



BA

# Combustion Air Conditioning Series BA

Versions BA, BA-P4

## Special Features

- **High degree of purity:**
  - $C_n H_m < 10$  ppb
  - $H_2O$  dew point  $< -10$  °C [14 °F]
- **Easy catalyst and adsorber change at the front without tools**
- **Long service life**
- **Minimum operating costs**
- **Status self-monitoring**
- **Compact, easy to use and service-friendly 19" rack housing**

## Application

When measuring hydrocarbons with an FID (flame ionization detector), hydrocarbon-free combustion air is required. The M&C combustion air conditioning BA has been developed in order to achieve a low-cost combustion air supply, independent of gas cylinders.

The BA unit can also be used as a zero gas generator when calibrating IR analyzers for immission monitoring.

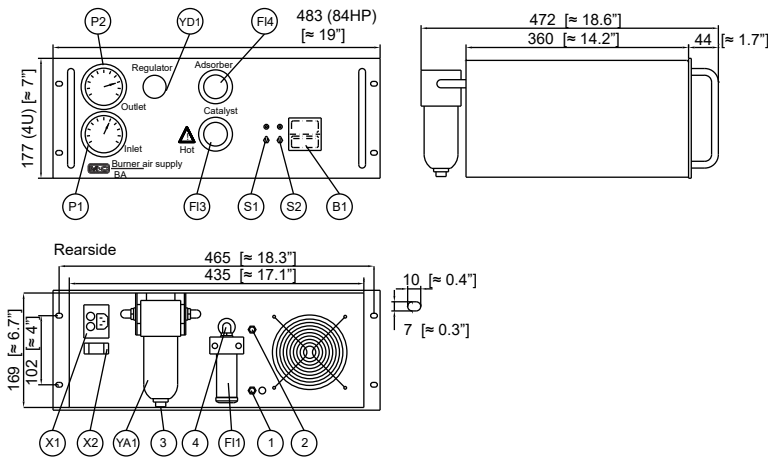
## Description

The M&C combustion air conditioning versions BA and BA-P4 have been designed as compact, easy-to-use and service-friendly 19" rack modules.

In the BA-P4 version, ambient air is drawn in via the rear-mounted ambient air intake filter with the integrated swing piston pump and is led through a high-performance filter (0.01 µm filter porosity) with a built-in automatic float condensate drain for particle and condensate separation. The condensate-free compressed air is dried to  $< -10$  °C [14 °F] dew point in a membrane dryer. The compressed air is then cleaned from traces of hydrocarbons by catalytic oxidation at 500 °C [932 °F] using a platinum/palladium catalyst. A downstream adsorber cartridge with molecular sieve and activated carbon guarantees optimum purity of the combustion air thus processed.

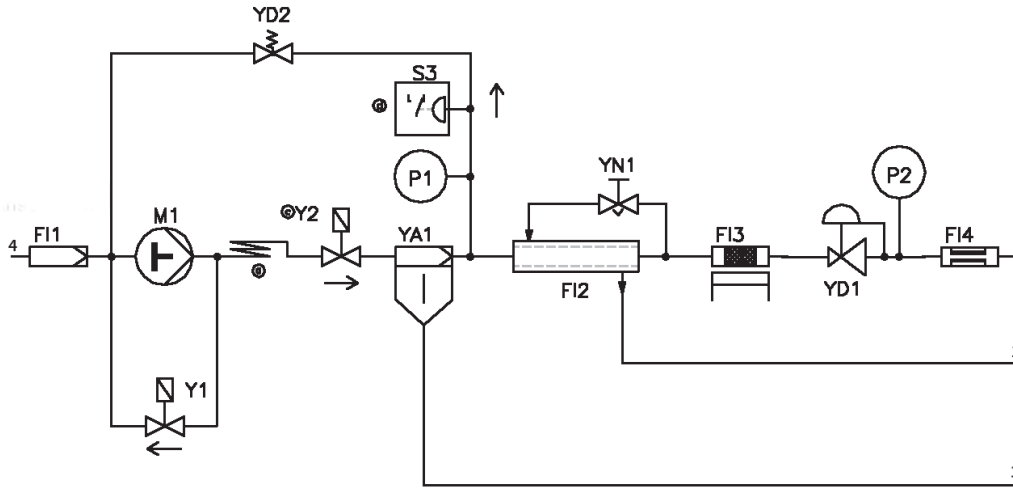
If necessary, the catalyst and adsorber material can be replaced on the front side without tools.

With external compressed air supply, M&C supplies the combustion air conditioning BA without an internal compressed air pump.



Dimensions in mm [Inches]

## Functional diagram BA-P4



- 1 Combustion air OUT
- 2 Exhaust OUT
- 3 Condensate outlet
- 4 Air IN
- for BA: instrument air IN
- B1 Temperature controller
- F11 Air intake filter
- F12 Membrane dryer
- F13 Catalyst
- F14 Adsorber
- M1 Compressor
- for BA: solenoid valve
- P1 Inlet pressure gauge
- P2 Outlet pressure gauge
- S1 Pump ON switch
- for BA: solenoid valve ON
- S2 Power ON switch
- S3 Pressure switch
- X1 Power supply
- X2 Status contact
- Y1 Solenoid valve
- Y2 Solenoid valve
- YA1 Condensate drainer
- YD1 Pressure regulator
- YD2 Check valve
- YN1 Needle valve

## Technical Data

Combustion air conditioning series BA	Version BA	Version BA-P4
Part No.	60A2000	60A2200
Inlet pressure	Instrument air, 4 to 5.8 bar	Internal pump
Outlet pressure/combustion air flow	0 to 4 bar adjustable/max. 3 NI/min	
Ambient temperature	+5 to +40 °C [41 to 104 °F]	
Start-up time	Approx. 45 min.	
Catalyst temperature	500 °C [932 °F]	
Combustion air purity	< 10 ppb C <sub>n</sub> H <sub>m</sub> , H <sub>2</sub> O dew point <-10 °C [< 14 °F]	
Catalyst poisons	Halogenes, silicone, lead, phosphorous substances	
Storage temperature	-25 to +65 °C [-13 to 149 °F]	
Relative air humidity	< 75 %, avoid condensation	
Inlet gas connection	Instrument air IN G 1/4" i	Air intake filter
Outlet gas connections	Hose connection DN 4/6 mm* standard	
Condensate connection	G 1/8" i DIN ISO 228/1	
Power supply/power consumption	230 V/50 Hz 480 VA	230 V/50 Hz 560 VA
Electrical connections	Plug with 2 m connecting cable for power in 9-pin sub-D connector for status contact	
Status signal contact for pressure and temperature	1 changeover contact-potential free, contact rating 24 V, 1 A	
Case protection	IP20 EN 60529	
Housing dimensions/protection class	19" rack unit 4 U, 84 HP, depth 430 mm/IP20 EN 60529	
Weight	Approx. 14.5 kg [≈ 32 lbs]	Approx. 16 kg [≈ 35.3 lbs]
Electrical equipment standard	EN 61010	

Please note: NI/h and NI/min refer to the German standard DIN 1343 and are based on these standard conditions: 0 °C [32 °F], 1013 mbar.