

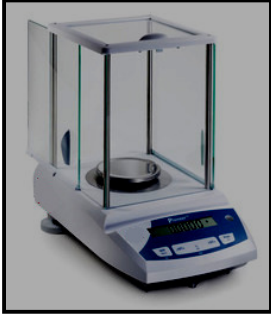
# ULTRA-PRECISION BALANCE MACHINE

Semi-active suspension/pulse electromagnetic technology

MICROCONTROLLER BASED

**Introduction:** MUPBM range of Pulse base ultra-precision balance machine is available in 10 different regular models apart from tailor made solutions to offer fine resolution measurement upto 100 nano- gram all industrial and research applications requirement like electrical, thermal, mechanical, and environmental specifications. These machines are used in metallurgy, heavy electrical engineering industries, defense, process control, sugar, milk, chemical, fuel, petrochemical industrial electronics, railway, bio-chemical, medicine, Polymer composites and avionics and many research and development activities.

**Operating Principle:** These ultraprecision weighing scales are working on Fleming principle of electromagnetic force, where a current (I) carrying conductor of length (L) experience force (F) when placed in a magnetic field (B). This force is balanced by incremental weight under measurement using sensitive feedback controlled D.S.P. system and is converted into equivalent display. These measurement systems are immune to any climatical, mechanical, tribological, rheological, chemical constraints and displays very consistently with high level of accuracy.



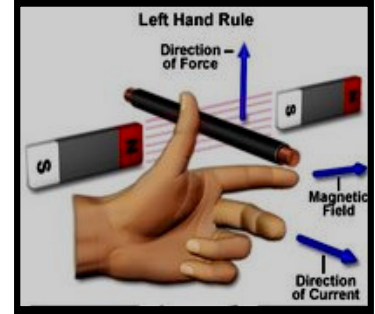
MUPBM-000021



MUPBM-002005



MUPBM-020005



WORKING PRINCIPLE

**Models & Technical data of Ultra Precision balancing machine:**

Weight < 0.00200 to 200.000 grams

Model	Max. Capacity gms	min-weight measurement/ Tare weight (gms) or option	Step-down ration U=1, K=2/min-weight count Subject to resolution	Incremental resolution above min weight X Capacity (3-option)	Accuracy count restricted to resolution	Resolution Quantified-by count/optional	use/D.C./Pulse Frequency
MUPBM-0000021	00.002	01.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	001	1/2/5/optional	Option
MUPBM-0000022	00.002	02.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	002	1/2/5/optional	Option
MUPBM-0000025	00.002	05.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	50x10 <sup>-7</sup> /50x10 <sup>-8</sup> /50x10 <sup>-9</sup>	005	1/2/5/optional	Option
MUPBM-0000201	00.020	10.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	001	1/2/5/optional	Option
MUPBM-0000202	00.020	20.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	002	1/2/5/optional	Option
MUPBM-0000205	00.020	50.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	50x10 <sup>-7</sup> /50x10 <sup>-8</sup> /50x10 <sup>-9</sup>	005	1/2/5/optional	Option
MUPBM-0001001	00.100	10.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	001	1/2/5/optional	Option
MUPBM-0001002	00.100	20.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	002	1/2/5/optional	Option
MUPBM-0001005	00.100	50.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	50x10 <sup>-7</sup> /50x10 <sup>-8</sup> /50x10 <sup>-9</sup>	005	1/2/5/optional	Option
MUPBM-0005001	0005.0	10.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	002	1/2/5/optional	Option
MUPBM-0005002	0005.0	20.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	005	1/2/5/optional	Option
MUPBM-0005005	0005.0	50.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	50x10 <sup>-7</sup> /50x10 <sup>-8</sup> /50x10 <sup>-9</sup>	005	1/2/5/optional	Option
MUPBM-0100001	00010.0	10.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	001	1/2/5/optional	Option
MUPBM-0100002	00010.0	20.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	002	1/2/5/optional	Option
MUPBM-0100005	00010.0	50.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	50x10 <sup>-7</sup> /50x10 <sup>-8</sup> /50x10 <sup>-9</sup>	005	1/2/5/optional	Option
MUPBM-0200001	00020.0	10.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	001	1/2/5/optional	Option
MUPBM-0200002	00020.0	20.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	002	1/2/5/optional	Option
MUPBM-0200005	00020.0	50.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	50x10 <sup>-7</sup> /50x10 <sup>-8</sup> /50x10 <sup>-9</sup>	005	1/2/5/optional	Option
MUPBM-0500001	00050.0	10.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	001	1/2/5/optional	Option
MUPBM-0500002	00050.0	20.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	002	1/2/5/optional	Option
MUPBM-0500005	00050.0	50.0x10 <sup>-4</sup> /1.0x10 <sup>-5 to-4</sup>	1:4000000/1000	50x10 <sup>-7</sup> /50x10 <sup>-8</sup> /50x10 <sup>-9</sup>	005	1/2/5/optional	Option
MUPBM-01000001	00100.0	10.0x10 <sup>-3</sup> /1.0x10 <sup>-3 to-2</sup>	1:4000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	001	1/2/5/optional	Option
MUPBM-01000002	00100.0	20.0x10 <sup>-3</sup> /1.0x10 <sup>-3 to-2</sup>	1:4000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	002	1/2/5/optional	Option
MUPBM-02000005	00200.0	50.0x10 <sup>-3</sup> /1.0x10 <sup>-3 to-2</sup>	1:4000000/2000	50x10 <sup>-7</sup> /50x10 <sup>-8</sup> /50x10 <sup>-9</sup>	001/002/005	1/2/5/optional	Option

Company provides dedicated solution meeting specific requirement.

**General electrical/mechanical specifications:**

- Operating voltage: 12 volts D.C. /220 Volts A.C./option
- Max Weighing range: 2.0 m.g. /20 m.g. /200 m.g. /2.0gms/5.0 gms/10.0 gms/20.0 gms/50.0 gms/100.0gms/200.0gms
- Min. weight: as above
- Eccentric load deviation: 25 times the least count
- Linearity:0.1/0.2/0.3% of F.S.
- Null voltage:0. 5/1/1.5% of F.S.V.
- Position offset/Gain: programmable
- Operating Temperature range: 60/100/200 Degree cel
- Temperature coefficients of measurement: 10x10<sup>-6</sup> ppm/degree cel
- Power consumption: 5.0 V.A [max]
- Accuracy: 0.5/1.0/2.0 % reading
- Repeatability: same as resolution
- Resolution: 1.0 nano/micro gram or as in data sheet
- Accuracy: restricted to least count
- Standard deviation: 2nd
- Differential Standard deviation: SQRT (8 x (10-14) g R\_nt)
- Step down range: 1:10,00,00
- Stabilization time: 3-10 sec
- Temperature range/Rh: 0-70 degree cel/0-80%
- Range: four range (programmable)
- Control: control against three different set point
- Interface: RS-232/0-5 volt D.C/ proportional to weight
- Pan size/weight: Size: 213 x 342 x 90 mm/8.4 x 13.5 x 3.54 inch (pan size: 190 x 204 mm / 7.4 x 8.0 in)

**NOTES:** The Four numeral after product code indicates the (displacement in m.m.), and last digit corresponds AC/DC excitation (1-A.C., 2-D.C., 3-PULSE)



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# PRECISION BALANCE MACHINE

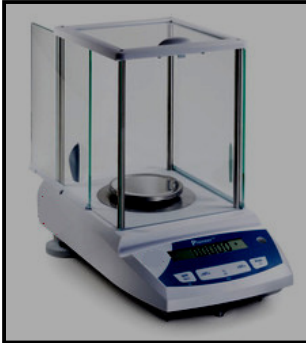
Semi-active suspension/pulse piezo-resistive technology

**MICROCONTROLLER BASED**

## Introduction:

MPBM range of Pulse base precision balance machine is available in 10 different regular models apart from tailor made solutions. to offer fine resolution measurement upto one milli gram all industrial and research applications requirement like electrical, thermal, mechanical, and environmental specifications. These machines are used in mettallurgy,heavy electrical engineering industries, defense, process control, sugar, milk, chemical, fuel, petrochemical industrial electronics, railway, bio-chemical, medicine, Polymer composites and avionics and many research and development activities.

**Operating Principle:** These weighing scales are based on either capacitive/inductive/resistive sensor working in full/half bridge Mode. Any cahngr in weight generates proportional excitation signal which is converted in noise free digital display.



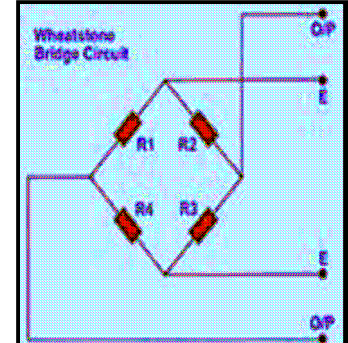
MPBM-100015



MPBM-100055



MPBM-200015



MPBM-200015

## Models & Technical data of precision-balance machine:

**Weight<2000.000 kg**

Model	Max. capacity gms/ Incremental Resolution gms	min-weight measurement/ Tare weight (gms) or option	Step-down ratio $U=1, K=2/\text{min-weight count}$ Subject to resolution	Incremental resolution above min weight $X \text{ Capacity (3-option)}$	Accuracy count restricted to resolution level	Resolution Quantified- by count/optional	ulse/D.C./Pulse Frequency
MPBM-000201	0020.0/0000.0001	$10.0 \times 10^{-4} / 1.0 \times 10^{-3}$	1:1000000/1000	$10 \times 10^{-7} / 10 \times 10^{-8} / 10 \times 10^{-9}$	002	1/2/5/optional	Option
MPBM-000202	0020.0/0000.0002	$20.0 \times 10^{-4} / 1.0 \times 10^{-3}$	1:1000000/1000	$20 \times 10^{-7} / 20 \times 10^{-8} / 20 \times 10^{-9}$	005	1/2/5/optional	Option
MPBM-000205	0020.0/0000.0005	$50.0 \times 10^{-4} / 1.0 \times 10^{-3}$	1:1000000/1000	$50 \times 10^{-7} / 50 \times 10^{-8} / 50 \times 10^{-9}$	002	1/2/5/optional	Option
MPBM-000501	0050.0/000.00001	$10.0 \times 10^{-4} / 1.0 \times 10^{-3}$	1:1000000/1000	$10 \times 10^{-7} / 10 \times 10^{-8} / 10 \times 10^{-9}$	002	1/2/5/optional	Option
MPBM-000502	0050.0/000.00002	$20.0 \times 10^{-4} / 1.0 \times 10^{-3}$	1:1000000/1000	$20 \times 10^{-7} / 20 \times 10^{-8} / 20 \times 10^{-9}$	005	1/2/5/optional	Option
MPBM-000505	0050.0/0000.0005	$50.0 \times 10^{-4} / 1.0 \times 10^{-3}$	1:1000000/1000	$50 \times 10^{-7} / 50 \times 10^{-8} / 50 \times 10^{-9}$	002	1/2/5/optional	Option
MPBM-001001	0100.0/00000.001	$10.0 \times 10^{-4} / 1.0 \times 10^{-3}$	1:1000000/1000	$20 \times 10^{-7} / 20 \times 10^{-8} / 20 \times 10^{-9}$	001	1/2/5/optional	Option
MPBM-001002	0100.0/00000.002	$20.0 \times 10^{-4} / 1.0 \times 10^{-3}$	1:1000000/1000	$50 \times 10^{-7} / 50 \times 10^{-8} / 50 \times 10^{-9}$	002	1/2/5/optional	Option
MPBM-001005	0100.0/00000.005	$50.0 \times 10^{-4} / 1.0 \times 10^{-3}$	1:1000000/1000	$10 \times 10^{-7} / 10 \times 10^{-8} / 10 \times 10^{-9}$	005	1/2/5/optional	Option
MPBM-002001	0200.0/00000.001	$01.0 \times 10^{-3} / 1.0 \times 10^{-3}$	1:1000000/1000	$20 \times 10^{-7} / 20 \times 10^{-8} / 20 \times 10^{-9}$	002	1/2/5/optional	Option
MPBM-002002	0200.0/00000.002	$02.0 \times 10^{-3} / 1.0 \times 10^{-3}$	1:1000000/1000	$10 \times 10^{-7} / 10 \times 10^{-8} / 10 \times 10^{-9}$	005	1/2/5/optional	Option
MPBM-002005	0200.0/00000.005	$05.0 \times 10^{-3} / 1.0 \times 10^{-3}$	1:1000000/1000	$20 \times 10^{-7} / 20 \times 10^{-8} / 20 \times 10^{-9}$	001	1/2/5/optional	Option
MPBM-005001	0500.0/00000.010	$10.0 \times 10^{-3} / 1.0 \times 10^{-3}$	1:1000000/1000	$50 \times 10^{-7} / 50 \times 10^{-8} / 50 \times 10^{-9}$	002	1/2/5/optional	Option
MPBM-005002	0500.0/00000.020	$20.0 \times 10^{-3} / 1.0 \times 10^{-3}$	1:1000000/1000	$10 \times 10^{-7} / 10 \times 10^{-8} / 10 \times 10^{-9}$	005	1/2/5/optional	Option
MPBM-005005	0500.0/00000.050	$50.0 \times 10^{-3} / 1.0 \times 10^{-3}$	1:1000000/1000	$20 \times 10^{-7} / 20 \times 10^{-8} / 20 \times 10^{-9}$	001	1/2/5/optional	Option
MPBM-010001	1000.0/00000.010	$10.0 \times 10^{-3} / 1.0 \times 10^{-3}$	1:1000000/1000	$50 \times 10^{-7} / 50 \times 10^{-8} / 50 \times 10^{-9}$	002	1/2/5/optional	Option
MPBM-010002	1000.0/00000.020	$20.0 \times 10^{-3} / 1.0 \times 10^{-3}$	1:1000000/1000	$10 \times 10^{-7} / 10 \times 10^{-8} / 10 \times 10^{-9}$	005	1/2/5/optional	Option
MPBM-010005	1000.0/00000.050	$50.0 \times 10^{-3} / 1.0 \times 10^{-3}$	1:1000000/1000	$20 \times 10^{-7} / 20 \times 10^{-8} / 20 \times 10^{-9}$	001	1/2/5/optional	Option
MPBM-020001	2000.0/00000.010	$10.0 \times 10^{-3} / 1.0 \times 10^{-3}$	1:1000000/1000	$50 \times 10^{-7} / 50 \times 10^{-8} / 50 \times 10^{-9}$	002	1/2/5/optional	Option
MPBM-020002	2000.0/00000.020	$20.0 \times 10^{-3} / 1.0 \times 10^{-3}$	1:1000000/1000	$10 \times 10^{-7} / 10 \times 10^{-8} / 10 \times 10^{-9}$	005	1/2/5/optional	Option
MPBM-020005	2000.0/00000.050	$50.0 \times 10^{-3} / 1.0 \times 10^{-2}$	1:1000000/1000	$20 \times 10^{-7} / 20 \times 10^{-8} / 20 \times 10^{-9}$	001	1/2/5/optional	Option

## General eletrical/mechanical specifications:

Operating voltage: 12 volts D.C. /220 Volts A.C./option

Max Weighing range:2.0gms/5.0 gms/10.0 gms/20.0 gms/50.0 gms/100.0gms/200.0gms

Min. weight: as above

Eccentric load deviation: 25 times the least count

Linearity:0.1/0.2/0.3% of F.S.

Null voltage:0.5/1/1.5% of F.S.V.

Position offset/Gain: programmable

Operating Temperature range: 50/100/200 Degree cel

Temperature coefficients of measurement:  $10 \times 10^{-5}$  ppm/degree cel

Power consumption: 5.0 V.A [max]

Accuracy: 0.5/1.0/2.0 % reading

Repeatability: same as resolution

Resolution: 1.0 nano/micro gram or as in data sheet

Accuracy: restricted to least count

Standard deviation:2<sup>nd</sup>

Differential Standard deviation:SQRT(8 x (10-14) g-R\_nt)

Step down range: 1:10,00,00

Stabilization time: 3-10 sec

Temperature range/Rh: 0-70 degree cel/0-80%

Range: four range(programmable)

Control: control against three different set point

Interface: RS-232/0-5 volt D.C/ proportional to weight

Pan size/weight: optional

Size: 213 x 342 x 90 mm/8.4 x 13.5 x 3.54 inch (pan size: 190 x 204 mm / 7.4 x 8.0 in)

NOTES: The Four numeral after product code indicates the (displacement in m.m.), and last digit corresponds AC/DC excitation (1-A.C., 2-D.C., 3-PULSE)



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# PRECISION INDUSTRIAL BALANCE MACHINE

Semi-active suspension/pulse piezo-resistive technology

MICROCONTROLLER BASED

Models & Technical data of precision-balance machine:

Weight < 2000.000 tons

Model	Max. capacity gms/ Incremental Resolution(tons )	min-weight measurement/ tare weight ( tons or Option	Step-down ratio U=1,K=2/min-weight count Subject to resolution	Incremental resolution above min weight X Capacity (3-option)	Accuracy count restricted to resolution level	Resolution Quantified- by count/optional	ulse/D.C./Pulse Frequency
MPBM-000201	0020.0/0000.0001	10.0x10 <sup>-4</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	002	1/2/5/optional	Option
MPBM-000202	0020.0/0000.0002	20.0x10 <sup>-4</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	005	1/2/5/optional	Option
MPBM-000205	0020.0/0000.0005	50.0x10 <sup>-4</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	50x10 <sup>-7</sup> /10x50 <sup>-8</sup> /50x10 <sup>-9</sup>	002	1/2/5/optional	Option
MPBM-000501	0050.0/000.00001	10.0x10 <sup>-4</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	002	1/2/5/optional	Option
MPBM-000502	0050.0/000.00002	20.0x10 <sup>-4</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	005	1/2/5/optional	Option
MPBM-000505	0050.0/0000.0005	50.0x10 <sup>-4</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	002	1/2/5/optional	Option
MPBM-001001	0100.0/00000.001	10.0x10 <sup>-4</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	001	1/2/5/optional	Option
MPBM-001002	0100.0/00000.002	20.0x10 <sup>-4</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	50x10 <sup>-7</sup> /10x50 <sup>-8</sup> /50x10 <sup>-9</sup>	002	1/2/5/optional	Option
MPBM-001005	0100.0/00000.005	50.0x10 <sup>-4</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	005	1/2/5/optional	Option
MPBM-002001	0200.0/00000.001	01.0x10 <sup>-3</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	002	1/2/5/optional	Option
MPBM-002002	0200.0/00000.002	02.0x10 <sup>-3</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	005	1/2/5/optional	Option
MPBM-002005	0200.0/00000.005	05.0x10 <sup>-3</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	001	1/2/5/optional	Option
MPBM-005001	0500.0/00000.010	10.0x10 <sup>-3</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	50x10 <sup>-7</sup> /10x50 <sup>-8</sup> /50x10 <sup>-9</sup>	002	1/2/5/optional	Option
MPBM-005002	0500.0/00000.020	20.0x10 <sup>-3</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	005	1/2/5/optional	Option
MPBM-005005	0500.0/00000.050	50.0x10 <sup>-3</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	001	1/2/5/optional	Option
MPBM-010001	1000.0/00000.010	10.0x10 <sup>-3</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	50x10 <sup>-7</sup> /10x50 <sup>-8</sup> /50x10 <sup>-9</sup>	002	1/2/5/optional	Option
MPBM-010002	1000.0/00000.020	20.0x10 <sup>-3</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	005	1/2/5/optional	Option
MPBM-010005	1000.0/00000.050	50.0x10 <sup>-3</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	001	1/2/5/optional	Option
MPBM-020001	2000.0/00000.010	10.0x10 <sup>-3</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	50x10 <sup>-7</sup> /10x50 <sup>-8</sup> /50x10 <sup>-9</sup>	002	1/2/5/optional	Option
MPBM-020002	2000.0/00000.020	20.0x10 <sup>-3</sup> /1.0x10 <sup>-3</sup>	1:1000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	005	1/2/5/optional	Option
MPBM-020005	2000.0/00000.050	50.0x10 <sup>-3</sup> /1.0x10 <sup>-2</sup>	1:1000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	001	1/2/5/optional	Option

Models & Technical data of precision-balance machine:

Weight < Weight < 2000.000 tons

Model	Max. capacity (tons)/ Incremental Resolution (tons)	min-weight measurement/ tare weight ( tons or Option	Step-down ratio U=1,K=2/min-weight count Subject to resolution	Incremental resolution above min weight X Capacity (3-option)	Accuracy count restricted to resolution level	Resolution Quantified- by count/optional	ulse/D.C./Pulse Frequency
MPBM-000201	0020.0/0000.0001	10.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	002	1/2/5/optional	Option
MPBM-000202	0020.0/0000.0002	20.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	005	1/2/5/optional	Option
MPBM-000205	0020.0/0000.0005	50.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	50x10 <sup>-7</sup> /10x50 <sup>-8</sup> /50x10 <sup>-9</sup>	002	1/2/5/optional	Option
MPBM-000501	0050.0/000.00001	10.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	002	1/2/5/optional	Option
MPBM-000502	0050.0/000.00002	20.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	005	1/2/5/optional	Option
MPBM-000505	0050.0/0000.0005	50.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	002	1/2/5/optional	Option
MPBM-001001	0100.0/00000.001	10.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	001	1/2/5/optional	Option
MPBM-001002	0100.0/00000.002	20.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	50x10 <sup>-7</sup> /10x50 <sup>-8</sup> /50x10 <sup>-9</sup>	002	1/2/5/optional	Option
MPBM-001005	0100.0/00000.005	50.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	005	1/2/5/optional	Option
MPBM-002001	0200.0/00000.001	01.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	002	1/2/5/optional	Option
MPBM-002002	0200.0/00000.002	02.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	005	1/2/5/optional	Option
MPBM-002005	0200.0/00000.005	05.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	001	1/2/5/optional	Option
MPBM-005001	0500.0/00000.010	10.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	50x10 <sup>-7</sup> /10x50 <sup>-8</sup> /50x10 <sup>-9</sup>	002	1/2/5/optional	Option
MPBM-005002	0500.0/00000.020	20.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	005	1/2/5/optional	Option
MPBM-005005	0500.0/00000.050	50.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	001	1/2/5/optional	Option
MPBM-010001	1000.0/00000.010	10.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	50x10 <sup>-7</sup> /10x50 <sup>-8</sup> /50x10 <sup>-9</sup>	002	1/2/5/optional	Option
MPBM-010002	1000.0/00000.020	20.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	005	1/2/5/optional	Option
MPBM-010005	1000.0/00000.050	50.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	001	1/2/5/optional	Option
MPBM-020001	2000.0/00000.010	10.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	50x10 <sup>-7</sup> /10x50 <sup>-8</sup> /50x10 <sup>-9</sup>	002	1/2/5/optional	Option
MPBM-020002	2000.0/00000.020	20.0x10 <sup>-4</sup> /1.0x10 <sup>-4</sup>	1:1000000/1000	10x10 <sup>-7</sup> /10x10 <sup>-8</sup> /10x10 <sup>-9</sup>	005	1/2/5/optional	Option
MPBM-020005	2000.0/00000.050	50.0x10 <sup>-4</sup> /1.0x10 <sup>-2</sup>	1:1000000/1000	20x10 <sup>-7</sup> /20x10 <sup>-8</sup> /20x10 <sup>-9</sup>	001	1/2/5/optional	Option

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