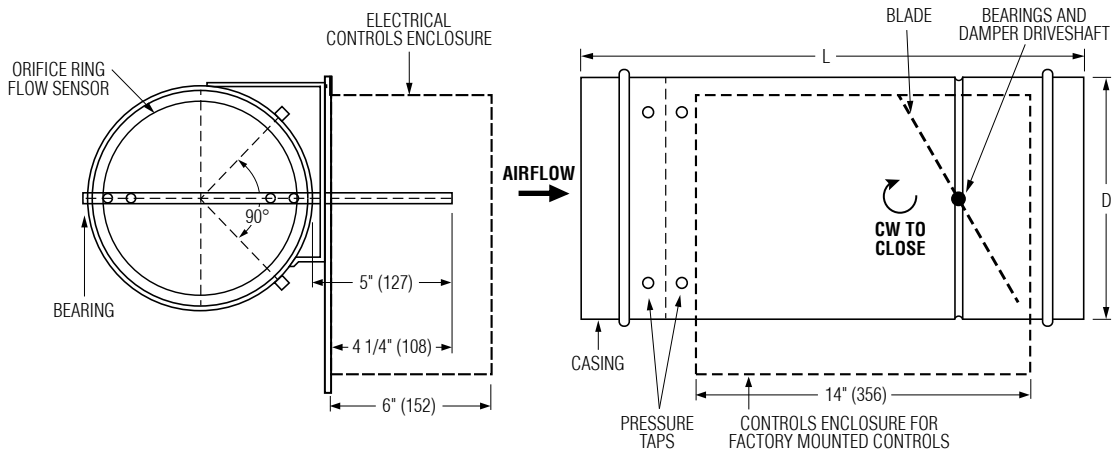




**ROUND LABORATORY EXHAUST TERMINAL UNIT
WITH ORIFICE RING FLOW SENSOR**
DIGITAL CONTROL • PRESSURE INDEPENDENT
VARIABLE AIR VOLUME
MODEL: D36VRL



Dimensional Data

Unit Size	Airflow Range cfm (l/s)	D	L	Duct Area (Sq. ft.)	K-Factor (cfm)	F-Factor (amp.)
4	35 – 300 (17 – 142)	3 7/8 (98)	18 (457)	0.087	248	1.97
5	65 – 550 (31 – 260)	4 7/8 (124)	18 (457)	0.136	448	1.48
6	70 – 605 (33 – 286)	5 7/8 (149)	18 (457)	0.196	497	2.49
7	120 – 1020 (57 – 481)	6 7/8 (175)	18 (457)	0.267	836	1.64
8	145 – 1240 (68 – 585)	7 7/8 (200)	18 (457)	0.349	1015	1.90
9	170 – 1445 (80 – 682)	8 7/8 (225)	20 (508)	0.442	1182	2.24
10	225 – 1920 (106 – 906)	9 7/8 (251)	20 (508)	0.545	1569	1.94
12	300 – 2580 (142 – 1218)	11 7/8 (302)	20 (508)	0.785	2106	2.23
14	455 – 3930 (215 – 1855)	13 7/8 (352)	22 (559)	1.069	3209	1.78
16	550 – 4755 (260 – 2244)	15 7/8 (403)	22 (559)	1.395	3883	2.07

Maximum airflow is based upon 1.5" w.g. (375 Pa) max. differential pressure signal from flow sensor.

Equations:

$$Q = K \times \sqrt{\Delta P} \quad \Delta P = \left(\frac{Q}{K}\right)^2 \quad F = \left(\frac{4005 \times A}{K}\right)^2$$

Where:

Q = Airflow Rate (cfm)
 ΔP = Sensor Differential Pressure ("w.g.)
 K = K-Factor Calibration Constant (standard air)
 F = Amplification Factor (sensor gain)
 A = Nom. Duct Area (sq. ft.)

The K-Factors tabulated in the table are the airflow required to produce a 1.0" w.g. differential pressure at the Flow Sensor.

Standard Construction:

- Casing: 20 ga. (0.91), Type 316 stainless steel with stiffening beads. Welded casing.
- Blade: Two layers of 20 ga. (0.91), Type 316 stainless steel laminated together with Teflon peripheral gasket for tight shut-off. 90° rotation, CW to close. Damper leakage is less than 1% of the terminal rated airflow at 3" w.g. (750 pa.) and less than 2% at 6" w.g. (1500 pa.) as tested in accordance with ANSI / ASHRAE Standard 130.
- Bearings: Teflon.
- Drive Shaft/Axles: 1/2" (13) diameter Type 316 stainless steel. Indicator mark on the end of the shaft to show damper position.
- Type 304 stainless steel controls enclosure mounting bracket.
- Full NEMA 1 type controls enclosure for factory mount controls.
- Orifice ring flow sensor to measure airflow. The orifice sensor features 2 upstream and 2 downstream averaging pressure taps which minimizes particulate collection in contaminant exhaust applications. UL rated FR 3/16" (4.76) I. D. pneumatic flow sensor tubing (not shown). Supplied with brass balancing/calibration tees.

- Right-hand control location is standard (as shown) when looking in direction of airflow. Left-hand is optional.

Controls:

- Digital (by others).
- See separate submittal.

Options and Accessories:

- 24 VAC Control transformer.
- Toggle disconnect switch.
- Controls enclosure 22 ga. (0.85), galvanized steel.
- Controls enclosure. 22 ga. (0.76), Type 304 S.S.
- Dust tight enclosure seal.
- Special features _____.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Dimensions are in inches (mm)

DATE	B SERIES	SUPERSEDES	DRAWING NO.
11 - 20 - 23	3600	11 - 1 - 23	36VRL-1