

Perfection in fluids.

The right *flow*
by German engineering.



BPP10,000 - Bell Piston Prover

Data Sheet EPE-147074



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Primary standard 10,000 l/h

Traceability to SI units length and time

Measurement uncertainty up to 0.08% (k=2)

Flow calibration with air up to 6 bar gauge pressure (7 bar abs.)



Similar to Figure

Description

The Bell Piston Prover BPP10,000 is a primary standard for flow calibration with air and other gases (optional). Operating pressure up to 6 bar gauge pressure (7 bar abs.). The piston is moved via an electrical motor: In the initial state the bell piston is fully retracted (upper position). At the end of a calibration procedure the bell piston is fully extended (lower position). Using the dimensions and the travel speed of the piston the flow is determined exactly. The typical measuring time is bigger than 20 seconds. The two pressure chambers are separated by seals and coupled via a switching valve. A bypass is opened with this valve, so that the system with the test piece can be tempered by a pre-set flow rate for any time.

Advantages

- ✓ Measurement uncertainty up to 0.08% (k=2)
- ✓ Calibration of test items with compressed air and other gases (optional)
- ✓ No measurement errors caused by temperature stratification
- ✓ Fully adjustable air flow
- ✓ Direct calibration of sonic nozzles or other flow adjusting test items
- ✓ Highest accuracy using plunger-piston:
- Machining and calibration of outside-diameter
- ✓ User defined pre-tempering with bypass
- ✓ No leakage over sealing by using patented plunger-piston

Technical data

Measurement range	10...10,000 l/h
Measurement uncertainty (150...5000 l/h)	Type A: $\leq 0.08\%$ (k=2) Type B: $\leq 0.15\%$ (k=2)
Measurement time	t > 20s
Operating pressure	up to 6 bar gauge pressure (7 bar abs.)
Medium	Atmospheric air Compressed air Optional: other gases
Dimensions (L x W x H)	1000 x 1000 x 3600 mm



Standard Solutions Application examples:



Gas- and flow measurement technology:

Calibration standard for sonic nozzles, MFM, LFE, venturi nozzles, gas meters



This is only an example interpretation and can change according to your needs.



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For special requirements we are happy to advise you. Subject to change. / EPE-147074 / Last update: 08/2018 / V03
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