## halstrup walcher

### KAL 100/200 Series 3

### Description

At halstrup-walcher you can find the KAL100/200 Series 3 pressure calibration 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 integrated pressure generation for setting the calibration point and high-precision pressure measurement.

### **Properties / Benefits**

- High precision measurement and calibration device
- · High flexible while it runs on mains supply or battery
- Automatic zero-point correction provides high zero-point stability
- Internal pump quickly and accurately generates negative or positive differential pressures of -80 kPa up to 100 kPa
- Unit conversion (e.g. mmHg, mmH<sub>2</sub>O, psi, etc.)
- Ensuring the calibration interval by displaying the last calibration
- Switching power supply for automatic adjustment of the voltage supply between 85 VAC and 264 VAC for the worldwide use

### Applications of the pressure calibration KAL

The KAL 100/200 enables you to calibrate pressure gauges yourself. However, if you wish to use the calibration device as a reference, it should be calibrated by DKD-directive 6-1.

The KAL is suitable for calibrating:

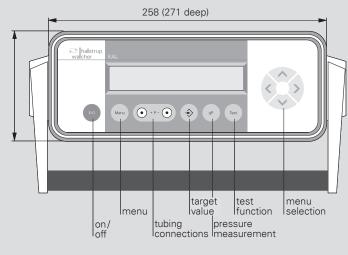
- differential pressure gauges in cleanrooms (pharma, semiconductors etc.)
- blood pressure monitoring equipment in hospitals etc.
- differential pressures in air-conditioning systems





#### KAL 100/200 Series 3

| Control accuracy of the<br>Pressure generation | ≤ 0.05 % FS   |
|--|---|
| Overload capacity                              | 200 x measurement range,<br>max.600 kPa                 |
| Temperature coefficient zero point             | $\pm 0$ % (cyclical zero-point correction)              |
| Calibration temperature                        | 22°C±4K   |
| Medium   | air, all non-aggressive gases                           |
| Measurement input                              | 010 V, 020 mA<br>Measurement accuracy: 0.2 % v.E.       |
| Display  | Alphanumeric display with 2x20 characters, backlighting |
| Rated temperature range                        | 1040°C  |
| Storage temperature                            | -1070°C   |
| Weight   | approx. 4.6 kg  |
| Pressure ports                                 | Ø 6mm, for tubing NW 5 mm                               |
| Certificates                                   | CE/UKCA   |



All dimensions in mm.

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|  | KAL 100 KAL 200   |  |  |  |  |
|--|---|--|--|--|--|
|  |   |  |  |  |  |
| Pressure generation  | automatic   |  |  |  |  |
| Applications   | mobile or stationary (laboratory)   |  |  |  |  |
| Measurement ranges   | 0100 Pa/0200 Pa/0500 Pa/01 kPa/02<br>kPa/05 kPa/010 kPa/020 kPa/050 kPa/<br>0100 kPa/<br>±100 Pa/±200 Pa/±500 Pa/±1 kPa/±2 kPa/±5<br>kPa/±10 kPa/±20 kPa/±50 kPa/-80100 kPa |  |  |  |  |
| Measurement<br>accuracy <sup>1)</sup>                            | ±0.2 % FS<br>Measurement ran-<br>ges>0200 Pa/±200 Pa<br>±0.5 % FS<br>Measurement ran-<br>ges ≤0200 Pa/±200 Pa   | $\pm 0.1 \% FS$ Measurement ranges > 0200 Pa/±200 Pa $\pm 0.2 \% FS$ Measurement ranges 0200 Pa/±200 Pa $\pm 0.3 \% FS$ Measurement ranges 0100 Pa/±100 Pa |  |  |  |
| Temperature coeffi-<br>cient span<br>(1040°C)                    | max.<br>0.04 % FS/K   | max.<br>0.03 % FS/K  |  |  |  |
| USB-Interface and<br>analog measurement<br>input for test object | optional  | ~  |  |  |  |
| Battery life<br>(rechargeable)                                   | ca. 8 h   | ca. 8 h  |  |  |  |
| Factory calibration  | $\checkmark$  | $\checkmark$   |  |  |  |
| power supply test<br>object<br>(24 V DC / 100 mA)                | optional  | $\checkmark$   |  |  |  |

 $^{1\!\!\!0}$  measurement accuracy for the reference 0.3 Pa, for measurement ranges  $\leq \pm 1,5$  kPa

# APPLICATION SOFTWARE FOR THE KAL 100/200

Control your calibration process from the PC. The calibration devices KAL 100/200 with USB connection can be operated with our user software. You can choose between the following operating modes: setpoint mode, pressure measurement and test mode.

You can define calibration points and approach them automatically. Save a calibration sequence once defined and use it again for another or the same pressure transmitter.

Use the software to conveniently set parameters that you would otherwise set via the operating menu of the display (unit, language (English/French/ German/Italian/Spanish), zeroing,...).

|            |             | kPa                   | U-M     | essung    | 🗆 I-Messun | 9         | Einstellunge<br>Einheit Dr |
|------------|-------------|-----------------------|---------|-----------|------------|-----------|----------------------------|
|            |             |                       |         |           |            |           | kPa                        |
| Solivermod | In Duckmen  | ung Testro            | \$ini   |           |            |           | Autom.                     |
|            |             |                       |         |           |            | Autz.     | Nullg.                     |
| Sol        | Idruck [kPa |                       | 100.000 | Prozent   | Messen     | 10 s      | %-Schritt                  |
|            | 0,0         | < 120,0  <br>> -120,0 |         | 0:        | 29         |           | 1%(PC)                     |
|            | -,-         | >-120,0               | [KP-a]  | - 61      | 6-0        |           | Zeile 2                    |
| Des        | ck Z        | D                     | MARY    |           |            |           | hPa                        |
|            |             |                       | 0       | A440      |            |           | Sprache                    |
|            | 2,5000      | 100                   | 0       |           |            |           | Deutsch                    |
|            |             |                       |         | enfugen   |            |           |                            |
| - 10       |             |                       |         | kischen   |            |           | Speiche                    |
| - 10       |             |                       |         |           |            | Nullieren |                            |
|            |             |                       |         | Speichern |            |           |                            |
|            |             |                       |         | Citore    |            | Verbinden |                            |

You will find the free user software under:

www.halstrup-walcher.de/en/downloads

#### Accessories





Transport case KAL 100/200 Order no. 9220.0002

Carrying bag KAL 100/200 supplied as standard

#### **Recalibration service**

ISO factory calibration certificate Calibration certificate with DKD-directive 6-1 **Order no.** 9601.0136 9601.0288

### Your Product request

Please use the boxes below to select the respective specifications for your product.

| Model  | А   |
|--|-----|
| KAL 100  | 100 |
| KAL200   | 200 |
|  |     |
| Power supply   | С   |
| 85 264 V AC,<br>(47 63 Hz)                                 | 0   |
| 85 264 VAC<br>(47 63 Hz)<br>and Lithium-ion<br>Accumulator | A   |

| Data interface  | D |
|---|---|
| none  | 0 |
| USB + measure-<br>ment input for test<br>object <sup>2)</sup> | 1 |
| 9 Standard for KAL 200  |   |

| Calibration certi-<br>ficate  | E           |
|---|-------------|
| Factory calibration   | Ι           |
| Calibration accor-<br>ding to DKD-R 6-1 <sup>3)</sup>               | D           |
| <sup>3)</sup> Calibration according to DKD-F<br>pressure indication | 6-1 only fo |

| Measurement<br>ranges | В    |
|-----------------------|------|
| 0100 Pa               | 0    |
| 0200 Pa               | 02   |
| 0500 Pa               | 05   |
| 01 kPa                | 1    |
| 02 kPa                | 2    |
| 05 kPa                | 5    |
| 010 kPa               | 10   |
| 020 kPa               | 20   |
| 050 kPa               | 50   |
| 0100 kPa              | 100  |
| ± 100 Pa              | 0A   |
| ±200 Pa               | 02A  |
| ±500 Pa               | 05A  |
| ±1 kPa                | 1A   |
| ±2 kPa                | 2A   |
| ±5 kPa                | 5A   |
| ± 10 kPa              | 10A  |
| ±20 kPa               | 20A  |
| ±50 kPa               | 50A  |
| -80100 kPa            | 100A |

| Order code | Α | В | С | D | Е |
|------------|---|---|---|---|---|
| KAL –      |   |   |   |   |   |