

Portable 3D force plate

Type 9260BA...

With digital output

This portable digital 3D force plate offers a versatile solution for measuring ground reaction forces, moments and the center of pressure in gait and balance analysis. Thanks to its lightweight and portable design, it is easy to set up and suitable for various applications. It combines the advantages of piezoelectric sensors with the benefits of the digital measurement technology in one streamlined measuring chain.

- Excellent center of pressure (COP) accuracy
- Vertical measuring range up to 10 kN
- Available in two different sizes
- Flexible, mobile application
- Easy mounting and versatile installation options
- PTP synchronization of force plate systems (16+ plates)

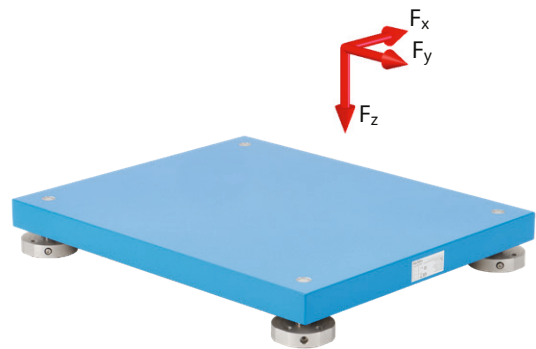
Description

Multicomponent force plate Type 9260BA... has an aluminum sandwich cover plate with an anti-slip surface and is available in two sizes (300x500 mm and 600x500 mm). It offers a very wide measuring range (0 ... 10 kN), outstanding accuracy and a high natural frequency (> 400 Hz). This makes it a precise tool for measurements in biomechanics and due to their durability, Kistler force plates are a long-lasting and cost-effective investment. Compared to stationary force plates which are permanently installed in the ground, this force plate type offers portability thanks to its low weight and can simply be used on any flat surface. This cuts installation costs and adds flexibility. In addition, it is possible to combine them with walkway elements or to install them on mounting frames to cover bigger areas and to facilitate flexible measurement layouts. This makes it a very versatile solution for various applications.

Application

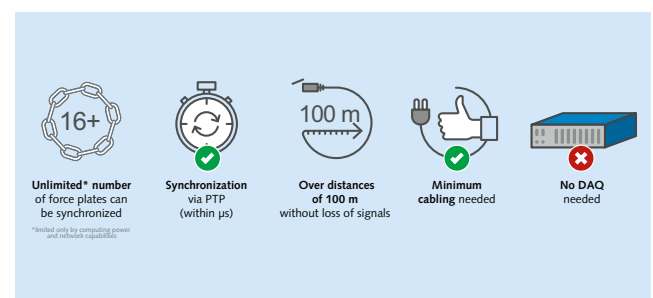
This force plate is designed specifically for use in gait and balance analyses. Type 9260BA... has a built-in charge amplifier with digital signal output. It is compatible with all of the common motion analysis systems. Thanks to the PTP (precision time protocol) technology, exact time synchronization is achieved for all force plates in the network. This allows the system to be fully scalable.

Additional plates can be added to the system in a daisy chain configuration with a single cable running from plate to plate. With the use of ethernet switches supporting PTP several daisy chains can be linked and synchronized with each other to scale the number of force plates within a system up to a theoretically unlimited number.



Versatile Installation

There are multiple mounting options for this force plate type which makes it a very versatile solution for various applications. The flexible feet facilitate stable positioning on level and solid ground to start measuring right away. Holes and locking screws in the feet also allow to fix them to the floor. Besides this, force plate Type 9260BA... can be combined with walkway elements to create a bigger surface with multiple force plates and dummy plates of different sizes. Furthermore, mounting frames are available which provide permanent and flush installation into the floor. It is also possible to install multiple frames that allow mounting of several force plates and filler plates in diverse arrangements. These different ways of installing one or more force plates in combination with various walkway elements or dummy plates offer versatile options to tailor the setup to the individual requirements.



Technical Data

Specifications

| | | | |
|--|--|-------|------------------|
| Dimensions | | mm | 600 x 500 x 80 |
| Type 9260BA6 | | mm | 298.5 x 500 x 80 |
| Measuring range | F _x , F _y | kN | -2.5 ... 2.5 |
| | F _z | kN | 0 ... 10 |
| Calibrated range (high) | F _x , F _y | kN | 0 ... 1 |
| | F _z | kN | 0 ... 5 |
| Calibrated range (low) | F _x , F _y | kN | 0 ... 0.25 |
| | F _z | kN | 0 ... 1 |
| Natural frequency | f _n (x, y, z) | Hz | ≈400 |
| Linearity | | %FSO | ±0.5 |
| Hysteresis | | %FSO | ≤0.5 |
| Crosstalk | F _z → F _x , F _y | % | ±0.5 |
| Drift (Δt = 0°C) | F _x , F _y , F _z | N/min | ±0.5 |
| Max. COP error (inside sensor rectangle) | Δa _x , Δa _y | mm | ≈2 |
| Operating temperature range | | °C | 10 ... 50 |
| Weight | | | |
| Type 9260BA6 | | kg | 12.5 |
| Type 9260BA3 | | kg | 8.2 |
| Degree of protection | EN60529 | | IP52 |

Electrical Data

Connectors

| | | |
|----------------------|--|---------------------------------|
| Connector type | | Industrial M12 |
| Number of connectors | | 2 |
| Cable type | | Hybrid power and ethernet cable |

Power supply (DC)

| | | |
|----------------------|-----|-----------|
| Supply voltage range | VDC | 12 ... 48 |
| Power consumption | W | <5 |

Ethernet interface

| | | |
|----------------|------|------|
| Interface type | | RJ45 |
| Data rate | Mbit | 100 |

Daisy chaining

| | | |
|-------------------------------------|----|-----|
| Max. number of devices in one chain | | 16 |
| Synchronization error (IEEE1588) | μs | ≤10 |

Measuring chain

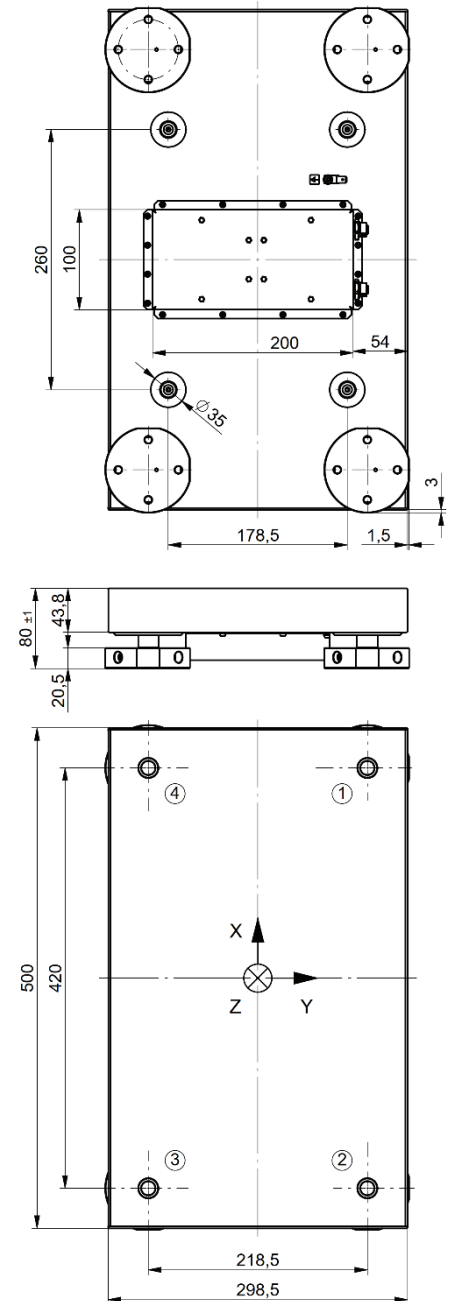
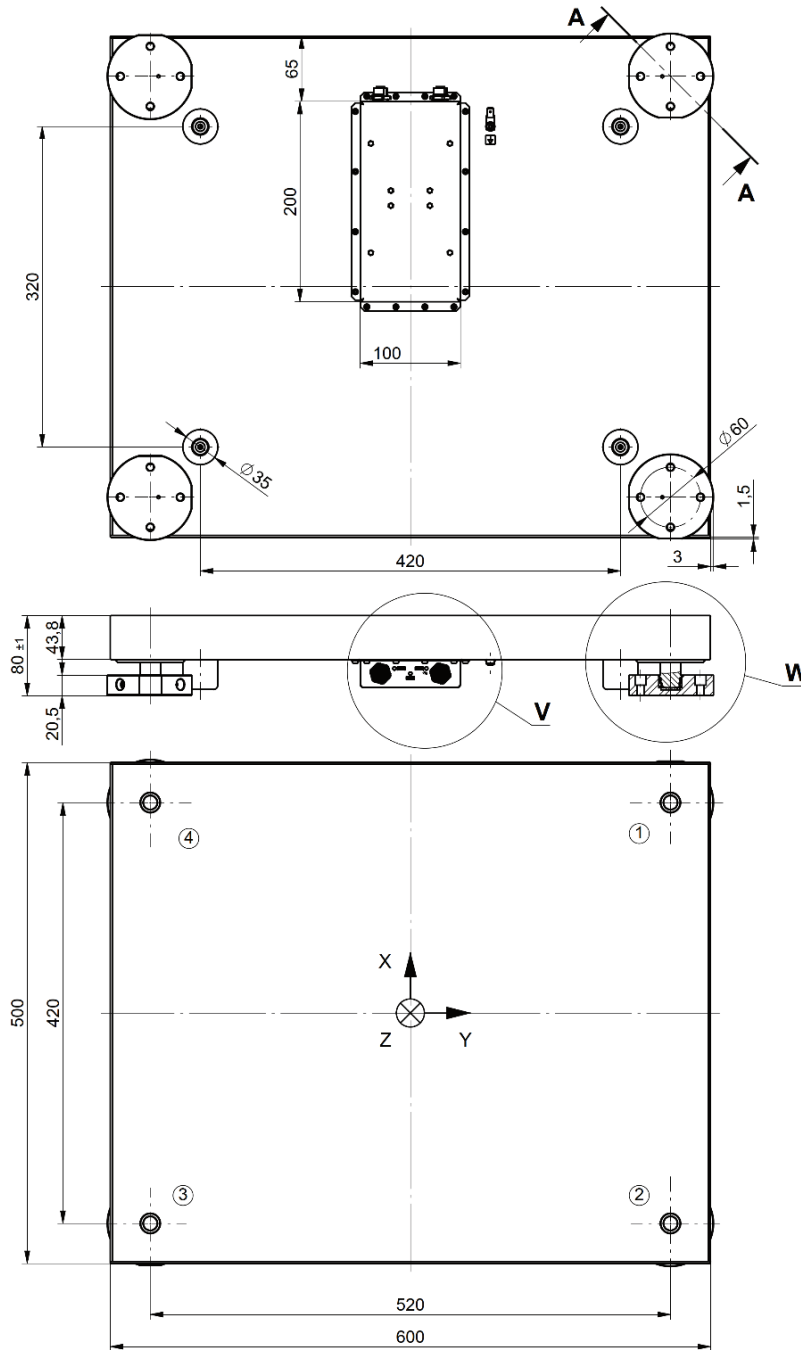
| | | | |
|---|---|--|---|
| Portable digital force plate Type 9260BA... | Hybrid cable for power and ethernet Type 1200A263AM... | Power and ethernet supply set Type 5793A | Laptop (provided by user) with BioWare software |
|  |  |  |  |

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Dimensions

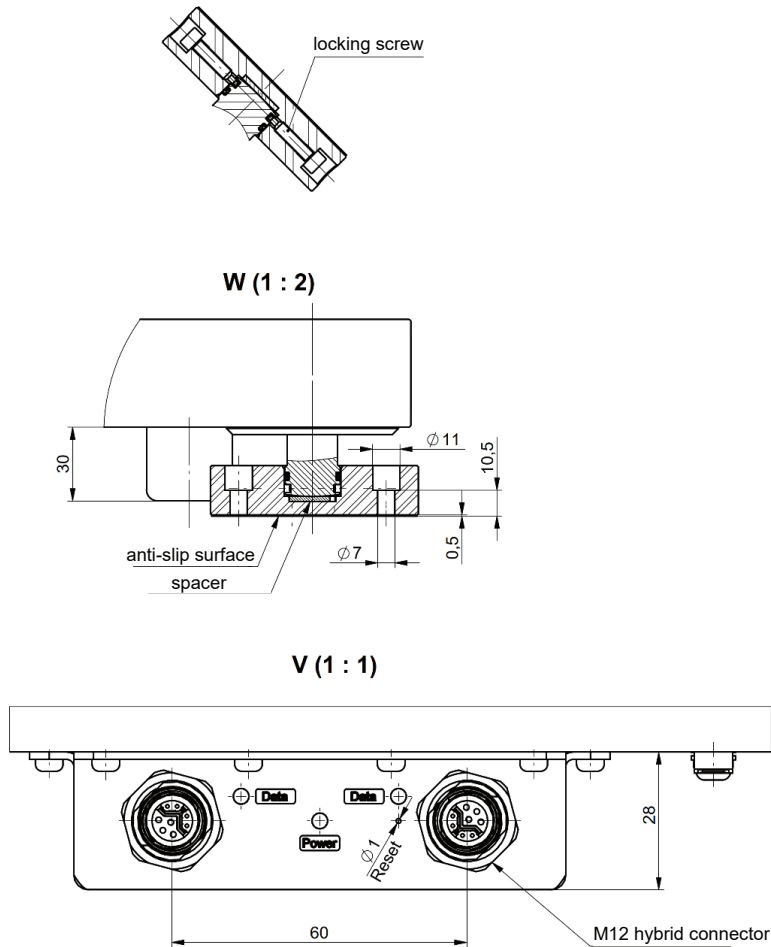
Type 9260BA6

Type 9260BA3



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Type 9260BA6 and Type 9260BA3



Included accessories

- 1 Shim set
- 1 Potential equalization cable
- 2 Suction cups

Type/Mat. No.

65013790
65009873
65008209

Ordering key

Type 9260BA

Optional accessories

- Power/Ethernet supply set
- Sync box
- Hybrid cable for Power/Ethernet (various lengths and configurations)
 - angle (m) – angle (m) 1200A263AMAM...
L = 2, 5, 10 m
 - angle (m) – straight (m) 1200A263AMSM...
L = 10, 15, 20, 25, 30, 35 m
 - angle (m) – straight (f) 1200A263AMSF...
L = 2, 10, 20, 30, 40 m
 - straight (f) – straight (f) 1200A263SFSF...
L = 0.3, 2 m

Type/Mat.No.

5793A
5699A
1200A263...
1200A263AMAM...
1200A263AMSM...
1200A263AMSF...
1200A263SFSF...

Dimensions

| | |
|----------------|---|
| 300 x 500 x 80 | 3 |
| 600 x 500 x 80 | 6 |

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