

Airtube Service Company



And



VA San Diego Renovate
Anatomical Pathology Lab
San Diego, CA

Pneumatic Tube System

Spec 149200

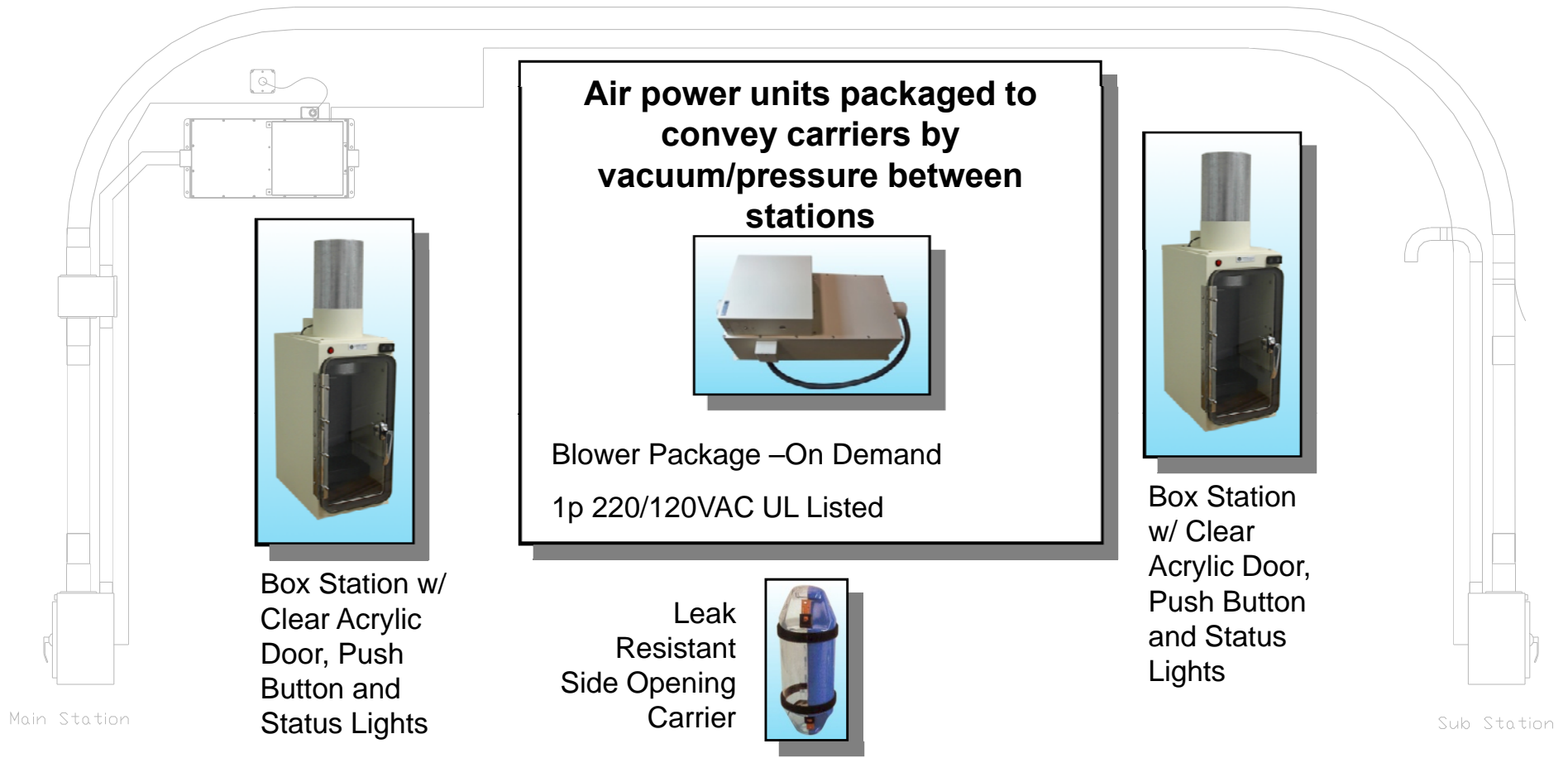
Product Data



Point To Point Single Tube Vacuum/Pressure Pneumatic Tube Systems

Summary and System Design

Provide a 6" single line vacuum/pressure point to point pneumatic tube systems. The system shall consist of air-tight tube run connecting counter top, surface or recessed mounted box stations between two locations. Stations shall be oriented for up send/ down receive as shown on project drawings. Blowers and controls (suitable for adjacent remote mounting), carriers, 6" tubing and bends, supports/ hangers, fitting and other required accessories to provide two way carrier travel between stations.





Pneumatic Tube Systems

Tubing & Long Radius Bends

Tubing and bends shall be 6" O.D. electric resistance welded 16 gauge galvanized carbon steel mechanical tubing. Bends shall maintain a uniform cross section throughout on a nominal centerline radius of not less than 36 inches (where required to clear structure) .

Standard Stock Tubing (One End Expanded)*

Zinc-coated(galvanized) Steel

Part Number	A (O.D)	B	C	D (I.D)	Gauge	WT. Per Ft.
69010-1	6"	10'	4 3/4"	6"	16	4.12#
69000	6"	12'6"	4 3/4"	6"	16	4.12#

* Tubing w/ straight ends available. Dimensions same as above except C is not applicable.

Standard Stock Long Radius Bends (One End Expanded)*

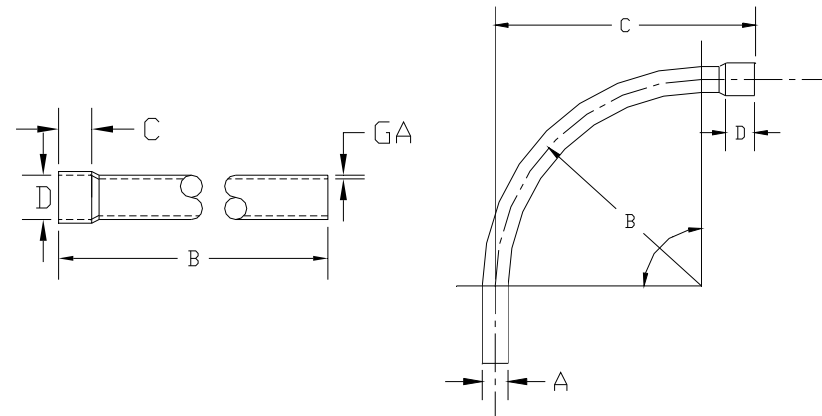
Zinc-coated(galvanized) Steel

Part Number	A (O.D)	B	C	D (I.D)	Gauge	WT. Per Unit
69236-1	6"	36"	48"	4 3/4"	16	20#
69248-1	6"	48"	73 3/8"	4 3/4"	16	33.2#

* Bends w/ straight ends available. Dimensions same as above except D is not applicable.

Specifications:

Material:	ASTM-A787.Grade 1008/1010CS ERW Galvanized Carbon Steel
Type:	#2
Code:	AWG
Coating Designation:	G-60 Per ASTM A653
Flash Condition:	Controlled To .010 Maximum
Steel Grade Designation:	1008/1010 CS
Hardness:	65Rb Maximum
Cross Section:	Round
Ovality:	.040" Maximum
Dimensions:	
Outside Diameter:	6.00" ±.020"
Wall Thickness:	.065" +.020 -.010"
Requirements:	To be free from excessive oil, chips, dirt, scale and injurious defects





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Methods of Joining

Expanded Fitting

This type of connection enables a straight section of tubing to slip inside the expanded end of the fitting. The two pieces can then be “locked” together by any of several techniques - brazing, welding (normally for underground tubing), industrial adhesive, or shrink sleeve.

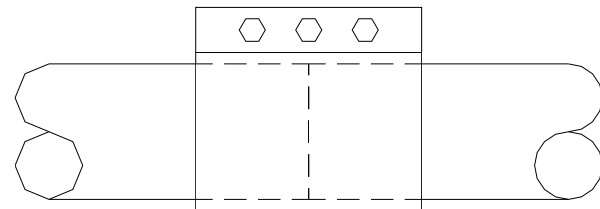
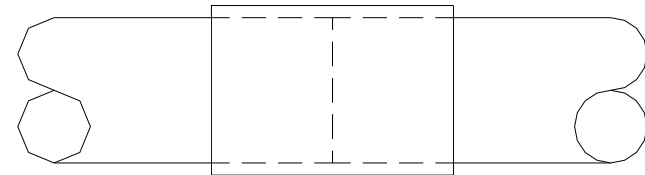
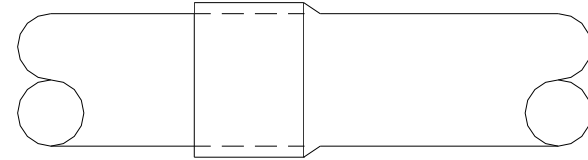
Slip Coupling

Can be used for joining any two straight ends of tubing or fittings. The slip coupling is a solid sleeve that fits the O.D. of the joint which can then be glued, brazed, welded or covered by a shrink sleeve.

A solid tube joint maybe made be either using an expanded fitting or a slip coupling to join two or more pieces together.

Clamp Sleeve

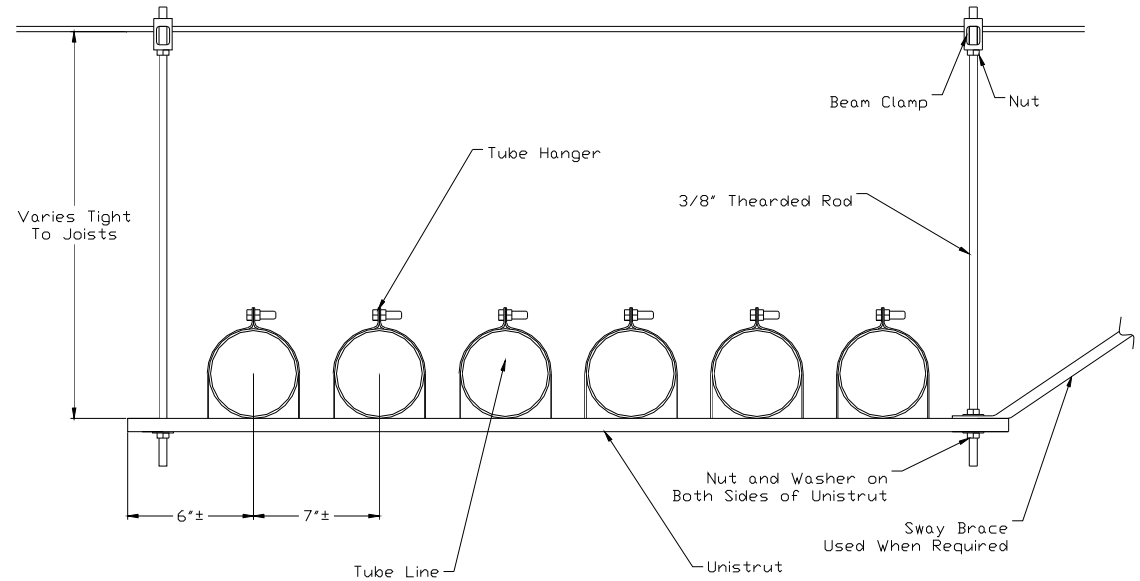
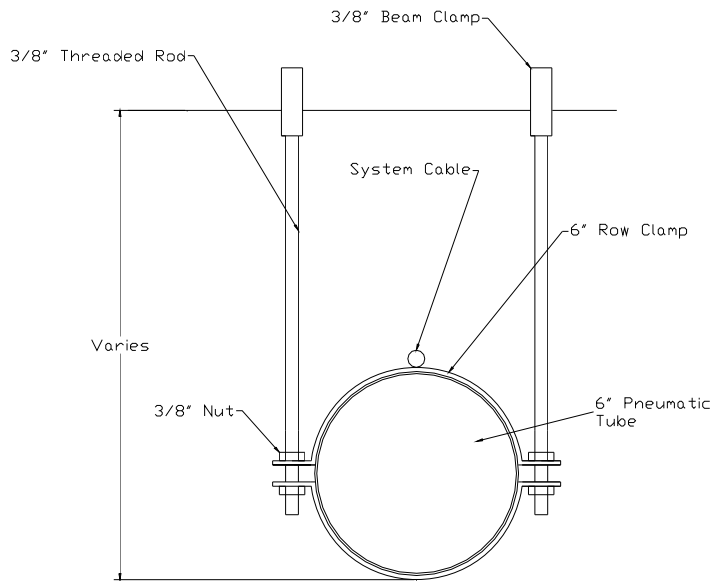
Offers easy “tear down” function. Straight end tubing or fittings butt together within the I.D. of the coupling, and the joint is mechanically locked simply by tightening the bolts which are included.





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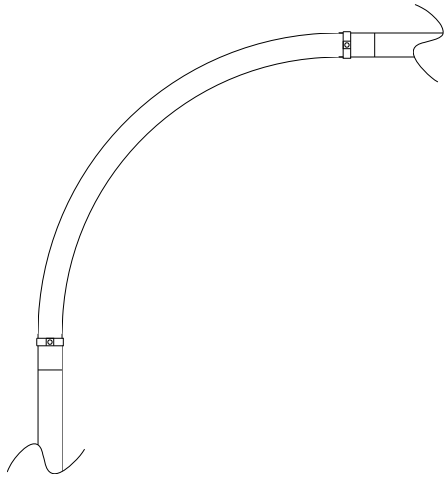
Typical Tube Hanging Detail





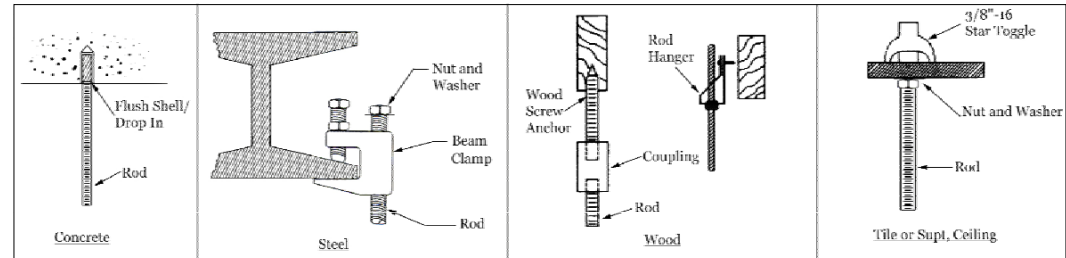
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Typical Tube Hanging Detail



Typical Bend Hanging

Typical Anchor And Hanger Types



Anchor Types - Typical

1. Hanger - 10' to 12 $\frac{1}{2}$ ' Spacing (horizontal tube), at each end of bend or offset, and at each floor (vertical tube).
2. Sway Brace as Required
3. Use Single Tube Hangers Or Cut Row Clamp and Hangers as Required in field
4. All Bolts, Nut and Rods are $\frac{3}{8}$ "-16 thread.
5. Finish: All Fittings are the standard finish for hanging material, channels, clamps, metal framing and fittings - minimum zinc plated or as otherwise approved.
6. Standard of Quality: Standard material from Superstrut, Kindorf, B-Line, Unistrut or equal.
7. Structural channel, angle iron or pre formed channel may be used to support parallel or close together multiple runs of tubing.
8. Strut support unless otherwise noted 1 $\frac{5}{8}$ " x $\frac{13}{16}$ "



Pneumatic Tube Systems

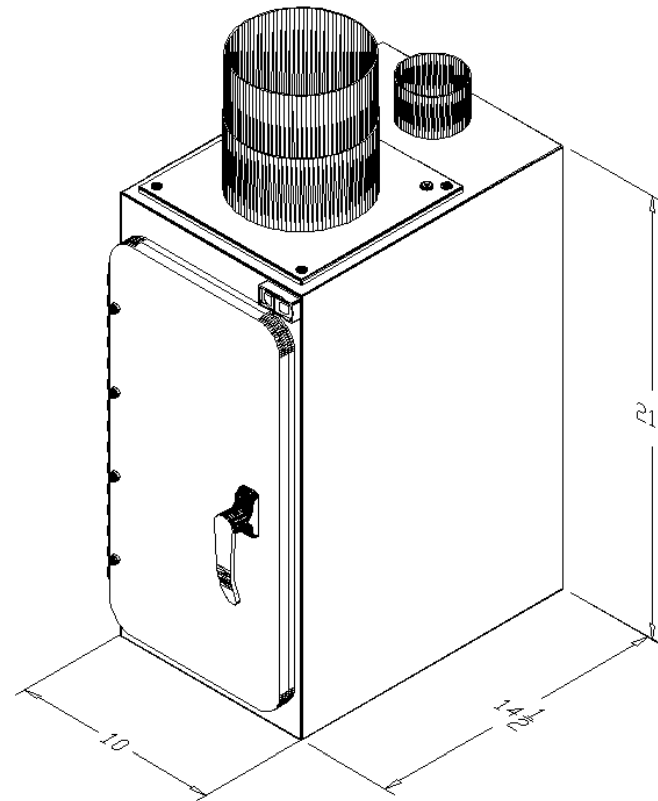
A-ware Model PV960 Master Station

Description:

The A-Ware Sub-Station is a small compact free standing station that fits easily into most any location. The station's design, quality components, and overall construction have proven it the most rugged and reliable station on the market today. This single tube station is designed for ease of installation, maintenance, and high reliability.

The station STANDARD features include:

- Up Send / Down Receive
- Stainless Steel Hinge, Positive Door Latch and Chrome Handle
- Air-cushioned "soft" delivery
- 12 Gauge Cold Rolled Steel Construction
- "IN-USE", "READY" and "Carrier Arrival" Lights
- Low Voltage – 30 Volt DC Operation
- Baked-On Powder Coat Finish
- .705" Thick clear acrylic door
- For 6" tube systems





Pneumatic Tube Systems

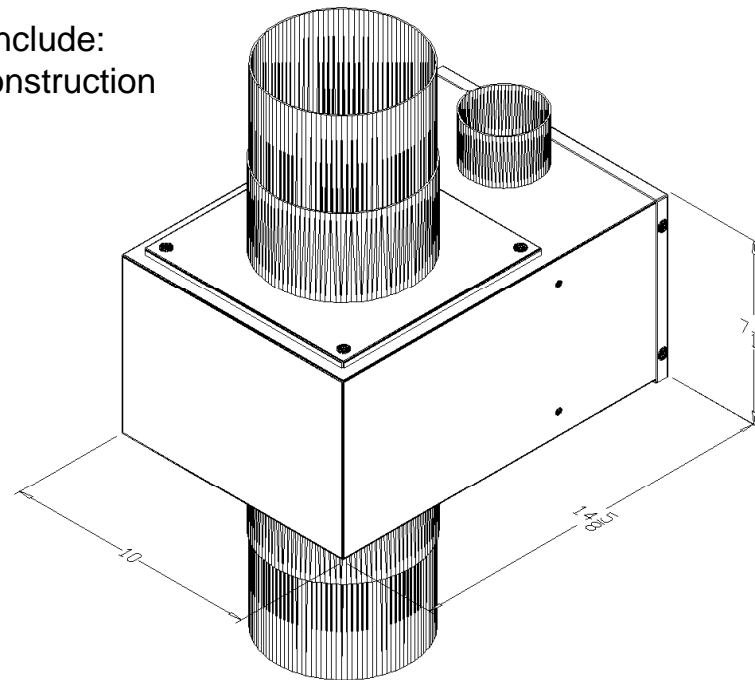
A-ware Model PVC6 Air Valve

Description:

The A-Ware air valve is used to direct the air in either vacuum or pressure to the proper system connection and provide an air cushioned, soft arrival at the master station. Located above the master station it provides the connections between the blowers, the transmission line and the master station. It is a small compact unit that fits easily into most any location. This air valve is designed for ease of installation, maintenance, and high reliability.

The station STANDARD features include:

- 14 Gauge Cold Rolled Steel Construction
- Baked-On Powder Coat Finish
- For 6" tube systems



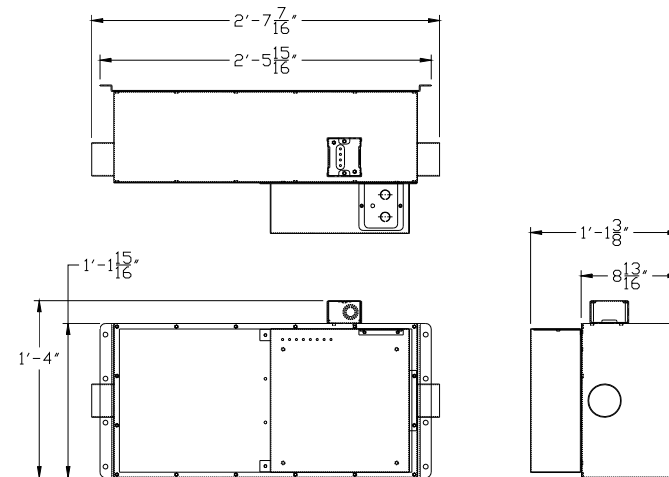
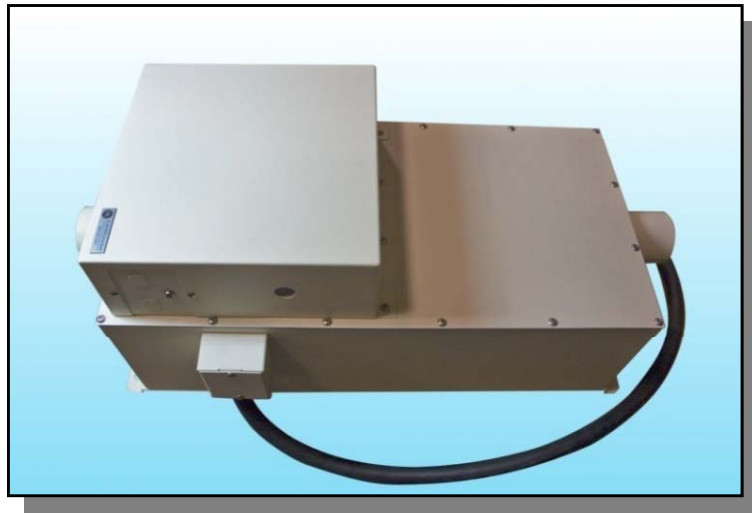


Pneumatic Tube Systems

A-ware Model HD4PV Vacuum/Pressure Blower

Blower or air power unit shall be of heavy duty construction, and provides both air and low voltage control operation for point to point systems. This compact, all steel, unit is powered with two to four AMETEK 2 stage continuous duty through-flow vacuum motors to provide vacuum or pressure sufficient to move carriers at an carrier speed of 25 FPS. The unit has built-in circuit fuses and operates on 120/220 VAC, 1 phase, 60 cycle current. The integrated control converts AC power to 24VDC for system control voltage. Built-in inlet and outlet screens help to keep out debris. The blower unit shall be suitable for remote mounting near main station units in dock area out side of dispatch and office. Each system shall have its own blower unit, operated independently on demand only, automatically shutting down after use.

The HD4PV blower unit is ETL listed and conforms to ANSI/UL std. 73 and is certified to CAN/CSA C22.2 std. no. 68

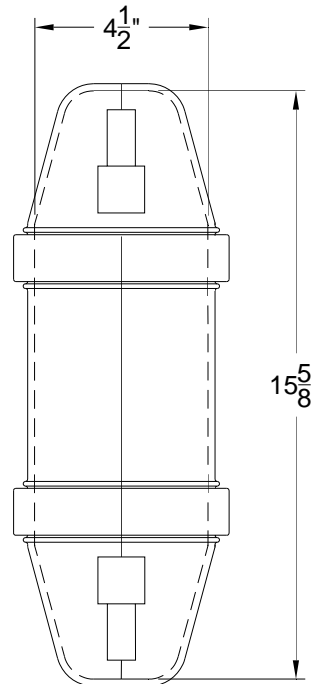




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6 Inch Leak Resistant Carrier

Carrier shall be full access leak-resistant type. Carrier shall be molded from high quality plastic, side opening, positive-latching closure with replaceable wear bands and bi-directional.. Bodies are available in clear or ½ transparent ½ opaque. Carrier shall use latches that do not extend outside the carrier line. Carrier shall have inside dimensions of 4-½" inside diameter x 15-⁵/₈" inside length.





Pneumatic Tube Systems

Quality Assurance

All materials and labor will be the highest quality for the equipment used and will be designed to comply with customer requirements.

The entire installation will meet all applicable industry and manufacturer standards. Workmanship and material shall be high quality. The installation shall be done by Airtube Service. Total responsibility for system installation, installation material, system start up, training and warranty shall rest directly with Airtube Service.