



Refrigeration Compressed Air Dryers



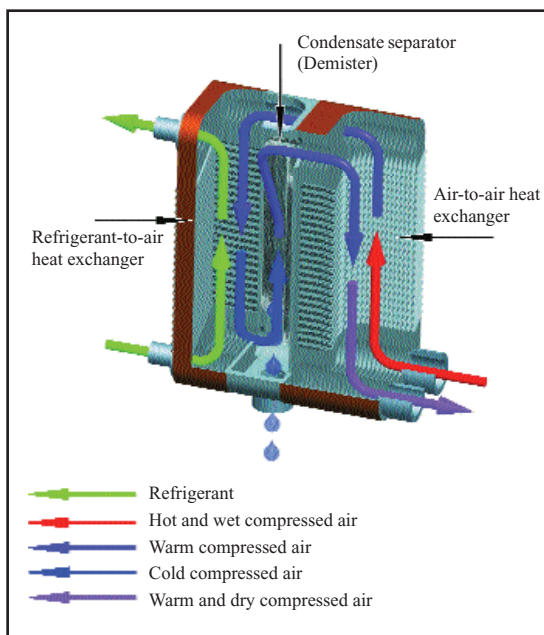
How the Euros dryer works

Compressed air is fed into the dryer and is pre-cooled in the air-to-air heat exchanger by the outgoing cold compressed air. The pre-cooled air then passes through the refrigerant-to-air heat exchanger where it is further cooled to the required pressure dewpoint. The moisture in the compressed air condenses out and is collected and discharged automatically.

Finally, the cold discharged air is rewarmed by the incoming compressed air. This saves energy and prevents any moisture forming beyond the dryer in the compressed air system.

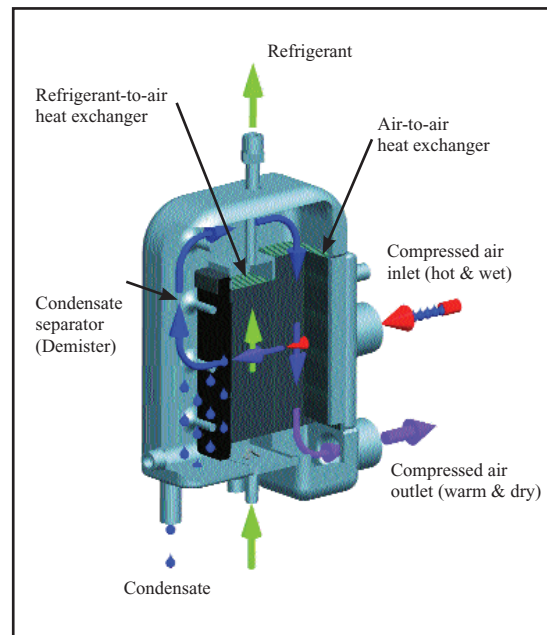
Two different types of heat exchangers

The Euros CQ 0020 A up to CQ 0125 A dryers are equipped with a stainless steel plate type heat exchanger. This type of heat exchanger has a number of advantages, but the unique advantage is that the water separator is part of the heat exchanger. The result is a very compact design and a minimum of compressed air piping.



Stainless steel plate type heat exchanger

The Euros CQ 0150 AE up to CQ 0850 AE dryers are equipped with an aluminium plate type heat exchanger. This aluminium block with a very compact design is used as storage mass to ensure a quick response to load changes. Together with the microprocessor based control device energy savings up to 90 % are possible.



Aluminium plate type heat exchanger

The distinguishing advantages of the two types of heat exchangers

- Generously sized air-to-air and refrigeration-to-air heat exchanger
- Integrated condensate separation
- Low pressure drop
- Corrosion resistant stainless steel or aluminium construction
- High thermal mass for wide range thermal efficiency (aluminium plate type heat exchanger)

Energy savings up to 90 % with the microprocessor based controller

Several times per second the control device measures the temperature of the heat exchanger. The data is processed and the controller calculates if the refrigerant compressor should be switched on or off.

With the aluminium heat exchanger as storage mass, a quick response to load changes is ensured. The pressure dewpoint is shown with two LED lamps (green and red). In general the green lamp signals normal operation and red signals an alarm in the event of a malfunction.



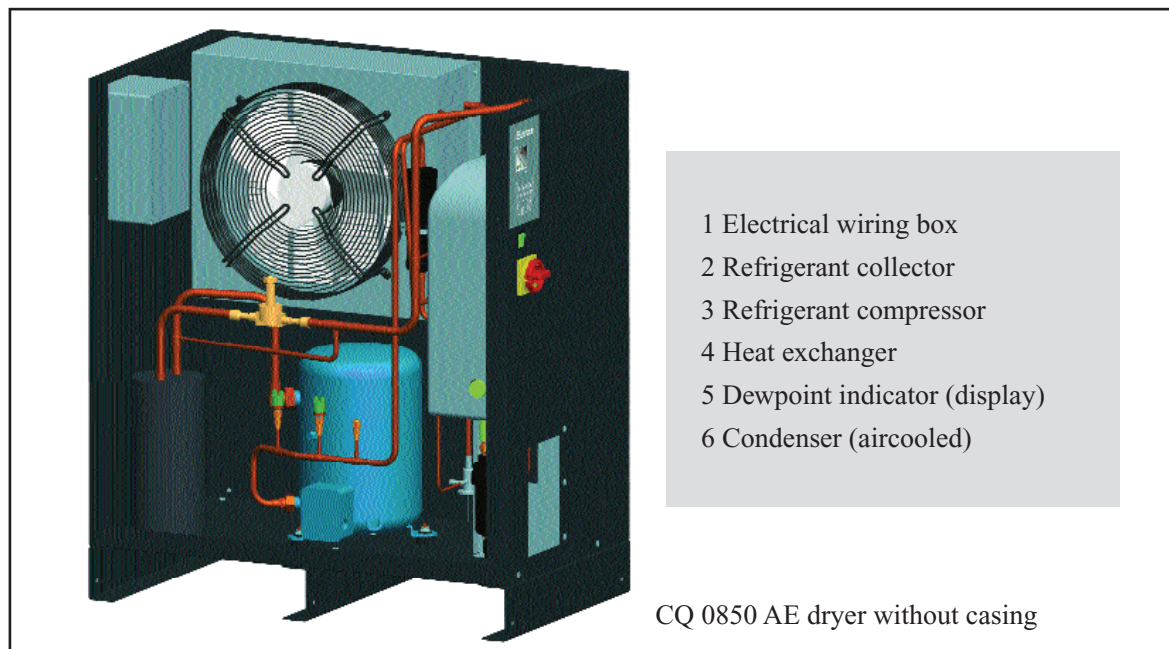
Dewpoint indicator

Ozone-safe, 100 % chlorine free, R-134a refrigerant as standard

All Euro's dryers are equipped with R-134a refrigerant as standard. R-134a has become the industry's choice as the preferred refrigerant because of its ozone depletion factor 0.0 and low global warming potential. R-134a is a one component refrigerant and, therefore, consistent in performance (no temperature glide) and easy to service (no mixture of different refrigerants).

The key advantages of the Euro's dryer range

- Dewpoint indicator as standard for all dryers
- Level-controlled drain "float drain"
- Energy saving controller from size CQ 0150 AE as standard
- One component refrigerant R-134a
- Wide range of possible applications, because of high operation parameters
- Lightweight & compact design
- Easy to install
- Service friendly, the service panel of the housing is removable

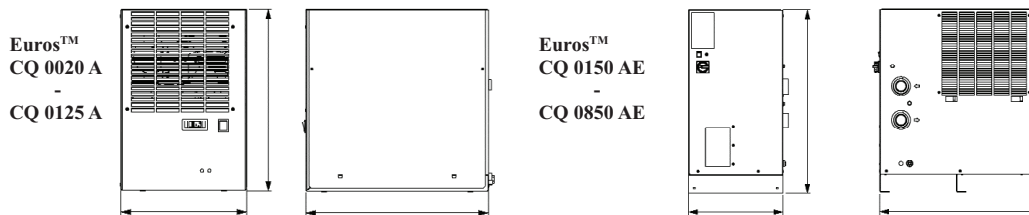


- 1 Electrical wiring box
- 2 Refrigerant collector
- 3 Refrigerant compressor
- 4 Heat exchanger
- 5 Dewpoint indicator (display)
- 6 Condenser (aircooled)

CQ 0850 AE dryer without casing

Technical Data Euros™ CQ 0020 A - CQ 0850 AE

Type	Airflow m³/h	Airflow m³/min	Power Supply m³/h	Power consumption kW			Cooling Air m³/h	Air Connection BSP	Weight kg	Dimensions mm		
				100% Full load	50% Part load	0% Zero load				Width	Height	Depth
CQ 0020 A	20	0,33	230	0,15	0,13	0,11	380	1/2"	25	310	450	450
CQ 0035 A	35	0,58	230	0,16	0,14	0,12	380	1/2"	26	310	450	450
CQ 0050 A	50	0,83	230	0,22	0,20	0,18	320	1/2"	27	310	450	450
CQ 0065 A	65	1,08	230	0,24	0,21	0,19	320	1/2"	28	310	450	450
CQ 0085 A	85	1,42	230	0,26	0,23	0,20	320	1/2"	29	310	450	450
CQ 0105 A	105	1,75	230	0,35	0,31	0,26	260	1/2"	31	310	450	450
CQ 0125 A	125	2,08	230	0,44	0,39	0,33	260	1/2"	32	310	450	450
CQ 0150 AE	150	2,50	230	0,45	0,25	0,05	650	1"	59	500	740	710
CQ 0180 AE	180	3,00	230	0,56	0,31	0,06	650	1 1/2"	60	500	740	710
CQ 0225 AE	225	3,75	230	0,62	0,34	0,06	650	1 1/2"	66	500	740	710
CQ 0300 AE	300	5,00	230	0,90	0,50	0,09	1300	1 1/2"	79	500	740	710
CQ 0360 AE	360	6,00	230	0,95	0,52	0,10	1300	1 1/2"	80	500	740	710
CQ 0450 AE	450	7,50	230	1,08	0,59	0,11	900	1 1/2"	85	500	740	710
CQ 0550 AE	550	9,17	400	1,25	0,69	0,13	2700	2"	90	500	970	850
CQ 0650 AE	650	10,83	400	1,30	0,72	0,13	2700	2"	92	500	970	850
CQ 0750 AE	750	12,50	400	1,50	0,83	0,15	2700	2"	117	500	970	850
CQ 0850 AE	850	14,17	400	1,77	0,97	0,18	2700	2"	121	500	970	850



Volume flow referred to the suction status of the air compressor (+20°C, 1 bar), with compressed air inlet temperature 35°C, operating pressure 7 bar g, ambient temperature 25°C, pressure dewpoint +3°C, measured at dryer outlet in accordance with DIN ISO 7183. Permitted ambient temperature: min. +2°C – max. 50°C, max. operating pressure: 16 bar g (CQ 0020 A - CQ 0125 A) and 14 bar g (CQ 0150 AE - CQ 0850 AE). Permitted inlet temperature: max. 70°C (CQ 0020 A - CQ 0125 A) and max. 65°C (CQ 0150 AE - CQ 0850 AE). Protection class IP 20, noise pressure level: dB(A) <70.

Working pressure	bar g	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Factor	f _p	0,60	0,70	0,80	0,88	0,94	1,00	1,04	1,06	1,09	1,10	1,12	1,14	1,15	1,16	1,17

Dewpoint	°C	3	5	7	10	15	Ambient temperature	°C	25	30	35	40	45	50
Factor	f _{pd}	1,00	1,12	1,24	1,36	1,45	Factor	f _{ta}	1,00	0,97	0,94	0,87	0,75	0,62

Compressed air inlet temp.	°C	30	35	40	45	50	55	60	65	70
Factor	f _u	1,28	1,00	0,88	0,75	0,58	0,48	0,44	0,42	0,40

Corrected dryer capacity =
Standard dryer capacity x f_p x f_{ti} x f_{ta} x f_{tpd}

Technical alterations reserved (3/2007)

Donaldson
Ultrafilter

Product Program

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