

# Model PK1

## Pressure Calibration KIT

PK1 is a pressure calibration kit that include everything the operator needs to calibrate pressure instruments: hand pressure pump, reference gauge, hose, connection adapters, carrying case.

Ranges: from 0.9 up to 1000 bar  
Accuracy up to 0.02 % FS



### General

To cover any requirement of mobility and effectiveness in the field, CalRef proposes a portable pressure calibration kit configurable from the customer according to its requirements.

Robust and handy, they are supplied with an industrial carrying case ready for use both on site and workshop.

Each calibrator has a Works Test Certificate against reference Standards, traceable to National or International Standards (EA).

Wide measuring ranges from -0.9 bar to 1000 bar pneumatic and hydraulic

### The KIT

- Digital or Analogue gauge: ranges from 0,9 up to 1000 bar;
- Pressure generator: models

- MP-V (- 1...0 bar)
- MP-P (0...7 bar)
- MPV-600 (-1...40 bar)
- M-10 (0...700 bar),

- Set of adaptors allowing the use of the equipment with the majority of the instruments to be tested

### Field of Applications

- Maintenance and testing of instrumentation for industrial plants
- Calibration of pressure sensors
- Material Acceptance
- Quality Control
- Chemical & Petrochemical Industries
- Pharmaceutical
- Avionic/Airspace
- Industrial plants

### Test Digital Gauges Model DGS - DG

Range: see next page table  
 Compensated Temperature Range: 0...50 °C  
 Accuracy (10...30 °C): 0,05 % FS  
 (including linearity, repeatability and hysteresis)  
 Numbers of Digits: 5  
 Precision: 0,05 % FS  
 Precision optional ( $\geq 20$  bar): 0,025 % FS  
 Storage/Operating Temp.: -10÷60°C / 0÷50°C  
 Pressure Connection: 1/4" BSP M  
 Protection, CEI 529: IP 65  
**Intrinsically safe version available,  
 94/9/CE (ATEX)**



### Reference Digital Gauges Model CRP101

Range: see next page table  
 Automatic temperature compens.: -10...50 °C  
 Accuracy: up to 0.02% FS  
 Overpressure: 150 % max (depend on range)  
 Diameter: 100 mm  
 20 measuring units available  
 Datalogger included  
 Process connection: 1/4" G or 1/2" G M  
 Power supply: AAA NiMH batteries  
 Batteries charger integrated  
 Power adapter 9 V - 600 mA  
 For complete datasheet: P-CRP101-E



### Analogue Gauges Model AG63

Range: see next page table  
 Uncertainty: 0,5 % FSD  
 Dial: 63 mm  
 Connection: 1/4" NPT M  
 Knife-edge pointer.  
 Weight 0.7 kg  
 Dimensions Ø 105x52 mm



### MP-V & MP-P Pneumatic Pump



- Fluid: air
- Pressure MP-V: -0.9...0 bar
- Pressure MP-P: 0...7 bar
- Fine volume adjustment + vent valve
- Net weight: 0.6 kg (without gauge)
- Outputs:
  - 1/8" NPT F for reference gauge
  - 1/8" NPT F for process
  - Flexible hose 100 cm length with the following connections:
    - 1/8" NPT M for pump side port
    - 1/4" NPT F

### MVP-600 Pneumatic Pump



Fluid: air

Pressure: -1 ÷ 40 bar max

Fine volume adjustment + vent valve

Net weight: 0.9 kg (without gauge)

Outputs:

- Upper port 1/4" NPT F with adaptor 1/4" NPT M to 1/4" BSP F (for reference gauge)
- Side port 1/8" NPT F
- Flexible hose 100 cm length with the following connections:
  - 1/8" NPT M for pump side port
  - 1/4" BSP F rotating connector for instrument under test

### M-10 Hydraulic Pump



Fluid: low viscosity mineral oil or demineralised water

Pressure: 0 ÷ 700 bar

Fine volume adjustment

Net Weight: 1 kg (without gauge)

Reservoir: transparent, 0.15 litres capacity

Output connections: 2 ports 1/4" NPT F for reference gauge and instrument under test

- Flexible hose 100 cm length with the following connections:
  - 1/4" NPT M for pump side port
  - 1/4" BSP F rotating connector for instrument under test

## Standard Supply includes

- Pressure generator as per code list
- Reference gauge as per code list
- Technical Carrying Case IP67
- Flexible hose 100 cm
- Conformity report
- Calibration work test report (for DGS only)
- Instruction manual

## Options

- The kit can be supplied without the gauge
- Set of 5 process adapters as per table "Adapters kit"
- The gauge can be supplied with official calibration certificate (ACCREDIA or Equivalent)

## Adapters kit

Code	Connection
4BM4NF	¼" BSP male X ¼" NPT female
4BM2NF	¼" BSP male X ½" NPT female
4BM4NM	¼" BSP male X ¼" NPT male
4BM2NM	¼" BSP male X ½" NPT male
4BM2BF	¼" BSP male X ½" BSP female

## Model CRP101

Code	Range	Res.	Over press.
CRPX-200C	-200÷200 mbar	0,001 mbar	1 bar
CRPX-500G	0÷500 mbar	0,001 mbar	1 bar
CRPX-101C	-1÷1.5 bar	0.01 mbar	1.6 bar
CRPX-701G	0÷7 bar	0.01 mbar	8 bar
CRPX-202G	0÷20 bar	0.1 mbar	22 bar
CRPX-402C	-1÷40 bar	0.1 mbar	50 bar
CRPX-103G	0÷100 bar	1 mbar	120 bar
CRPX-203G	0÷200 bar	1 mbar	220 bar
CRPX-403G	0÷400 bar	1 mbar	440 bar
CRPX-703G	0÷700 bar	1 mbar	750 bar
CRPX-104G	0÷1000 bar	10 mbar	1050 bar

CRPX

X = 0 - accuracy = 0.1%FS

X = 1 - accuracy = 0.05% FS

X = 2 - accuracy = 0.02%FS (0.025% for range ≥100 bar)

## How to order

- MPV** Pneumatic pressure generator -0.9 up to 0 bar  
**MPP** Pneumatic pressure generator 0 to 7 bar  
**MP2** Pneumatic pressure generators MPV and MPV  
**MVP** Pneumatic pressure generator -0.9 to 40 bar  
**M10** Hydraulic pressure generator up to 700 bar

**AGXX** Analogue gauge (see table)

**DGXX** Digital gauge (see table)

**DGSX** Digital Test Gauge High Accuracy

**CRPX** Digital Reference Gauge High Accuracy

**XXXX** Code for range (see table)

**XXX XXXX XXXX K** Model code

## Model DGS

Code	Range	Resolution	Over press.
DGS-102G	-1÷2 bar	0,1 mbar	6 bar
DGS-102A	0÷2 bar	0,1 mbar	6 bar
DGS-110G	-1÷10 bar	1 mbar	20 bar
DGS-110A	0÷10 bar	1 mbar	20 bar
DGS-120G	-1÷20 bar	1 mbar	40 bar
DGS-120A	0÷20 bar	1 mbar	40 bar
DGS-140A	-1÷40 bar	1 mbar	60 bar
DGS-100A	0÷100 bar	10 mbar	200 bar
DGS-200A	0÷200 bar	10 mbar	400 bar
DGS-300A	0÷300 bar	50 mbar	500 bar
DGS-400A	0÷400 bar	50 mbar	800 bar
DGS-700A	0÷700 bar	50 mbar	800 bar
DGS-1K0A	0÷1000 bar	100 mbar	1100 bar

## Model DG

Code	Range	Resolution	Over press.
DG-103G	-1÷3 bar	1 mbar	10 bar
DG-030G	-1÷30 bar	10 mbar	60 bar
DG-300G	1÷300 bar	100 mbar	400 bar
DG-700G	1÷700 bar	200 mbar	700 bar

## Model AG63

Code	Range	Over press.
0610	10 bar	130% FSD
0635	35 bar	130% FSD
0670	70 bar	130% FSD
6100	100 bar	130% FSD
6140	140 bar	130% FSD
6200	200 bar	130% FSD
6400	400 bar	130% FSD

Other ranges available on request