

Manufacturer: ETANCO (FRANCE)
Parc les Erables – Bât 1 – 66 route de Sartrouville – BP 49 – 78231 LE PECQ Cedex, FRANCE
Tel.: +33 134 805 200 – Fax:+33 130 710 189

Product name:

BELVIS 4T TX 20 TB12 / ZN Ø 4.8 x 20

Application:

Steel sheet on steel beam.

Description:

Self-drilling screw Ø 4.8 mm.
Domed head Ø 12 with Torx 20. Natural finish or EPOXY powder painted stove hardened.
Pitch 1.59 mm. Drill point.
Assembled with washer VULCA Alu Ø 10 mm.

Drilling capacity (CP):

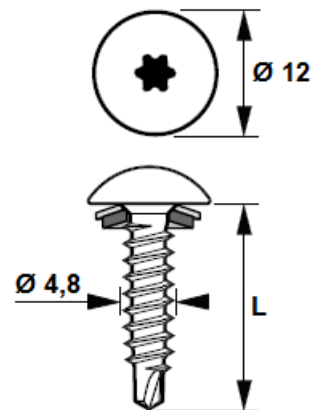
0.75 to 4 x 0.75 mm into steel sheet.

Material:

Screw body: Cemented steel 20MB5 - SAE 1020 - JIS SWRCH22A.

Surface hardness: HV 0.5 _ 550 < HV < 750.

Washer: Steel + vulcanized EPDM of 2 mm thickness 70 Shore A.



Material, coating and anti-corrosion level tests

- **ZN:** Carbon steel (3 to 5 µm of zinc)

Corrosion resistance level determined by Kesternich test (sulphur dioxide corrosion with general dampness condensation) according to NF EN 3231 (2 ℓ):

Resisted to 15 cycles before the appearance of red rust

Salt spray test according to NF ISO 9227 (March 2007):

No trace of red rust after 48 hours.

Resistance to corrosion: No warranty

We recommend not using powder painted steel screws in outside environments other than the following: non-polluted rural, normal urban and industrial, marine 10 to 20 km from the coast.

Painting of heads and washers:

Powder painted without TGIC – Gloss-free polyester Epoxy

The following tests were carried out on 1 mm zinc plated steel test panels and a nominal coating thickness of 60 µm

Test	ISO / ASTM Specification
Cross hatch adhesion	ISO 2409 - class 0
Impact resistance	ASTM D 2794 - pass 20 inch/lbs
Flexibility	ISO 1519 - pass4 mm
Cupping test	ISO 1520 - pass6 mm
Scratch resistance	N / A
Hot salt spray resistance	ISO 9227 - pass 1000 hours
Humidity resistance	ISO 6270 - pass 1000 hours
Kesternich resistance	ISO 3231 - pass 25 cycles
Chemical resistance	Resistance to most acids, alkalis and oils at normal temperatures. May be affected by chlorinated solvents

Drilling Performance:

Conditions: a) Test material: S355 JR

b) Test screwdriver: Drilling test with SCS Fein 6.3-19X power 400 W mini with torque limiter (depth control)

Drilling test	Unit	Ø 4.8	Ø 5.5	Ø 6.3 & 6.5
Drilling time	s/mm	< 2	< 2	< 2
Speed rotate	rpm	2000 *	2000 *	2000 *
Axial load	daN	16	20	27

* Under load: 1800 rotations/min

Drilling performance, diameter, length in mm and packaging

Drilling capacity	Ø x Length	CS Build up mini	CS Build up maxi	Pan head	Packaging
2 to 4 x0.75	4.8 x 20 + VA 10	-	10	Ø 12	100 units

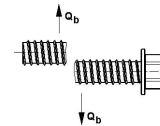
Tensile test value in daN:

$\bar{x} = 855 \text{ daN}$



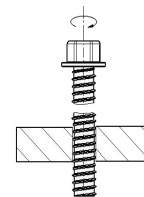
Shear test value – 0.6 x Rm (value in daN):

$\bar{x} = 513 \text{ daN}$



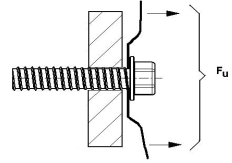
Breaking torque value (in Nm):

$\bar{x} = 7 \text{ Nm}$



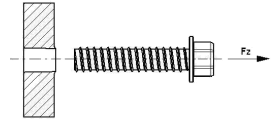
Pull out test values (Pk in daN) of top sheet - According to NF P 30-314.

Sheet thickness (mm)	
Top sheet (Steel S320)	Steel sheet (Steel S320)
0.75 mm	2 x 0.75 mm
	176
the values do not include safety coefficients	



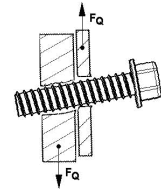
Pull out test values (Pk in daN) – According to NF P 30-310.

Steel thickness (mm) – Steel S320		
2 x 0.75 mm	3 x 0.75 mm	4 x 0.75 mm
243	353	558
the values do not include safety coefficients		



Shear load test values (Pk in daN) – According to NF P 30-316.

Steel thickness (mm)		
Top sheet (Steel S320)	Steel sheet (Steel S320)	daN
0.75	0.75	-
0.75	2 x 0.75	-
0.75	3 x 0.75	-
the values do not include safety coefficients		



Conformity:

Professional regulations related to cladding.

Recommended setting tools:

Screwdriver: FEIN SCS 6.3 -19X power 400 W mini with torque limiter (depth control)
Screw bit: socket with imprint Torx n° 20

Marking - Labelling:

BELVIS 4T TX TB12 / Zn – Ø 4.8 x 20 + VA 10 + CODE
BELVIS 4T TX COLOR TB12 / Zn – Ø 4.8 x 20 + VA 10 + CODE

Quality control:

ISO 9001 : 2015