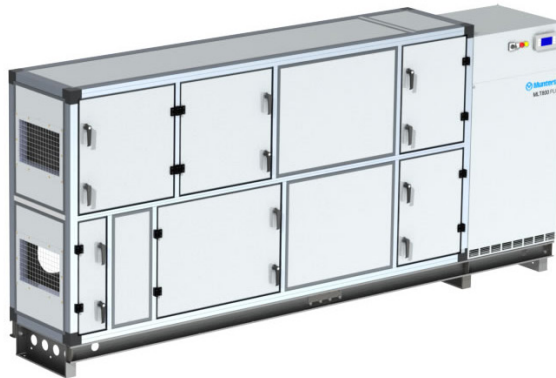


# ML 17 Plus System

## Unit Submittal Data



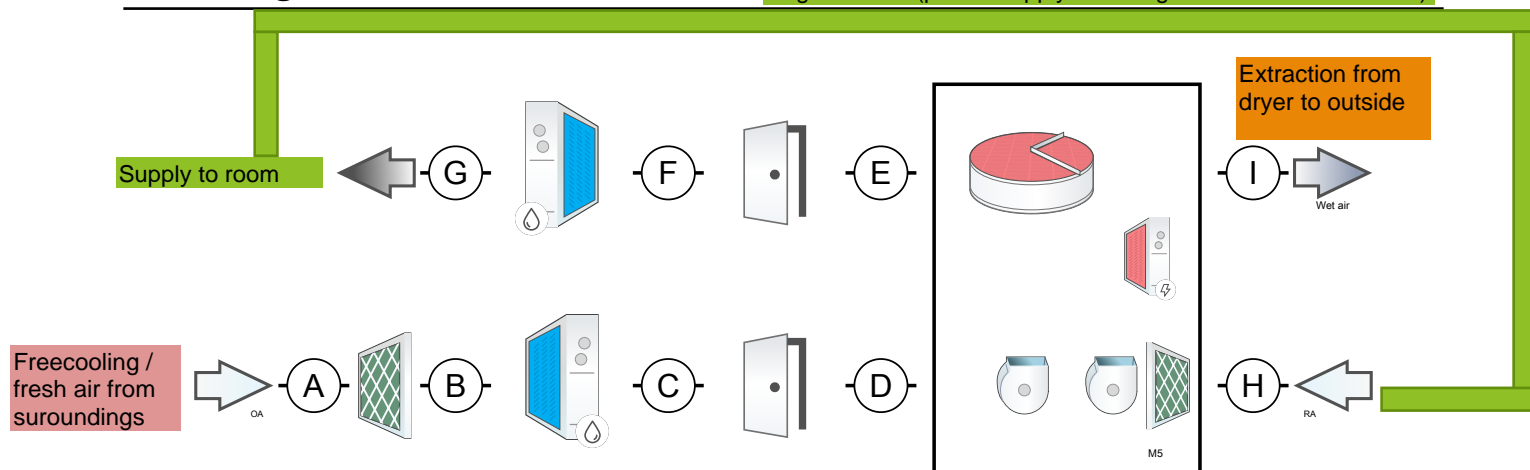
System name	ALT COOLING FINAL - ANTI - Product in - ML17+
Genesys No	G319976-2
Labels	Pfizer FFW
Prepared by	An Timmermans
Print date	07/03/2023 08:31:56
Program version	2023.3.1.37036

System Type ML 17 Plus System  
Plenum Code 1110  
Genesys No G319976-2  
Name ALT COOLING FINAL - ANTI - Product  
in - ML17+

Prepared by An Timmermans  
Print date 07/03/2023  
Labels Pfizer FFW

## Flow diagram

Regeneration (part of supply air brought back to connection H)



Climate data location: Belgium, ANTWERP INTL 12 m / 1011.8 mbar

## Summer

	A	B	C	D	E	F	G	H	I
Sm³/h	1700	1700	1700	1700	1700	1700	1700	631	631
°C	25	25	6	6	31	31	20	20	46
dp°C	13.9	13.8	5.9	5.9	-37.9	-37.9	-37.9	-41.0	20.9
% r.H.	50	50	99	99	0	0	1	0	25
Pa	0	-142	-231	-231	316	316	300	0	561

### System capacities

Total Dehumidification 20.2 kg/h  
Dehumidifier 11.8 kg/h  
Cooling Coil 8.4 kg/h

### Dehumidification @ maximum capacity

### System utilities

System total rated power 21.1 kW  
System rated current 33.5 A  
Chilled Water 1.02 l/s

System Type      ML 17 Plus System  
Plenum Code     1110

Prepared by  
Print date

An Timmermans  
07/03/2023

## Project Summary

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Number of systems      1  
System configurations    1 x ALT COOLING FINAL - ANTI - Product in - ML17+ (G319976-2)

### System

System arrangement	ML Plus System
DH Model	ML17
React heater type	Electric
System airflow direction	Process left side
System voltage	400/3/50
System connection side	Back
Control system	Climatix
System weight	766.97 kg
Case number	0

### Operating conditions

Operating temperature, minimum	-20.0 °C
Operating temperature, maximum	40.0 °C
Installation altitude, maximum	2000.00 m

### Transport and Storage

Minimum temperature for transport and storage	-20.0 °C
Maximum temperature for transport and storage	70.0 °C
Packaging	Included

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Genesys No	G319976-2	Labels	Pfizer FFW
Name	ALT COOLING FINAL - ANTI - Product in - ML17+		

## Technical data - Filter, pre-treatment

### Casing

Door	Removable panel
Inspection side	Right

### Panel filter

Panel Filter grade (EN 779)	M5
Panel filter part no.1	150-016849-001 (1pcs)
Panel filter size 1	592x592x48

### Bag filter

Bag filter grade (EN 779)	without
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### Design

Dirtyness % for design	50 %
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### Options

Pressure indicator	Pressure Switch 50-500Pa QBM9903-5
Pressure indicator quantity	1

### Panel filter

Panel filter pressure drop design	142 Pa
Panel filter pressure drop clean	35 Pa
Panel filter pressure drop dirty	250 Pa

### Filter

Average face velocity	1.38 m/s
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Plenum Code	1110	Print date	07/03/2023
Genesys No	G319976-2	Labels	Pfizer FFW
Name	ALT COOLING FINAL - ANTI - Product in - ML17+		

**1 x Valve Actuator**

Actuator	SIEMENS SAS61.03
Actuator voltage	24 V AC/DC
Actuator positioning voltage	0-10V DC

**1 x Siphon Drainage, Non-Return Valve**

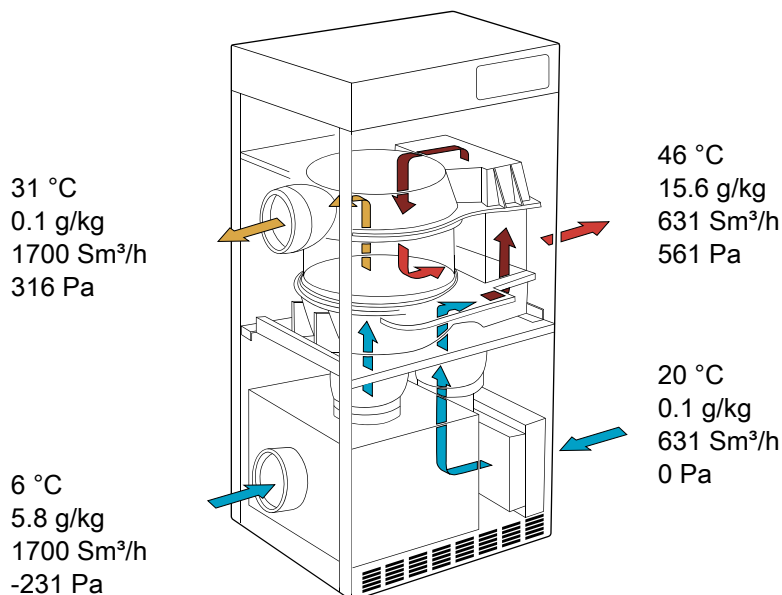
Drainage valve	Water trap, non-return, under pressure
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System Type ML 17 Plus System  
Plenum Code 1110  
Genesys No G319976-2  
Name ALT COOLING FINAL - ANTI - Product  
in - ML17+

Prepared by  
Print date  
Labels

An Timmermans  
07/03/2023  
Pfizer FFW

## Technical data - Dehumidifier



### Dehumidifier

System arrangement  
Control system  
System voltage  
DH Model  
Desiccant rotor type  
Material, Coated galvanised steel 1.0mm,  
painted outside

ML Plus System  
Climatix  
400/3/50  
ML17  
Silica Gel Blocked Rotor Center  
AluZink

### React Heater

React heater type

Electric

### React filter

React filter  
Reactivation filter size  
Reactivation filter part no.

M5  
592x392x45  
150-012357-001

### Process filter

Process filter  
Process filter size  
Process filter part no.

Without  
n/a  
n/a

### Options

Insulated process inlet  
User Manual

Yes  
GB

### Weight

Weight

316 kg

### React Heater

Reactivation heater power

18.00 kW

### Process fan(s)

Fan grid power, Frequency controlled

2.20 kW

### React fan

Fan grid power

0.75 kW

### Dehumidifier

Component total rated electric power  
Component total rated electric current

21.10 kW  
33.50 A

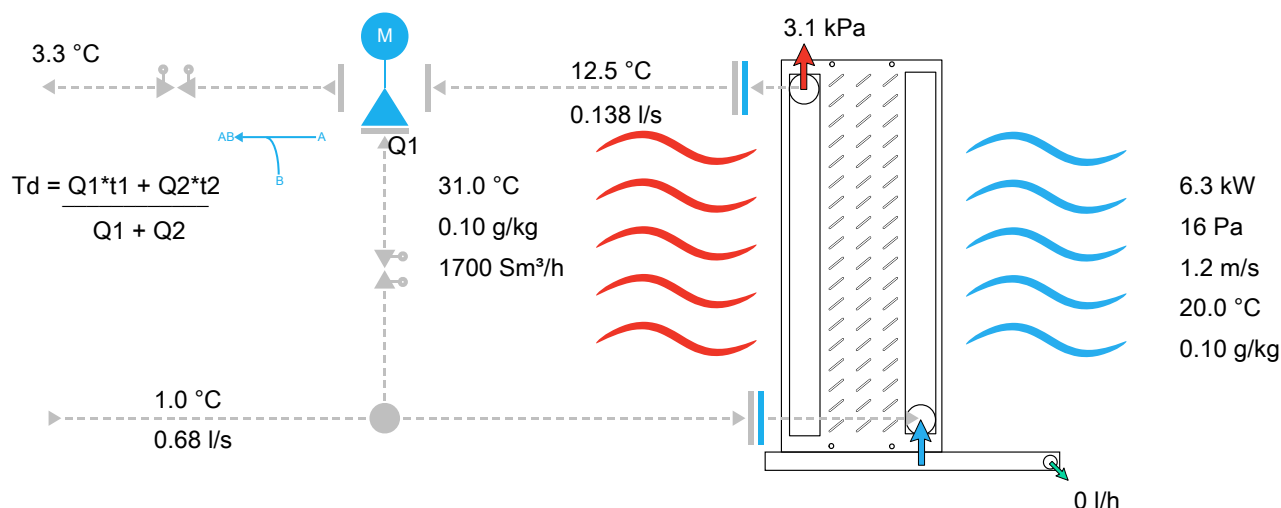
System Type	ML 17 Plus System	Prepared by	An Timmermans
Plenum Code	1110	Print date	07/03/2023
Genesys No	G319976-2	Labels	Pfizer FFW
Name	ALT COOLING FINAL - ANTI - Product		
	in - MI 17+		
Reactivation max power			18.00 kW



System Type ML 17 Plus System  
Plenum Code 1110  
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Labels Pfizer FFW

## Technical data - Post cooler, Propylene glycol



### Design

Cooling fluid temperature in 1.0 °C  
Cooling fluid temperature out 4.0 °C

### Coil casing

Connection side Right  
Coil frame material FeZn 1.5 mm  
Coil dimensions 806x685  
Cooling coil fluid drainage Flat tray, Inox304

### Tubes

Tube material Copper  
Tube diameter 9.9mm (3/8")  
Tube thickness 0.30 mm  
Number of tube rows 3  
Number of circuits 9

### Fins

Fin material Aluminium  
Fin spacing 3mm  
Fin thickness 0.2 mm

### Fluid

Fluid Propylene glycol  
Cooling fluid antifreeze by weight 30 %  
Coil fluid Pipe Connection Size DN 32  
Fluid volume 5 L

### Accessories

Coil Flanges Threaded flanges PN16  
Frost Protection None  
Droplet eliminator No  
Mist eliminator frame None

### 1 x Valve, Post cooler, Propylene glycol

Fluid valve type 3-WAY, VXG44.15-2.5  
Valve fittings Brass  
Coil fluid Pipe Connection Size DN 32  
Valve, pipe side Rp 1/2 "  
Valve connection, valve side G 1 "

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Print date 07/03/2023  
Labels Pfizer FFW

**1 x Valve Actuator**

Actuator SIEMENS SAS61.03  
Actuator voltage 24 V AC/DC  
Actuator positioning voltage 0-10V DC

**1 x Siphon Drainage, Non-Return Valve**

Drainage valve Water trap, non-return, overpressure

System Type	ML 17 Plus System	Prepared by	An Timmermans
Plenum Code	1110	Print date	07/03/2023
Genesys No	G319976-2	Labels	Pfizer FFW
Name	ALT COOLING FINAL - ANTI - Product in - ML17+		

## Technical data - Control system

### System arrangement

System arrangement	ML Plus System
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### Control system

Control system	Climatix
HMI	Magnetic Text Display
Communications protocols	Modbus TCP/IP
Munters Connected Climate®	No

### Humidity control

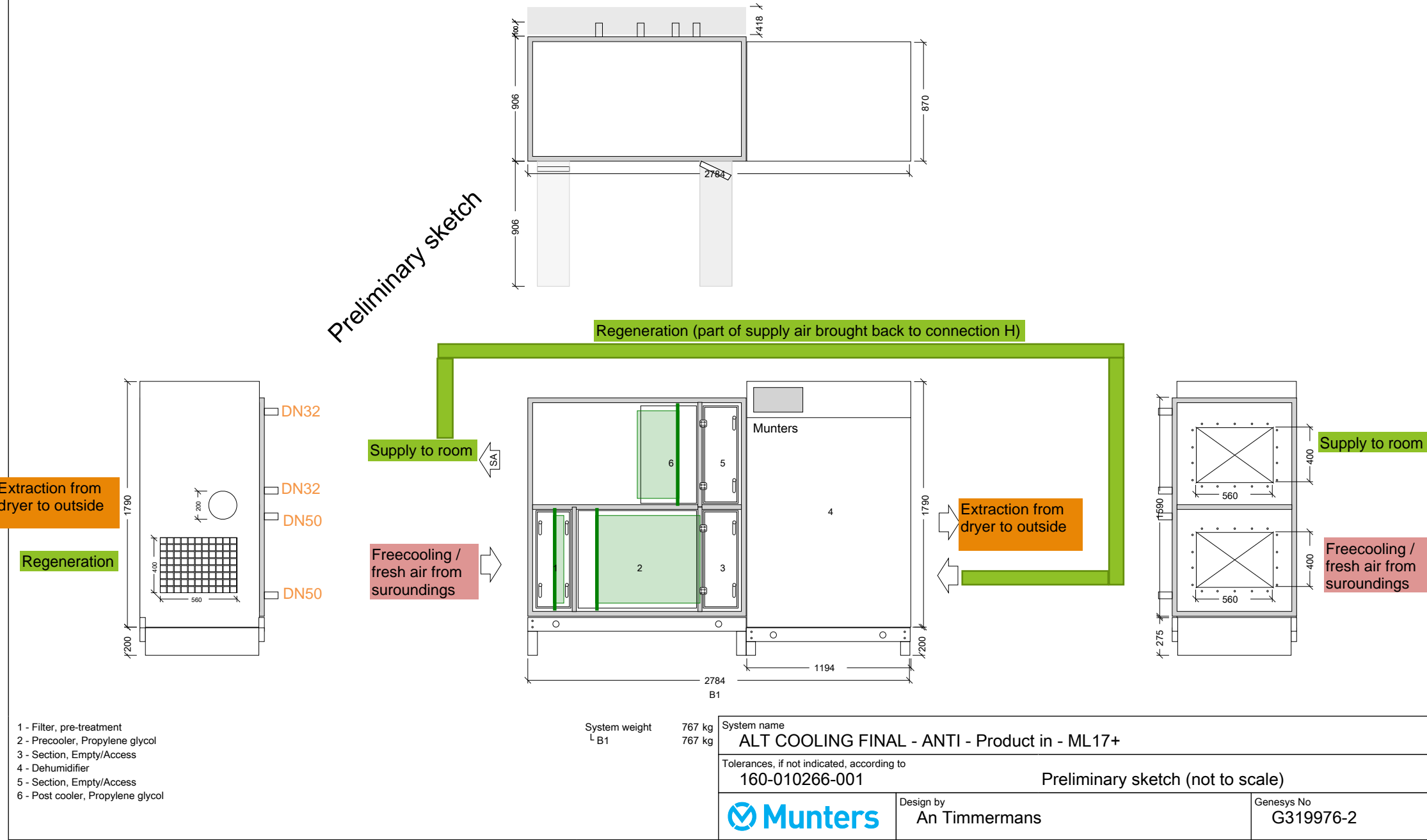
Humidity transmitter	Dew Point Sensor
Humidity transmitter control	Dew Point
Sensor 2	No
Sensor 3	No
Sensor 4	No
Temperature sensor	PT1000
Temperature sensor	PT1000

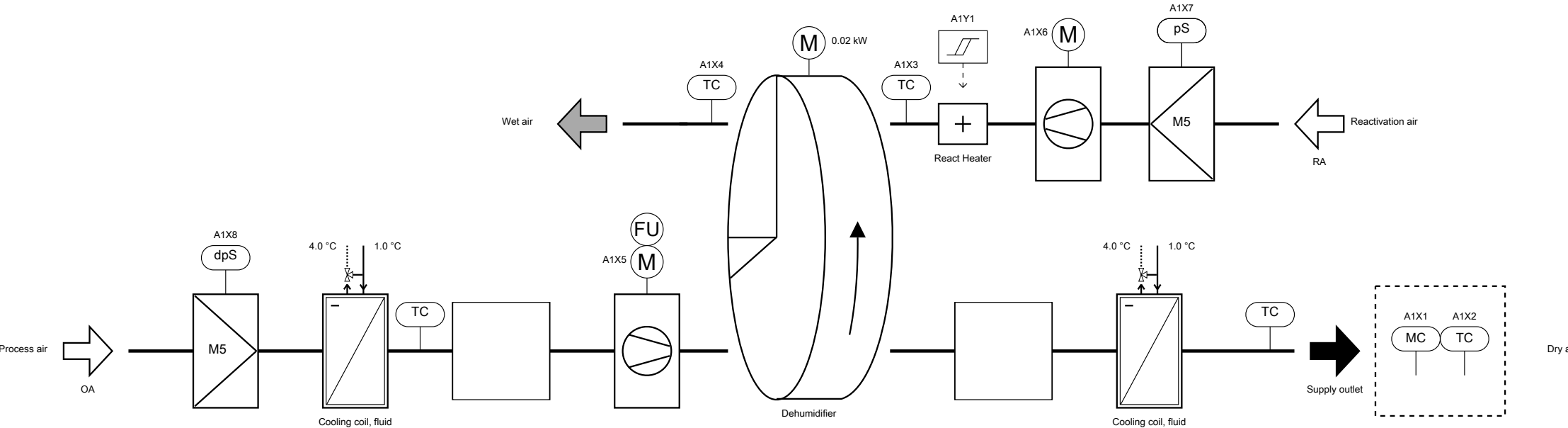
### Options

External Control	No
External temperature setpoint	No
CO2 Sensor	No
CO2 damper output	No
Floating dew point control	No
Re-transmission control	No
Re-transmission signal	No
Re-transmission control nr.2	No
Re-transmission signal nr.2	No

### System

Process pretreatment temp sensor	PT1000
Limitation temp sensor	PT1000





System	
System arrangement	ML Plus System
Process pretreatment temp sensor	PT1000
Limitation temp sensor	PT1000
Precooler	Yes
Preheater	No
Post-treatment is present	Yes
Humidifier present	No
Post cooler or heater present	Yes
Control system	
Control system	Climatix
HMI	Magnetic Text Display
Communications protocols	Modbus TCP/IP

Humidity sensor	
Humidity transmitter	Dew Point Sensor
Humidity transmitter control	Dew Point
Main selections	
Remote start/stop	Yes
External control	
External Control	Yes
Sensor	
CO2 Sensor	
Floating dew point control	

Yes	System name	
No	ALT COOLING FINAL - ANTI - Product in - ML17+	
No	Tolerances, if not indicated, according to	
No	160-010266-001	
No	P&ID	
No	Genesys No	
No	G319976-2	