



## CCSD & CCSE Series Oil/Water Separators

**NEW**



Engineered to Save

# Oil/Water Separators

Condensate generated by lubricated type air compressors is comprised of atmospheric borne water vapor and lubricant from the compression process. Post compression, condensate is dropped from the air stream in the cooling, refrigerated dryer, and filtration phases of the air treatment process. Regardless of site conditions, it is virtually impossible to remain legally compliant with local discharge regulations without proper separation equipment.

## Products That Work For You

CompAir is setting the standard in condensate management products with the introduction of the CCSD and CCSE Series of oil/water separators. Both of these products are designed for 24 hour continuous heavy duty use. CCSD and CCSE both operate effectively in 90°F at 90% RH summertime conditions. The CCSD Series are ideal for use with CompAir PAO/POE type lubricants. The CCSE Series separators are ideal for emulsible lubricants which use PAG as their base fluid. The CCSE should not be used with Food Grade fluids.



## CCSD Series

Oil/water separator-demulsible

The CCSD Series oil/water separators work effectively with PAO/POE base lubricants that quickly and easily separate from water. These oil/water separators are designed for 90°F at 90% RH summertime conditions and can separate oil/discharge water to levels of 15 ppm. Using the most advanced technology for reducing the volume of compressed air condensate destined for disposal, the CCSD offers greater reliability, longer filter life and cleaner discharge water quality than ever before.



## CCSE Series

Oil/water separator-emulsible

CompAir's CCSE design features allow the separator to use the most economical and efficient means to separate emulsified, slowly demulsible, or high volume condensate loads. The fully automatic CCSE Series oil/water separators were designed to effectively separate emulsified compressor condensate to levels of 15 ppm or less without premature element failure and backup spillages by using two unique features. Simply determine the highest cfm flow possible with the application and then make your selection of the appropriate unit size.

# Product Features

## CCSD Features

### ⇒ *Effective Design*

- Removable Sediment Chamber prevents rust, dirt and scale from escaping into the main reservoir
- Internal filter inside Sediment Chamber accelerates the coalescing process by making fine oil droplets larger resulting in faster separation
- Timely piping removal is eliminated due to the accessibility of the Access Lid
- Replaceable pre-absorber possesses a proprietary, non-restrictive, polar absorber which extends life of the carbon bed
- Pop-up flow indicator
- Three input connections
- Integrated handles for ease of filter replacement

### ⇒ *Reliability and Effectiveness*

- Designed for 24/7/365 operation
- Designed for 90°F at 90% RH conditions
- Oil Outlet Weir prevents spills by allowing the amount of oil collected to be seen.
- Sample Valve eliminates guesswork on when filters need changed, saving time and money.

### ⇒ *Options*

- Heaters: Used in areas where the separator might be subject to freezing temperatures.
- Distributor: Used to collect and evenly distribute flow into multiple units; also recommended for use with high capacity demand drains to protect the CCSD from large condensate surges. Distributor is available on CCSD120–240.

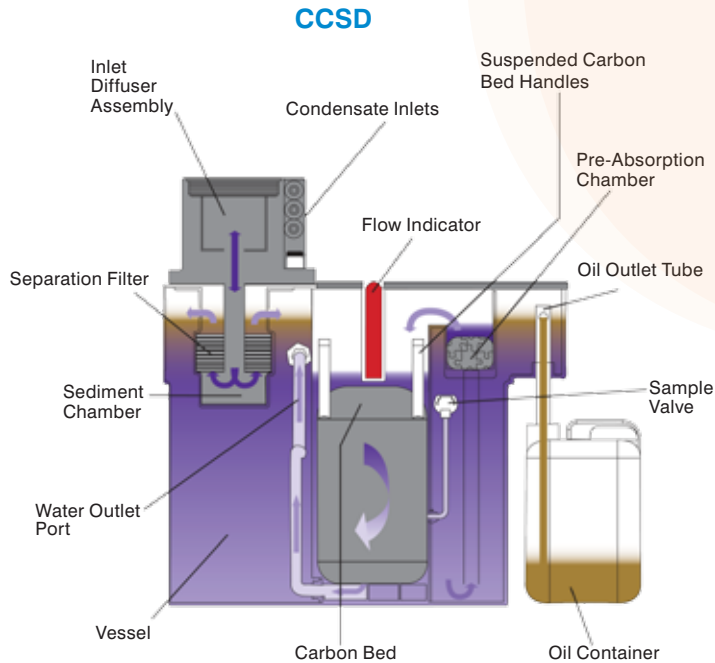
## CCSE Features

### ⇒ *Unique Delivery System*

- Pneumatically operated pump that feeds the filter module—no electricity needed.
- Two moving parts ensure maximum reliability.
- Filter module contains a proprietary blend of alumino silicate and carbon. Alumino silicate substrate is coated with a hydrophobic compound, resulting in the media's ability to hold up to four times the amount of oil that standard activated carbon can hold.
- Availability of three different sized filter modules make your system easily expandable.
- Filter is completely self-contained and easily transported.



# Operation



## CCSD Operation

### 1) Depressurization

- Condensate enters the separator through the Condensate Inlets in the Inlet Diffuser Assembly where air is exhausted to atmosphere through the filter at the top.
- Gravity draws the new condensate into the Sediment Chamber and pushes the old condensate through the Separation Filter.

### 2) Processing

- Both oil and water enter the Vessel through exit holes in the sediment chamber. Oil will float to the surface and is removed via the Oil Outlet Tube to the Oil Container.
- The water slowly sinks to the bottom of the vessel and then rises through a tube to enter the Pre-Absorption Chamber.
- The water is pre-cleaned and then flows down through the Carbon Bed for final polishing.
- Water then exits the separator via the Water Outlet Port located at the back of the vessel.

## CCSE Operation

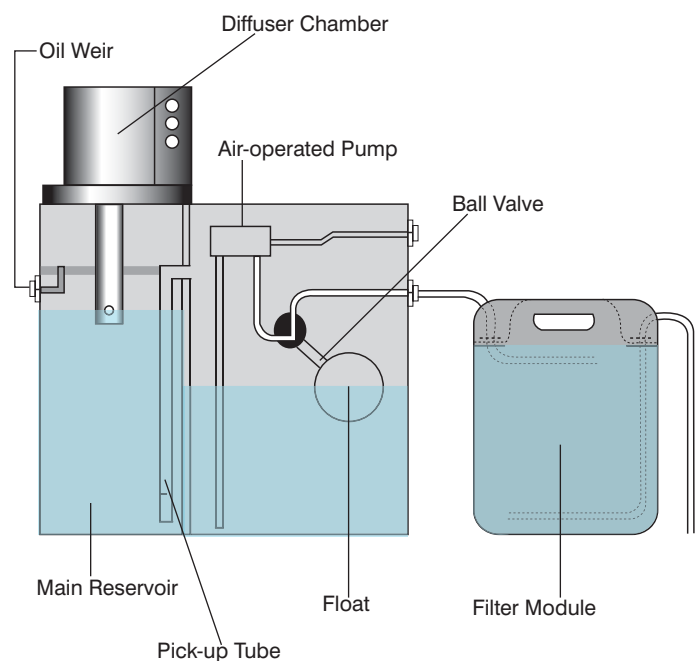
### 1) Depressurization

- Condensate first enters the Diffuser Chamber where it is depressurized.
- The oily condensate then enters the Main Reservoir where gravity separation occurs. Any oil that floats to the surface is skimmed off through an adjustable Oil Weir.

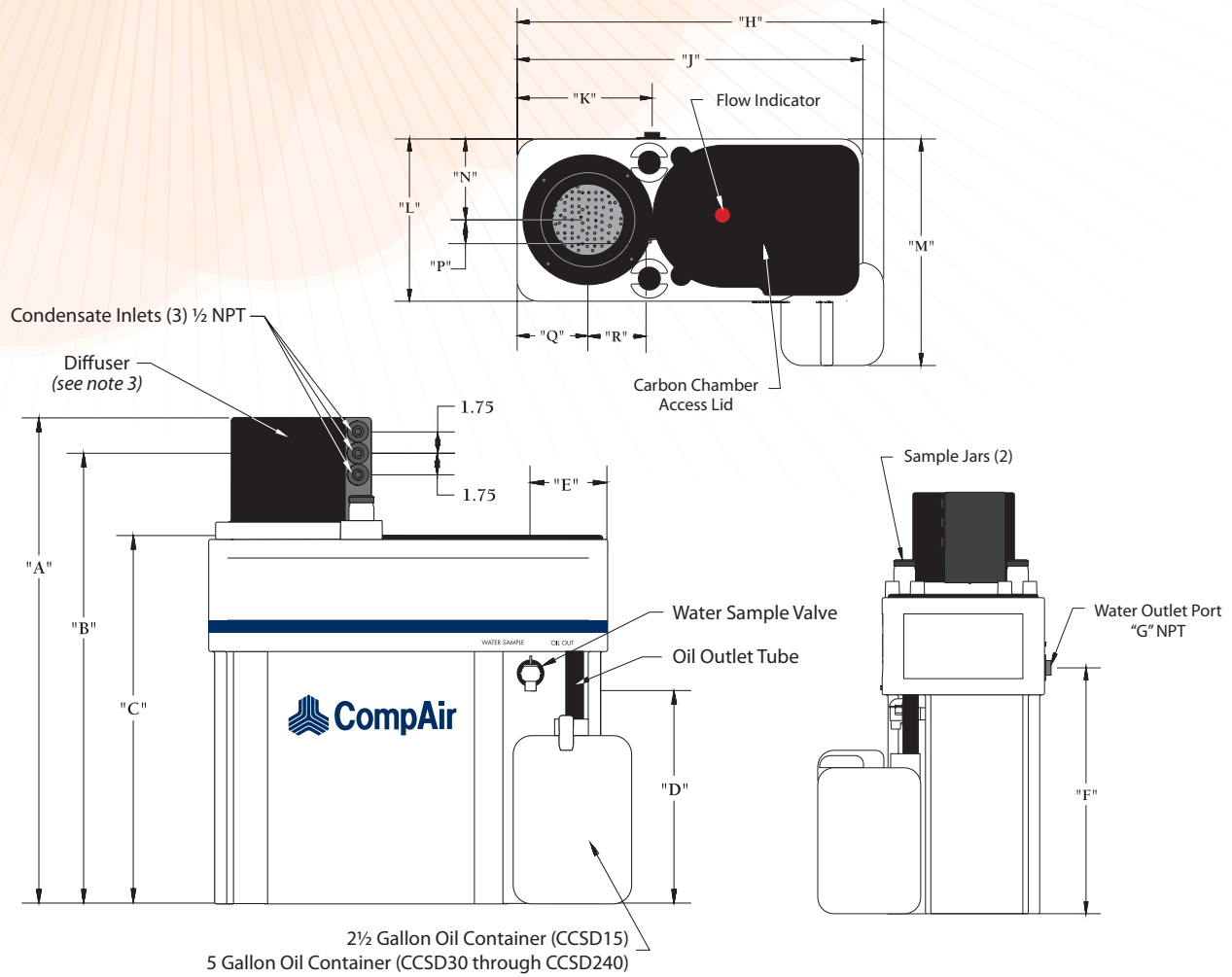
### 2) Processing

- The condensate moves to a separate chamber through a Pick-Up Tube. As the condensate accumulates in the next chamber, a Float rises with the level of condensate. The float is connected to a Ball Valve by a lever arm.
- The increased level of condensate causes the float to rise and open the ball valve.
- As the valve opens, the Air-Operated Pump is allowed to push the condensate out to the Filter Module. If the level of condensate continues to rise, the float also rises and further opens the ball valve. This results in additional condensate being pushed to the Filter Module. Thus, the system will self adjust to the quantity of condensate entering the system. This system assures maximum contact time for the filter module.

## CCSE



# CCSD Dimensional Data



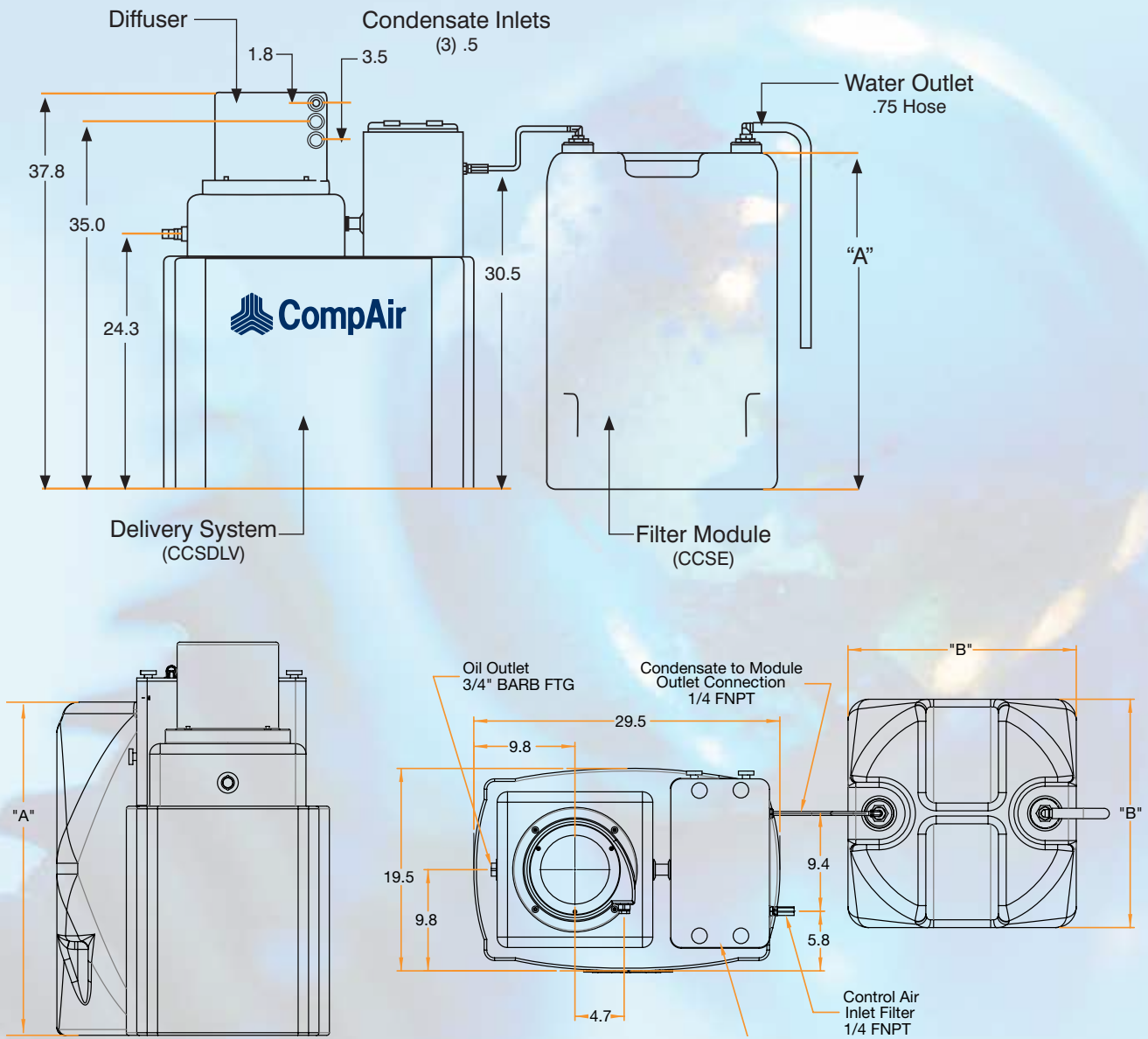
Size	DIMENSIONAL SYMBOL															
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
CCSD15	29.75	27.00	20.75	11.25	5.25	16.00	.75	26.50	26.00	9.00	14.00	19.50	4.50	2.75	4.50	4.00
CCSD30	39.00	36.25	29.75	17.00	6.25	22.75	.75	34.00	32.00	12.50	15.00	21.00	7.50	3.50	6.50	5.25
CCSD60	39.00	36.25	29.75	17.00	5.25	23.00	1.00	35.00	32.00	22.00	26.50	30.75	6.00	3.50	13.50	5.25
CCSD120	39.00	36.25	29.75	17.00	5.25	23.00	1.00	72.00	32.00	22.00	26.50	30.75	6.00	3.50	13.50	5.25
CCSD180	39.00	36.25	29.75	17.00	5.25	23.00	1.00	109.00	32.00	22.00	26.50	30.75	6.00	3.50	13.50	5.25
CCSD240	39.00	36.25	29.75	17.00	5.25	23.00	1.00	146.00	32.00	22.00	26.50	30.75	6.00	3.50	13.50	5.25

**NOTE 1:** All dimensions are in inches.

**NOTE 2:** Tolerances-all dimensions are +/- .50 unless otherwise shown.

**NOTE 3:** Diffuser is rotatable in 90 degree increments.

# CCSE Dimensional Data



Model	"A" (inches)	"B" (inches)	Dry weight (lbs)
CCSE15	20	15	90
CCSE30	28.5	18.6	200
CCSE55	32.5	23	400

# Specifications

## CCSD Ordering Information

Model	Max. CFM		Capacity**			Dimensions (inches)			Inlet	Water Outlet	Oil Container	Weight
	90°F @ 90% RH		70°F @ 70% RH		H	D	W	NPT		gal	lbs	
CCSD15	150		357		30	19	26.5	(3) 1/2"	3/4"	2.5	53	
CCSD30	300		714		39	21	34	(3) 1/2"	3/4"	5	77	
CCSD60	600		1428		39	31	35	(3) 1/2"	1"	5	120	
CCSD120	1200		2856		39	31	72	(3) 1/2"	(2) 1"	(2) 5	240	
CCSD180	1800		4284		39	31	109	(3) 1/2"	(3) 1"	(3) 5	360	
CCSD240	2400		5712		39	31	146	(3) 1/2"	(4) 1"	(4) 5	480	

\*Optional distributor ports available for CCSD120-240

\*\*Optional heaters available for CCSD15-240

## CCSE Ordering Information

Model	Delivery System cfm	Filter Gallons
CCSE15	125–250	15
CCSE30	250–500	30
CCSE55	560–1125	55

### Filter Replacements

Part #	Description
CCSFM15	Filter Module, CCSE15
CCSFM30	Filter Module, CCSE30
CCSFM55	Filter Module, CCSE55

### Specifications

Delivery System Specifications	Max GPM	CFM @ 20 psi	Dimensions (in)			Inlet Conn. (NPT)	Oil Outlet	Container Material	Pump Material
			H	D	W				
CCSDLV	0.9	0.35	38	18	28	(3) 1/2"	3/4"	Polypro.	Acetal/Viton
Filter Module Specifications	Max Compressor hp	Max Oil Capacity gal	Dimensions (in)			Inlet	Water Outlet	Container Material	Dry Weight lbs
			H	D	W				
CCSE15	50	5	20	15	15	3/8"	3/4"	Polyethyl	90
CCSE30	100	12	29	19	19	3/8"	2"	Polyethyl	200
CCSE55	200	24	33	23	23	3/8"	2"	Polyethyl	400

Inter-connecting fittings and hoses are supplied for connecting the delivery system to the filter modules.

# Aftermarket Parts & Lubricants

## *Protect the Investment in CompAir*

Regular maintenance and service of CompAir product is critical to the performance and longevity of the equipment. Only CompAir can provide the assurance that the investment will provide a lifetime of productivity.

## *Reliability*

Only CompAir can provide aftermarket parts and services that are engineered for use in CompAir products. The parts and lubricant have been tested under rigorous conditions at the factory to the highest quality standards.

## *Performance*

Only CompAir can provide aftermarket parts designed specifically for the CompAir product. Use of OEM parts ensures that the investment in CompAir will continue to perform year in and year out with the same reliability and efficiency.

## *Ease of Doing Business*

Only CompAir can provide the peace of mind of turning to one supplier and one source for all aftermarket needs. CompAir has the support network in place to handle all customer service, service and technical support needs.

## *Value*

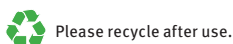
Only CompAir can provide the high quality aftermarket parts and services for the life of the investment in CompAir. Proper care of the CompAir product is vital to the equipment's performance and efficiency. Lean on a trusted source—CompAir.



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