# DryXtreme - NA

Heatless adsorption dryers
Nominal air flow 0,12 - 1,06 m$^3$/min.

*Purifying your compressed air,*
*increasing your efficiency.*

**MTA**®

Cooling, conditioning, purifying.

# DryXtreme-NA

The efficient removal of impurities within compressed air offers numerous important benefits, reducing both downtimes and operating costs, and optimizing the entire process.

Whilst MTA filtration allows the removal of dirt and oil, condensate removal requires the use of a dryer. DryXtreme adsorption dryers offer pressure dew points down to -40 °C or even -70 °C, allowing numerous critical applications to function accurately and efficiently. And all this within an advanced yet easy to use package.



### Suited to all applications

DryXtreme is CE marked and PED approved, as well as being ASME exempt. The ability to operate at 50/60Hz AC and DC voltages, the choice of -40 °C and -70 °C dew points and flexible pre-filter options ensure DryXtreme covers all individual needs.

### Guaranteed performance

DryXtreme is born from over 30 years drying experience within MTA, with each and every dryer being quality tested and performance tested before leaving the factory. The advanced yet reliable design ensures guaranteed high performance in all conditions and applications.

### Advanced control

The reliable controller manages and monitors dyer operation, and supplies the User with updated information as to unit operation, maintenance needs, warnings and alarms.

### Easy to use & install

The compact housing can be installed vertically or horizontally. NA012-107 can be wall mounted and offer 3 inlet and outlet ports which can even be inverted. The silencer allows installation near operating personnel, with an internal 1 micron post-filter eliminating the need to install one downstream.
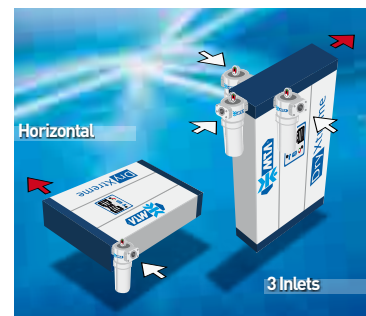


Suited to numerous applications



Each dryer is accurately tested



Comprehensive User interface



Flexibility in installation

# DryXtreme - the perfect partner for your application

**DryXtreme Applications –** Packaging, bottling, power stations, paint spraying, dentistry, laboratories, instrumentation & measurement equipment, conveyors, CNC machines, pharmaceutical, automotive, lasers, sprinkler systems, other general industrial applications.

**Reduced purge losses** – Generous dryer sizing reduces purge losses, with an interchangeable purge plug allowing personalization to the exact operating conditions, avoiding unneeded energy wastages.

**Reduced filter drain losses** – An integral electronic drain allows the pre-filter to be synchronised to the dryer operation, minimising unwanted compressed air wastages.

**Remote management & energy saving software** – An internal standard function of the microprocessor allows dryer operation to be directly synchronised to the air compressor operation, offering notable energy savings, especially in discontinuous and varying load conditions.

**How DryXtreme works** – The air first passes through a pre-filter (A - to be supplied separately) and then into the dryer's inlet valve (B). Here it is guided to one of the 2 vessels, as defined by the controller. On passing through vessel 1 (C) the air is dried to the required dew point by a high performance molecular sieve dessicant bed. It then passes through the 1 micron dust filter (D) and exits the dryer through the outlet valve (E).
Simultaneously vessel 2 (F) passes through a process of depressurisation, regeneration, and repressurisation. The regeneration is performed using a small amount of dry (purge) air, which removes condensate from the saturated dessicant bed as it passes across it, and is then silently dispersed to atmosphere through the silencer (G).
When vessel 1 is saturated the air flow switches to vessel 2 and the process is inversed.
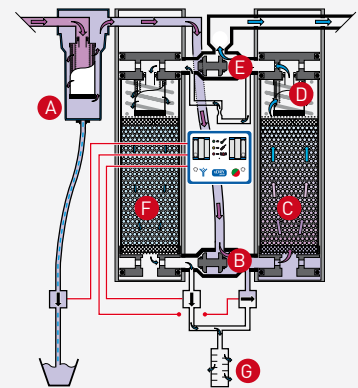
## Easy to service

The controller warns as to when servicing is needed, with just 2 kits covering all servicing needs, simplifying logistics. The easily removable front panel, ability to service the unit without disturbing the pipework and simple dessicant cartridge substitution allow rapid servicing.

## Dessicant cartridge

The dessicant cartridge, with integrated post-filter, allows simple, quick and clean servicing. The spring loading ensures perfect dessicant packing and eliminates attrition. The see-through cartridge housing allows verification as to correct dryer operation.

## Robust and reliable

The highly reliable multi-function valve block combines a shuttle valve, purge valve and two exhaust valves.
The aluminium vessels feature a corrosion protected coating for increased longevity.
The controller ensures trouble free operation.

## Accessories

- Wall mounting kit (NA012-107).
- Floor mounting kit.
- Breathing air and medical air packages for specific applications.
- Pre-filtration kit.

Easy to use service kits

Integral post-filter & spring load

Reliable valve block

Remote supervision software

| Model | Nominal air flow (*) | | Air connections | Dimensions (mm) | | | Weight | Recommended pre-filter |
|---|---|---|---|---|---|---|---|---|
| | m³/min | m³/h | | A | B | C | (kg) | |
| NA012 | 0,12 | 7,3 | 3/8" | 445 | 281 | 92 | 13,0 | HEF 005 |
| NA018 | 0,18 | 10,9 | 3/8" | 504 | 281 | 92 | 14,0 | HEF 005 |
| NA025 | 0,24 | 14,6 | 3/8" | 565 | 281 | 92 | 15,0 | HEF 005 |
| NA030 | 0,30 | 18,2 | 3/8" | 635 | 281 | 92 | 16,5 | HEF 005 |
| NA046 | 0,46 | 27,4 | 3/8" | 815 | 281 | 92 | 19,5 | HEF 005 |
| NA077 | 0,76 | 45,6 | 3/8" | 1065 | 281 | 92 | 24,0 | HEF 005 |
| NA107 | 1,06 | 63,8 | 3/8" | 1460 | 281 | 92 | 31,0 | HEF 005 |

(*) Data refers to the following working conditions: air FAD 20 °C / 1barA, pressure 7 bar(g) at dryer inlet, air inlet temperature 35 °C, pressure dew point -40 °C, according to ISO 8573.1 standards.

Dryer working limits: working pressure 4-16bar(g); inlet temperature 1,5-50 °C; ambient temperature min. 5 °C.
Power supply: 100-240V AC 50-60Hz; 12-24V DC.

Adequate pre-filtration (MTA grade S, ideally preceded by grade P or M) should always be installed upstream of the dryer; according to the application, additional dust filtration (MTA grade M or S) may need to be installed downstream of the dryer. Ensure a separator or other is installed upstream of the dryer (to avoid liquid condensate entering the dryer itself); this is not necessary in installations with a refrigeration dryer installed upstream. To ensure proper dryer operation the air flow must never drop below 30% of the nominal value.

The below correction factors allow calculation of the dryer's maximum air flow at conditions differing from the nominal values given in the above table; to determine the maximum air flow proceed as follows:
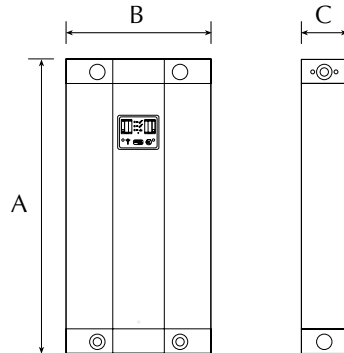• Determine, using the below correction factor data, the applicable correction factors to be utilised in accordance with the user's input conditions (minimum inlet pressure (K1), maximum inlet temperature (K2) and required dew point (K3)).
• Calculate the dryer's maximum air flow at the user's input conditions using the following formula: Maximum air flow = nominal air flow * K1 * K2 * K3.
• If the resulting maximum air flow is lower than the user's required air flow then move up to a larger dryer model and repeat the exercise.

| Working pressure | bar(g) | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Correction factor | K1 | 0,62 | 0,75 | 0,87 | 1 | 1,12 | 1,25 | 1,37 | 1,5 | 1,62 | 1,75 | 1,87 | 2 | 2,12 |

| Air inlet temperature | °C | 20 | 25 | 30 | 35 | 40 | 45 | 50 |
|---|---|---|---|---|---|---|---|---|
| Correction factor | K2 | 1,07 | 1,06 | 1,04 | 1 | 0,88 | 0,78 | 0,55 |

| Pressure dew point | °C | -40 | -70 |
|---|---|---|---|
| Correction factor | K3 | 1 | 0,7 |

**NA012-107**

**MTA®**

Cooling, conditioning, purifying.