

SCHMIDT

control instruments

Instruction Manual for Push-Pull Scales

PSS/PS/PSM

FS/FB

PSH



Read through this manual before using this scale.

FORCE MEASUREMENT

IMADA

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Introduction

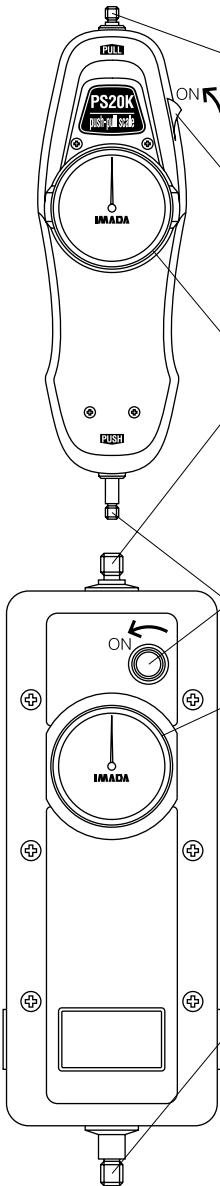
The Push-Pull Scales are direct reading, dial type instruments designed for measuring tension and compression forces. All models are housed in a rugged, ergonomically designed, die-cast aluminum housing which make these instruments ideal for material testing, manufacturing, quality control and laboratory environments.



Precautions

- Do not exceed capacity of unit.
- Accuracy may be affected if unit is exposed to high humidity, dust or extreme shock.
- Do not apply oil or chemical soap which causes corrosion or dust adhesion.
- Keep the scale in the carrying case.

Function



- **Tension Sensing Rod**
(PSS/PS/PSM/FS/FB: M6P1)
(PSH: M10P1.5)

Measure tensile forces with the following attachments: small hook, large hook, Y hook and supplied attachments.

- **Peak switch**

This switch activates or clears peak hold reading.

- **Tare Ring**

Rotate tare ring to delete the attachment's weight.

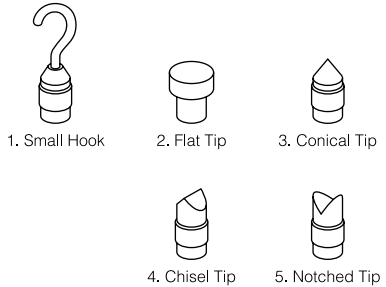
- **Compression Sensing Rod**
(PSS/PS/PSM/FS/FB: M6P1)
(PSH: M10P1.5)

Measure compressive forces with following attachments: flat tip, conical tip, chisel tip, notched tip and supplied attachments.

Standard Attachments

The various kinds of measurement is possible with the standard attachments.

- 1 to 8 are standard with PSS, PS, PSM series.
- 1 to 6 are standard with FS, FB, series. 7 and 8 are option.
- 1 to 6 are standard with PSH series. Mounting bolts and handles are included.

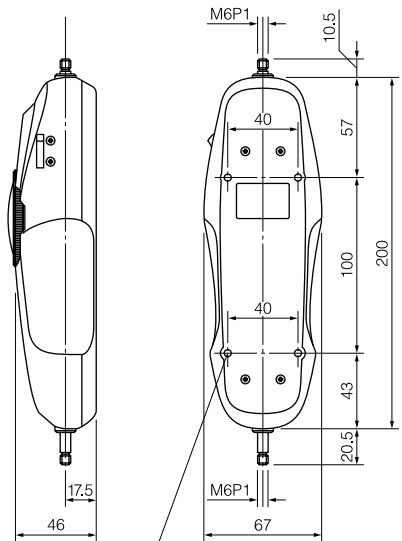


[Mount of Attachment]

Set a suitable attachment to the measurement shaft.



- Do not set the attachment with any tool to avoid strong load applied. The screw may be broken.



Mounting Internal Screw M4P0.7

Mount of Force Gauge

[Mount of
PSS/PS/PSM/FS/FB]

Mount the gauge to a stand with
internal screw on back.



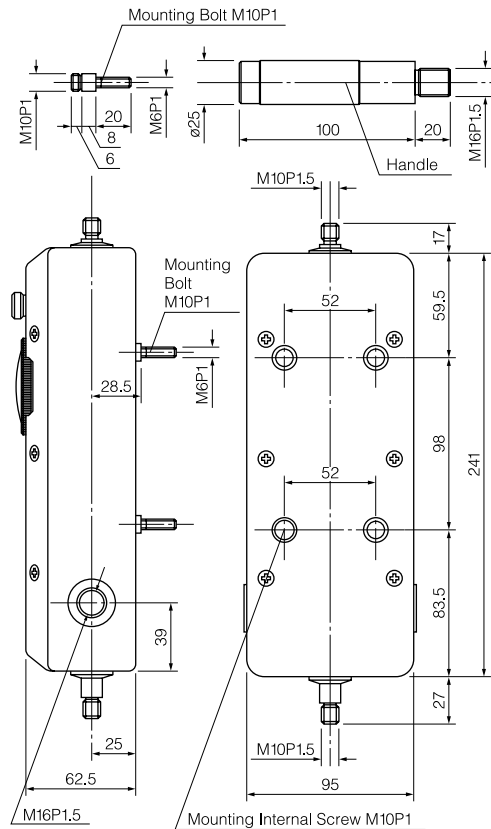
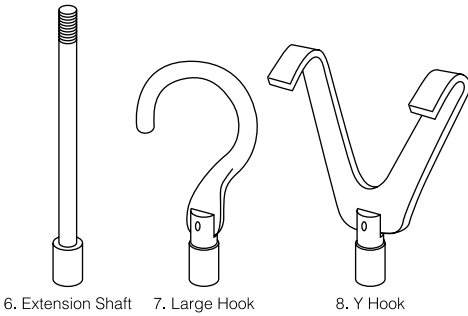
- Make sure to use screw less than 8mm-long.
- Do not apply torque more than capacity, otherwise the internal screw may be broken.

[Mount of PSH]

Mount the gauge with exclusive
mounting bolt included to the force
gauge.



- Non-exclusive bolt may break the force gauge. Make sure to use the exclusive one.
- Do not apply torque more than capacity, otherwise the internal screw may be broken.



General Operation

1. Turn peak switch OFF.
2. HAND TIGHTEN attachment to push or pull measuring shaft.
3. Rotate tare ring to "0". Adjustment should be made under the same conditions as those used when measuring load.
4. Begin measuring:
 - (a) When peak switch is ON, Push-Pull Scale will retain highest reading taken. To reset dial to zero, press peak switch back to OFF.
 - (b) When peak switch is OFF, Push-Pull Scale shows real time measurement.



Caution in Operation

- Do not apply force to opposite direction.
- Do not exceed capacity of this gauge. Excessive overload will cause gauge damage.
- Hand tighten attachments only. Do not use tools.
- Do not use Push-Pull scale for breaking test. Recoil may damage gauge.
- Using worn attachments, especially hooks, may result serious damage. Please replace such attachments with new ones.

Caution at Storage

- Please keep clean and store in carrying case after use.
- Keep from high temperature and high humidity.

Regular Check

We recommend self-check of the scales once every six month or a year.

[Operation Check]

Place the scale on a horizontal table. See if the scale goes back to 0 N by pushing and pulling the measurement shaft.

[Peak Switch Check]

Apply load by 10 points when peak switch is on and see if the peak switch accurately operates.

[Accuracy Check]

Turn peak switch off and place the scale vertical with the measuring shaft down. Apply force by putting standard weight and see if scale shows the appropriate value.

Warranty

We warrant that this Push-Pull scale be free from defects in workmanship and materials under normal use and proper maintenance, for one year from the date of original purchase. This warranty shall not be effective if the scale has been subject to overload, misuse, negligence or accident.

The foregoing warranty constitutes the **SOLE AND EXCLUSIVE WARRANTY**, and we hereby disclaim all other warranties, express, statutory or implied, applicable to the product, including, but not limited to, all implied warranties of merchantability and fitness.

Specifications

Model	PSS	PS	PSM	FS	FB	PSH
Stroke	10mm					
Accuracy	0.1%F.S.			0.3%F.S.		0.1%F.S.
Dial Divisions	100*		200**	100*		
Weight (approx.)	580g*** (PSS-10N)	670g*** (PS-500N)	660g*** (PSM-300N)	580g*** (FS-10N)	630g*** (FB-100N)	2.8kg*** (PSH-2000N)

* 120 divisions for 3kg, 30kg, 30N, 300N, 30lb, 300kg, 3000N, 300lb

** 150 divisions for 3kg, 30kg

*** As the weight differs depending on its capacity, the above is just of main model numbers.