



Solid, simple and smart:
advanced reliability in
compressed air

REFRIGERANT DRYERS R513A
COOL 400-7700
MDX 400 - 18000



mark-compressors.com



COOL REFRIGERATION AIR DRYERS

The drying process

Refrigeration dryers use a refrigerant gas in order to cool the compressed air. As a result the water from the air condenses and can be removed. With this technique we can reach in the COOL range a pressure dew point of 7 °C. As a result, the refrigeration technology is by far the most used dryer technology, complying for more than 95 % of industrial applications. Refrigerant dryers are commonly used with pneumatic applications and in the general industry (e.g. engineering, steel, paper, tannery, garage).

Main benefits

- Remove the water pollution from your network
- Refrigeration dryer is a simple, low maintenance technology
- Extremely easy to install
- Very compact equipment fits in a minimum space
- Low maintenance requirement
- Compatible with any compressor technology
- Very low energy consumption
- Check your air quality with the dew point indicator
- Higher final product quality
- Increase your overall productivity

Risks to avoid

Humid, unclean compressed air can cause:

- Corrosion, pollution, leakage and rust of the air net (pipes) and the downstream equipment/tools
- Costly interruptions of the production
- A decreased efficiency of the equipment/tools used
- Reduction of the life span of all equipment involved
- Risk of water contamination in the air network, with potential freezing in winter time
- Increased maintenance costs
- Lower quality of the final product and potential risk of product recalls

COMPACT & EFFICIENT

The COOL range offers reliable components in a simple vertical lay-out:

- Simple to install and easy to operate
- Easy access for quick servicing resulting in low maintenance costs
- Efficient cooling system
- Flexible transportation
- Small footprint
- Stable dew point



APPLICATIONS

- Pneumatic tools and equipment
- Pneumatic control systems
- Painting application
- Packaging
- Injection molding
- Car shop
- Tire inflation



Technical data

According to ISO 7183:2007

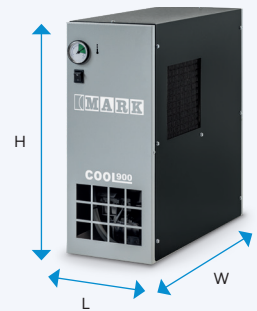
Type	Air treatment capacity ¹			R513A - 50Hz			R513A - 60Hz			Inlet/Outlet connections	Dimensions (mm)	List Price	Weight up to
				Part Number	Power consumption ¹	Voltage	Part Number	Power consumption ¹	Voltage				
	l/min	m ³ /h	cfm										
COOL 400	350	21	12,4	4102003512	130	230/1/50	4102003518	140	230/1/60	1/2 F	233 x 550 x 561	1.077,28	22
COOL 600	600	36	21,2	4102003513	135	230/1/50	4102003519	144	230/1/60	1/2 F	233 x 550 x 561	1.340,76	22
COOL 900	850	51	30	4102003514	167	230/1/50	4102003520	147	230/1/60	1/2 F	233 x 550 x 561	1.479,65	25
COOL 1200	1200	72	42,4	4102003515	286	230/1/50	4102003521	202	230/1/60	1/2 F	233 x 550 x 561	1.584,77	25
COOL 1800	1800	108	63,6	4102003516	372	230/1/50	4102003522	297	230/1/60	1/2 F	233 x 550 x 561	1.757,40	27
COOL 2200	2150	129	76	4102003517	337	230/1/50	4102003523	393	230/1/60	3/4 F	233 x 550 x 561	1.859,94	32
COOL 3000	3000	180	106	4102001840	419	230/1/50	4102001841	459	230/1/60	1" F	233 x 559 x 561	2.344,07	31
COOL 3600	3600	216	127	4102005030	657	230/1/50	4102005035	730	230/1/60	1" F	310 x 706 x 994	2.664,67	47
COOL 4100	4100	246	145	4102005031	735	230/1/50	4102005036	756	230/1/60	1" 1/2 F	310 x 706 x 994	3.044,95	54
COOL 5200	5200	312	184	4102006414	623	230/1/50	4102006378	751	230/1/60	1" 1/2 F	310 x 706 x 994	3.457,68	66
COOL 6500	6500	390	230	4102006415	645	230/1/50	4102006379	778	230/1/60	1" 1/2 F	310 x 706 x 994	3.943,13	65
COOL 7700	7700	462	272	4102006416	794	230/1/50	4102006380	957	230/1/60	1" 1/2 F	310 x 706 x 994	4.428,56	69

Reference conditions¹

- Operating pressure: 7 bar (100 psi)
- Inlet temperature: 35 °C
- Room temperature: 25 °C
- Pressure dewpoint: 7 °C

Limit conditions:

- Working pressure: 16 bar COOL 400-3600 / 14 bar COOL 4100-7700
- Inlet temperature: 50 °C
- Min/Max room temperature: +5 °C; +40 °C



Correction factor for conditions differing from the project $K = A \times B \times C$

Room temperature	°C	25	30	35	40	Inlet temperature	°C	30	35	40	45	50	
	A	1,00	0,92	0,84	0,80		B	1,24	1,00	0,82	0,69	0,54	
Operating 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

MDX REFRIGERANT DRYER

The inlet air of a compressor contains humidity and contaminants like dust, oil, etc. During the compression these contaminants reach a high concentration. This can cause wear and corrosion to the downstream equipment, with potential costly interruption to production and reduction in the efficiency and service life of the equipment used.

By cooling down the compressed air, a refrigerant dryer removes the largest part of the water content. Our MDX range ensures high quality dry air, increasing efficiency and productivity as well as the life span of your equipment and tools.



THE BENEFIT OF REFRIGERANT DRYERS

Clean and dry air

- Increase your overall productivity
- Improve your final product quality
- Protect your downstream equipment against corrosion, rust and leakages.
- Avoid costly service interventions

USER BENEFITS

Simple installation

- Light and compact design
- Easy to transport
- Easy and fast installation using the optional filter supports and by pass option (MDX 400-1800)

Solid quality

- High reliability was a key driver when developing the MDX dryer range
- First-class components tested under extreme operating conditions
- Constant dew point under any load conditions

Easy maintenance and accessibility

- Low maintenance level
- Reliable components easily accessible
- Long service intervals

Costs saving

- Very little maintenance required
- Low energy consumption
- Energy savings due to low pressure drops
- No loss of compressed air due to level-controlled condensate drain

Advanced refrigerant solutions

- Low refrigerant gas load
- Refrigerant gas with low GWP



Technical data

According to ISO 7183:2007

Model	Air Treatment Capacity			Part Number	R513A - 50Hz		R513A - 60Hz		Inlet/outlet Connections	Dimensions (mm)	List Price	Weight up to	
					Power consumption	Voltage	Part Number	Power consumption					Voltage
	l/min.	m ³ /h	cfm		W	V/Ph/Hz	W	V/Ph/Hz	gas/DN	A x B x C	€	kg	
MDX 400	350	21	12,4	4102005714	130	230/1/50	4102005719	170	230/1/60	3/4" M	493 x 350 x 450	1.214,88	19
MDX 600	600	36	21,2	4102005715	164	230/1/50	4102005720	172	230/1/60	3/4" M	493 x 350 x 450	1.512,11	19
MDX 900	850	51	30	4102005716	190	230/1/50	4102005721	222	230/1/60	3/4" M	493 x 350 x 450	1.709,38	20
MDX 1200	1200	72	42,4	4102005717	266	230/1/50	4102005722	306	230/1/60	3/4" M	493 x 350 x 450	1.826,20	25
MDX 1800	1800	108	63,6	4102005718	284	230/1/50	4102005723	364	230/1/60	3/4" M	493 x 350 x 450	2.027,38	27
MDX 2400	2350	141	83	4102005724	674	230/1/50	4102005726	726	230/1/60	1" F	497 x 370 x 764	2.168,04	44
MDX 3000	3000	180	106	4102005725	716	230/1/50	4102005727	763	230/1/60	1" F	497 x 370 x 764	2.731,66	44
MDX 3600	3600	216	127	4102008113	933	230/1/50	4102007513	590	230/1/60	1" 1/2 F	557 x 460 x 789	3.063,13	62
MDX 4100	4100	246	145	4102008114	933	230/1/50	4102007514	727	230/1/60	1" 1/2 F	557 x 460 x 789	3.500,53	60
MDX 5200	5200	312	184	4102008271	933	230/1/50	4102005715	745	230/1/60	1" 1/2 F	557 x 460 x 789	3.974,28	64
MDX 6500	6500	390	230	4102008115	1276	230/1/50	4102007516	1315	230/1/60	1" 1/2 F	587 x 580 x 899	4.533,67	82
MDX 7700	7700	462	272	4102008272	1276	230/1/50	4102007517	1325	230/1/60	1" 1/2 F	587 x 580 x 899	5.091,80	92
MDX 10000	10000	600	353	4102008197	1912	400/3/50	4102007518	2021	460/3/60	2" F	1070 x 805 x 962	6.791,03	157
MDX 12000	12000	720	424	4102008198	1912	400/3/50	4102007519	2341	460/3/60	2" F	1070 x 805 x 962	8.147,21	170
MDX 15000	15000	900	530	4102008199	2629	400/3/50	4102007520	2511	460/3/60	2" 1/2 F	1070 x 805 x 962	9.310,93	176
MDX 18000	18000	1080	636	4102008296	2629	400/3/50	4102007521	3334	460/3/60	2" 1/2 F	1070 x 805 x 962	11.442,06	188

Notes:

Reference conditions:

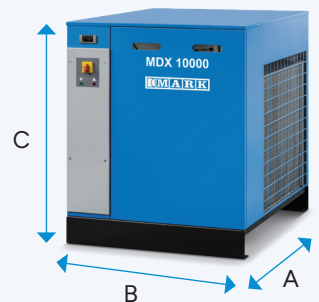
- Operating pressure: 7 bar (100 psi)
- Inlet temperature: 35°C
- Room temperature: 25°C
- Pressure dewpoint: +4°C +/-1
- Available in different voltages and frequencies

Operating limit conditions:

- Max. operating pressure: 16 bar (232 psi) MDX 400-1800 - 14 bar (203 psi) MDX 2400 - 18000
- Max. inlet temperature: 55°C (60°C for MDX 10000-18000)
- Min./Max. ambient temperature: +5°C; 43°C (+5°C; 46°C for MDX 10000-18000)

Optional for MDX (400-1800):

- Bypass + filter support
- Filter support



Correction factor for conditions differing from the project $K = A \times B \times C$

Room temperature	°C	25	30	35	40	43	46
	A	1	0,91	0,81	0,72	0,67	0,62

Inlet temperature	°C	25	30	35	40	46	50	55	60
	B	1,1	1,05	1	0,82	0,69	0,58	0,49	0,42

Operating pressure	bar	6	7	8	10	13	14	15	16
	C	0,97	1	1,03	1,07	1,12	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.

EXPORT PACKAGING

COOL 400-7700

Description	Part Number Wooden crate	Part Number Wooden box
COOL 400-3000	0000050721	0000050701
COOL 3600-7700	0000050728	0000050708

MDX 400-18000

Description	Part Number Wooden crate	Part Number Wooden box
MDX 400-1800	0000050721	0000050701
MDX 2400-3000	0000050722	0000050702
MDX 3600-5200	0000050723	0000050703
MDX 6500-7700	0000050724	0000050704
MDX 10000-18000	0000050725	0000050705

Contact your local representative:
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CARE

Care is what service is all about: professional service by knowledgeable people, using high-quality original parts.

TRUST

Trust is earned by delivering on our promises of reliable, uninterrupted performance and long equipment lifetime.

MultiAir

EFFICIENCY

Equipment efficiency is ensured by regular maintenance. Efficiency of the service organization is how Original Parts and Service make the difference.

