TROPICAL

ACT-T
Dryer Series

FRIULAIR Dryers

ALUMINIUM TECHNOLOGIES DIRECT TO ENERGY SAVING

Friulair improves it's range of compressed air dryers with the development of the ACT series (Aluminium Cooling Technology), focused to reduce energy consumption. Main features are:
- low pressure drop even with load variances;
- low power consumption thanks to the ALU-DRY heat exchanger, high efficiency compressors, innovative hot gas by-pass valve and zero loss drain condensate system (from ACT 180 included);
- constant pressure Dew Point with differing load conditions;
- functionally even at maximum working conditions (air inlet 70°C and ambient 50°C).
The components of ACT range, from refrigerant to materials of construction, have been selected with maximum respect for the environment and their ability to be recycled.

TECHNICAL DETAILS [ACT 3...160]

CONTROL PANEL

DMC15 CONTROLLER (standard)

Operation of the ACT-T dryer is monitored by DMC15 electronic controller which indicates the DewPoint temperature digitally, controls the condensate drain valve via a timer and the condenser fan via a probe.

DMC14 CONTROLLER (optional)

Operation of the models ACT 3...160 is controlled and monitored by DMC14 digital controller. Features a 3 digit display for the visualization of the Dew Point temperature in °C or °F, an electric contact alert for detection of eventual irregularities concerning the Dew Point, and full management of the condensate drain system.

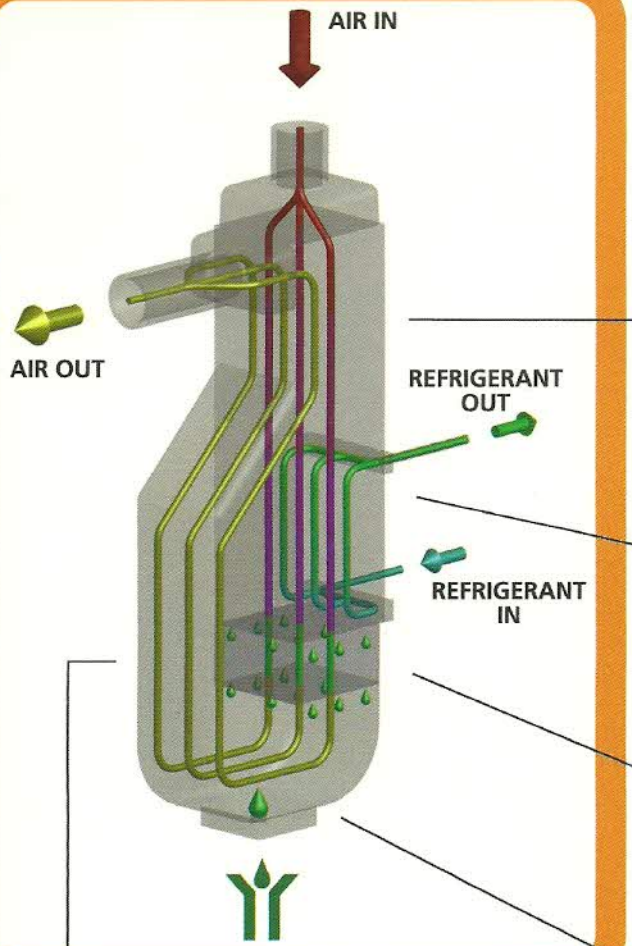
CONTROL AND PROTECTION DEVICES

All models are fitted with a fan pressure switch to control the refrigerant condensing.
ACT 30 and largers, come equipped with some specific devices to protect the components of the unit:
- re-set high refrigerant pressure cut-out (for ACT 80...160);
- low refrigerant pressure cut-out (for ACT 80...160);
- re-set high temperature cut-out (for ACT 30...160), which stops the refrigerating compressor when discharge temperature is too high (e.g. clogged or blocked condenser).

CONDENSATE DRAIN

ACT 3...160 models are fitted with an electronic system to drain the condensate interfaced to the controller. Discharge and pause times are adjustable. Drainage group includes also a ball isolation valve and a strainer. A zero loss drain is available as an option.

PATENTED



ALU-DRY HEAT EXCHANGER

The air-to-air and the air-to-refrigerant heat exchangers plus the demister type condensate separator are housed in an unique module. The vertical arrangement ensures the wet compressed air flows down to the automatic drain. The counter flows of compressed air ensure maximum heat transfer.

AIR/AIR HEAT EXCHANGER

Or economizer, pre-cools the air entered into the dryer, in order to reduce the cooling power required when the air subsequently passes into the evaporator. The air exiting the dryer is heated in the same way in order to prevent condensation from forming in the factory pipes.

EVAPORATOR

The generous dimensions of the air-to-refrigerant heat exchanger plus the counter flow gas streams allow full and complete evaporation of the refrigerant (preventing liquid returning to the compressor).

DEMISTER TYPE CONDENSATE SEPARATOR

The high efficiency condensate separator is located within the heat exchanger module. No maintenance is required and the coalescing effect results in a high degree of moisture separation.

LARGE CAPACITY

The large capacity separator is designed to hold condensate also at high humidity in compressed inlet air.

LOW PRESSURE DROP

The large cross section of flow channels leads to low air velocities and reduced pressure drop.

COMPRESSOR

RECIPROCATING TYPE

Models ACT 3...23 are fitted with high efficiency piston compressors sourced from major producers.

ROTARY

For models ACT 30...160. This is a new technology applied to refrigerants as an alternative to the traditional piston compressor. Compression of the refrigerant is achieved by way of interaction between a cylindrical stator and a rotating eccentric nucleus. In this method, the parts which come into contact with one another are wear-resistant and therefore more reliable.

SCROLL

From model ACT 180 on, the type of compressor used is the scroll. Widely used in the air conditioning and refrigeration sectors, the scroll compressor performs well and has low energy consumption. Compression of the refrigerant is achieved by way of two concentric coils: one fixed and the other mobile. The scrolls are wear-resistant, highly reliable and guarantee a high level of noise reduction.