

DryPro

refrigeration dryers
225-760 m³/min



pure energy

Purifying your compressed air,
increasing your efficiency.



Cooling, conditioning, purifying.

DRYPRO



DRYPRO OFFERS TWO MAJOR BENEFITS: EXTREMELY HIGH ENERGY SAVINGS, WITH UP TO 4 COMPRESSORS OFFERING LOAD DEPENDENT PARTIALISATION; AND PEACE OF MIND FOR THE USER, WITH MULTIPLE COMPRESSORS WITHIN MULTIPLE REFRIGERATION CIRCUITS. AND DRYPRO OFFERS MUCH MORE, SUCH AS THE MOST ADVANCED MICROPROCESSORS AND THE EASY TO USE, LOW PRESSURE DROP DRYSTREAM HEAT EXCHANGER TECHNOLOGY.



Scroll technology

Scroll compressors offer energy savings of around 20%. They are also extremely robust and even tolerate liquid refrigerant returns, notably reducing the chance of compressor damage. Reduced vibrations increase dryer longevity, and there is no need to pre-heat the dryer at start-up.

Multiple compressors

DryPro features 4 compressors (2 on DN225). Consequently excellent energy savings can be achieved, with compressors switching on and off according to the load. Multiple compressor technology furthermore ensures exceptional system efficiency levels.

Stand-by peace of mind

In line with the needs of large industries, DryPro has been designed to offer the User maximum peace of mind. The presence of 4 compressors within 2 separate refrigeration circuits (DN300-380) offer stand-by safety in the unlikely event of any fault occurring on the dryer.

zDRAIN (zero-loss drain)

The zDRAIN is fitted as standard and uses electronic zero-loss drain technology to ensure notable energy savings. A sensor in the vessel detects the liquid level, the valve is controlled by the microprocessor. In the event of a fault an alarm is generated and the drain switches to timed operation.



DRYSTREAM HEAT EXCHANGER

DryPro is fitted with the *DRYSTREAM* heat exchanger, a very compact all-in-one solution ensuring significant User benefits:

Demister pre-filter – The inlet pre-filter, standard on all models, means that the dryer requires no additional pre-filtration, saving capital and installation costs and avoiding the additional pressure drops due to the addition of the pre-filter itself. Although no maintenance is normally needed, the pre-filter can nonetheless be easily accessed via the flange.

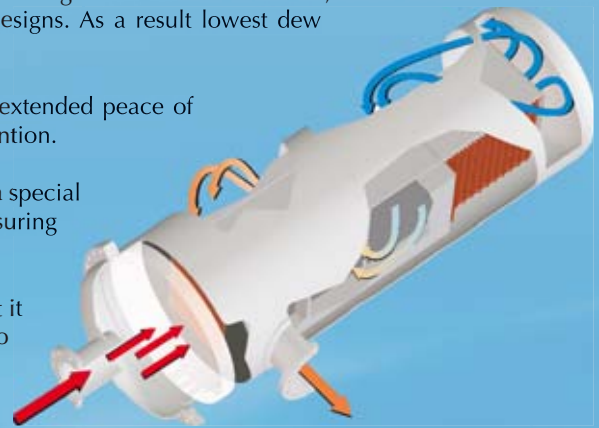
Lowest pressure drops – *DRYSTREAM* features very wide air paths, leading to lowest pressure drops, which are always well below 0,2barg at nominal conditions.

Non air-flow dependent separation – Maximum condensate separation is guaranteed at all air flows, there is no reduction in efficiency at reduced loads as per centrifugal designs. As a result lowest dew points are guaranteed at all times.

Flange access – The vessel can be accessed via a flange, offering extended peace of mind in the unlikely event of the exchanger's internals needing attention.

Epoxy coated vessel – The vessel itself is made of carbon steel, with a special epoxy coating applied to all parts in contact with humid air, ensuring years of trouble free operation in even the harshest conditions.

Compact dimensions – *DRYSTREAM*'s architecture, and the fact that it fits within a single vessel, ensure that DryPro's dimensions are kept to an absolute minimum, saving valuable factory space.



Advanced microprocessor

DryPro's microprocessor offers an extensive digital display, full programming and multiple alarms, plus an alarm history which also memorizes dryer operation. RS485 serial connection to MODBUS and other systems is offered, as well as communication via GSM directly to a cell phone.

Easy to use & maintain

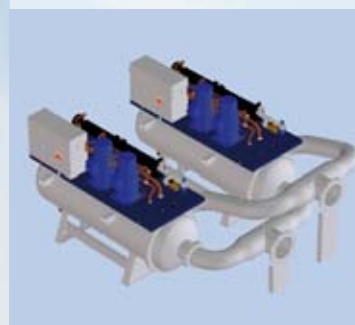
DryPro operates up to inlet temperatures of 65°C, with a protection rating of IP54. There is no need for a pre-filter and the *DRYSTREAM* exchanger can be accessed via a flange. The easy to use microprocessor supplies extensive information to facilitate operation and maintenance.

DryPro Twin

DryPro is also available in Twin configuration, for air flows of up to 760 m³/min. Up to 8 compressors within 4 refrigeration circuits offer unparalleled energy savings and stand-by capacity. The master-slave microprocessor configuration simplifies dryer control.

Configurations & Options

Choose between air (DN225, DN450T) and water-cooled configurations. Water-cooled versions are available with refrigeration circuit covering panels. Copper-copper, pre-coated and cupro-nickel air-cooled condensers are all available. Personalized solutions are also offered.



| Model | Airflow | | Nomal absorbed power kW | Condenser water flow m ³ /h | Power supply | |
|--------------|-------------------|---------------------|-------------------------|--|--------------|--------------|
| | m ³ /h | m ³ /min | | | | |
| DN225/A | 13.500 | 225 | 23,3 | - | 400±10%/3/50 | |
| DN225/W | 13.500 | 225 | 19,4 | 10.2 | 400±10%/3/50 | |
| DN300/W | 18.000 | 300 | 23,8 | 13.1 | 400±10%/3/50 | |
| DN380/W | 22.800 | 380 | 31,5 | 16.9 | 400±10%/3/50 | |
| Twin version | DN450T/A | 27.000 | 450 | 2 x 23,3 | - | 400±10%/3/50 |
| | DN450T/W | 27.000 | 450 | 2 x 19,4 | 20.4 | 400±10%/3/50 |
| | DN600T/W | 36.000 | 600 | 2 x 23,8 | 26.2 | 400±10%/3/50 |
| | DN760T/W | 45.600 | 760 | 2 x 31,5 | 33.8 | 400±10%/3/50 |

| Model | Air connections | Water connections | Overall dimensions (mm) | | | Weight (Kg) |
|--------------|-----------------|-------------------|-------------------------|-------|--------|-------------|
| | DN | BSP (F) | Depth | Width | Height | |
| DN225/A | DN 250 | 2" | 1150 | 3390 | 2210 | 1.850 |
| DN225/W | DN 250 | 2" | 2975 | 1165 | 1980 | 1.730 |
| DN300/W | DN 300 | 2" | 3575 | 1315 | 2230 | 2.750 |
| DN380/W | DN 300 | 2" | 3575 | 1315 | 2230 | 2.785 |
| Twin version | DN450T/A | DN 350 • | * | * | * | 2 x 1.850 # |
| | DN450T/W | DN 350 • | 2" | * | * | 2 x 1.730 # |
| | DN600T/W | DN 450 • | 2" | * | * | 2 x 2.750 # |
| | DN760T/W | DN 450 • | 2" | * | * | 2 x 2.785 # |

Data refers to the following working conditions: air FAD 20°C /1 barA, pressure 7 bar(g), ambient temperature 25 °C (air-cooled version) or condensing temperature 40°C (water-cooled version), air inlet temperature 35°C, pressure dew point 3°C, according to ISO8573.1 standards. Weights are net (without packing). The refrigerant used is R407C.

Maximum working pressure 12 bar(g), maximum ambient temperature 46°C, maximum inlet temperature 65°C. 460V±10%/3Ph/60Hz power supply available on request. Condenser water flow refers to 25°C water inlet temperature.

•: Air connection size is for unit with optional connection manifolds.

*: Dimensions depend on desired installation configuration (contact M.T.A. for details).

#: Weights do not include optional connection manifolds.

CAPACITY correction factors (indicative values): CAPACITY = RATED VALUE (7 barg) x K1 x K2 x K3 x K4.

| | | | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|------|------|
| working pressure | barg | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| correction factor | K1 | 0.69 | 0.79 | 0.88 | 0.95 | 1.00 | 1.05 | 1.09 | 1.12 | 1.15 | 1.17 |
| air inlet temperature | °C | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | | |
| correction factor | K2 | 1.23 | 1.00 | 0.82 | 0.68 | 0.56 | 0.46 | 0.38 | 0.31 | | |
| pressure dew point | °C | 3 | 4 | 5 | 6 | 7 | | | | | |
| correction factor | K3 | 1.00 | 1.07 | 1.13 | 1.19 | 1.25 | | | | | |
| ambient temperature (DN225/A + DN450T/A) | °C | 20 | 25 | 30 | 35 | 40 | 46 | | | | |
| correction factor | K4 | 1.05 | 1.00 | 0.95 | 0.90 | 0.84 | 0.77 | | | | |

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Cooling, conditioning, purifying.



ISO 9001
BUREAU VERITAS
Certification
19200017

M.T.A. is ISO9001:2000 certified, a sign of its commitment to complete customer satisfaction.



M.T.A. products comply with European safety directives, as recognised by the CE symbol.

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