



REFRIGERATION DRYER

RDL 35 - 480

(Non-cycling refrigeration dryer)

DESCRIPTION

RDL dryers have been designed for efficient compressed air drying, with pressure dew point +5 °C. Drying is achieved on the principle of cooling, which takes place inside a highly efficient and ultra-compact 3 stage aluminium heat exchanger. Developing the series, we focused on essential components and product evolution, with all of our market and R&D experience. Compact size, optimized layout and innovative solutions allowed us to achieve reduced manufacturing costs, whilst maintaining the same levels of reliability, quality and attention to detail. RDL series is designed and manufactured with respect to the environment, promoting energy efficiency and environmentally friendly materials.



DRYER RATING ACCORDING TO ISO 8573-1

Solid particles ⁽¹⁾	Water ^{(1),(2)}	Oil ⁽¹⁾
/	4	/

⁽¹⁾ Standard configuration of dryer does not include filters. It is strongly recommended to install prefilter (3 µm) upstream the dryer.

⁽²⁾ Pressure dew point also depends on specific operating conditions.

TECHNICAL SPECIFICATIONS

Max. operating pressure	16 bar _g
Max. inlet air temperature	55 °C (for temperature ≠ 35 °C apply correction factor)
Operating ambient temperature	1,5 °C to 45 °C (for temperature > 25 °C apply correction factor)
Max. storage temperature	65 °C
Pressure dew point	+ 5 °C
Filter requirement (inlet)	Prefilter 3 µm
Communication	MODBUS
Digital input	Remote ON/OFF
Digital output	Alarm
Type of cooling	Air cooled
Refrigerant	R513a
Compressor operation	Non-cycling
Condensate drain	AOK 20B
Power supply	1Ph, 230 V, 50/60 Hz
Protection class (controller front)	IP 65

MATERIALS

Casing	Carbon steel
Casing corrosion protection	Epoxy powder painted
Evaporator	Aluminium
Evaporator insulation	Flexible elastomeric foam
Condenser	Copper tube, aluminium fins
Compressor	Carbon steel
Refrigerant piping	Copper
Controller enclosure	Plastic



SIZES

Model	Compressed air			Electrical connection		Ambient air		Refrigerant		Dimensions & Mass	
	⁽³⁾ Flow	Connection	Pressure drop	Power supply	⁽⁴⁾ Power/Consumption	Cooling flow	Heat rejec.	Type	Mass	W x L x H	Net
	m ³ /h		bar	Ph~V-Hz	kW	m ³ /h	kW		kg	mm	kg
RDL 35	35	G 1/2" BSP-F	<0,2	1~230-50*	0,17 / 0,13	250	0,3	R513a	0,30	236 x 532 x 665	23
RDL 75	75	G 3/4" BSP-F	<0,2	1~230-50/230-60	0,40 / 0,25	250	0,6	R513a	0,35	236 x 532 x 665	24
RDL 100	100	G 1" BSP-F	<0,2	1~230-50/230-60	0,43 / 0,29	250	0,8	R513a	0,37	236 x 532 x 665	30
RDL 180	180	G 1" BSP-F	<0,2	1~230-50/230-60	0,52 / 0,37	700	1,5	R513a	0,42	236 x 573 x 763	46
RDL 235	235	G 1 1/2" BSP-F	<0,2	1~230-50*	0,61 / 0,46	700	1,9	R513a	0,65	236 x 573 x 763	49
RDL 380	380	G 1 1/2" BSP-F	<0,2	1~230-50*	1,1/0,8	1100	3,1	R513a	0,55	288 x 778 x 826	70
RDL 480	480	G 1 1/2" BSP-F	<0,2	1~230-50/230-60	1,2/1,0	1100	3,9	R513a	0,61	288 x 778 x 826	72

⁽³⁾ Nominal conditions: inlet flow 20 °C at 1 bar_a, ambient 25 °C, dryer inlet 35 °C at 7 bar_g, 5 °C pressure dew point (-19,3 °C atmospheric).

⁽⁴⁾ For 60 Hz 20 % more than stated, consumption at nominal conditions.

* Special 60 Hz version available.

CORRECTION FACTORS

To calculate the correct capacity of a given dryer based on actual operating conditions, multiply the nominal inlet flow by the appropriate correction factor(s). CORRECTED CAPACITY = NOMINAL FLOW CAPACITY x C_{OP} x C_{AT} x C_{IN} x C_{DP}

OPERATING PRESSURE

[bar]	4	5	6	7	8	10	12	13
[psi]	58	72	87	100	115	145	174	189
C _{OP}	0,77	0,86	0,93	1	1,05	1,14	1,21	1,24

DEW POINT

°C	3	5	7	10
°F	37,4	41	44,6	50
C _{DP}	0,9	1,0	1,1	1,26

INLET TEMPERATURE

°C	≤25	30	35	40	45	50	55
°F	77	86	95	104	113	122	131
C _{IN}	1,2	1,12	1	0,83	0,69	0,59	0,5

AMBIENT TEMPERATURE

°C	≤25	30	35	40	45
°F	77	86	95	104	113
C _{AT}	1	0,96	0,9	0,82	0,72

MAINTENANCE

For maintenance, please follow the operating manual. Check the dryer operation weekly.