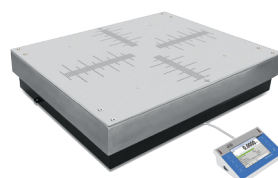


HRP 4Y.KO Mass Comparator

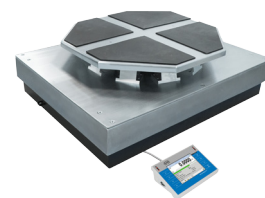
Class-leading manual mass comparator



HRP 200.4Y.KO



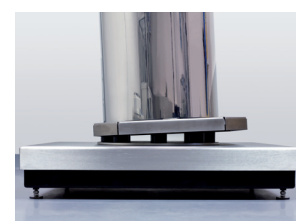
HRP 2000.1.4Y.KO



HRP 2000.1.4Y.KO with self-centring weighing pan



Precisely marked weighing platform



Comparison of weights loaded off-centre

Functions

- 

Mass comparator
- 

Ambient conditions measurement
- 

Proximity sensors
- 

Replaceable units
- 

Multilingual menu

Features

Effective and Excellent Measurement

The HRP 4Y.KO mass comparator represents the professional-class manual mass comparators. The comparator allows to compare weights of class F2 and lower of mass ranging between 50 kg and 1000 kg.

Design and Functionality

Precisely marked weighing platform of the HRP 4Y.KO mass comparator enables centring loading of weights. The device is equipped with self-centring weighing pan to provide comfort of the operation and reduce eccentricity error. The self-centring weighing pan (option) ensures stabilization and levelling of the weights loaded off-centre and to compare weights of different shapes.

Dedicated Software

Specially designed RMCS computer software enables comprehensive realisation of calibration procedures in laboratory. The system manages the whole calibration process, starting from the moment the order is placed, through procedure performance, to the moment of issuing the calibration certificate.

Technical Specifications

| | HRP 200.4Y.KO | HRP 500.4Y.KO | HRP 500.1.4Y.KO |
|---|------------------------------------|------------------------------------|------------------------------------|
| OIML calibration range E1 | — | — | — |
| OIML calibration range E2 | — | — | — |
| OIML calibration range F1 | — | — | 500 kg |
| OIML calibration range F2 | 200 kg | 500 kg | 100 kg ÷ 500 kg |
| OIML calibration range M1 | 50 kg ÷ 200 kg | 100 kg ÷ 500 kg | 20 kg ÷ 500 kg |
| OIML calibration range M2 | 10 kg ÷ 200 kg | 50 kg ÷ 500 kg | 10 kg ÷ 500 kg |
| Maximum capacity [Max] | 210 kg | 510 kg | 510 kg |
| Readability [d] | 0.2 g | 0.5 g | 0.1 g |
| Standard repeatability [5% Max]* | 0.4 g | 0.6 g | 0.2 g |
| Standard repeatability [Max] * | 0.6 g | 1.5 g | 0.4 g |
| Permissible repeatability * | 1 g | 3 g | 0.6 g |
| Stabilization time | 10 s | 10 s | 15 s |
| Adjustment | internal | internal | internal |
| Electric compensation range | 0 g ÷ 210 kg | 0 g ÷ 510 kg | 0 g ÷ 510 kg |
| Eccentricity (for test weight) | 2 d / 1 mm | 2 d / 1 mm | 2 d / 1 mm |
| Maximum permissible weight loading speed | 0.6 m / min | 0.6 m / min | 0.6 m / min |
| Recommended weight loading speed | 0.3 m / min | 0.3 m / min | 0.3 m / min |
| Display | 5.7" colour resistive touch screen | 5.7" colour resistive touch screen | 5.7" colour resistive touch screen |
| Keypad | 8 keys | 8 keys | 8 keys |
| Ingress protection - indicator | IP 43 | IP 43 | IP 43 |
| Touch-free operation | 2 programmable sensors | 2 programmable sensors | 2 programmable sensors |
| USB-A | 2 | 2 | 2 |
| Ethernet | 10 / 100 Mbit | 10 / 100 Mbit | 10 / 100 Mbit |
| RS 232 | 2 | 2 | 2 |
| Wi-Fi® | 802.11 b/g/n | 802.11 b/g/n | 802.11 b/g/n |
| IN/OUT | 4 × IN, 4 × OUT | 4 × IN, 4 × OUT | 4 × IN, 4 × OUT |
| Power supply | 110 ÷ 230 V AC / 50 ÷ 60 Hz | 110 ÷ 230 V AC / 50 ÷ 60 Hz | 110 ÷ 230 V AC / 50 ÷ 60 Hz |
| Operating temperature | +15 ÷ +30 °C | +15 ÷ +30 °C | +15 ÷ +30 °C |
| Operating temperature change rate | ± 1 °C / 12 h | ± 1 °C / 12 h | ± 1 °C / 12 h |
| Relative humidity variations | ±5% / 4 h | ±5% / 4 h | ±5% / 4 h |
| Relative humidity*** | 40 ÷ 60% | 40 ÷ 60% | 40 ÷ 60% |
| Transport and storage temperature | -20 ÷ +50 °C | -20 ÷ +50 °C | -20 ÷ +50 °C |
| Weighing pan dimensions | 800 × 600 mm | 800 × 600 mm | 800 × 600 mm |
| Self-centring weighing pan dimensions** | 600 × 600 mm | 600 × 600 mm | 600 × 600 mm |
| Mass comparator dimensions | 809 × 600 × 162 mm | 809 × 600 × 162 mm | 809 × 600 × 162 mm |
| Dimensions of mass comparator with self-centring weighing pan** | 809 × 600 × 255 mm | 809 × 600 × 255 mm | 809 × 600 × 255 mm |
| Indicator dimensions | 206 × 140 × 70 mm | 206 × 140 × 70 mm | 206 × 140 × 70 mm |
| Mass comparator net weight | 73.5 kg | 73.5 kg | 73.5 kg |
| Mass comparator gross weight | 96.5 kg | 96.5 kg | 96.5 kg |
| Net weight of mass comparator with self-centring weighing pan** | 142.5 kg | 142.5 kg | 142.5 kg |
| Gross weight of mass comparator with self-centring weighing pan** | 170 kg | 170 kg | 170 kg |
| Mass comparator packaging dimensions | 1000 × 800 × 307 mm | 1000 × 800 × 307 mm | 1000 × 800 × 307 mm |
| Packaging dimensions of mass comparator with self-centring weighing pan** | 1000 × 800 × 357 mm | 1000 × 800 × 357 mm | 1000 × 800 × 357 mm |

* repeatability is expressed as a standard deviation determined for 6 ABBA cycles

** optional design

*** non-condensing conditions

Wi-Fi® is a registered trademark of Wi-Fi Alliance.

| | HRP 1000.4Y.KO | HRP 2000.4Y.KO | HRP 2000.1.4Y.KO |
|---|------------------------------------|------------------------------------|------------------------------------|
| OIML calibration range E1 | — | — | — |
| OIML calibration range E2 | — | — | — |
| OIML calibration range F1 | — | — | — |
| OIML calibration range F2 | 1000 kg | 2000 kg | — |
| OIML calibration range M1 | 200 kg ÷ 1000 kg | 500 kg ÷ 2000 kg | 500 kg ÷ 2000 kg |
| OIML calibration range M2 | 100 kg ÷ 1000 kg | 200 kg ÷ 2000 kg | 500 kg ÷ 2000 kg |
| Maximum capacity [Max] | 1050 kg | 2100 kg | 2100 kg |
| Readability [d] | 1 g | 2 g | 5 g |
| Standard repeatability [5% Max]* | 1.5 g | 2.5 g | 5 g |
| Standard repeatability [Max] * | 2.5 g | 5 g | 10 g |
| Permissible repeatability * | 5 g | 10 g | 15 g |
| Stabilization time | 10 s | 10 s | 10 s |
| Adjustment | internal | internal | internal |
| Electric compensation range | 0 g ÷ 1050 kg | 0 g ÷ 2100 kg | 0 g ÷ 2100 kg |
| Eccentricity (for test weight) | 1 d / 1 mm | 1 d / 1 mm | 0.5 d / 1 mm |
| Maximum permissible weight loading speed | 0.6 m / min | 0.6 m / min | 0.6 m / min |
| Recommended weight loading speed | 0.3 m / min | 0.3 m / min | 0.3 m / min |
| Display | 5.7" colour resistive touch screen | 5.7" colour resistive touch screen | 5.7" colour resistive touch screen |
| Keypad | 8 keys | 8 keys | 8 keys |
| Ingress protection - indicator | IP 43 | IP 43 | IP 43 |
| Touch-free operation | 2 programmable sensors | 2 programmable sensors | 2 programmable sensors |
| USB-A | 2 | 2 | 2 |
| Ethernet | 10 / 100 Mbit | 10 / 100 Mbit | 10 / 100 Mbit |
| RS 232 | 2 | 2 | 2 |
| Wi-Fi® | 802.11 b/g/n | 802.11 b/g/n | 802.11 b/g/n |
| IN/OUT | 4 × IN, 4 × OUT | 4 × IN, 4 × OUT | 4 × IN, 4 × OUT |
| Power supply | 110 ÷ 230 V AC / 50 ÷ 60 Hz | 110 ÷ 230 V AC / 50 ÷ 60 Hz | 110 ÷ 230 V AC / 50 ÷ 60 Hz |
| Operating temperature | +15 ÷ +30 °C | +15 ÷ +30 °C | +15 ÷ +30 °C |
| Operating temperature change rate | ± 1 °C / 12 h | ± 1 °C / 12 h | ± 2 °C / 12 h |
| Relative humidity variations | ± 5% / 4 h | ± 5% / 4 h | ± 10% / 4 h |
| Relative humidity*** | 40 ÷ 60% | 40 ÷ 60% | 40 ÷ 60% |
| Transport and storage temperature | -20 ÷ +50 °C | -20 ÷ +50 °C | -20 ÷ +50 °C |
| Weighing pan dimensions | 1000 × 800 mm | 1250 × 1000 mm | 1250 × 1000 mm |
| Self-centring weighing pan dimensions** | 600 × 600 mm | 920 × 920 mm | 920 × 920 mm |
| Mass comparator dimensions | 1011 × 800 × 182 mm | 1250 × 1000 × 235 mm | 1250 × 1000 × 235 mm |
| Dimensions of mass comparator with self-centring weighing pan** | 1011 × 800 × 275 mm | 1250 × 1000 × 400 mm | 1250 × 1000 × 400 mm |
| Indicator dimensions | 206 × 140 × 70 mm | 206 × 140 × 71 mm | 206 × 140 × 71 mm |
| Mass comparator net weight | 134 kg | 300 kg | 300 kg |
| Mass comparator gross weight | 168 kg | 400 kg | 400 kg |
| Net weight of mass comparator with self-centring weighing pan** | 199 kg | 530 kg | 530 kg |
| Gross weight of mass comparator with self-centring weighing pan** | 249 kg | 665 kg | 665 kg |
| Mass comparator packaging dimensions | 1200 × 1000 × 436 mm | 1500 × 1250 × 615 mm | 1500 × 1250 × 615 mm |
| Packaging dimensions of mass comparator with self-centring weighing pan** | 1200 × 1000 × 481 mm | 1500 × 1250 × 713 mm | 1500 × 1250 × 713 mm |

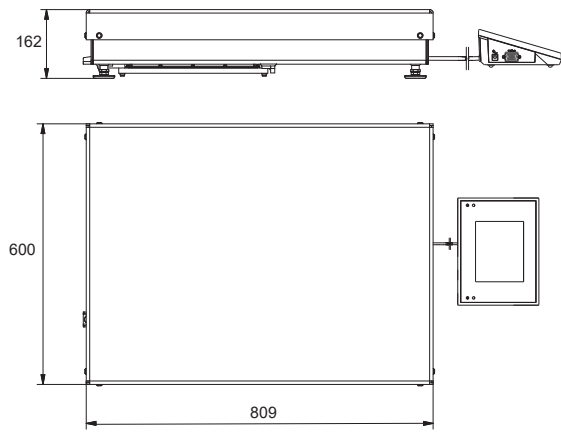
* repeatability is expressed as a standard deviation determined for 6 ABBA cycles

** optional design

*** non-condensing conditions

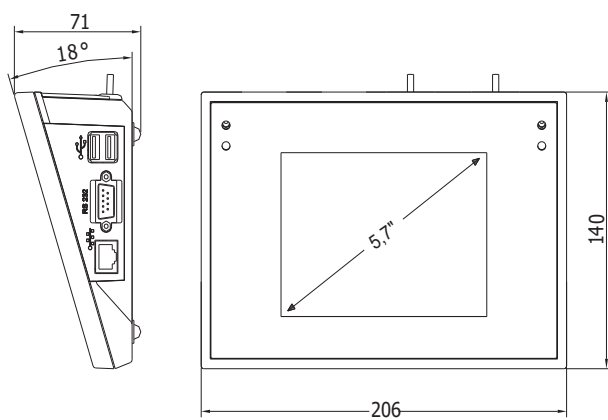
Wi-Fi® is a registered trademark of Wi-Fi Alliance.

Dimensions



| Type | A1 | A2 | H |
|------------------|------|------|-----|
| HRP 200.4Y.KO | 809 | 600 | 162 |
| HRP 500.4Y.KO | 809 | 600 | 162 |
| HRP 1000.4Y.KO | 1011 | 800 | 182 |
| HRP 2000.4Y.KO | 1250 | 1000 | 235 |
| HRP 2000.1.4Y.KO | 1250 | 1000 | 235 |

dimension in mm



PUE 7.1 indicator

Accessories

Professional Weighing

- self-centring weighing pan

Ambient Conditions

- THB-S or THB-P sensor

Peripheral Devices

- Epson dot matrix printer
- barcode scanner
- WD-5/3Y LCD display (backlit)

Cables, Converters

- RS-232 – P0108 computer cable
- RS-232 – P0167 computer cable
- RS-232 – P0151 Epson printer cable

Electrical Accessories

- power supply with ZR-02 battery

Dedicated Software

RMCS System

- performance of calibration procedures in a laboratory from the moment the order is placed, to the moment of issuing a calibration certificate
- compatible with THB sensors enabling recording ambient conditions
- export of report results to various files
- archiving calibration protocols, orders, certificates and ambient conditions

RADWAG Remote Desktop

- remote control of the mass comparator using computer, telephone or tablet
- sending text messages
- version for Windows 10 and Android systems

R-LAB

- collecting measurements
- carrying out statistical analysis of measurements
- customized graphs and reports

Parameters Editor

- remote change of parameters
- remote on-line preview of the display
- displaying current mass indication
- software update
- file loading, editing and saving parameters to a file
- import and export of parameters
- interfaces: RS232, Ethernet and Wireless Connection
- quick and easy edition of balance parameters using computer