

MEMBRANE

# AIR DRYERS



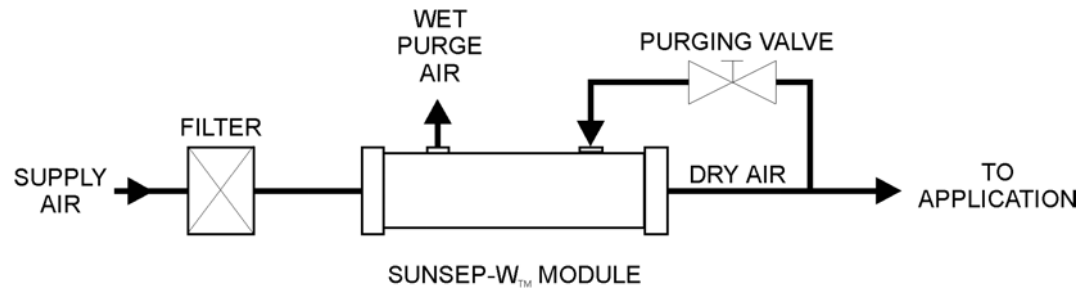
**SUNSEP-W™**



**TWIN TOWER  
ENGINEERING, INC.**

## MEMBRANE TECHNOLOGY

At the heart of the The **SUNSEP-W™** brand membrane technology is the patented non-porous membrane fibers developed by Asahi Glass Company (AGC) which has close to 40 years of membrane experience in the separation of gases. The drying process works by passing compressed air inside the hollow fiber membranes where the water vapor molecules permeate through the wall of the membrane leaving the oxygen and nitrogen molecules to exit the outlet as dry air. The permeated water vapor is then swept away by a small amount of dry air fed back over the outside of the membrane fibers through a purging valve or orifice.



## ADVANTAGES OF MEMBRANE TECHNOLOGY

- \* No Electricity Needed
- \* No Refrigerants Used
- \* Maintenance Free Operation
- \* Explosion Proof
- \* Quiet Operation
- \* No Moving Parts
- \* Continuous Operation
- \* Lightweight

## TYPICAL APPLICATIONS

Electronic chip testing	Micro abrasion equipment	Ozone generators
Waveguide drying	Vortex tubes	Air operated pumps
Outdoor HVAC controls	Car wash controls	Dry powder coating
Environmental chambers	Spectrometers	Natural gas switch controls
Pollution instrumentation	Air brushing	Grain elevator controls
Antenna pressurization	Gas chromatographs	Oil well logging instruments
Air bearings	Robotic machinery	Heat aging ovens
Graphic printers	Laboratory analyzers	Vent air for storage tanks
Air logic circuits	Pulse air for dust collectors	Analytical Instrumentation

## INSTALLATION

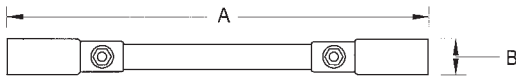
With three types of configurations available the **SUNSEP-W™** membrane dryers are easily installed into existing air lines, new lines and OEM applications. Our cassette and flexible type dryers are especially well suited for installation in the tight spaces inside OEM machines. To protect the membrane dryer from contaminants, a pre-filter (use a .01 - .03 micron coalescing pre-filter if there are any oil particles in the inlet air) must be installed on the inlet side of the dryer. The dryers require no electrical hook up and are very lightweight and compact in design.

## BARREL TYPE

There are four models in the long barrel type membrane air dryers. These dryers are used in applications where the dryer length is not a factor. They are used when it is necessary to plumb the wet purge air from inside an enclosure. The purge control can be a variable valve, or a fixed orifice where the pressure and flow will remain constant. No heat is created in the drying process and this helps where sensitive instruments require a stable temperature. The flow pattern is bi-directional, the inlet port can be either end.



<i>DIMENSIONS (In Inches)</i>	<i>Model</i>	<i>A</i>	<i>B</i>
	SWB-01-100	9.4	1.3
	SWB-01-200	13.4	1.3
	SWB-02-100	12.2	2.0
	SWB-05-150	12.2	2.0

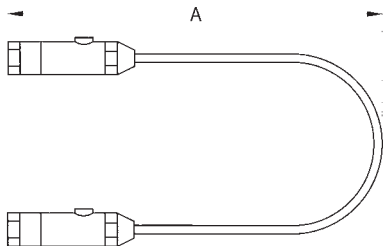


## FLEXIBLE TYPE



This one-of-a-kind membrane dryer is used in low air flow applications where space is at a premium. The dryer can be bent to go through tight spaces between other components. The flow pattern is bi-directional, the inlet can be either of the 1/4" end ports.

<i>DIMENSIONS (In Inches)</i>	<i>Model</i>	<i>A(x2)</i>	<i>B</i>
	SWF-M06-400	9.4	1.0



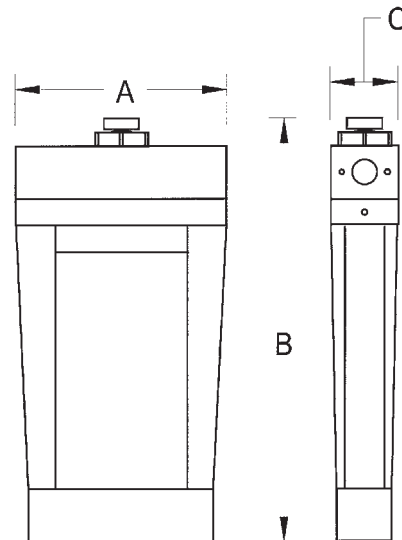
## CASSETTE TYPE

Uniquely shaped and available in six models our cassette type membrane dryers can fit in most tight spaces. Three models are equipped with built in purging orifices that have three settings. All models, except the SWC-M04-70, come supplied with mounting brackets. The SWC-M04-70 has (2) built-in mounting holes. With the built-in purge orifice in the SWC-M08-100 and SWC-M15-100 there is no need for external plumbing to control purge.



### *DIMENSIONS (In Inches)*

<i>Model</i>	<i>A</i>	<i>B</i>	<i>C</i>
SWC-M04-70	1.4	3.0	.6
SWC-M08-100	2.4	4.4	1.2
SWC-M15-100	2.4	4.4	1.2
SWC-01-150	2.8	5.9	1.6
SWC-02-250	3.9	7.9	2.0
SWC-03-250	3.9	7.9	2.0



**Specifications:**

MODEL NO.	PORT SIZE	SCFM		WEIGHT LBS.	DIMENSIONS (inches)			PURGE CONTROL
		IN	OUT		IN-OUT	H	D	
<b>BARREL TYPE</b>								
SWB-01-100	1/4"	3.8	3.0	.49	9.4	1.3 Dia.	1.3 Dia.	External Valve or Orifice
SWB-01-200	1/4"	6.3	5.0	.51	13.4	1.3 Dia.	1.3 Dia.	External Valve or Orifice
SWB-02-100	3/8"	8.0	6.4	1.39	12.2	2.0 Dia.	2.0 Dia.	External Valve or Orifice
SWB-05-100	3/8"	13.2	10.6	1.48	12.2	2.0 Dia.	2.0 Dia.	External Valve or Orifice
<b>CASSETTE TYPE</b>								
SWC-M04-70	M5	.6	.5	.11	1.4	3.0	.6	External Valve or Orifice
SWC-M08-100	1/8"	.9	.7	.57	2.4	4.4	1.2	Internal Fixed
SWC-M15-100	1/8"	1.5	1.1	.60	2.4	4.4	1.2	Internal Fixed
SWC-01-150	1/4"	4.7	3.0	.93	2.8	5.9	1.6	Variable Three Position
SWC-02-250	3/8"	6.8	5.0	1.52	3.9	7.9	2.0	Variable Three Position
SWC-03-250	3/8"	9.6	7.0	1.56	3.9	7.9	2.0	Variable Three Position
<b>FLEXIBLE TYPE</b>								
SWF-M06-400	1/4"	1.25	1.0	.22	18.8	1.0 Dia.	1.0 Dia.	External Valve or Orifice

-SCFM ratings are at 100 psig and +70° to +75°F inlet. Outlet pressure dewpoint is +35° to + 40°F, or lower.

-Changing the inlet or outlet flow, the pressure or the temperature will vary the outlet dewpoint.

-Maximum operating pressure is 120 psig.

-Operating temperature range is +32° to +130°F.

-There is no significant loss of oxygen in the drying process.

-Above data is average performance rates, individual units can vary.

**CONSULT TWIN TOWER ENGINEERING IF ADDITIONAL TECHNICAL SUPPORT IS REQUIRED.**

**CALL TOLL FREE  
1-800-700-8537**



**TWIN TOWER  
ENGINEERING, INC.**

P.O. BOX 879  
2150 W. 6TH AVE., UNIT P  
BROOMFIELD, CO 80020

TEL: 303-465-3063  
FAX: 303-465-9294