Air Preparation Systems 1/4" thru 3"

# Water Separators – P3TF



#### Features

- Tested in Accordance with ISO 8573.9.
- High Liquid Removal Efficiencies at All Flow Conditions.
- **Low Pressure Losses for Low Operational Costs.**
- Multiple Port Sizes for a Given Flow Rate Provides Increased Flexibility During Installation.
- Suitable for Variable Flow Compressors.
- Works with All Types of Compressor and Compressor Condensate.
- Low Maintenance.
- Lightweight Cast Aluminum Housing with 1/4" to 3" Ports.
- External Surface Epoxy Painted for Maximum Corrosion Resistance.

#### Applications

- Bulk Liquid Removal at Any Point in a Compressed Air System
- Protection of Refrigeration and Heatless Regenerative Desiccant Dryers
- Liquid Removal from Compressor Inter-coolers / After-coolers
- Liquid Separation Within Refrigeration Dryers
- Pre-Filtration

#### **Ordering Information**



#### BOLD ITEMS ARE MOST POPULAR.





## Operation

- Air Enters the Water Separator Inlet and Turns Into the Separator Module.
- The Inlet of the Separator Module Contains a Set of Fixed Vanes Which the Air Must Pass Through.
- The Vanes Force the Air to Spin Inside the Vessel.
- The Spinning Air is Then Forced to Change Direction as it Passes the Impinger.
- A Vortex is Created Which, Due to the Design of the Separator Module, Narrows and Intensifies as it Reaches the Lower Part of the Separator Module.
- Bulk Liquid is Removed From the Airstream Due to:
  - Directional Changes of the Airstream
  - Velocity Changes
  - Centrifugal Action of the Vortex
- As the Vortex Reaches the Bottom of the Module, Air is Forced Through The Center of the Vortex.
- Aerospace Turning Vanes, Located in the Outlet of the Separator Module, Turn an Inefficient Corner Into a Number of More Efficient Corners.
- Turning Vanes Reduce Turbulence, Minimizing Pressure Loss and Cost of Ownership.
- The Number of Vanes Required is Dependent Upon the Conduit Diameter.

## **Specifications**

Pressure Differential at Rated Flow ...... 1.0 PSID (0.07 bar)

Model Number	Pipe Size	SCFM (L/s)	Maximum Operating Pressure PSIG (bar)	Operating Temperature	Weight Lb. (kg)
P3TFA92WAAN	1/4"	21 (10)		Maximum 176°F (80°C) Minimum 35°F (1.5°C)	0.9 (0.4)
P3TFA93WBAN	3/8"	85 (40)			2.2 (1.0)
P3TFA94WCAN	1/2"	85 (40)			2.2 (1.0)
P3TFA96WDAN	3/4"	233 (110)			4.8 (2.2)
P3TFA98WEAN	1	233 (110)	232 (16)		2.6 (5.7)
P3TFA9BWGAN	1-1/2"	742 (350)			5.3 (11.6)
P3TFA9CWHAN	2"	742 (350)			5.3 (11.6)
P3TFA9EWKAN	3"	1695 (800)			12.0 (26.4)

Stated flows are for operation at 102 PSIG (7 bar) with reference to 20°C, 1 bar (a), 0% relative water vapor pressure.





#### Dimensions

Model Number	Pipe Size	Α	в	с	D	E	NPT F
P3TFA92WAAN	1/4"	3.00 (76)	1.12 (28.5)	6.02 (153)	1.58 (40)	7.15 (181.5)	1/2
P3TFA93WBAN	3/8"	3.83 (97.5)	1.34 (34)	7.91 (201)	1.97 (50)	9.25 (235)	1/2
P3TFA94WCAN	1/2"	3.83 (97.5)	1.34 (34)	7.91 (201)	1.97 (50)	9.25 (235)	1/2
P3TFA96WDAN	3/4"	5.07 (129)	1.67 (42.5)	13.09 (232.5)	2.76 (70)	10.80 (275)	1/2
P3TFA98WEAN	1	5.07 (129)	1.67 (42.5)	12.68 (322)	2.76 (70)	14.35 (364.5)	1/2
P3TFA9BWGAN	1-1/2"	6.70 (170)	1.97 (50)	18.68 (474.5)	3.94 (100)	20.64 (524.5)	1/2
P3TFA9CWHAN	2"	6.70 (170)	1.97 (50)	18.68 (474.5)	3.94 (100)	20.64 (524.5)	1/2
P3TFA9EWKAN	3"	8.07 (205)	2.36 (60)	30.39 (772)	4.72 (120)	32.76 (832)	1/2

Inches (mm)

# Air Preparation Systems Water Separators

#### Flow



#### Water Separator Kits & Accessories

Drain Kit.....PSY10328

# **Materials of Construction**

Automatic Float Drain	Plastic
Housing / Bowl	Aluminum
Seals	Fluorocarbon

For External Drains, please reference WDV3-G Automatic Electrical Drain or WDV2 Zero Loss Drain

