

FWS Series

Air Water Separator

For remove bulk liquid water,16 bar



Liquid Water Separator

Existing problems in compressed air system

Compressed air system has bulk liquid that brings pipeline corrosion, the damages of valves, air cylinder and tools; reduce the efficiency of after air cooler and heat ex-changer and compressed air filter.

Water separators play an important role in the compressed air system

Gas Water separator is one of purification products without elements what is used to before air filter protect coalescing filters against bulk liquid contamination where excessive cooling takes place in air receivers and distribution piping.

Features

- Aluminum alloy die-casting housing with tightly structure.
- External surface epoxy painted for maximum corrosion.
- Static rotary vane, keep 99.9% high efficiency separation.
- Flow rate: 1.0-70.0 m³/min.
- Thread type: Rc/G/NPT.
- Max. operating pressure: 16 bar (g) (without parts).
- Can be installed in any position of compressed air system.
- Low maintenance.
- Tested in accordance with ISO 8573.9.



Technical Data

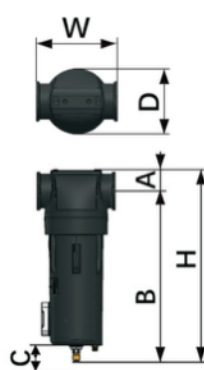
Housing material:	Aluminum alloy
Max.operating pressure:	16 bar (without internal drain)
Air flow rate:	1.0 to 70.0 m ³ /min
Inlet/outlet:	1/2 to 4" (Rc/NPT/Flange)
Operating temperature:	1.5°C to 80 °C
Pressure differential at rated flow:	0.07 bar
Certificate:	CE, factory test report

Pressure differential at rated flow means stated flows are for operation at 7 bar with reference to 20 °C, 0% relative vapor pressure.

Product Selection

Below flow rates of compressed air are calculated in rated working pressure of 7 bar (100 psi g) with reference to 20 °C.

Model	Inlet/ outlet (Rc)	Rated air flow at 7bar			Dimensions (mm)					
		L/S	Nm ³ / min	scfm	Width (W)	Depth (D)	Height (H)	A	B	C (reserved space)
FWS010	1/2"	40.0	2.4	84.5	96	79	233	29	198	118
FWS020	3/4"	60.0	3.6	127.1	96	79	233	29	198	118
FWS050	1"	75.0	4.5	158.9	96	79	268	29	233	153
FWS060	1"	125.0	7.5	264.8	138	111	339	37	296	208
FWS070	1-1/2"	166.7	10.0	353.1	138	111	339	37	296	208
FWS100	2"	300.1	18.0	635.6	174	142	669	58	607	469
FWS110	2-1/2"	416.8	25.0	882.8	174	142	669	58	607	469
FWS140	3"	833.5	50.0	1765.6	220	184	726	74	649	514
FWS140F	DN100	833.5	50.0	1765.6	300	184	761	74	649	514
FWS150	4"	1000.2	60.0	2118.7	220	184	726	74	649	514
FWS150F	DN125	1000.2	60.0	2118.7	300	184	776	74	649	514
FWS170	4"	1166.7	70.0	2464.0	220	184	983	74	906	764
FWS170F	DN125	1166.7	70.0	2464.0	300	184	1033	74	906	764



FWS010 to FWS170F

Pressure	Barg	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Psig	15	29	44	59	73	87	100	116	131	145	160	174	189	203	219	232
Pressure Correction Factor		0.38	0.53	0.65	0.76	0.85	0.93	1.00	1.07	1.13	1.19	1.23	1.31	1.36	1.41	1.46	1.51

Working Principle

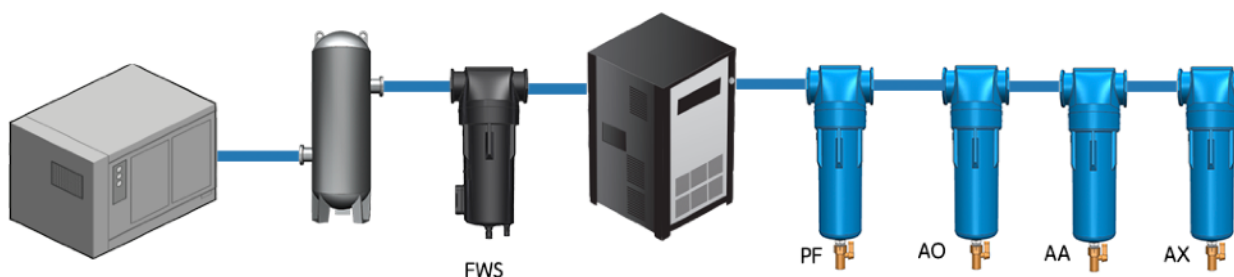
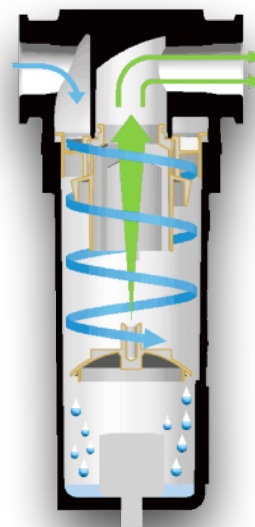
- Air enters the water separator inlet and flows into the separator module.
- The inlet of the separator module contains a set of fixed vanes which the air must pass through.
- In the vessel, the vanes spin the air.
- The spinning air is then forced to change direction as it passes through the impeller.
- Due to the design of the separator module, a vortex is created that narrows and intensifies as it reaches the lower part of the separator module.
- Liquid in bulk is removed from the airstream due to the following factors:

Airstream direction changes

Velocity changes

Vortex centrifugal action

- As the vortex reaches the bottom of the module, air is forced through the center of the vortex.
- Aerospace turning vanes, located at the outlet of the separator module, turn an inefficient corner into more efficient corners.
- Turning vanes reduce turbulence, minimizing pressure loss and the cost of ownership.



Installing benefits of high energy efficient water separators

- For the removal of bulk condensed water and liquid oil.
- Protects coalescing filters from bulk liquid contamination.



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OEM Capabilities

When you need a special water separator for a unique application, Yun Air experts are ready to work with you. We can tailor a configuration to meet your special need. In addition, with LEAN manufacturing, we can produce specials in reasonable quantities, in a reasonable amount of time, at a reasonable price. Not only will this enhance the performance of your product, but it will benefit you with aftermarket sales of replacement elements.

OUR RANGES OF PRODUCTS INCLUDE THE FOLLOWING:

- Compressed air dryers
- Compressed air filters
- Compressed air water separators
- Alternative air filter elements
- Condensate auto drain
- Compressed air accessories
- Portable mask