

Hilti S-MD 03S Self-Drilling Screws

Submission Folder

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S-MD 03 S self-drilling screw, without washer

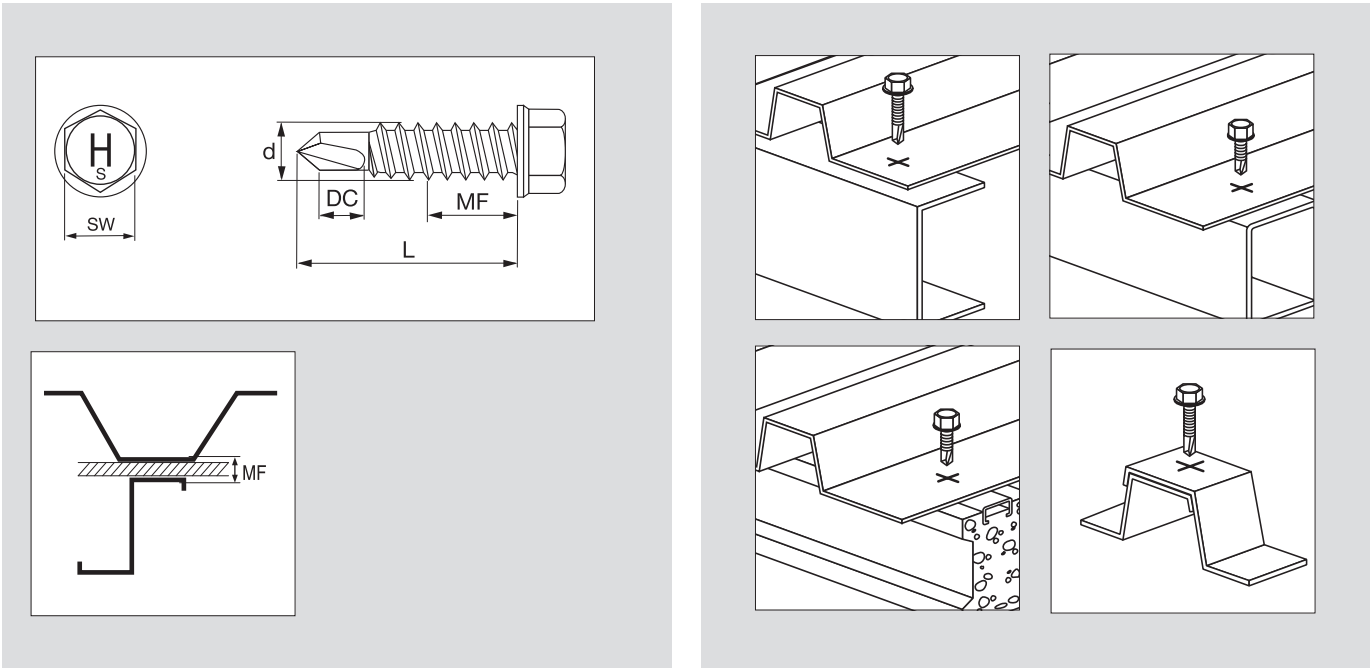


APPLICATIONS

- Fastening steel sections and sheet steel to steel framing

ADVANTAGES

- Fast and robust drill tip featuring Racing Tip technology



A2 stainless steel version, with hardened carbon steel drill point



Ordering designation	Drilling capacity range (DC)	Thickness fastened range (MF)	Screw diameter (d)	Screw length (L)	Head size (SW)	Sales pack quantity	Item number
S-MD 03 S 5.5x25	2.1 - 6 mm	2.1 - 10 mm	5.5 mm	25 mm	8	500 pc	413408

Please visit Hilti website for the latest item numbers and related products

A4 stainless steel version, with hardened carbon steel drill point



Ordering designation	Drilling capacity range (DC)	Thickness fastened range (MF)	Screw diameter (d)	Screw length (L)	Head size (SW)	Sales pack quantity	Item number
S-MD 03 SS 5.5x25	2 - 6 mm	2.1 - 10 mm	5.5 mm	25 mm	8	500 pc	2114790 ¹⁾
S-MD 03 SS 5.5x32	2 - 6 mm	2.1 - 10 mm	5.5 mm	32 mm	8	250 pc	2114791 ¹⁾

¹⁾ For detailed stock availability and lead time information please contact your Hilti representative.

Please visit Hilti website for the latest item numbers and related products

Cordless metal construction screwdriver ST



APPLICATIONS

- Driving self-drilling and self-tapping screws in various materials including steel, aluminium and wood
- Fastening profile metal sheets
- Fastening sandwich panels
- Fastening liner trays
- Screwing steel or aluminium profiles together
- Driving collated screws at side laps

ADVANTAGES

- High-performance cordless screwdriver with the features of a corded tool, specially designed for metal construction work
- Compact and well-balanced design with practical and comfortable in-line grip
- Built-in torque clutch and depth gauge for driving self-drilling screws (torque-controlled and depth-controlled driving)
- Perfectly matched power and speed for maximum productivity in steel and metal screwdriving applications
- Higher cordless productivity and greater working comfort with the SDT30 stand-up tool and ST-SG screw guide
- Batteries are compatible with other tools in the Hilti 22V Li-ion cordless system

Technical data	
No-load speed - range	0 - 2000 rpm
Max. torque	12 Nm
Dimensions (LxWxH)	252 x 94 x 268 mm
Weight	2.5 kg
Control switch lock	Yes
Chuck type	Quick-release chuck 1/4 in
Reversing switch	Yes
Spindle lock	Yes



Ordering designation	Package contents	Sales pack quantity	Item number
ST 1800-A22	1x Cordl. metal screwdr. ST 1800-A22, 1x Socket wrench insert S-NSD 8, 1x Cap, 1x Case	1 pc	437867

Please visit Hilti website for the latest item numbers and related products

SF 4-22 Cordless Drill Driver



APPLICATIONS

- Drilling in wood (max. diameter 25 mm)
- Drilling in steel (max. diameter 8 mm)
- Drilling with hole saws in wood (max. diameter 82 mm)
- Driving screws in steel (max. diameter 4.8 mm)
- Drilling with auger and spade bits in wood (max. diameter 25 mm)

ADVANTAGES

- Compact and capable cordless drill driver for working in tight spaces or overhead without compromising on efficiency
- Delivers the highest-ever RPM and torque from a Hilti cordless compact drill driver thanks to high-output Nuron batteries
- Full metal chuck, brushless motor and optimised cooling to better withstand intense use under tough jobsite conditions
- Active Torque Control (ATC) helps to prevent the tool body from uncontrolled spinning if the drill bit sticks
- Cordless tools without compromise thanks to longer-lasting batteries, energy-saving drill bits and a range of services to keep you more productive, today and tomorrow



Technical data	
Maximum torque (soft/hard joint)	36 Nm (soft joint), 62 Nm (hard joint)
No load RPM	gear 1: 610 rpm; gear 2: 2100 rpm
Chuck clamping range	2 - 13 mm
Dimensions (LxWxH)	178 x 68 x 215 mm
Number of gears	2
Weight	1.3 kg
Control switch lock	Yes
Reversing switch	Yes



Order Now



Ordering designation	Package contents	Sales pack quantity	Item number
SF 4-22	1x Cordl. drill driver SF 4-22 (02), 1x Tool case SF 4-22 assy	1 pc	2253844

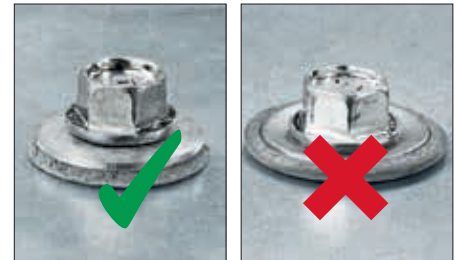
Please visit Hilti website for the latest item numbers and related products

Hilti screw fastening technology sets new standards because, on the one hand, virtually no drill point failure occurs even in high-strength steel with a thickness of up to 15 mm and, on the other, because sealing washers are always perfectly and reliably compressed even when the screws are driven at high speed.

We offer an immediate solution for all of your screw fastening applications where a drilling capacity of greater than 3 mm is required.



The sealing washers at screws on decking, siding and facades are often over compressed. Excessive pressure between the screw head and the sheets fastened causes fine cracks to occur in the EPDM sealing washer. This leads to leakage through the outer skin of the building at the fastening point and thus to an increase in the amount of subsequent remedial work required. The innovative and patented “PS” feature incorporated in all Hilti self-drilling screws with a drilling capacity of more than 3 mm provides a simple solution to the problem of over compression. Hilti screws with this new feature can be identified by the “PS” logo on the package.



Burned out or broken drill points are not only a thorn in the side of the user. The remedial work required is costly and time-consuming. Thanks to the new, patented, RT wave-form cutting edge, burned out drill points become a thing of the past, even in high-strength S355 steel. Rapid removal of the drilling chips allows the screw to penetrate the base material more quickly and prevents point burn-out in materials with a thickness of up to 15 mm. All screws featuring the new technology carry the “RT” logo on the package.



Selection of the right screw depends on a number of factors determined by the application and the circumstances or conditions under which the screw is to be used. If the application is known, the Hilti screw designation system provides a quick and reliable screw selection aid.



To quickly find the most suitable product for the specific application on hand, simply ask yourself the following questions.

1. Which type of Hilti fastener do you wish to use?

S: Screw

Example: Example

S- always stands for Hilti screw fastening

2. Which material is to be fastened?

M: Metal

C: Sandwich panel

W: Wood

I: Insulation

A: Aluminium

Example: Fastening metal profile sheet

S-M

3. Do you wish to use a self-tapping, self-drilling or pointed self-piercing (chipless) screw?

S: Pointed, self-piercing (Speedy function)

D: Self-drilling

DU: Self-drilling undercut

DW: Self-drilling wood

P: Pre-drilling (self-tapping)

T: Treadfast

DP: Plastic plug pre-mounted screw

Example: Self-drilling

S-MD

4. Is a sealing washer or a pressed-on washer required?

0: No sealing washer

1: Countersunk head

2: Pressed-on flange

3: 12 mm sealing washer

4: 14 mm sealing washer

5: 16 mm sealing washer

6: 19 mm sealing washer

7: 22 mm sealing washer

8: 29 mm sealing washer

Example: 19 mm sealing washer

S-MD 6



5. How thick is the material to be drilled through by the screw?

S-MS stitching screw

- 1: Drilling capacity 2 x 0.4 mm up to 2 x 1.25 mm

Self-drilling screw

- 1: Drilling capacity 1.0 up to 4.0 mm
3: Drilling capacity 2.1 up to 6.0 mm
5: Drilling capacity 4.6 up to 15.0 mm

Example: Drilling capacity 5 mm

S-MD 63

Self-tapping screw

- 2: Blunt thread run-out >1.25 mm steel substructure
3: Pointed thread run-out <3 mm steel substructure
Timber substructure
4: Blunt, hardened thread run-out, suitable for S355/ST52
high strength steel > 1.25 mm steel substructure

6. Which type of corrosion protection and head geometry are required.

Material:

- Z: Galvanized carbon steel
C: Duplex coated carbon steel
S: A2 grade stainless steel
SS: A4 grade stainless steel
S-A: A2 with alu washer
SS-A: A4 with alu washer

Example: Stainless steel

S-MD 63 S

Head geometry:

- PS: Pan head, stainless steel
PS-A: Pan head with alu washer
LS: Long drill point / A2 Drilling capacity 1.0 to approx. 4.0 mm
LZ: Long drill point / galvanized carbon steel
Drilling capacity 1.0 to approx. 4.0 mm
ZW: Wafer head, galvanized
GZ: Coarse thread galvanized
GS: Coarse thread stainless

Example: 5.5 mm diameter
length 55 mm

S-MD 63 S 5.5x40

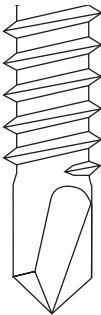
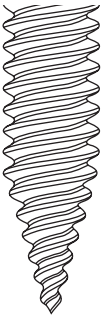
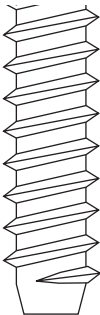
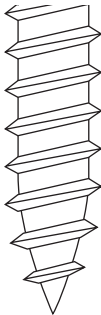
7. Dimensions and screw diameter

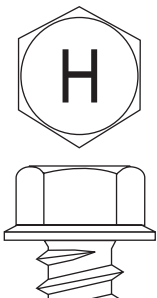
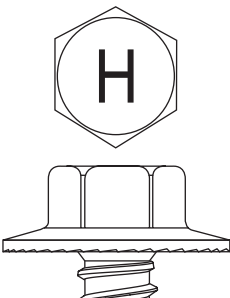
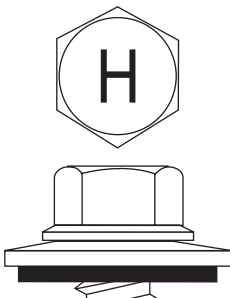
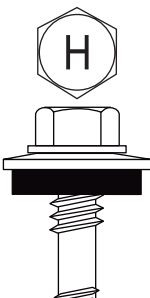
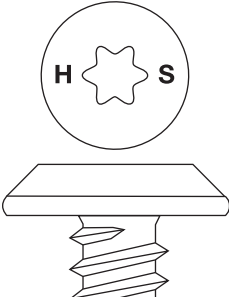
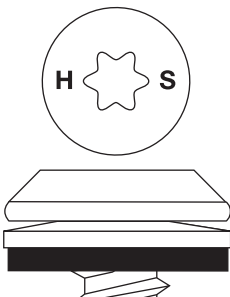
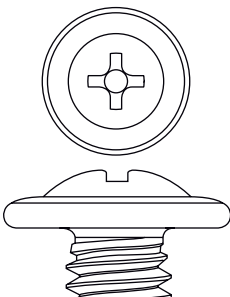
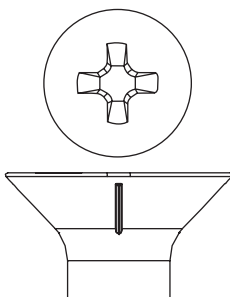
Screw diameter:

3.8 / 4.2 mm / 4.8 mm / 5.5 mm / 6.3 mm / 6.5 mm

Screw length:

- 13 mm – 102 mm S-MD screws
75 mm – 300 mm S-CD screws
19 mm – 275 mm S-MP screws

			
S-MD _1/3/5 S-CDW _1 S-CD _3/5 S-AD 01 S-IDP _4.8/6.7	S-MS _1	S-MP _2 S-MP _4	S-MP _3 S-IT _1

			
Hexagon head	Hexagon head with pressed-on flange	Hexagon head with sealing washer	Hexagon head with sealing washer and supporting thread
			
Pan head	Pan head with sealing washer	Wafer head	Countersunk head

4

All values from this manual need to be verified with actual jobsite situation and adapted if additional distances e.g. gaps occur on site.

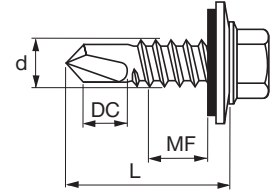
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The screw length is measured from the start of the screw (drill point) to below the screw head. However, the screw length alone says nothing about the screw's clamping area.

The screw length is selected depending on

- the thickness of the base material,
- the thickness of the building component to be fastened,
- the thickness of possible intermediate layers such as thermal separation, and
- additional building components such as calottes.

It must also be noted that when determining the screw length, the drill point, thread cut and (if necessary, in the case of bi-metal screws) the welding zone must be taken into account.



4

The drilling performance is the sum of the building component thicknesses, consisting of building component I and building component II, which can be drilled through by the drill point. The length of the drill point must always be selected such that the total material thickness is completely drilled through before the thread starts to mold.

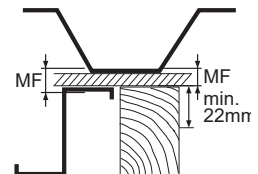
4

F

The fastening height MF (clamping area) is understood to mean the total height, consisting of:

- + the thickness of building component I
- + the thickness of possible intermediate layers, such as thermal separation
- + the thickness of additional building components, such as calottes
- + the embedment depth in building component II (steel)

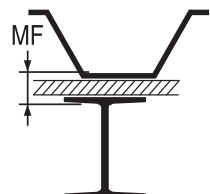
Note: in wood embedment is not part of MF



Fastening height in sheet metal with and without an intermediate layer Fastening height in wood

The embedment depth in building component II depends on the base material thickness and the base material itself. It is calculated as follows:

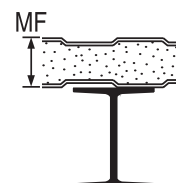
- Sheet metal or steel < 6 mm ➔ embedment depth = existing material thickness
- Steel ≥ 6 mm ➔ Self-tapping screws: embedment depth = 6 mm
➔ Self-drilling screws: embedment depth = existing material thickness
- Wood ➔ embedment depth ≥ 22 mm



Fastening height in profile metal sheet on steel

Special features:

- Sandwich elements fastened with S-CD screws: The fastening height (MF) or clamping length is only specified with the maximum sandwich element thickness that is relevant to the fastening.
- Calottes: If using calottes, 3 mm must be taken into account when calculating the fastening height (MF).



Fastening height in sandwich panel

The fastening height (MF) is not included in the screw approvals.

For this, please refer to the Hilti technical manual for metal construction screws for use in roofs/walls.

S-MD 03S/SS 5.5xL

stainless steel self-drilling screw

Load data

Design data

Drilling capacity Σt

max. 6.0 mm

Component II steel with t_{II} [mm] S280GD or S320GD (DIN EN 10326)		
1.50	2.00	3.00

Component I steel with t_I [mm] S280GD or S320GD (DIN EN 10326)			
	Shear force $V_{R,k}$ [kN]		
0.63	–	2.30	2.30
0.75	–	2.30	3.00
0.88	–	2.30	3.00
1.00	–	4.80	–
	Tensile force $N_{R,k}$ [kN]		
0.63	1.50	1.50	1.50
0.75	1.70	2.00	2.00
0.88	1.70	2.00	2.00
1.00	1.70	2.60	3.20
1.13	1.70	2.60	3.20
1.25	1.70	2.60	4.60
1.50	1.70	2.60	4.60
2.00	1.70	2.60	4.60

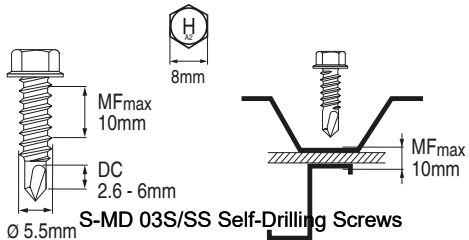
Safety factors according to EN 1993-1-3 and CUAP 06.02/07

	Tension	Shear
Partial safety concept		
Partial safety factor	$\gamma_M = 1.33$	$\gamma_M = 1.33$
Influence of cyclic loading	$\alpha_{cyclic} = 1.0$	– / –
Design load	$N_{Rd} = 1.0 \cdot N_{Rk} / 1.33$	$V_{Rd} = V_{Rk} / 1.33$
Global safety concept		
Global safety factor *	$\gamma_{GLOB} = 2.0$	$\gamma_{GLOB} = 2.0$
Recommended load	$N_{rec} = 1.0 \cdot N_{Rk} / 2.0$	$V_{rec} = V_{Rk} / 2.0$

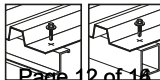
* Note: The global safety factor of 2.0 includes a partial safety factor of $\gamma_F = 1.5$ for wind load. For other loads safety factors should be applied in accordance with the appropriate standards.

S-MD 03 S 5.5 x 25

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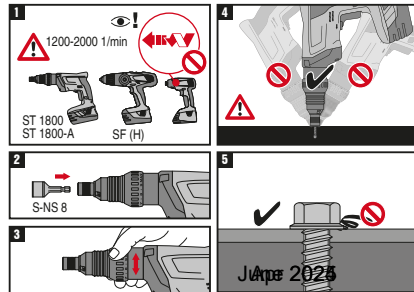


Rostfrei / Inox / Stainless A2



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2009394



Attn. : To whom it may concern

Date : 1 April 2025
Ref. : 087/AN/SC/25

Subject : Country of Origin- Hilti S-MD Self-drilling Screw

Dear Sir / Madam,

Enclosed please find the information of S-MD Self-drilling Screw.

Brand Name : Hilti

Model Name : Hilti S-MD Self-drilling Screw

Manufacturer : Hilti Corporation

Address of Manufacturer : FL-9494, Principality of Liechtenstein.

Manufacturer Contact Person : Spencer Cheung

Supplier : Hilti (Hong Kong) Ltd

Address of Supplier : 701-704, 7/F, Tower A, Manulife Financial Centre,
223 Wai Yip Street, Kwun Tong, Kowloon, Hong Kong

Supplier Contact Person : Spencer Cheung (+852 9732 1231)

Country of Origin : Taiwan

Should you have further questions, please do not hesitate to contact our Technical Representatives, Customer Service Hotline at 8228-8118, or email us at hksales@hilti.com.

Yours faithfully,



Spencer Cheung
Head of Product Leadership Strategy



Hilti S-MD 03S/SS Self-Drilling Screws Job Reference

Year	Project Name	Customer Name	Project type
2022	AGGRESSIVE CONSTRUCTION COMPANY	YING HEI ROAD	
2022	CHUN FUNG CONSTRUCTION LTD	MA SIK ROAD	
2022	SUN RISE ENGINEERING CONSULTANT	MACAU STUDIO CITY PHASE 2	
2022	HANG CHEONG BUILDING MATERIALS	HAU YUEN PATH	
2022	HUNG TEAM BUILDING	606 RECLAMATION ST, MONG KOK	
2022	THE MACAU BRANCH COMPANY OF	MACAO STUDIO CITY II	
2022	TAK SING ENGINEERING (HONG KONG)	NO 8 HEUNG SZE WUI STREET	
2022	JANGHO CURTAIN WALL MACAO CO.,LTD	STUDIO CITY	
2022	MAJESTIC ENGINEERING CO LTD	SHING KAI RD	
2022	GTECH-KUM SHING JV	HOI SHING RD	
2022	GTECH-KUM SHING JV	SHA TAU KOK ROAD (MA MEI HA)	
2022	GAMMON ENGINEERING & CONSTRUCTION	11 HOI WAH ROAD	
2022	TAK SHUN CONTRACTING LTD	QUEEN'S CENTRAL ROAD	
2022	CPD HK	223 WAI YIP STREET	
2022	GENUINE TREASURE ACCESS	CHE KUNG MIU ROAD	
2022	HONG TIN ENGINEERING CO LTD	CONCORDE RD	
2022	SUNDART TIMBER PRODUCTS CO LTD	2 KAI HING ROAD	
2023	SUNDART TIMBER PRODUCTS CO LTD	2 KAI HING ROAD	
2023	GENUINE TREASURE ACCESS	CHE KUNG MIU ROAD	
2023	TAK SHUN CONTRACTING LTD	QUEEN'S CENTRAL ROAD	
2023	GAMMON ENGINEERING & CONSTRUCTION	11 HOI WAH ROAD	
2023	TAK SHUN CONTRACTING LTD	QUEEN'S CENTRAL ROAD	
2023	GAMMON ENGINEERING & CONSTRUCTION	11 HOI WAH ROAD	
2024	SUNDART TIMBER PRODUCTS CO LTD	2 KAI HING ROAD	
2024	CHINA STATE CONSTRUCTION	125 WONG CHUK HANG RD	
2024	GAAI BO DECORATION	KAM HO RD	
2024	TOTAL ORIGIN ENGINEERING LIMITED	67 BEDFORD RD	
2024	STRONGLY INTERNATIONAL LIMITED	MANULIFE FINANCIAL CENTRE TOWER A	
2024	LI LING DECORATION ENGINEERING	WEST KOWLOON LYRIC THEATRE	
2024	HONG TIN ENGINEERING CO LTD	CONCORDE RD	
2024	HANG CHEONG BUILDING MATERIALS	KAM SHEUNG RD STATION	
2024	FAS ENGINEERING LIMITED	HOI LUEN INDUSTRIAL CENTRE	
2024	KODD MODULAR LIMITED	AUSTIN RD	