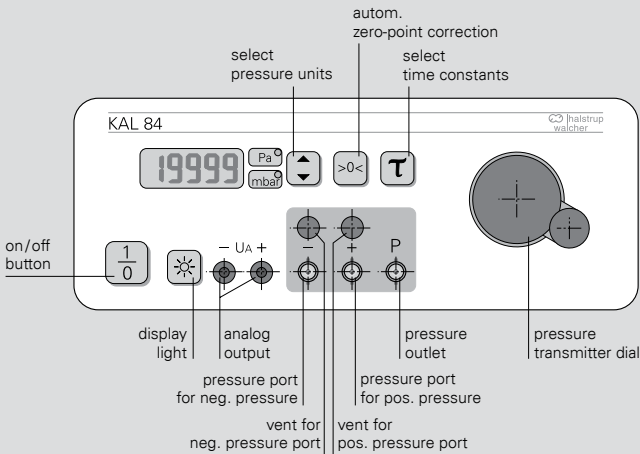
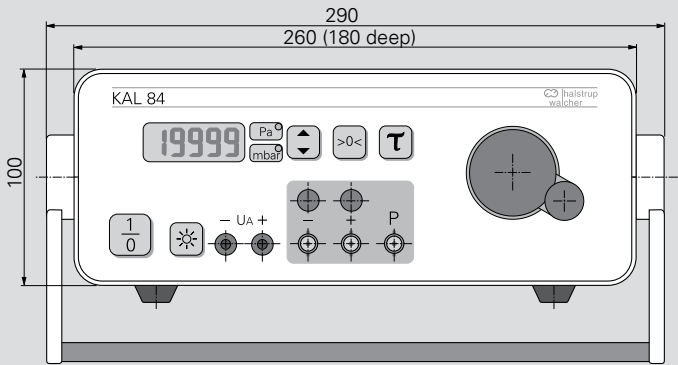




Features

- Highly accurate and reproducible results
- Internal pressure generation using pressure bellows and hand pump
- Very rugged and light:
excellent for service applications
- Unit conversion, e.g. mmHg/kPa, mbar/kPa
- Rechargeable battery allows for portable operation



Margin of error ¹⁾ (0.3 Pa margin of error for the reference)	$\pm 0.2\%$ of max. value + ± 1 digit for measurement ranges 1 .. 50 kPa $\pm 0.5\%$ of max. value + ± 1 digit
Hysteresis	0.1 % of max. value
Temperature coefficient zero point	not applicable; Push button for resetting zero-point
Temperature coefficient span	0.04 % of max. value/K (10 .. 40 °C)
Calibration temperature	22 °C
Medium	air, all non-aggressive gases
Displacement volume	approx. 100 cm ³ (1, 10, 100 kPa) approx. 200 cm ³ (100 Pa)
Analog output	0 .. 1 V ($R_L \geq 2\text{ k}\Omega$) 2 connectors Ø 4 mm
Display	4 ½ digit LCD character height = 10 mm
Time constants	toggles between 0.1 s; 1 s
Operating temperature	10 .. 40 °C
Storage temperature	-10 .. 70 °C
Power supply	NiCd rechargeable 9 V battery with AC adaptor
Weight	approx. 3 kg
Pressure ports	for tubing NW 6 mm
Certificates	CE

¹⁾ all measurement ranges have a 99 % overrange.

Measurement ranges ²⁾	A
0 .. 100 Pa (0 .. 1 mbar)	0
0 .. 1 kPa (0 .. 10 mbar)	1
0 .. 10 kPa (0 .. 100 mbar)	10
0 .. 100 kPa (0 .. 1 000 mbar)	100
0 .. 300 mmHg (0 .. 400 mbar)	300

²⁾ others available upon request

Margin of error	B
$\pm 0.5\%$ of max. value ± 1 digit	1
$\pm 0.2\%$ of max. value ± 1 digit for measurement range 1 .. 50 kPa (optional)	2

Power supply	C
230 VAC adaptor	230
115 VAC adaptor	115



Order code	A	B	C
KAL 84	-	-	-

HIGH PRECISION ON-SITE MEASUREMENT AND CALIBRATION

The KAL range from halstrup-walcher offers 3 pressure calibration devices which offer outstanding value for money and can be used either for stationary (e.g. in a customer's own laboratory) or mobile applications. These devices combine the following features:

- integrated pressure generation (for setting the calibration point)
- high-precision pressure measurement

In the KAL 84, the pressure is generated using a manual pump and integrated pressure bellows. In the KAL 100/200, the calibration point (target pressure) is entered via the keyboard. A high precision pump automatically generates the target pressure. The user can select not only the display language but also the unit of pressure.

Product	KAL 200	KAL 100	KAL 84
Details on	p. 36	p. 36	p. 37
			
Pressure generation	automatic		manual
Applications	mobile or stationary (laboratory)		
Measurement ranges	0..100 Pa/0..200 Pa/0..500 Pa/0..1 kPa/0..2 kPa/ 0..5 kPa/0..10 kPa/0..20 kPa/0..50 kPa/0..100 kPa/ ±100 Pa/±200 Pa/±500 Pa/±1 kPa/±2 kPa/±5 kPa/ ±10 kPa/±20 kPa/±50 kPa/-80..100 kPa		0..100 Pa (0..1 mbar) 0..1 kPa (0..10 mbar) 0..10 kPa (0..100 mbar) 0..100 kPa (0..1000 mbar) 0..300 mmHg (0..400 mbar)
Margin of error (0.3 Pa margin of error for the reference)	± 0.1 % of max. value Measurement ranges > 0..200 Pa/±200 Pa ± 0.2 % of max. value Measurement ranges 0..200 Pa/±200 Pa ± 0.3 % of max. value Measurement ranges 0..100 Pa/±100 Pa	± 0.2 % of max. value Measurement ranges > 0..200 Pa/±200 Pa ± 0.5 % of max. value Measurement ranges ≤ 0..200 Pa/±200 Pa	± 0.2 % of max. value ± 1 digit Measurement ranges 0..50 kPa ± 0.5 % of max. value ± 1 digit
Interface	USB (standard)	USB (optional)	-
Analog measurement input for test object	✓	optional	-
Battery life (rechargeable)	8 h	8 h	2 h
Factory calibration certificate	✓	optional	optional

USER SOFTWARE FOR THE KAL 100/200

Control calibration processes from your PC.

The KAL 100/200 calibration devices with USB port can be operated using our user software. You have a choice of three operating modes: target value mode, pressure measurement and test mode.

Define calibration points and run to them automatically. Once you have saved a defined calibration run, you can use it again for another or the same pressure transmitter.

You can also use the software to set parameters which you would otherwise set using the display's operating menu (unit, language, zero-point adjustment,...).

You can find the free user software at:

www.halstrup-walcher.de/en/software

