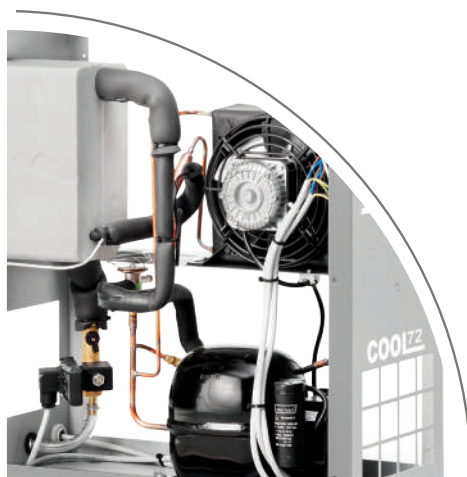




MADE IN ITALY



*Atlas Copco*

Multi brand of  
**Atlas Copco**

## COOL & DRY Refrigeration air dryers

2025/V03

## Our **COOL** and **Dry** range of refrigeration dryers keeps your compressed air system

Wear and corrosion threaten your air distribution network

### • **Cool Series**

#### **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).

**Footprint  
only 0,13m<sup>2</sup>**





## 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



## Components

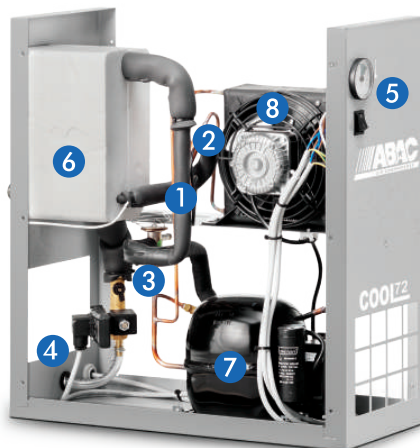
**1 Capillary tube** in order to considerably reduce the pressure and temperature of the refrigerant, improving the cooling process.

**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.

## Cool series dryer

| Type            | Max. working pressure |     | Air treatment capacity <sup>1</sup> |      |      | Nominal electrical power <sup>1</sup> | 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.    |                        |
| <b>COOL 21</b>  | 16                    | 232 | 350                                 | 21   | 12,4 | 130                                   | 230/1/50    | 1/2 F                    | 233              | 550 | 561 | 19     | R134a                  |
| <b>COOL 36</b>  | 16                    | 232 | 600                                 | 36   | 21,2 | 135                                   | 230/1/50    | 1/2 F                    | 233              | 550 | 561 | 19     |                        |
| <b>COOL 51</b>  | 16                    | 232 | 850                                 | 51   | 30,0 | 167                                   | 230/1/50    | 1/2 F                    | 233              | 550 | 561 | 19     |                        |
| <b>COOL 72</b>  | 16                    | 232 | 1200                                | 72   | 42,4 | 286                                   | 230/1/50    | 1/2 F                    | 233              | 550 | 561 | 20     |                        |
| <b>COOL 110</b> | 16                    | 232 | 1825                                | 110  | 64,4 | 323                                   | 230/1/50    | 1/2 F                    | 233              | 550 | 561 | 25     |                        |
| <b>COOL 129</b> | 16                    | 232 | 2150                                | 129  | 76   | 297                                   | 230/1/50    | 3/4 F                    | 233              | 550 | 561 | 27     |                        |
| <b>COOL 180</b> | 16                    | 232 | 3000                                | 180  | 106  | 419                                   | 230/1/50    | 1" F                     | 233              | 559 | 561 | 30     | R404A                  |
| <b>COOL 216</b> | 16                    | 232 | 3600                                | 216  | 127  | 664                                   | 230/1/50    | 1" F                     | 310              | 706 | 994 | 52     |                        |
| <b>COOL 246</b> | 13                    | 188 | 4100                                | 246  | 145  | 767                                   | 230/1/50    | 1" 1/2 F                 | 310              | 706 | 994 | 57     |                        |
| <b>COOL 312</b> | 13                    | 188 | 5200                                | 312  | 184  | 865                                   | 230/1/50    | 1" 1/2 F                 | 310              | 706 | 994 | 59     |                        |
| <b>COOL 390</b> | 13                    | 188 | 6500                                | 390  | 230  | 1028                                  | 230/1/50    | 1" 1/2 F                 | 310              | 706 | 994 | 80     |                        |
| <b>COOL 462</b> | 13                    | 188 | 7700                                | 462  | 272  | 1242                                  | 230/1/50    | 1" 1/2 F                 | 310              | 706 | 994 | 80     |                        |

### Reference conditions<sup>1</sup>

- 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  $K = A \times B \times C$

• Room temperature

| °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 |

## DRY series of Refrigeration dryer

### 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.





## DRY series dryer

| Type     | Code       | Max press<br>bar psi |     | Flow rate<br>m3/1' m3/h CFM |      |      | Power<br>W | Power supply<br>V/Hz/ph | Connections<br>gas/DIN | Dimensions mm<br>L x W x H | Weight<br>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                | 1 1/2" F               | 460 x 560 x 789            | 53           |
| DRY 290  | 4102000749 | 13                   | 188 | 4,833                       | 290  | 171  | 870        | 230/50/1                | 1 1/2" F               | 460 x 560 x 789            | 60           |
| DRY 360  | 4102000750 | 13                   | 188 | 6,000                       | 360  | 212  | 1072       | 230/50/1                | 1 1/2" F               | 460 x 560 x 789            | 65           |
| DRY 460  | 4102000751 | 13                   | 188 | 7,667                       | 460  | 271  | 1190       | 230/50/1                | 1 1/2" F               | 580 x 590 x 899            | 80           |
| DRY 530  | 4102000752 | 13                   | 188 | 8,833                       | 530  | 312  | 1446       | 230/50/1                | 1 1/2" 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 number | 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:  $K = A \times B \times C$

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<br>(DRY20 - DRY530)   |
| A                   | 1,00 | 0,91 | 0,81 | 0,72 | 0,62<br>(DRY690 - DRY1260) |

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

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

**Your vision is our commitment.**

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

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—COMPANY—

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