

# PRODUCT CATALOG

Superior Filtration Products. Pure & Simple.

FILTERS | DRYERS | DRAINS | ACCESSORIES

tsunami.us.com







## COMBINING **QUALITY AND CUTTING-EDGE TECHNOLOGY**





#### **OPTIMIZED CONTENT**

Our website works on a responsive template and is easily accessible on any hand-held device.

- Find in-depth information on the products you need.
- Get up-to-date information on new product releases and upcoming events.
- Download user manuals and instruction guides.

Get Connected! tsunami.us.com



#### **ONLINE VIDEOS**

Tsunami Compressed Air Solutions™, a division of Suburban Manufacturing Group, offers over forty online videos.

- Sales training and demonstration videos.
- View step-by-step installation instructions.
- General knowledge as well as tips and tricks on compressed air best practices.

Visit our YouTube channel or video library at: tsunami.us.com/videos

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For over 35 years, Tsunami Compressed Air Solutions™, a division of Suburban Manufacturing Group, has set the industry standard for quality compressed air filtration and drying solutions. While we strive to bring cutting-edge technology to the world of pneumatics, we continue to focus on the core principles that built the foundation of our successful business: quality, value, and worldclass customer service.

At Suburban Manufacturing Group, our mission is to build value for our customers by producing quality, innovative, application-based products. Suburban is an engineering driven organization that partners with customers to design and develop unique and specific fluid power products.

Today, we distribute thousands of fluid power solutions worldwide right from our U.S. manufacturing facility located in Monticello, Minnesota.

Suburban Manufacturing Group is an ISO 9001-2015 Certified Manufacturer.

a division of



**L** 1.800.782.5752

# THE #1 RULE OF COMPRESSED AIR

For Every 20°F that Compressed Air is Cooled, the Air Loses 50% of its ability to Hold Moisture in Vapor Form (Humidity).

#### UNDERSTANDING AIR DRYING AND AIR FILTRATION... THERE IS A DIFFERENCE!

AIR DRYING | The Removal of Water Vapor (Humidity) from Compressed Air

Typically, this is accomplished in one of four ways:

• Desiccant (molecular sieve, activated alumina, silica gel) • Membrane • Refrigeration • Deliquescent

#### WHEN TO USE COMPRESSED AIR DRYERS

Air dryers should be used when you want to remove or reduce the humidity levels in your compressed air system to meet or exceed the air quality requirements for the compressed air demands of your tools, equipment, or applications.

#### **AIR FILTRATION** | The Removal of Particulates, Water, Oil Droplets, and Aerosols

This is most effective when done in stages:

- Water separator removes bulk water, oil, and large particulates (down to 10 micron)
- Coalescing filter removes oil, aerosols and fine particulates (down to .01 micron)
- Activated carbon filter removes oil vapors; eliminates odors and taste (down to .003ppm)

#### WHERE TO PLACE COMPRESSED AIR FILTRATION

- The further away from the compressor, the more effective your filtration will work
- On or near the equipment, directly connected to air supply connection (IMPORTANT)
- In front of all air dryers as pre-filters
- Water separators should be placed at all air tool drops with regulators

#### **IMPORTANT THINGS TO KNOW**

- Proper control of air pressure throughout your facility can help save 10-15% of your compressed air energy costs.
- Repairing an audible air leak can save you \$50 or more per year in energy used to drive your compressor.
- When sizing a compressor for manufacturing, it is important to calculate total machine air consumption as well as total air consumed by machine operators and other personnel.
- Proper control of air volume (CFM) will make all your air drying and filtration technology perform at their rated capacity. Most pieces of equipment have a manufacturer's specification of volume consumption along with the recommended operating pressure.
- Improper use of volume can cause an "over-flowing" of the rated capacity of your dryer or filtration which causes a carry over of moisture and contaminants.
- Many OSHA approved blow off guns can consume up to 35 CFM, the equivalent of a 10 Hp compressor.
- Many color changing indicators used with desiccant systems do not begin to change color before 20% rH.

## KEY QUESTIONS FOR APPLICATION SOLUTIONS

#### **ABOUT THE APPLICATION**

- 1. How much air does the application/equipment need, in CFM?
- 2. What pressure does the application require?
- 3. How dry does the air have to be?
- a) Typically going to be specified as dew point or relative humidity
- 4. How clean does the air have to be?
- a) Are we just worried about water, dirt, dust, and other particulates?
- b) Do we have to remove any oil aerosols from the air?

#### **ABOUT THE SUPPLY SIDE**

- 1. What types, and how many, compressors are in the facility?
- 2. What is the horsepower rating of the compressor(s)?
- a) Do we know the output flow of the compressor?
- b) What is the output pressure of the compressor?
- 3. What is the system pressure?
- 4. What drying technology is used?
- a) Is the dryer installed before or after the receiver tank?
- b) Are there pre-filters used before the dryer?
- c) Are there filters after the dryer?
- 5. Where, and how many, receiver tanks are installed?
- 6. Is the system a looped system, "tree" layout, or a "dead stick" system?









## **AIR DRYERS**

Tsunami Regenerative Drying Systems use proprietary technology to provide extremely clean and dry air.

- Low relative humidity down to .01% RH
- Dew points down to -80°F
- Easy, low-cost maintenance under \$1000/year average
- Includes Tsunami Water Separator and Oil Coalescing Filter with automatic drains

#### **HOW IT WORKS**

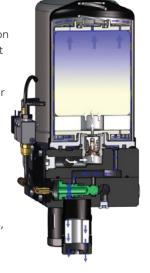
#### The Drying Process

- 1 Pre-filtered air enters the dryer and is channeled through the desiccant tower(s).
- Wet air passes through the tower(s) where molecular sieve desiccant draws water vapor in while under pressure.
- 3 After flowing through the desiccant, the now dry air is sent downstream.
- 4 After two minutes, the control timer sends out a pilot signal shifing the internal piston. When the piston shifts, air is redirected from this tower(s) to the opposite side.



#### The Regeneration Process

- 1 A small amount of air from the dry outlet on the opposite tower(s) percolates up through the regeneration orifice and back through the desiccant filled tower(s).
- **2** The desiccant is dried as the sweep air passes back through the media.
- <sup>3</sup> With the use of this air, the tower(s) discharge water vapor through the dryers mufflers.
- 4 After two minutes, the control timer sends out a pilot signal shifing the internal piston. When the piston shifts, flow is reversed and this tower(s) begins drying the air.



#### **HOW DO WE STACK UP?**



#### **TSUNAMI REGENERATIVE DRYER**

- Can handle high inlet temperature up to 150°F
- Performs well with high demand surge flows
- No Aftercooler Required
- Complete with 2-stage pre-filters & automatic drains
- Dew points ... down to -80°F and lower
- No refrigerant to maintain
- Works great with low flow rates
- Minimal maintenance required:

Change oil coalescing element every six months



#### REFRIGERANT DRYER

- Max inlet temperature 100°F
- Moisture will carry over during high demand surge flows
- Requires Aftercooler
- Must purchase pre-filters and automatic drains separately
- Dew points ... 35-50°F
- Refrigerant to maintain
- Low flow rates may allow water carry over at separator
- Regular maintenance required:

Clean heat exchanger | Electric motor | Refrigerant compressor

## **ULTRA REGENERATIVE DRYERS**

ULTRA SERIES REGENERATIVE DRYERS INCLUDE:

- 2-stage Pre-fitration; Water Separator, Oil Coalescing Filter
- Regenerative Dryer

or Champ

- ✓ Moisture Minder® Automatic Drains
- Programmable Logic Control (PLC)
- ✓ Heater pads availble for cold temp applications



3-Year Warranty on Tsunami Ultra Drying Systems

#### **ULTRA SERIES WALL-MOUNTED**

Ultra series wall-mounted regenerative dryers are designed as complete packages. Systems can be configured in multiple variations allowing for pre-filtration to be installed on the left or right side of the unit. Dual inlet/outlet ports allow for bypass of the dryer where breathing air is required.

#### **ULTRA SERIES TANK-MOUNTED**

The optimal solution for any facility; simply connect shop air into the inlet fitting and out the regulator. It's that simple. Tank-mounted come fully assembled to provide for absolute ease of installation. A built-in bypass system allows the dryer to be shutoff for maintenance or service without stopping production.

#### **ULTRA SERIES RAIL-MOUNTED**

Tsunami rail mounted regenerative dryers are built to withstand the largest surges of contamination. Similar to other Tsunami drying systems, these dual-inlet units are built as complete packages.

21999-0750

21999-0830



In addition to our complete line of standard products, Tsunami has engineered customizable dryers to meet air cleanliness requirements for a variety of industries and applications. Call 1.800.782.5752 or visit **tsunami.us.com** to learn more.

Dryer flow rates based on 100°F at 175 PSI with an outlet pressure of 100 PSI.\*

Lower inlet pressure and higher temperatures affect the performance and quality of the downstream air.

\*minimum inlet pressure 80 PSI

#### WALL-MOUNTED DRYERS

ITEM #	MAX CFM	SIZE	DRAIN	PORT SIZE	WEIGHT	DIMENSIONS
21999-0710	40	10 HP	Pneumatic	1" NPT	73 lbs	30" × 30" × 12"
21999-0715	60	15 HP	Pneumatic	1" NPT	93 lbs	30" × 36" × 12"
21999-0720	80	20 HP	Pneumatic	1" NPT	118 lbs	30" × 42" × 12"
21999-0730	120	30 HP	Pneumatic	1" NPT	118 lbs	30" x 42" x 12"

Parts sent globally will include a -G with the part number.

#### **TANK-MOUNTED DRYERS**

ITEM #	MAX CFM	SIZE	DRAIN	PORT SIZE	WEIGHT	DIMENSIONS
21999-0810	40	10 HP	Pneumatic	1" NPT	335 lbs	69" x 51" x 27"
21999-0815	60	15 HP	Pneumatic	1" NPT	358 lbs	69" x 51" x 27"
21999-0820	80	20 HP	Pneumatic	1" NPT	381 lbs	69" x 51" x 27"
21999-0830	120	30 HP	Pneumatic	1" NPT	381 lbs	69" x 51" x 27"

#### RAIL-MOUNTED DRYERS

ITEM #	MAX CFM	SIZE	DRAIN	PORT SIZE	WEIGHT	DIMENSIONS	
21999-0750	200	50 HP	Pneumatic	1" NPT	267 lbs	66" x 36" x 21"	
21999-0755	300	75 HP	Pneumatic	1" NPT	428 lbs	66" x 36" x 42"	
21999-0760	400	100 HP	Pneumatic	1" NPT	534 lbs	66" x 36" x 42"	
125 HP and 150 HP available on request. Call for details.							







### **PURE REGENERATIVE DRYERS**

PURE SERIES REGENERATIVE DRYERS INCLUDE:

2-stage Pre-fitration; Water Separator, Oil Coalescing Filter

Regenerative Air Dryer

Solenoid Valve Timer

Automatic Drains

✓ Heater pads availble for cold temp applications











Portable Pure-5

Pure-10T

21999-0955

21999-0945

#### **PURE SERIES WALL-MOUNTED**

Pure systems utilizes a simple timed control valve for cycling & Tsunami pre-filtration to assure removal of water, oil and particulates before entering the dryer.





Pure Series dryers are available with either float or Moisture Minder® pneumatic drains.

#### **PURE SERIES TANK-MOUNTED**

The Pure Series Tank-Mounted dryers come as a complete package with tank attachments to support air flow. The Pure-5T comes with a 1-gallon tank to maximize laminar air flow and the Pure-10T sits atop a 60-gallon storage tank to increase shop capacity.

#### **TSUNAMI PORTABLE DRYERS**

Tsunami's Portable Dryers are designed to give you ultimate mobility. These user friendly designs provide Tsunami world class air quality in a portable package.



Cut the cord! The Tsunami Rove is now available with pneumatic generator power supply. Pneumo powered models operate by consuming 1-2 scfm from the dryer.

Dryer flow rates based on 100°F at 175 PSI with an outlet pressure of 100 PSI.\* Lower inlet pressure and higher temperatures affect the performance and quality of the downstream air. \*minimum inlet pressure 80 PSI

#### **WALL-MOUNTED DRYERS**

ITEM #	MAX CFM	SIZE	POWER	DRAIN	PORT SIZE (NPT)	WEIGHT	DIMENSIONS
21999-1105	17	5 HP	120v	Float	1/4" inlet 1/2" outlet	20 lbs	25" x 17" x 12"
21999-1105-MM	17	5 HP	120v	Pneumatic	1/4" inlet 1/2" outlet	20 lbs	25" x 17" x 12"
21999-1010	40	10 HP	120v	Float	½" inlet 1" outlet	60 lbs	27" x 21" x 12"
21999-1010-220	40	10 HP	120v	Float	½" inlet 1" outlet	60 lbs	27" x 21" x 12"
21999-1010-MM	40	10 HP	120v	Pneumatic	½" inlet 1" outlet	62 lbs	27" x 21" x 12"
21999-1010-MM-220	40	10 HP	120v	Pneumatic	½" inlet 1" outlet	62 lbs	27" x 21" x 12"

#### **TANK DRYERS**

ITEM #	MAX CFM	SIZE	POWER	DRAIN	PORT SIZE	WEIGHT	DIMENSIONS
21999-1105-T	17	5 HP	120v	Pneumatic	1/4" inlet 1/4" outlet	50 lbs	26" x 18" x 12"
21999-1105-T-MM	17	5 HP	120v	Pneumatic	1/4" inlet 1/4" outlet	51 lbs	26" x 18" x 12"
21999-0955	40	10 HP	120v	Pneumatic	½" NPT	190 lbs	36" x 72" x 24"
21999-0955-220	40	10 HP	220v	Pneumatic	½" NPT	190 lbs	36" x 72" x 24"
21999-0955-PP	40	10 HP	Pneumatic Generator	Pneumatic	1/2" NPT	190 lbs	36" x 72" x 24"

#### MOBILE/PORTABLE DRYERS

ITEM #	MAX CFM	SIZE	POWER	DRAIN	PORT SIZE	WEIGHT	DIMENSIONS
21999-1100	17	5 HP	120v	Float	1/4" inlet 1/4" outlet	51 lbs	27" × 21" × 13"
21999-0945	40	10 HP	120v	Float	1/2" NPT	150 lbs	54" × 24" × 24"
21999-0945-PP	40	10 HP	Pneumatic Generator	Float	1/2" NPT	150 lbs	54" × 24" × 24"

### **MEMBRANE** DRYERS

Tsunami Membrane Dryers provide an economical solution for supplying clean, dry air without the need for electricity. The molecular makeup of the hollow tubes allows water vapor to pass. The greater the pressure differential between the inlet and outlet pressures, the drier the air downstream.

- Low relative humidity down to .01% RH
- Great dew point supression up to 140°F swing
- Easy, low-cost maintenance \$160/year
- Includes Tsunami Water Separator and Oil Coalescing Filter pre-filtration with automatic drains

#### **HOW IT WORKS**

#### The Drying Process

- 1 The molecular makeup of the hollow tubes allows certain gases to pass through the membrane quicker than the desired gas.
- 2 As compressed air travels through the hollow tubes, water vapor passes through the membrane pores.
- 3 The water vapor collects within the housing until it is removed.
- 4 A fixed orifice at the bottom of the hollow tubes allows dry air to pass up the housing, around the hollow tubes, to sweep the water vapor out the sweep holes at the top of the housing.



#### **MEMBRANE DRYER**

• 2-Stage Pre-filtration

Outlet Regulator

Max Pressure: 175 psi Max Temperature: 100°F



PART NUMBER	MAX CFM	PORT SIZE	WEIGHT	DIMENSIONS (HWD)
21999-0889	15	1/4" NPT	9 lbs	22" x 12" x 3½"
21999-0357	20	1/2" NPT	16½ lbs	23" × 20" × 4½"
21999-0355	Mer	mbrane Core	Replacemer	nt

#### **PRECISION MEMBRANE** DRYER

- 3-Stage Pre-filtration
- Electronic Drain Outlet Regulator

Max Pressure: 175 psi Max Temperature: 100°F

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PART NUMBER	MAX CFM	PORT SIZE	WEIGHT	DIMENSIONS (HWD)
21999-0957	15	1/4" NPT	12 lbs	24½" x 18½" x 5½"
21999-0524	20	1/2" NPT	22 lbs	23" x 23½" x 5½"

**▶** TSUNAMI.US.COM





## **AIR FILTRATION**

#### FOR THE SURGES ORDINARY FILTERS CAN'T HANDLE

Tsunami filters are machined from the highest quality materials and are anodized inside and out to ensure ultimate durability against corrosion and trapped contaminates. Our cutting-edge technology is rigorously tested to outperform your expectations regardless of the industry or application.

- 1 Filter heads machined from 6061 Aircraft Aluminum
- Oversized tube length allows both gravity and velocity to assist in the removal of water and air contaminates
- 3 Removable bottom cap provides ease of service and machined drain port provides various drain capabilities



- -R Filter packages can be ordered in reverse flow, right to left, and have a "-R" at the end of the part number
- Filtration service parts can be found on pages 18-19 or by searching the unit part number online at tsunami.us.com

### **WATER SEPARATORS**

The Tsunami Water Separator removes water, up to one quart per minute, and filters particulate down to 10 micron.

#### **HOW IT WORKS**

- 1 Air enters the filter & travels down a small diameter tube causing an increase in velocity.
- 2 The air reaches the bottom of the inner tube then is redirected 180° up the outer tube allowing gravity and a slower velocity to capture bulk liquids.
- 3 Velocity increases again as air is forced through small orifice baffles before entering the stainless steel mesh element.
- **4** Centrifugal force is used to capture any remaining liquids before exiting the filter.
- **5** Liquids are automatically ejected through the drain.



Max Pressure: 250 psi Max Temperature: 175°F

PART NUMBER	MAX CFM	DRAIN TYPE	PORT SIZE	WEIGHT	DIMENSIONS (HWD)
21999-0390	20	Float	1/4" NPT	1½ lbs	8½" × 2" × 2"
21999-0390-ED	20	Electronic	1/4" NPT	2½ lbs	11½" x 2" x 2"
21999-0390-MM	20	Pneumatic	1/4" NPT	2 lbs	10½" × 2" × 2"
21999-0131	50	Float	½" NPT	3½ lbs	14½" x 2½" x 2½"
21999-0131-ED	50	Electronic	½" NPT	6 lbs	17½" × 5½" × 4"
21999-0131-MM	50	Pneumatic	½" NPT	6 lbs	17" × 2½" × 2½"
21999-1034	120	Float	34" NPT	9lbs	16" × 3½" × 3½"
21999-1034-ED	120	Electronic	34" NPT	9½ lbs	18" x 6" x 4½"
21999-1034-MM	120	Pneumatic	34" NPT	9lbs	18" x 3½" x 3½"
21999-0082	120	Float	1" NPT	9 lbs	16" × 3½" × 3½"
21999-0082-ED	120	Electronic	1" NPT	9½ lbs	18" x 6" x 4½"
21999-0082-MM	120	Pneumatic	1" NPT	9 lbs	18" x 3½" x 3½"
21999-0850	240	Float	2" NPT	19 lbs	16.5" x 7½" x 3½"
21999-0850-ED	240	Electronic	2" NPT	21 lbs	19" x 10" x 6½"
21999-0850-MM	240	Pneumatic	2" NPT	20 lbs	18½" x 7½" x 3½"
21999-0960	800	Float	3" NPT	38 lbs	35½" × 6" × 6"
21999-0960-ED	800	Electronic	3" NPT	39 lbs	35½" × 6" × 10"
21999-0960-MM	800	Pneumatic	3" NPT	39 lbs	35½" x 6" x 8½"

## **OIL COALESCING FILTERS**

The Oil Coalescing Filter removes oil aerosols down to .001 ppm and particulates down to .01 micron.

#### **HOW IT WORKS**

- 1 Air enters the filter and passes through the element from the center to the outside.
- **2** As the air travels through the fibrous layers, oil aerosols are captured and coalesce.
- 3 The non-wicking outer drain layer separates the bulk liquids from the air flow.
- 4 Gravity slows the bulk liquids to drip into the drain sump off the filter where they are automatically removed.



Max Pressure: 250 psi Max Temperature: 175°F

PART NUMBER	MAX CFM	DRAIN TYPE	PORT SIZE	WEIGHT	DIMENSIONS (HWD)
21999-0390-Z-FD	20	Float	1/4" NPT	1½ lbs	8½" × 2" × 2"
21999-0390-Z-ED	20	Electronic	1/4" NPT	2½ lbs	11½" x 2" x 2"
21999-0390-Z-MM	20	Pneumatic	1/4" NPT	2 lbs	10½" x 2" x 2"
21999-0131-Z-FD	50	Float	½" NPT	3½ lbs	14½" x 2½" x 2½"
21999-0131-Z-ED	50	Electronic	½" NPT	4½ lbs	17½" x 5½" x 4"
21999-0131-Z-MM	50	Pneumatic	1/2" NPT	4 lbs	17" x 2½" x 2½"
21999-1034-Z-FD	120	Float	34" NPT	5 lbs	16" x 3½" x 3½"
21999-1034-Z-ED	120	Electronic	34" NPT	6 lbs	18" × 6" × 4½"
21999-1034-Z-MM	120	Pneumatic	34" NPT	5½ lbs	18" x 3½" x 3½"
21999-0082-Z-FD	120	Float	1" NPT	5 lbs	16" x 3½" x 3½"
21999-0082-Z-ED	120	Electronic	1" NPT	6 lbs	18" × 6" × 4½"
21999-0082-Z-MM	120	Pneumatic	1" NPT	5½ lbs	18" x 3½" x 3½"
21999-0850-Z-FD	240	Float	2" NPT	11½ lbs	16½" x 7½" x 3½"
21999-0850-Z-ED	240	Electronic	2" NPT	13 lbs	19" x 10" x 6½"
21999-0850-Z-MM	240	Pneumatic	2" NPT	12½ lbs	18½" x 7½" x 3½"

## **ACTIVATED CARBON FILTERS**

The Activated Carbon Filter removes oil vapor down to .003 ppm, removing odor and taste from the air.

#### **HOW IT WORKS**

- 1 Air enters the filter and passes through the element from the outside to the center.
- **2** As the air travels through the activated carbon layers, oil vapors are captured and held through the process of adsorption.
- **3** No liquids should be present at this stage, therefore, there is no drain.



Max Pressure: 250 psi Max Temperature: 175°F

PART NUMBER	MAX CFM	DRAIN TYPE	PORT SIZE	WEIGHT	DIMENSIONS (HWD)
21999-0390-AC	20	-	1/4" NPT	1½ lbs	8" x 2" x 2"
21999-0131-AC	50	-	1/2" NPT	3½ lbs	14½" × 2½" × 2½"

## **FILTER DRAIN OPTIONS**

Tsunami water separators and oil coalescing filters are designed to accommodate multiple drain types for specific application needs. Draining options include float drains, our patented Moisture Minder® Electronic Drain and our patent pending pneumatic filter drain.



FLOAT DRAIN
Standard with all filters.

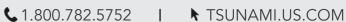


MOISTURE MINDER® EDV A fixed strainer screen removes contaminates before reaching the valve orifice.



MOISTURE MINDER®
FILTER DRAIN
Requires an intermittent pilot signal to operate. Designed to spin on corresponding size filter housing.

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## **FILTRATION PACKAGES**

#### PACKAGE 1

- Water Separator
- Lubricator



PART NUMBER	MAX CFM	PORT SIZE	WEIGHT	DIMENSIONS (HWD)
21999-0416	20	1/4" NPT	2½ lbs	9½" x 4½" x 2½"
21999-0247	50	1/2" NPT	7 lbs	18" x 6" x 5"
21999-0248	120	1" NPT	12 lbs	19½" x 8" x 5½"

#### **PACKAGE 3**

Includes:

- Water Separator
- · Oil Coalescing Filter



PART NUMBER	MAX CFM	PORT SIZE	WEIGHT	DIMENSIONS (HWD)
21999-0424	20	1/4" NPT	3 lbs	9½" x 5" x 2½"
21999-0251	50	1/2" NPT	9½ lbs	18" x 6½" x 5"
21999-0252	120	1" NPT	14 lbs	19½" x 8" x 5½"

#### **PACKAGE 5**

- Water Separator
- Oil Coalescing Filter
- Activated Carbon Filter



PART NUMBER	MAX CFM	PORT SIZE	WEIGHT	DIMENSIONS (HWD)
21999-0421	20	1/4" NPT	4 lbs	9½" x 8" x 2½"
21999-0255	50	1/2" NPT	13½ lbs	17" x 13" x 3½"
21999-0255-R	50	1/2" NPT	13½ lbs	17" x 13" x 3½"

#### **PACKAGE 7**

- Oil Coalescing Filter
- Regulator



PART NUMBER	MAX CFM	PORT SIZE	WEIGHT	DIMENSIONS (HWD)
21999-0969	20	1/4" NPT	2 lbs	10½" x 4" x 3½"
21999-0494	50	1/2" NPT	6 lbs	18½" x 6½" x 6"
21999-0967	120	1" NPT	12 lbs	21" x 8" x 5½"

#### PACKAGE 2

- Water Separator
- Regulator
- Lubricator



PART NUMBER	MAX CFM	PORT SIZE	WEIGHT	DIMENSIONS (HWD)
21999-0415	20	1/4" NPT	3 lbs	10½" x 5½" x 3½"
21999-0249	50	1/2" NPT	10½ lbs	18" x 13" x 6½"
21999-0249-R	50	1/2" NPT	10½ lbs	18" x 13" x 6½"
21999-0250	120	1" NPT	16 lbs	21" x 13" x 6½"

#### **PACKAGE 4**

Includes:

- Water Separator
- Oil Coalescing Filter
- Regulator



PART NUMBER	MAX CFM	PORT SIZE	WEIGHT	DIMENSIONS (HWD)
21999-0677	20	1/4" NPT	3½ lbs	9½" x 6½" x 3½"
21999-0253	50	1/2" NPT	12 lbs	17" x 13" x 4½"
21999-0253-R	50	1/2" NPT	12 lbs	17" x 13" x 4½"
21999-0254	120	1" NPT	18 lbs	21" x 13" x 6½"

#### PACKAGE 6

- Water Separator
- Oil Coalescing Filter
- Activated Carbon Filter
- Regulator



	PART NUMBER	MAX CFM	PORT SIZE	WEIGHT	DIMENSIONS (HWD)
	21999-0678	20	1/4" NPT	5 lbs	10½" x 9" x 3½"
	21999-0257	50	1/2" NPT	15½ lbs	18½" x 17" x 4½"
	21999-0257-R	50	½" NPT	15½ lbs	18½" x 17" x 4½"
C	EDV Models Avail	able: 20 S	SCFM: 21999-	0457	50 SCFM: 21999-0291

#### **PACKAGE 8**

- Water Separator
- Regulator



PART NUMBER	MAX CFM	PORT SIZE	WEIGHT	DIMENSIONS (HWD)
21999-0414	20	1/4" NPT	2½ lbs	10½" × 4" × 3½"
21999-0679	50	1/2" NPT	8 lbs	18" x 6½" x 6"
21999-0968	120	1" NPT	12 lbs	21" x 8" x 5½"

## **BREATHING AIR SYSTEMS**

Tsunami Breathing Air Systems are the optimal solution when Grade D breathing air is required. The complete system features industry-leading Tsunami 3-stage filtration along with continuous carbon monoxide monitoring that can be used in any SAR (Supplied Air Respirator) system.

- 3-stage Tsunami filtration system with automatic float drains
- Easy-to-read digital carbon monoxide alarm
- CO monitor calibration made easy with Autocal®
- Meets OSHA Grade D breathing air quality specifications

#### **SINGLE-USER SYSTEM**





\*Complete your system with Bullard® hoses and hoods

#### **BREATHING AIR PANELS**

ITEM #	DESCRIPTION	MAX CFM	PORT SIZE	DRAIN	MAX PSI	MAX °F	DIMENSIONS
21999-0265	Multi-User Breathing Air System - USA (10ppm)	50	½ NPT	Float	250	175	16" x 18" x 5"
21999-0980	Single-User Breathing Air System - USA (10ppm)	20	1/4 NPT	Float	250	175	13" x 12" x 5"
21999-0265-CA	Multi-User Breathing Air System - Canada (5ppm)	50	½ NPT	Float	250	175	16" x 18" x 5"
21999-0980-CA	Single-User Breathing Air Panel - Canada (5ppm)	20	1/4 NPT	Float	250	175	13" x 12" x 5"

## **BREATHING AIR ACCESSORIES**







**FULL MASK** 

ITEM #	DESCRIPTION
SPEC41L	Full Mask Set - Spectrum Series - M/L



#### **RESPIRATOR HELMET**

ITEM #	DESCRIPTION
21999-1021	Respirator Helmet with Cooling Tube

#### **BULLARD® HOSES**

**EXTENSION HOSES** 

HOOD

ITEM #

CC20TIC31

ITEM #	DESCRIPTION
21999-0276-25	25' Breathing Air Hose
21999-0276-50	50' Breathing Air Hose
21999-0276-100	100' Breathing Air Hose



ITEM #	DESCRIPTION
5457	50' Extension Hose
5458	100' Extension Hose



**L** 1.800.782.5752

#### **BULLARD® BREATHING AIR ACCESSORIES**

0010 ((0	BILLY III III TO 7 III TO TO CLOS OT IILO
ITEM #	DESCRIPTION
20LCL	Mylar Lens Covers - Full Hood (25pk)
LC	Mylar Lens Covers - Full Mask (25pk)
HMXLC25	Mylar Lens Covers - Respirator Helmet (25pk)
RLS	Replacement Lens - Full Mask
HMXIL	Replacement Lens - Respirator Helmet
AC100031	Cooling Tube - Respirators Only
DC70ML	Cooling Vest - Med / Lg
DC70XLXXL	Cooling Vest - XL / XXL
AC1000DC	Cooling Tube - Vest Only

#### GFG BREATHING AIR ACCESSORIES

ITEM #	DESCRIPTION
21999-0264	Calibration Kit for CO Monitor (GFG 7735-101)
21999-0263	CO Monitor for Tsunami Breathing Air Panel (GFG RAM 744 (10ppm) - USA)
21999-0263-CA	CO Monitor for Tsunami Breathing Air Panel (GFG RAM (5ppm) - Canada)
21999-0267	110/120v Wall Pack Adaptor Replacement
1450004	Replacement CO Sensor (RAM 744)











## **AUTOMATIC DRAINS**

Neglecting to consistently drain condensate and contamination will result in endless headaches and costly downtime. Inadequate or forgotten draining dramatically wears on filtration systems causing them to become ineffective and damaging to critical equipment and processes. Tsunami offers a variety of drain styles to assure timely and effective draining for your facility.

### **PNEUMATIC PISTON DRAINS**

#### **HOW IT WORKS**

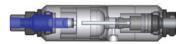
PILOT SIGNAL RECEIVED

Condensation enters left hand, or water inlet of valve.

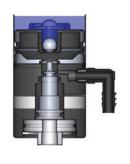
#### **MOISTURE MINDER® 1**



#### **MOISTURE MINDER® 2**



#### **MOISTURE MINDER® FILTER DRAIN**



#### 2 PILOT SIGNAL FROM UNLOADER

Piston shifts, closing off drain port. As piston moves, it will open up the stainless ball check allowing condensate to be forced into pressurized discharge reservoir.

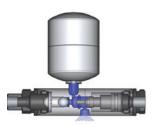


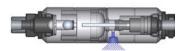


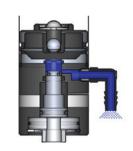


#### **3** VALVE AT REST

When pilot signal is relieved, piston returns to relaxed position. The ball check closes preventing zero pressure loss in the system. The drain port opens and the stored condensate is ejected.







#### **MOISTURE MINDER® PNEUMATIC DRAIN**

Available in both external reservoir or internal reservoir models. Drain Minder Cotroller can be used to cycle pneumatic



PART NUMBER	MAX PSI	PORT SIZE	WEIGHT	DIMS (HWD)
142-0000	250	1/4" NPT	2 lbs	1½" × 6½" × 1½"
152-0000	250	1/4" NPT	2 lbs	5" × 5½" × 2"
21999-0317	Pneumatic Drain Installation Kit			

#### **MOISTURE MINDER® FILTER DRAIN**

Designed to spin on the corresponding size Tsunami filter tube.

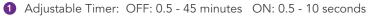


NUMBER	SIZE	PSI	WEIGHT	DIMS (HWD)
21999-0792	20 CFM	250	1 lbs	4" × 3" × 2"
21999-0795	50 CFM	250	1 lbs	4" x 3½" x 3½"
21999-0805	120/240 CFM	250	1½ lbs	4" × 3½" × 3"

### **ELECTRONIC** DRAINS

#### MOISTURE MINDER® ELECTRONIC DRAIN VALVE (EDV)

The Moisture Minder® EDV incorporates a self-cleaning feature where a fixed strainer screen is used to capture contaminates before reaching the valve orifice. Opening the manual ball valve automatically flushes the strainer screen clean. The drain is compatible with various types of media and conforms to the NEMA 4 standard.



- 2 Internal screen and ball valve allows for self cleaning
- 3 Dual Size Inlet: Accommodates 1/4" I.D. or 1/2" OD NPT thread sizes
- 4 1/4 turn ball valve allows for self cleaning without disassembling

#### **HOW IT WORKS**

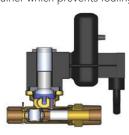
**1** TIMER ACTUATES

Condensation enters through the inlet side of valve. Debris is captured inside the internal strainer.



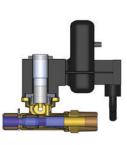
#### 2 DEBRIS IS EJECTED

When valve activates condensate flows thru strainer up to the orifice and out the back discharge port. Debris is captured by internal strainer which prevents fouling.



#### SELF CLEANING

Only open ¼" ball valve to clean strainer or to manually drain the tank.



#### MOISTURE MINDER® ELECTRONIC DRAIN VALVE

ITEM #	POWER	DUAL SIZE INLET	WEIGHT	DIMENSIONS
21999-0177	115v AC / 60Hz	1/4" ID & 1/2" OD	1 lb	5½" × 3½" × 3½"
21999-0177-230	220v AC / 60Hz	1/4" ID & 1/2" OD	1 lb	5½" x 3½" x 3½"
21999-0177-230-50	230v AC / 50Hz	1/4" ID & 1/2" OD	1 lb	5½" x 3½" x 3½"
21999-0177-24	24v DC	1/4" ID & 1/2" OD	1 lb	5½" x 3½" x 3½"
21999-0177-12	12v DC	1/4" ID & 1/2" OD	1 lb	5½" x 3½" x 3½"
21999-0316		Electronic Drain Installation Kit		

#### **DRAIN MINDER II** CONTROLLER

**HOW IT WORKS** 

Provides the pilot signal every 30 seconds to 120 minutes to multiple pneumatic drains.



**DRAIN MINDER II AUTOMATIC TIMER** 

the supply line to the inlet side of the controller solenoid.

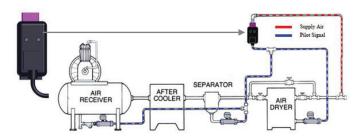
The Drain Minder II can deliver the pilot signal needed to operate the Moisture Minder pneumatic drain valves when no other intermittent pilot signal is available. The control is installed in the typical system by teeing into a filtered air supply and connecting



#### **FLOAT DRAIN** REPLACEMENT

Includes 3 float drains and o-rings for replacement in Tsunami filters.

PART NUMBER	DESCRIPTION
21999-0868	Float Drain 3-Pack





## **COMPRESSED AIR ACCESSORIES**

#### AIR MONITORING EQUIPMENT

Tsunami Air Monitoring Equipment provides the ability to verify that the air system tested is supplying the quality of compressed air cleanliness required for the application.

- Air Prep Kit
  - Includes Air Survey Monitor and CFM Test Kit
- **B** Air Survey Monitor
  - Measures humidity, dew point, and air temperature
  - Easy to read LCD screen
  - Includes sensor filtration
- **G** CFM Test Kit
  - Measure the CFM usage at any tool
  - Easy to read graph
  - Complete with regulator and female coupler

#### **COMPRESSED AIR ACCESSORIES**

ITEM #	DESCRIPTION	WEIGHT	DIMENSIONS
21999-0938	Air Prep Kit (A)	8.5 lbs	13" × 17" × 4"
21999-0440	Air Survey Kit (B)	5.5 lbs	13" × 17" × 4"
21999-0447	CFM Test Kit (C)	5 lbs	13" × 17" × 4"

#### **ULTRA-FLO SPRAY HOSE**

The extremely lightweight Tsunami Ultra-flo Spray Hose is designed to bring both longevity and performance to the toughest applications. Engineered for high-temperature exposure, this lay-flat hose features a proprietary internal coating which prevents breakdown caused by heat and harmful chemicals.

#### **ULTRA-FLO SPRAY HOSE**

ITEM #	HOSE LENGTH	HOSE QUANTITY	HOSE I.D.	WEIGHT
21999-0495	5′	1	3/8"	2 lbs
21999-0449	35′	1	3/8"	4.5 lbs
21999-0450	50′	1	3/8"	5.5 lbs
21999-0783	35′	10 pack	3/8"	4.5 lbs each
21999-0784	50′	5 pack	3/8"	5.5 lbs each

#### **HIGH-FLOW COUPLERS**

10 PACK

21999-0832

Prevost Venting-Action couplers are designed to eliminate hose whip.







PART NUMBER	DESCRIPTION
21999-0833	1/4" Female (sold in 10 pack)
21999-0834	1/4" Male (sold in 10 pack)

## **BLOW GUN** 10 PACK

Nylon Tip OSHA Compliant Blow Gun



PART NUMBER	DESCRIPTION
21999-0835	1/4" Inlet (sold in 10 pack)

## **COMPRESSED AIR ACCESSORIES** FILTERS, REGULATORS, AND LUBRICATORS

#### **UTILITY STATION - INDUSTRIAL GRADE**

The Industrial Grade Utility Station is designed to eliminate problems that are found in commercial grade boxes. The unit is easily installed and adapts to any machine or work area.

- 1 Electrical outlets equipped with 20 amp industrial GFI protection. Outlets are located above air service to prevent moisture damage.
- 2 Air service available through 2 ports: one non-lubricated for parts blow off; one lubricated for pneumatic tool applications.
- 3 Powder coated finish for durability regardless of the application.
- 4 Hooks to hang and organize hoses and cords.

#### **UTILITY STATION - INDUSTRIAL GRADE**

ITEM #	POWER	PORT SIZE	WEIGHT	DIMENSIONS
21999-0081	110/120v AC - 20 amp	1/4" NPT	8 lbs	18" x 12 x 6"

#### **REGULATORS WITH GAUGE**

ITEM #	MAX FLOW	PORT SIZE	WEIGHT	DIMENSIONS
21999-0870	25 SCFM	1/4" NPT	1 lbs	4" × 2" × 3"
21999-0871	89 SCFM	1/2" NPT	2 lbs	5" x 2½" x 3½"
21999-0872	160 SCFM	1"	3½ lbs	7½" × 3" × 4½"

#### **LUBRICATORS**

ITEM #	MAX FLOW	PORT SIZE	WEIGHT	DIMENSIONS
21999-0298	25 SCFM	1/4" NPT	1 lb	6½" x 2" x 2"
21999-0195	153 SCFM	1/2" NPT	2 lbs	8" x 2½" x 2½"
21999-0196	565 SCFM	1" NPT	21/2 lbs	10" x 3" x 3"

#### FILTER-REGULATOR COMBO

ITEM #	MAX FLOW	PORT SIZE	WEIGHT	DIMENSIONS
21999-0190	25 SCFM	1/4" NPT	1 lb	4" × 2" × 2"
21999-0192	88 SCFM	1/2" NPT	1½ lbs	10" x 2½" x 2½"

#### **ACCESSORIES**

ITEM #	DESCRIPTION
4338228	Pressure Gage - (0-200 PSI) - fits " back mount - ¼" NPT & ½" NPT Regulators
G201420B	Pressure Gage - (0-200 PSI) - fits 1/4" back mount - 1" NPT Regulators
8825701	Filter-Regulator-Lubricator - 1/4" NPT - 25 SCFM (F/R/L)
21999-0874	Regulator Rebuild Kit 50 Series

**L** 1.800.782.5752



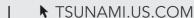






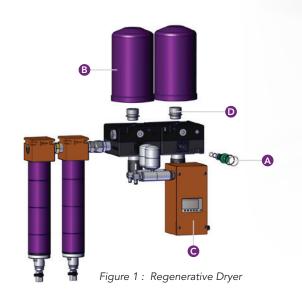






1/4" Male (sold in 10 pack)

## **SERVICE PARTS**





	ITEM #	DESCRIPTION
Α	21999-0707	Piston Rebuild Kit for Degenerative Dryer
В	21999-0976	Tower Replacement - Pure 5 Dryers only
В	21999-0349	Tower Replacement (Standard) Purple
В	21999-0349-BK	Tower Replacement (Standard) Black
С	21999-0672-10	PLC for 10HP Regenerative Dryer
С	21999-0672	PLC for Regenerative Dryer (15HP or larger)
С	21999-0672-BK	PLC - Custom Dryer
-	21999-0718	Mobile Dryer PLC
-	21999-0714	Power Supply - Regenerative Dryer
-	21999-0714-G	Global Power Supply - Regenerative Dryer
-	21999-0941	Timer Valve Assembly for 110v Dryer
-	21999-0504	12v DC Timer / Coil Assembly
-	610928-01	110v AC Timer / Coil Assembly
-	610934-01	220/230v AC Timer / Coil Assembly
D	21999-0650-15	Tower Mounting Stud / Regen Valve (.015")
D	21999-0650-30	Tower Mounting Stud / Regen Valve (.030")
D	21999-0650-45	Tower Mounting Stud / Regen Valve (.045")
D	21999-0650-60	Tower Mounting Stud / Regen Valve (.060")
D	21999-0650-80	Tower Mounting Stud / Regen Valve (.080")
D	21999-0650-90	Tower Mounting Stud / Regen Valve (.090")
D	21999-1108-18	Pure 5 Tower Mounting Stud / Regen Valve (.018")
D	21999-1108-30	Pure 5 Tower Mounting Stud / Regen Valve (.030")
-	940825	Muffler Replacement - Pure 5 Only
-	21999-0700	Muffler Replacement - Pure 10 and Ultra Series
-	21999-1042	Tsunami Dryer Heater 110/120v AC, 700W (requires 1 heater per 2 towers)
-	21999-0890	Tsunami Dryer Heater 12 Vdc
-	21999-0937	Tsunami Dryer Heater 24 Vdc



Figure 2 : Filtration Hardware

#### FILTRATION HARDWARE

	ITEM #	DESCRIPTION
-	21999-0201	Drain Tube Kit - 10 Pack
А	21999-0867	Mounting Bracket - 20 Series
А	21999-0144	Mounting Bracket - 50 & 120 Series

#### **OUTER TUBE REPLACEMENT**

	ITEM #	DESCRIPTION
В	21999-0386	Outer Tube - 20 Series
В	21999-0125	Outer Tube - 50 Series
В	21999-0078	Outer Tube - 120 / 240 Series

#### **BOTTOM CAP REPLACEMENT**

	ITEM #	DESCRIPTION
С	21999-0388	Bottom Cap - 20 Series
С	21999-0127	Bottom Cap - 50 Series
С	21999-0182	Bottom Cap - 120 / 240 Series

#### **HEATER WRAPS**

	ITEM #	DESCRIPTION
D	163-0644	20 / 50 Series - 110 / 120v AC, 100W
D	163-0648	20 / 50 Series - 12v DC, 75W
D	163-0646	20 / 50 Series - 24 DC, 100W
D	163-0649	120 / 240 Series - 110 / 120v AC, 150W
D	163-0651	120 / 240 Series - 12v DC, 50W
D	163-0650	120 / 240 Series - 24v DC, 120W
D	163-0650	800 Series - 120v DC, 150W

<sup>\*240</sup> Series requires two wraps

#### **DRAINS AND ACCESSORIES**

ITEM #	DESCRIPTION
- 21999-0868	Float Drain 3 Pack - Includes bottom O-rings
- 21999-0316	Basic Drain Install Kit - Electronic Drains
- 21999-0317	Deluxe Drain Install Kit - Pneumatic Drains

## **SERVICE PARTS**



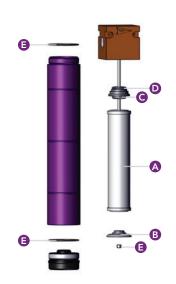


Figure 3 : Water Separator

Figure 4 : Oil Coalescing Filter

Figure 5 : Activated Carbon Filter

#### WATER SEPARATOR

ITEM #	DESCRIPTION
21999-0846	20 Series - Includes (A) Stainless Steel Element, (B) Inner Tube, (C) Bottom Baffle, (D) Adapter, and (E) O-rings
21999-0227	50 Series - Includes (A) Stainless Steel Element, (B) Inner Tube, (C) Bottom Baffle, (D) Adapter, and (E) O-rings
21999-0228	120 / 240 Series (240 requires x 2) - Includes (A) Stainless Steel Element, (B) Inner Tube, (C) Bottom Baffle, (D) Adapter, and (E) O-rings

#### **OIL COALESCING FILTER**

ITEM #	DESCRIPTION
21999-0394	20 Series - Includes (A) Coalescing Element, (B) Baffle, (C) Adapter, (D) O-rings, and (E) Lock Nut
21999-0202	50 / 120 / 240 / Pure 10 Series (240 requires x 2) - Includes (A) Coalescing Element, (B) Baffle, (C) Adapter, (D) O-rings, and (E) Lock Nut
21999-0202-Z-SP	Ultra Model Regenerative Dryer Oil Coalescing Service Kit
21999-0823	Pack of 5 (A) Elements - 20 Series Coalescing Element
21999-0825	Pack of 5 (A) Elements - 50 / 120 / 240 / Pure 10 Series (240 requires x 2)
21999-0828	Pack of 5 (A) Elements - Regenerative Dryer Coalescing Element

#### **ACTIVATED CARBON**

ITEM #	DESCRIPTION
21999-0395	20 Series - Includes (A) Activated Carbon Element, (B) Baffle, (C) Adapter, (D) O-rings, and (E) Lock Nut
21999-0200	50 Series - Includes (A) Activated Carbon Element, (B) Baffle, (C) Adapter, (D) O-rings, and (E) Lock Nut
21999-0824	Pack of 5 (A) Elements - 20 Series Activated Carbon Element
21999-0826	Pack of 5 (A) Elements - 50 Series Activated Carbon Element

#### PRECISION EQUIPMENT

ITEM #	DESCRIPTION
21999-0818	20 Series Annual Maintenance Kit - Includes (2) Biannual Coalescing and Activated Carbon Element Kits with O-rings
21999-0819	50 Series Annual Maintenance Kit - Includes (2) Biannual Coalescing and Activated Carbon Element Kits with O-rings



Building value for our customers by producing quality, innovative, engineered, application-based products.

Suburban is an engineering driven organization that partners with our customers to design and develop unique and specific solutions for multiple application specific needs in the Defense, Hydraulics, Oil & Gas, Automotive, Agriculture, Construction, Utilities, and Industrial markets. In addition to custom engineered solutions, Suburban offers a complete line of standard products sold under the Python, LubeMinder, and Tsunami brands.



#### CLEAN, DRY AIR

Providing the highest-grade clean, dry air, our systems filter out oil, water, and dirt that build up in compressed air systems and interrupt daily business.



AIR DRYERS & FILTRATION



GRADE D BREATHING AIR



AIR HOSES, DRAINS & ACCESSORIES

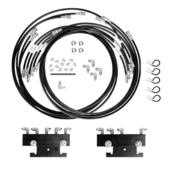


## MODERN DAY PROTECTION

Our lubrication systems automatically grease and oil machinery - reducing the overall time spent maintaining tools and increasing the life of equipment.



**AUTOMATIC OILING SYSTEMS** 



**GREASE BANK SYSTEMS** 



## EQUIPMENT & OPERATOR PROTECTION

Protect hoses, wires, and cables from abrasion, temperature, moisture, and ruptures with our easy-to-use sleeves and straps.



WRAP SLEEVES



TUBULAR SLEEVES





