



High Resolution Platforms and Weighing Modules

PRECISE MEASUREMENT IN INDUSTRY

MODULES AND HRP PLATFORMS

Mass Measurement with Maximum Possible Accuracy

What is the electromagnetic module?

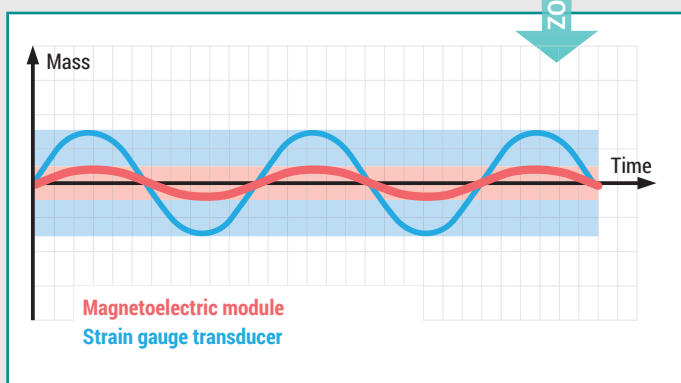
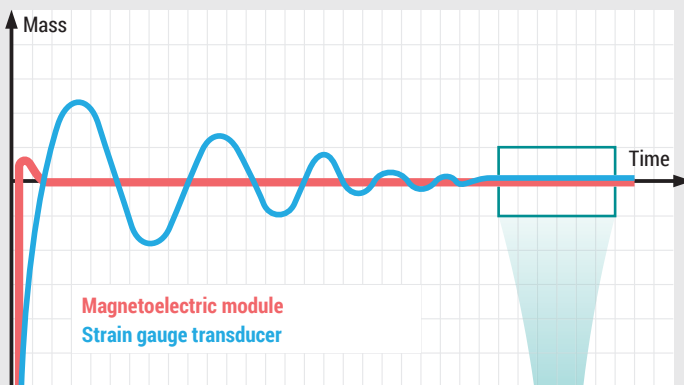
Mechanical design of magnetolectric laboratory balances has been developed and housed in a dust and water proof casing provided for use in industry under severe conditions.

The above solution has resulted with designing of a whole product group, i.e. industrial high resolution electromagnetic weighing modules.

Special platform design plus use of electromagnetic modules for mass measurement enabled developing HRP scales.



Magnetolectric Module

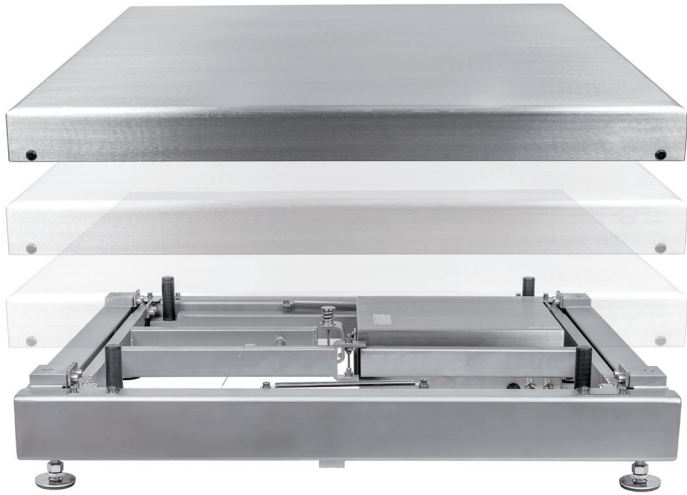


Measurement Speed

Magnetolectric measuring system has been equipped with hi-tech adjustment solutions which facilitate fast stabilisation. In case of strain gauge transducer use, stabilisation YES takes much more time.

Measurement Accuracy

Magnetolectric modules generate practically no measuring noise, this favours high resolution measurement.



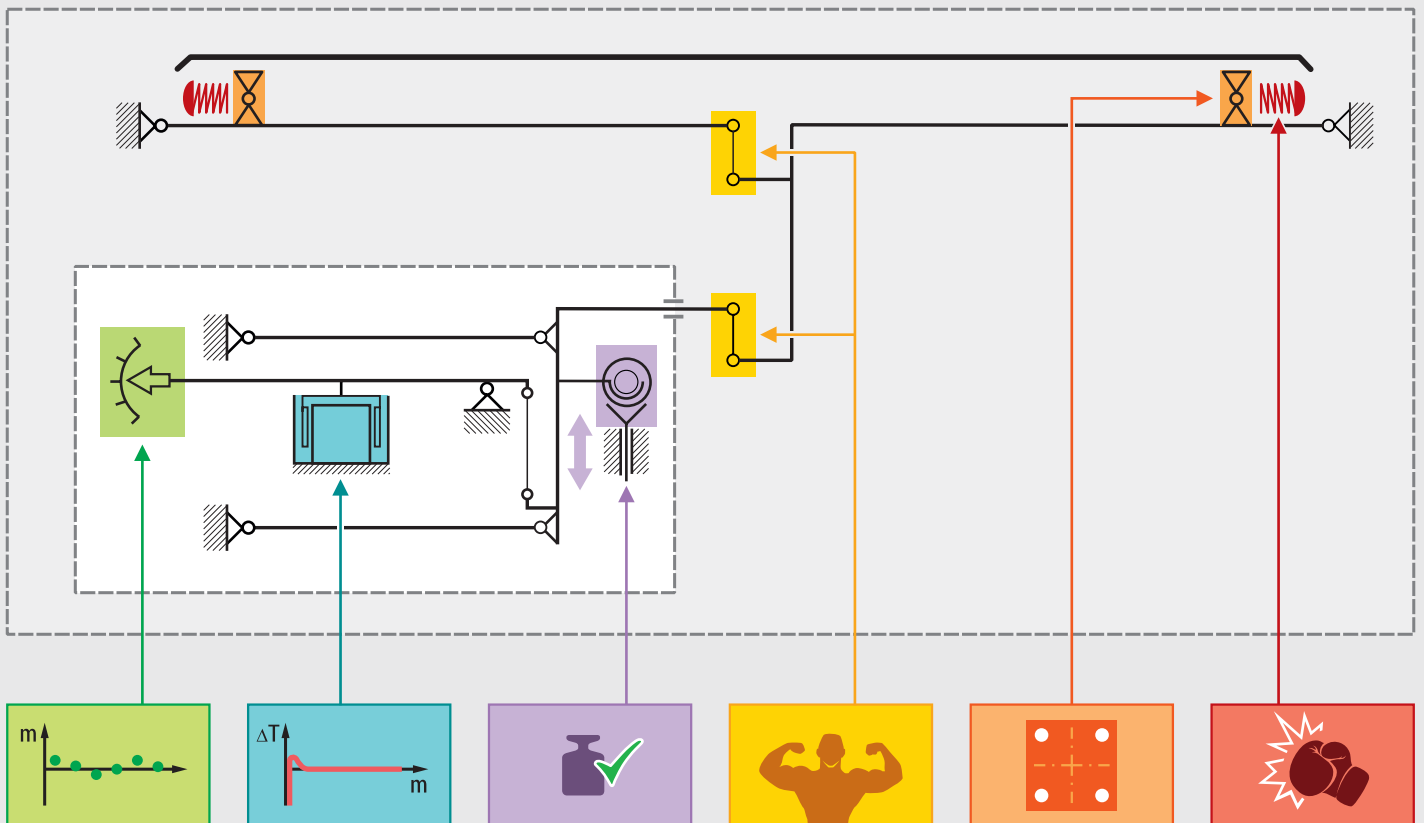
The HRP platforms enable adaptation of technology so far used exclusively in laboratory to industrial processes.

Dedicated design solutions, dust and water proof housing, vast capacity range, numerous communication interfaces and automatic adjustment mechanism redefine quality of mass measurement carried out in industry!

RADWAG-manufactured HRP platforms are intended for those who cannot rely on classic load cell platform, i.e. those who require high resolution measurement to be obtained within short time interval.

The HRP platforms facilitate performance of measurement with few hundred better accuracy than load cell platforms can offer.

HRP Platform



Differential position sensor:

- very high repeatability of indications.

Magnetolectric converter:

- fast measurement.
- high resolution.

Internal adjustment weight:

- automatically carried out adjustment providing precise indication.

Stamina and reliability:

- optimised quantity of components and mechanical couplings.

4 points of support:

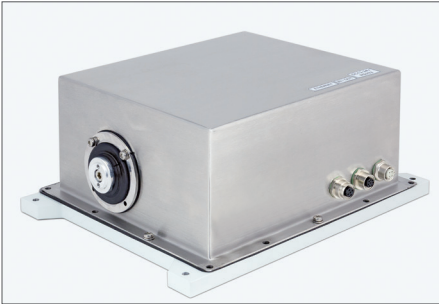
- minimum eccentricity deviations.

Anti-shock bumper:

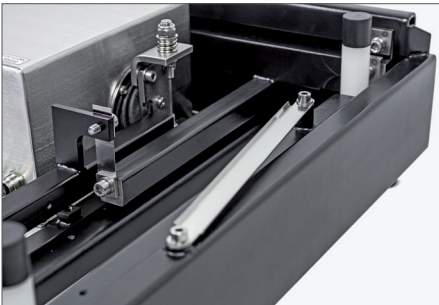
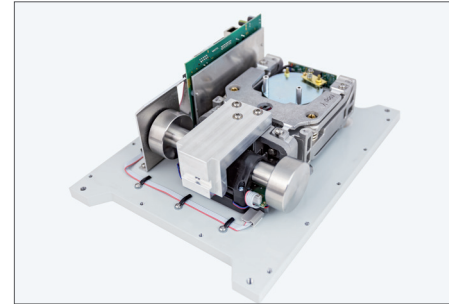
- protection against side shocks.

HRP

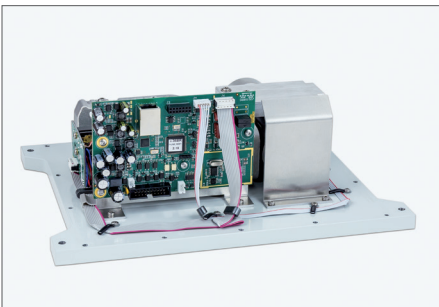
High Resolution Weighing Platforms



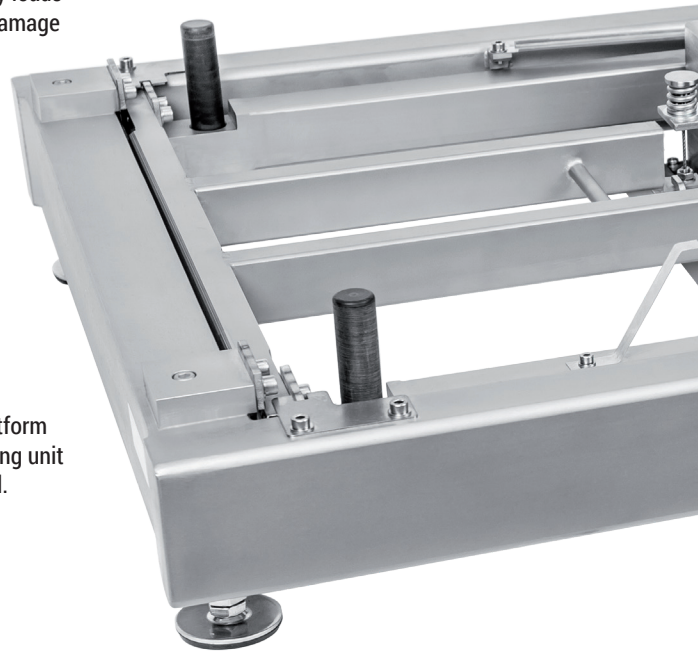
The HRP platform features electromagnetic force compensation module of high resolution. The module is housed in dust and water proof casing (IP67).



Mechanical levers system coupled to the weighing module enables precise measurement of heavy loads and facilitates resistance to damage of mechanical nature.



Integrated HRP platform's electronics store metrological parameters. With this, the platform can be an autonomous weighing unit not requiring use of a terminal.

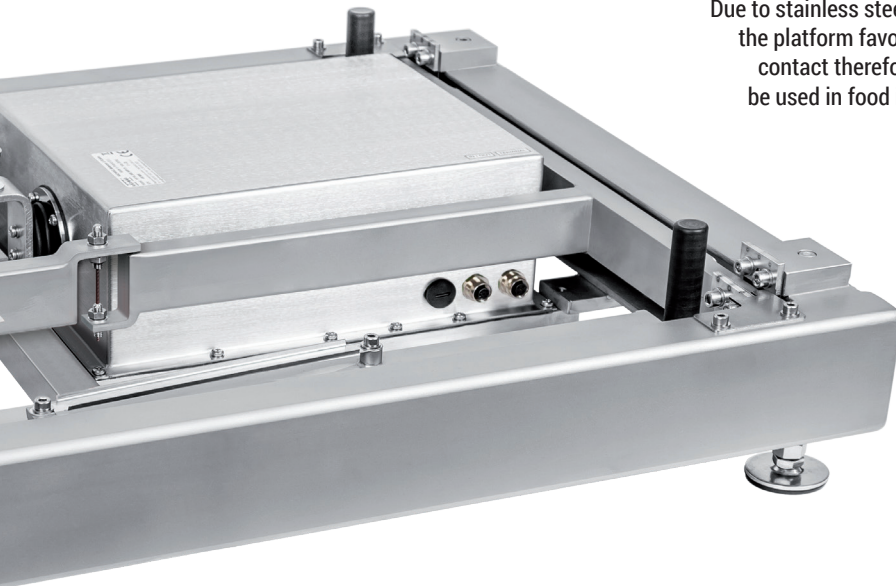
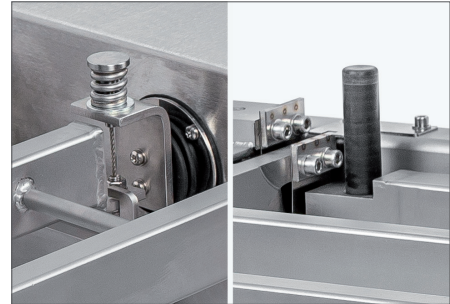


The HRP platform has been equipped with numerous communication interfaces facilitating cooperation with computer systems, terminals, indicators, large-size displays and PLC controllers.

MWMH Manager PC software has been designed to support operation of HRP platforms. The software enables easy and intuitive setup.

An internal automatic adjustment system guarantees measurement repeatability and precision even for unstable ambient conditions. Adjustment is carried out upon temperature change or passage of specified time interval. It can be also performed with reference to user-defined time-table.

System protecting against overloading and mechanical shocks is a warranty of reliable and safe operation.



Due to stainless steel design the platform favours food contact therefore it can be used in food industry.

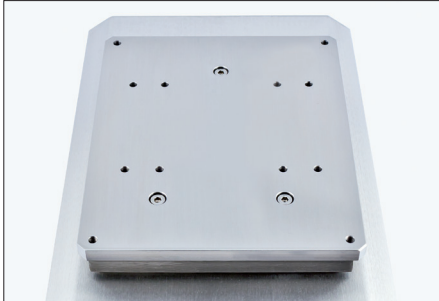


Connecting a HRP platform to a terminal enhances platform's functionality. With this you can YES advantage of numerous applications intended for industry. Go for this solution and enjoy user-friendly interface.



INDUSTRIAL WEIGHING MODULES

Series of Professional Magnetolectric Modules



The module features mounting holes enabling its integration into production line. As for the weighing pan, it has been equipped with openings which make installation of company-owned conveyor possible.

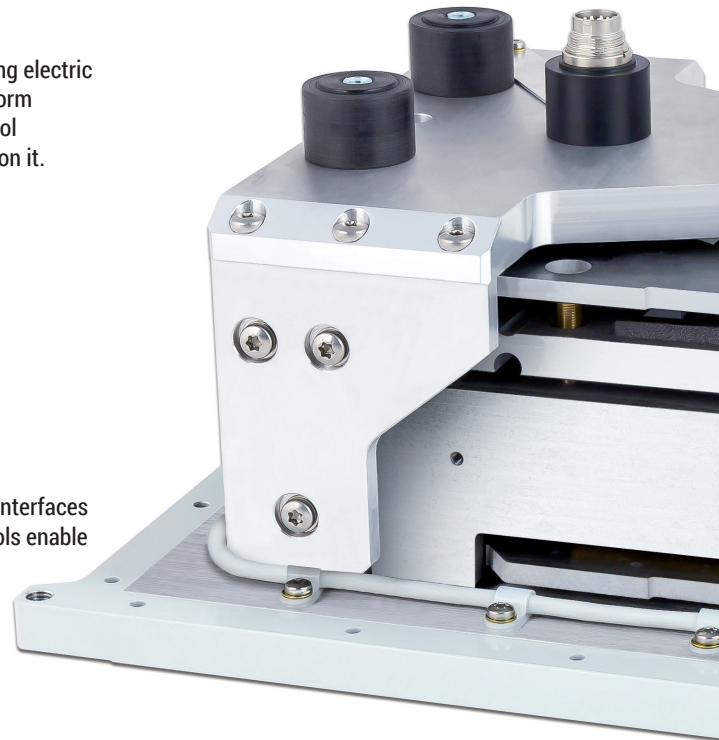
Due to innovative design solutions enabling proper measurement speed, the module can be applied in industry on automated production lines. The module provides throughput of 3200 samples per second.



With use of cable transferring electric signal to the weighing platform it is possible to install control components and actuators on it.

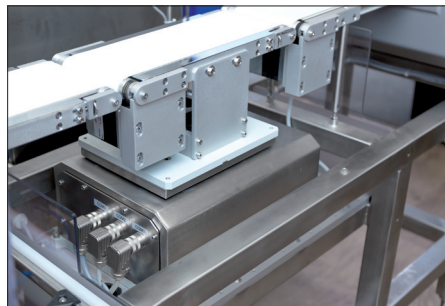


Numerous communication interfaces and communication protocols enable cooperation of weighing modules with PLC controllers, terminals, indicators, large-size displays and computers.



Weighing modules feature stainless steel housing. With IP65, IP67 or IP69K in-use, they can be operated under challenging industrial conditions. The mechanical design lacks sharp edges and recesses facilitating easy maintenance.

Fast operation of the module makes it a perfect tool for performance of dosing and checkweighing processes. Module's digital outputs enable control of devices such as valves and feeders.

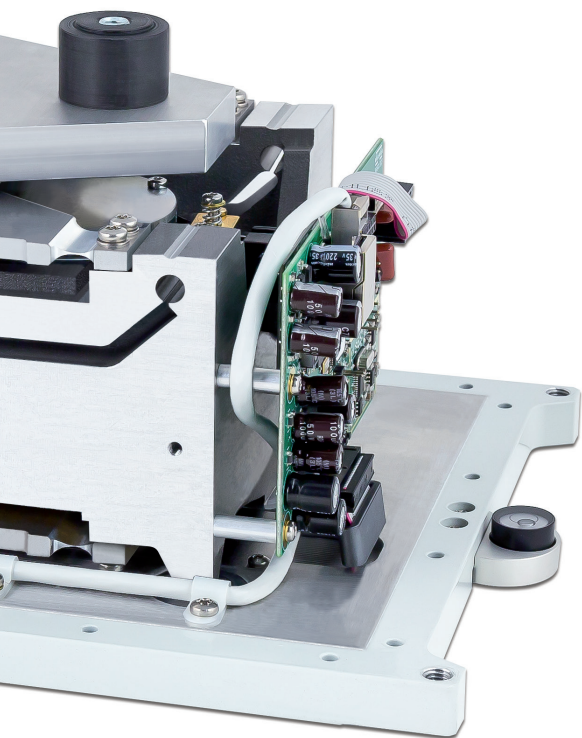


MWSH

Max: 6 kg
d: 0.01 g



MWSH module is the most compact device of the airtight weighing modules series. Using it you can weigh up to 6 kg heavy loads with $d=0.01$ g. An in-built internal adjustment system is a guarantee of highly precise measurements even when the device operates in unstable ambient conditions.



MWMH

Max: 1–10 kg
d: 0.01–0.1 g



MWMH module allows weighing of up to 10 kg heavy loads. You can install even 15 kg conveyor on the module without worrying that the measuring range will be affected. MWMH has been equipped with cable transferring electric signal to the weighing platform. Due to this solution it is possible to control automatic systems installed directly onto the weighing pan without the need of using any external cables that might distract your attention in the course of the weighing process.



MWLH

Max: 10–35 kg
d: 0.01–0.1 g



MWLH module, when compared to other devices of this product group, offers the highest capacity. It is intended for precise mass measurement of products weighing up to 35 kg.

HIGH RESOLUTION WEIGHING MODULES

Module-Terminal Sets

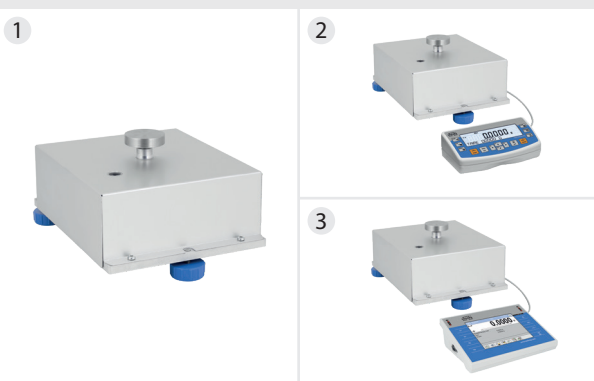
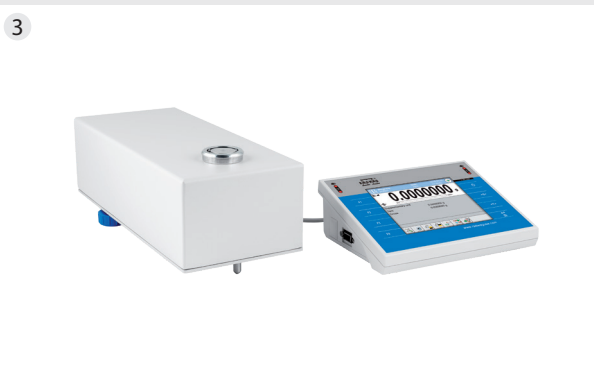
Advanced MUYA, MAS and MPS weighing modules are characteristic for high resolution measurement. They are intended to be a component of laboratory workstations and also to be integrated into production lines operating in dust-free industrial environment.

There are three different versions:

- 1 module as a stand-alone device (without the operation panel),
- 2 module with the R operation panel (weighing terminal with the LCD and the membrane keypad),
- 3 module with the Y operation panel (multifunctional weighing terminal with a 5.7" colour graphic touch screen).

Functions and features:

- ALIBI memory allowing to store weighing records,
- weighing applications: differential weighing, dosing, SQC, other,
- automatic internal adjustment providing repeatability and precise indication,
- databases: users, products, etc.,
- cooperation with printers and scanners,
- customized printouts and reports,
- quick data exchange via USB port,
- compatibility with Rad-Key, PW-WIN, E2R System and Rad Connect (3Y series exclusively).



WEIGHING TERMINALS

Cooperating with Platforms and Weighing Modules

Full-featured RADWAG terminals advance functionality of HRP platforms and weighing modules. 'Terminal - weighing module' or 'terminal - HRP platform' set gives you high resolution scale offering numerous applications intended for industry. The terminal communicates with the module or the platform via RS232 and Ethernet interfaces.

PUE HY10 terminal

enables designing multifunctional scales operating in industry. It features 10.1" touchscreen housed in a stainless steel casing. With use of HY10 terminal it is possible to perform processes such as dosing, parts counting, labelling, formulations, weight control, etc. Vast range of industrial interfaces allows for integration of the terminal and production line automatics. HY10 can be a component of a multiplatform workstation comprising HRP platforms, weighing modules, laboratory balances and load cell platforms.

PUE 5 terminal

combines characteristic features of a scale and an industrial computer. Depending on a model, it can be equipped with either 15" or 19" touchscreen and a dust and water proof stainless steel housing. PUE5 provides you with the following applications: parts counting, formulations, weighing records and transactions. These applications cooperate with E2R system, created to enable complex support of the weighing process. PUE5 operating on the basis of Windows 7 facilitates cooperation with customer-designed applications. The terminal has been equipped with set of programming components by means of which communication between customer's application and platforms or weighing modules can be established. You can use PUE5 terminal as a base for multiplatform weighing system.

PUE HX7 terminal

is a key component of advanced industrial scales. It is equipped with 7" colour graphic display and a hermetic stainless steel housing. The terminal's multifunctional software allows carrying out processes such as weighing, parts counting, dosing, labelling and percent weighing. Complex communication protocol enables establishing communication with IT, adjustment and control systems. Option: an in-built battery facilitating flawless operation in case of no or unstable power supply.

PUE 7.1 terminal

has been equipped with 5.7" display and a plastic housing. Both PUE 7.1 and HY10 terminals offer the same set of weighing applications. PUE 7.1 can be a component of scale operating in dust-free industrial environment.

PUE HY10
Touch screen
10.1"



PUE 5
Touch screen
15" or 19"



PUE HX7
Screen 7"

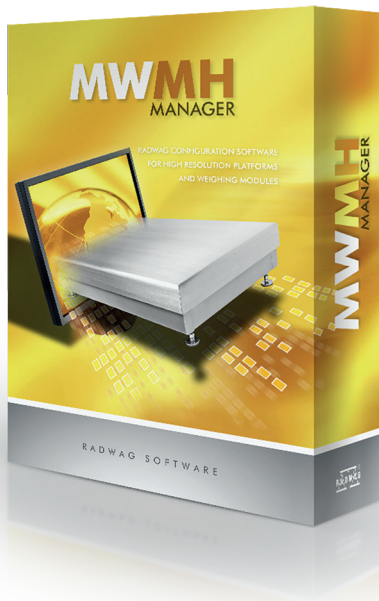


PUE 7.1
Touch screen
5.7"



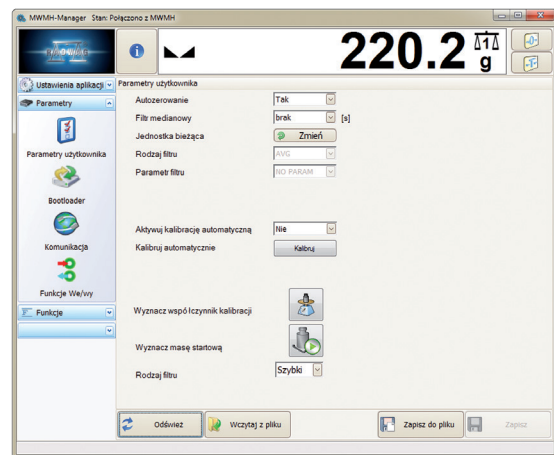
SOFTWARE

Dedicated for Platforms and Modules



MWMH Manager program is a tool facilitating setup of HRP platforms and weighing modules. Connection between MWMH Manager and the device is established via RS232 or Ethernet ports.

Using the program you can set communication parameters, filter rate, determine zero indication upon installation of a weighing pan and record measurements.



ACCESSORIES

For Platforms and Weighing Modules



Communications cable, power suppliers



Adapter with roller conveyor



Ramps

RADWAG offer covers:

- positioning mat
- platform frame (pit version)
- cantilever arm
- platform frame

TECHNICAL SPECIFICATIONS

MAS and MPS Weighing Modules

	MAS.1.21 MAS.1.21.R MAS.1.21.Y	MAS.1.51 MAS.1.51.R MAS.1.51.Y	MAS.1.82/220 MAS.1.82/220.R MAS.1.82/220.Y
Maximum capacity [Max]	21 g	51 g	82 / 220 g
Minimum capacity [Min]	1 mg	1 mg	1 mg
Verification unit	-	-	-
Readability [d]	0.01 mg	0.01 mg	0.01 mg / 0.1 mg
Tare range	- 21 g	- 51 g	- 220 g
Preload	-	-	-
Repeatability	0.02 mg	0.025 mg	0.1 mg
Linearity	± 0.06 mg	± 0.06 mg	± 0.06 mg / ± 0.2 mg
Measurement stabilization time	6 s	6 s	6 s / 2 s
Weighing pan dimensions	ø 33 mm	ø 33 mm	ø 42 mm
Internal adjustment	YES	YES	YES
Sensitivity drift	1 ppm / °C	1 ppm / °C	1 ppm / °C
Working temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
Atmospheric humidity	40% ÷ 80%	40% ÷ 80%	40% ÷ 80%
IP rating	IP 54	IP 54	IP 54
Power supply	MAS.1, MAS.1.R - 12 ÷ 16 V DC MAS.1.Y - 13.5 ÷ 16 V DC		
Verification	-	-	-
Display	MAS.1 - none MAS.1.R - LCD (backlit) MAS.1.Y - 5.7" colour touch screen		
Interfaces	MAS.1, MAS.1.R - RS 232 MAS.1.Y - 2 × USB-A, 2 × RS 232, Ethernet, Wi-Fi®, 4 × IN / 4 × OUT		
Module material	aluminium	aluminium	aluminium
Weighing pan material	stainless steel	stainless steel	stainless steel
Module dimensions	289 × 143 × 125 mm	289 × 143 × 125 mm	289 × 143 × 125 mm

	MAS 220 MAS 220.R MAS 220.Y	MPS 2000 MPS 2000.R MPS 2000.Y	MPS 6000 MPS 6000.R MPS 6000.Y
Maximum capacity [Max]	220 g	2000 g	6000 g
Minimum capacity [Min]	10 mg	20 mg	500 mg
Verification unit	-	-	-
Readability [d]	0.1 mg	1 mg	1 mg
Tare range	- 220 g	- 2000 g	- 6000 g
Preload	-	-	-
Repeatability	0.1 mg	15 mg	15 mg
Linearity	± 0.2 mg	± 4 mg	± 30 mg
Measurement stabilization time	3.5 s	3 s	1.5 s
Weighing pan dimensions	ø 42 mm	ø 115 mm	ø 115 mm
Internal adjustment	YES	YES	YES
Sensitivity drift	1 ppm / °C	2 ppm / °C	2 ppm / °C
Working temperature	+10 ÷ +40 °C	+10 ÷ +40 °C	+10 ÷ +40 °C
Atmospheric humidity	40% ÷ 80%	40% ÷ 80%	40% ÷ 80%
IP rating	IP 32	IP 32	IP 32
Power supply	MAS, MPS - 12 ÷ 16 V DC MAS.1.Y - 13.5 ÷ 16 V DC		
Verification	-	-	-
Display	MAS, MPS - none MAS R, MPS R - LCD (backlit) MAS Y, MPS Y - 5.7" colour touch screen		
Interfaces	MAS, MAS R, MPS, MPS R - USB-B, RS 232 MAS Y, MPS Y - 2 × USB-A, 2 × RS 232, Ethernet, Wi-Fi®, 4 × IN / 4 × OUT		
Module material	aluminium	aluminium	aluminium
Weighing pan material	stainless steel	stainless steel	stainless steel
Module dimensions	248 × 180 × 117 mm	293 × 190 × 112 mm	293 × 190 × 112 mm

TECHNICAL SPECIFICATIONS

HRP Platforms and MW Weighing Modules

	PL.16.HRP PL.16.HRP.H	PL.32.HRP PL.32.HRP.H	PL.62.HRP PL.62.HRP.H	PL.120.HRP PL.120.HRP.H
Maximum capacity [Max]	16 kg	32 kg	62 kg	120 kg
Minimum capacity [Min]	5 g	5 g	25 g	50 g
Readability [d]	0.1 g	0.1 g	0.5 g	1 g
Tare range	- 16 kg	- 32 kg	- 62 kg	- 120 kg
Preload	4 kg	4 kg	30 kg	10 kg
Repeatability	0.1 g	0.1 g	0.3 g	0.6 g
Linearity	± 0.1g	± 0.3 g	± 1 g	± 2 g
Weighing pan dimensions	360 × 280 mm	360 × 280 mm	500 × 500 mm	500 × 500 mm
Internal adjustment	YES	YES	YES	YES
Sensitivity drift	2 ppm / °C	2 ppm / °C	2 ppm / °C	2 ppm / °C
Working temperature	+10° ÷ +40°C	+10° ÷ +40°C	+10° ÷ +40°C	+10° ÷ +40°C
Atmospheric humidity	15% ÷ 80%	15% ÷ 80%	15% ÷ 80%	15% ÷ 80%
IP rating	IP 66 / 67	IP 66 / 67	IP 66 / 67	IP 66 / 67
Power supply	12 ÷ 24 V DC	12 ÷ 24 V DC	12 ÷ 24 V DC	12 ÷ 24 V DC
Interfaces	RS 485, RS 232, Ethernet / optional: Profibus, 2 × IN, 2 × OUT			
Communication protocols	Radweg protocol, ASCII, Modbus			
Platform material	powder coated aluminium, stainless steel [HRP], stainless steel [HRP.H]		powder coated steel [HRP], stainless steel [HRP.H]	
Weighing pan material	stainless steel [HRP], stainless steel [HRP.H]		stainless steel [HRP], stainless steel [HRP.H]	
Platform dimensions	360 × 313 × 170 mm	360 × 313 × 170 mm	513 × 500 × 150 mm	513 × 500 × 150 mm

	MWSH 6000	MWMH 100	MWMH 200	MWMH 500	MWMH 1000
Maximum capacity [Max]	6000 g	1000 g	2000 g	5000 g	10000 g
Minimum capacity [Min]	500 mg	2 g	4 g	10 g	20 g
Verification unit	-	0.1 g	0.2 g	0.5 g	1 g
Readability [d]	0.01 g	0.1 g	0.2 g	0.5 g	1 g
Tare range	- 6000 g	- 1000 g	- 2000 g	- 5000 g	- 10000 g
Preload	600 g	6 kg – 9 kg	4 kg – 7 kg	4 kg – 7 kg	4 kg – 7 kg
Repeatability	15 mg	0.03 g	0.05 g	0.3 g	0.5 g
Linearity	± 30 mg	0.05 g	0.1 g	0.2 g	0.5 g
Measurement stabilization time	1.5 s	1 s	1 s	1.5 s	1.5 s
Weighing pan dimensions	100 × 100 mm	212 × 174 mm	212 × 174 mm	212 × 174 mm	212 × 174 mm
Internal adjustment	YES	-	-	-	-
Sensitivity drift	2 ppm / °C	2 ppm / °C	2 ppm / °C	2 ppm / °C	2 ppm / °C
Working temperature	+10° ÷ +40°C	+5° ÷ +40°C	+5° ÷ +40°C	+5° ÷ +40°C	+5° ÷ +40°C
Atmospheric humidity	15% ÷ 80%	15% ÷ 80%	15% ÷ 80%	15% ÷ 80%	15% ÷ 80%
IP rating	IP 65	IP65 / IP69K	IP65 / IP69K	IP65 / IP69K	IP65 / IP69K
Power supply	12 ÷ 24 V DC	12 ÷ 24 V DC	12 ÷ 24 V DC	12 ÷ 24 V DC	12 ÷ 24 V DC
Verification	-	YES	YES	YES	YES
Display	-	-	-	-	-
Interfaces	RS 232, Ethernet, 3 × IN, 2 × OUT / optional: Profibus, RS 485, 2 × IN, 2 × OUT				
Communication protocols	Radweg protocol, ASCII, Modbus				
Module material	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel
Platform dimensions	336 × 175 × 96 mm	242.5 × 350 × 164 mm	242.5 × 350 × 164 mm	242.5 × 350 × 164 mm	242.5 × 350 × 164 mm

PL.150.HRP PL.150.HRP.H	PL.300.HRP PL.300.HRP.H	PL.300.1.HRP PL.300.1.HRP.H	PL.600.HRP PL.600.HRP.H	PL.1100.HRP PL.1100.HRP.H	PL.2000.HRP PL.2000.HRP.H
150 kg	300 kg	300 kg	600 kg	1100 kg	2000 kg
50 g	100 g	100 g	250 g	500 g	1000 g
1 g	2 g	2 g	5 g	10 g	20 g
- 120 kg	- 300 kg	- 300 kg	- 600 kg	- 1100 kg	- 2000 kg
30 kg	60 kg	60 kg	60 kg	100 kg	200 kg
1.5 g	3 g	3 g	7.5 g	15 g	30 g
± 3 g	± 6 g	± 6 g	± 15 g	± 30 g	± 60 g
800 × 600 mm	800 × 600 mm	1000 × 800 mm	1000 × 800 mm	1000 × 800 mm	1250 × 1000 mm
YES	YES	YES	YES	YES	YES
2 ppm / °C	2 ppm / °C	2 ppm / °C	2 ppm / °C	2 ppm / °C	2 ppm / °C
+10° ÷ +40°C	+10° ÷ +40°C	+10° ÷ +40°C	+10° ÷ +40°C	+10° ÷ +40°C	+10° ÷ +40°C
15% ÷ 80%	15% ÷ 80%	15% ÷ 80%	15% ÷ 80%	15% ÷ 80%	15% ÷ 80%
IP 66 / 67	IP 66 / 67	IP 66 / 67	IP 66 / 67	IP 66 / 67	IP 66 / 67
12 ÷ 24 V DC	12 ÷ 24 V DC	12 ÷ 24 V DC	12 ÷ 24 V DC	12 ÷ 24 V DC	12 ÷ 24 V DC
RS 485, RS 232, Ethernet / optional: Profibus, 2 × IN, 2 × OUT					
Radwag protocol, ASCII, Modbus					
powder coated steel [HRP], stainless steel [HRP.H]					
stainless steel [HRP], stainless steel [HRP.H]					
707 × 600 × 173 mm	707 × 600 × 173 mm	1011 × 800 × 175 mm	1011 × 800 × 175 mm	1011 × 800 × 175 mm	1250 × 1000 × 245 mm
MWLH 10	MWLH 25	MWLH 30	MWLH 35	MUYA 2.4Y	MUYA 5.4Y
10 kg	25 kg	30 kg	35 kg	2.1 g	5.1 g
0.5 g	5 g	5 g	5 g	-	-
-	-	-	-	-	-
0.01g	0.1g	0.1g	0.1g	0.1 µg	1 µg
- 10 kg	- 25 kg	- 30 kg	- 35 kg	- 2.1 g	- 5.1 g
1 kg	2.5 kg	3 kg	3.5 kg	-	-
0.01 g	0.1 g	0.1 g	0.1g	0.5 µg	1 µg
± 0.02 g	± 0.1 g	± 0.3 g	± 0.3 g	± 1.5 µg	± 5 µg
3 s	2 s	2 s	2 s	10 ÷ 20 s	~5 s
212 × 174 mm	212 × 174 mm	212 × 174 mm	212 × 174 mm	∅ 16 mm	∅ 26 mm
YES (option)	YES (option)	YES (option)	YES (option)	YES	YES
2 ppm / °C	2 ppm / °C	2 ppm / °C	2 ppm / °C	1 ppm / °C	1 ppm / °C
+10° ÷ +40°C	+10° ÷ +40°C	+10° ÷ +40°C	+10° ÷ +40°C	+10° ÷ +40°C	+10° ÷ +40°C
15% ÷ 80%	15% ÷ 80%	15% ÷ 80%	15% ÷ 80%	15% ÷ 80%	15% ÷ 80%
IP65	IP65	IP65	IP65	IP32	IP32
12 ÷ 24 V DC	12 ÷ 24 V DC	12 ÷ 24 V DC	12 ÷ 24 V DC	13.5 ÷ 16 V DC	13.5 ÷ 16 V DC
-	-	-	-	-	-
-	-	-	-	5.7" colour touch screen	
RS 232, Ethernet, 3 × IN, 2 × OUT / optional: Profibus, RS 485, 2 × IN, 2 × OUT				Wi-Fi®, 2 × RS 232, 2 × USB, 1 × Ethernet, 4 × IN, 4 × OUT	
Radwag protocol, ASCII, Modbus				ASCII	
stainless steel	stainless steel	stainless steel	stainless steel	aluminium	aluminium
341 × 236 × 164 mm	341 × 236 × 164 mm	341 × 236 × 164 mm	341 × 236 × 164 mm	248 × 180 × 117 mm	293 × 190 × 112 mm



Local Dealer:



RADWAG Balances and Scales

www.radwag.com