

# CONVENTIONAL OIL SEPARATORS

The function of a Conventional Oil Separator is to remove oil from the discharge gas and return it to the compressor, either directly or indirectly. This helps maintain the compressor crankcase oil level and raises the efficiency of the system by preventing excessive oil circulation.

## Applications

Conventional oil separators can be used in a wide variety of applications.

Common applications include multi-compressor racks and remote condensing units.

Conventional oil separators are intended for Low Pressure Oil Management Systems, using HCFC, HFC, R290 & A2L gases and their associated oils, compatible with the vessel materials.

These separators are designed for use with scroll and reciprocating type compressors. They are not recommended for screw or rotary vane compressors.

## How it works

Oil-laden refrigerant gas from the compressor enters the separator and passes through an inlet screen. On entering the separator, the velocity of the gas is reduced. This reduction in velocity causes a change in momentum. The fine oil particles collide with one another to form heavier particles, which adhere to the inlet screen and inside wall of the separator.

The gas then passes through an outlet screen where final separation takes place. Refrigerant gas, with the majority of oil removed, then exits the separator.

The separated oil falls to the bottom of the separator where a float operated needle valve returns the oil to the crankcase or oil reservoir in the same way as the helical oil separator.

With proper selection, oil separation efficiency is typically 80%.

## Main Features

- Low pressure drop
- Cleanable/replaceable oil float assemblies for S-19\* models

## Technical Specification

Allowable operating pressure = 0 to 31 barg

Allowable operating temperature = -10°C to +130°C

## Materials of Construction

The main components; shell, end caps and connections are made from carbon steel. The oil float is made from stainless steel. The needle valve seat is made from steel.

