

Liquid Separators WSA / WSO



Specifications

Maximum Operating Pressure	(WSA)	200 PSIG (13.8 bar)
	(WS0)	232 PSIG (16.0 bar)
Operating Temperature	(WSA)	32° to 150°F (0° to 65.5°C)
	(WS0)	35° to 176°F (1.6° to 80°C)
Pressure Differential at Rated Flow		1.0 PSID (0.07 bar)

Materials of Construction

	WSA	WS0
Housing	Zinc	Aluminum
Seals	Nitrile	Fluorocarbon

Features

- High Flow Rates
- Less than 1 PSIG Differential Pressure
- Lightweight Cast Aluminum Housing with 1" to 3" NPT Connections (WS0)
- Cast Zinc Housings with 1/4" to 1" NPT Connections (WSA)
- External Surfaces Epoxy Painted for Maximum Corrosion Protection
- Standard Equipped with Quick Disconnect Bowls for Ease of Service (WSA)
- Three (3) Optional Automatic Drains Available

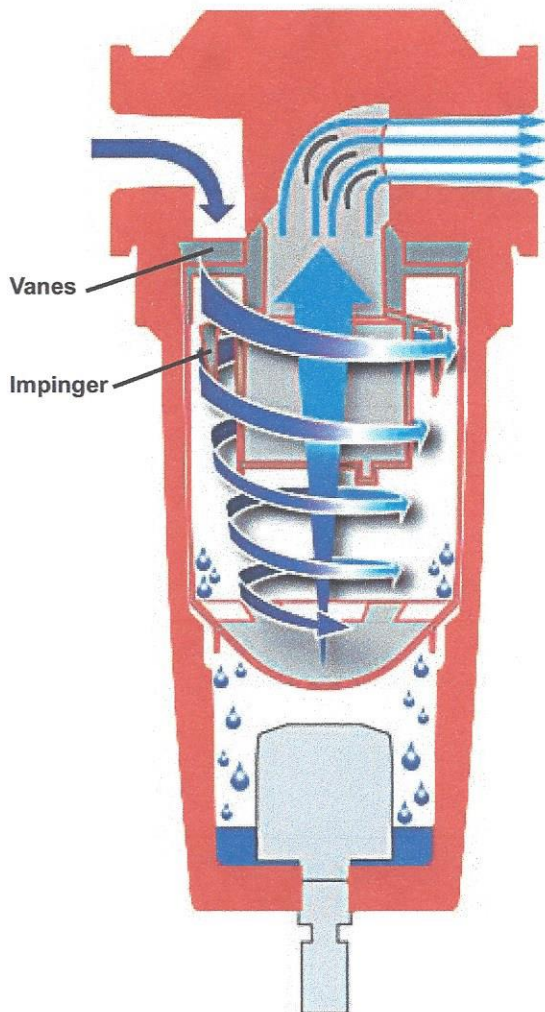
Liquid Separators

Our unique design combines the techniques of centrifugal action and other mechanical separation principles (Impingement, Separation, Laminar Flow and Stokes Law) to remove large quantities of liquid and solid contamination.

Typical applications include water separation downstream of aftercoolers, protection of refrigerant and heatless regenerative desiccant dryers, downstream of air receivers, and other liquid / gas separation duties where the volume of water and solids poses a real problem.

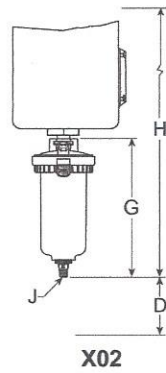
Model Number	In / Out NPT Pipe Conn.	Rated Flow (SCFM) @ 100 PSIG*	Approx. Weight lbs.	Recommended Automatic Drain
WSA-02-M00**	1/4"	25	2.2	Optional
WSA-02-FM0	1/4"	25	2.2	Internal
WSA-03-M00**	3/8"	50	2.6	Optional
WSA-03-FM0	3/8"	50	2.6	Internal
WSA-04-M00**	1/2"	50	2.6	Optional
WSA-04-FM0	1/2"	50	2.6	Internal
WSA-06-M00**	3/4"	100	6.0	Optional
WSA-06-FM0	3/4"	100	6.0	Internal
WSA-08-M00**	1"	120	6.0	Optional
WSA-08-FM0	1"	120	6.0	Internal
WS0-08-000B	1"	233	4.8	X02-04-FM0 WDV3-G
WS0-0B-000B	1-1/2"	472	11.2	X02-04-FM0 WDV3-G
WS0-0C-000B	2"	742	11.2	X02-04-FM0 WDV3-G
WS0-0E-000B	3"	1700	22.0	X02-04-FM0 WDV3-G

*1 PSID maximum differential. **Models have petcock.

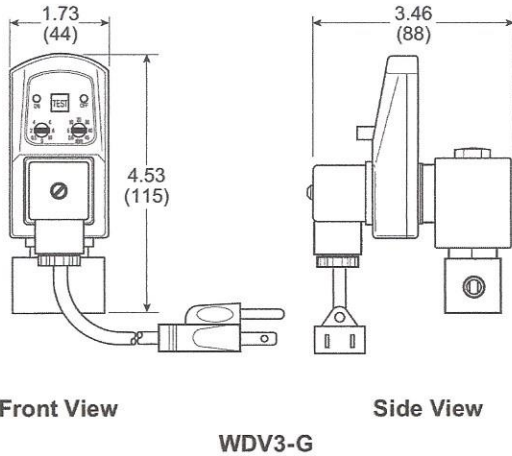
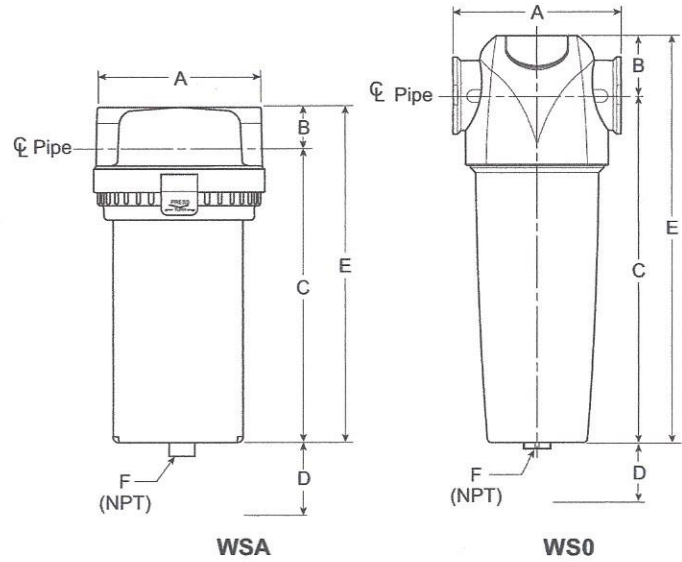


Operation

- 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.



D = Bowl Removal Clearance Dimension
J = External Drain Discharge Port (NPT)



NOTE: MAXIMUM separator efficiency of 98%+ is achieved in the range of 15 to 100% of rated flow in SCFM. At flow rates of <15% or >100%, separator efficiency is reduced considerably. Consult your Wilkerson distributor or contact Wilkerson for assistance in selecting the correct separator model for your application.

Model Number	A	B	C	D	E	NPT F	G	H	NPT J
WSA-02-M00*	3.00	.90	5.51	3.50	6.41	1/8	—	—	—
WSA-02-FM0	3.00	.90	5.51	3.50	6.41	1/8	—	—	—
WSA-03-M00*	3.35	.98	6.36	3.50	7.34	1/8	—	—	—
WSA-03-FM0	3.35	.98	6.36	3.50	7.34	1/8	—	—	—
WSA-04-M00*	3.35	.98	6.36	3.50	7.34	1/8	—	—	—
WSA-04-FM0	3.35	.98	6.36	3.50	7.34	1/8	—	—	—
WSA-06-M00*	4.62	1.00	9.00	3.50	10.00	1/8	—	—	—
WSA-06-FM0	4.62	1.00	9.00	3.50	10.00	1/8	—	—	—
WSA-08-M00*	4.62	1.00	9.00	3.50	10.00	1/8	—	—	—
WSA-08-FM0	4.62	1.00	9.00	3.50	10.00	1/8	—	—	—
WS0-08-000B	5.10	1.60	9.20	3.00	10.80	1/2	5.90	18.00	1/4
WDV3-G	—	—	—	—	—	—	1.73	13.83	—
WS0-0B-000B	6.70	2.00	15.00	4.00	17.00	1/2	5.90	18.00	1/4
WDV3-G	—	—	—	—	—	—	1.73	13.83	—
WS0-0C-000B	6.70	2.00	15.00	4.00	17.00	1/2	5.90	24.50	1/4
WDV3-G	—	—	—	—	—	—	1.73	20.33	—
WS0-0E-000B	8.10	2.40	17.50	4.72	19.90	1/2	5.90	28.90	1/4
WDV3-G	—	—	—	—	—	—	1.73	24.73	—

*Models have petcock.