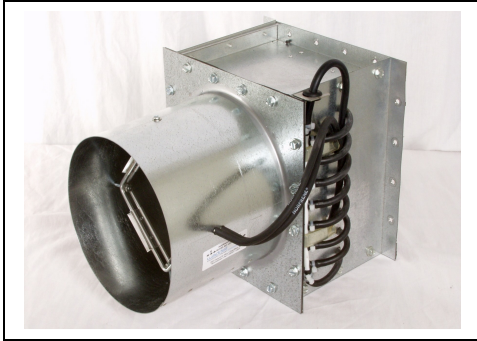


Very Low Leakage Control Damper

BULLETIN 811



Low Leakage Damper with Averaging Flow Sensor

Product Description

The Waddell WPD damper is known for very accurate flow or pressure control with linear performance. By adding special modifications the airflow leakage rates through the exterior casing are reduced to very low values – important for projects requiring tight containment.

Applications

Specific applications may include zone containment in the event of a spill, certain decontamination processes, isolation and specific infectious disease laboratories and biomedical spaces

Applications

- Zone Isolation
- BioMedical

Benefits

- Space Saving
- Cost Reduction

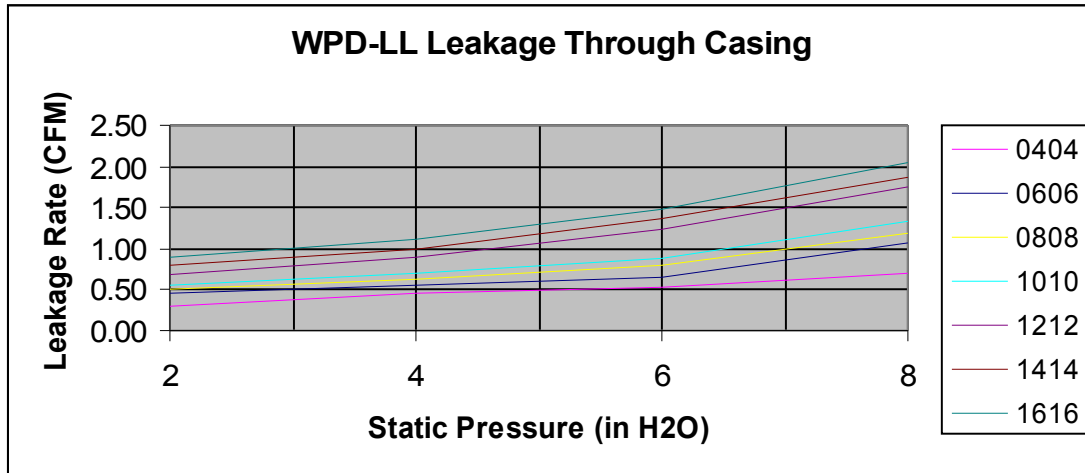
The maximum amount of leakage as well as the operating conditions for the project should be determined prior to the selection of any containment hardware. The hardware selection should consider not only seal design and the material selected, the closure pressure on the seal as well as the total pressure on the damper.

Design

The modifications to the original WPD include side and end panel seals as well as special seals where any items penetrate the casing.

Performance

The pressure drop through a wide open valve is increased by 3.5% of the applicable velocity.



**Model WPD-LL
Leakage Through Casing**

		Static Pressure							
In		2		4		6		8	
Pa		500		1000		1500		2000	
Size		CFM	L/S	CFM	L/S	CFM	L/S	CFM	L/S
	0404	0.29	0.14	0.45	0.21	0.54	0.25	0.70	0.33
	0606	0.45	0.21	0.55	0.26	0.65	0.31	1.08	0.51
	0808	0.50	0.24	0.64	0.30	0.80	0.38	1.20	0.56
	1010	0.56	0.26	0.71	0.33	0.88	0.41	1.34	0.63
	1212	0.68	0.33	0.96	0.42	1.24	0.59	1.85	0.82
	1414	0.8	0.38	1.24	0.47	1.68	0.64	1.92	0.88
1616	0.86	0.42	1.41	0.52	1.78	0.70	2.06	0.95	

Leakage through Casing and Closed Damper

		Static Pressure							
In		2		4		6		8	
Pa		500		1000		1500		2000	
Size		CFM	L/S	CFM	L/S	CFM	L/S	CFM	L/S
	04x04	0.56	0.26	0.70	0.33	0.86	0.40	1.10	0.52
	06x06	0.69	0.32	0.79	0.37	0.97	0.46	1.48	0.70
	08x08	0.74	0.35	0.89	0.42	1.12	0.53	1.62	0.76
	10x10	0.81	0.38	0.96	0.45	1.20	0.56	1.74	0.82
	12x12	0.92	0.43	1.25	0.59	1.56	0.73	2.28	1.07
	14x14	1.04	0.49	1.49	0.70	2.01	0.94	2.3	1.08
16x16	1.14	0.54	1.66	0.78	2.1	0.99	2.43	1.14	

Notes

The objective of the tests is to accurately measure the amount of air required to replace the volume of air which is leaking from the device or a duct system at a specified pressure. The above data is based on strict compliance with procedures set out by NEBB. Test instruments included a calibrated orifice and a digital display all traceable to NIST.

Closure Pressure is 20psi.


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