated by the turbulence created in the flow of vapor, gas, or steam as the fluid passes through a control valve. The Whisper NXG's optimized design allows for up to 30 dB(A) noise reduction with maximized flow efficiency while providing 20% more flow capacity than previously possible. Using a Whisper NXG provides the ability to apply smaller globe valves where previously capacity limited.

Whisper Trim NXG cages are available for a variety of valve body types (see table 1). Please refer to the appropriate valve body bulletin for additional construction details.



X2018

WHISPER TRIM NXG CAGE

Features

- **Optimum Fabrication**—The additively manufactured lattice trim design eliminates jet structure limitations.
- **Outstanding Noise Control**—Use of a Whisper Trim NXG cage in a properly sized valve can result in a noise reduction up to 30 dB(A) compared to the same valve with standard trim. Such a reduction would be similar to the reduction in noise level noticed when moving away from the noise source 94 m (308 feet).
- **Optimum Performance**—Use of a Whisper Trim NXG cage provides 20% more capacity than previously possible without compromising noise attenuation.
- **Long Trim Life**—Hardened materials of construction are standard to provide exceptional wear resistance. For more information about trim materials, see the appropriate valve body bulletin.
- **Easy Maintenance**—Quick change trim allows fast and easy inspection of the cage without taking the valve body out of the pipeline. Whisper Trim NXG is interchangeable with standard control valve trim, consult your [Emerson sales office](#).

Specifications

Availability

See table 1

Trim Material and Selection

See appropriate valve body bulletin

Pressure/Temperature Capability

See appropriate valve body bulletin

Maximum Pressure Drops

As shown in appropriate valve body bulletin

Flow Characteristic⁽¹⁾

Linear (restricted linear cages, modified parabolic cages, and special, characterized cages are available--consult your [Emerson sales office](#))

Flow Direction

Up--through the seat ring and out through the cage orifices

Noise Attenuation

See Catalog 12, section 3 for calculation procedure

Sizing Coefficients⁽¹⁾

See Catalog 12, section 1 for actual values

Shutoff Classification

See appropriate valve body bulletin

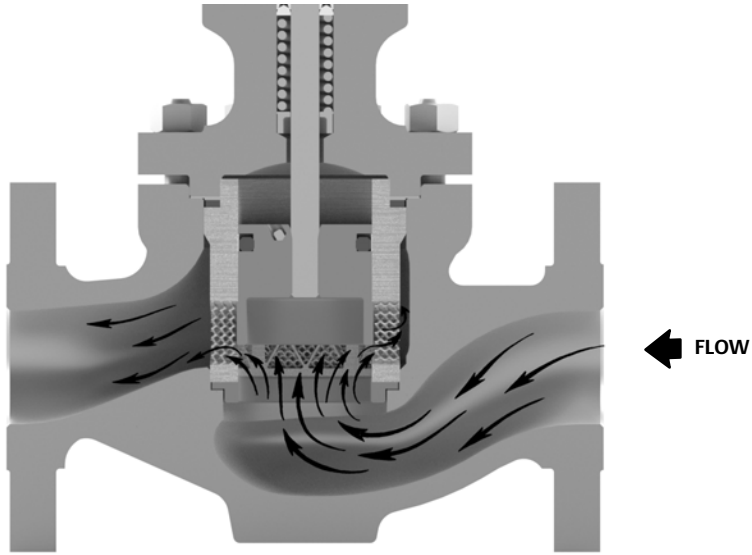
1. For additional sizing information, contact your Emerson sales office.

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.

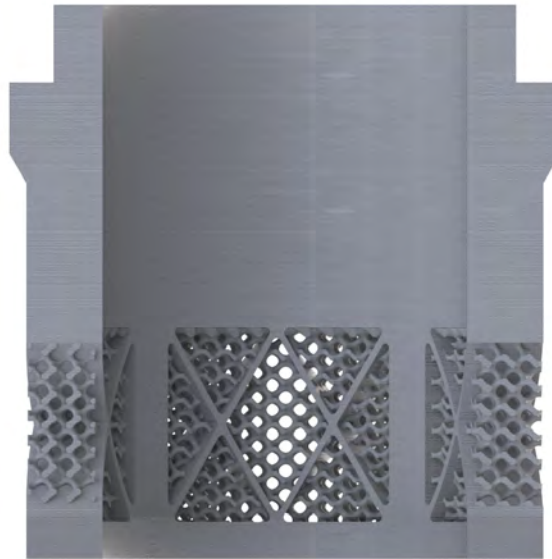
Because the Whisper Trim NXG cage design utilizes a multiple-orifice design, a strainer should be installed upstream of any Whisper Trim NXG application.

Figure 1. Whisper Trim NXG Cage in Fisher Valve



X202

Figure 2. Whisper Trim NXG Cage Cutaway



X2023

Table 1. Valve Body Constructions with Whisper Trim NXG Cages

VALVE DESIGN	VALVE SIZE, NPS ⁽²⁾	PRESSURE RATING	PORT DIAMETER		VALVE PLUG, TRAVEL		PERFORMANCE LEVEL, MAX 0.999 Δ P/P ₁ ⁽³⁾								
			mm	Inch	mm	Inch	A1	A3	B1	B3	C1	C3	D1	D3	
ED, ES, ET, ET-C ⁽⁴⁾	1	CL150, CL300, CL600	33.3	1-5/16	19	3/4	X								
	1 1/2		47.6	1-7/8	19	3/4	X								
	2		58.7	2-5/16	35	1-3/8	X								
	2 1/2		73.0	2-7/8	38	1-1/2	X								
	3		87.3	3-7/16	38	1-1/2	X								
	4		111.1	4 3/8	51	2	X								
	6 ⁽¹⁾		177.8	7	51	2	X								
			136.5	5-3/8	76	3	X								
8 ⁽¹⁾	203.2	8	76	3	X										
			95	3-3/4	X										
			102	4	X										
EAD, EAS, EAT	1	CL150, CL300, CL600	33.3	1-5/16	19	3/4	X								
	2		47.6	1-7/8	19	3/4	X								
	3		73.0	2-7/8	38	1-1/2	X								
	4		87.3	3-7/16	38	1-1/2	X								
	6	CL150, CL300, CL600	111.1	4-3/8	51	2	X								
EHD, EHS, EHT	2, 3 x 2	CL2500	38.1	1.5	38	1.5	X								
	3, 4 x 3		58.7	2.3125	38	1.5	X								
	6, 6 x 4		73	2.875	51	2	X								
	6, 8 x 6		111.1	4.375	76	3	X								
	8, 10	CL1500	178	7	178	7	X								
		CL2500	136	5.375	146	5.75									
EWD, EWS, EWT, EWT-C ⁽⁴⁾	4 x 2	CL150, CL300, CL600	58.7	2.3125	34.9	1.375	X								
	6 x 4 ⁽¹⁾		111.1	4.375	50.8	2	X								
	8 x 4		111.1	4.375	50.8	2	X								
	8 x 6, 10 x 6 ⁽¹⁾		76.2	3	X										
			101.6 ⁽⁵⁾	4 ⁽⁵⁾	X										
	12 x 6 ⁽¹⁾		136.5	5.375	165.1	6.5	X								
	10 x 8	203.2	8	152.4	6	X									
12 x 8	CL150, CL300, CL600, CL900	203.2	8	152.4	6	X									
EWD-1, EWT-1	12 x 8	CL900	197	7.75	146	5.75	X								
EWND-1, EWNT-1	8 x 6	CL900	136	5.375	127	5	X								
	12 x 8	CL900	197	7.75	203	8	X								
EWND-1, EWNT-2	12 x 8	CL300, 600	197	7.75	203	8	X								

-continued-

Table 1. Valve Body Constructions with Whisper Trim NXG Cages (continued)

VALVE DESIGN	VALVE SIZE, NPS ⁽²⁾	PRESSURE RATING	PORT DIAMETER		VALVE PLUG, TRAVEL		PERFORMANCE LEVEL, MAX 0.999 Δ P/P ₁ ⁽³⁾												
			mm	Inch	mm	Inch	A1	A3	B1	B3	C1	C3	D1	D3					
FBD, FBT	8 x 12 thru 24 x 16	Consult Fisher bulletin 51.1:FB (D100195X012)																	
HPD, HPS, HPT	1	CL1500, 2500	19	0.75	29	1.125	X												
			25	1	19	0.75	X												
	2		19	0.75	29	1.125	X												
			25	1	19	0.75	X												
			48	1.875	51	2	X												
	3		CL1500	48	1.875	51	2	X											
				73	2.875	51	2	X											
	4			73	2.875	51	2												
				92	3.625	51	2	X											
	6			111	4.375	76	3												
136		5.375		76	3	X													
HPAD, HPAS, HPAT	2	CL1500, 2500		48	1.875	38	1.5	X											
	3	CL1500		48	1.875	38	1.5	X											
	4			73	2.875	51	2	X											
	6			73	2.875	51	2												
			92	3.625	51	2	X												
	8		111	4.375	76	3													
136			5.375	76	3	X													

1. Please note that the body/bonnet height may be greater after installing a Whisper Trim NXG cage. A spacer is required for ED, ET, ET-C, EWD, EWT, and EWT-C configurations.
2. Two-number valve body size designation for EH, EW, and EWN Series valves indicates end connection size by trim size, but for FB Series valves, it indicates inlet size by outlet size.
3. The X indicates performance level available for given body-trim configuration. Other cage/body configurations available to meet specific applications.
4. ET-C available for sizes NPS 3-8 and EWT-C available for sizes NPS 6x4 - NPS 12x8.
5. Travel limited to 3.75" for EWD valves with Class IV multiple piston rings and EWT with PEEK anti-extrusion seal ring.

Ordering Information

When ordering, please specify:

1. Required C_v
2. Trim material
3. Valve body design
4. Valve body size
5. Valve materials of construction
6. Service conditions and all other information requested in the valve body bulletin

Product Bulletin

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Whisper Trim NXG
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