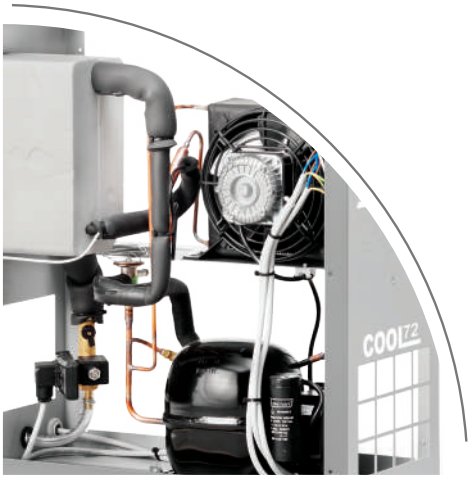
TRYCOMP Heavy Duty

INDUSTRIAL COMPRESSED AIR & GAS SOLUTIONS

ABAC



COOL & DRY Refrigeration air dryers

2025/V01

TRYCOMP Heavy Duty

INDUSTRIAL COMPRESSED AIR & GAS SOLUTIONS

Our COOL range of refrigeration dryers keeps your compressed air system in optimal shape

Wear and corrosion threaten your air distribution network

Footprint only 0,13m²

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 5°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).

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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

Applications

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

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

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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** aircooled and with a large exchange surface for high thermal exchange.

Technical table

Type	Max. working pressure		Air treatment capacity[1]			Nominal electrical power[1]	Voltage	Inlet/Outlet connections	Dimensions (mm.)			Weight	Refrigeration gas type
	bar	psi	l/min	mc/h	cfm	W	V / ph / Hz	gas	L	W	H	Kg.	
COOL 21	16	232	350	21	12,4	130	230/1/50	1/2 F	233	550	561	19	
COOL 36	16	232	600	36	21,2	135	230/1/50	1/2 F	233	550	561	19	
COOL 51	16	232	850	51	30,0	167	230/1/50	1/2 F	233	550	561	19	
COOL 72	16	232	1200	72	42,4	286	230/1/50	1/2 F	233	550	561	20	R134a
COOL 110	16	232	1825	110	64,4	323	230/1/50	1/2 F	233	550	561	25	
COOL 129	16	232	2150	129	76	297	230/1/50	3/4 F	233	550	561	27	
COOL 180	16	232	3000	180	106	419	230/1/50	1" F	233	559	561	30	
COOL 216	16	232	3600	216	127	664	230/1/50	1" F	310	706	994	52	
COOL 246	13	188	4100	246	145	767	230/1/50	1" 1/2 F	310	706	994	57	
COOL 312	13	188	5200	312	184	865	230/1/50	1" 1/2 F	310	706	994	59	R404A
COOL 390	13	188	6500	390	230	1028	230/1/50	1" 1/2 F	310	706	994	80	
COOL 462	13	188	7700	462	272	1242	230/1/50	1" 1/2 F	310	706	994	80	

Reference conditions[1]
- Operating pressure: 7 bar (100 psi)
- Operating temperature:35 °C
- Room temperature: 25 °C
- Pressure dewpoint: +5 °C +/- 1
- Also available at 60Hz

Limit conditions:
- Working pressure: 16 bar COOL 21-216
  13 bar COOL 246-462
- Operating 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

- Roomtemperature

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

- Operating 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

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ABAC Refrigeration Dryer: Remove Condensate and Vapor from Your Air System

ABAC provides refrigeration dryers to remove condensate and vapor so that dry, compressed air is produced in a continuous, cost-efficient way. Today's compressed air generation process is not only a matter of producing air: purity and cleanliness have become fundamental features.

Dryers aim to preserve and extend the production system's lifecycle at the same time. To better understand their working principle, you must know that the ambient air, which surrounds the intake valve comprises of various particles and other contaminants that enter the air compressor.

These polluted elements can permanently damage your compressors and other production machines which can cause sudden stops. To avoid unwanted breakdowns and downtimes to your production, compressed air treatment is necessary to extend the compressors' life cycle.

Range Insights

By investing in a high-quality dryer, you can enjoy numerous benefits, including a more economical distribution network, longer lifespan of equipment, greater productivity, lower maintenance costs, and improved final product quality. The dryer reduces wear and tear on equipment and the distribution network, leading to a longer lifespan. Its intelligent discharge system silently removes water, resulting in fewer breakdowns. The dryer also increases the reliability of final tools and equipment, improving product quality. Energy-saving features, such as lower pressure drops, reduce energy consumption. The easy dew point indicator reading allows for simple monitoring and maintenance.

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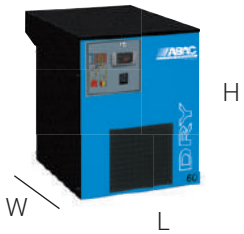
Refrigeration Dryers



Type	Code	Max press bar	Max press psi	Flow rate m3/1'	Flow rate m3/h	Flow rate CFM	Power W	Power supply V/Hz/ph	Connections gas/DIN	Dimensions mm L x W x H	Weight Kg
DRY 20	4102000740	16	232	0,333	20	11,8	130	230/50/1	3/4' M	350 x 500 x 450	19
DRY 25	4102000741	16	232	0,417	25	14,7	130	230/50/1	3/4' M	350 x 500 x 450	19
DRY 45	4102000742	16	232	0,750	45	26,5	164	230/50/1	3/4' M	350 x 500 x 450	19
DRY 60	4102000743	16	232	1,000	60	35,3	190	230/50/1	3/4' M	350 x 500 x 450	20
DRY 85	4102000744	16	232	1,417	85	50	266	230/50/1	3/4' M	350 x 500 x 450	25
DRY 130	4102000745	16	232	2,167	130	76,5	284	230/50/1	3/4' M	350 x 500 x 450	27
DRY 165	4102000746	13	188	2,750	165	97,1	609	230/50/1	1" F	370 x 500 x 764	44
DRY 210	4102000747	13	188	3,500	210	124	673	230/50/1	1" F	370 x 500 x 764	44
DRY 250	4102000748	13	188	4,167	250	147	793	230/50/1	11/2" F	460 x 560 x 789	53
DRY 290	4102000749	13	188	4,833	290	171	870	230/50/1	11/2" F	460 x 560 x 789	60
DRY 360	4102000750	13	188	6,000	360	212	1072	230/50/1	11/2" F	460 x 560 x 789	65
DRY 460	4102000751	13	188	7,667	460	271	1190	230/50/1	11/2" F	580 x 590 x 899	80
DRY 530	4102000752	13	188	8,833	530	312	1446	230/50/1	11/2" F	580 x 590 x 899	80
DRY 690	4102001584	13	188	11,500	690	406	1319	230/50/3	2" F	735 x 898 x 962	128
DRY 830	4102001585	13	188	13,833	830	489	1631	400/50/3	2" F	735 x 898 x 962	146
DRY 1040	4102001586	13	188	17,333	1040	612	1889	400/50/3	2" F	735 x 898 x 962	158
DRY 1260	4102001587	13	188	21,000	1260	742	2110	400/50/3	2" F	735 x 898 x 962	165

Item nummer	Item description
4101000653	Filters support bypass DRY 20- DRY 130 1/2G
4101000652	Filters support DRY20 - DRY130 1/2G

Correction factor Formula for calculating the correction factor: K = A x B x C

Delivery correction factors for other conditions

Ambient temperature					
°C	25	30	35	40	45
A	1,00	0,92	0,84	0,80	0,74 (DRY20 - DRY530)
A	1,00	0,91	0,81	0,72	0,62 (DRY690 - DRY1260)

Working temperature						
°C	30	35	40	45	50	55
B	1,24	1,00	0,82	0,69	0,58	0,45 (DRY20 - DRY530)
B	1,00	1,00	0,82	0,69	0,58	0,49 (DRY690 - DRY1260)

Working Pressure												
bar (psi)	5 (72)	6 (87)	7 (100)	8 (116)	9 (130)	10 (145)	11 (159)	12 (174)	13 (188)	14 (203)	15 (218)	16 (232)
	0,90	0,96	1,00	1,03	1,06	1,08	1,10	1,12	1,13	1,15	1,16	1,17 (DRY20 - DRY 530)
	0,90	0,97	1,00	1,03	1,05	1,07	1,09	1,11	1,12 (DRY690 - DRY1260)			

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Your vision is our commitment.

Reach out to us today, to explore the great possibilities.

A brand by ARNIKA COMPANY

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