MARK

REFRIGERATION DRYER

MDX 400 - 7700 DX 100 - 350

TECHNOLOGY YOU CAN TRUST

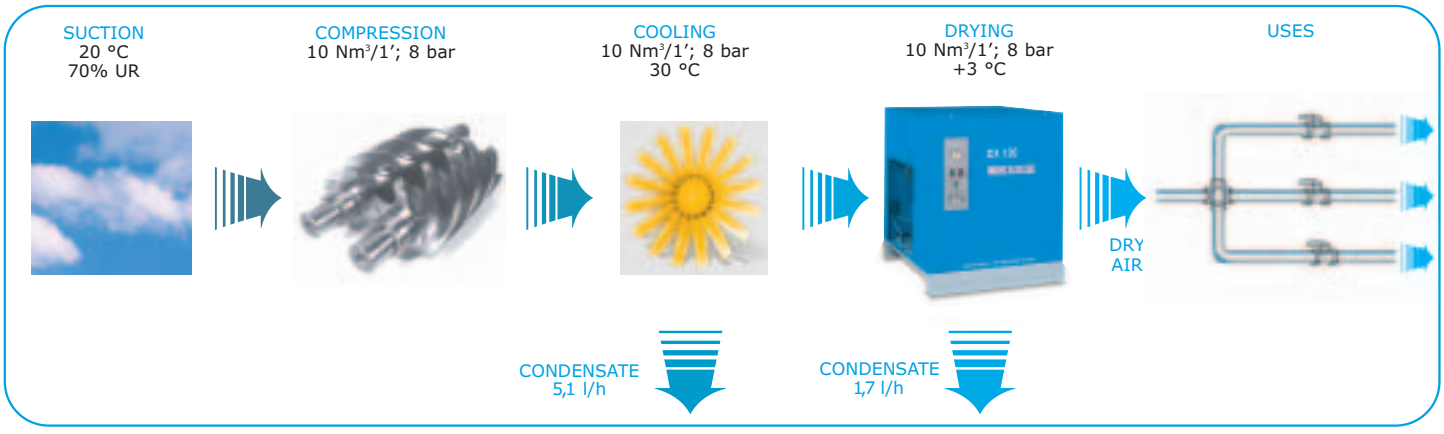
GB

Why

Humidity is one of the components of atmospheric air that we can find in our plants of distribution and use of compressed air, in form of condensate and/or vapour.

If the condensate can be easily separated and discharged, humidity in form of vapour follows the compressed air flow up to the final product.
By further cooling, this part of humidity present in the compressed air condensates causing in time serious damages to the distribution network, to the machine using it and to the final product as well.

For example a compressor having a flow rate of 10 Nmc/min intaking air from an environment at 20 °C with 70 % relative humidity by working at a delivery pressure of 8 bar(g) and cooling it at 30 °C separates 5,1 l/h of condensate.



If the compressed air is further processed using a dryer achieving a dew point of +3°C, further 1,7 l/h of condensate are separated.

Lower cost of the distribution plant,

which can be made without slopes, separators and condensate drains, but simply with fittings derived at "T" directly from the distribution ring.

Lower maintenance costs:

- for the distribution network, since it is no more necessary to drain the line separators and to verify the operation of the drains, which sometimes are located even on very wide areas.
- for the machines using the compressed air and using pneumatic tools, since the absence of condensate removes most of the fauly causes.

Energy savings

due to less line pressure drops.

Longer life

of the pneumatic equipment, since the use of dry air assures reliable performance in time.

Greater productivity

given the reduction of inappropriate standstills due to faults to the machineries.

Better quality of the final product

both in the applications where the compressed air gets in contact with the product and when the air is used only to move the machine servo-mechanisms.

Improvement of profits and of the corporate image

That is why the people in charge of maintenance and production, and the specialists of compressed air foresee the DRYER in their plants.

MARK

Quality • Easy • Saving

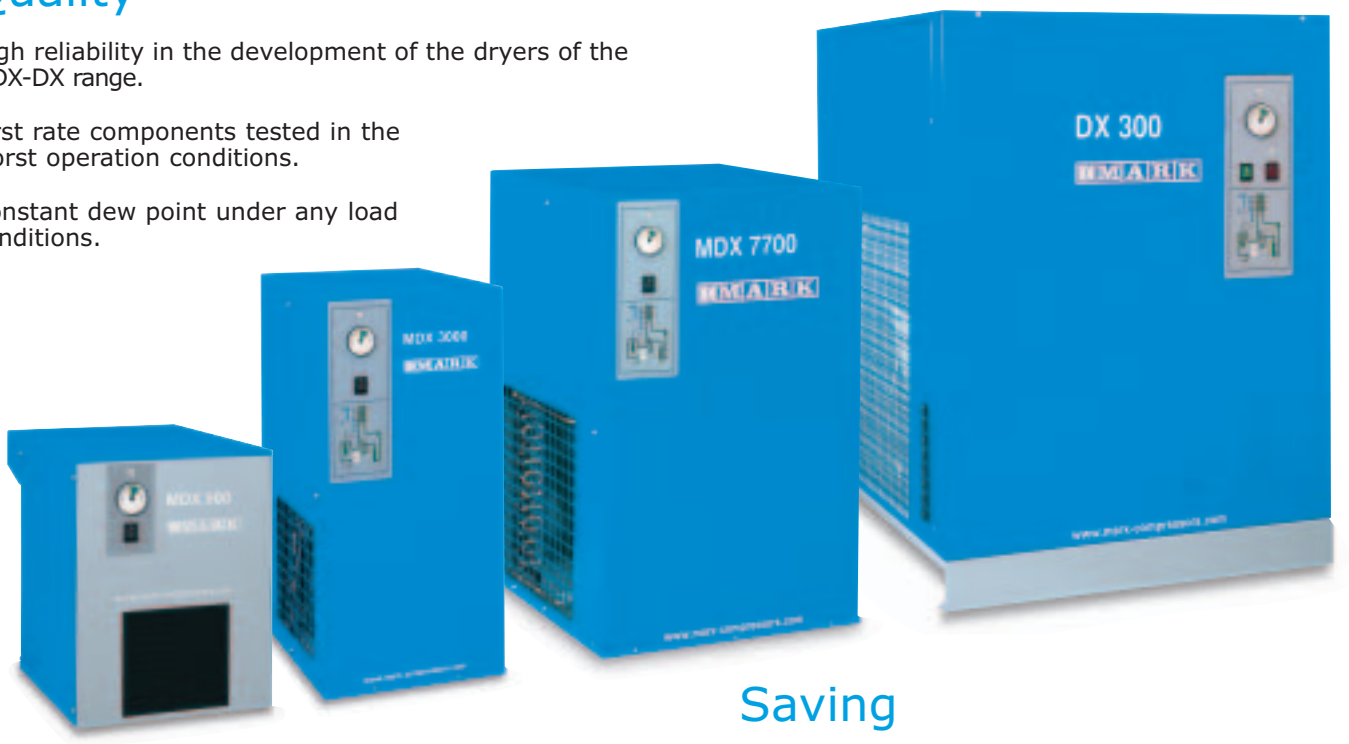
MARK is among the world leader manufacturers of dryers and is the only producer of compressors designing and manufacturing in its premises also all the dryers of its range of products.

Quality

High reliability in the development of the dryers of the MDX-DX range.

First rate components tested in the worst operation conditions.

Constant dew point under any load conditions.



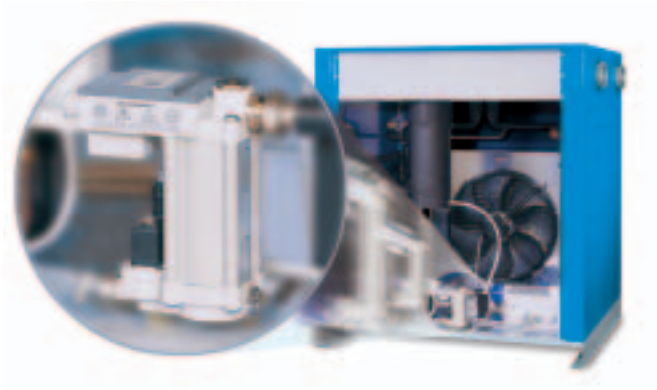
Easy

Automatic operation without any intervention of the operator.

A simple design for an ergonomic execution.

Suitable for any application.

Targeted matching for any compressor.



Saving

High energy saving due to the low drop pressure through the plant.

No waste of compressed air with ecologic condensate discharge of ECD type, serial in MDX range, optional in DX range.

Cleaner distribution network of the compressed air without leakages.

Greater reliability and duration of the uses.

Reduced and easy maintenance due to both the reliability of the components and the easy access to any internal component

Safe and reliable operation.

ECD ecologic drain:

Each condensate discharge operation leads to the discharge of more or less big quantities of compressed air.
With the ECD system, only water is discharged and, not less important, without noise.

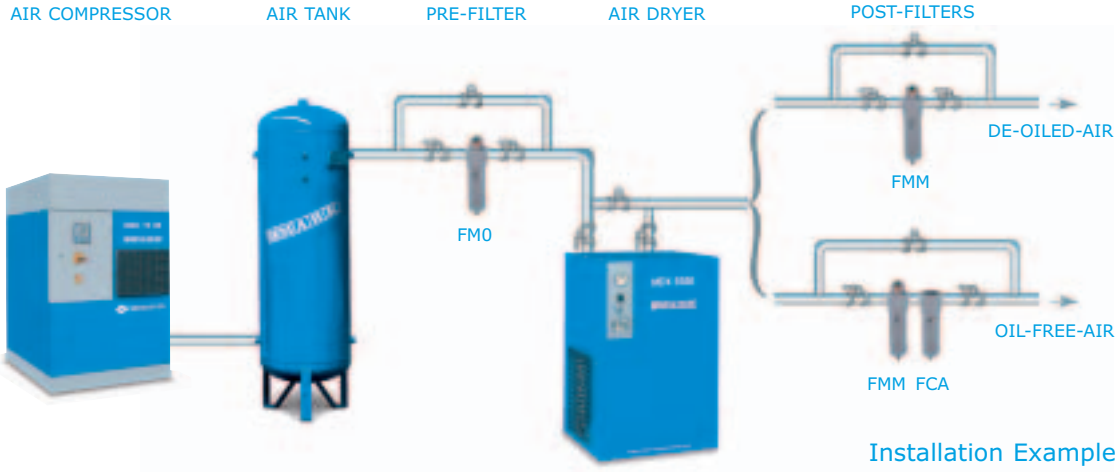
with ECD:
- reduction acoustic pollution;
- no waste of compressed air.

The refrigeration dryers MDX-DX are the result of a global knowledge of the compressed air from the production to the treatment of compressed air acquired in more than 30 years of activity in the field.

Installation • Maintenance

Installation

The specific light and compact construction allows an easy handling using any means.
The installation of the dryer DSX-DX is easy and does not require special equipment and/or specific foundation works both in case it is a new plant and in case it just involves the installation in an existing plant.
It is enough to perform a pneumatic and electric connection and the dryer is ready for operation.
The installation is complete only if also the filters are foreseen.



Installation Example

Maintenance

The experience acquired, the quality of components, the good seizing, a simple design and an efficient control system make these machines safe and reliable in time.
All dryers of the series MDX - DX have been designed and manufactured paying special care to functionality and performance with primary brand components tested since years in the field.
MARK refrigeration dryer is a machine with:
- long maintenance intervals;
- few components subject to consumption.

Respect for the Environment

CFC absent = no impact on the OZONE
Ecological thanks to the use of gases R134a – R404A
Complying with the current European regulations
Thermal insulation aiming at assuring a high efficiency
Noiseless condensate drain by ECD

That is why the persons in charge of maintenance and production, and the specialists of compressed air foresee the DRYERS of MARK in their plants.

MDX - DX

The right answer to the increasing need of cleaner air due to the increasing automation of the plants and to the use of more and more sophisticated equipment.

⑥ AIR-AIR EXCHANGER with high thermal exchange and low load losses.

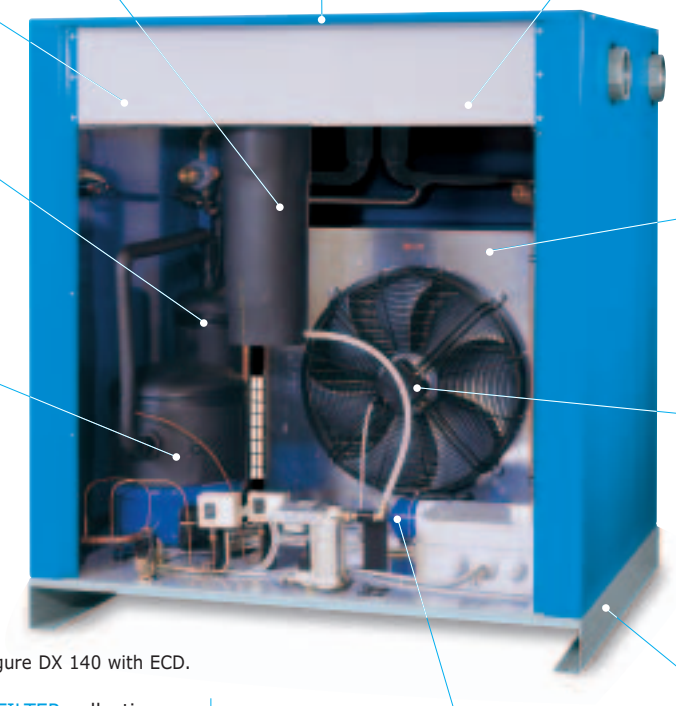
⑤ HIGH EFFICIENCY CONDENSATE SEPARATOR.

㉒ CASE in oven varnished stainless steel.

④ AIR-REFRIGERANT EVAPORATOR with high thermal exchange and low losses of load.

⑳ INSTRUMENT PANEL for command and control made up of: dew point indicator, run and stop luminous switch, overtemperature warning light.

⑦ SEPARATOR OF REFRIGERANT LIQUID with high efficiency.



② REFRIGERATION CONDENSER air-cooled, well seized, with high thermal exchange.

① REFRIGERATION COMPRESSOR driven by electric motor cooled by the refrigerating fluid itself and protected against thermal overload.

③ MOTOR FAN IP 54, for the cooling flow of the condenser.

⑱ + ⑲ CONDENSATE DISCHARGE with standard supply timed solenoid valve.

Upon request on DX range ECOLOGICAL CONDENSATE DISCHARGE type ECD able to avoid discharges of compressed air.

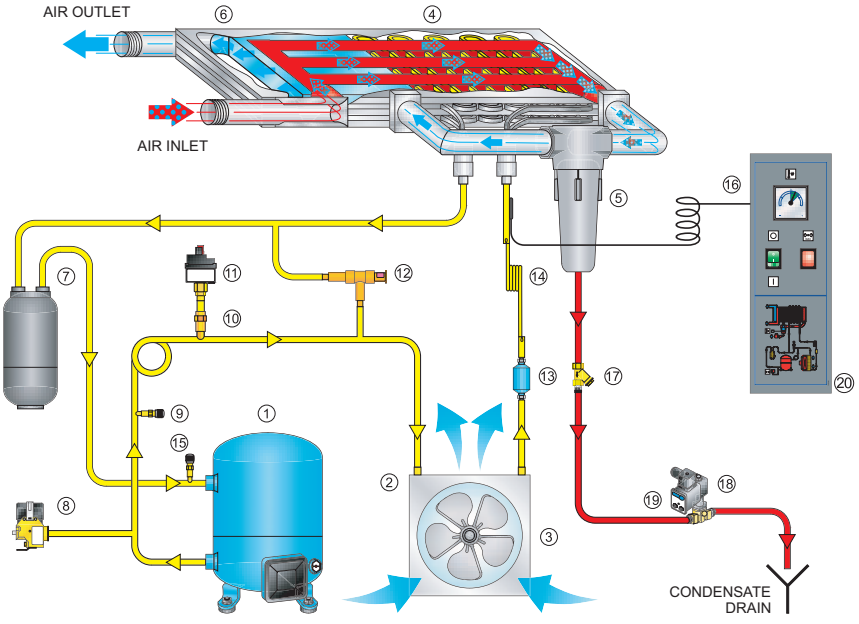
In figure DX 140 with ECD.

⑰ FILTER collecting impurities to protect the condensate discharge system.

⑬ REFRIGERANT FILTER.

㉑ Sturdily-built STRUCTURE self-bearing.

⑫ HOT GAS BY-PASS VALVE, adjusts the refrigerating potential in all load conditions avoiding the formation of ice in the system.



① Refrigerating fluid compressor
② Condenser
③ Motor fan
④ Evaporator
⑤ Demister condensate separator
⑥ Air-air-exchanger
⑦ Refrigerating liquid separator
⑧ Max. pressure pressure switch
⑨ Service valve
⑩ Service valve
⑪ Fan control pressure switch
⑫ Hot gas by-pass valve
⑬ Refrigerating liquid filter
⑭ Expansion capillary
⑮ Service valve
⑯ Dew point thermometer
⑰ Impurity collector
⑱ Condensate discharge solenoid valve
⑲ Timer
⑳ Instrumental panel

TECHNICAL DATA (according to ISO 7183 and Cagi Pneurop PN8NTC2)

Type	bar	psi	m³/min	m³/h ①	cfm	W ①	V/Hz/Ph	DLA*	L	B	H	Kg
MDX 400	13	188	0,350	21	12,4	130	230/50/1	3/4"	350	497	450	19
MDX 600	13	188	0,600	36	21,2	160	230/50/1	3/4"	350	497	450	19
MDX 900	13	188	0,850	51	30,0	180	230/50/1	3/4"	350	497	450	20
MDX 1200	13	188	1,200	72	42,4	220	230/50/1	3/4"	350	497	450	25
MDX 1800	13	188	1,825	110	64,4	290	230/50/1	3/4"	350	497	450	27
MDX 2400	13	188	2,350	141	83,0	610	230/50/1	1"	370	500	764	44
MDX 3000	13	188	3,000	180	106	670	230/50/1	1"	370	500	764	44
MDX 3600	13	188	3,600	216	127	790	230/50/1	1¼"	460	560	789	53
MDX 4100	13	188	4,100	246	145	870	230/50/1	1¼"	460	560	789	60
MDX 5200	13	188	5,200	312	184	1120	230/50/1	1¼"	460	560	789	65
MDX 6500	13	188	6,500	390	230	1190	230/50/1	1¼"	580	590	899	80
MDX 7700	13	188	7,700	462	272	1440	230/50/1	1¼"	580	590	899	80
DX 100	16	232	9,900	594	350	1867	230/50/1	2½"	795	990	925	160
DX 120	16	232	12,000	720	424	1940	230/50/1	2½"	755	975	925	165
DX 140	16	232	13,900	835	491	2340	400/50/3	2½"	755	975	925	170
DX 200	16	210	20,000	1200	706	3790	400/50/3	3"	955	1220	1295	303
DX 240	14,5	210	24,000	1440	848	4290	400/50/3	3"	955	1220	1295	303
DX 300	14,5	210	30,000	1800	1060	5290	400/50/3	3"	955	1220	1295	345
DX 350	14,5	210	35,000	2100	1237	5890	400/50/3	3"	955	1220	1295	345

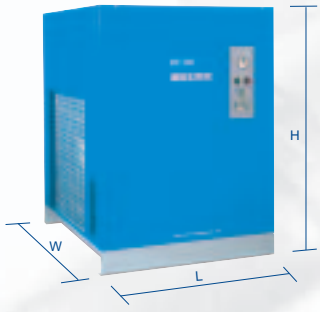
REMARKS:

① Reference conditions:
- Operation pressure : 7 bar (100 psi)
- Operation temperature : 35 °C
- Environment temperature : 25 °C
- Dew point in pressure : +3 °C +/- 1

Limit conditions:
- Operation pressure : 13 bar (188 psi) MDX range
  : 16 bar (232 psi) DX100 ÷ DX200 range
  : 14,5 bar (210 psi) per DX240 ÷ DX350
- Operation temperature : 55 °C
- Environment temperature min./max : +4 °C; +45 °C

MDX optional:
- By Pass
- Filter Kit
- Energy Saving

DX optional:
- ECD Condensate Discharge



Correction factor for conditions differing from the project K = A x B x C

Environment temperature	°C	25	30	35	40	45
	A	1,00	0,92	0,84	0,80	0,74

Operation temperature	°C	30	35	40	45	50	55
	B	1,24	1,00	0,82	0,69	0,58	0,45

Operation pressure	bar	5	6	7	8	9	10	11	12	13	14	15	16
	C	0,90	0,96	1,00	1,03	1,06	1,08	1,10	1,12	1,13	1,15	1,16	1,17

The new flow rate value can be obtained by dividing the current or real flow rate by the correction factor related to the real operation conditions.

The company reserves the right to perform eventual modifications due to a steady improvement of the product.

According to UNI EN ISO 9001: 2000 and UNI EN ISO 14001

SOLD AT

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Cod. 2200772285 - 1M - 04/05 - ALKARIA