

Precision Shear Web Disk

FEATURES

- Capacities:
 - PSD: 2.5, 5, 10, 25
 - PSD-SJTH: 0.5, 1, 2, 5, 10, 20, 25, 30
 - PSD-SJTT: 0.2, 0.5, 1, 1.5, 2.5, 5, 10, 20, 25, 30, 50, 100 t
- Compact size with low profile
- Low deflection for high output
- Electroless nickel-plated alloy tool steel construction
- Off center load compensated
- OIML C3 available for the entire series
- **Optional**
 - PSD-SJTT and PSD-SJTH models have different mounting holes and capacities from default PSD – see below for details.



APPLICATIONS

- Testing machines
- Platform scales
- Hopper and vessel weighing
- Truck scales

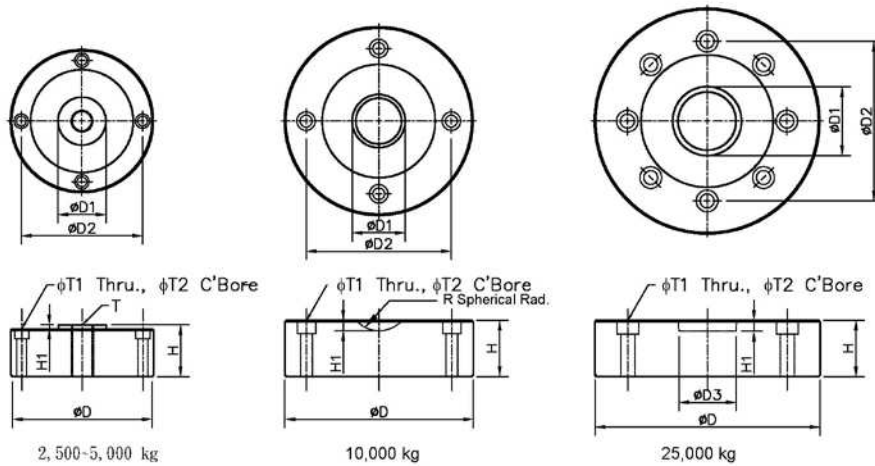
DESCRIPTION

The model PSD is a precision shear web disk, a specialized compression load cell. A low profile design makes the PSD the most suitable application when height is a primary safety concern. The shear web design provides excellent performance even when side forces are inevitable in normal operations. A typical example would be in motor truck scales. The PSD is fully potted with special chemical compounds to the IP67 standard. This protects the cell from water and moisture attack. The PSD-SJTT and PSD-SJTH are low-profile compression disks specially designed for testing machines.

Outline drawings and specifications follow on next pages.

Precision Shear Web Disk

OUTLINE DIMENSIONS – PSD 2.5 TO 25 t

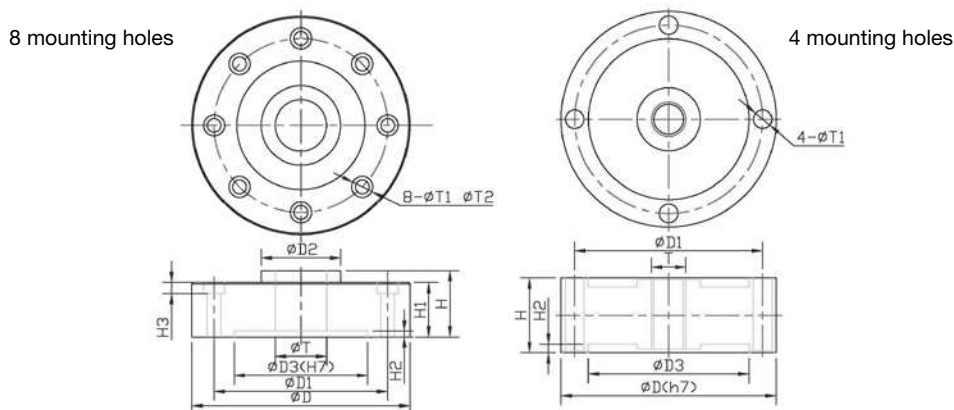


Wiring
 + Excitation Red
 - Excitation Black
 + Signal Green
 - Signal White

Please note:
 The shape of the Model PSD varies between capacities. Please consult the dimensions table below carefully.

| CAPACITY | | D | D ₁ | D ₂ | D ₃ | H | H ₁ | R | T | T ₁ | T ₂ |
|-------------|----|-------|----------------|----------------|----------------|------|----------------|------|-----------|----------------|----------------|
| 2.5 t / 5 t | mm | 104.7 | 32 | 88.9 | — | 34.8 | 3.05 | — | M16 × 1.5 | 4 - 7.2 | 10.5 × 7.2DP |
| | in | 4.12 | 1.26 | 3.5 | — | 1.37 | 0.12 | — | | 0.28 | 0.41 × 0.28DP |
| 10 t | mm | 138 | 38.9 | 106.4 | — | 41.1 | 7.61 | 22.0 | — | 4 - 8.7 | 13.5 × 9.7DP |
| | in | 5.43 | 1.53 | 4.19 | — | 1.62 | 0.3 | 0.87 | — | 0.34 | 0.53 × 0.38DP |
| 25 t | mm | 165 | 50.4 | 116.8 | 42 | 41.1 | 8 | — | — | 8 - 10.3 | 18.5 × 10.2DP |
| | in | 6.5 | 1.98 | 4.6 | 1.65 | 1.62 | 0.31 | — | — | 0.41 | 0.73 × 0.40DP |

OUTLINE DIMENSIONS – PSD-SJTT 0.2 TO 30 t



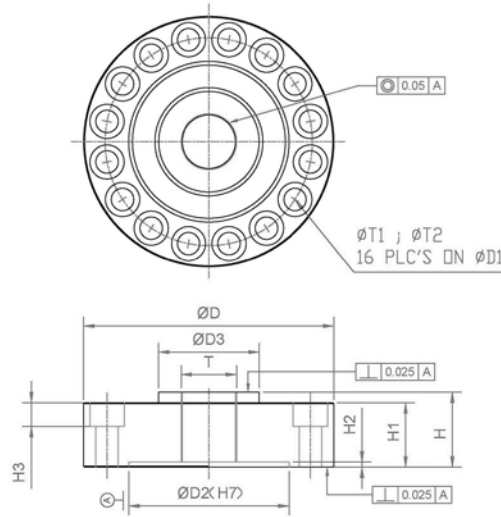
Wiring
 + Excitation Red
 - Excitation Black
 + Signal Green
 - Signal White

Please note:
 The shape of the Model PSD varies between capacities. Please consult the dimensions table below carefully.

| CAPACITY | | D | D ₁ | D ₂ | D ₃ | H | H ₁ | H ₂ | T | T ₁ | T ₂ | H ₃ |
|-------------|----|------|----------------|----------------|----------------|------|----------------|----------------|------------|----------------|----------------|----------------|
| 0.2 t | mm | 75 | 65.5 | — | 56 | 26 | — | 1.2 | M12 × 1.75 | 4 - 6.5 | — | — |
| | in | 2.95 | 2.58 | — | 2.20 | 1.02 | — | 0.05 | — | 0.25 | — | — |
| 0.5 / 1 t | mm | 90 | 78 | 22 | 65 | 43 | 40 | 3 | M12 × 1.75 | 8 - 6.6 | 10.5 | 6 |
| | in | 3.54 | 3.07 | 0.87 | 2.56 | 1.69 | 1.57 | 0.12 | — | 0.26 | 0.41 | 0.24 |
| 1.5 / 2.5 t | mm | 105 | 89 | 32 | 75 | 35 | 32 | 3 | M16 × 2 | 8 - 7.2 | 10.5 | 7.2 |
| | in | 4.13 | 3.5 | 1.26 | 2.95 | 1.38 | 1.26 | 0.12 | — | 0.28 | 0.41 | 0.28 |
| 5/10 t | mm | 138 | 110 | 44 | 88 | 46 | 41 | 3 | M27 × 2 | 8 - 13.2 | 19 | 12 |
| | in | 5.43 | 4.33 | 1.73 | 3.46 | 1.81 | 1.62 | 0.12 | — | 0.52 | 0.75 | 0.47 |
| 20/25/30 t | mm | 165 | 130 | 55 | 96 | 50 | 41 | 3 | M36 × 2 | 8 - 21 | 31 | 20 |
| | in | 6.5 | 5.11 | 2.17 | 3.78 | 1.97 | 1.62 | 0.12 | — | 0.83 | 1.22 | 0.79 |

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OUTLINE DIMENSIONS - PSD-SJTT 50 AND 100 t



Wiring
 + Excitation Red
 - Excitation Black
 + Signal Green
 - Signal White

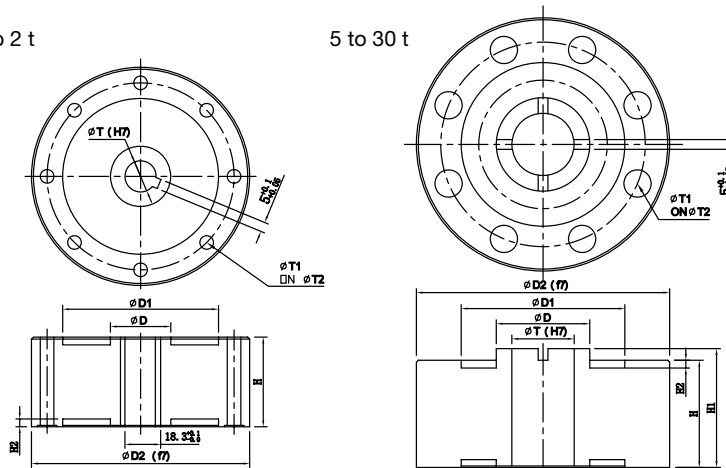
Please note:
 The shape of the Model PSD varies between capacities. Please consult the dimensions table below carefully.

| CAPACITY | | D | D ₁ | D ₂ | D ₃ | H | H ₁ | H ₂ | H ₃ | T | T ₁ | T ₂ |
|----------|----|------|----------------|----------------|----------------|------|----------------|----------------|----------------|------------|----------------|----------------|
| 50 t | mm | 234 | 194 | 150 | 94 | 60.0 | 55 | 4.7 | 22 | M52 × 2-6H | 21.0 | 32.0 |
| | in | 9.2 | 7.6 | 5.9 | 3.7 | 2.4 | 2.2 | 0.2 | 0.9 | | 0.8 | 1.3 |
| 100 t | mm | 258 | 218 | 174 | 120 | 60.0 | 57 | 3 | 22 | M76 × 2 | 21.0 | 32.0 |
| | in | 10.2 | 8.6 | 6.9 | 4.72 | 2.4 | 2.24 | 0.12 | 0.9 | | 0.8 | 1.3 |

OUTLINE DIMENSIONS - PSD-SJTH

500 kg to 2 t

5 to 30 t



Wiring
 + Excitation Red
 - Excitation Black
 + Signal Green
 - Signal White

Please note:
 The shape of the Model PSD varies between capacities. Please consult the dimensions table below carefully.

| CAPACITY | | D | D ₁ | D ₂ | H | H ₁ | H ₂ | T | T ₁ | T ₂ |
|--------------------|----|------|----------------|----------------|------|----------------|----------------|------|----------------|----------------|
| 500 kg / 1 t / 2 t | mm | 31 | 80 | 112 | 46 | - | 4 | 16 | 7.0 | 96.0 |
| | in | 1.22 | 3.15 | 4.41 | 1.81 | - | 0.16 | 0.63 | 0.28 | 3.78 |
| 5 / 10 t | mm | 48 | 84 | 130 | 55 | 61 | 4 | 32 | 14.0 | 105.0 |
| | in | 1.89 | 3.31 | 5.12 | 2.17 | 2.4 | 0.16 | 1.26 | 0.43 | 4.13 |
| 20 / 25 / 30 t | mm | 72 | 130 | 182 | 80. | 86 | 4 | 39 | 15.0 | 154.0 |
| | in | 2.83 | 5.12 | 7.17 | 3.15 | 3.39 | 0.16 | 1.54 | 0.59 | 6.06 |

Precision Shear Web Disk

| SPECIFICATIONS PSD AND PSD SJTH | | | |
|---------------------------------|---------------------------|------------------------------|--------------------|
| PARAMETER | VALUE | | UNIT |
| Model | PSD | PSD SJTH | |
| Standard capacities | 2.5, 5, 10, 25 | 0.5, 1, 2, 5, 10, 20, 25, 30 | t |
| Rated output – R.O. | 3 (±0.25%) | | mV/V |
| Rated output tolerance | 0.25 | | ±% of rated output |
| Zero balance | ±1 | ±1 | ±% of rated output |
| Non-linearity | 0.025% | 0.05% | ±% of rated output |
| Hysteresis | 0.025% | 0.05% | ±% of rated output |
| Non-repeatability | 0.02% | | ±% of rated output |
| Creep error (20 minutes) | 0.03% | | ±% of rated output |
| Zero return (20 minutes) | 0.03% | | ±% of rated output |
| Compensated temperature range | -10 to +40 | | °C |
| Operating temperature range | -20 to +60 | | °C |
| Safe overload | 150 | | % of R.C. |
| Ultimate overload | 300 | | % of R.C. |
| Excitation, recommended | 10 | | VDC or VAC RMS |
| Excitation, maximum | 15 | | VDC or VAC RMS |
| Input impedance | 385±5 | 385±5 | Ω |
| Output impedance | 350±3 | 350±3 | Ω |
| Insulation resistance | >5000 | | MΩ |
| Construction | Nickel-plated alloy steel | Nickel-plated alloy steel | |
| Environmental protection | IP67 | | |

| SPECIFICATIONS PSD-SJTT | | | | |
|-------------------------------|-------------------------------------|--------------------|---------------------------------------|--------------------|
| PARAMETER | VALUE | | | UNIT |
| Model | PSD-SJTT | PSD-SJTT Aluminium | PSD-SJTT 50 t & 100 t Models | |
| Standard capacities | 0.5, 1, 1.5, 2.5, 5, 10, 20, 25, 30 | 0.2 | 50, 100 | t |
| Rated output – R.O. | 3 (±0.25%) | 2 (±0.25%) | 50 t: 3 (±0.25%) 100 t: 2 (±0.25%) | mV/V |
| Rated output tolerance | 0.25 | | | ±% of rated output |
| Zero balance | ±1 | | | ±% of rated output |
| Non-linearity | 0.05% | 0.05% | 0.10% | ±% of rated output |
| Hysteresis | 0.05% | 0.05% | 0.10% | ±% of rated output |
| Non-repeatability | 0.02% | | | ±% of rated output |
| Creep error (20 minutes) | 0.03% | | | ±% of rated output |
| Zero return (20 minutes) | 0.03% | | | ±% of rated output |
| Compensated temperature range | -10 to +40 | | | °C |
| Operating temperature range | -20 to +60 | | | °C |
| Safe overload | 150 | | | % of R.C. |
| Ultimate overload | 300 | | | % of R.C. |
| Excitation, recommended | 10 | | | VDC or VAC RMS |
| Excitation, maximum | 15 | | | VDC or VAC RMS |
| Input impedance | 385±5 | 385±5 | 770±10 | Ω |
| Output impedance | 350±3 | 350±3 | 700±0 | Ω |
| Insulation resistance | >5000 | | | MΩ |
| Construction | Nickel-plated alloy steel | Aluminium | Nickel-plated alloy steel | |
| Environmental protection | IP67 | | | |

Precision Shear Web Disk

| SPECIFICATIONS ALL MODELS | | | |
|--|--------------|---------------------|-----------------------|
| PARAMETER | VALUE | | UNIT |
| NTEP/OMIL accuracy class | C3 | Non-approved | |
| Maximum no. of intervals (n) | 3000 | 1000 | |
| Y = E_{max}/V_{min} | 8000 | 5000 | Maximum available |
| Temperature effect on min. dead load output | 0.0014 | 0.0026 | ±% of applied load/°C |
| Temperature effect on sensitivity | 0.001 | 0.0015 | ±% of applied load/°C |

All specifications subject to change without notice.



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