DryXtreme - ND

Heatless adsorption dryers
Nominal air flow 2,7 - 59 m³/min.

Purifying your compressed air,
increasing your efficiency.

MTA®

Cooling, conditioning, purifying.

DryXtreme - ND

Dryextreme Adsorption Dryer offers dew points from -40 °C down to –70 °C, and is the ideal partner for applications which demand highest quality compressed air. ND is unique, with endless user programmable control algorithms. Where typical dryers force the application to be adapted to the dryer, MTA adapts the dryer to the application, optimizing performance and saving energy. DryXtreme offers adsorption drying know-how spanning 30 years, obtained together with prestigious customers within sensitive applications. DryXtreme: a trusted yet advanced solution to your demanding needs.

User and environmentally friendly

DryXtreme is individually quality tested to guarantee dew points from -40 °C down to –70 °C. The advanced dryer design, with 5 energy saving modes and unique low pressure drop shuttle valves, ensure a minimal environmental impact. PED approval is standard, with ASME available on request. 40 barg versions are also available. Both allumina and molecular sieve dessicants are offered, according to the application needs.
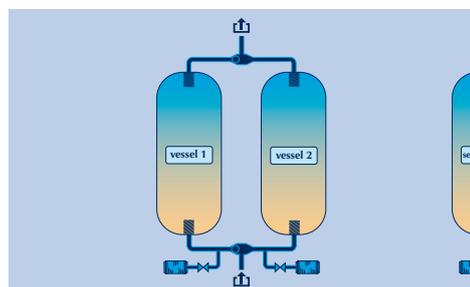
Matches the application

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.

DryXtreme operation

Compressed air passes through vessel 1, where the high performance dessicant removes moisture from the air in order to achieve the desired dew point. Contemporaneously vessel 2 is regenerated using a small amount of (purge) air. When vessel 1 becomes saturated vessel 2 starts drying and vessel 1 is regenerated. The microprocessor optimises the cycle according to the operating mode.

Lab tested performance and quality

Perfectly matches the application needs

Continuous dew point performance

DryXtreme – perfectly matched to your application

The heart of DryXtreme is the advanced xDRY midi microprocessor. Exclusively developed by MTA, xDRY midi not only renders the dryer extremely simple to operate, but furthermore allows DryXtreme to be personalised to every application and operating condition, ensuring optimum performance together with maximum energy conservation.

Highly informative

The extensive LCD display informs the User as to the exact operating procedure, as well as supplying the sensor readings and timing intervals. On request both the dew point and air inlet temperatures can be displayed. Full programmability, with multiple menus and passwords, allow complete personalisation to all User needs.

Service friendly

Multiple alarms and an integrated alarm history simplify diagnostic servicing, whilst a twin level service warning aids in both planning and performing scheduled maintenance. A volt free general alarm contact is offered as standard.

Easy Connectivity

DryXtreme allows serial connection via RS485 to a ModBus compatible remote management system, simplifying operation and maintenance.

6 operating modes

As well as the standard drying cycle, DryXtreme offers 5 differing User programmable operating modes, allowing energy savings up to 70%:

- **ECO manual:** Allows operation to be managed according to the nominal air flow.

- **ECO dew point:** Continuously manages and modifies the cycle time according to the dew point reading supplied by an optional dew point sensor.

- **ECO twin T:** Allows the User to program 2 operating modes, to achieve 2 differing dew point levels according to the needs.

- **ECO compr:** Directly links dryer operation to the air compressor operation, ensuring it only operates when it needs to.

Unique shuttle valves

The unique new shuttle valves (ND003-018), specifically developed by MTA for the ND range, offer an extremely simple working principle ensuring highest reliability together with minimal maintenance. The aluminium valve body and PVC piston and liner avoid corrosion and minimize erosion. An optimized internal design notably reduces pressure drops, with large neoprene joints ensuring perfect air tightness.
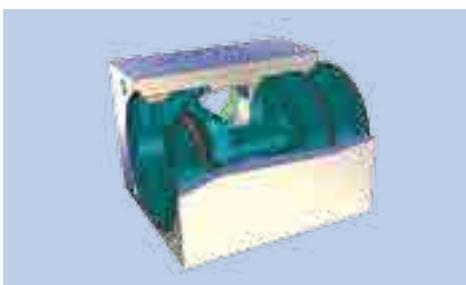
Unique MTA developed shuttle valves

Easy to install

DryXtreme features a fully enclosed design (ND003-018) with an IP54 protection rating and 50/60 Hz power supply. Both the air inlet and outlet connections can be rotated into 3 differing positions. The pre-filter's drain can be directly managed by the microprocessor, simplifying operation and saving energy. Efficient exhaust silencers ensure DryXtreme can be positioned near operating personnel.

Pre-filter & additional post filter (on request)

Easy to use

The easy to use microprocessor allows extensive connectivity and informs when servicing is required. Pleated 1 micron post-filters reduce pressure drops and increase filter life, allowing them to be substituted together with the dessicant; consequently only 2 service procedures with 2 service kits cover all maintenance needs. Air-tight flanged access to the vessels simplifies service and increases robustness.

Easy to use microprocessor

Model	Nominal air flow (*)		Air connections	Dimensions (mm)						Anchorage points (mm)		Weight (kg)
	m³/min	m³/h		A	B	C	D	E	F	G	H	
ND-003.1	2,68	161	1"	456	750	1702	224	1428	440	200	560	175
ND-004.1	3,92	235	1"	456	750	1894	224	1620	440	200	560	190
ND-006.1	5,89	353	1 1/2"	475	1000	2021	253	1717	575	250	810	306
ND-007.1	7,13	428	1 1/2"	475	1000	2194	253	1890	575	250	810	320
ND-010.1	9,80	588	1 1/2"	530	1100	2045	255	1980	575	350	910	450
ND-012.1	12,1	726	1 1/2"	500	1100	2277	253	1973	575	350	910	465
ND-014.1	13,9	834	2"	627	1200	2190	275	1855	640	410	1010	592
ND-018.1	17,8	1068	2"	627	1200	2230	275	1904	640	410	1010	746
ND-021.1	21,4	1284	DN 65	700	1340	2346	275	1978	780	500	1150	776
ND-027.1	26,8	1608	DN 65	750	1370	2405	275	2037	780	530	1180	912
ND-032.1	32,1	1926	DN 65	800	1380	2453	275	2085	780	580	1190	1210
ND-039.1	39,2	2352	DN 80	850	1780	2556	275	2181	1080	630	1590	1302
ND-045.1	44,6	2676	DN 80	900	1830	2548	275	2171	1080	680	1640	1414
ND-059.1	58,8	3528	DN 80	1000	1930	2605	275	2230	1080	780	1740	1716

(*) Data refers to the following working conditions: air FAD 20 °C/1 barA, 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).

Stated air flows refer to dryer with activated allumina. For particulary low inlet relative humidities, inlet temperatures of 45 °C or higher and dew points below -40 °C (down to -70 °C) molecular sieves should be applied (contact MTA for further details).

Maximum working pressure 16 bar(g) (ND003-018); 10 bar(g) (ND021-059). Higher pressures available on request.

Power supply: 230 V +/-10% / 1Ph / 50-60Hz.

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.
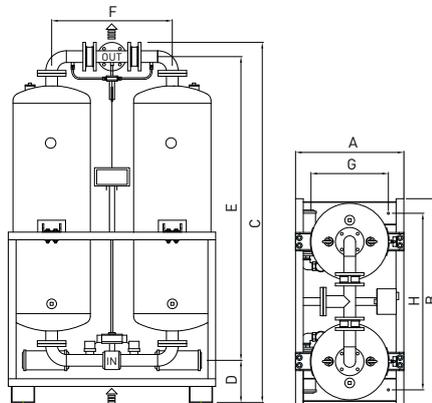
The below correction factors allow calculation of the dryer's maximum air flow at conditions differing from the nominal values given in the above table; to determine the maximum air flow proceed as follows:
- Determine, using the below correction factor data, the applicable correction factors to be utilised in accordance with the user's input conditions (minimum inlet pressure (K1) 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 * K1 * 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 exercise.

Working pressure	bar(g)	4	5	6	7	8	9	10
Correction factor	K1	0,63	0,75	0,87	1	1,13	1,25	1,38

Air inlet temperature	°C	25	30	35	40	45(*)	50(*)
Correction factor	K2	1,10	1,06	1	0,88	0,65	0,50

(*) Necessitates the application of molecular sieves

ISO 9001 BUREAU VERITAS Certification N° 220817
MTA is ISO9001 certified, a sign of its commitment to complete customer satisfaction.

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

EAC
EAC Declaration.

MTA®
Cooling, conditioning, purifying.