

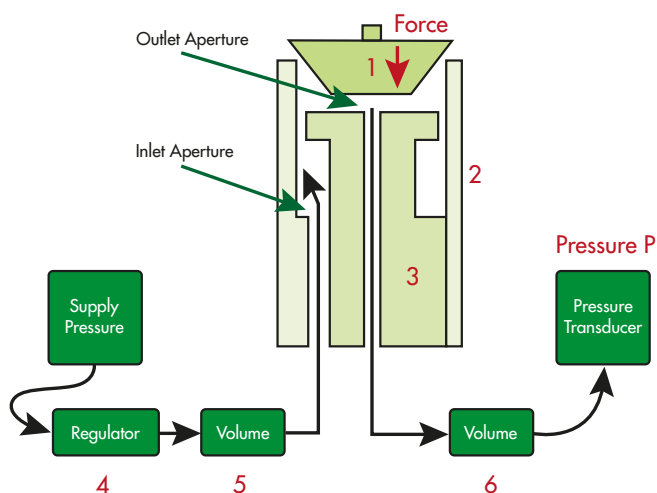
# Minerva Low Pressure Deadweight Tester

## MNR 700-VLP

*ACCURATE AND STABLE PRESSURE MEASUREMENT IN A LOW MEASURING RANGE*

This deadweight tester is a robust and flexible pressure measurement instrument with high accuracy.

- Pressure range 0,005 to 25 kPa
- Accuracy 0,020% of reading, optional 0,015% or 0,010%
- Traceable to International Standards. Supplied with ISO/IEC 17025 accredited certificate
- Quick and simple to operate
- Gas operated



### OPERATING PRINCIPLE

The operating principle of the MNR-700-VLP is based on the dynamic interaction between a flow of gas and a non-cylindrical piston. The diagram shows piston (1) coaxially located in the cylinder (2) transforming force (mg) into pneumatic pressure (P). The inclusion of the insert (3) and the two volumes (5 & 6) assures dynamic stability. The high accuracy of the MNR-700-VLP is provided by the two cascade regulators (4) which also isolate the output pressure from supply pressure fluctuations. When air is passing between the piston and cylinder a reactive feedback force is generated. This force does not exceed 0,0015 mg which is sufficient to self-centre the piston.

## TECHNICAL SPECIFICATIONS

<b>Pressure range:</b>		
MNR-700-VLP-25kPa	0,02 – 25 kPa (gauge) or 0,005 – 25 kPa (differential)	
Accuracy	Accuracy Reading 0,020% *Note 1	0 .. 0,4 kPa : ± 0,1 Pa
		0,4 .. 2 kPa : ± 0,030% of reading
		>2 kPa : ± 0,020% of reading
	Accuracy Reading 0,015% *Note 1	0 .. 0,4 kPa : ± 0,1 Pa
		0,4 .. 2 kPa : ± 0,025% of reading
		>2 kPa : ± 0,015% of reading
	Accuracy Reading 0,010% *Note 1, *Note 2	0 .. 0,4 kPa : ± 0,1 Pa
		0,4 .. 2 kPa : ± 0,020% of reading
		>2 kPa : ± 0,010% of reading
Operating temperature	15 to 35 °C	
Operating atmospheric pressure	85 -110 kPa abs	
Operating humidity range	30 to 80 % RH	
External air supply	300-400 kPa	
Setting internal pressure regulator	150 +/- 7,5 kPa	
External air supply quality	Dry clean air, purity class 1-2-1 (ISO 8573-1)	
Dimensions calibrator	390 x 310 x 240 mm (l x w x h)	
Dimensions case for piston, mass set & accessories	390 x 310 x 147 mm (l x w x h)	
Weight calibrator	13,5 kg	
Weight case for piston, mass set & accessories	5,3 kg	
Ordering code	Accuracy Reading 0,020%	MNR-700-VLP-25kPa-0.020
	Accuracy Reading 0,015%	MNR-700-VLP-25kPa-0.015
	Accuracy Reading 0,010%	MNR-700-VLP-25kPa-0.010

\*1 Note: reference parameters for defined specification:

- Temperature: 20 +/- 1 Deg.C.
- Atmospheric pressure: 101,325 +/- 3 kPa
- Relative Humidity: 50 +/- 20%

\* 2 Note: Consult Minerva for availability



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