COOL Refrigeration air dryers

Wear and corrosion threaten your air distribution network.
Our COOL range of refrigeration dryers keeps your compressed air system in optimal shape.



CECCATO ARIA COMPRESSA

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

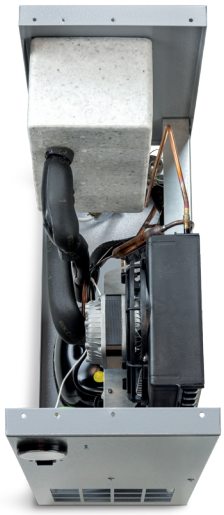
Humid, unclean compressed air can cause:

- 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



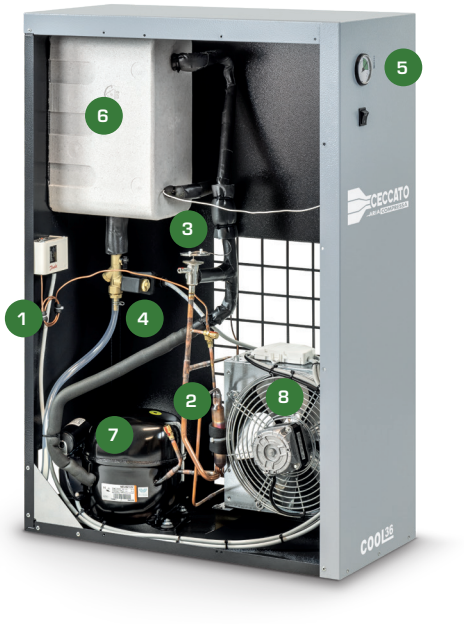
Applications

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





Components



1. **Capillary tube** in order to considerably reduce the pressure and temperature of the refrigerant, improving the cooling process.
2. **Refrigerant filter** in order to protect the capillary from some possible dirty particles.
3. **Hot gas by-pass valve**:
   - Injects hot gas from compressor discharge into suction / liquid separator
   - Keeps refrigeration capacity in all load conditions
   - Maintains constant pressure in the evaporator, avoiding freezing
4. **Timer drain** ensures a proper drain of the condensate.
5. **Control panel**: PDP indicator (green zone) & main on-off switch.
6. **Air/Air** and **Air/Refrigerant Heat Exchanger** with high thermal exchange and low load losses. Integrated water separator allows a highly efficient water-air separation.
7. **Refrigerant compressor** driven by an electric motor, cooled using refrigerant fluid and protected against thermal overload.
8. **Refrigerant condenser** air-cooled and with a large exchange surface for high thermal exchange.

Technical table

Type	Air treatment capacity[1]			R410A - 50Hz		R513A - 50Hz		R513A - 60Hz		Inlet/Outlet connections	Dimensions (mm)	Weight up to
	Power consumption[1]			Voltage		Power consumption[1]	Voltage	Power consumption[1]	Voltage			
	l/min	m³/h	cfm	W	V/Ph/Hz	W	V/Ph/Hz	W	V/Ph/Hz	gas/DN	L x W x H	kg
COOL 4	350	21	12,4	-	-	130	230/1/50	140	230/1/60	1/2 F	233 x 550 x 561	22
COOL 6	600	36	21,2	-	-	135	230/1/50	144	230/1/60	1/2 F	233 x 550 x 561	22
COOL 9	850	51	30	-	-	167	230/1/50	147	230/1/60	1/2 F	233 x 550 x 561	25
COOL 12	1200	72	42,4	-	-	286	230/1/50	202	230/1/60	1/2 F	233 x 550 x 561	25
COOL 18	1800	108	63,6	-	-	372	230/1/50	297	230/1/60	1/2 F	233 x 550 x 561	27
COOL 22	2150	129	76	-	-	337	230/1/50	393	230/1/60	3/4 F	233 x 550 x 561	32
COOL 30	3000	180	106	-	-	419	230/1/50	459	230/1/60	1" F	233 x 559 x 561	31
COOL 36	3600	216	127	-	-	675	230/1/50	730	230/1/60	1" F	310 x 706 x 994	47
COOL 41	4100	246	145	-	-	735	230/1/50	756	230/1/60	1" 1/2 F	310 x 706 x 994	54
COOL 52	5200	312	184	702	230/1/50	623	230/1/50	751	230/1/60	1" 1/2 F	310 x 706 x 994	66
COOL 65	6500	390	230	746	230/1/50	645	230/1/50	778	230/1/60	1" 1/2 F	310 x 706 x 994	65
COOL 77	7700	462	272	954	230/1/50	794	230/1/50	957	230/1/60	1" 1/2 F	310 x 706 x 994	69

Reference conditions [1]

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

Limit conditions:

- **Working pressure:**
  16 bar COOL 4-36 / 14 bar COOL 41-77
- **Inlet temperature:** 50 °C
- **Min/Max room temperature:** +5 °C; +40 °C



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

Room temperature	°C	**25**	30	35	40
	A	**1,00**	0,92	0,84	0,80

Inlet temperature	°C	30	**35**	40	45	50
	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



Contact your local representative:

www.ceccato-compressors.com

ORIGINAL PART

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.

EFFICIENCY

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

6999100284 © 2025, C. Aria C. S.R.L. All rights reserved.
C. Aria C. S.R.L reserves the right to change or revise specifications and product design in connection with any features of our products. Such changes do not entitle the buyer to corresponding changes, improvements, additions or replacements for equipment previously sold or shipped. Read all safety instructions in the manual before usage.

CECCATO ARIA COMPRESSA