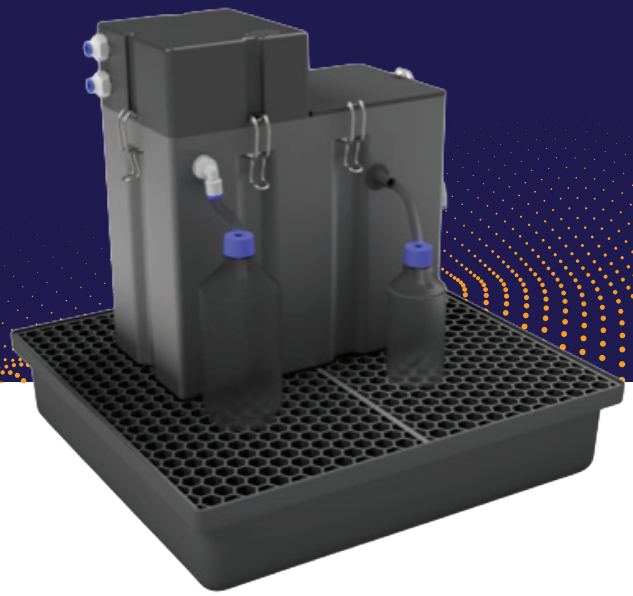
CONDENSATE

KOWS Series Oil-Water Separator Units



Easy and Effective Condensate Removal. **That's KELTEC's KOWS.**

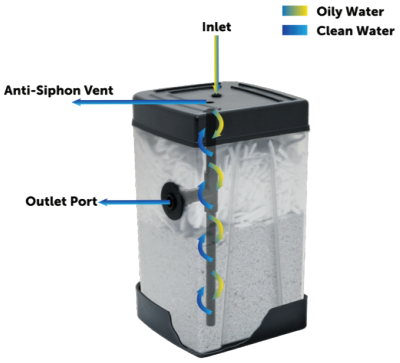
Compressed air systems are considered one of the largest energy sources, ranking just behind water, gas, and electricity. Due to its efficient storage and transmission properties, compressed air is widely used across various industries. Oil is commonly utilized in compressed air systems to dissipate heat, lubricate moving parts like rotors and bearings, and form seals between the rotor and the compressor casing. This results in significant oil content in the condensate drained from the compressor. Along with the oil, other contaminants, including water, are present when the air is pressurized, leading to the formation of compressor condensate. This mixture is classified as a highly hazardous industrial waste, as just one liter of oil can contaminate up to one million liters of water. For this reason, it is illegal in many regions to discharge this condensate without an oil removal system in place. Many countries enforce strict regulations on oil content in wastewater, making oil separation essential for environmental protection and regulatory compliance.

The KELTEC KOWS Series Oil-Water Separator Units effectively separate oil from condensate in line with ISO 14000 standards, offering both reliability and cost-efficiency. The units can reduce oil concentrations from 3000–500 ppm to as low as 10 ppm. They are designed for easy installation and maintenance, minimizing machine downtime.

Features

- Low carbon footprint
- Eco-friendly drain according to ISO 14000
- Low weight and easy installation
- User-friendly maintenance procedure
- Wear resistant multiple inlet ports
- Oil storage box that obeys environmental regulation of oil collection (for KOWS-250 and KOWS-400 Models)
- Filtering system that prevents particles to enter the system from the environment

Oil Types	Separator Compatibility
Mineral Oil	●
Synthetic Oil	●



Working Principle of KOWS-250 and KOWS-400 Models

1. The oil-water condensate, which has approximately 3000-500 ppm oil concentrations, comes from the compressor condensate line and enters the KOWS through the multiple inlet ports.
2. The condensate goes through the depressurization chamber to condensate liquid pressure reach the atmospheric level for protecting the Mikro-Sep from high pressure.
3. The condensate goes inside the Mikro-Sep (separator element) and most of the oil is removed in this step. In that part, the oil concentration is decreased to significant ranges. The filtered oil-water condensate is started to collect at a specific level at the outside of the Mikro-Sep. The water stays at the bottom of the box which is much cleaner due to the density differences between water and oil. At a specific level, oil continues to collect top of the liquid and drained safely through the oil outlet.
4. The gradually cleaned condensate is transferred to the bottom of the box and directed through a channel for another separation step.
5. The special Mikro-X-Tex material is reduced the remaining oil content from gradually cleaned oil-water condensate.
6. The consecutively purified oil-water mixture is finally passed through the Mikro-Carb granules that reduces the remaining oil concentration to below 10 ppm. The oil content of the liquid is approximately reached <10 ppm which is acceptable bylaws.
7. Lastly, the purified water is discharged from the KOWS unit and can be allowed to flow into the drains that complies fully with the legal standards.

Working Principle of KOWS-60 Model

- KOWS-60 has been designed to separate and clean the oil-water condensate from the compressor system. The unit consists of inlet and outlet ports, special material, bulk oil removal shred, and anti-siphon venting port.
- The oily water entering from the inlet is degreased by the bulk oil removal shred and special material, respectively.
- The clean water accumulating inside the unit is discharged from the outlet port by passing through the discharge pipe accordance with the anti-siphon vent.

**Please note that the KOWS-60 Model Unit is a single-use product.*

Technical Specifications

Model	Compressor Capacity (cfm)	Oil Concentration at the Outlet of MWOS	Dimensions*		
			L	W	H
KOWS-60	60	<10 ppm	5.5	5.4	9.7
KOWS-250	250	<10 ppm	19	12.3	15
KOWS-400	400	<10 ppm	19.3	12.4	19.1
KOWS-800	800	<10 ppm	21	20	43
KOWS-1200	1200	<10 ppm	42	20	43
KOWS-1600	1600	<10 ppm	42	20	43
KOWS-2000	2000	<10 ppm	42.5	44.4	21

**The dimension data includes the accessories.*

Location	CF
%60 RH 15°C Ambient (Cold Climate)	0, 55
%60 RH 25°C Ambient (Mild Climate)	1
%70 RH 32°C Ambient (Hot Climate)	1, 6

Please divide the compressor capacity by the correction factor (CF) for the relevant climate conditions to determine the required KOWS capacity.