

Gas meter test benches



**CUBIC STANDARD EQUIPMENT
BELL PROVER**



Technical description

Cubic standard equipment as test station is used for the verification of domestic diaphragm gas meters of G1.6, G2.5, G4, G6, G10 sizes. This test method is one of the oldest methods and belong to very accurate and reliable methods. Accurate cylindrical vessel (bell) is immersed by constant speed into liquid at fully balanced system, thus discharging strictly defined volume of air by constant pressure and flowrate through gas meters being verified. By comparison of the volume of air discharged by the vessel with the volume measured by individual gas meters taking into account pressure conditions and temperatures error of gas meters is found. 5 to 6 pieces of gas meters can be connected in series with this measurement. This new equipment differs from original one by the system of control through PC. It means improvement in both comforts of operation and accuracy of measurement because unlike with classic equipment it is possible to carry out testing by using dynamic test method. The equipment can operate in automatic cycle with evaluation of results on PC and printing hard copies of test protocols.



In comparison with verification against standard gas meters this method is not so productive but is more accurate and reliable due to the strictly defined constant volume in contrast to standard gas meters that have some uncertainty of measurement and reproducibility. For the reason stated it can be also used as standard equipment for the verification of standard gas meters.

The test equipment consist of the following subgroups

- stainless tank with bell, filled with oil
- chain with weight, counterweight, pulley and incremental sensor
- desk with pneumatic clamping of gas meters, fan
- panel for the evaluation of gas meters, pulse sensors, pressure gauges, thermometers
- desk for computer, control computer, printer, electric distributor, electronic differential pressure gauge

Technical parameters

Bell prover type	BP 100	BP 250	BP 500	BP 1100	BP 1800
Bell volume (dm ³)	100	250	500	1100	1800
Flow rate range (m ³ /h)	0,03 – 9,5	0,1 - 30	0,22 - 70	0,5 - 150	0,8 - 250
Maximal extended uncertainty U (kU = 2) [%]	0,1 ÷ 0,2				
Maximal testing volume for a measurement (dm ³)	37,5	225	450	850	1350
Maximal stabilization air volume (dm ³)	12,5	75	150	250	450
Shortest time limit (max. Q):	30 s				
Overall weight (kg)	290	580	850	1600	2000
Oil quantity ca. (l)	70	150	320	480	600
Energy – compressed air	6 bar (not include in delivery)				
Protection	IP43				
Supply	3 x 400 V / 230V , 2000 VA				

JUSTUR, spol.s.r.o.

Nám. Dr. A. Schweitzera 194
SK – 916 01 Stará Turá
Tel.: +421 32 7743601
www.justur.sk, info@justur.sk



ISO 9001



V130716