

Minerva Portable High Pressure Case

MNR-300-AD672/AD681 (Ex)

*AUTONOMOUS HIGH PRESSURE SUPPLY AND ADJUSTMENT SYSTEM
FOR ADDITEL 68x/681IS AND 672 DIGITAL PRESSURE GAUGES*

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 controlling conditions in an explosive atmosphere



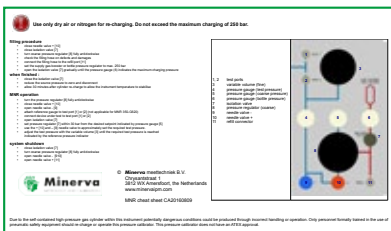
Self contained unit provides pneumatic pressure for calibration and testing using Additel 681 (Ex) or 672 digital pressure gauges.

The unit is designed as an accessory tool for your Additel 681 or 672 allowing fast and safe storage, supply and adjustment of pressure up to 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 Additel digital pressure gauge 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 ¼" NPT male adaptor for the test connection and filling and a refill connector.



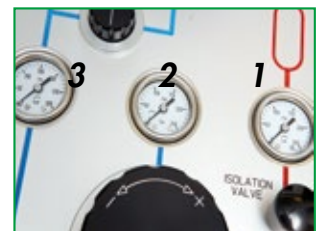
Quick reference guide for safety and ease of use (not in ATEX version)



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

Space to store extra pressure gauge

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



A high pressure swivel connection with quick connector allows the Additel gauge to be connected and positioned at whichever angle is most convenient for the operator.



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

ADDITEL DIGITAL PRESSURE GAUGES MODELS*



Gauge Pressure					
P/N	Pressure Range		Media	Accuracy (%FS)	Burst pressure
GP50	50 psi	3.5 bar	G, L	0.025 (0.05, 0.1, 0.2)	3x
GP100	100 psi	7.0 bar	G, L	0.025 (0.05, 0.1, 0.2)	3x
GP300	300 psi	20 bar	G, L	0.025 (0.05, 0.1, 0.2)	3x
GP500	500 psi	35 bar	G, L	0.025 (0.05, 0.1, 0.2)	3x
GP600	600 psi	40 bar	G, L	0.025 (0.05, 0.1, 0.2)	3x
GP1K	1,000 psi	70 bar	G, L	0.025 (0.05, 0.1, 0.2)	2x
GP2K	2,000 psi	140 bar	G, L	0.025 (0.05, 0.1, 0.2)	3x
GP3K	3,000 psi	200 bar	G, L	0.025 (0.05, 0.1, 0.2)	3x
GP5K	5,000 psi	350 bar	G, L	0.025 (0.05, 0.1, 0.2)	3x



Compound Pressure					
P/N	Pressure Range		Media	Accuracy	Over pressure
CP30	-15 to 30 psi	-1 to 2 bar	G	0.025 (0.05, 0.1, 0.2)	3x
CP100	-15 to 100 psi	-1 to 7 bar	G, L	0.025 (0.05, 0.1, 0.2)	3x
CP300	-15 to 300 psi	-1 to 20 bar	G, L	0.025 (0.05, 0.1, 0.2)	3x

Absolute Pressure					
P/N	Pressure Range		Media	Accuracy	Burst pressure
AP50	50 psi	3.5 bar	G	0.1 (0.2)	3x
AP100	100 psi	7.0 bar	G, L	0.05 (0.1, 0.2)	3x
AP300	300 psi	20 bar	G, L	0.05 (0.1, 0.2)	3x
AP500	500 psi	35 bar	G, L	0.05 (0.1, 0.2)	3x
AP1K	1,000 psi	70 bar	G, L	0.05 (0.1, 0.2)	2x
AP3K	3,000 psi	200 bar	G, L	0.05 (0.1, 0.2)	3x
AP5K	5,000 psi	350 bar	G, L	0.05 (0.1, 0.2)	3x

For updated and more detailed information on the Additel 672/681 and options please check the latest brochure of the manufacturer.

Additel is a registered trademark of Additel Corporation.

GENERAL SPECIFICATIONS

Media compatibility • 15, 30 psi: any clean dry non-corrosive gas • 100, 300, 1000 psi: any liquids or gasses compatible with 316 stainless steel • above 1000 psi: any non-flammable, non-toxic, non-explosive, non-oxidizing liquid or gas compatible with 316 stainless steel	
Mechanical specifications	
Dimensions (HxWxD)	12.7 cm x 11.4 cm x 3.7 cm (5 in x 4.5 in x 1.5 in)
Pressure connection	1/4 in BSP Male
Housing/Weight	Cast ZNAl/0.56 kg (1.22 lb) with holster
Display	5-1/2 digits, 16.53 mm (0.65 in) high 20-segment bar graph, 0 to 100 %
Power	Three AA alkaline batteries

Model	ADT681: Regular gauge, ADT681IS: ATEX certified intrinsically safe and ADT 672
Accuracy	681 (IS)-02: 0.02% of full scale, 681 (IS)-05: 0.05% of full scale, 681 (IS)-10: 0.1% of full scale, 681 (IS)-20: 0.2% of full scale, ADT672-02: 0.02% of full scale, ADT672-05: 0.05% of full scale.
Display	ADT 68x; 5 full digit FSTN LCD ADT 672; Dual-line 6 full digit FSTN LCD with LED backlight
Pressure Units	Pa, kPa, MPa, psi, bar, mbar, kgf/cm ² , in H ₂ O 4°C, mm H ₂ O 4°C, in Hg 0°C, mm Hg 0°C
Environmental	Compensated Temperature: 14°F to 122°F (-10°C to 50°C), Operating Temperature*: 14°F to 122°F (-10°C to 50°C), Humidity: <95%
Pressure Port	1/4 BSP male
Power	680 + 681; battery, 1 x 9V alkaline battery (included) 672; battery, rechargeable Li-ion polymer battery
Enclosure	Case material: Aluminum alloy, Wetted parts: 316L SS. Dimension: Ø110mm X 35mm depth X 176mm height, Weight: 0.6kg
Intrinsic Safety and CE	CE marked, ATEX certified intrinsically safe (ADT681IS) *(Rubber boot for ADT681 is not ATEX certified)

New: IS version of the case available to be used in combination with Additel ADT681IS, the ex version of the 681.

TECHNICAL SPECIFICATIONS

Pressure ranges	See Additel 68X or 672, digital pressure gauges supported table page 3
Pressure measurement specs	See Additel 68X or 672, digital pressure gauges supported table page 3
MNR 300 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-300-AD68x/672
Ordering code ATEX version	MNR-300-AD681-ex

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

Pelicase is a trademark of Pelican Products, Inc.

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