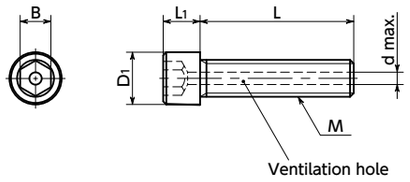
SVSS-SD Vented Socket Head Cap Screws with Small Head

SUS Stainless steel | Vacuum | Cleanroom wash & packaging | Small Head



- Small head screws with ventilation holes. Because the head diameter is small, spot facing diameters can be reduced compared to standard hex socket head cap screws.
- The ventilation hole easily releases gas trapped in the screw holes of equipment and machines, and supports vacuum drawing of vacuum devices.
- Ventilation holes are machined using a method with minimal effect on metallic structures. Brittle fracture and outgassing during use in vacuum environments are prevented.
- Cleanroom wash/cleanroom packing provided.

Material/Finish

RoHS

	SVSS-SD
Main Body	SUSXM7 (Equivalent to SUS304)
Strength Class	A2 - 70

Application

Vacuum devices / Vacuum chambers / FPD production equipment / Semiconductor manufacturing equipment / Electron microscopes

Unit : mm

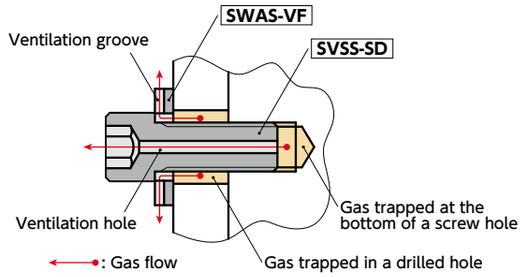
Part Number 1	M (Coarse)		L 2												D1	L1	B	d	Mass (g)	Qty per Pack
	Nominal of Thread	Pitch																		
SVSS-M2-SD	M2	0.4	3	4	5	6									3	2	1.5	0.8	0.088 - 0.15	10
SVSS-M2.5-SD	M2.5	0.45		4	5	6	8								3.8	2.5	2	1	0.26 - 0.38	10
SVSS-M3-SD	M3	0.5			5	6	8	10	12						4.5	3	2.5	1.2	0.5 - 0.8	20
SVSS-M4-SD	M4	0.7				6	8	10	12	16	20	25			5.5	4	3	1.5	1.1 - 2.6	20
SVSS-M5-SD	M5	0.8					8	10	12	16	20	25			7	4.5	4	1.5	2.1 - 4.2	10
SVSS-M6-SD	M6	1					8	10	12	16	20	25	30		8.5	5.5	5	2	3.4 - 7.2	10
SVSS-M8-SD	M8	1.25						10	12	16	20	25	30	35	11	7.5	6	2	7.8 - 16	10
SVSS-M10-SD	M10	1.5								16	20	25	30	35	40	13.5	9.5	8	3	17 - 29	5

- When purchasing less volume than one full bag, a separate handling fee is charged. For details, see the Sold Separately Service.

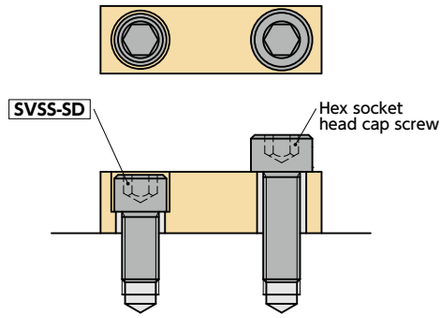
1 Individual Sales	Cleanroom Wash & Packaging	Screw Length Adjustment	Vibration Resistant	Modification process for captive use
Available / Add'l charge	Cleanroom washed and packed	Available / Add'l charge	Not Available	Not Available

Usage Example

Gas trapped at the bottom of the screw hole is released through **SVSS-SD**, and gas trapped in the drilled hole is released through **SWAS-VF**.



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.



Related Products

For ventilation of drilled holes, please use **SWAS-VF**.

Precautions for Use

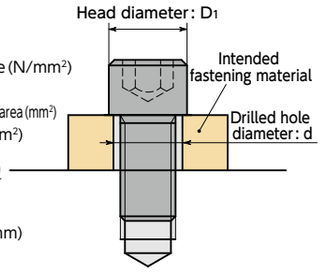
- Since the head bearing surface area is small, the bearing surface pressure increases.
- Using the following formula as a reference, ensure that the bearing surface pressure due to screw tightening does not exceed the permitted surface pressure of the intended fastening material.

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

P : Bearing surface pressure (N/mm²)
σ : Bolt stress (N/mm²)
As : Screw effective cross-sectional area (mm²)
A : Bearing surface area (mm²)

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

D1 : 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 (mm²)
SVSS-M2-SD	3	2.07
SVSS-M2.5-SD	3.8	3.39
SVSS-M3-SD	4.5	5.03
SVSS-M4-SD	5.5	8.78
SVSS-M5-SD	7	14.2
SVSS-M6-SD	8.5	20.1
SVSS-M8-SD	11	36.6
SVSS-M10-SD	13.5	58

Part Number Specification

SVSS-M5 - 16 - SD
1 2 1