

DRILLNOX 3.5 PI TH8 – STAINLESS STEEL A2 – Ø 5.5 x L



ETA 10/0181
ETA 25/0616



PRODUCT DEFINITION

- Self-drilling screw Ø 5.5 mm bi-metal.
- Hexagonal head of 8 mm.
- Ø 10.5 mm flange.
- A2 stainless steel.
- Natural or painted head.
- 1.81 mm pitch.
- Pilote drill point.
- Can be mounted with a VULCA washer.

APPLICATION

- Roofing: Fixing of steel sheets on the bottom on a metal frame (with VULCA stainless steel Ø19 washer).
- Single-skin cladding: Fixing of steel and aluminium sheets on a metal frame.
- Vertical double-skin cladding: Fixing of steel and aluminium sheets on the edges of the cladding trays.
- Horizontal double-skin cladding: Fixing of the steel and aluminium sheets to the ZED or OMEGA intermediate frame.
- Aggressive environment (off the seafront).
- Drilling capacity (CP): 1.5 to 3.5 mm of steel.

MATERIAL & COATING

Material:

- Screw body: Austenitic stainless steel A2 – 1.4307 - AISI 304L.
- Drill point and first threads: Treated carbon steel.
- VULCA washer: A2 (VI) stainless steel + EPDM (Ethylene Propylene Diene Monomer).

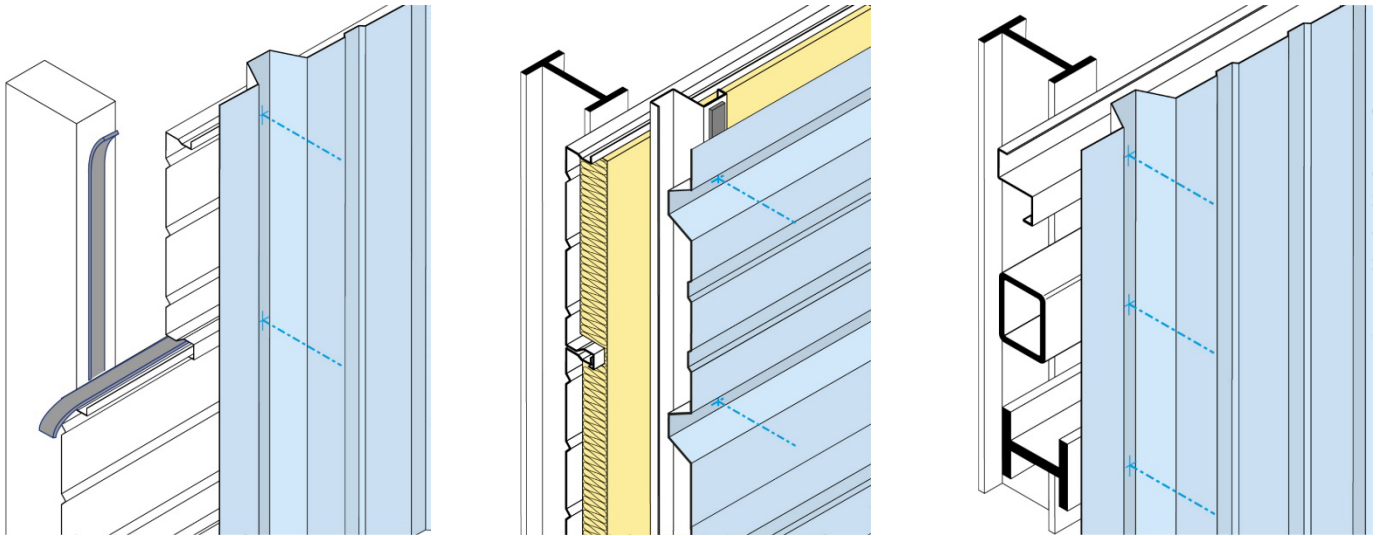
Painting:

- Epoxy, polyester or polyurethane paint (wide range of colours available).
- Painting thickness according to TDS n°4453.
- The colour coating only gives an aesthetic character. It does not prejudice nominal mechanical strengths. In the event of degradation of the coating, this product retains its performance and does not deviate from the main function for which it is intended.

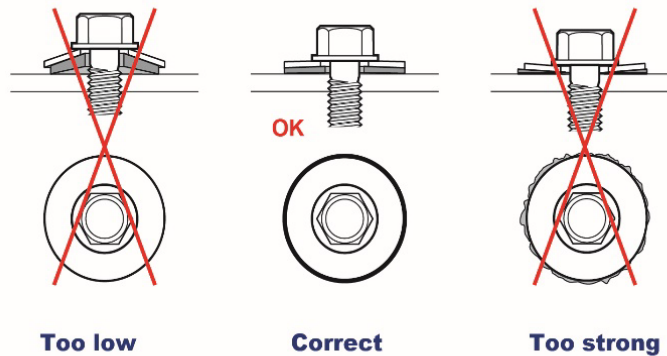
Corrosion resistance:

- Screw Body:
 - By Kesternich test according to NF EN ISO 22479:
Resist more 30 cycles without the appearance of red rust.
 - By salt spray test according to NF EN ISO 9227:
No trace of red rust after 1000 hours.
- Drill point and 1st threads with surface coating:
 - By salt spray test according to NF EN ISO 9227:
No trace of red rust after 200 hours.

INSTALLATION



- The pilot drill point is specially designed for fastening several thin sheets and drilling all sheets before the thread is engaged in the support.
- The assembly is carried out using a FEIN ASCM 18-4 QM AS screwdriver with torque limiter and depth gauge with an 8 mm hexagonal socket.



Unauthorized machines:

- Nutrunners, impact wrenches, impact screwdrivers are not suitable for assembly work and are strictly forbidden to use.

Recommended tools:

- FEIN ASCM 18-4 QM AS battery-powered screwdriver set + 2 batteries and 1 charger (code: 321 688).
- Depth stop for FEIN ASCM 18-4 QM AS (code: 321 686).
- 8 mm Lg 65 mm hexagonal socket (code: 323 500).

Associated Products:

- DRILLNOX 3.5 FT TH8 A4 Ø5.5xL (refer to TDS n°4007).
- DRILLNOX 6 FT TH8 A2 Ø5,5xL (refer to TDS n°4010).
- DRILLNOX 6 FT TH8 A4 Ø5,5xL (refer to TDS n°4259).

PERFORMANCE

Mechanical properties of the EPDM of the VULCA washer:

- Hardness : 58 ± 5 SHORE A.

Drilling time :

- Materials tested: S355 JR structural steel.
- Tools used: FEIN ASCM 18-4 QM AS screwdriver with torque limiter and depth gauge.

Drilling test	Unit	Ø 5.5
Drilling Time	dry/mm	< 2
Rotational speed	RPM	2000 ¹
Axial load	daN	20

¹ Actual under load: 1800 rpm

Characteristic resistances:

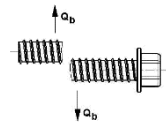
- Characteristic tensile strength:

$$\bar{x} = 784 \text{ daN}$$



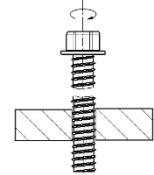
- Characteristic shear strength - 0.6 x Rm:

$$\bar{x} = 470 \text{ daN}$$



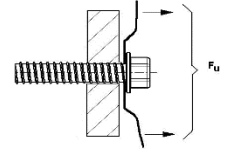
- Characteristic torsional strength:

$$\bar{x} = 7.5 \text{ Nm}$$



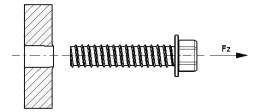
- Pull-out resistance (Pk) according with the NF P 30-314 standard:

Top Plate Steel	Steel support sheet	Pk to daN
S320 - 0.75 mm	S320 - 1.5 mm	190
	S320 - 2 mm	381
	S320 - 2.5 mm	490 ²
	S235 - 3 mm	490 ²
² Unbuttoning The values indicated do not include safety factors		



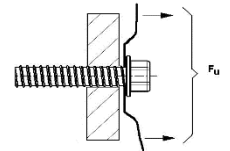
- Pull-out resistance (Pk) according with the NF P 30-310 standard:

Thickness of the support Steel	Pk to daN
S320 - 1.5 mm	190
S320 - 2 mm	381
S320 - 2.5 mm	531
S235 - 3 mm	564
The values indicated do not include safety factors	



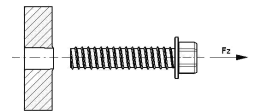
- Pull-out resistance (NR,k) according to Annex 5 of ETA 10/0181:

Top Plate Steel	Steel support sheet	NR,k to daN
S280 to S320 - 0.75 mm	S320 - 1.5 mm	179
	S320 - 2 mm	251
	S320 - 2.5 mm	251
	S235 - 3 mm	251
The values indicated do not include safety factors		



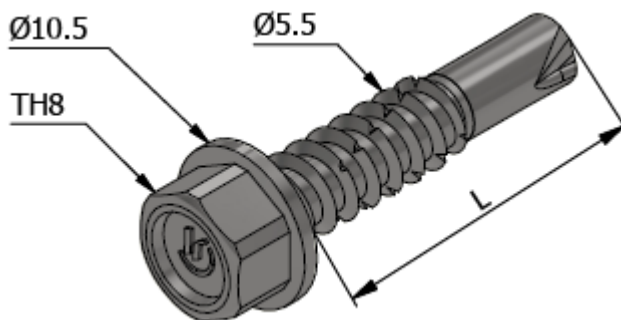
- Pull-out strengths (NR,k,II) according to Annex 5 of ETA 10/0181:

Thickness of the support Steel	NR,k,II to daN
S320 - 1.5 mm	179
S320 - 2 mm	282
S320 - 2.5 mm	377
S235 - 3 mm	471
The values indicated do not include safety factors	



- The values of NR,k and NR,k,II in the above tables are extracted from the ETA of fixation. For more information or for other cases, please refer to the ETA of the fixation.

DIMENSIONS & CODES



Ø x L (mm)	CP (mm)	CS mini (mm)	CA maxi (mm)	Hex Head	VULCA washer	Cond.	Code Natural	Code Painted
5.5 x 28	1.5 to 3.5	-	7	8	-	100	376 400*	376 401*
5.5 x 28 + VI 14	1.5 to 3.5	-	5	8	14	100	376 404*	376 405*
5.5 x 28 + VI 16	1.5 to 3.5	-	5	8	16	100	376 406	376 407
5.5 x 28 + VI 19	1.5 to 3.5	-	4	8	19	100	376 408	376 409
5.5 x 38	1.5 to 3.5	-	17	8	-	100	376 410*	376 411*
5.5 x 38 + VI 12	1.5 to 3.5	-	15	8	12	100	376 412*	376 413*
5.5 x 38 + VI 14	1.5 to 3.5	-	15	8	14	100	376 414*	376 415*
5.5 x 38 + VI 16	1.5 to 3.5	-	15	8	16	100	376 416	376 417
5.5 x 38 + VI 19	1.5 to 3.5	-	14	8	19	100	376 418	376 419
5.5 x 38 + VI 22	1.5 to 3.5	-	14	8	22	100	376 423	-
5.5 x 38 + VI 28	1.5 to 3.5	-	14	8	28	100	376 435	-
5.5 x 50 + VI 14	1.5 to 3.5	-	27	8	14	100	-	376 525*
5.5 x 50 + VI 16	1.5 to 3.5	-	27	8	16	100	376 526	376 527
5.5 x 50 + VI 19	1.5 to 3.5	-	26	8	19	100	376 528	376 529

* Product not CE marked.

Ø : Nominal diameter - L : Length - CS_{mini}: Minimum clamping capacity - CA_{maxi}: Maximum assembly capacity - CP : Drilling capacity - Cond. : Packaging

CONFORMITY

- European Technical Assessment No. 10/0181 issued by the DIBT according to the European Assessment Document 330046-01-0602.
- European Technical Assessment No. 25/0616 issued by ETA-DANMARK according to European Assessment Document 330046-01-0602.
- According with NF DTU 40.35: Ribbed plate roofing from coated steel sheets.
- According with RAGE Professional Recommendations: Protected Steel and Stainless-Steel Cladding.
- Seafront: Conditions of direct attack by seawater, the choice of fastening material must be confirmed by LR ETANCO or be in accordance with the selection guide of the fastener installation reference (DTU, RAGE/PACTE professional recommendations, etc.).
- The characteristic Pk resistors are the result of tests carried out by the LR ETANCO laboratory.
- The characteristic resistors N_{Rk} and $N_{R,k,II}$ are derived from the European Technical Assessments.
- Reaction to fire: A1 according to NF EN 13501-1 (only for the screw).

MARKING & LABELLING

- On packaging, natural screw: DRILLNOX 3.5 PI TH8 A2 - Ø 5.5 x L + CODE.
- On packaging, painted screw: DRILLNOX 3.5 PI TH8 A2 - Ø 5.5 x L + COLOUR + CODE.
- On packaging, natural screw with washer: DRILLNOX 3.5 PI TH8 A2 - Ø 5.5 x L + VI Ø + CODE.
- On packaging, painted screw with washer: DRILLNOX 3.5 PI TH8 A2 - Ø 5.5 x L + VI Ø + COLOUR + CODE.

QUALITY CONTROL

- ISO 9001 certified quality management system according in force.

NOTE

These products are intended for professional installers landlords whose the related service includes supply and installation. In accordance with rules and normative regulation, it's their responsibility to check that the use of these products is in conformity to themselves needs and their customers. They have to insure as well the adequacy of this material with their real operating conditions. The company excludes any guarantee for the use that does not respect these conditions. His responsibility is limited to the strict compliance with the specifications stipulated on the customer's purchase order. The guarantee is limited to the replacement of defective parts acknowledged by the Company's technical service, without workforce costs and travel expenses. It excludes material damage or physical injury and others direct or indirect damages, material or immaterial, which may result from defective parts including installation that not complying with the use for which they are designed and produced.