



Drying - DRYPOINT® RAc compact

DRYPOINT® RAc compact: Economy Series Compact Refrigeration Dryers

Humidity in compressed-air systems poses a permanent risk for your operating procedure. Therefore, compressed air must be dried. DRYPOINT® RAc compressed air refrigeration dryers complement the BEKO TECHNOLOGIES dryer programme with another reliable and economically priced alternative. The intelligent construction of the DRYPOINT® RAc offers the most economical way to dry compressed air.

For the DRYPOINT® RAc, the condensate drainage was integrated in the device concept: the refrigeration dryers are equipped with a BEKOMAT® as standard.

Technical highlights include: a vertical heat exchanger allowing logical condensate flow from top to bottom; a stainless steel demister for reliable separation; and a large calm zone to minimise condensate carry-over. In addition to that, all DRYPOINT® RAc dryers are equipped with a potential-free alarm contact.

The product series combines an outstanding price-performance ratio with high performance reliability.

› High Reliability and Compact

- › Vertical profile of the heat exchanger allows for optimal drying and self cleans using gravitational force.
- › A simple and proven design is backed up by an effective control system (hot gas bypass) to ensure reliable performance.
- › Economic initial investment that also saves costly floor space with the smallest footprint.

› Efficient Condensate Management

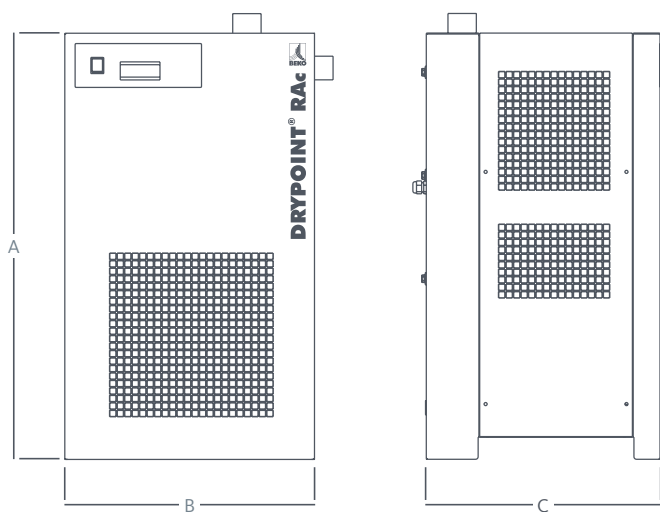
- › No compressed air loss and reliable operation thanks to the integrated BEKOMAT®.

› Easy Installation and Maintenance Friendly

- › Easy installation of RAc dryers thanks to a plug and play concept.
- › The entire range provides easy access to all components.



Better through Responsibility



All DRYPOINT® RAc dryers are equipped with a simple and intuitive control-system DMC 16

- › Potential-free alarm contact
- › Service messages
- › Operating-hour meter

Type	Air volume flow m³/h	Power consumption kW	Pressure drop bar	Air connection	A mm	B mm	C mm	Weight (kg)
RAc 3	21	0.15	0.15	G ¾ BSP-F	435	310	370	21
RAc 6	36	0.16	0.04	G ½ BSP-F	475	370	515	25
RAc 9	57	0.19	0.09	G ½ BSP-F	475	370	515	26
RAc 12	72	0.21	0.14	G ½ BSP-F	475	370	515	28
RAc 18	108	0.29	0.32	G ½ BSP-F	475	370	515	32
RAc 25	150	0.39	0.24	G 1 BSP-F	740	345	420	34
RAc 32	192	0.48	0.16	G 1¼ BSP-F	740	345	445	39
RAc 43	258	0.71	0.24	G 1¼ BSP-F	740	345	445	40
RAc 52	312	0.72	0.34	G 1¼ BSP-F	825	485	455	50
RAc 61	366	0.82	0.19	G 1 ½ BSP-F	885	555	580	54
RAc 75	450	0.71	0.25	G 1 ½ BSP-F	885	555	580	56
RAc 105	630	0.92	0.14	G 2 BSP-F	975	555	625	94
RAc 130	780	1.4	0.2	G 2 BSP-F	975	555	625	96
RAc 168	1008	1.5	0.15	G 2½ BSP-F	1105	665	725	144
RAc 190	1140	1.9	0.21	G 2 ½ BSP-F	1100	645	920	189
RAc 220	1320	2.31	0.28	G 2 ½ BSP-F	1100	645	920	212

Operating conditions	
Max. Compressed air inlet temperature	55°C
Min. ... max. Operating pressure RAc 3 - RAc 18	4 ... 16 bar [g]
Min. ... max. Operating pressure RAc 25 - RAc 220	4 ... 14 bar [g]
Min. ... max. Ambient temperature	2°C ... 45°C
Refrigerant RAc 3 - RAc 32	R134.a
Refrigerant RAc 43 - RAc 220	R407C

Electrical power supply (other voltages on request)	
RAc 3 - RAc 25 with DMC16 controller	230 V, 50 ... 60 Hz, 1 ph.
RAc 32 - RAc 220 with DMC16 controller	230 V, 50 Hz, 1 ph.

Reference conditions in accordance with DIN/ISO 7183:	
Air flow m³/h in relation to 20°C	1 bar [a]
Operating pressure (p1)	7 bar [g]
Compressed air inlet temperature (t1)	35°C
Cooling media temperature (tc)	25°C
Humidity	saturated

Correction Factors	With other operating pressures multiply air flow with factor f1							
[bar]	4	5	6	7	8	10	12	14
f1	0,77	0,86	0,93	1,00	1,05	1,14	1,21	1,27

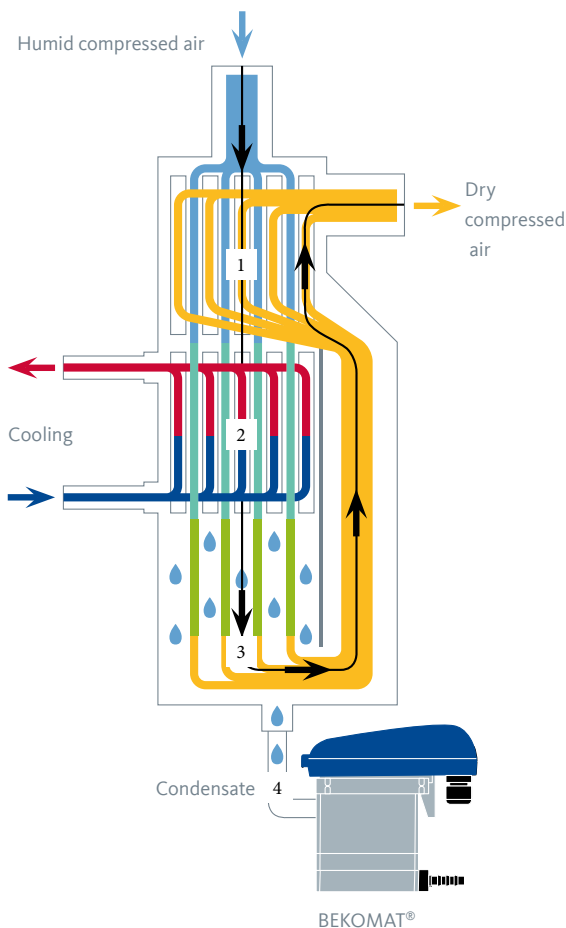
With other cooling media multiply air flow with factor f2								
[°C]	25	30	35	40	45			
f2	1,00	0,95	0,88	0,79	0,68			

With other compressed air inlet temperatures multiply air flow with factor f3								
[°C]	25	30	35	40	45	50	55	
f3	1,20	1,11	1,00	0,81	0,67	0,55	0,45	

All models are equipped with BEKOMAT® condensate drains as standard.

To protect the dryer, the installation of a CLEARPOINT® universal filter (G, 5µm) or of a finer grade at the inlet is recommended.

Drying according to the efficiency principle: The operating principle of DRYPOINT® RAc



In the DRYPOINT® RAc, compressed air drying takes place via an optimum heat exchange through a counter-flow process over the cooling surface; the air flows constantly in a downward movement without turbulence.

Warm compressed air, saturated with water vapor, is pre-cooled in the air/air heat exchanger (1) when entering the refrigeration dryer. The required cooling capacity of the refrigerant in the downstream air/refrigerant heat exchanger (2) is reduced by this action and the system becomes more energy-efficient.

The gravitational force sustains a particularly high droplet separation of nearly 99%. In the very large condensate collection chamber with subsequent recirculation, the flow velocity is significantly reduced. Re-entrainment of already separated droplets is reliably prevented in this manner (3).

The accumulated condensate is discharged from the DRYPOINT® RAc via the level-controlled BEKOMAT® condensate drain avoiding any compressed air losses, and can be processed reliably using processing systems such as the ÖWAMAT® oil-water separation system or the BEKOSPLIT® emulsion-splitting plant (4).

Prior to leaving the DRYPOINT® RAc, the dried and cold compressed air is reheated in the air/air heat exchanger. Through this process, the relative air humidity is significantly reduced and the cooling capacity employed is recovered by up to 60 %.

Do you have further questions in relation to the optimum processing of your compressed air?

We have the answer! And suitable solutions around the processing chain. We would be happy to hear from you and to show you our products in the areas of condensate processing, filtration,

drying, measuring technology and process technology as well as our extensive services.

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