

Minerva Portable High Pressure Case

MNR 350 - BMC5/6(Ex)

*AUTONOMOUS HIGH PRESSURE SUPPLY AND ADJUSTMENT SYSTEM
FOR BEAMEX MC5, MC6 en MC6EX MULTIFUNCTION CALIBRATORS*

This case offers improved efficiency to quickly and safely perform clean, high pressure calibrations at your own location.

- Supports pressure ranges with full scale from 20 MPa down to 0.7 MPa in a single system
- Simple, compact and easy to operate
- Built-in refillable 28 MPa storage tanks for pressure supply
- Precise test pressure control using a pressure balanced volume controller
- Protected against overpressure
- Three analogue pressure gauges for monitoring pressure in storage system, regulated supply pressure and pressure at test ports
- Two test ports
- 316 SS high pressure tubing and fittings
- *Additional option:* ATEX certified version available for use in potentially explosive atmospheres



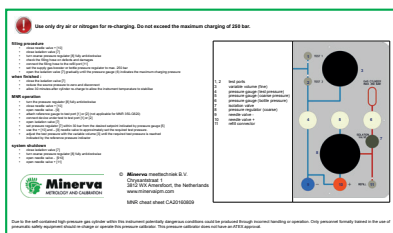
Self contained unit provides pneumatic pressure for calibration and testing up to 250 bar using a Beamex MC6 (Ex) multifunction calibrator with pressure module.

The unit is designed as an additional tool for your Beamex MC6 multifunction calibrator allowing fast and safe generation of high pneumatic pressure up to max 20 MPa.

OPERATION

The built-in high pressure gas storage system is filled through the appropriate connection. Three separate monitor gauges are mounted to indicate storage system pressure, regulated pressure and pressure at test ports. The maximum test pressure is set using the supply regulator. The test pressure at the two test connections is precisely controlled by two fine metering needle valves and the pressure balanced volume adjuster.

The installed Beamex MC5/6 multifunction calibrator displays the test pressure. Externally generated pressures can also be measured via the test connections. The instrument is supplied with quick-connect test and filling hose, a 1/4" NPT male adaptor for the test connection and filling and a refill connector.



Quick reference guide for safety and ease of use (not in ATEX version)



The Minerva MNR 90 precision volume adjuster allows very fine pressure control to within 100 Pa

IEC/ATEX certified IS version

Are you using the High Pressure Case in situations that require an IS calibrator? Then choose the IEC/ATEX certified case, especially designed and certified for controlling conditions in an explosive atmosphere.



The three pressure gauges indicate:

- 1. pressure in bottle*
- 2. pressure set by pressure regulator*
- 3. pressure at test port*

The external pressure modules can be stored above the top of the MC6 calibrator.



The internal pressure module connections are located on the top of the MC6 calibrator. There is enough space to easily connect the test hose to the module.

The space in the mold has been designed to create room for connecting the internal pressure module or the external pressure module. The tight fit ensures a stable setting and yet easy removal. The MC6 shows the pressure at the test ports generated by the control panel.



The Minerva MNR 180 pressure regulator is designed specifically for use in calibration and test applications

BEAMEX MC5/6 PRESSURE MODELS *

This Minerva Portable High Pressure Case fits the MC5, MC6 or MC6Ex and their Digital Pressure Models:



Internal Modules	External Modules	Unit	Range (3*)	Resolution	Accuracy (+/-) (1*)	1 year uncertainty (+/-) (2*)
P6C	EXT6C	kPa bar psi	-100 to 600 -1 to 6 -14.5 to 90	0.01 0.0001 0.001	0.005% FS + 0.01% RDG	0.01% FS + 0.025% RDG
P20C	EXT20C	kPa bar psi	-100 to 2000 -1 to 20 -14.5 to 300	0.01 0.0001 0.001	0.005% FS + 0.01% RDG	0.01% FS + 0.025% RDG
P60	EXT60	kPa bar psi	0 to 6000 0 to 60 0 to 900	0.1 0.001 0.01	0.005% FS + 0.0125% RDG	0.01% FS + 0.025% RDG
P100	EXT100	MPa bar psi	0 to 10 0 to 100 0 to 1500	0.0001 0.001 0.01	0.005% FS + 0.0125% RDG	0.01% FS + 0.025% RDG
P160	EXT160	MPa bar psi	0 to 16 0 to 160 0 to 2400	0.0001 0.001 0.01	0.005% FS + 0.0125% RDG	0.01% FS + 0.025% RDG
-	EXT250	MPa bar psi	0 to 25 0 to 250 0 to 3700	0.001 0.01 0.1	0.007% FS + 0.0125% RDG	0.015% FS + 0.025% RDG

1 * Accuracy includes hysteresis, nonlinearity and repeatability (k=2).

2 * Uncertainty includes reference standard uncertainty, hysteresis, nonlinearity, repeatability and typical long term stability for mentioned period (k=2).

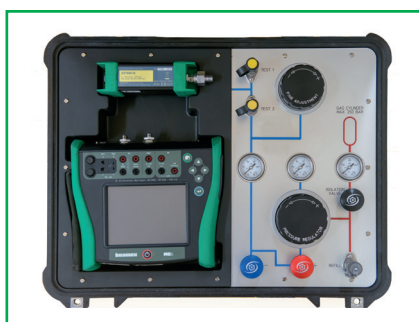
3 * Every internal/external gauge pressure module's range may be displayed also in absolute pressure if the barometric module (PB or EXT B) is installed/connected.

New: IS version of the case available to be used in combination with the Beamex MC6 ex.

* For up to date information on the Beamex MC6 and the manufacturers specifications for the full range of pressure modules and options, please check the latest brochure of the manufacturer at www.beamex.com. Beamex is a registered trademark of Beamex Oy.

TECHNICAL SPECIFICATIONS

Pressure ranges	See Beamex MC6 digital pressure modules supported table page 3
Pressure measurement specs	See Beamex MC6 digital pressure modules supported table page 3
MNR 350 control range	0 - 20 MPa gauge pressure
Gas storage system	2 x 1 litre capacity, filling pressure limited to 28 MPa, tested to 45 MPa
Monitor gauges	40 mm, analogue, all stainless steel: gas bottle pressure, regulated supply pressure, pressure at test port
Pressure regulator	Minerva Model 180 high pressure regulator, Range 0 - 25 MPa
Volume adjuster	Minerva Model 90, pressure balanced volume adjuster, displacement 11 cm ³ max 67 turn, precise pressure setting to within 100 Pa, stainless steel interior
Needle valves	Fine control valve for test pressure inlet and exhaust
Connections	Low volume Minimess 1215, quick connect couplings with internal check valve
Test / filling hose	Minimess 1215, length 2 meter, including 1/4" NPT male connector
Refill connection	For connection to nitrogen bottle, standard RU-3
Quick lock system in lid	Quick lock system for storing test hose and test connector
Housing	Pelicase. Material: ultra high impact copolymer
Dimensions	405 x 295 x 255 mm (L x W x H)
Weight	Approx. 19 kg
Certification	Pressure Equipment Directive (PED), Transportable Pressure Equipment Directive (TPED), CE conformity declaration
Accessories included	2 meter test / filling hose, 1/4" NPT male test adaptor, RU-3 refill connection
ATEX zone	II 3G Ex ic IIB T6 Gc (-10°C ≤ Ta ≤ +50°C)
Documentation included	Manual, PED conformity declaration, TPED conformity declaration, CE declaration
Ordering code	MNR-350-BMC6 or MNR-350-BMC5
Ordering code Atex version	MNR-350-BMC6-ex



All specifications are subject to change for product improvement and without notice.
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