



COMPRESSED AIR
& GAS TREATMENT

DryXtreme - NC

Heatless compressed air adsorption dryers
3,3 – 25,0 m³/min



*Purifying your compressed air,
increasing your efficiency.*



Cooling, conditioning, purifying.

DryXtreme-NC

Many highly demanding industries such as chemical, pharmaceutical, food & beverage, electronics require absolutely dry compressed air. In these cases an adsorption dryer is the only solution capable to eliminate any risk of damage or freezing due to the moisture. NC DryXtreme ensures the reliability of the process and the quality of the finished products, providing absolutely dry air with a dew point of -40 °C or even -70 °C for special applications. NC DryXtreme can be programmed according to the dew point and air flow required optimizing performance and energy saving. DryXtreme: a trusted yet advanced solution to your demanding needs.

Desiccant vessels. Carbon steel towers powder coated. They are constructed for 10 barg design pressure, according CE directives. ASME VIII Div.1 calculation code (option).

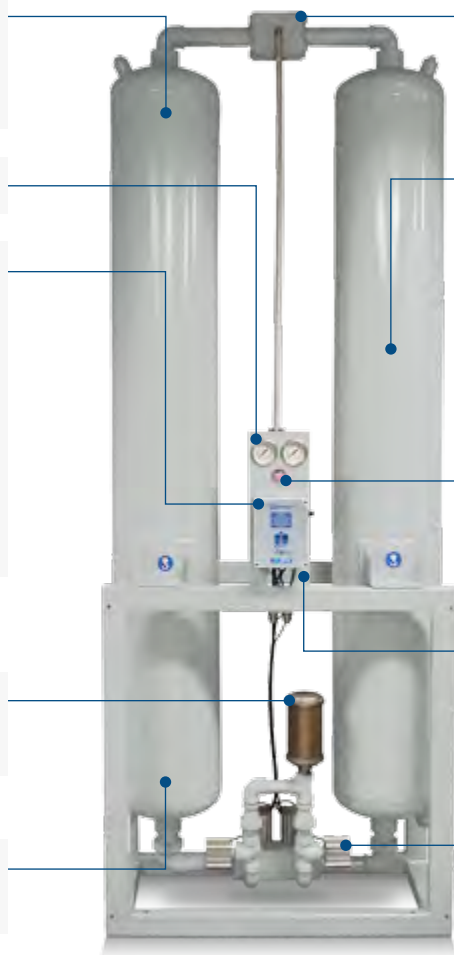
Pressure gauges

DMcontroller Energy saving functions:

- the standard **compressor synchronizing contact** reduces the regeneration air consumption.
- the **standard 4 positions purge switch** enables an operator to reduce the purge air matching any reduced load condition.
- **Eco control (option)** reduces energy consumption by automatically regulating purge in response to actual moisture load.

Silencers in metallic structure (easily cleanable) minimize noise when purge air is exhausted to atmosphere.

Stainless steel diffusers (removable) for a perfect air distribution through the desiccant bed.



Regeneration air nozzle. It can be optimized for your flow, reducing energy consumption.

Exclusive desiccant mix activated alumina/molecular sieve with high crush strength, large active surface and 5 seconds contact time guarantee maximum performance in all the working conditions. The uniform size of the beads minimizes channelling and reduces desiccant dust.

Silica gel moisture indicator continuously monitors outlet airflow for excessive moisture content.

Control panel. Suitable for outdoor installation (IP55), it includes the DMcontroller with LEDs status indicators and ON/OFF switch.

Front seat piston valves with internal parts in inox and teflon-made seals, guarantee maximum reliability.

Matches the application

DryXtreme is the ideal partner for demanding applications such as packaging, bottling, power stations, paint spraying, dentistry, laboratories, instrumentation & measurement equipment, conveyors, CNC machines, pharmaceutical, automotive, lasers, sprinkler systems, and other general industrial applications. Whatever your need, DryXtreme is the perfect solution.

Easy to install & to operate

DryXtreme NC heatless operation ensures simple installation and maintenance. All the units are delivered tested pre-commissioned and ready to use. The standard pressure gauges allow an easy check to ensure correct operation, whilst the dew point indicator warns against incorrect functioning. To improve operation, DryXtreme NC can be supplied with HEF pre and post-filters.

DMcontroller

The **DMcontroller** is installed on a control panel IP55 and allows the user to program the dryer to achieve the dew point requested. This not only offers maximum performance, but also ensures significant energy savings. **DMcontroller** also controls valves operation, for high operational reliability.



Perfectly matches the application needs



Pressure gauges & moisture indicators



DMcontroller



Eco Control analysis display



Silica gel moisture indicator



Front seat piston valves

Eco control analysis system (option)

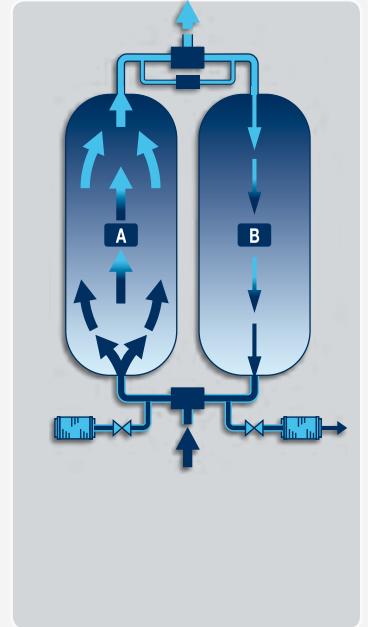
The optional **Eco Control** system is an automatic purge saver based on a dew point probe. **Eco Control** system allows the dryer to operate on dew point switching instead of time. This leads to a reduction of energy consumption while improving performance and reliability.



Eco Control analysis system

The functional principle

Compressed air passes through the vessel A flowing upwards through the desiccant bed which adsorbs the condensate in the air, while the vessel B is regenerated with a small stream of dried air, then the cycle is automatically reversed. The regeneration process of vessel A starts with de-pressurization, via the silencers. A small amount of dry compressed air (between 7% and 15%) is directed downwards through the bed to be regenerated. This -40 °C purge air, when expanded to atmospheric pressure reaches an extremely low dew point and rapidly drives the moisture from the desiccant bed. The purge air is then exhausted to atmosphere through the silencers. The regenerated tower A is then gradually re-pressurized for 30 seconds, before it reverts to drying the compressed air stream. The drying duty is cyclically alternated between the two towers. Each tower dries on-stream for 5 minutes. This is followed by 4.5 minutes of de-pressurization & regeneration, then 30 seconds gradual re-pressurization.



Optional features

- Oil coalescing HEF Pre-Filters "S" series (0,01 micron) equipped with condensate drainer;
- Post-Filters HEF "P" series (3 micron);
- Eco Control: for exact dew point control and minimum energy consumption;
- Safety valves for maximum reliability of operation;
- Service Kit.

Special versions

- High design pressures;
- Several voltage options;
- GOST.

Main Benefits

- **DMcontroller** with 4-position purge adjustment switches as standard allows energy saving;
- Exclusive desiccant mix activated alumina/molecular sieve for higher process safety;
- Large desiccant beds allow lower velocity and 5 seconds contact time for maximum performance;
- High quality components and exclusive pneumatically powered front piston valves assure high reliability and reduced factory downtimes;
- Counter-flow purging increases desiccant bed efficiency and performances;
- Gradual re-pressurization prevents fluidization & extends desiccant life;
- All the components are easily accessible for an easy maintenance.

Model	Air flow		Air connections	Dimensions (mm)			Weight (kg)	Air filters HEF	
	m ³ /min.	cfm		A	B	C		Pre-filtro	Post-filtro
NC 004	3,3	118,0	1"	500	1710	320	220	018 S	018 P
NC 006	5,8	206,0	1 1/2"	880	2050	433	300	047 S	047 P
NC 007	7,5	265,0	1 1/2"	880	2450	433	350	047 S	047 P
NC 010	10,0	353,0	2"	1000	2300	528	450	070 S	070 P
NC 014	13,3	471,0	2"	1000	2800	528	450	094 S	094 P
NC 020	20,0	706,0	2 1/2"	1400	2550	630	760	150 S	150 P
NC 025	25,0	883,0	2 1/2"	1400	2800	630	1050	150 S	150 P

Data refers to the following working conditions: air FAD 20 °C/1 bar a, pressure 7 bar(g), relative humidity 100%, air inlet temperature 35 °C, pressure dew point -40 °C, according to ISO 8573.1 standards. For differing conditions contact MTA.

Weights are net (without packing).

Minimum/Maximum working pressure: 4/10 bar(g). Higher pressures available on request.

Minimum/Maximum inlet temperature: +5/+50 °C.

Minimum/Maximum ambient temperature: +5/+45 °C.

Power supply: 230 V +/-10% / 1Ph / 50-60Hz. Several voltage options available on request.

It is strongly recommended to install HEF filters, sized as above, before and after the NC dryers.

Ensure a separator is being installed upstream of the NC 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.

CORRECTION FACTORS FOR DIFFERING AIR INLET TEMPERATURES & PRESSURES

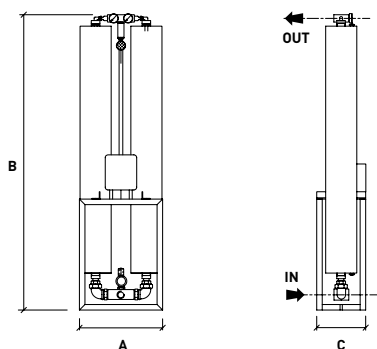
The below correction factors allow calculation of the dryer's maximum air flow at conditions differing from the nominal values given in the above table. To determine the maximum air flow proceed as follows:

- Determine the applicable correction factors to be applied in accordance with the user's input conditions minimum inlet pressure (K1) and maximum inlet temperature (K2).
 - Calculate the dryer's maximum air flow at the user's input conditions using the following formula: Maximum air flow = nominal air flow x K1 x K2.
 - 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 calculation.
- For a precise selection, please contact MTA.

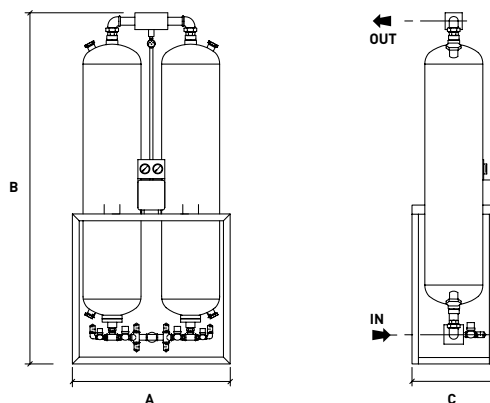
Working pressure	bar(g)	4	5	6	7	8	9	10
Correction factor	K1	0,63	0,75	0,88	1,00	1,12	1,25	1,38

Air inlet temperature	°C	25	30	35	40	45	50
Correction factor	K2	1,10	1,05	1,00	0,90	0,77	0,60

NC 004



NC 006 - 025



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MTA products comply with European safety directives, as recognised by the CE symbol.



GOST Certification



Cooling, conditioning, purifying.