Sabroe AP100 + Mini WDO combined air and water purger

Removes any air and water present in an ammonia refrigerant charge

The AP100 + Mini WDO is a combined air and water purger specially designed for use in small industrial refrigeration systems and industrial chiller units – of all sizes – that use ammonia (R717) as refrigerant.

AP100 + Mini WDO units use excess thermal energy from the air purger to remove any water, dirt or oil (WDO) that might be present in an ammonia refrigerant charge. This enables you to tackle multiple refrigerant contamination problems at once at relatively low cost. Installing an AP100 + Mini WDO unit means you reap the full benefits of clean ammonia with consistent specifications, for use at the heart of your refrigeration systems.

This whole purging system is easy and cheap to install, operate, and service. It is also ideal as a low-cost, energy-effective way to boost operating efficiency as well as to avoid and prevent unpleasant surprises, service interruptions, and possible follow-on breakdowns in your key processes.

Features	Benefits
Uses energy often wasted in an air purger to provide additional water purging capabilities	Normally reduces refrigeration equipment energy consumption by as much as 5–10%
Constantly purges efficiency-sapping air and water from your refrigeration system	Reduces operating costs and keeps the refrigeration system and its components operating at maximum efficiency
Helps prevent undesirable chemical reactions in all systems in a refrigeration installation	More stable operation as well as lower service and maintenance costs
Prevents any water present in the refrigerant from degrading the lubricant oil	Fewer oil changes needed, improved operating efficiency and longer service life for equipment and installations
Only three connections needed – wet suction, low-pressure liquid, and fouled gas line	Easy and cheap to install, operate and service

The mounting plate shown above is standard equipment

The mounting stand shown above is an optional extra

The power behind **your mission**

How to install

An AP100 + Mini WDO unit can be mounted on a special supporting frame, freestanding or mobile.

It is very easy to install because only three connections are needed – for wet suction, low-pressure liquid, and an input line for the fouled gas.

AP100

The AP100 works automatically when connected to a control panel and/or level switch.

When powered on, a timer delay ensures that the air purge solenoid valve cannot open during the first 10–30 minutes of running (depending on the timer setting). This makes sure the pressure inside is high enough and the temperature is low enough for the gaseous ammonia in the inner chamber to condense.

When the air purger is filled with non-condensable gas, the liquid level switch opens the air purge connection and releases air until high liquid level is restored, and then closes the air purge connection again.

Mini WDO

The Mini WDO works automatically, but requires manual draining of the sludge reservoir and water reservoir when these are full.

A WDO unit evaporates – and thus purifies – the liquid ammonia by exploiting the refrigerant's particular properties, pressure, and temperature with no additional energy inputs needed. The ammonia evaporates before water, leaving dirt, oil, and other contaminants to settle in the sludge reservoir.

When the sludge reservoir temperature is higher than the evaporation temperature (10–15°C), this reservoir must be drained. This is a manual operation.

The water purger also holds back the water dissolved in the liquid ammonia. When the water reservoir temperature is higher than the evaporation temperature (10–15°C), this water must be drained off, after a pump down. This is also a manual operation.

Technical data	
Material	Stainless steel
Dimensions HxWxD	1200 x 620 x 360 mm
Weight	28 kg
Capacity	
Nominal ammonia evaporating capacity of the water purger:	2 kW (approx.)
Nominal ammonia capacity of the air purger:	2 kW (approx.)
Compliance	CE/PED

Part numbers
4385.100 AP100 + Mini WDO - no controls
4385.101 AP100 + Mini WDO - incl. level switch for 1 pp (stand-alone)
4385.102 AP100 + Mini WDO - incl. control panel for 16 pp

All information is subject to change without notice.

Johnson Controls Denmark ApS . Sabroe Factory . Christian X's Vej 201 . 8270 Højbjerg . Denmark . Phone +45 87 36 70 00
www.sabroe.com

PUBL-1478 02.2022

The power behind **your mission**