DRYPOINT® M PLUS

Drying

Efficiency in the smallest space

DRYPOINT® M PLUS, the all-in-one solution for filtration and drying

Two in one: the successful concept of DRYPOINT® M PLUS

The most important objective in compressed-air processing is to remove contaminations and humidity from the compressed air. The condensation of water in compressed air systems causes corrosion, promotes the growth of micro-organisms and represents a permanent danger to the operating procedure. Compressed air with a high content of humidity can lead, for example, to a breakdown of the pneumatic controls, to increased wear and tear or to other failures in the production process.

High performance demands
The demands on the degree of drying (pressure dew point) vary depending on the application. However, they should always be met with the lowest possible use of energy. In addition, the dry compressed air must be immediately available.
The precondition for this is a finely graded range of products and the know-how of the manufacturer regarding the performance characteristics of the dryers under widely differing operating conditions. The solution:
DRYPOINT® M PLUS made by **BEKO** TECHNOLOGIES.

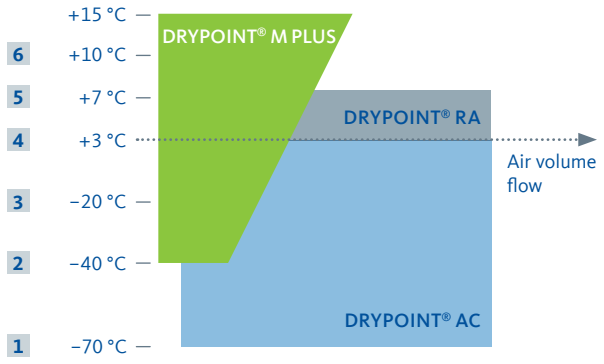
Demand-oriented and energy-efficient
DRYPOINT® M PLUS membrane dryer with an integrated nanofilter is the innovative solution for efficient filtration and drying in one housing. It offers reliable compressed-air drying with low purge air demands, requires no electric energy and contains no environmentally harmful desiccants. The integrated nanofilter increases the quality of the dried compressed air and the reliability and long-term stability of the highly selective hollow-fibre membranes. The high-capacity DRYPOINT® M PLUS is even suitable for the processing of breathing air.

Drying and filtering in new dimensions

With the integration of a compressed-air filter and a membrane dryer in one housing, the DRYPOINT® M PLUS offers highest safety and flexibility to the user. Thanks to its compact construction type, the device is suitable for use with widely differing space requirements. The performance of the membrane dryer made by **BEKO** TECHNOLOGIES with its wide drying spectrum makes it attractive for versatile tasks. In extensive compressed air systems with central processing, DRYPOINT® M PLUS can also be employed where additional compressed-air processing is required as a result of demanding plant technology, for example for point-of-use drying at decentralised supply points. With the corresponding prefiltration, the employment directly downstream of oil-lubricated compressors is also possible. DRYPOINT® M PLUS is particularly easy to maintain and needs no electric energy.

Compressed air of highest quality

Depending on the volume flow, pressure, size and purge-air setting, pressure dew points down to -40°C are achieved with the DRYPOINT® M PLUS. The compressed air corresponds to the quality requirements of ISO 8573-1.



Pressure dew point **1–6** = quality class in accordance with ISO 8573-1

The right turn: the operating principle of the DRYPOINT® M PLUS

In the DRYPOINT® M PLUS compressed-air membrane dryer, the air is dried according to the physical principle of the partial vapour pressure compensation of water vapour through diffusion. This is particularly efficient and energy-saving thanks to the patented TWIST 60 technology of **BEKO** TECHNOLOGIES. The special winding method of the fibres in the membrane element leads to optimum flow conditions at a lower construction height and reduces the purge air demand. The filter element directly upstream of the hollow-fibre membranes offers effective protection against aerosols and particles.

1 The compressed air flows into the core tube of the membrane dryer.

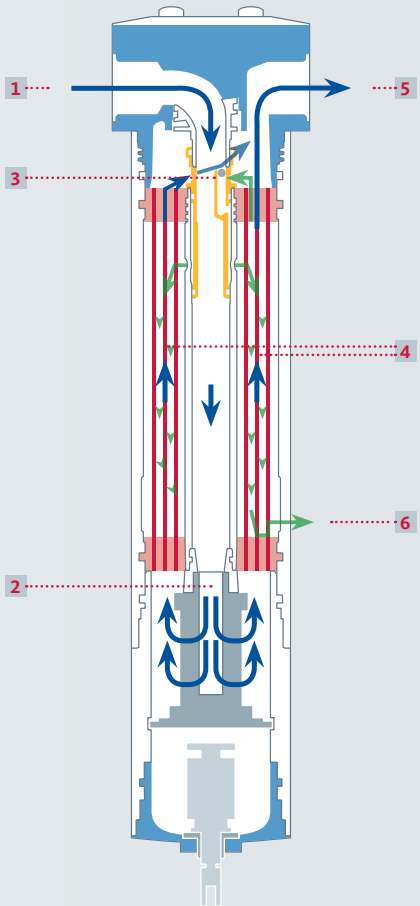
2 In the filter element, it is diverted; filtered compressed air enters the hollow fibres of the membrane element.

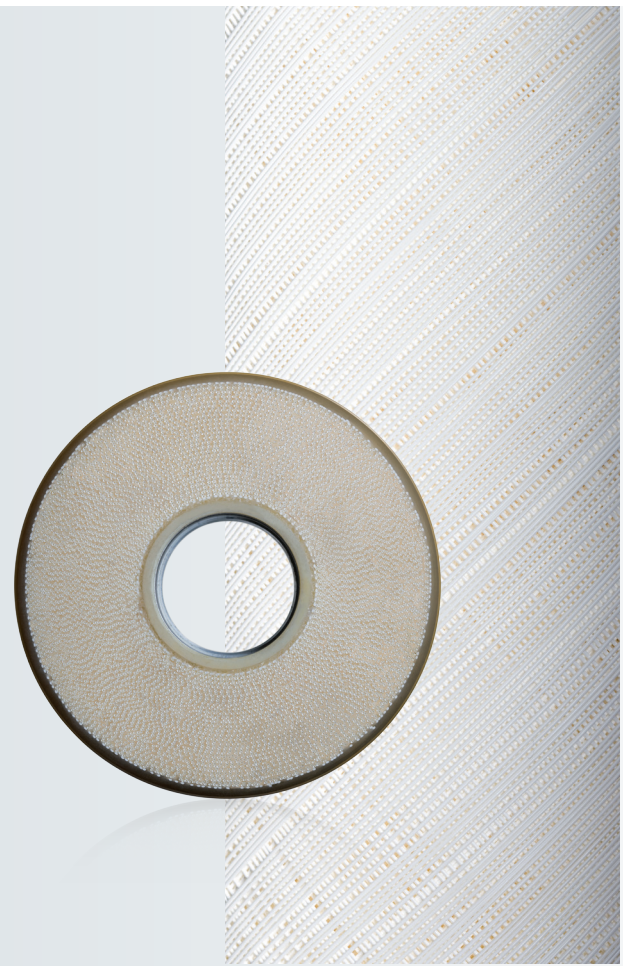
3 The purge air required for drying is continuously diverted in the outlet zone of the membrane element and is atmospherically expanded through a defined nozzle opening. This purge air is significantly drier due to the expansion, as the humidity contained in the compressed air is now distributed to a multiple of volume. The dry purge air is led via the outside of the membrane fibres.

4 Two air flows with different moisture contents move in a reverse current through the membrane element, only separated by the membrane wall. The humid compressed air flows in the hollow-fibre membranes, and the dry purge air flows outside. As a result of the different moisture contents, the humidity diffuses from the compressed air into the purge air. The drying process is highly efficient thanks to the controlled winding of the membrane fibres, the TWIST 60 technology.

5 The dry compressed air leaves the membrane element.

6 The humid purge air is released into the environment.





DRYPOINT® M PLUS with purge-air shut-off option for increasing energy efficiency.

You do not always need a constant flow of dry compressed air. In such instances, the purge air means that compressed air is used unnecessarily. Thanks to the DRYPOINT® M PLUS's purge air barrier, purge air is only used when dried compressed air is needed as well.

As a result, the DRYPOINT® M PLUS provides greater energy efficiency and cuts down on the cost of generating compressed air.

DRYPOINT® M PLUS as an FDR unit

The FDR unit is a compact combination that consists of a **F**ilter, **D**ryer and **P**ressure regulator. It is the perfect solution for terminal applications.
The FDR unit comes fully assembled and just needs to be connected to the compressed air line.

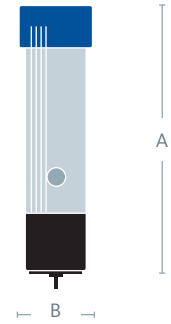
The advantages at a glance

- **Compact Plug & Play solution**
- **Pressure regulator 4 – 10 bar for constant pressure at the point of use**
- **Optionally available with an additional activated carbon filter for reducing oil vapours**

In use everywhere: DRYPOINT® M PLUS types and applications

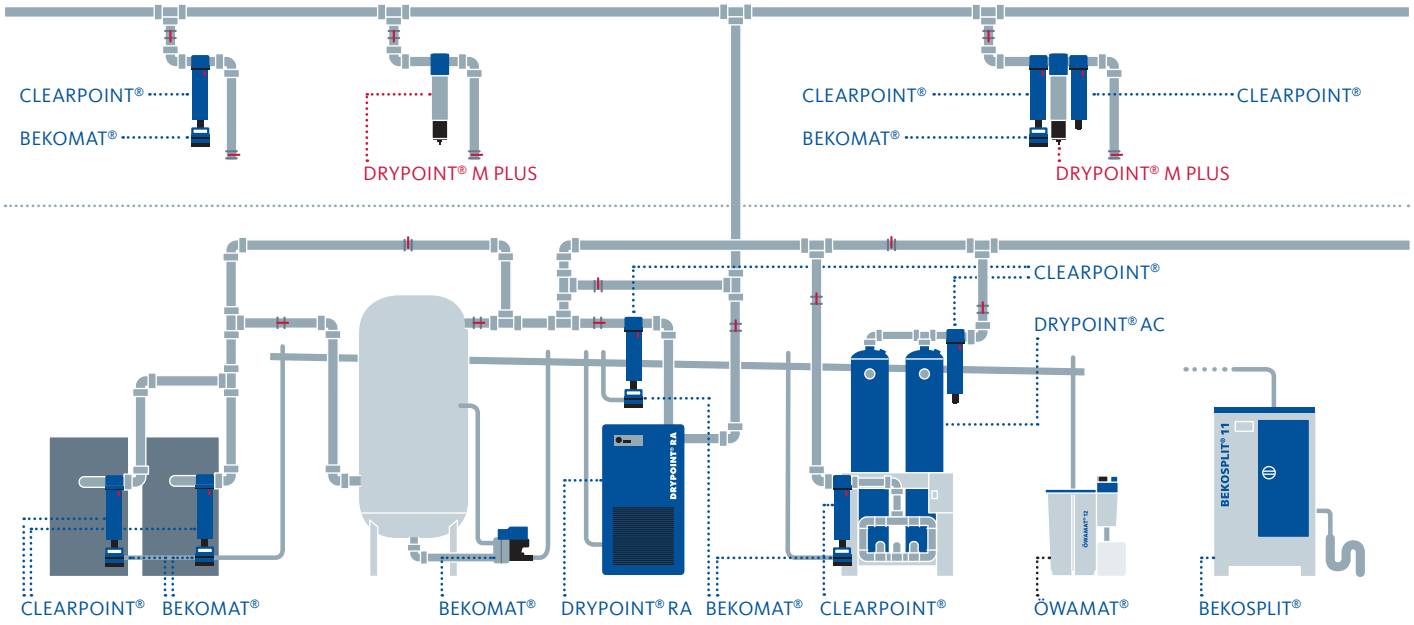
DRYPOINT® M PLUS is available in several sizes, for different drying degrees, and is equipped with a float drain. Depending on the volume flow, pressure, size and purge-air setting, standard pressure dew points of down to 40°C are achieved. Customer-specific designs, e.g. for lower pressure dew points, are possible at any time.

Operating conditions DRYPOINT® M PLUS	
Pressure difference	0.1–0.3 bar (depending on the volume flow and size)
Filter, integrated	Class 1.-1. in accordance with ISO 8573-1 (depending on the application, additional filters connected ahead need to be provided)
Conditions of use	Temperature +2 °C to +60 °C / pressure up to 7 bar Temperature +2 °C to +50 °C / pressure up to 12.5 bar



Size	DM 08 G19 KA - N	DM 08 G24 KA - N	DM 08 G28 KA - N	DM 08 G34 KA - N	DM 10 G34 CA - N	DM 10 G41 CA - N	DM 10 G47 CA - N	DM 20 G48 CA - N	DM 20 G53 CA - N	DM 20 G60 CA - N	DM 20 G67 CA - N	DM 40 G61 CA - N	DM 40 G75 CA - N	DM 40 G90 CA - N
Drying performance (inflow in l/min at 7 bar)														
Pressure dew point reductions from														
35 °C to +15 °C (5 °C to −7 °C)	50	100	150	200	270	300	400	600	800	1050	1350	1650	2450	–
35 °C to +3 °C (5 °C to −17 °C)	32	66	100	133	181	199	266	399	532	765	910	1125	1690	2250
35 °C to −10 °C (5 °C to −26 °C)	23	49	74	99	139	149	198	297	396	590	700	860	1290	1720
35 °C to −20 °C (5 °C to −35 °C)	19	42	63	84	120	127	169	253	338	505	605	740	1110	1480
Purge air (l/min)	5	10	15	20	30	30	40	60	80	120	150	180	270	360
Dimension Data														
A	265	315	355	415	435	505	565	575	625	695	765	795	935	1085
B	46	46	46	46	75	75	75	100	100	100	100	146	146	146
Weight (kg)	0.79	0.87	0.94	1.03	1.85	2.1	2.3	3.5	3.8	4.1	4.4	9.1	10.2	11.3
Thread	G ¼				G ⅜			G ¾				G 1½		

Membrane dryers for higher pressures and temperatures upon request.
Please feel free to avail yourself of our professional expertise, e.g. for a design to fit any other conditions. We would be happy to advise you.



The DRYPOINT® M PLUS advantages at a glance

All-in-one: filtration and drying in one housing	Twist 60 technology for highest efficiency	Integrated condensate drain
Optimum filtration directly upstream of the membrane	No change in the compressed-air composition / temperature	Easy filter element replacement

Our fields of competence

Drying | DRYPOINT® | EVERDRY®

Significantly reduced operating costs with the application-optimized DRYPOINT® refrigerant, adsorption, and membrane dryers and the EVERDRY® heat-regenerated adsorption dryers.

Filtration | CLEARPOINT®

Condensate technology
BEKOMAT® | ÖWAMAT® | BEKOSPLIT®

Service

Measurement technology
METPOINT®

Process technology
BEKOBLIZZ® | BEKOKAT®

BEKO TECHNOLOGIES GmbH
Im Taubental 7
41468 Neuss | Germany

Phone +49 2131 988-0
Fax +49 2131 988-900

info@beko-technologies.com
www.beko-technologies.com

ISO 9001:2008 DNV Certified Company

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