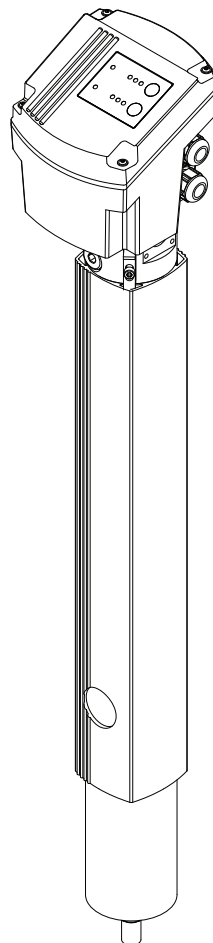


Installation and operation instructions

Drying system

DRYPOINT[®] M intelligence



- MDi 12 | -LV
- MDi 17 | -LV
- MDi 25 | -LV
- MDi 35 | -LV
- MDi 45 | -LV
- MDi 55 | -LV
- MDi 65 | -LV
- MDi 100 | -LV
- MDi 130 | -LV

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1. Safety information

1.1. Pictograms and symbols

1.1.1. In this documentation



General instructions



Observe installation and operating instructions



General hazard symbol (danger, warning, caution)



General hazard symbol (danger, warning, caution) relating to mains voltage and powered machine parts

1.1.2. On the device



eco label
Label awarded to particularly energy-efficient devices



Maintenance information for nanofilter:
Date of next filter change



Maintenance information for nanofilter:
Do not open the housing head when exchanging the filter.



General instructions



General hazard symbol (danger, warning, caution)






General hazard symbol (danger, warning, caution) relating to mains voltage and powered machine parts

1.2. Signal words according to ISO 3864 and ANSI Z.535

DANGER	Imminent danger Consequences of non-compliance: serious or even fatal injury
WARNING	Potential danger Consequences of non-compliance: serious or even fatal injury
CAUTION	Imminent danger Consequences of non-compliance: injury and/or damage to property
NOTICE	Additional notes, tips and hints Consequences of non-compliance: Disadvantages in operation and maintenance. No risk to persons

1.3. Safety instructions


DANGER	Escaping compressed gas
	<p>Risk of serious or even fatal injury from suddenly released compressed gas or condensate at bursting and/or unsecured device components.</p> <ul style="list-style-type: none"> • Before carrying out any assembly, installation or maintenance work, depressurize the system. All electrical work must be carried out by authorized specialist technical personnel¹. • Use only pressure-resistant installation materials and suitable tools that are in proper working order. • Before pressurizing the system, check all unit parts and repair them, if necessary. Open valves slowly to prevent pressure blows during operation. • Make sure that no persons can be injured or objects can be damaged by condensate or escaping compressed gas. • Protect the device parts against vibration and impact. • Perform a leakage test.
DANGER	Mains voltage
	<p>Risk of serious or even fatal injury from electric shock when coming into contact with non-insulated, powered components.</p> <ul style="list-style-type: none"> • For the electrical installation of the device, adhere to all applicable regulations (e.g. VDE 0100 / IEC 60364). • Before carrying out any maintenance work, de-energize the system. • All electrical work must be carried out by authorized specialist technical personnel¹. • The permissible operating voltage is printed on the name plate and must be strictly adhered to. • All components of the electrical installation on site must be approved and/or bear the CE mark. • A reliably accessible circuit breaker (e.g. power plug or switch) that shuts off all live conductors must be installed close to the unit.
WARNING	Operation of unit outside limit range
	<p>If the specified limits are exceeded, there is a risk of plant malfunction, potentially resulting in injury and/or damage to property.</p> <ul style="list-style-type: none"> • The unit must only be operated for the intended purpose and within the permissible limits specified on the name plate and in the technical data. • Strictly adhere to the prescribed operating times and maintenance intervals. • Observe the prescribed storage and transport conditions.

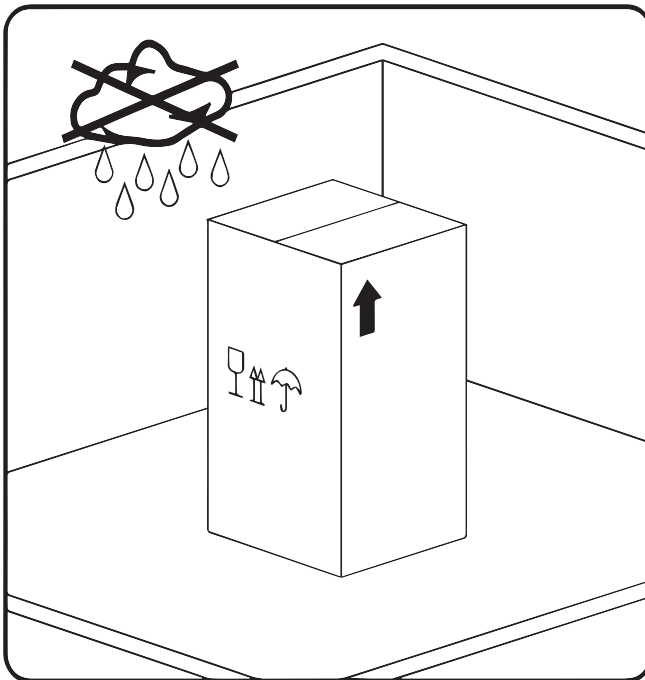
¹Specialist technical personnel

Specialist technical personnel are persons who, due to their professional qualification and knowledge in the field of measuring, control and pneumatic technology, and their knowledge of the applicable statutory regulations, guidelines and standards are in a position to foresee potential dangers in relation to the use of the device and are qualified to perform the tasks described in this manual. Special operating conditions (e.g. aggressive media) require additional knowledge.

1.4. Transport and storage

Despite our best efforts regarding packaging, etc., the device might be damaged during transport. Upon receipt, please remove all packaging material and inspect the product for visible damage. If you detect such damage, immediately notify the carrier company and BEKO TECHNOLOGIES GMBH or one of its agents.


CAUTION	Damage caused during transport or storage
	<p>Incorrect transport or storage, or the use of unsuitable lifting equipment might cause damage to the device.</p> <ul style="list-style-type: none"> • The device must only be transported and stored by authorized and suitably trained technical personnel. • If you detect any damage, do not start the device. • Adhere to the permissible storage and transport temperatures (see technical data). • Protect the device against direct sunlight and heat radiation.



The device must be stored in the original packaging, sealed the packaging and stored in a dry and frost-free room. Ensure that the storage temperature does not exceed the limits specified on the name plate.

Even when packaged, take suitable measures to protect the device against the elements.

While in storage, secure the device so that it cannot topple over or fall, and protect it against vibration.

NOTICE	Recycling of packaging material
	<ul style="list-style-type: none"> • The packaging material is recyclable. Dispose of the packaging material according to the applicable statutory regulations of the destination country.

1.5. Intended use

The DRYPOINT® M intelligence drying system with integrated nanofilter and pressure dew point control is designed for the removal of aerosols and particles from compressed air and subsequent downstream drying of the air, based on customer settings.

Operate the DRYPOINT® M intelligence only for the intended purpose and within the limit range specified in the technical data. Do not operate the unit with any media (fluids, gas/vapor mixtures) other than those listed above. Any other use of the device is deemed improper and poses a risk to persons, property and the environment.

- The unit must be operated within the permissible operating parameter limits (see technical data).
- For proper operation, the air/gas to be treated must be at operating pressure.
- The unit is not suitable for operation in potentially explosive or aggressive atmospheres.
- Do not operate the unit to treat corrosive gases.
- Strictly observe the prescribed storage and transport conditions.
- The unit is not designed for use in conjunction with CO₂ systems.

With an application in systems with increased requirements for compressed air quality (food or foodstuff industry, medical technology, laboratory equipment or facilities, specialised processes etc.) the operator must decide on measures for the monitoring of the compressed-air quality. Such equipment might also help enhance the safety of the downstream processes, preventing damage to persons and property. It is the task of the operator to ensure that the above conditions are met during the entire operating time.

1.6. Warranty and liability

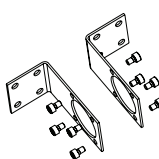
All liability claims shall be voided, if the DRYPOINT® M intelligence is used improperly, for a purpose other than the intended or is operated outside the limits specified in the technical data. Improper operation includes especially:

- Incorrect installation, commissioning or operation; insufficient maintenance
- Operation with defective components
- Non-compliance with the instructions in this document, in particular the safety instructions
- Execution of construction related interactions or modifications of the device
- Non-compliance with the prescribed maintenance intervals
- Use of third-party spare parts that have not been approved by the manufacturer

2. Product information

2.1. Scope of delivery

The table below shows the scope of delivery of the DRYPOINT® M intelligence.

Type	Wall bracket
MDi12 ... MDi 55	
MDi 65 ... MDi 130	

2.2. Name plate





The drying system features two name plates. One name plate refers to the control unit, the other refers to the entire unit.

2.2.1. Name plate of drying system

DRYPOINT® M intelligence

Type: MDi 55
 Material-no.: 4040189
 Serial-no.: 13830052
 Lot: 201804
 Element: 06N-V02
 Element mat.-no.: 4010849
 Work. temp. TS: +35 ... 122 °F / +2 ... +50 °C
 Max. work. pr. PS: 58 ... 145 psi / 4 ... 10 bar
 Connection: pipe NPT 1/2
 Power supply: 95 ... 240 VAC ± 10 %
 50-60 Hz
 100 ... 125 VDC ± 10 %

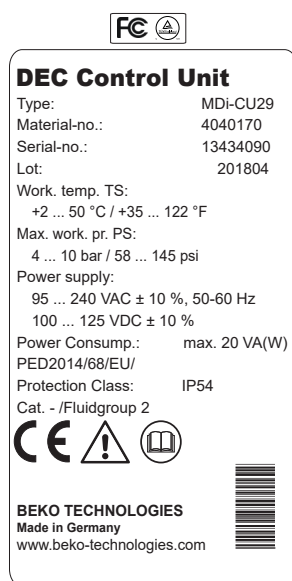
Power Consumption: max. 20 VA(W)
 PED2014/68/EU/Category - Fluidgroup 2

BEKO TECHNOLOGIES
 Made in Germany
www.beko-technologies.com

Designation	Description
Type:	Type designation
Material No.:	Material number
Serial No.:	Serial number
Lot:	Date of manufacture
Element:	Designation of integrated filter element
Element mat. No.:	Material number of integrated filter element
Work. temp. TS:	Permissible min./max. operating temperature
Max. work. pr. PS:	Permissible min./max. operating pressure
Connection:	Pipeline connection
Power supply:	Power supply rating
Protection class:	IP class
PED2014/68/EU/Category	Permissible fluid group according to European Pressure Equipment Directive

2.2.2. Type plate of control unit

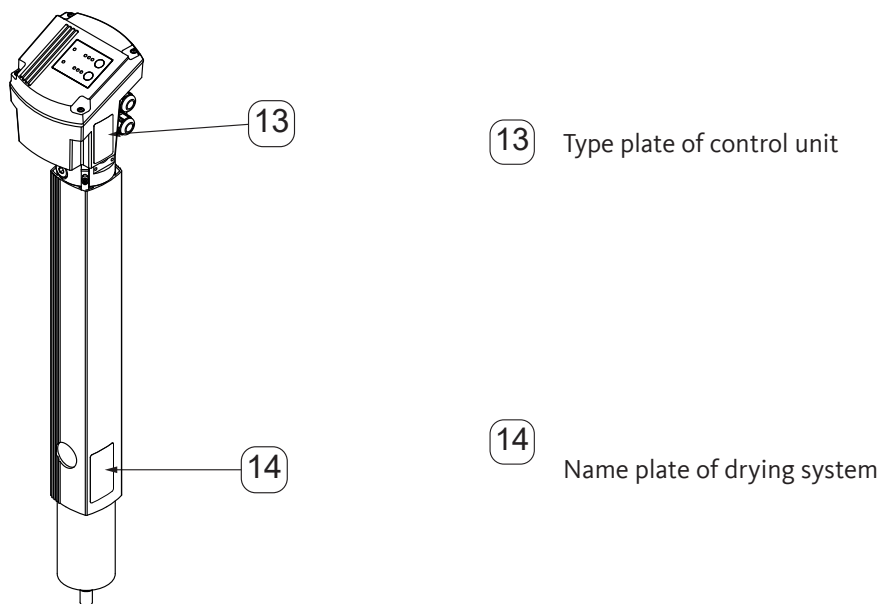
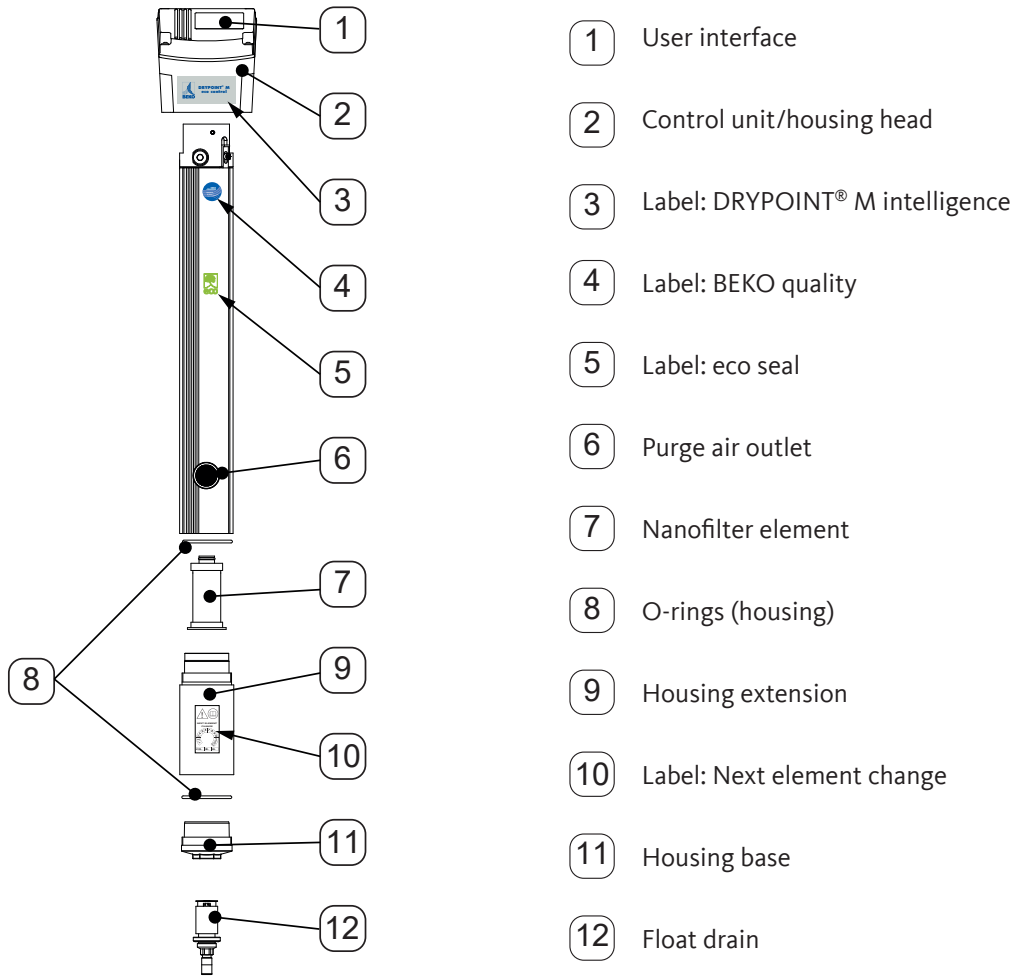


Designation	Description
Type:	Type designation
Material No.:	Material number
Serial No.:	Serial number
Lot:	Date of manufacture
Work. temp. TS:	Permissible min./max. operating temperature
Max. work. pr. PS:	Permissible min./max. operating pressure
Power supply:	Power supply rating
Protection class:	IP class
PED2014/68/EU/Category	Permissible fluid group according to European Pressure Equipment Directive

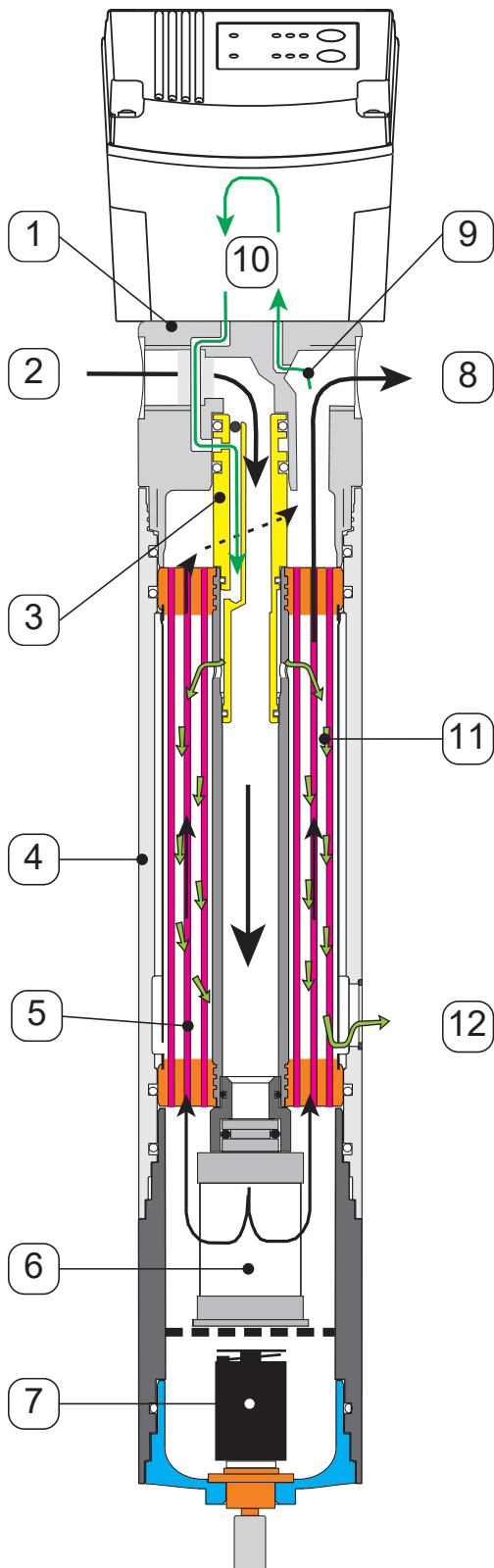
NOTICE	Handling of name plate
	Do not remove or cover the name plate, and protect it against damage. For more information regarding the symbols used, see “Pictograms and symbols“ on page 4.

2.3. Product overview and description

The DRYPOINT® M intelligence is a drying system that guarantees a constant degree of drying even under fluctuating operating conditions. The sensor system integrated into the control unit (2) responds to changes in the operating pressure, the pressure dew point at the inlet and fluctuations in the compressed air demand. The display and control elements of the unit are integrated into the control panel (1). The control panel shows the current operating mode as well as the set degree of drying. A change of the operating mode or the degree of drying is possible at any time during continuous operation.



2.3.1. Operating principle



Humid compressed air (2) enters the unit through the housing head (1) and flows downwards through the core tube of the membrane element (5). A nanofilter is located at the outlet of the core pipe (6) fixed, which removes residual aerosols and particles from the compressed air. The resulting condensate is drained off at the base and is discharged by the float drain (7).

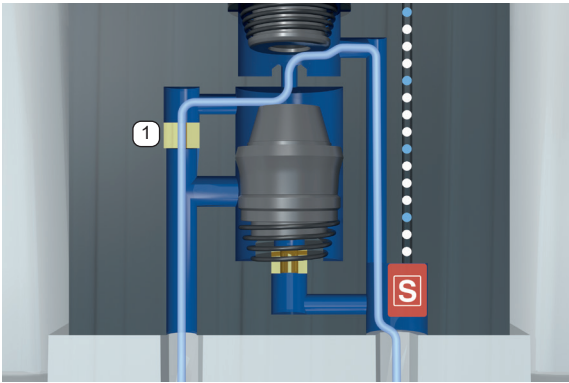
At the nanofilter element, the compressed air is directed in the opposite direction and the humid compressed air flows through the membranes of the internal membrane element.

A partial flow (9) of the compressed air will be branched after the membrane element and bypasses the sensor continuously in the purge air control. Based on the sensor signals, the purge air control opens the purge air inlet to the membrane dryer, if purging is required. As a result, the purge air pressure drops to the atmospheric pressure and is much dryer than the compressed air, as the moisture is distributed to a much larger volume.

The very dry purge air (10) will be routed through the purge air channel in the head and purge air nozzle (3) to the outside of the membranes (11) and will be evenly distributed due to the orderly position of the membranes. This means that there are two air flows through the membrane element (5) with different humidity content in the counter flow. Humid compressed air at the inside and dry purge air at the outside.

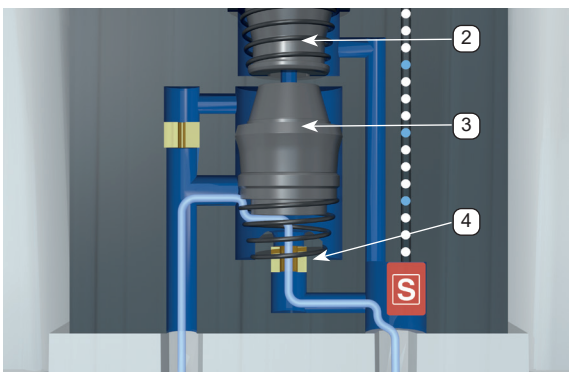
Due to the humidity gradient, water diffuses from the compressed air to the purge air. The humid purge air (12) is then released to the ambient air. The dried compressed air (8) leaves the membrane dryer.

The control software decides in cycles if and for how long the complete purge air volume is to be supplied in order to achieve and stabilize the required degree of drying. This process is implemented by means of a cycle-operated solenoid valve. The time for the two subprocesses described below therefore varies in each cycle, in order to keep the degree of drying within the specified tolerance range.



Function: Measuring gas flow

A very small partial flow of the dried compressed air (measuring gas) flows continuously through the internal channel along the temperature and humidity sensor (S) to the measuring gas nozzle (1). This sensor continuously measures the moisture content of the compressed air in the measuring gas and sends the result to the control.



Function: Purge air flows

The control continuously compares the measured degree of drying of the measuring gas with the setpoint value for the DRYPOINT® M intelligence. The valve unit is actuated in case of deviations: The solenoid core (2) and the piston (3) close the valve seat so that the compressed air flows through the purge air nozzle (4) to the membrane dryer. The drying process commences without delay.

2.3.2. Operating mode

Constant mode (-14 °F; factory-set) - the pressure dew point at the outlet is kept constant:

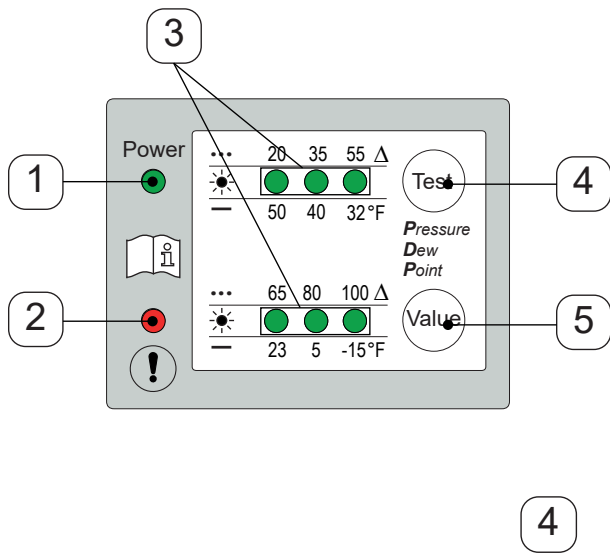
In this operating mode, the DRYPOINT® M intelligence keeps the set outlet pressure dew point constant between +50 and -15 °F. If the set pressure dew point is less than 10 °F below the compressed air temperature, the setpoint pressure dew point is automatically reduced by one step (to max. -15 °F). As soon as the difference is again 10 °F, the system returns to normal operation.

Dynamic mode - the difference between the compressed air temperature and the outlet pressure dew point is kept constant:

In this operating mode, the pressure dew point is reduced relative to the compressed air temperature by a specified difference between 20 and 100 °F. If the compressed air temperature changes, the pressure dew point follows automatically. For technical reasons, the compressed air temperature increase is limited to 4 °F/h in order to eliminate insignificant short-term changes in the ambient conditions on site.

2.4. Control and display elements

The DRYPOINT® M intelligence is controlled through the control panel at the top of the housing. The current operating mode is indicated by LEDs.




- 1 Power LED (green)**
Indicates operating mode and power supply
- 2 Warning LED (red)**
Indicates alarms, errors and malfunctions in operation
- 3 Value LED (green)**
Indicates setpoint values
- 4 >>Test<< button**
Change operating mode or to the test of the solenoid valve function
- 5 >>Value<< button**
Setting of the degree of drying or activation of the service mode
- 4 + 5 Button >>Test<< + Taste >>Value<<**
Unlock software □ change settings

The >>Test<< and >>Value<< push buttons are designed so that inadvertent actuation is impossible. The software only responds if a button is pressed and held for a certain period of time (approx. 0.2 second).

If one control function is initiated through permanent pressing of the button(s), then the device displays the possible start of the operation: All green value LEDs (3) are flashing. After releasing the button(s), a time window of 10 seconds is available for actions. Each actuation of the buttons in this time window extends the time window again to its full length.

After the action has been completed and after no button has been pressed for 10 seconds, the acknowledgment of the completion of the action by the control → is performed. All green value LEDs (3) are flashing. Afterwards, the system transfers to normal operation and continues to control based on the specified settings.

NOTICE	Additional information
	For more information regarding the display and the test function of the solenoid valve, see “Operation“ on page 25.

2.5. 4 ... 20 mA interface

The drying system features a 4 ... 20 mA interface through which the currently measured pressure dew point can be output (irrespective of the selected operating mode).

4 mA \triangleq -55°F

20 mA \triangleq +77 °F

Output value in case of an error: 24 mA

Intervals: 0.9 °F

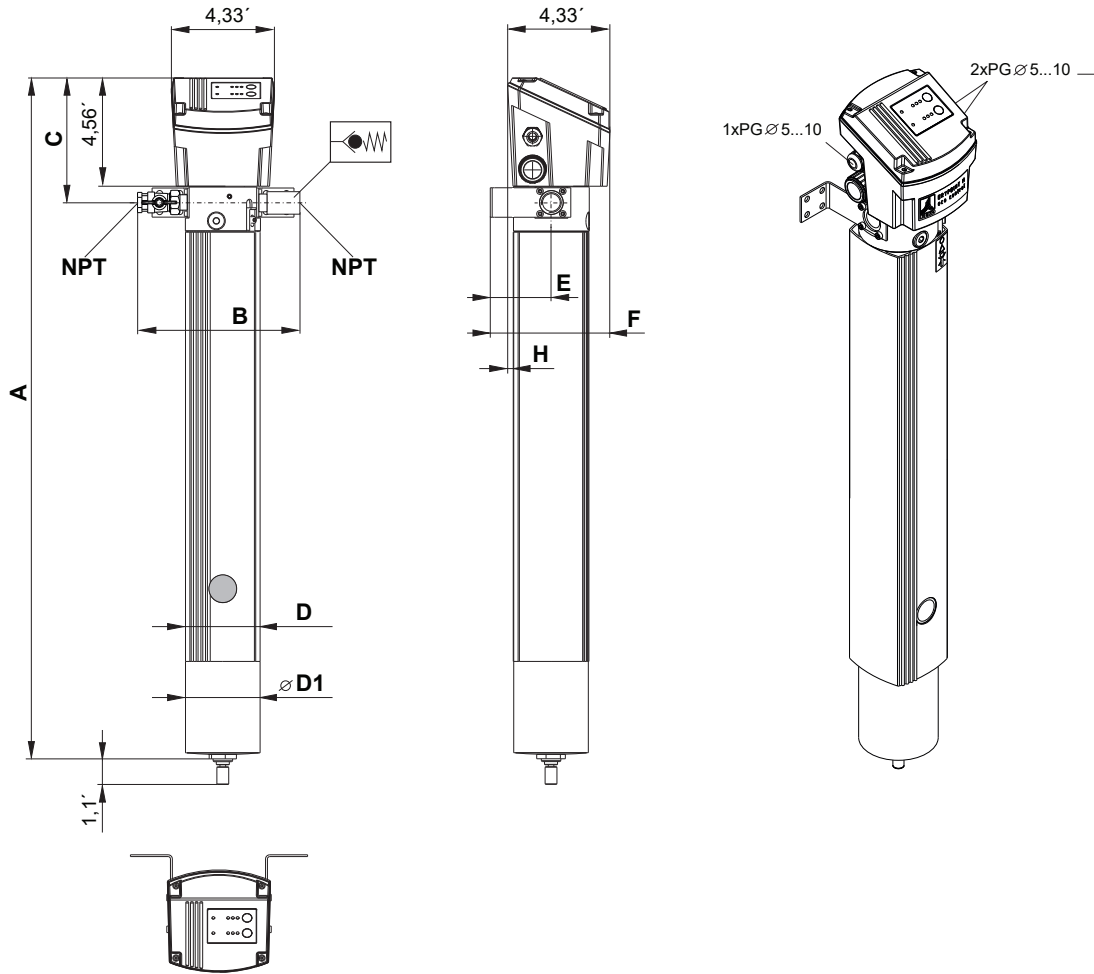
2.6. Alarm relay

The drying system is equipped with an alarm relay for the output of error signals. The system does not distinguish between the different types of errors.

Error list:

- Sensor errors (see device errors)
- Solenoid valve errors (see device errors)
- Exceeding the permissible deviation degree of drying (see 9.1.3)
- Power failure (see 9.1.1)

2.7. Dimensions



Dimensions	MDi 12	MDi 17	MDi 25	MDi 35	MDi 45	MDi 55	MDi 65	MDi 100	MDi 130
A (inch)	24.60	26.96	27.28	29.25	32.00	34.76	35.23	40.74	46.65
B (inch)	approx. 7.67	approx. 7.67	approx. 8.46	approx. 8.46	approx. 8.46	approx. 8.46	approx. 11.81	approx. 11.81	approx. 11.81
C (inch)	5.23	5.23	5.23	5.23	5.23	5.23	5.62	5.62	5.62
D / diameter D1 (inch)	2.36/2.36	2.36/2.36	3.14/3.14	3.14/3.14	3.14/3.14	3.14/3.14	4.72/4.72	4.72/4.72	4.72/4.72
E (inch)	2.55	2.55	2.55	2.55	2.55	2.55	3.07	3.07	3.07
F (inch)	5.23	5.23	5.23	5.23	5.23	5.23	5.74	5.74	5.74
NPT	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1"	1"	1"
H (inch)	0.43	0.43	0.07	0.07	0.07	0.07	-	-	-

2.8. Technical data

Technical data									
	MDi 12	MDi 17	MDi 25	MDi 35	MDi 45	MDi 55	MDi 65	MDi 100	MDi 130
Min./max. operating overpressure	58 ... 145 psi								
Overpressure protection housing	Ventilation screw with check valve (opening pressure approx. 3 psi)								
Min./max. storage/transport temperature	+35 ... +122 °F								
Min./max. Ambient temperature	+35 ... +122 °F								
Min./max. Media temperature	+35 ... +122 °F								
Medium	Fluid group 2: Compressed air/nitrogen								
Media and quality at the inlet of the membrane dryer	Only neutral media in accordance with DGRL 2014/68/EU of the class [3: - :3] ISO 8573-1								
Noise level	<< 45 dB (A), for switching operation of solenoid valve < 60 dB (A)								
Installation position	vertical								
Weight	7.5 lbs	7.9 lbs	10.8 lbs	11.4 lbs	12.1 lbs	12.8 lbs	24.0 lbs	26.4 lbs	28.8 lbs
Materials	Media-contacting parts corrosion-proof Materials conforming to RoHS and REACH regulations Plastic components conforming to UL regulations								
Integrated nanofilter	0.01 µm / 0.005 mg/m³								
Pressure loss	2 - 5 psi, depending on compressed air volume flow								
PDP outlet settings	+50 / +45 / +40 / +37 / +32 / +23 / +14 / +5 / -5 / -15 °F								
PDP difference settings	20 / 27 / 35 / 45 / 55 / 65 / 72 / 80 / 90 / 100 °F (Fahrenheit)								
Electrical data									
Power consumption	max. 20 VA (W) with permanently closed solenoid valve								
Recommended strand cross-section	AWG 21								
Recommended power cable	2-strand, diameter 0.19 ... 0.39 inch								
Protection class control unit	IP 54								
Min./max. Contact spring load (potential-free contact)	max. 12 VAC / 1 A oder 24 VDC / 1 A ; min. 5 VDC / 10 mA								
Signal output	4 ... 20 mA (PDP output)								
Interfaces	2 x cable connection M16, cable diameter 0.19 ... 0.39 inch								
Operating voltage	95 ... 240 VAC ± 10% (50 ... 60 Hz) / 100 ... 125 VDC ± 10%								
Electrical data	MDi 12-LV	MDi 17LV	MDi 25-LV	MDi 35-LV	MDi 45-LV	MDi 55-LV	MDi 65-LV	MDi 100-LV	MDi 130-LV
Operating voltage	24 ... 48 VAC ± 10% (50 ... 60 Hz) / 18 ... 72 VDC ± 10%								

PDP inlet		Volume flow inlet in cfm at 145 psi								
+100 °F	+40 °F	MDi 12	MDi 17	MDi 25	MDi 35	MDi 45	MDi 55	MDi 65	MDi 100	MDi 130
+50 °F	+14 °F	12.9	17.2	26.0	34.5	48.7	56.6	67.5	101.1	134.7
+40 °F	+5 °F	10.9	14.5	21.7	29.0	41.4	47.9	57.5	87.4	115.9
+32 °F		9.7	13.0	19.5	25.9	37.2	43.3	52.1	79.5	105.5
	-4 °F	9.5	12.6	19.0	25.3	36.3	42.3	50.8	77.6	103.2
+23 °F		8.8	11.7	17.6	23.5	33.6	39.4	47.5	72.6	96.5
+14 °F	-15 °F	8.1	10.8	16.2	21.6	30.8	36.2	44.0	67.0	88.8
+5 °F		7.5	9.9	14.9	19.9	28.5	33.4	40.7	61.8	82.0
-4 °F		7.0	9.3	14.0	18.6	26.7	31.4	38.1	57.8	76.8
-15 °F		6.5	8.6	13.0	17.3	24.8	28.9	35.4	53.8	71.8
DTP outlet		1.5	1.9	2.9	3.9	5.6	6.5	7.9	12.1	15.9
145 psi		Purge air in cfm at 145 psi								

* The intrinsic permeability is app. 5% of the purge air volume.

PDP inlet		Volume flow inlet in cfm at 130 psi								
+100 °F	+40 °F	MDi 12	MDi 17	MDi 25	MDi 35	MDi 45	MDi 55	MDi 65	MDi 100	MDi 130
+50 °F	+14 °F	11.1	14.8	22.5	29.8	42.1	48.9	58.4	87.3	116.4
+40 °F	+5 °F	9.4	12.5	18.8	25.1	35.8	41.4	49.7	75.5	100.1
+32 °F		8.4	11.2	16.8	22.4	32.2	37.4	45.0	68.7	91.2
	-4 °F	8.2	10.9	16.4	21.9	31.3	36.5	43.9	67.1	89.1
+23 °F		7.6	10.2	15.2	20.3	29.1	34.1	41.1	62.7	83.4
+14 °F	-15 °F	7.0	9.3	14.0	18.6	26.6	31.3	38.0	57.9	76.7
+5 °F		6.4	8.6	12.9	17.2	24.6	28.9	35.2	53.4	70.8
-4 °F		6.0	8.1	12.1	16.1	23.1	27.1	32.9	50.0	66.4
-15 °F		5.6	7.4	11.3	15.0	21.4	25.0	30.6	46.5	62.1
DTP outlet		1.3	1.7	2.6	3.5	5.0	5.9	7.2	10.9	14.4
130 psi		Purge air in cfm at 130 psi								

* The intrinsic permeability is app. 5% of the purge air volume.

PDP inlet		Volume flow inlet in cfm at 115 psi								
+100 °F	+40 °F	MDi 12	MDi 17	MDi 25	MDi 35	MDi 45	MDi 55	MDi 65	MDi 100	MDi 130
+50 °F	+14 °F	9.5	12.6	19.1	25.4	35.8	41.5	49.6	74.2	99.0
+40 °F	+5 °F	8.0	10.6	16.0	21.3	30.4	35.2	42.2	64.2	85.1
+32 °F		7.2	9.5	14.3	19.1	27.3	31.8	38.2	58.4	77.5
	-4 °F	7.0	9.3	13.9	18.6	26.6	31.1	37.3	57.0	75.8
+23 °F		6.5	8.6	12.9	17.3	24.7	29.0	34.9	53.3	70.9
+14 °F	-15 °F	5.9	7.9	11.9	15.8	22.6	26.6	32.3	49.2	65.2
+5 °F		5.5	7.3	11.0	14.6	20.9	24.6	29.9	45.4	60.2
-4 °F		5.1	6.8	10.3	13.7	19.6	23.1	28.0	42.5	56.4
-15 °F		4.8	6.3	9.6	12.7	18.2	21.2	26.0	39.5	52.8
DTP outlet		1.2	1.6	2.4	3.1	4.5	5.3	6.4	9.8	12.9
115 psi		Purge air in cfm at 115 psi								

* The intrinsic permeability is app. 5% of the purge air volume.

PDP inlet		Volume flow inlet in cfm at 100 psi								
+100 °F	+40 °F	MDi 7	MDi 9	MDi 13	MDi 18	MDi 25	MDi 29	MDi 36	MDi 51	MDi 71
+50 °F	+14 °F	8.0	10.6	16.1	21.3	30.1	34.9	41.7	62.4	83.2
+40 °F	+5 °F	6.7	8.9	13.4	17.9	25.5	29.6	35.5	54.0	71.5
+32 °F		6.0	8.0	12.0	16.0	23.0	26.7	32.1	49.1	65.1
	-4 °F	5.9	7.8	11.7	15.6	22.4	26.1	31.4	47.9	63.7
+23 °F		5.4	7.3	10.9	14.5	20.8	24.3	29.3	44.8	59.5
+14 °F	-15 °F	5.0	6.7	10.0	13.3	19.0	22.3	27.1	41.3	54.8
+5 °F		4.6	6.1	9.2	12.3	17.6	20.6	25.1	38.2	50.6
-4 °F		4.3	5.8	8.6	11.5	16.5	19.4	23.5	35.7	47.4
-15 °F		4.0	5.3	8.0	10.7	15.3	17.8	21.8	33.2	44.3
DTP outlet		1.1	1.4	2.1	2.8	4.1	4.8	5.8	8.8	11.6
100 psi		Purge air in cfm at 100 psi								

* The intrinsic permeability is app. 5% of the purge air volume.

PDP inlet		Volume flow inlet in cfm at 90 psi								
+100 °F	+40 °F	MDi 7	MDi 9	MDi 13	MDi 18	MDi 25	MDi 29	MDi 36	MDi 51	MDi 71
+50 °F	+14 °F	6.2	8.3	12.5	16.6	23.5	27.2	32.5	48.7	64.9
+40 °F	+5 °F	5.2	7.0	10.5	14.0	19.9	23.1	27.7	42.1	55.8
+32 °F		4.7	6.2	9.4	12.5	17.9	20.8	25.1	38.3	50.8
	-4 °F	4.6	6.1	9.1	12.2	17.5	20.4	24.5	37.4	49.7
+23 °F		4.2	5.7	8.5	11.3	16.2	19.0	22.9	35.0	46.4
+14 °F	-15 °F	3.9	5.2	7.8	10.4	14.8	17.4	21.2	32.2	42.8
+5 °F		3.6	4.8	7.2	9.6	13.7	16.1	19.6	29.8	39.5
-4 °F		3.4	4.5	6.7	9.0	12.9	15.1	18.3	27.8	37.0
-15 °F		3.1	4.1	6.3	8.3	11.9	13.9	17.0	25.9	34.6
DTP outlet		1.0	1.3	1.9	2.5	3.7	4.3	5.2	7.9	10.4
90 psi		Purge air in cfm at 90 psi								

* The intrinsic permeability is app. 5% of the purge air volume.

PDP inlet		Volume flow inlet in cfm at 75 psi								
+100 °F	+40 °F	MDi 7	MDi 9	MDi 13	MDi 18	MDi 25	MDi 29	MDi 36	MDi 51	MDi 71
+50 °F	+14 °F	4.5	6.0	9.2	12.1	17.1	19.9	23.8	35.6	47.4
+40 °F	+5 °F	3.8	5.1	7.7	10.2	14.6	16.9	20.2	30.8	40.8
+32 °F		3.4	4.6	6.8	9.1	13.1	15.2	18.3	28.0	37.1
	-4 °F	3.3	4.4	6.7	8.9	12.8	14.9	17.9	27.3	36.3
+23 °F		3.1	4.1	6.2	8.3	11.8	13.9	16.7	25.5	33.9
+14 °F	-15 °F	2.8	3.8	5.7	7.6	10.8	12.7	15.5	23.6	31.2
+5 °F		2.6	3.5	5.2	7.0	10.0	11.8	14.3	21.7	28.8
-4 °F		2.5	3.3	4.9	6.6	9.4	11.0	13.4	20.3	27.0
-15 °F		2.3	3.0	4.6	6.1	8.7	10.2	12.4	18.9	25.3
DTP outlet		0.8	1.1	1.6	2.2	3.1	3.7	4.5	6.8	8.9
75 psi		Purge air in cfm at 75 psi								

* The intrinsic permeability is app. 5% of the purge air volume.

PDP inlet		Volume flow inlet in cfm at 60 psi								
+100 °F	+40 °F	MDi 7	MDi 9	MDi 13	MDi 18	MDi 25	MDi 29	MDi 36	MDi 51	MDi 71
+50 °F	+14 °F	3.1	4.1	6.3	8.3	11.7	13.6	16.3	24.3	32.4
+40 °F	+5 °F	2.6	3.5	5.2	7.0	10.0	11.5	13.8	21.0	27.9
+32 °F		2.3	3.1	4.7	6.2	9.0	10.4	12.5	19.1	25.4
	-4 °F	2.3	3.0	4.6	6.1	8.7	10.2	12.2	18.7	24.8
+23 °F		2.1	2.8	4.2	5.7	8.1	9.5	11.4	17.5	23.2
+14 °F	-15 °F	1.9	2.6	3.9	5.2	7.4	8.7	10.6	16.1	21.4
+5 °F		1.8	2.4	3.6	4.8	6.9	8.1	9.8	14.9	19.7
-4 °F		1.7	2.2	3.4	4.5	6.4	7.6	9.2	13.9	18.5
-15 °F		1.6	2.1	3.1	4.2	6.0	7.0	8.5	12.9	17.3
DTP outlet		0.7	0.9	1.3	1.8	2.6	3.0	3.7	5.5	7.3
60 psi		Purge air in cfm at 60 psi								

* The intrinsic permeability is approx. 5% of the purge air volume.

Product selection

Example selection drying result for:

- Volume flow usage air: 6.4 cfm
- Operating pressure: 60 psi
- PDP lowering: +40 °F to -15 °F

Search in the table of the service data 4 bar

Column DTP inlet "+40 °F" up to the line "-15 °F" (DTP outlet)

Search a value in this line, which is larger than the usage air volume flow

→ Column MDi 45 meets this requirements with a nominal value of 7.4 cfm

Purge air consumption MDi 45:

2.6 cfm must be deducted from the in lead volume flow

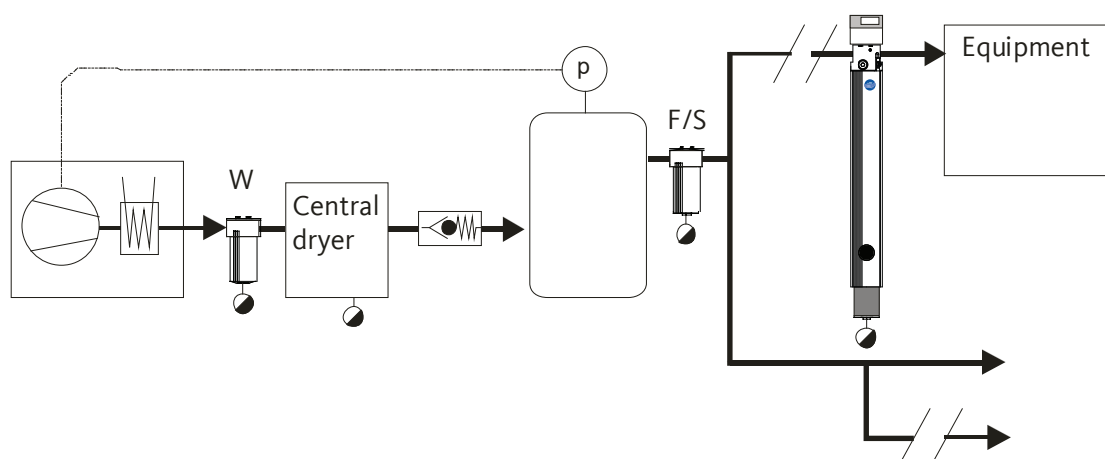
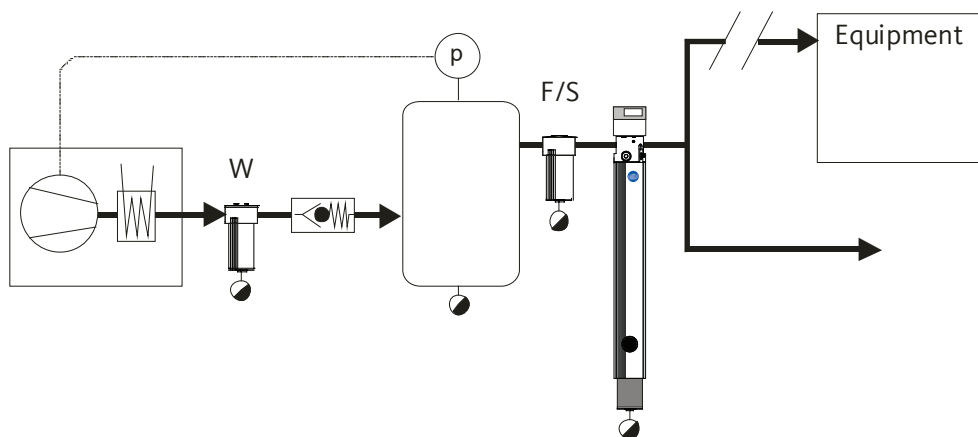
Max. usage air volume flow:

4.8 cfm → Device is too small, larger device MDi 55 must be selected

3. Installation

3.1. Preconditions

To achieve good drying results, you must ensure efficient preliminary filtration of the compressed air. Without a preliminary filtration system that meets the recommendations below, it is not possible to achieve satisfactory drying results. For details, see overview below.

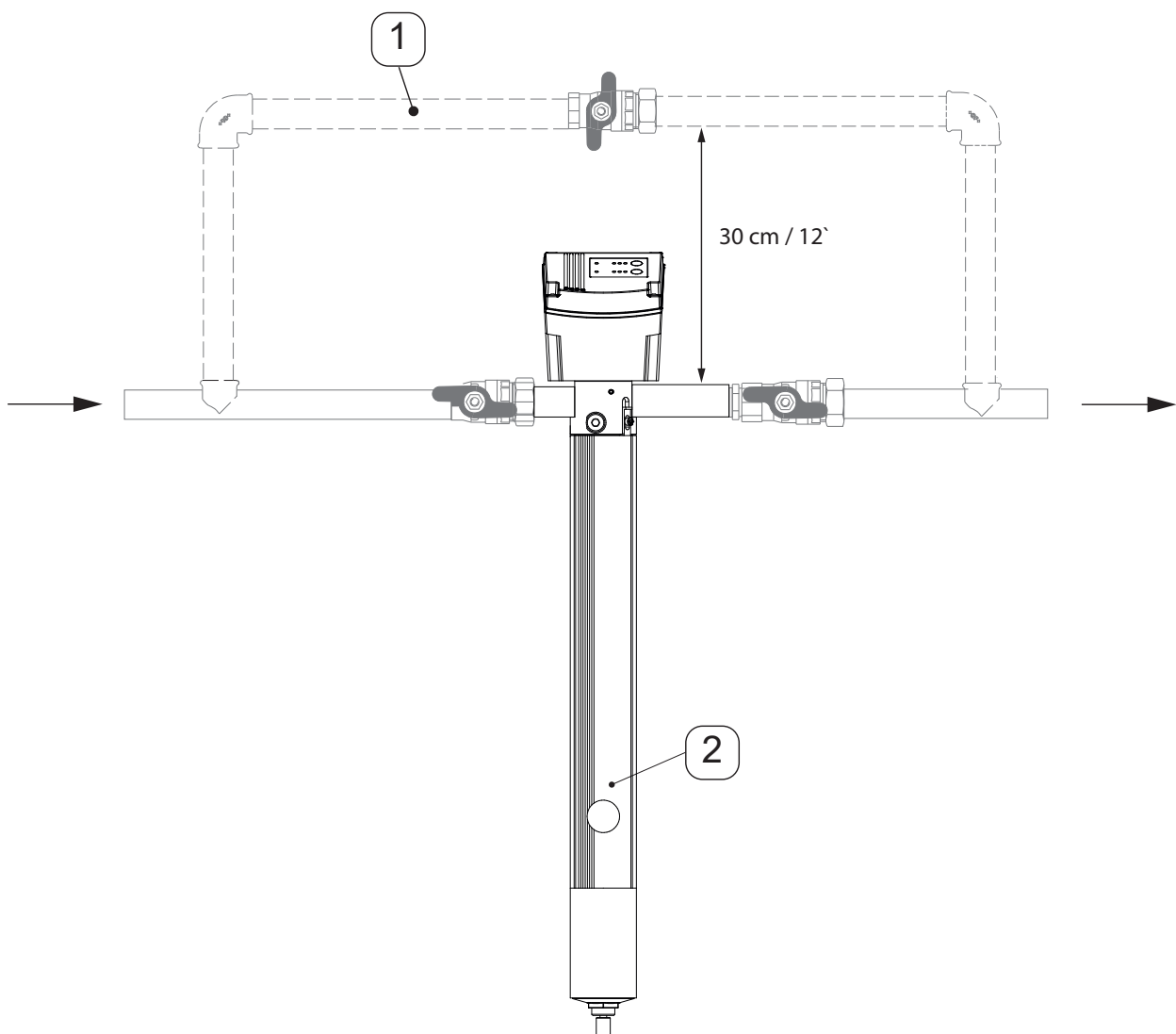


- W = Water separator
- F = Fine filter for the application with oilfree compressors
- S = Super fine filter for the application with oil lubricated compressors

3.2. Installation


When installing the DRYPOINT® M intelligence, observe the direction of flow of the compressed air. If the compressed air flows from left → right, the purge air outlet (2) faces forward.

- For maintenance and servicing, we recommend installing a bypass line (1). Take into account that there should be around 30 cm space for the operation of the control unit.
- Install the supplied long nipples and the check valve in the outlet assembly of the membrane dryer (mount in flow direction, see arrow on check valve).
- The purge air must flow freely from the section covered by the screen (2).
- The room in which the unit and the accessory equipment are installed must not house units that might release chemical substances.
- The unit must be installed in a room that is protected against frost. The ambient temperature as well as the compressed air temperature must be between +35 and +122 °F.
- Before installing the unit, thoroughly clean the existing pipelines and devices. (e.g. by blowing out).
- Seal all threads with Teflon tape → do not use liquid sealants.
- Install the unit so that the filter can be changed easily without causing damage to the drying system.



4. Electrical installation

4.1. Warning

DANGER	Mains voltage
	<p>Risk of serious or even fatal injury from electric shock when coming into contact with non-insulated, powered components.</p> <ul style="list-style-type: none"> • For the electrical installation of the device, adhere to all applicable regulations (e.g. VDE 0100 / IEC 60364). • All electrical work must be carried out by authorized specialist technical personnel¹. • The permissible operating voltage is printed on the name plate and must be strictly adhered to. • All components of the electrical installation on site must be approved and/or bear the CE mark. • A reliably accessible circuit breaker (e.g. power plug or switch) that shuts off all life conductors must be installed close to the unit. • Never carry out any connection work while the unit is powered.

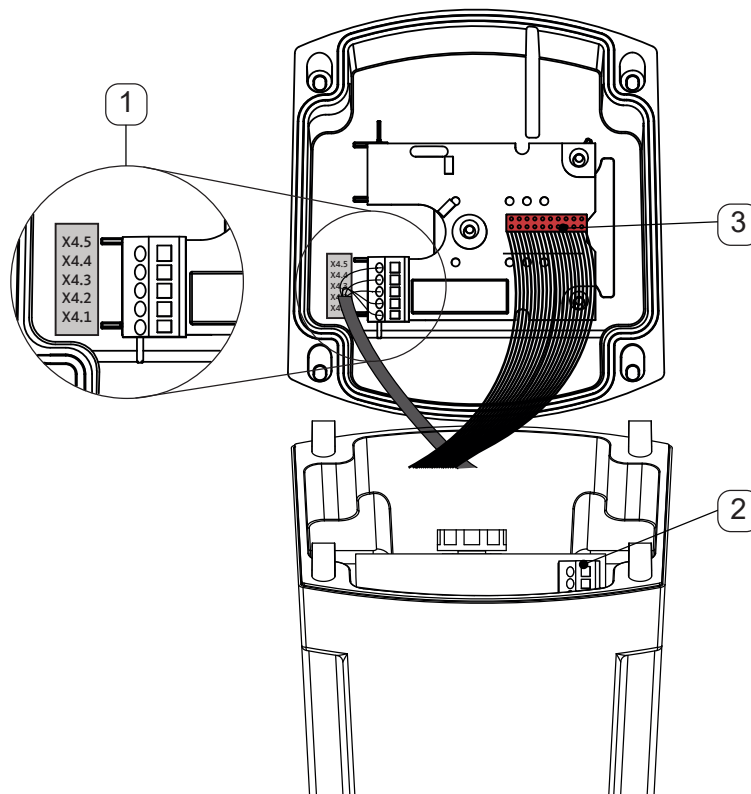
¹Specialist technical personnel

Specialist technical personnel are persons who, due to their professional qualification and knowledge in the field of measuring, control and pneumatic technology, and their knowledge of the applicable statutory regulations, guidelines and standards are in a position to foresee potential dangers in relation to the use of the device and are qualified to perform the tasks described in this manual. Special operating conditions (e.g. aggressive media) require additional knowledge.

The control unit of the DRYPOINT® M intelligence system is equipped with a power cord and device plug. There is thus no need to open the control unit to connect it to the power supply.

4.2. Terminals

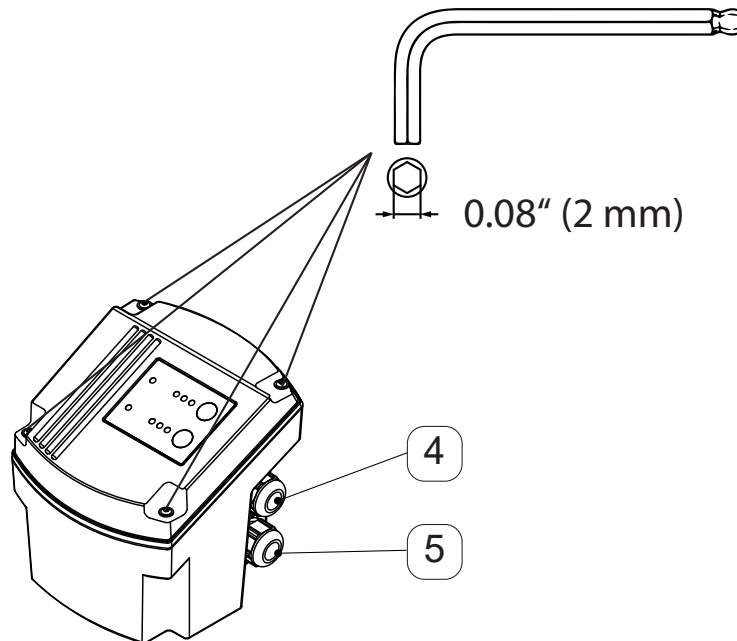
The diagram below shows the position of the PCB and the terminals (cover removed).



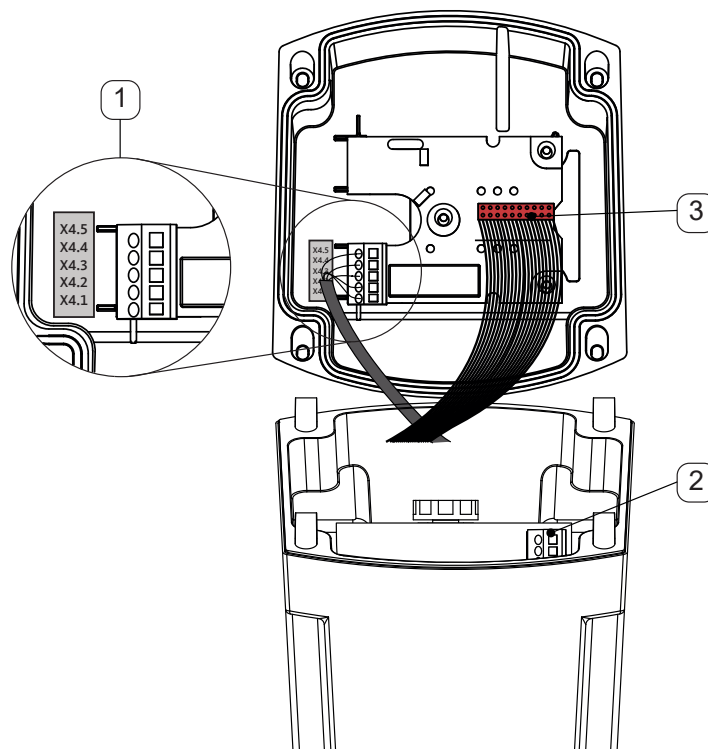
1	Control PCB with terminal for 4 ... 20 mA interface and floating contact
2	Power supply board with power supply terminal

4.3. Opening the control unit

To establish an alarm contact or a connection to the 4 ... 20 mA interface, you must open the housing of the control unit. To do this, loosen the 4 housing screws, using a 0.08" Allen key. Feed the cables through the armored conduit fitting (4) or (5).



Then lift the cover from the control unit. Ensure that the ribbon cable (3) is not squeezed or torn.



4.4. Connection of power cable to power supply board

The connection of the power supply is made at the factory and is therefore not required.

Terminal assignment:

- X1.1 = N / -
- X1.2 = L / +

4.5. Connection of 4 ... 20 mA interface to control unit PCB

The 4 ... 20 mA interface is used for the output of the currently measured pressure dew point (depending on operating mode).

4 mA \triangleq -55 °F

20 mA \triangleq +77 °F

Intervals: 0.9 °F

Output value in case of an error: 24 mA

Connect the 4 ... 20 mA interface according to the terminal assignment chart below:

- X4.4 = - (recommended)
- X4.5 = + (recommended)

4.6. Connection of floating contact to control unit PCB

This contact is used for alarm output signals. Connect the floating contact according to the terminal assignment chart below:

- X4.1 = n.o.
- X4.2 = com
- X4.3 = n.c.

5. Commissioning

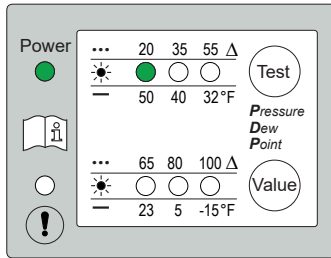
After the unit has been integrated into the piping system and all electrical connections have been established, it can be commissioned. To do this, connect the power plug to the power mains and slowly pressurize the pipeline system.

At the start of the commissioning process, the red warning LED might be lit, as it normally takes a few minutes until the set drying level is reached. Should the red warning LED continue to be lit, refer to "Troubleshooting and repair" on page 32.

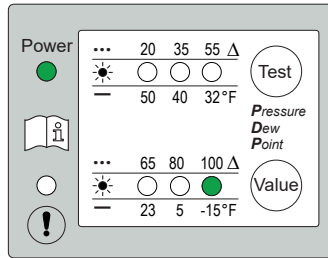
6. Operation

6.1. LED signals during operation

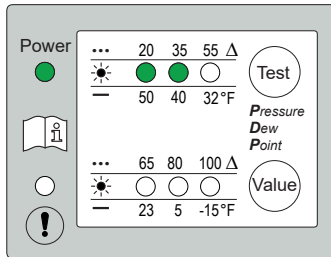
This chapter presents the two operating modes with their LED displays. The red LEDs indicate a malfunction or fault in the system. For more information, see “Troubleshooting and repair“ on page 32.



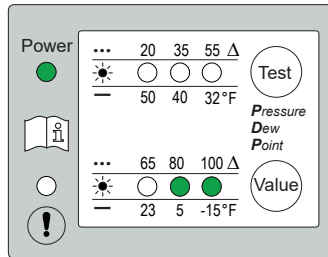
Power and value LEDs are lit:
Constant Mode
 → **DTP = +50 °F**
 Power LED flashes
 (interval 2 sec.),
 value LED is continuously on:
Dynamic Mode → **ΔT = 20 °F**



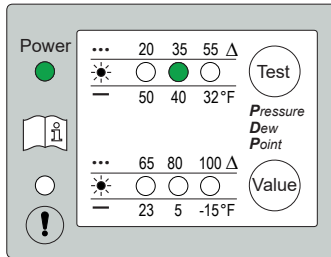
Power and value LEDs are lit:
Constant Mode → **DTP = -15 °F**
 Power LED flashes
 (interval 2 sec.),
 value LED is continuously on:
Dynamic Mode → **ΔT = 100 °F**



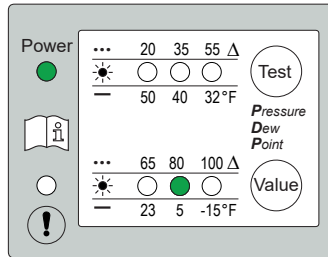
Power and value LEDs are lit:
Constant Mode
 → **DTP = +45 °F**
 Power LED flashes
 (interval 2 sec.),
 value LED is continuously on:
Dynamic Mode → **ΔT = 27 °F**



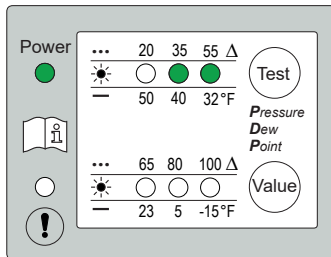
Power and value LEDs are lit:
Constant Mode → **DTP = -5 °F**
 Power LED flashes
 (interval 2 sec.),
 value LED is continuously on:
Dynamic Mode → **ΔT = 90 °F**



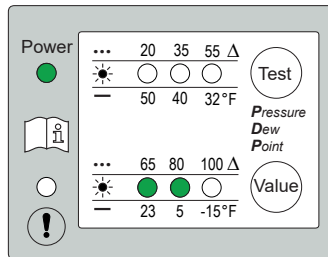
Power and value LEDs are lit:
Constant Mode
 → **DTP = +40 °F**
 Power LED flashes
 (interval 2 sec.),
 value LED is continuously on:
Dynamic Mode → **ΔT = 35 °F**



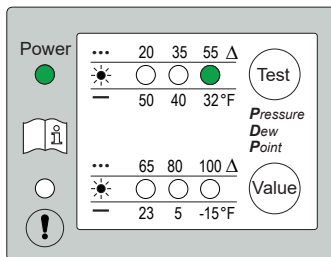
Power and value LEDs are lit:
Constant Mode
 → **DTP = +5 °F**
 Power LED flashes
 (interval 2 sec.),
 value LED is continuously on:
Dynamic Mode → **ΔT = 80 °F**



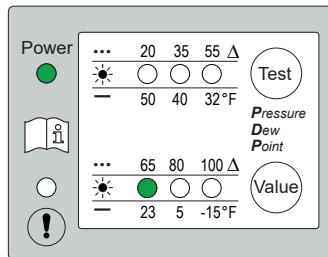
Power and value LEDs are lit:
Constant Mode
 → **DTP = +37 °F**
 Power LED flashes
 (interval 2 sec.),
 value LED is continuously on:
Dynamic Mode → **ΔT = 45 °F**



Power and value LEDs are lit:
Constant Mode
 → **DTP = +14 °F**
 (factory settings)
 Power LED flashes (interval 2 sec.),
 value LED is continuously on:
Dynamic Mode → **ΔT = 72 °F**



Power and value LEDs are lit:
Constant Mode
 → **DTP = +32 °F**
 Power LED flashes
 (interval 2 sec.),
 value LED is continuously on:
Dynamic Mode → **ΔT = 55 °F**

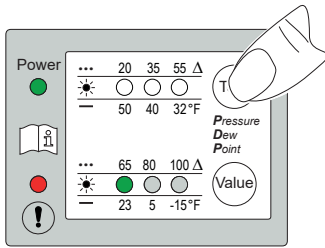


Power and value LEDs are lit:
Constant Mode
 → **DTP = +23 °F**
 Power LED flashes
 (interval 2 sec.),
 value LED is continuously on:
Dynamic Mode → **ΔT = 65 °F**



6.2. Solenoid valve test function

When the >>Test<< button is pressed, the solenoid valve is actuated and performs 3 switching cycles within 2 seconds. The red warning LED flashes at the same rate.
 Solenoid valve disengaged → Red LED off → the full purge air volume exits
 Solenoid valve engaged → Red LED on → only measuring gas volume exits

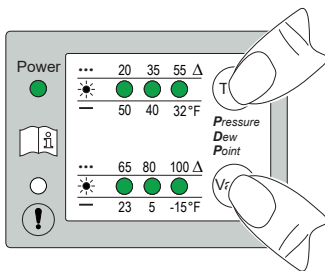


- Press and hold the >>Test<< button for 3 seconds.
- Activation is displayed (all green LEDs are flashing)
- Releasing the button >>Test<< → Valve switches 3 cycles
- The system automatically returns to normal operating mode.

6.3. Adjust settings (setup mode)

To adjust the unit settings, you must unlock the software. The unlocking is provided by simultaneous pressing of the buttons >>Value<< + >>Test<<: All green LEDs are flashing for confirmation.

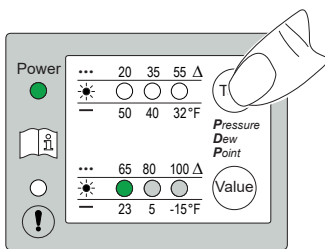
You now have 10 seconds to change the settings. Each actuation of the buttons in this time window extends the time window again to its full length.



- Press and hold the >>Test<< button and the >>Value<< button for 3 seconds.
- Activation is displayed (all green LEDs are flashing)
- Release both buttons: The setup mode is activated
- Execute changes/settings

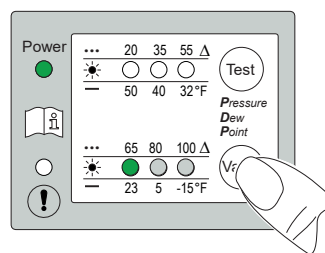
The settings apply until they are changed. To change the settings, press the >Value<< and >>Test<< buttons.

6.3.1. Change operating mode

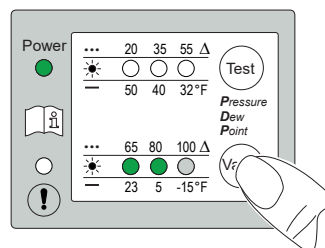


- Press and hold the >>Test<< button.
- The power LED is lit permanently:
Constant Mode
- Power LED flashes [2 sec. cycle on-off],
Dynamic mode

6.3.2. Changing settings



Press the >>Value<< button.
1 value LED is lit:
65°F / +23 °F (example)



Press the >>Value<< button again.
2 value LEDs are lit:
Intermediate value
72°F / +14 °F (example)

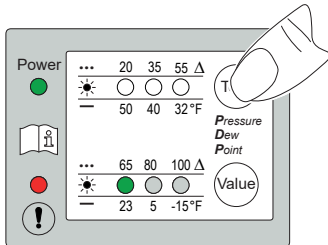
After the action or the change has been completed and if no button is pressed for 10 seconds, then the confirmation of the completion of the action/acceptance of the changed values is performed: All green value LEDs are flashing. Afterwards, the system transfers to normal operation and continues to control based on the specified settings.

6.3.3. Service mode

This function can be used to perform a review of the permeation rate at the membrane dryer during preventive service without the need to dismount the device. This check can be used to determine whether it may have to be exchanged.

The control unit must already be in setup mode to be able to use the service mode (see 6.3). When activating the service mode, the solenoid valve will be permanently engaged, which means that only the measuring gas flows through the control unit.

This function can be deactivated manually, otherwise the control unit resets this function automatically after 30 minutes.

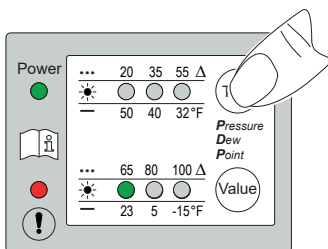


Activation Press and hold the >>Test<< button for 10 seconds.

Activation is displayed (all green LEDs are flashing)

Releasing the >>Test<< button: Valves engages, only the measuring gas flows

All green LEDs flash in a 2 second cycle during service mode.



Deactivation Press and hold the >>Test<< button for 10 seconds.

Activation is displayed (all green LEDs are flashing)

Releasing the button: The device returns to the setup mode, changes of the settings can now be performed.

If no buttons will be actuated during 10 seconds, then the device will change to normal mode.

7. Maintenance and servicing

7.1. Maintenance schedule

Maintenance	Interval
Function testing and visual inspection <ul style="list-style-type: none"> Visual inspection 	regularly
Changing filter element <ul style="list-style-type: none"> Change filter element 	annually

7.1.1. Function testing and visual inspection

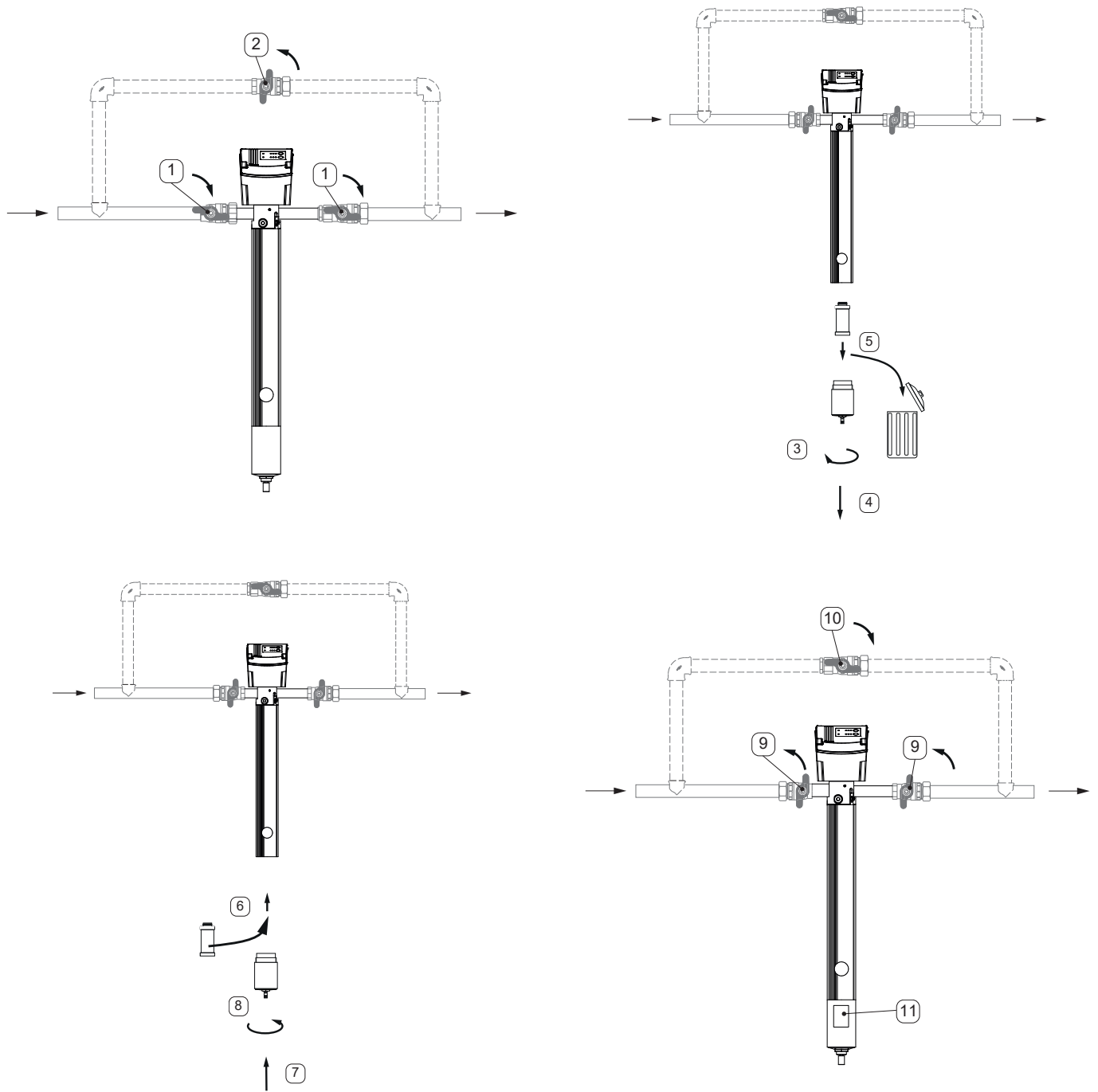
To ensure that the unit is in proper working order, the unit operator must perform regular function tests and visual inspections:

- Perform function tests and check purge air outlet, housing (for damage), system (for leakage), electrical connection (for damage)
- Check whether there are any errors or faults
→ For detailed instructions, see “9. Troubleshooting and repair“ on page 32
- Inspect the unit for dirt and contamination and clean it, if necessary
→ For detailed instructions, see “Cleaning“ on page 31
- BEKOMAT® check function
→ Press the test button
- Check float drain function
→ Turn up the knurled screw (left-hand thread) and turn it down completely

7.1.2. Changing filter element

The filter elements must be changed at least every 12 months. To change the filter element:

1. Close the shut-off valves (1) and open the shut-off valve (2) of the bypass.
2. Hold the top part of the housing, unscrew the housing extension (3) and remove it (4).
3. Remove the spent filter element (5) and dispose of it safely.
4. Insert the new filter element (6).
5. Mount (7) and screw on (8) the housing extension.
6. Open the shut-off valves (9) and close the shut-off valve (10) of the bypass.
7. Apply the new nanofilter service label (11).



CAUTION	Risk of damage to the environment!
	Spent filter elements might contain substances that are harmful to the environment.
	Therefore dispose of spent filter elements according to the applicable statutory regulations. For more information, see chapter 6. "Dismantling and disposal", page 32.

7.1.3. Replacing control unit

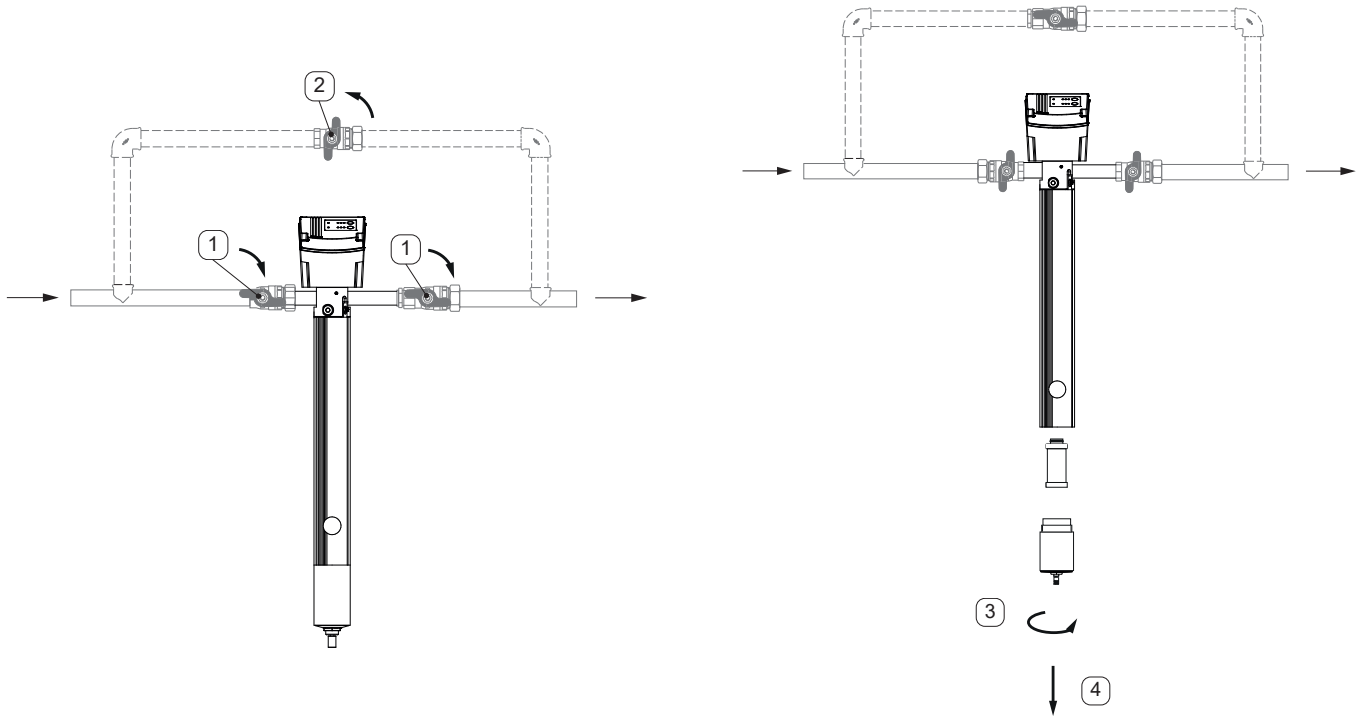
If your control unit is not working properly, contact BEKO TECHNOLOGIES GmbH or one of its agents. Have the serial number printed on the name plate handy.

If an exchange of the control unit is required as a result of assessing the situation, then you will receive the installation instructions with the new control unit.

7.1.4. Replacing float drain


If the float drain is defective, it must be replaced.

1. Close the shut-off valves (1) and open the shut-off valve (2) of the bypass.
2. Hold the top part of the housing, unscrew the housing extension (3) and remove it (4).



For detailed instructions for the replacement of the float drain, refer to the instruction sheet shipped with the spare part.

7.1.5. Permeation rate measurement

NOTICE	The device is subjected to operating pressure and electrical voltage
	<p>While performing maintenance works, the device is subjected to operating pressure and electrical voltage</p> <ul style="list-style-type: none"> • Only for the tasks described in the following

The following preconditions must be established before the measurement for measurement of the permeation rate – as the condition assessment of the membranes themselves.

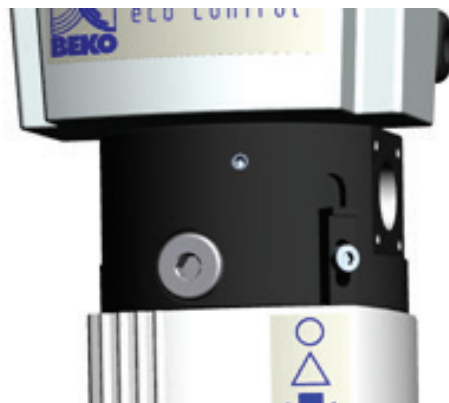
- Acquisition of a suitable volume flow meter with a range of 0.4 – 4 cfm (atmospheric) with hose connection (approx. 40 inch)/plug connection with connection thread G1/4 (BSPP - British Standard Pipe Parallel)
- Setting of the DRYPOINT® M intelligence to operating mode “Service Mode“, see 6.3.3 (only the measuring gas flow will be made available inside of the device)

Measurement sequence

- Unscrew the blind plug at the head of the membrane dryer
- The exiting purge area is depressurized
- Screw in connection G1/4 (BSPP - British Standard Pipe Parallel) of the hose connection volume flow meter into the thread G1/4 (BSPP - British Standard Pipe Parallel) in the head
- Manually closing/pasting the purge air outlet
- Read the measuring result

After the measurement, the connection in the head of the membrane and dryer must be closed again by using the blind plug, the purge air output at the sieve must be cleared. The device must be returned to normal mode “6.3.3. Service mode“ on page 27.


Recommended limit values in l/min: app. 25% of the maximum purge air volume DRYPOINT® M intelligence plus 0.2 cfm (measuring gas flow share).



7.1.6. Cleaning



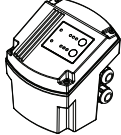
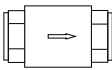
To clean the DRYPOINT® M intelligence, use a damp (but not wet) cotton cloth or disposable tissue and a mild conventional detergent.

Spray a little detergent onto the clean cotton cloth or tissue and carefully wipe the component. Then dry the device with a clean cloth or let it dry at room temperature. Observe all hygiene instructions applicable on the site.

NOTICE	Damage caused by improper cleaning
	Cleaning with a wet cloth, pointed implement or aggressive detergent can cause damage to the device components and integrated electronic components.
	<ul style="list-style-type: none"> • Never clean the device with a wet cloth. • Do not use aggressive detergents. • Do not clean or operate the device with hard or pointed implements.

8. Spare parts and accessories

The following spare parts and accessories for the DRYPOINT® M intelligence are available from the manufacturer.

Type	Spare part	Picture	Order number
MDi 12 + MDi 17	Filter element		4007268
MDi 25 - MDi 55			4010849
MDi 65 - MDi 130			4009150
MDi 12 + MDi 17	Float drain		4025537
MDi 25 - MDi 55			
MDi 65 - MDi 130			
MDi 12 + MDi 17	Control unit		see name plate
MDi 25 - MDi 55			
MDi 65 - MDi 130			
MDi 12 + MDi 17	Check valve G1/2		on request
MDi 25 - MDi 55	Check valve G1/2		on request
MDi 65 - MDi 130	Check valve G1		on request

9. Troubleshooting and repair

9.1. Action to be taken in the event of a fault/malfunction

If you observe any malfunction or damage to the unit, refer to the FAQ section below to identify the cause of the problem. If necessary contact the manufacturer for advice.

9.1.1. Power failure

In the event of a power failure, the solenoid valve opens so that the purge air flow is unrestricted.

As soon as the power returns, the DRYPOINT® M intelligence automatically switches to normal operating mode with the previously applied settings.

9.1.2. Sensor failure

Software detects sensor failure: red LED flashes permanently.

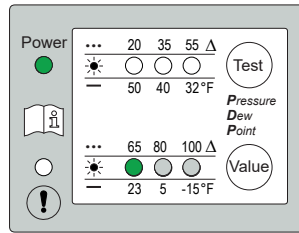
- **Power-LED: shows still operating mode**

- **Value-LEDs: show still the set values**

9.1.3. Deviating degree of drying

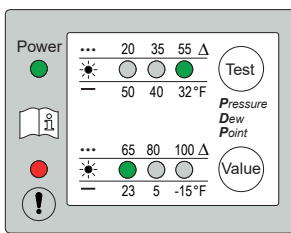
If, during operation, the system detects a deviation from the setpoint pressure dew point, the operator is made aware of this fact. For permissible deviations, see table below.

Settings



Setpoint = 65 °F / +23 °F (example)

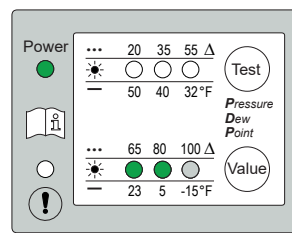
Actual PDP exceeds upper limit



Value LED is lit:
Setpoint = 65 °F / +23 °F (example)
 Value LED of higher value flashes next to the setting:
Value = 55 °F / +32 °F (example)

Red LED flashes (2 seconds cycle)

Actual PDP drops below lower limit



Value LED is lit:
Setpoint = 65 °F / +23 °F (example)

Value LED of lower value flashes next to the setting:
Value = 80 °F / +5 °F example)

If the achieved pressure dew point is again in line with the setpoint value, the unit returns to normal operating mode.

Actual value above upper limit value, triggering an error (insufficient drying performance)

Setpoint pressure dew point	Permissible upper limit	Flashing value LED
≥ +37 °F	+8 °F	+50 °F
≥ +32 °F	+8 °F	+40 °F
≥ +14 °F	+14 °F	+32 °F
≥ -4 °F	+14 °F	+23 °F
< -4 °F	+19 °F	+5 °F

Actual value below lower limit value, Limit value to display too strong drying

Setpoint pressure dew point	Permissible lower limit	Flashing value LED
≥ +50 °F	+8 °F	+40 °F
≥ +41 °F	+8 °F	+32 °F
≥ +37 °F	+8 °F	+23 °F
≥ +32 °F	+14 °F	+23 °F
≥ +23 °F	+14 °F	+5 °F
≥ +5 °F	+14 °F	-15 °F
< +5 °F	+19 °F	-15 °F

9.2. FAQ

Symptom(s)	Possible causes	Remedy
Poor degree of drying	Temporary overload	Improve operating conditions (e.g. increase operating pressure); avoid sudden load changes
	Incorrectly dimensioned unit	Use larger dryer
	Aerosols in compressed air	Check filter element (function test) and replace, if necessary; install additional prefilter; check condensate drain function and replace if necessary
	Purge air flow blocked internally	Contact manufacturer: if necessary, return unit for repair
	Sensor failure due to age	Contact manufacturer: if necessary, return unit for repair or replace control unit
	Incorrect operating mode selected	Change operating mode
	Coating on the sensor due to low quality of the incoming air	Improve compressed air quality at the inlet of the membrane dryer. Observe the maintenance intervals of the filter elements and replace them regularly. Replace control unit. Send the device to the manufacturer for repair.
Purge air outlet continuously open ("failsafe")	Continuous overload	Improve operating conditions (e.g. increase operating pressure); avoid sudden load changes; check dryer dimensions; use larger unit
	Fail-safe mode active	Check error signals: the flashing rate and interval of the red LED indicate the type of the error/fault; if necessary, contact manufacturer
	Incorrect installation direction	Check installation direction of unit
	Software error	Contact manufacturer: if necessary, return unit for repair or replace control unit
	Sensor defective	Contact manufacturer: if necessary, return unit for repair or replace control unit
	Power failure (power LED off)	Connect unit to power mains
	Power supply board defective	Contact manufacturer: if necessary, return unit for repair or replace control unit
	Unit overheating	The unit automatically resumes operation when the internal temperature has dropped < 140 °F
	Piston gasket defective	Contact manufacturer: if necessary, return unit for repair or replace control unit
	Measuring gas nozzle clogged	Contact manufacturer: if necessary, return unit for repair or replace control unit
Purge air outlet constantly closed (measuring gas flow only)	Incorrectly dimensioned unit	Use smaller dryer
	Sensor defective	Contact manufacturer: if necessary, return unit for repair or replace control unit

Symptom(s)	Possible causes	Remedy
Error signal upon switching on unit	Required performance parameters not yet reached	The moment the set performance range is reached, the error message is automatically reset (latest after 10 to 15 minutes) → otherwise, identify cause of the problem: the flashing rate and interval of the red LED indicate the type of the error/fault; if necessary, contact manufacturer
	PCB fault	Contact manufacturer: if necessary, return unit for repair or replace control unit
Settings cannot be changed	2 buttons not pressed simultaneously	See chapter ... "Operation": Correct button operation, testing with solenoid valve
	Button not held long enough	See chapter ... "Operation": Press the buttons for approx. 0.2 seconds
	Button physically damaged	Contact manufacturer: if necessary, return unit for repair or replace control unit
No power supply (green power LED not lit)	Incorrect supply voltage	Check the supply voltage to ensure that it corresponds to that specified on the name plate
	PCB fault	Contact manufacturer: if necessary, return unit for repair or replace control unit
	Unit overheating	The unit automatically resumes operation when the internal temperature has dropped < 140 °F

10. Shutting down

To decommission the drying system, disconnect it from the power mains and close the shut-off valves.

When not connected to the power mains, the drying system runs in fail-safe mode, whereby the full purge air volume is used.

11. Dismantling and disposal

Before dismantling the drying system, disconnect it from the power mains and perform the steps for assembly and installation in reverse order.

Disassemble the DRYPOINT® M intelligence and dispose of the parts and media separately according to the applicable statutory waste disposal regulations.

Spent filter element:

Waste classification: 150203

Adsorption and filter materials; cleaning wipes and protective clothing, unless classified under **150202**

Used float drain:

Do not dispose of as household waste! Dispose of safely and according to the statutory waste disposal regulations.

12. Declaration of Conformity

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EU Conformity declaration

We herewith declare that the products identified in the following are in accordance with the requirements of the relevant directives and technical standards. This declaration only refers to products that are in a condition in which they were delivered by us. Parts that were not attached by the manufacturer and/or subsequently performed interventions are not included.

Product designation:	DRYPOINT®M eco control
Models:	MDi-12 MDi-17 MDi-25 MDi-35 MDi-45 MDi-55 MDi-65 MDi-100 MDi-130
Voltage variants:	95...240 VAC ±10% (50-60 Hz) / 100...125 VDC ±10%
Max. operating pressure:	10 bar (g)
Product description and function:	Compressed air adsorption agent with membrane dryer with integrated filter/condensate drain and sensor controlled pressure dew point control for the setting of stable degrees of drying.

Low voltage directive 2014/35/EU

Applied harmonized standards: EN 61010-1:2010

EMC directive 2014/30/EU

Applied harmonized standards: EN 61326-1:2013
EN 55011:2009 + A1:2010 group 1, class B

ROHS II directive 2011/65/EU

Adherence to the regulation of the directive 2011/65/EU for the restriction of the use of certain hazardous materials in electrical and electronic devices is provided.

The manufacturer has the sole responsibility for issuing this conformity declaration.

Signed for and on behalf of:

Neuss, 6/11/2018

BEKO TECHNOLOGIES GMBH

i.V. Christian Riedel
Manager Quality Management

Headquarters**Germany**

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