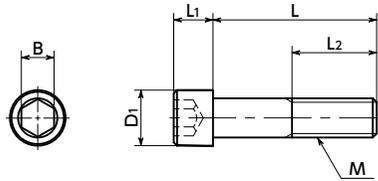


# SNST-SD Socket Head Cap Screws with Small Head - Titanium

Cleanroom wash & packaging Chemical-proof Non-Magnetic Lightweight Small Head



Material/Finish



	<b>SNST-SD</b>
Main Body	TW340 (Grade 2 Titanium)

Mechanical Properties

	<b>TW340 (Grade 2 Titanium)</b>
Tensile Strength (N/mm <sup>2</sup> )	340 - 510
0.2% Proof Load (N/mm <sup>2</sup> )	215 or Higher
Elongation (%)	23 or Higher

• Values in chart are for reference only. They are not guaranteed values.

Physical Properties

	<b>TW340 (Grade 2 Titanium)</b>
Specific Gravity	4.51
Melting Point (°C)	1668
Longitudinal Elastic Modulus (GPa)	106
Thermal Conductivity (W/(m·K))	17.16
Linear Expansion Coefficient (K <sup>-1</sup> )	8.4 × 10 <sup>-6</sup>
Electric Resistance (μΩ·m)	0.55
Magnetic Permeability (μ)	1.0001 (Nonmagnetic)

• Values in chart are for reference only. They are not guaranteed values.



- Hex socket head cap screws with small head diameter. Able to reduce the spot facing diameters compared to standard hex socket head cap screws.
- The specific gravity is approximately 60% that of stainless steel.
- Non-magnetic.
- Excellent chemical resistance / seawater resistance.
- For the properties of titanium materials, see "Properties of Titanium."
- Special chemical polishing and brightening treatment improve the quality of the surface. Additionally, products have been cleanroom washed and packed. Cleanroom specification prevents oil and dirt from adhering.

Surface quality improved

Unprocessed



Application

Lighter-weight automobiles, aircrafts/aerospace equipment, robots, etc. FPD production equipment / Semiconductor manufacturing equipment / Electrical and electronic equipment / Offshore instruments / Plating facilities

Unit : mm

Part Number	M (Coarse)		L	D1	L1	B	L2*1	Mass (g)
	Nominal of Thread	Pitch						
<b>SNST-M3-SD</b>	M3	0.5	5 6 8 10 12 16 20	4.5	3	2.5	Full Thread	0.27 - 0.66
<b>SNST-M4-SD</b>	M4	0.7	8 10 12 16 20 25 30	5.5	4	3	20(L=30)	0.83 - 2
<b>SNST-M5-SD</b>	M5	0.8	10 12 16 20 25 30 35	7	4.5	4	22(L≥30)	1.1 - 3.2
<b>SNST-M6-SD</b>	M6	1	10 12 16 20 25 30 35 40	8.5	5.5	5	24(L≥35)	2.2 - 5.7

\*1: If the "L" value is not in parentheses, the screw is full thread.

⚠ Precautions for Use

- Since the head bearing surface area is small, the bearing surface pressure increases.
- Using the following formula as a reference, ensure that the bearing surface pressure due to screw tightening does not exceed the permitted surface pressure of the intended fastening material.

$$P = \sigma \frac{As}{A}$$

P: Bearing surface pressure (N/mm<sup>2</sup>)

σ: Bolt stress (N/mm<sup>2</sup>)

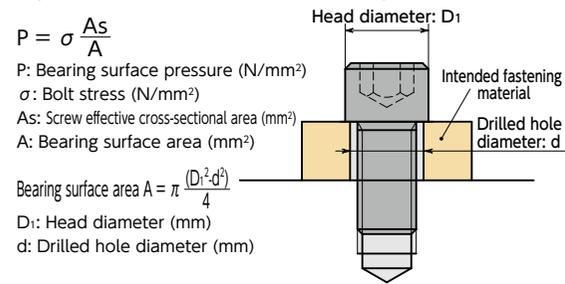
As: Screw effective cross-sectional area (mm<sup>2</sup>)

A: Bearing surface area (mm<sup>2</sup>)

$$\text{Bearing surface area } A = \pi \frac{(D_1^2 - d^2)}{4}$$

D<sub>1</sub>: Head diameter (mm)

d: Drilled hole diameter (mm)

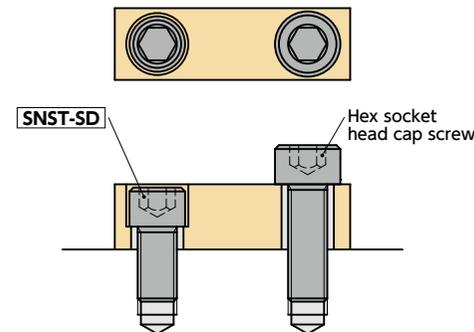


Head Diameter and Screw Effective Cross-Sectional Area

Part Number	Head Diameter (mm)	Screw Effective Cross-Sectional Area (mm <sup>2</sup> )
<b>SNST-M3-SD</b>	4.5	5.03
<b>SNST-M4-SD</b>	5.5	8.78
<b>SNST-M5-SD</b>	7	14.2
<b>SNST-M6-SD</b>	8.5	20.1

Usage Example

It is possible to perform spot facing and hide the head in locations where spot facing is not possible with standard hex socket head cap screws.



Part Number Specification

**SNST-M3-10-SD**

Batch cleanroom packing is provided for orders containing multiple items of the same size.

Individual Sales 1 piece in 1 pack Cleanroom Wash & Packaging Cleanroom washed and packed Screw Length Adjustment Available / Add'l charge Vibration Resistant Available / Add'l charge Modification process for captive use Please feel free to contact us