

## 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

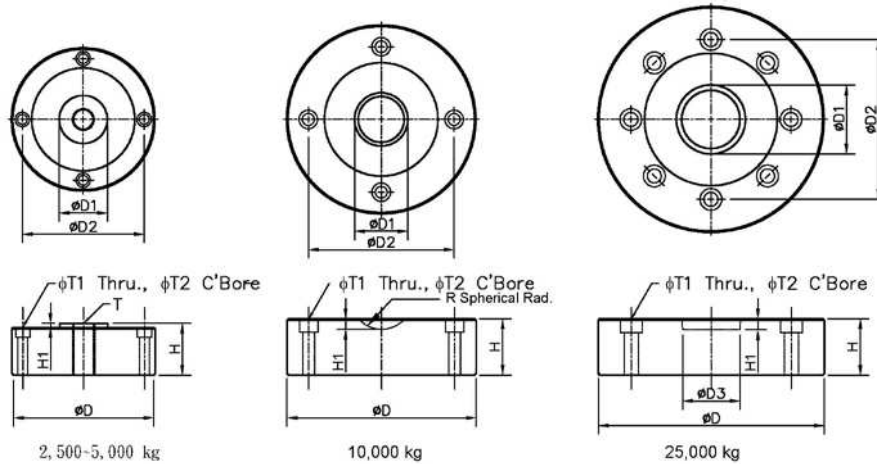
### DESCRIPTION

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

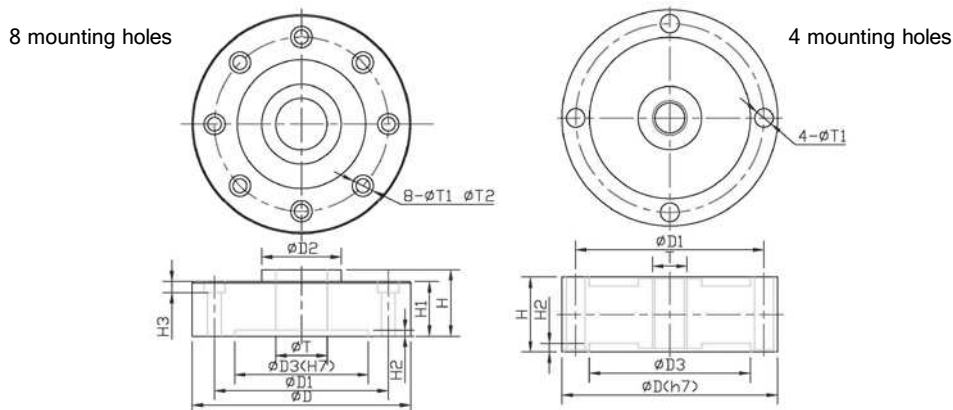


**Wiring**  
 + Excitation Red  
 - Excitation Black  
 + Signal Green  
 - Signal White

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

CAPACITY		D	D1	D2	D3	H	H1	R	T	T1	T2
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



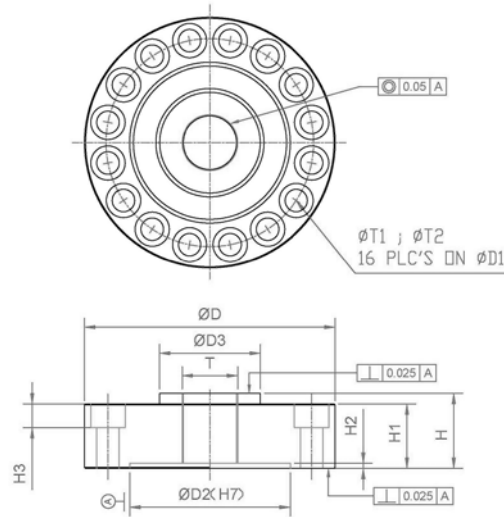
**Wiring**  
 + Excitation Red  
 - Excitation Black  
 + Signal Green  
 - Signal White

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

CAPACITY		D	D1	D2	D3	H	H1	H2	T	T1	T2	H3
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:

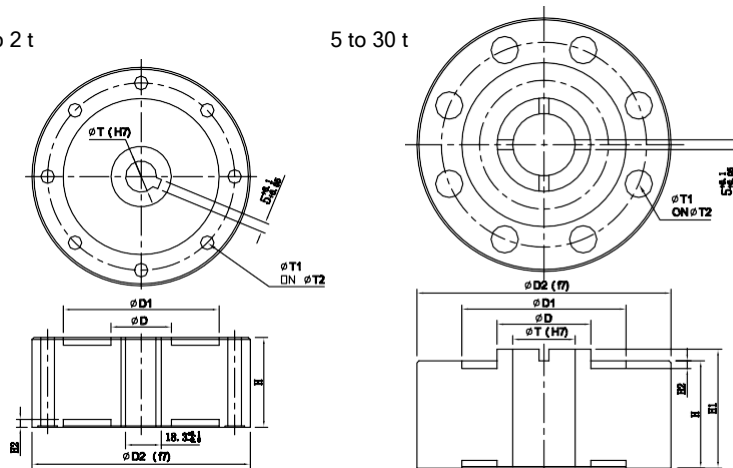
The shape of the Model PSD varies between capacities. Please consult the dimensions table below carefully.

CAPACITY		D	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	H	H <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>	T	T <sub>1</sub>	T <sub>2</sub>
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 <sub>1</sub>	D <sub>2</sub>	H	H <sub>1</sub>	H <sub>2</sub>	T	T <sub>1</sub>	T <sub>2</sub>
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

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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 ( $\pm 0.25\%$ )		mV/V
Rated output tolerance	0.25		$\pm\%$ of rated output
Zero balance	$\pm 1$	$\pm 1$	$\pm\%$ of rated output
Non-linearity	0.025%	0.05%	$\pm\%$ of rated output
Hysteresis	0.025%	0.05%	$\pm\%$ of rated output
Non-repeatability	0.02%		$\pm\%$ of rated output
Creep error (20 minutes)	0.03%		$\pm\%$ of rated output
Zero return (20 minutes)	0.03%		$\pm\%$ of rated output
Compensated temperature range	-10 to +40		$^{\circ}\text{C}$
Operating temperature range	-20 to +60		$^{\circ}\text{C}$
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 $\pm$ 5	385 $\pm$ 5	$\Omega$
Output impedance	350 $\pm$ 3	350 $\pm$ 3	$\Omega$
Insulation resistance	>5000		M $\Omega$
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 ( $\pm 0.25\%$ )	2 ( $\pm 0.25\%$ )	50 t: 3 ( $\pm 0.25\%$ ) 100 t: 2 ( $\pm 0.25\%$ )	mV/V
Rated output tolerance	0.25			$\pm\%$ of rated output
Zero balance	$\pm 1$			$\pm\%$ of rated output
Non-linearity	0.05%	0.05%	0.10%	$\pm\%$ of rated output
Hysteresis	0.05%	0.05%	0.10%	$\pm\%$ of rated output
Non-repeatability	0.02%			$\pm\%$ of rated output
Creep error (20 minutes)	0.03%			$\pm\%$ of rated output
Zero return (20 minutes)	0.03%			$\pm\%$ of rated output
Compensated temperature range	-10 to +40			$^{\circ}\text{C}$
Operating temperature range	-20 to +60			$^{\circ}\text{C}$
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 $\pm$ 5	385 $\pm$ 5	770 $\pm$ 10	$\Omega$
Output impedance	350 $\pm$ 3	350 $\pm$ 3	700 $\pm$ 0	$\Omega$
Insulation resistance	>5000			M $\Omega$
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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