



OWS Series

Oil/Water Separators



Oil can seriously affect the efficient operation of sewage purification, as well as harm the environment. For this reason, very low oil in water discharge limits are permitted and rigid legislation exists in most countries to protect the environment against this type of contamination.

International standards such as ISO 14001 also require the compressed air user to comply with local environmental legislation and show use of protective systems and procedures.

After the oily condensate has been efficiently removed from the compressed air system it cannot be discharged directly to the sanitary sewer without first having the oil content reduced to within legal disposal limits.

Parker Airtek Oil/Water Separators are a simple, economical and environmental solution. These oil / water separators are installed as part of the compressed air system and simply reduce the oil concentration in the collected condensate to a level permitted for discharge. This allows the larger volume of clean water, up to 99.9% of the total condensate, to be discharged safely into the sanitary sewer and the relatively small amount of concentrated oil to be disposed of legitimately and economically.



Contact Information:

Parker Hannifin Corporation
**Purification, Dehydration and Filtration
Division**

New York, USA
T 716 685 4040 F 716 685 1010
Toll Free 1-800-451-6023

Sales Offices

North Carolina, USA
T 704 921 9303 F 704 921 1960
Toll Free 1-800-345-8462

Ontario, Canada
T 905 693 3000 F 866 958 1306
Toll Free 1-888-342-2623

www.airtek.com

Benefits:

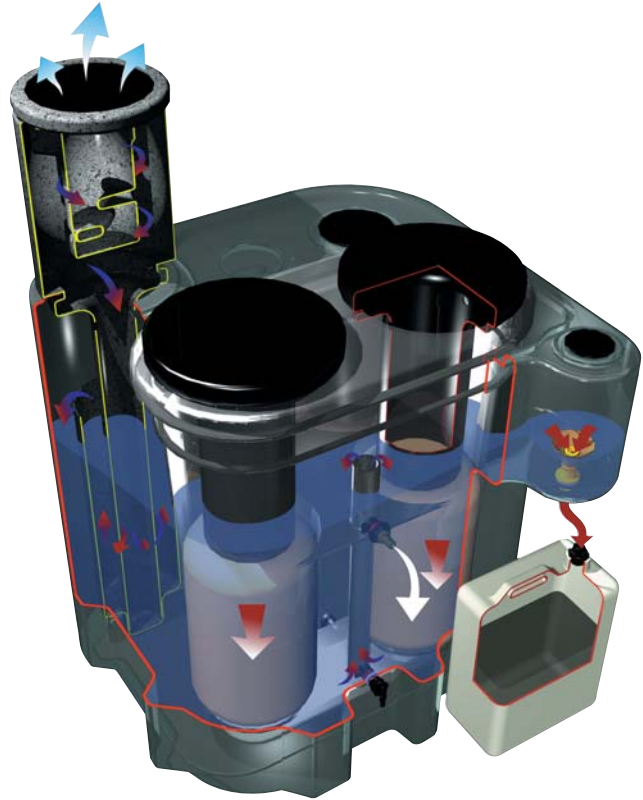
- **Help to protect and maintain the environment.**
- **Efficiently separate oil and water on-site and return up to 99.9% of the condensate to sanitary sewers.**
- **Meet trade effluent discharge regulations.**
- **Rapid payback over conventional disposal methods.**
- **Simple to install, operate and maintain.**
- **Will assist you in achieving ISO 14001 certification.**



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Special Features

- Single piece units – reduce overall footprint.
- Robust, corrosion resistant, polyethylene construction, includes ribbing for extra strength.
- Large centrifugal inlet chamber provides effective venting of compressed air energy, while multiple inlet ports and four inlet chamber positions simplify installation.
- Large, easily cleaned primary settlement chamber for the accumulation and removal of dirt particles.
- Large main tank increases settlement time and reduces oil carryover to carbon filter stage.
- Large internal galleries reduce risk of an internal blockage and simplify maintenance.
- Oil absorbing pre-filter(s) protect carbon stage from bulk contamination.
- Large carbon stage for increased contact time, improving water quality and extending carbon life.
- High specification carbon for improved service intervals.
- Adjustable oil outlet funnel for the efficient removal of separated oil.
- Sealed external oil container for easy oil disposal.
- Sample tap removes need to disconnect outlet piping when obtaining a test sample.



Accessories

- Additional oil containers for simple maintenance.
- Flow splitter provides equal distribution of condensate on multiple oil/water separator installations.
- Condensate manifold - multi ported device for connection to drain ports.

Operation

Parker Airtek Oil/Water Separators are designed to separate compressor oil from condensate with high efficiency without the use of external power. The condensate entering the OWS Series should be fed by a proven zero air loss drain like the Parker Airtek zero air loss drains.

Condensate enters the oil/water separator inlet chamber which is a unique centrifugal chamber design. Liquid will drop out of the air steam as it impinges on the chamber walls and the vortex tubing effectively draining without turbulence into the primary settlement chamber below.

Dirt particles suspended in the condensate will drop to the bottom of the primary settlement chamber and the condensate will then flow into the main separation chamber.

Entrained droplets of oil dispersed in the water will rise to the surface due to a lower specific gravity. As the oil rises it coalesces to form a thick layer on the surface.

An adjustable funnel allows the oil to be continuously skimmed off the surface. Drained oil is collected in the external oil container for safe disposal according to local regulations.

Clearer water taken from the bottom of the tank flows into the pre-filter and then into a carbon filter where any entrained oil droplets are removed via adsorption.

The processed and clean water can now be safely and legally discharged into the sanitary sewer from the water outlet.

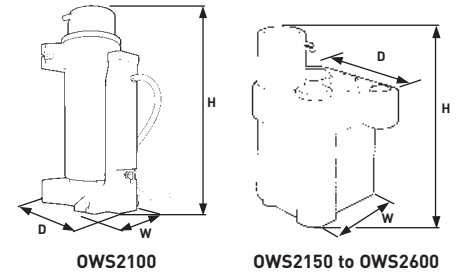
Parker Airtek Oil/Water Separators are the responsible and very economical solution to separate and remove contaminants from the compressor condensate.

Technical Data

Model	OWS2100	OWS2150	OWS2200	OWS2300	OWS2400	OWS2500	OWS2600
Inlet* Connections	1 x ½" 1 x ¼"	1 x ½" 1 x ¼"	1 x ½" 1 x ¼"	1 x ½" 3 x ¼"	1 x ½" 3 x ¼"	1 x ½" 3 x ¼"	1 x ½" 3 x ¼"
Outlet Hose Connections	¾" [19 mm]	1" [25 mm]	¾" [19 mm]	1" [25 mm]	1" [25 mm]	1" [25 mm]	1" [25 mm]
Settlement Tank Capacity	N/A	16 US G	20 US G	33 US G	49 US G	94 US G	128 US G
	N/A	60 l	75 l	125 l	185 l	355 l	485 l
Max. Pressure	232 psi g [16 bar g]						
Min/ Max Temperature	°F	41 to 95	41 to 95	41 to 95	41 to 95	41 to 95	41 to 95
	°C	5 to 35	5 to 35	5 to 35	5 to 35	5 to 35	5 to 35
Material (Re-cyclable)	Polythene						

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight			
							Empty		Full	
	ins	mm	ins	mm	ins	mm	lbs	kg	lbs	kg
OWS2100	33.0	842	10.6	270	12.4	316	13	6	154	24.5
OWS2150	32.0	810	17.0	433	14.0	350	22	10	173	78.5
OWS2200	32.0	803	18.0	450	14.0	350	26	12	206	93.5
OWS2300	47.0	1195	20.0	500	41.7	795	59	27	350	159
OWS2400	47.0	1195	26.0	650	41.7	795	79	36	477	217
OWS2500	60.0	1535	28.0	700	38.7	980	154	70	880	400
OWS2600	60.0	1535	39.0	1000	39.7	1005	214	97	1210	550



There are many factors which play a part in the selection of a static oil/water separator, with ambient conditions of the installation and oil type being the most important. Should the oil/water separator be installed in conditions other than those shown, please contact your local Parker Airtek outlet or approved distributor/agent for correct sizing.

Systems Conditions

Ambient Temperature at Compressor Inlet: 77°F (25°C)
Relative Humidity: 65%
Ambient Temperature at Compressor Inlet: 95°F (35°C)

Refrigeration Dryer Dewpoint if Fitted: 35°F (2°C)
Minimum System Temp without Refrigeration Dryer: 86°F (30°C)
System Pressure: 102 psig(7bar)

For conditions other than those shown, e.g. higher ambient temperatures, please contact Parker Airtek.

No Refrigeration Dryer Installed in System		Oil Type											
		Band A Turbine, Additive Free				Band B Mineral, PAO, TMP, PE				Band C Diesters, Triesters, PAG			
		cfm	m³/min	m³/hr	L/s	cfm	m³/min	m³/hr	L/s	cfm	m³/min	m³/hr	L/s
Rotary Screw, Vane	OWS2100	43	1.2	74	20.3	36	1.0	62	17.0	30	0.9	51	14.2
	OWS2150	124	3.5	211	58.5	106	3.0	179	50.0	86	2.4	146	40.6
	OWS2200	191	5.4	325	90.1	162	4.6	276	76.5	132	2.3	224	62.3
	OWS2300	268	7.6	456	126.5	225	6.4	383	106.2	185	8.9	314	87.3
	OWS2400	535	15.1	909	252.5	450	12.7	764	212.4	370	17.6	628	174.6
	OWS2500	1062	30.1	1804	501.2	900	25.5	1530	424.8	734	20.5	1247	346.4
	OWS2600	2113	59.8	3590	997.2	1800	51.0	3057	849.5	1461	30.7	2482	689.5

Refrigeration Dryer Installed in System		Oil Type											
		Band A Turbine, Additive Free				Band B Mineral, PAO, TMP, PE				Band C Diesters, Triesters, PAG			
		cfm	m³/min	m³/hr	L/s	cfm	m³/min	m³/hr	L/s	cfm	m³/min	m³/hr	L/s
Rotary Screw, Vane	OWS2100	33	0.9	55	15.6	27	0.8	46	12.7	22	0.6	38	10.4
	OWS2150	93	2.6	158	43.9	79	2.2	134	37.3	64	1.8	109	30.2
	OWS2200	143	4.1	243	67.5	122	3.4	207	57.6	99	2.8	168	46.7
	OWS2300	201	5.7	341	94.9	169	4.8	286	79.8	138	3.9	235	65.1
	OWS2400	400	11.3	680	188.8	337	9.5	572	159.1	277	7.8	470	130.7
	OWS2500	795	22.5	1351	375.2	674	19.4	1145	318.1	549	15.6	934	259.1
	OWS2600	1582	44.8	2687	746.6	1347	38.1	2288	635.7	1093	31.0	1858	515.8

The above values are not applicable for polyglycol lubricants or ATF (automatic transmission fluid).

Selection

To simplify the Parker Airtek Oil/Water Separator selection, lubricant classifications have been divided by three categories depending upon the oil's ability to separate within a static type separator. It is important to note that the oil type has a direct effect on the efficiency of separation!

Class 1 (High Separation Efficiency)

Additive free turbine oil

Class 2 (Medium Separation Efficiency)

Mineral, Polyalphaolefins (PAO), Trimethylolpropane Ester (TMP), Pentaerythrityl Ester (PE)

Class 3 (Low Separation Efficiency)

Diesters, Triesters, Polyoxyalkylene glycol (PAG)

Drain Selection

The condensate should be removed from the compressed

air system using a drainage method that will not cause additional emulsification of the condensate. It should also be appropriate for draining into the oil/water separator unit. Typical types include: timer drains, float drains and zero air loss drains.

Parker Airtek recommends the use of our zero air loss condensate drains as the optimal solution.

If the use of timer drains is unavoidable, care should be taken to ensure that condensate is being discharged into the separator and not just compressed air. This may be accomplished by decreasing the length of on-time (duration) of the drain and increasing the frequency of operation if necessary.

Important Note:

Static oil/water separators are unable to separate stable emulsions or oils that are miscible in water. In these applications, contact Parker Airtek for recommendations.

Complete range of competitor interchange oil/water separator maintenance kits available including Beko, Hankison, MotivAir, Kaeser, Ultrafilter, Quincy, ASP & Wortman.



For more information on extended warranty and preventative maintenance contract availability, please contact your local Parker Airtek sales office or log on to www.airtek.com

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