

Atlas Copco



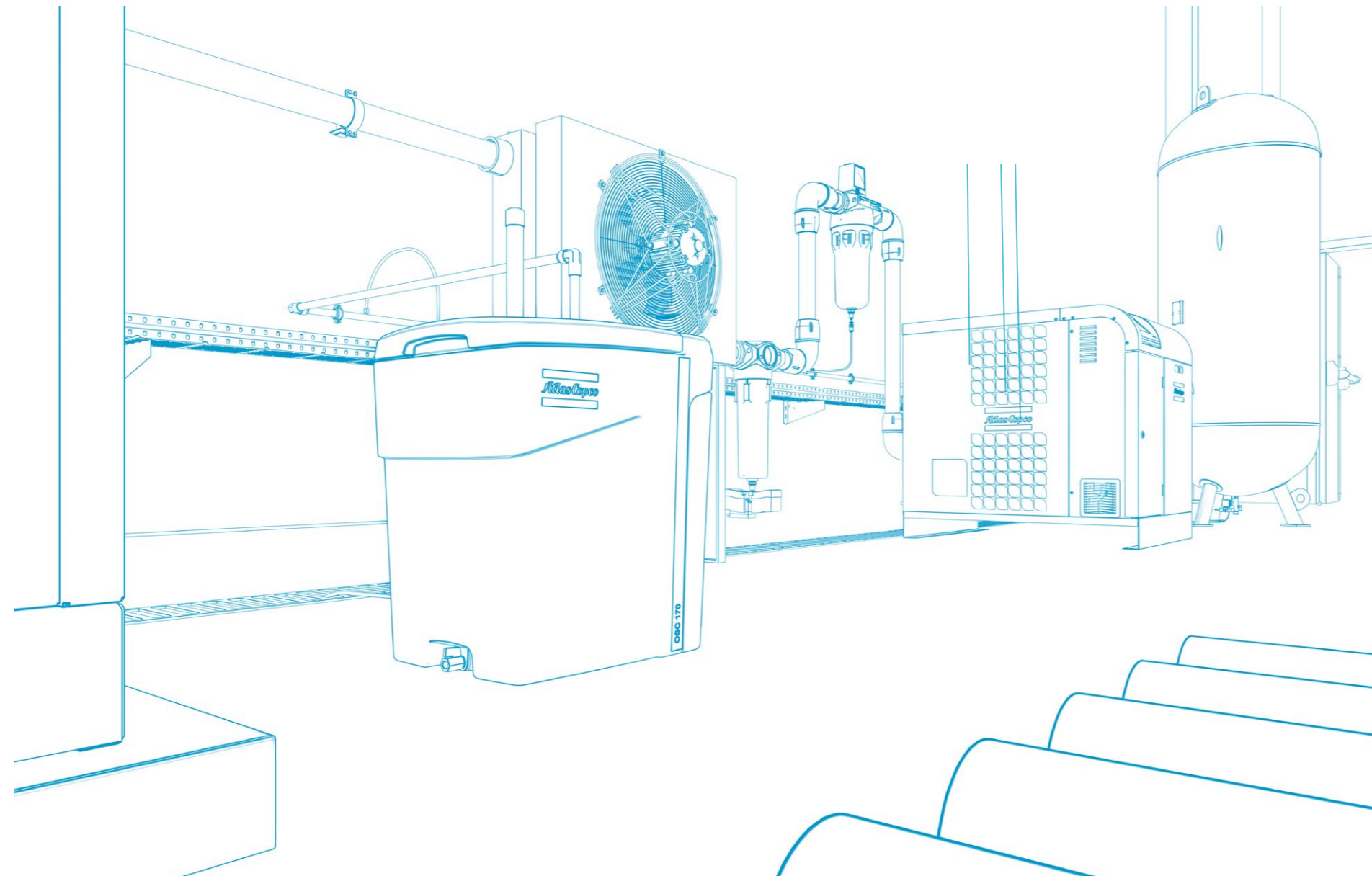
# Air treatment solutions

Aftercoolers & condensate treatment



## Reliable and clean air

The air that leaves a compressor reaches 100% humidity. It also contains oil (unless you are using an oil-free compressor) and solid particles. Together, they form an abrasive, often acidic, oily sludge. Without air treatment, this murky mix will enter your compressed air system, corroding pipe work, damaging pneumatic tools and potentially compromising final products.



Atlas Copco offers a wide range of aftercoolers, drains and condensate treatment solutions, extending our premium quality throughout your compressed air system.

### Remove oil

#### Condensate treatment

Because oil poses an environmental risk, compressed air condensate must be treated appropriately. Atlas Copco's condensate management solutions separate and safely dispose of the oil in compressed air before it enters the system.

### Remove water

#### Drains

The remaining humidity in compressed air turns into water as the air cools while it moves through the system. Because water causes corrosion and damage, drains must be installed throughout your network. Atlas Copco has a range of drains, automatic or electronic, that will keep your aftercooler, dryer, air receiver, and other equipment working optimally.

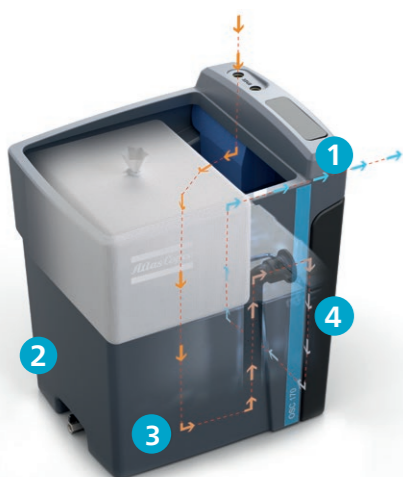
#### Aftercoolers

All Atlas Copco compressors are equipped with an aftercooler. It cools the air, turning up to 70% of the humidity into water, which is then immediately drained. However, production facilities with extremely high ambient temperatures might need additional cooling. Atlas Copco's add-on aftercoolers prevent excess moisture from entering your compressed air system.

## OSC condensate treatment

If the oil in compressor condensate is not removed before it enters the sewage system, it can cause significant environmental damage. Therefore, condensate treatment is not only the responsible thing to do; in most countries it's the law. Thanks to its multi-stage filtration, Atlas Copco's OSC removes oil from your compressor's condensate with unmatched precision to achieve an oil content of 10 ppm at outlet. In addition, the OSC offers zero-hassle maintenance thanks to its easily removable filter bags and cartridges.

## Highly effective multi-stage filtration



- 1 **Inlet:** The condensate enters the unit via one single or multiple inlets. It passes through a diffuser and depressurizes in the expansion chamber. The diffuser removes bigger solid particles from the condensate so that these cannot compromise the filter media.
- 2 **First chamber:** The oil-water mixture seeps through the polypropylene filter, which adsorbs the oil, but not the water. The condensate remains in the chamber for a while, starting a secondary, natural filtration as the remaining free oil floats to the top and is adsorbed by the filter bag.
- 3 **Second chamber:** A removable cartridge, filled with activated carbon or organoclay, separates the remaining oil droplets from the condensate.
- 4 **Outlet:** Clean condensate exits from the removable cartridge with almost no residual oil content, allowing for safe discharge into the sewer system.



### Effectiveness

- Dual-stage filtration with polypropylene and activated carbon removes a wider range of oil types.
- Organoclay cartridges are available to take on stronger emulsions in the second chamber.
- The discharge condensate contains so little residual oil (10 ppm, 5 ppm if required), that it can be drained without environmental risk and in compliance with regulations.

### Reliability

- You can verify filtration performance using the test outlet.
- A service indicator signals the polypropylene filter is saturated.
- An overflow indicator monitors correct water passage.

### Ease of use

- The simple yet robust design allows for easy installation without special set-up.
- Easily removable filter bags and cartridges simplify and shorten maintenance.
- You enjoy a long service interval of 4,000 hours.

### Flexibility

- OSC 12-15 are small single-use units. The larger units are serviceable.
- OSC 12-625 are two-stage units, while the OSC 1250-2500 are three-stage units.
- OSC 2500 uses a flow divider to evenly split the flow between units.

# OSC technical specifications

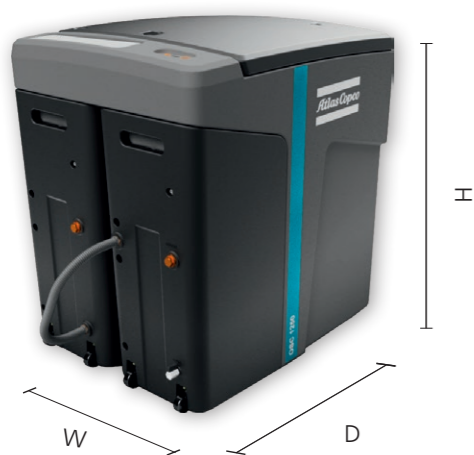
Capacity is based on the compressor running at 7 barg/100 psig or 12 hours per day, with all condensate from the compressor, the air receiver, the filters and refrigerant dryer piped into the unit.

Model	Max capacity - Mild climate without dryer & filters			Max capacity - Mild climate with dryer & filters		
	l/s	m <sup>3</sup> /hr	cfm	l/s	m <sup>3</sup> /hr	cfm
OSC 12	15	54	32	12	43	25
OSC 25	31	113	66	25	90	53
OSC 50	63	225	132	50	180	106
OSC 85	106	383	225	85	306	180
OSC 170	213	765	450	170	612	360
OSC 300	375	1350	795	300	1080	636
OSC 625	781	2813	1655	625	2250	1324
OSC 1250	1563	5625	3311	1250	4499	2648
OSC 2500	3125	11250	6621	2500	8998	5296

\* All capacities are based on an outlet oil content of 10 mg/l.

## Reference conditions

Relative air humidity: 60%  
Air inlet temperature: 25°C (77°F)  
Running hours per day: 12 hours  
Effective working pressure: 7 bar (102 psi)



## Running hours

Multiply the OSC FAD capacity by the appropriate correction factor to adjust for different running hours:

Running hours per day	12	14	16	18	20	22	24	22	24
Correction factor	1	0.86	0.75	0.67	0.6	0.55	0.5	0.55	0.5

## Separation performance

For an outlet oil carry-over of 10 mg/l. 5 mg/l can also be achieved when applying correction factors. Contact Atlas Copco for precise derating.

## Dimensions

Model	Dimensions						Weight		Connections (BSP/NPT)	
	Depth		Width		Height		kg	lbs	Inlet	Outlet
	mm	inch	mm	inch	mm	inch				
OSC 12	250	10	147	6	216	9	1.2	2.6	1/4" (6mm)	3/8" (10mm)
OSC 25	250	10	147	6	216	9	1.5	3.4	1/4" (6mm)	3/8" (10mm)
OSC 50	390	15	278	11	428	17	5.8	12.7	2 x 1/2"	1/2"
OSC 85	397	16	286	11	507	20	7.7	16.9	2 x 1/2"	1/2"
OSC 170	490	19	396	16	576	23	13.1	28.9	2 x 3/4"	3/4"
OSC 300	583	23	446	18	721	28	25.3	55.7	2 x 3/4"	3/4"
OSC 625	692	27	568	22	970	38	45.1	99.4	2 x 3/4"	3/4"
OSC 1250	975	38	782	31	1000	39	86	189.5	2 x 3/4"	3/4"
OSC 2500	975	38	1600	63	1000	39	171.9	379.1	2 x 3/4"	3/4"

## Options

- Manifold for multiple condensate inlets
- Wall mounting kit (for sizes 12-25)
- Test capsule (standard for sizes 12-25)
- Drip tray
- Electronic alarm

# WSD water separators

Atlas Copco's WSD prevents condensed water from building up in your air system. The water separator comes as standard with Atlas Copco's aftercoolers and can also be installed at any point in your system. Made entirely of rustproof material, these cyclone-based separators remove water aerosols to protect system components such as dryers and filters. Maintenance-free and without moving parts, they come with an automatic or a manual drain.

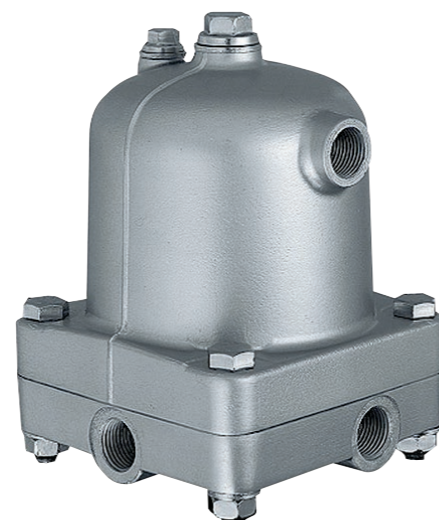


Type	Capacity range		Maximum working pressure		Connections	Dimensions					Weight		
	l/s	cfm	bar(e)	psi		Height		Width		Length		kg	lbs
					mm	inch	mm	inch	mm	inch			
WSD 25	7-60	15-127	20	290	G 1	332	13.0	130	5.1	185	7.3	1.1	2.4
WSD 80	50-150	106-318	20	290	G 1½	432	17.0	130	5.1	185	7.3	3.5	7.7
WSD 250	125-350	265-742	20	290	G 2½	532	20.9	160	6.3	230	9.0	12.5	27.6
WSD 750	300-800	636-1695	20	290	83 mm*	532	20.9	160	6.3	230	9.0	14.0	30.9

\* Blind flange to be machined up to this diameter.

## WD automatic drains

The WD 80 drain valve provides completely automatic drainage of the water that collects at the lowest point of a compressed air system (e.g. at the bottom of a receiver or cyclone separator). Its patented design ensures minimal maintenance.



Type	Maximum working pressure		Drain capacity	Connections		Dimensions						Weight	
	bar(e)	psi				l/h	Height		Width		Length		kg
			mm	inch	mm		inch	mm	inch				
WD 80	20	290	200	G ½		182	7.2	132	5.2	132	5.2	2.7	5.9

## TWD timer drain

The TWD timer drain removes condensate using a solenoid valve in combination with an electronic timer. Pre-selecting the timing and length of each drain cycle minimizes compressed air loss. Compact, easy to install and fully automatic, the TWD is a cost-effective drain solution for compressed air filters and vessels.



Type	Maximum working pressure		Connections		Dimensions						Weight	
	bar(e)	psi	inlet	valve	Height		Width		Length		kg	lbs
					mm	inch	mm	inch	mm	inch		
TWD	16	232	G ½-¼	G ½	126.5	5	131	5.2	95	3.7	0.7	1.5

## EWD electronic drains

The EWD range of electronic drains offers safe, dependable and efficient condensate drainage. The intelligent drain function monitors condensate build-up and removes the liquid only when necessary, avoiding compressed air loss. Special EWD drains are also available for oil-contaminated condensate. The range can be delivered with additional hard coating for oil-free and aggressive condensate.



Type	Maximum compressor capacity*		Maximum dryer capacity*		Maximum pressure		Dimensions						Weight	
	l/s	cfm	l/s	cfm	bar	psi	Height		Width		Length		kg	lbs
							mm	inch	mm	inch	mm	inch		
EWD 50**	65	138	130	275	16	232	115	4.5	70	2.8	171	6.7	0.7	1.5
EWD 50 A***	65	138	130	275	16	232	115	4.5	70	2.8	171	6.7	0.7	1.5
EWD 50 B****	650	1380	1729	3640	16	232	115	4.5	70	2.8	171	6.7	0.7	1.5
EWD 50 L*****	650	1380	1729	3640	16	232	115	4.5	70	2.8	171	6.7	0.7	1.5
EWD 75	98	208	194	411	16	232	141	5.6	65	2.6	150	5.9	0.8	1.8
EWD 75 C**	98	208	194	411	16	232	141	5.6	65	2.6	150	5.9	0.8	1.8
EWD 75 CHP	98	208	194	411	63	913	141	5.6	65	2.6	150	5.9	0.9	2.0
EWD 330	433	917	866	1835	16	232	162	6.4	93	3.7	212	8.3	2.0	4.4
EWD 330 C**	433	917	866	1835	16	232	162	6.4	93	3.7	212	8.3	2.0	4.4
EWD 330 CHP**	433	917	866	1835	25	362	162	6.4	93	3.7	212	8.3	2.0	4.4
EWD 1500	1950	4132	3900	8264	16	232	180	7.1	120	4.7	252	9.9	2.9	6.4
EWD 1500 C**	1950	4132	3900	8264	16	232	180	7.1	120	4.7	252	9.9	2.9	6.4
EWD 16K C**	21670	45920	43340	91830	16	232	280	11.0	254	10.0	280	11.0	5.9	13.0

\* Climatic conditions:  
 - ambient temperature 35°C (95°F)  
 - relative humidity 70%  
 \*\* Suitable for oil-free condensate.  
 \*\*\* Standard + indicative LEDs and potential free alarm.  
 \*\*\*\* With vario function: pause between detection of high condensate level and opening of valve (not oil-adjusted).  
 \*\*\*\*\* With vario function: pause between detection of high condensate level and opening of valve (oil-adjusted).

C = With anti-corrosion coating for oil-free condensate.  
 HP = High-pressure version.



## HD and TD aftercoolers

Atlas Copco's air and water-cooled aftercoolers provide additional moisture management in facilities with extremely high ambient temperatures. Supplied with all necessary parts, they are compact, simple to install and easy to disassemble for cleaning.

Our HD and TD aftercoolers combine minimal pressure drop with high cooling efficiency and low energy consumption. A negligible pressure drop means no production power is lost. The compressor doesn't generate extra demand, eliminating additional energy or maintenance costs.



### Your benefits:

- **Efficiency** - Special, highly efficient separation by cyclone results in low pressure drop and energy use.
- **Minimal installation & maintenance** - Easy assembly of connection flanges.
- **Reliability** - Totally rustproof materials ensure a long lifetime.

### Water-cooled HD aftercoolers

Atlas Copco's HD water-cooled aftercoolers deliver high effectiveness with low water consumption. Their built-in bundle of stainless steel tubes reduces the temperature of the air leaving the compressor. The cooling water and the compressed air flow in opposite directions. The cooler is equipped with a water drain as standard.

### Air-cooled TD aftercoolers

Atlas Copco's TD air-cooled aftercoolers have an aluminum block element. An electrically driven fan, shielded by a protector for user safety, forces air between the cooling fins to ensure high efficiency and low energy use. The aftercooler is mounted on a sturdy frame and has a built-in water drain.



## HD water-cooled aftercooler

Type	Nominal flow *		Maximum working pressure		Δt above cooling water *		Water consumption		
	l/s	cfm	bar(e)	psi	°C	°F	l/s	m³/h	US gal/min
HD 250	180	380	20	290	12	21	0.4	1.44	6.3
HD 650	530	1120	10.5	150	11	20	1.3	4.68	21
HD 1500	1500	3180	16	230	4	7	3.9	14.0	62
HD 3500	3500	7420	16	230	4	7	8.5	30.6	134

\* HD water-cooled aftercooler.

Type	Air inlet / outlet connections Ø		Dimensions						Weight		Cooling water inlet outlet
			Height		Width		Length				
	inlet	outlet	mm	inch	mm	inch	mm	inch	kg	lbs	
HD 250	G 2½	G 2½	1975	77.7	230	9.0	483	19.0	140	308	G ½
HD 650	DN 100	DN 100	2083	82.0	500	19.7	635	25.0	210	463	G 1
HD 1500	DN 150	DN 150	840	33.0	1574	62.0	925	36.4	710	1565	DN 80
HD 3500	DN 200	DN 200	828	33.0	1574	62.0	925	36.4	715	1576	DN 80

## TD air-cooled aftercooler

Type	Nominal flow *		Maximum working pressure		Δt above ambient temperature *		Fan motor power	
	l/s	cfm	bar(e)	psi	°C	°F	kW	hp
TD 08	8	17	20	290	10	18	0.05	0.07
TD 25	25	53	20	290	10	18	0.12	0.16
TD 50	50	106	20	290	10	18	0.18	0.24
TD 150	150	318	20	290	10	18	0.75	1.01
TD 300	300	363	20	290	10	18	0.75	1.01
TD 650	650	1377	20	290	10	18	2.20	2.95
TD 650	650	1377	10.5	152	10	18	2.20	2.95

\* Refers to absolute pressure of 1 bar and temperature of 20 °C. Compressed air in at 160 °C.

Type	Air inlet / outlet connections Ø		Dimensions						Weight		N° of cooler cores
			Height		Width		Length				
	inlet	outlet	mm	inch	mm	inch	mm	inch	kg	lbs	
TD 08	G ½	G ½	188	7.4	130	5.1	270	10.6	6	13	1
TD 25	G 1	G 1	658	25.9	402	15.8	588	23.1	19	42	1
TD 50	G 1¼	G 1¼	735	28.9	412	16.2	664	26.1	23	51	1
TD 150	G 2½	G 2½	1160	45.6	435	17.1	920	36.2	53	117	1
TD 300	G 2½	G 2½	1280	50.3	466	18.3	1140	44.8	73	161	1
TD 650	DN 80	DN 100	1525	60.0	716	28.1	1780	70.0	185	408	1

