Deutsches Institut für Bautechnik
Zulassungsstelle für Bauprodukte und Bauarten
Bautechnisches Prüfamt
Eine vom Bund und den Ländern gemeinsam getragene Anstalt des öffentlichen Rechts

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Authorised and notified according to Article 10 of the Council Directive of 21 December 1988 on the approximation of laws, regulations and administrative provisions of Member States relating to construction products (89/106/EEC)

Deutsches Institut für Bautechnik

DIBt

Mitglied der EOTA
Member of EOTA

European Technical Approval ETA-08/0262

English translation prepared by DIBt - Original version in German language

Handelsbezeichnung *Trade name*	SFS intec Flachdachbefestigungselemente *SFS intec Flat Roof Fasteners*
Zulassungsinhaber *Holder of approval*	SFS intec AG FasteningSystems Rosenbergsaustraße 10 9435 HEERBRUGG SCHWEIZ
Zulassungsgegenstand und Verwendungszweck *Generic type and use of construction product*	Befestigungselemente für Dachabdichtungssysteme *Fasteners for flexible roof waterproofing systems*
Geltungsdauer: *Validity:* vom *from* bis *to*	25 April 2013 28 October 2017
Herstellwerke *Manufacturing plants*	Werk 1, Werk 2, Werk 3, Werk 4, Werk 5, Werk, 6, Werk 7, Werk 8, Werk 9, Werk 10 Factory 1, factory 2, factory 3, factory 4, factory 5, factory 6, factory 7, factory 8, factory 9, factory 10

Diese Zulassung umfasst *This Approval contains*	173 Seiten einschließlich 167 Anhänge *173 pages including 167 annexes*
Diese Zulassung ersetzt *This Approval replaces*	ETA-08/0262 mit Geltungsdauer vom 04.06.2012 bis 28.10.2017 *ETA-08/0262 with validity from 04.06.2012 to 28.10.2017*

I LEGAL BASES AND GENERAL CONDITIONS

1 This European technical approval is issued by Deutsches Institut für Bautechnik in accordance with:

- Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of Member States relating to construction products[1], modified by Council Directive 93/68/EEC[2] and Regulation (EC) N° 1882/2003 of the European Parliament and of the Council[3];
- *Gesetz über das In-Verkehr-Bringen von und den freien Warenverkehr mit Bauprodukten zur Umsetzung der Richtlinie 89/106/EWG des Rates vom 21. Dezember 1988 zur Angleichung der Rechts- und Verwaltungsvorschriften der Mitgliedstaaten über Bauprodukte und anderer Rechtsakte der Europäischen Gemeinschaften (Bauproduktengesetz - BauPG) vom 28. April 1998[4], as amended by Article 2 of the law of 8 November 2011[5];*
- Common Procedural Rules for Requesting, Preparing and the Granting of European technical approvals set out in the Annex to Commission Decision 94/23/EC[6];
- Guideline for European technical approval of "Mechanically fastened flexible roof waterproofing membranes", ETAG 006.

2 Deutsches Institut für Bautechnik is authorized to check whether the provisions of this European technical approval are met. Checking may take place in the manufacturing plant. Nevertheless, the responsibility for the conformity of the products to the European technical approval and for their fitness for the intended use remains with the holder of the European technical approval.

3 This European technical approval is not to be transferred to manufacturers or agents of manufacturers other than those indicated on page 1, or manufacturing plants other than those indicated on page 1 of this European technical approval.

4 This European technical approval may be withdrawn by Deutsches Institut für Bautechnik, in particular pursuant to information by the Commission according to Article 5(1) of Council Directive 89/106/EEC.

5 Reproduction of this European technical approval including transmission by electronic means shall be in full. However, partial reproduction can be made with the written consent of Deutsches Institut für Bautechnik. In this case partial reproduction has to be designated as such. Texts and drawings of advertising brochures shall not contradict or misuse the European technical approval.

6 The European technical approval is issued by the approval body in its official language. This version corresponds fully to the version circulated within EOTA. Translations into other languages have to be designated as such.

1 Official Journal of the European Communities L 40, 11 February 1989, p. 12
2 Official Journal of the European Communities L 220, 30 August 1993, p. 1
3 Official Journal of the European Union L 284, 31 October 2003, p. 25
4 *Bundesgesetzblatt Teil I 1998*, p. 812
5 *Bundesgesetzblatt Teil I 2011*, p. 2178
6 Official Journal of the European Communities L 17, 20 January 1994, p. 34

II SPECIFIC CONDITIONS OF THE EUROPEAN TECHNICAL APPROVAL

1 Definition of the products and intended use

1.1 Definition of the construction product

The construction products are mechanical fasteners. The fasteners comprise a screw, blind rivet or anchor made of coated carbon steel, aluminium or stainless steel and a washer with or without integrated sleeve. The washers without integrated sleeve are made of coated carbon steel whereas the washers with integrated sleeve are made of polypropylene or polyamide.

1.2 Intended use

The fasteners are intended to be used for the fastening of flexible roof waterproofing membranes according to ETAG 006. The possible substructures are steel or aluminium decks, concrete, aerated concrete, pumice panel or timber.

The provisions made in this European technical approval are based on an assumed working life of the fasteners of 10 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

In order to use the fasteners for systems of mechanically fastened flexible roof waterproofing membranes a separate ETA according to ETAG 006 is necessary for the entire roof waterproofing system.

2 Characteristics of the products and methods of verification

2.1 Characteristics of the products

The fasteners shall correspond to the information given in Annexes 1 to 158.

Corrosion resistance of blind rivet type TPR-L shall be provided by minimum 8 µm galvanisation.

The material properties, dimensions and tolerances not indicated in Annexes 1 to 158 shall correspond to the information laid down in the technical information[7] to this European technical approval.

2.2 Safety in use (ER 4)

The characteristic values of the axial load resistance of the fasteners are given in Annexes 159 to 169. The values were determined by axial loading tests according to ETAG 006.

The fasteners are deemed to satisfy the requirements of ETAG 006 concerning unwinding. This was either evaluated by tests or on the basis of the existing field experience of the manufacturer.

[7] The technical documentation is deposited with Deutsches Institut für Bautechnik and as far as relevant for the tasks of the approved bodies involved in the attestation of conformity procedure is handed over to the approved bodies.

2.3 Aspects of durability

The durability requirements of ETAG 006 (resistance to corrosion of metallic fasteners, impact resistance and brittleness of plastic fasteners before and after heat ageing, requirements for results of Charpy tests for plastic materials before and after heat ageing) are satisfied for the coated carbon steel, aluminium, stainless steel, polypropylene and polyamide components of the fasteners.

All coated carbon steel components resisted to 15 cycles of the test procedure described in ETAG 006 (Kesternich test) and did not show more than 15 % surface corrosion.

The test results of the tests to check the impact resistance and brittleness of the polyamide components showed a drop height of more than 1,0 m before and after heat ageing of these components. Furthermore the results of the corresponding Charpy tests after heat ageing did not show any significant decline compared to the results before heat ageing.

3 Evaluation and attestation of conformity and CE marking

3.1 System of attestation of conformity

According to the Decision 98/143/EC of the European Commission[8] system 2+ of the attestation of conformity applies.

This system of attestation of conformity is defined as follows:

System 2+: Declaration of conformity of the products by the manufacturer on the basis of:

(a) Tasks for the manufacturer:
  (1) initial type–testing of the product;
  (2) factory production control;
  (3) testing of samples taken at the factory in accordance with a prescribed test plan.

(b) Tasks for the approved body:
  (4) certification of factory production control on the basis of:
    - initial inspection of factory and of factory production control;
    - continuous surveillance, assessment and approval of factory production control.

Note: Approved bodies are also referred to as "notified bodies".

3.2 Responsibilities

3.2.1 Tasks for the manufacturer

3.2.1.1 Factory production control

The manufacturer shall exercise permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures, including records of results performed. This production control system shall insure that the products are in conformity with this European technical approval.

The manufacturer may only use initial materials stated in the technical documentation of this European technical approval.

[8] Official Journal of the European Communities L 42 of 14 February 1998

The factory production control shall be in accordance with the control plan which is part of the technical documentation of this European technical approval. The control plan is laid down in the context of the factory production control system operated by the manufacturer and deposited with Deutsches Institut für Bautechnik.[9]

The results of factory production control shall be recorded and evaluated in accordance with the provisions of the control plan.

3.2.1.2 Other tasks for the manufacturer

The manufacturer shall, on the basis of a contract, involve a body which is approved for the tasks referred to in section 3.1 in the field of "Fasteners for flexible roof waterproofing membranes" in order to undertake the actions laid down in section 3.2.2. For this purpose, the control plan referred to in sections 3.2.1.1 and 3.2.2 shall be handed over by the manufacturer to the approved body involved.

The manufacturer shall make a declaration of conformity, stating that the construction products are in conformity with the provisions of this European technical approval.

3.2.2 Tasks for the approved bodies

The approved body shall perform the

- initial inspection of factory and of factory production control,
- continuous surveillance, assessment and approval of factory production control

in accordance with the provisions laid down in the control plan.

The approved body shall retain the essential points of its actions referred to above and state the results obtained and conclusions drawn in a written report.

The approved certification body involved by the manufacturer shall issue an EC certificate of conformity of the factory production control stating the conformity with the provisions of this European technical approval.

In cases where the provisions of the European technical approval and its control plan are no longer fulfilled the certification body shall withdraw the certificate of conformity and inform Deutsches Institut für Bautechnik without delay.

3.3 CE marking

The CE marking shall be affixed on each packaging of fasteners. The letters "CE" shall be followed by the identification number of the approved certification body, where relevant, and be accompanied by the following additional information:

- the name and address of the producer (legal entity responsible for the manufacture),
- the last two digits of the year in which the CE marking was affixed,
- the number of the EC certificate for the factory production control,
- the number of the European technical approval,
- the name of the product.

[9] The control plan is a confidential part of the European technical approval and only handed over to the approved body involved in the procedure of attestation of conformity. See section 3.2.2.

4 Assumptions under which the fitness of the products for the intended use was favourably assessed

4.1 Manufacturing

The European technical approval is issued for the products on the basis of agreed data/information, deposited with Deutsches Institut für Bautechnik, which identifies the products that have been assessed and judged. Changes to the products or production process, which could result in this deposited data/information being incorrect, should be notified to Deutsches Institut für Bautechnik before the changes are introduced. Deutsches Institut für Bautechnik will decide whether or not such changes affect the approval and consequently the validity of the CE marking on the basis of the approval and if so whether further assessment or alterations to the approval shall be necessary.

4.2 Installation

The installation is carried out according to the manufacturer's instructions. The manufacturer hands over the assembly instructions to the assembler.

In order to use the fasteners for systems of mechanically fastened flexible roof waterproofing membranes a valid ETA according to ETAG 006 is issued for the entire roof waterproofing system. The ETA according to ETAG 006 covers the wind uplift resistance of the entire system as well as the product characteristics of the components of the system.

The conformity of the installed fastener with this ETA is attested by the executing company.

5 Indications to the manufacturer

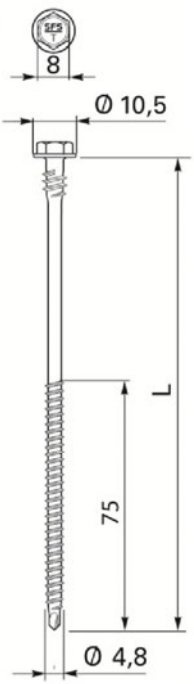
It is in the responsibility of the manufacturer to ensure that the information on the specific conditions according to 1, 2 and 4 is given to those who are concerned. The information may be given by reproduction of the European technical approval. In addition all installation data shall be shown clearly on the package and/or on an enclosed instruction sheet, preferably using illustration(s).

Georg Feistel
Head of Department

beglaubigt:
Hahn

Deutsches Institut für Bautechnik DIBt

IR2-4,8xL



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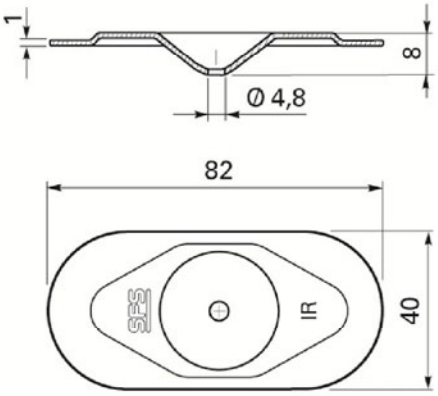


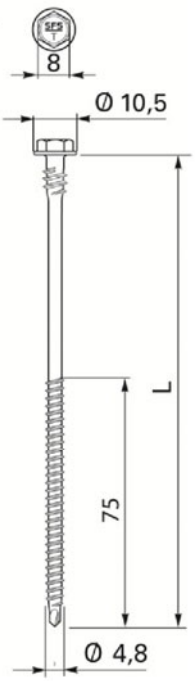
SFS intec flat roof fasteners

Combination 1
SFS intec IR2-4,8xL
SFS intec IR-82x40

Annex 1

Deutsches Institut für Bautechnik DIBt

IR2-4,8xL



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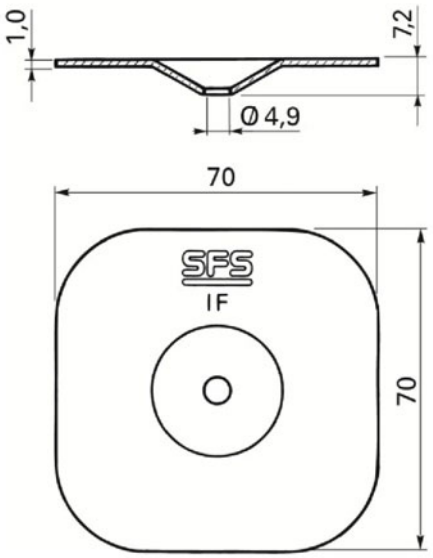
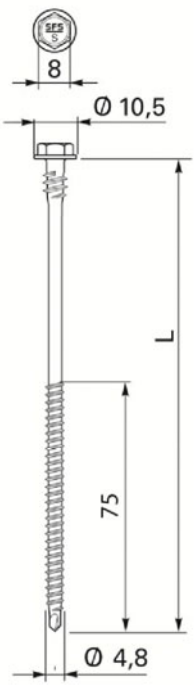


SFS intec flat roof fasteners

Combination 2
SFS intec IR2-4,8xL
SFS intec IF-70x70

Annex 2

IR2-S-4,8xL



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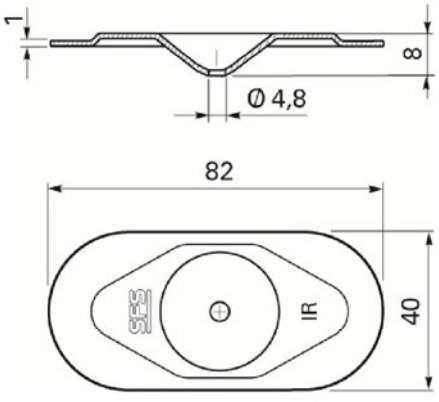

SFS intec flat roof fasteners

Combination 3
SFS intec IR2-S-4,8xL
SFS intec IR-82x40

Annex 3

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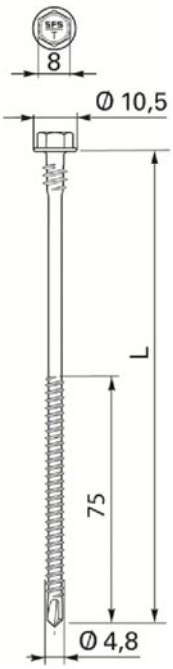
IR3-4,8xL



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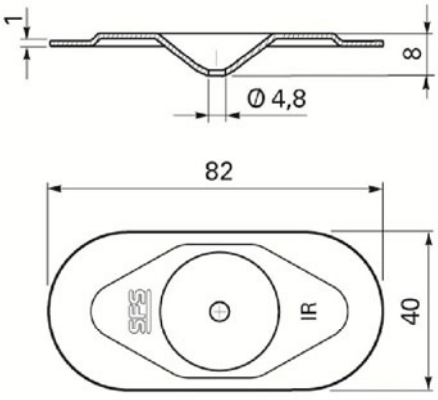

SFS intec flat roof fasteners

Combination 4
SFS intec IR3-4,8xL
SFS intec IR-82x40

Annex 4

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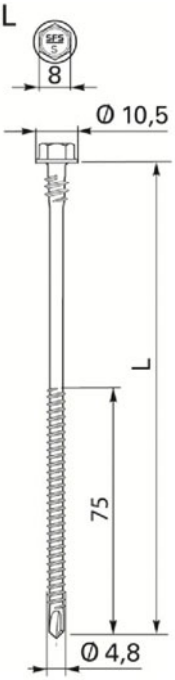
IR3-S-4,8xL



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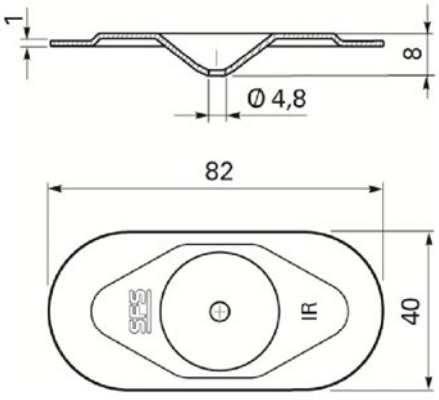
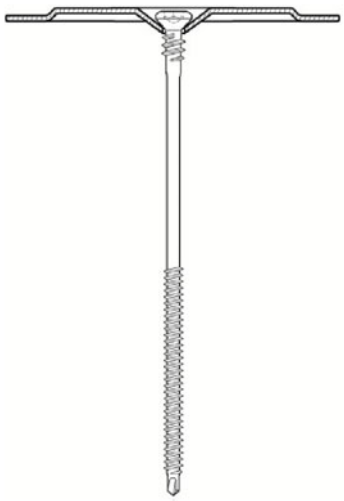


SFS intec flat roof fasteners

Combination 5
SFS intec IR3-S-4,8xL
SFS intec IR-82x40

Annex 5

Deutsches Institut für Bautechnik DIBt



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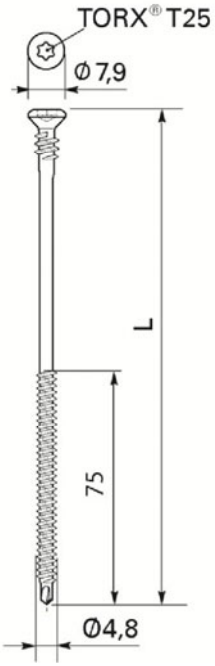
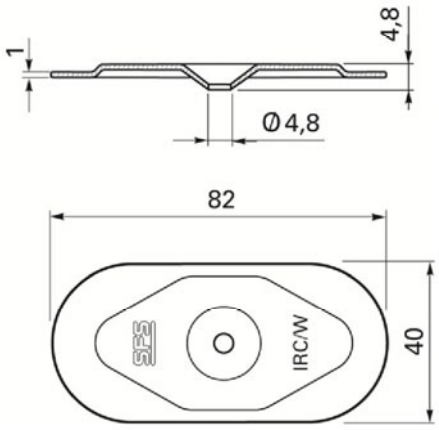


IRC/W-82x40



SFS intec flat roof fasteners

Combination 6
SFS intec IR2-C-4,8xL
SFS intec IRC/W-82x40

Annex 6

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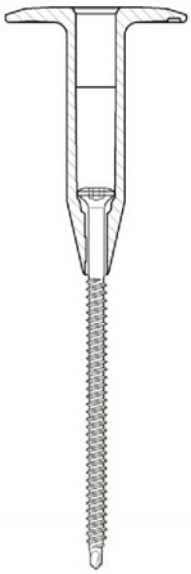
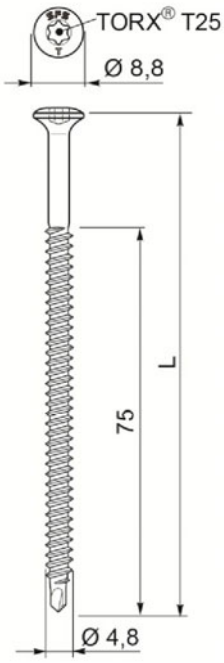
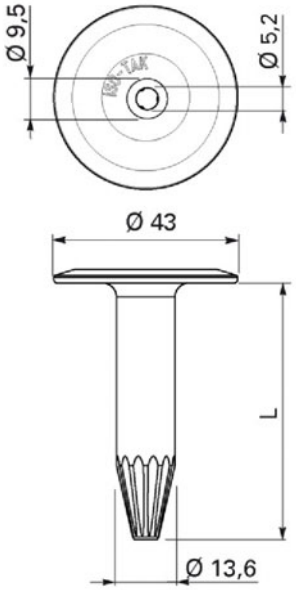


BS-4,8xL



RP45xL



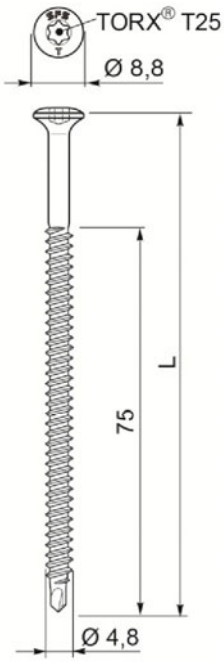
SFS intec flat roof fasteners

Combination 7
SFS intec BS-4,8xL
SFS intec RP45xL

Annex 7

Deutsches Institut für Bautechnik DIBt

BS-4,8xL



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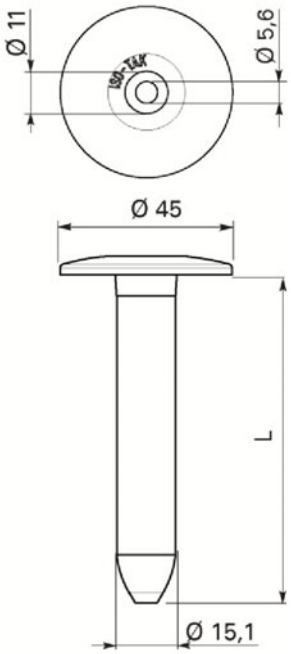
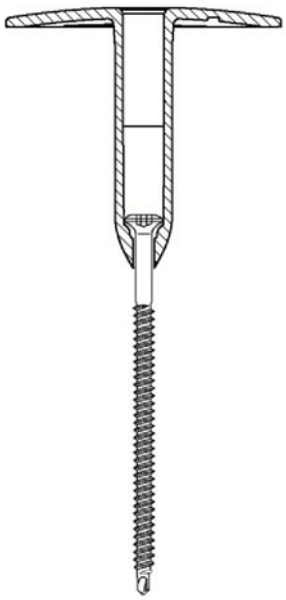


SFS intec flat roof fasteners

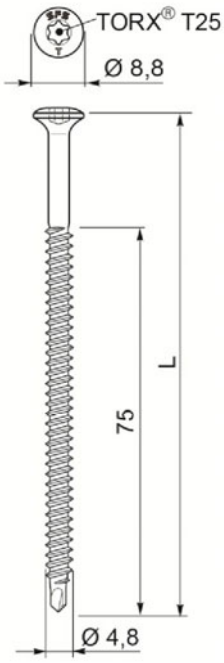
Combination 8
SFS intec BS-4,8xL
SFS intec R45xL

Annex 8

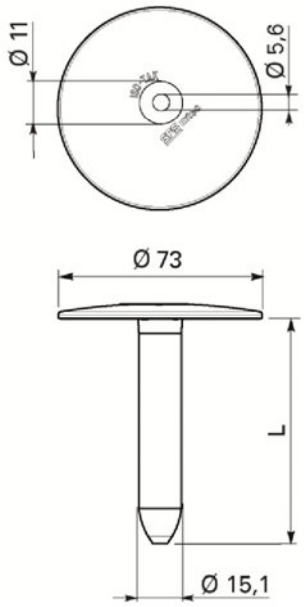
Deutsches Institut für Bautechnik DIBt



BS-4,8xL



R75xL

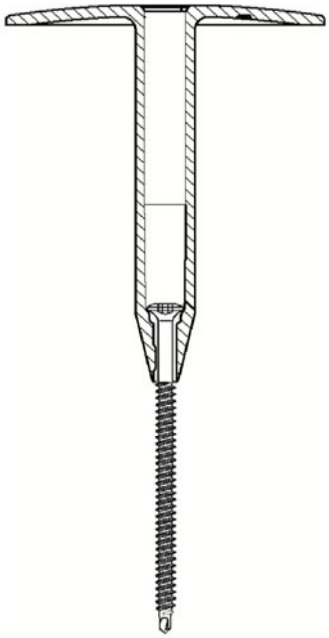


SFS intec flat roof fasteners

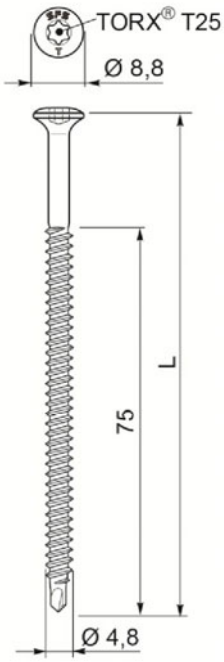
Combination 9
SFS intec BS-4,8xL
SFS intec R75xL

Annex 9

Deutsches Institut für Bautechnik DIBt



BS-4,8xL



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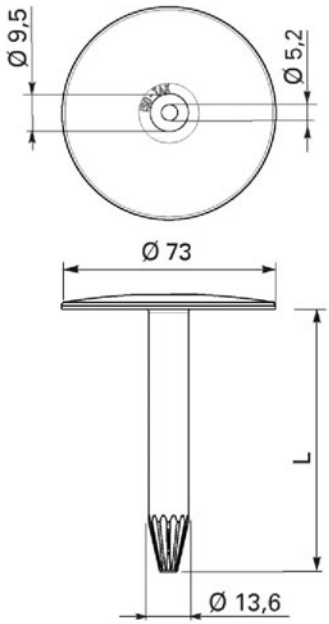
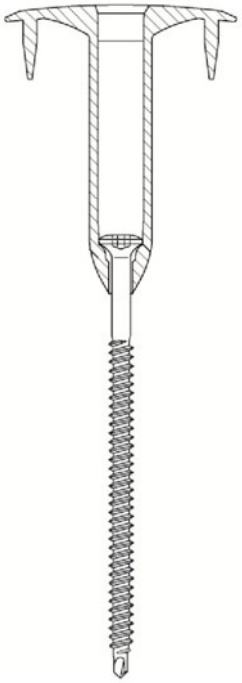


SFS intec flat roof fasteners

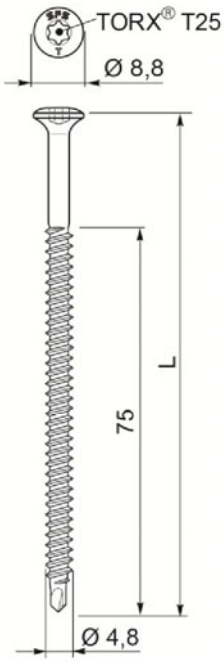
Combination 10
SFS intec BS-4,8xL
SFS intec RP75xL

Annex 10

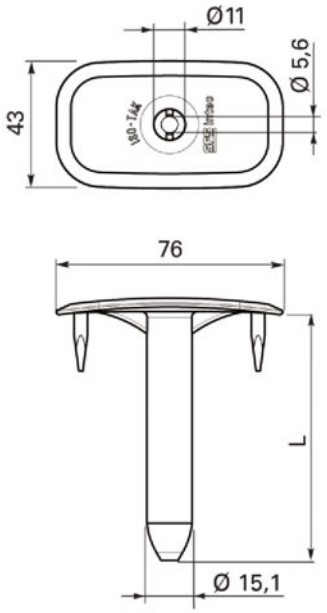
Deutsches Institut für Bautechnik DIBt



BS-4,8xL



TPSxL

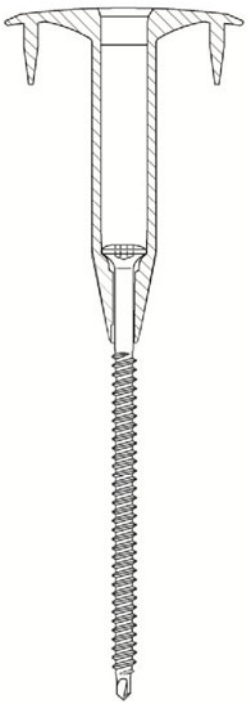


SFS intec flat roof fasteners

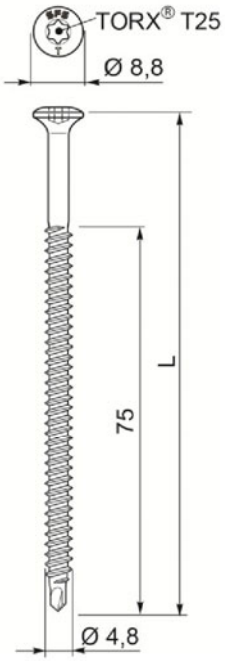
Combination 11
SFS intec BS-4,8xL
SFS intec TPSxL

Annex 11

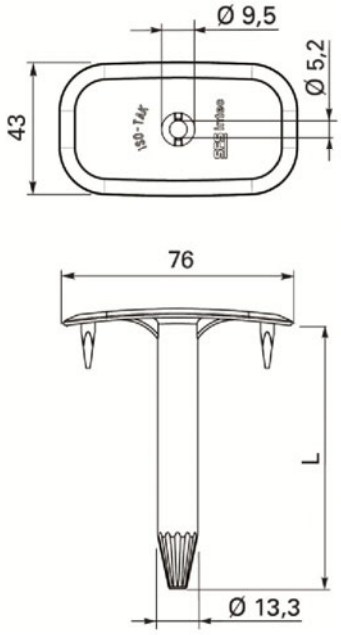
Deutsches Institut für Bautechnik DIBt



BS-4,8xL



TPPxL



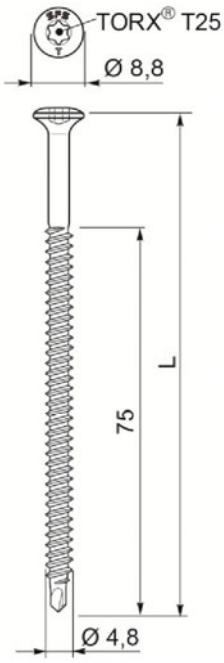
SFS intec flat roof fasteners

Combination 12
SFS intec BS-4,8xL
SFS intec TPPxL

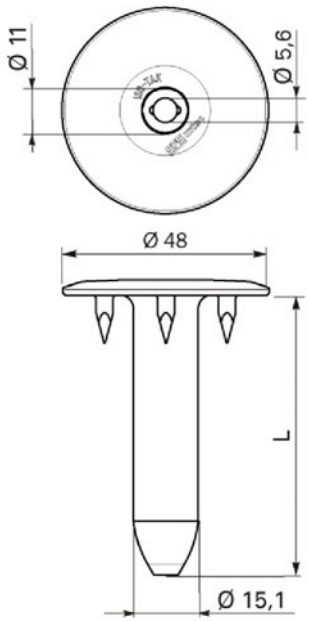
Annex 12

Deutsches Institut für Bautechnik DIBt

BS-4,8xL



R48xL-3N



SFS intec flat roof fasteners

Combination 13
SFS intec BS-4,8xL
SFS intec R48xL-3N

Annex 13

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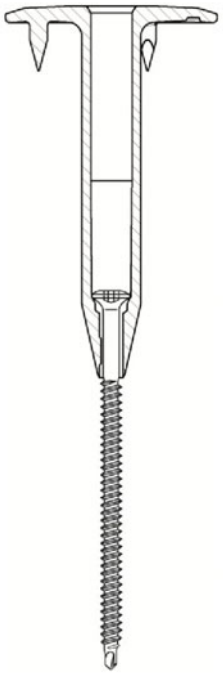
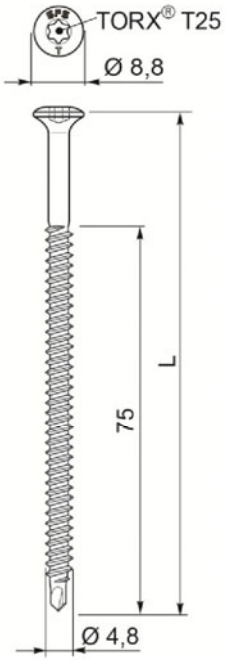
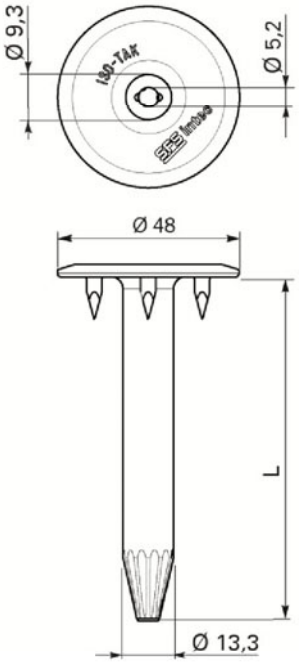


BS-4,8xL



RP48xL-3N



SFS intec flat roof fasteners

Combination 14
SFS intec BS-4,8xL
SFS intec RP48xL-3N

Annex 14

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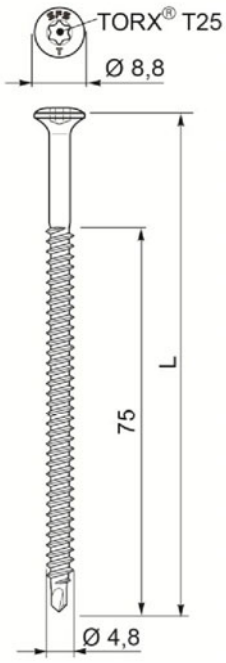
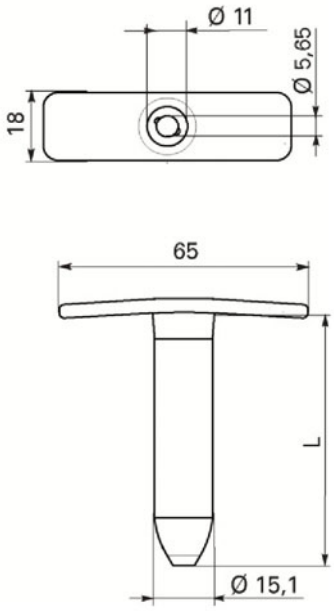
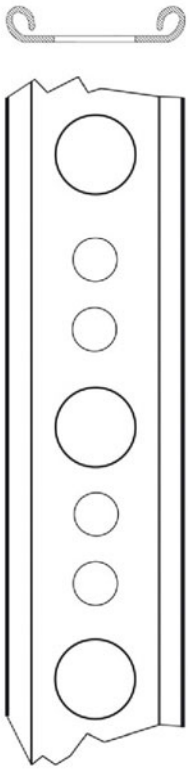
BS-4,8xL



SH-18/65xL





Protan steel bar

SFS intec flat roof fasteners

Combination 15
SFS intec BS-4,8xL
SFS intec SH-18/65xL
Protan steel bar

Annex 15

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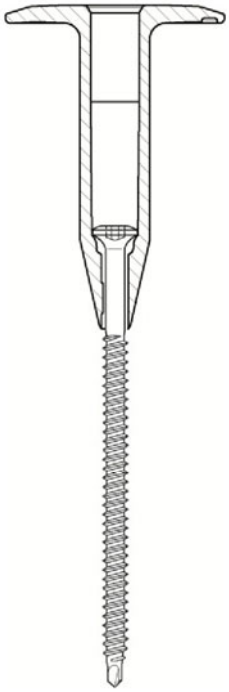
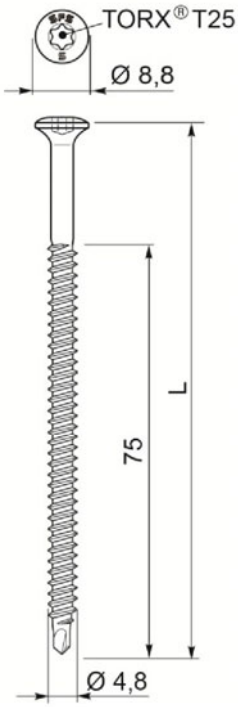
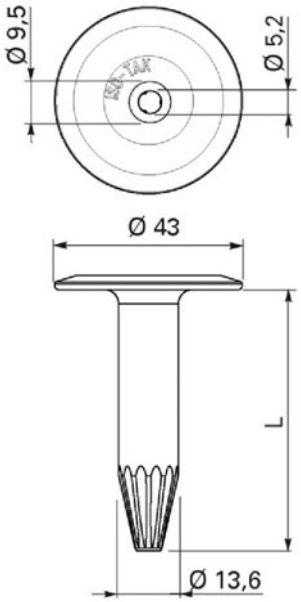


BS-S-4,8xL



RP45xL



SFS intec flat roof fasteners

Combination 16
SFS intec BS-S-4,8xL
SFS intec RP45xL

Annex 16

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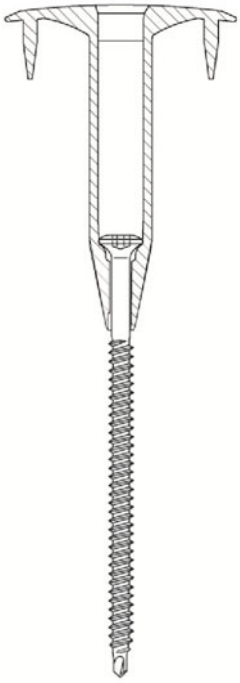
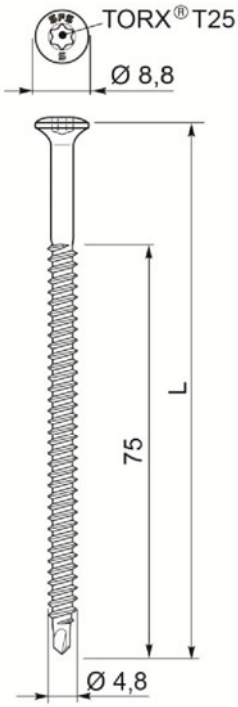
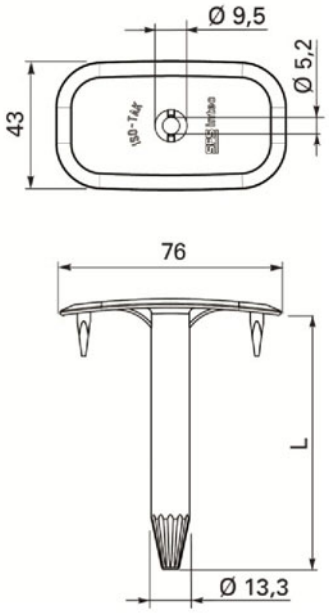


BS-S-4,8xL



TPPxL



SFS intec flat roof fasteners

Combination 17
SFS intec BS-S-4,8xL
SFS intec TPPxL

Annex 17

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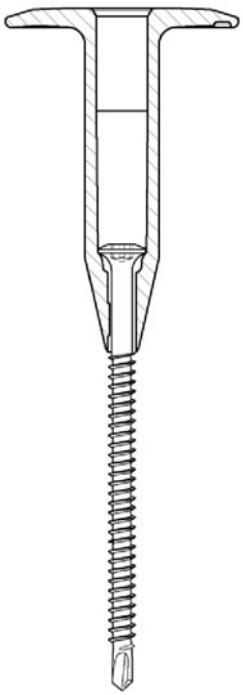
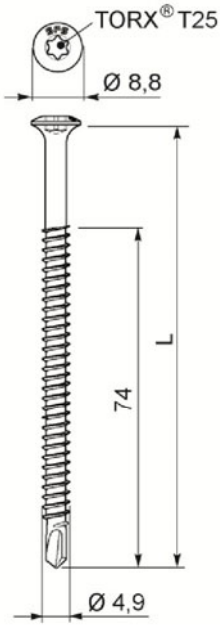
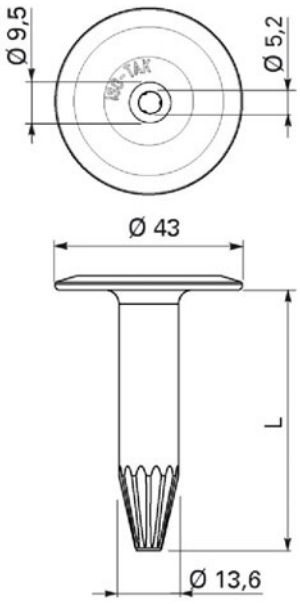


BS3-4,8xL



RP45xL



SFS intec flat roof fasteners

Combination 18
SFS intec BS3-4,8xL
SFS intec RP45xL

Annex 18

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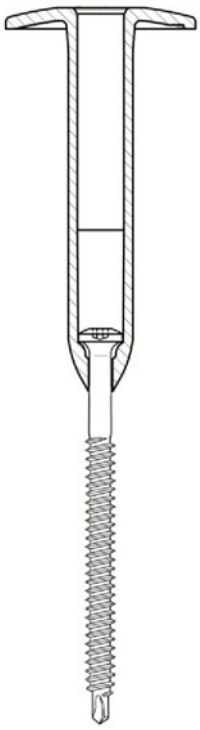
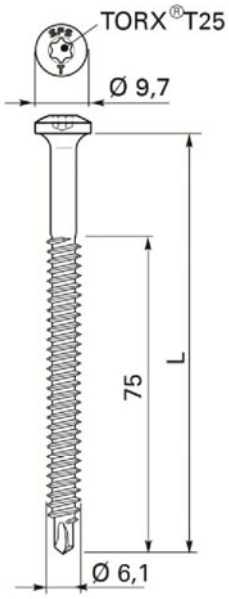
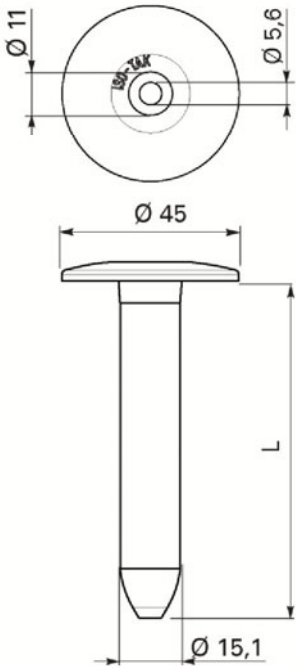


BS-6,1xL



R45xL



SFS intec flat roof fasteners

Combination 20
SFS intec BS-6,1xL
SFS intec R45xL

Annex 20

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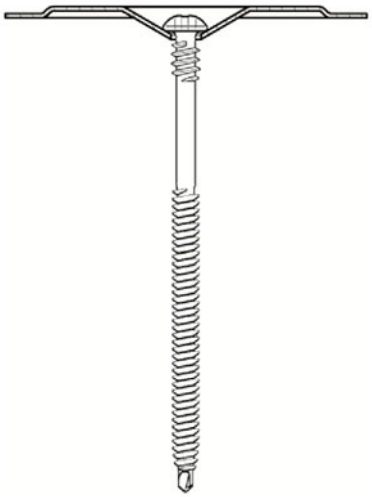
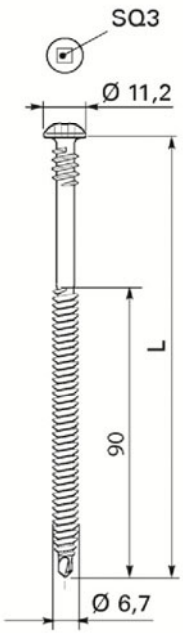
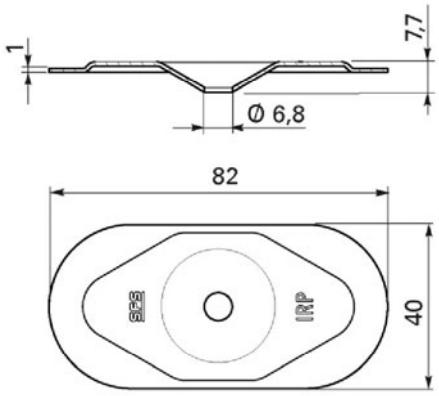


IFP2-6,7xL



IRP-82x40



SFS intec flat roof fasteners

Combination 21
SFS intec IFP2-6,7xL
SFS intec IRP-82x40

Annex 21

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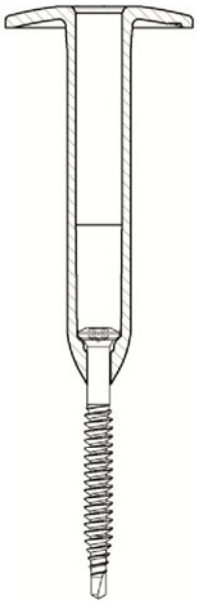
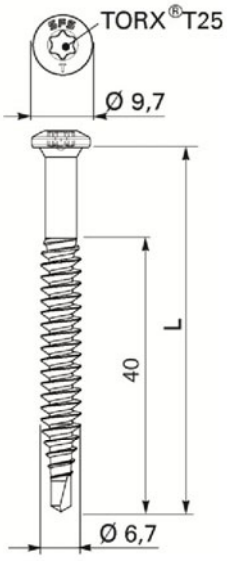
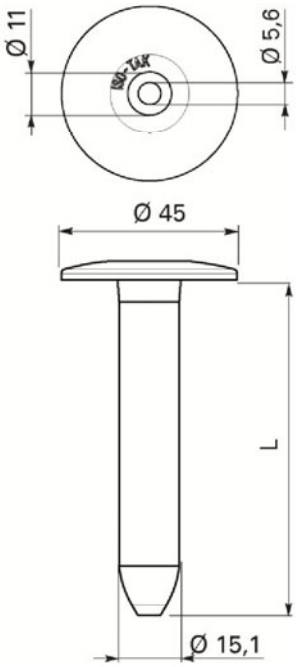


BS-6,7xL



R45xL



SFS intec flat roof fasteners

Combination 22
SFS intec BS-6,7xL
SFS intec R45xL

Annex 22

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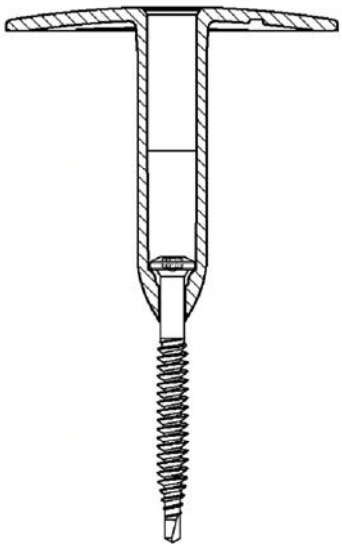
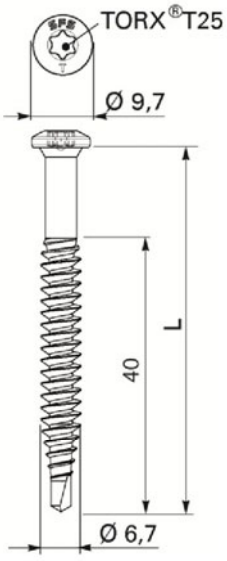
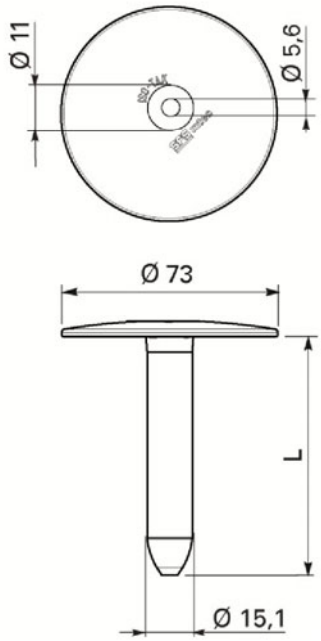


BS-6,7xL



R75xL



SFS intec flat roof fasteners

Combination 23
SFS intec BS-6,7xL
SFS intec R75xL

Annex 23

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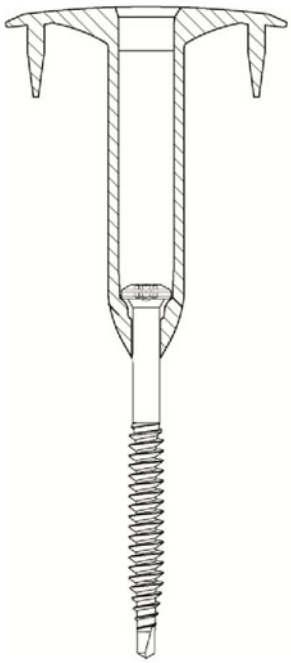
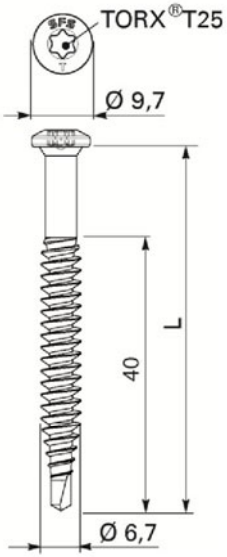
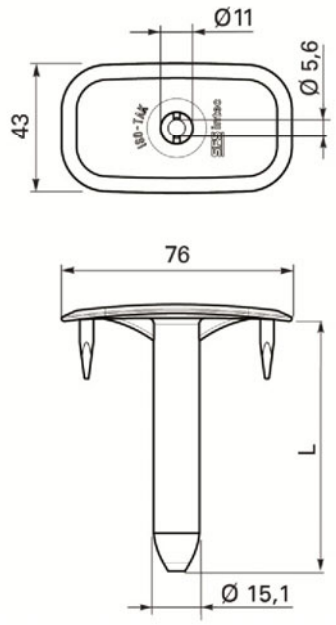


BS-6,7xL



TPSxL



SFS intec flat roof fasteners

Combination 24
SFS intec BS-6,7xL
SFS intec TPSxL

Annex 24

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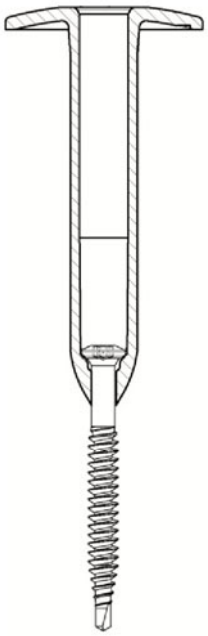
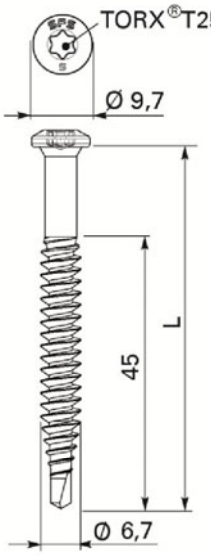
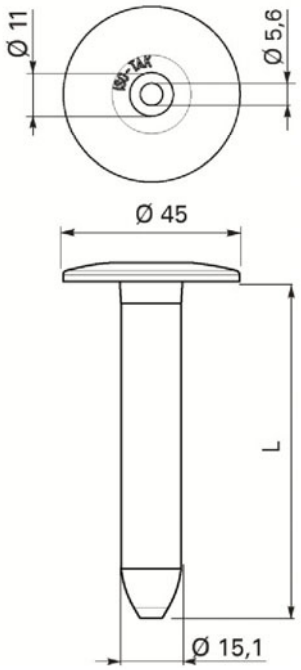


BS-S-6,7xL



R45xL



SFS intec flat roof fasteners

Combination 25
SFS intec BS-S-6,7xL
SFS intec R45xL

Annex 25

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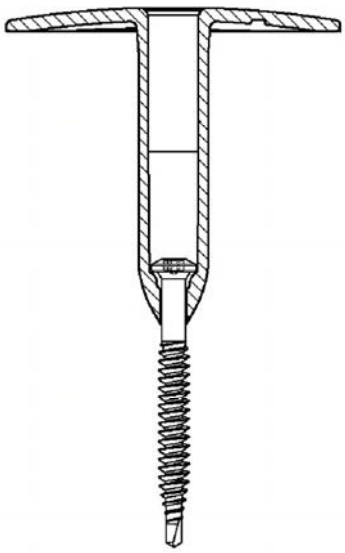
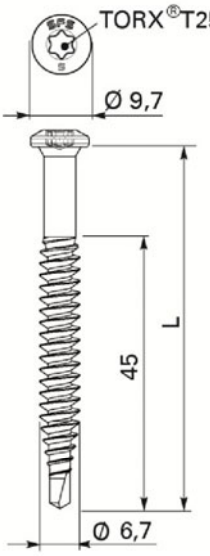
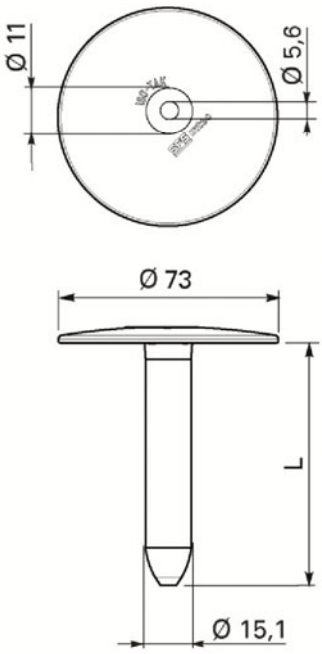


BS-S-6,7xL



R75xL



SFS intec flat roof fasteners

Combination 26
SFS intec BS-S-6,7xL
SFS intec R75xL

Annex 26

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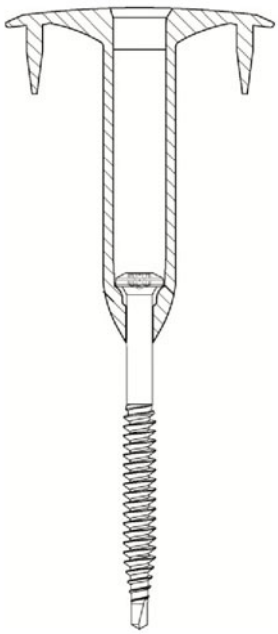
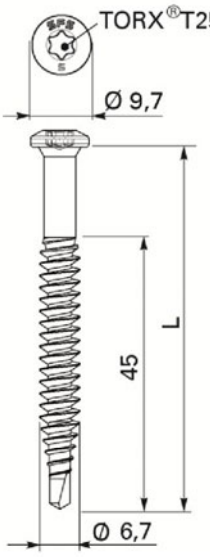
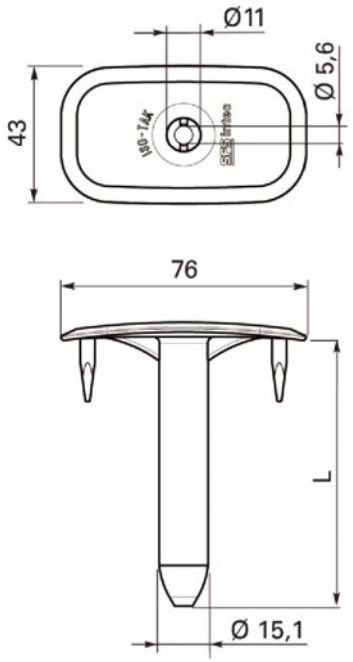


BS-S-6,7xL



TPSxL



SFS intec flat roof fasteners

Combination 27
SFS intec BS-S-6,7xL
SFS intec TPSxL

Annex 27

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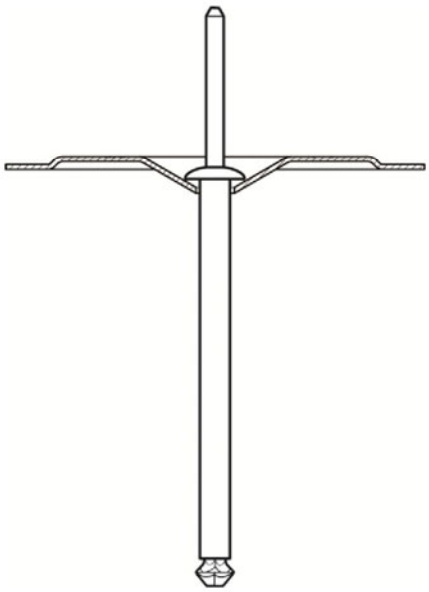
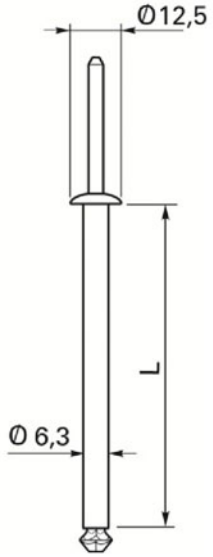
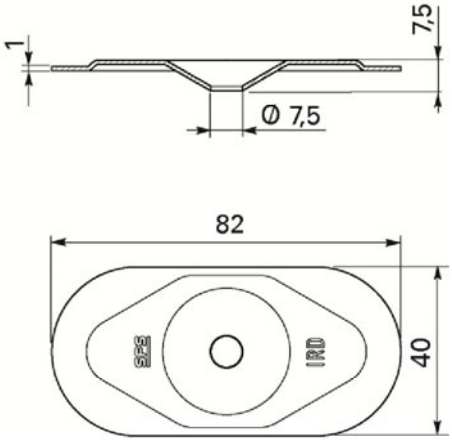


TPR-L-6,3xL



IRD-82x40



SFS intec flat roof fasteners

Combination 28
SFS intec TPR-L-6,3xL
SFS intec IRD-82x40

Annex 28

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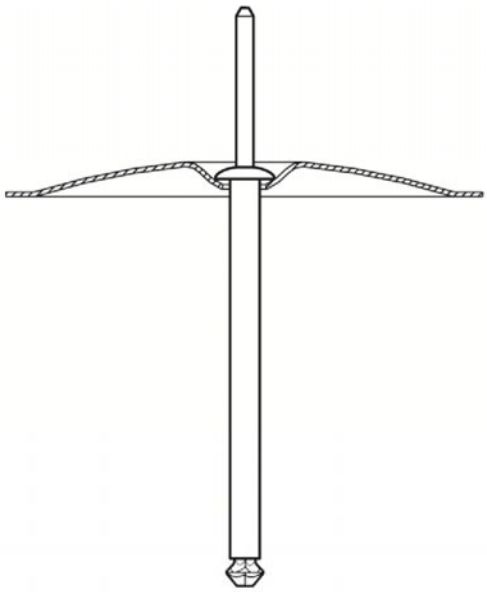
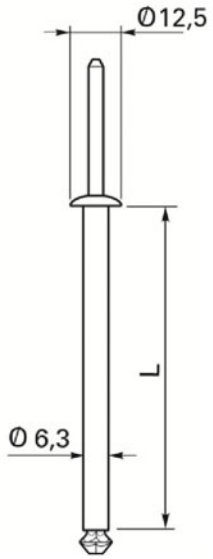
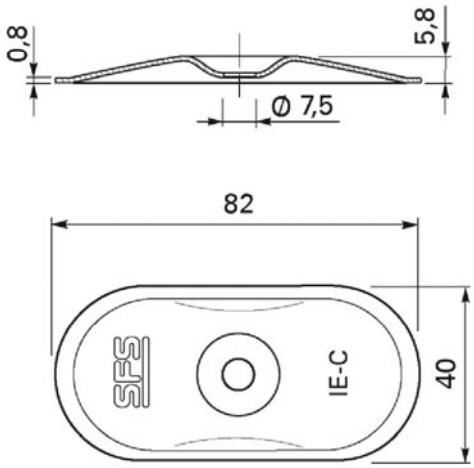


TPR-L-6,3xL



IE-C-82x40



SFS intec flat roof fasteners

Combination 29
SFS intec TPR-L-6,3xL
SFS intec IE-C-82x40

Annex 29

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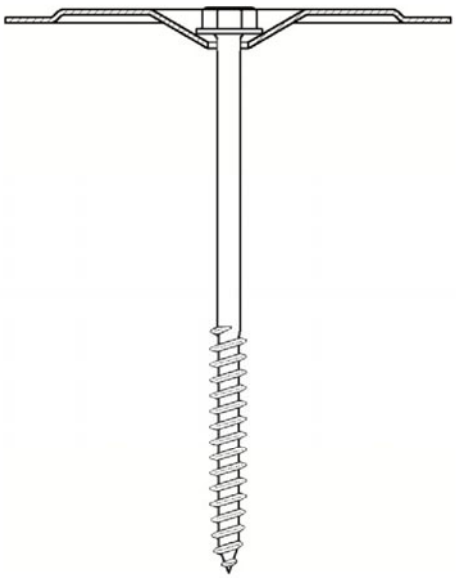
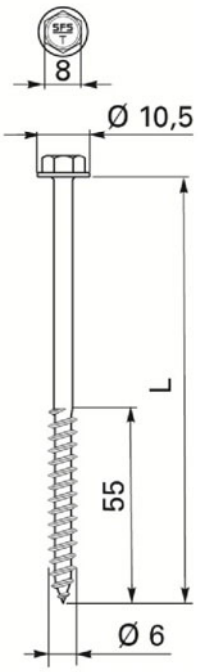
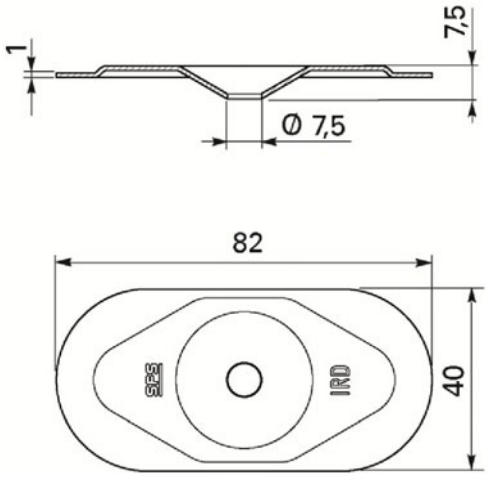


IG-6,0xL



IRD-82x40



SFS intec flat roof fasteners

Combination 30
SFS intec IG-6,0xL
SFS intec IRD-82x40

Annex 30

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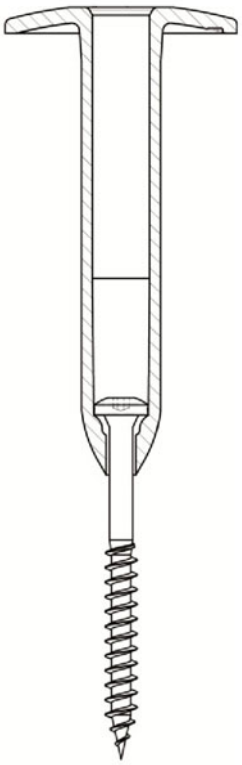
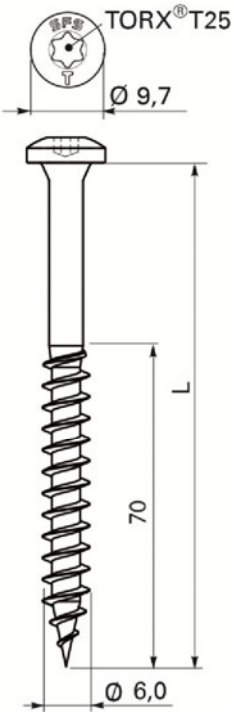
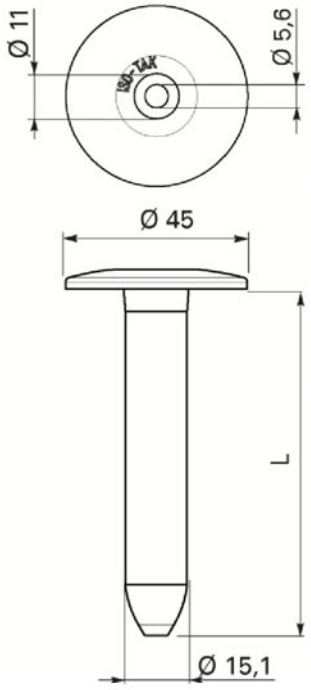


TS-T25-6,0xL



R45xL



SFS intec flat roof fasteners

Combination 32
SFS intec TS-T25-6,0xL
SFS intec R45xL

Annex 32

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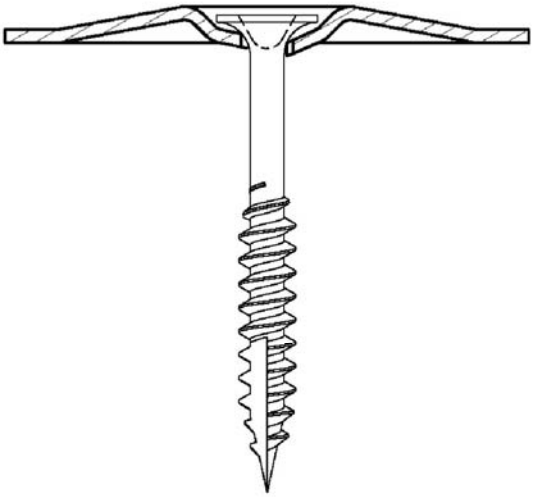
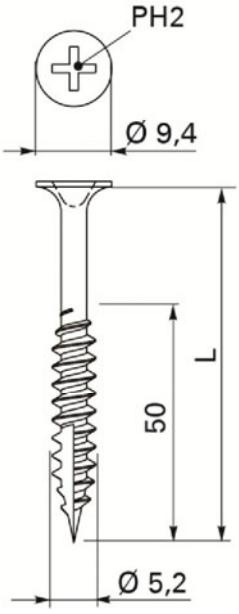
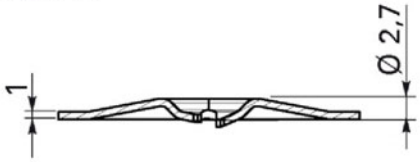


IWF-5,2xL



MW-40-FH



SFS intec flat roof fasteners

Combination 33
SFS intec IWF-5,2xL
SFS intec MW-40-FH

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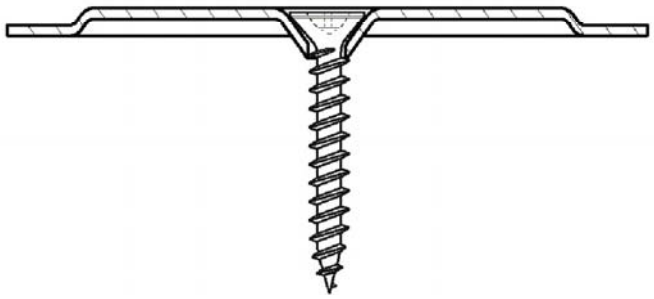
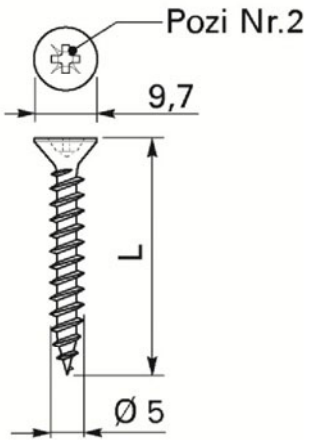
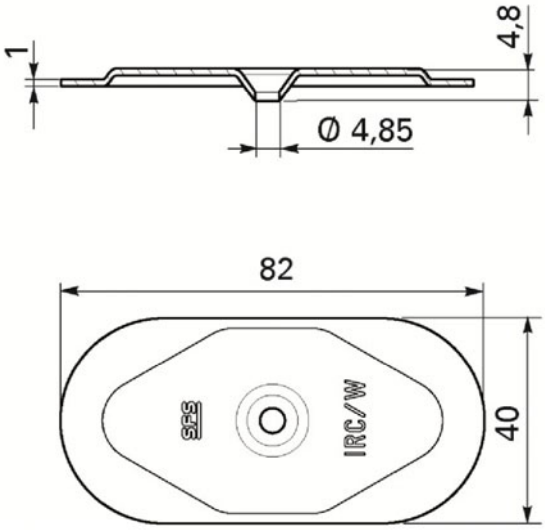


IW-T-5,0xL



IRC/W-82x40



SFS intec flat roof fasteners

Combination 34
SFS intec IW-T-5,0xL
SFS intec IRC/W-82x40

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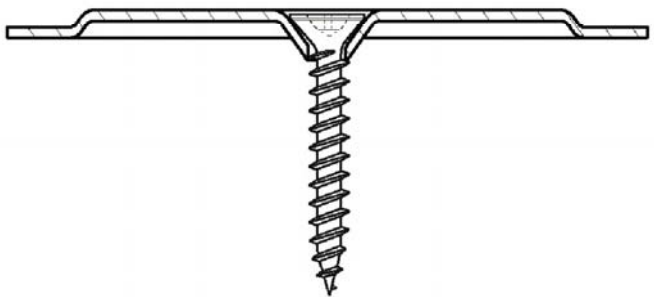
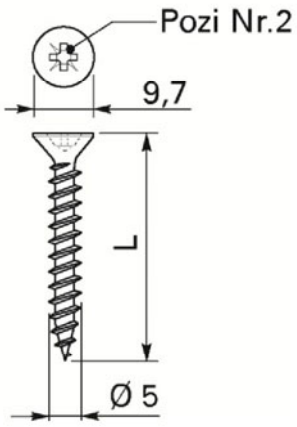
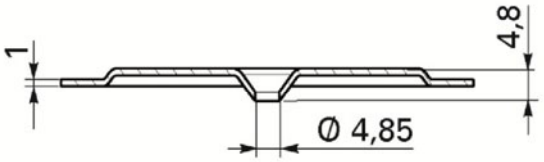
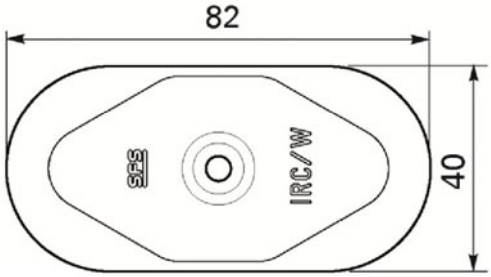


IW-S-5,0xL



IRC/W-82x40





SFS intec flat roof fasteners

Combination 35
SFS intec IW-S-5,0xL
SFS intec IRC/W-82x40

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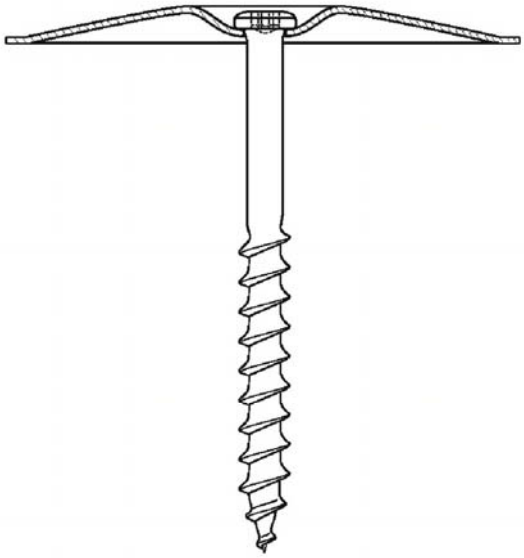
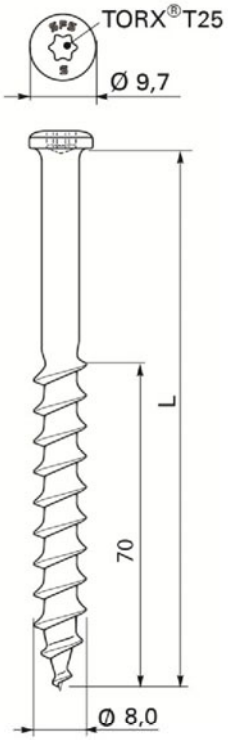
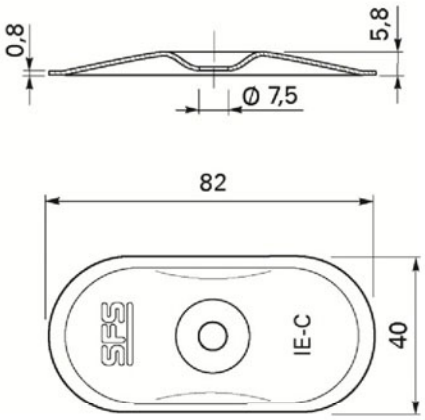


LBS-S-T25-8,0xL



IE-C-82x40



SFS intec flat roof fasteners

Combination 36
SFS intec LBS-S-T25-8,0xL
SFS intec IE-C-82x40

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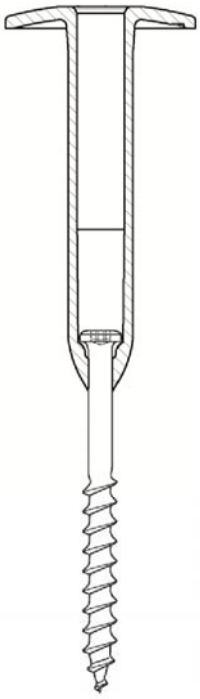
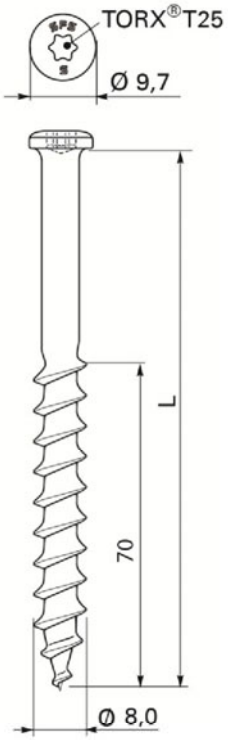
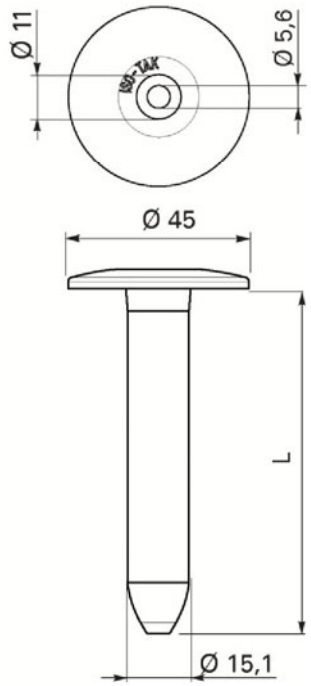


LBS-S-T25-8,0xL



R45xL



SFS intec flat roof fasteners

Combination 37
SFS intec LBS-S-T25-8,0xL
SFS intec R45xL

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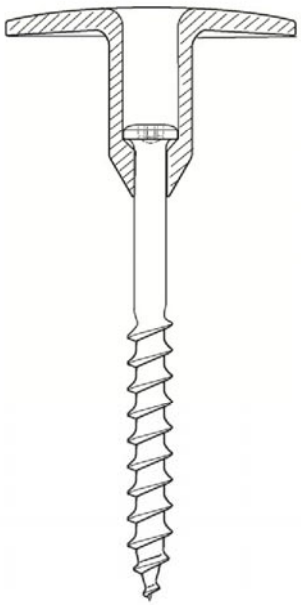
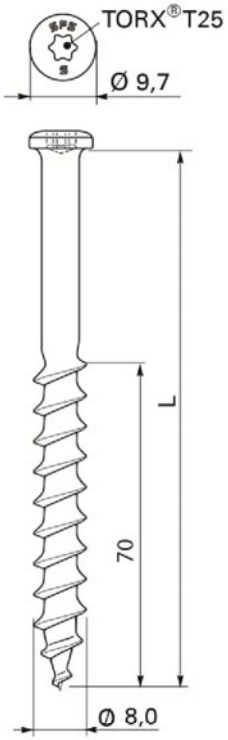
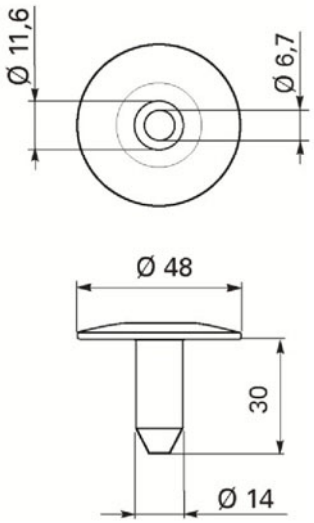


LBS-S-T25-8,0xL



TC-50-30



SFS intec flat roof fasteners

Combination 38
SFS intec LBS-S-T25-8,0xL
SFS intec TC-50-30

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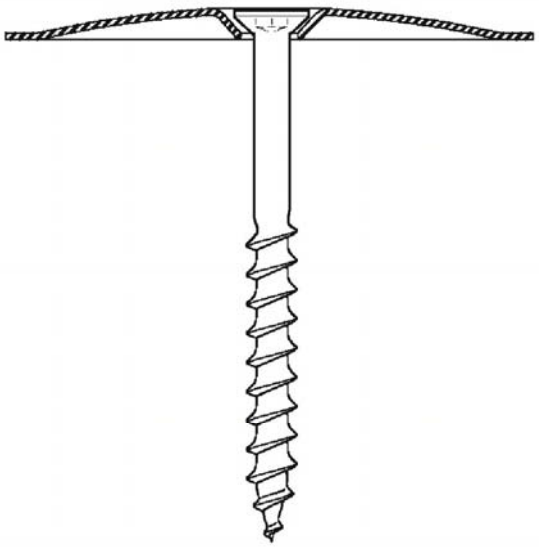
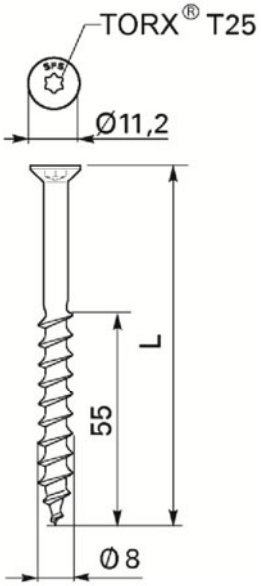
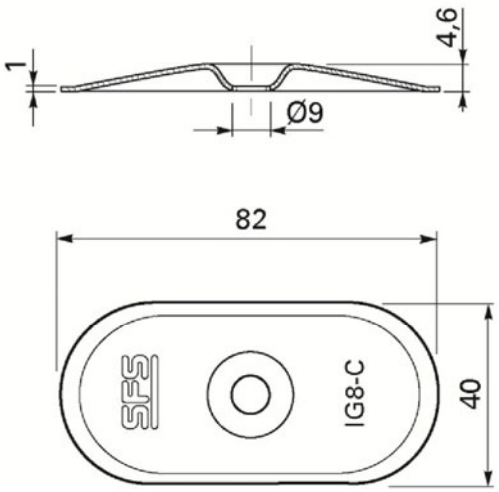


IGR-T-T25-8,0xL



IG8-C-82x40



SFS intec flat roof fasteners

Combination 39
SFS intec IGR-T-T25-8,0xL
SFS intec IG8-C-82x40

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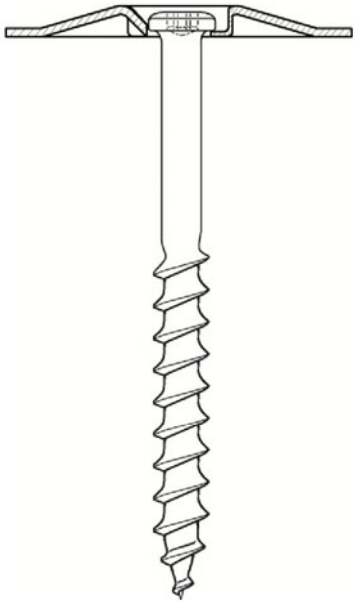
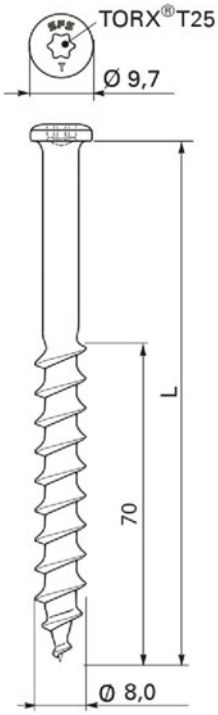
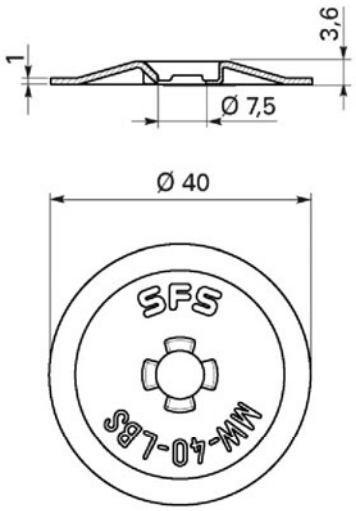


LBS-T25-8,0xL



MW-40-LBS



SFS intec flat roof fasteners

Combination 40
SFS intec LBS-T25-8,0xL
SFS intec MW-40-LBS

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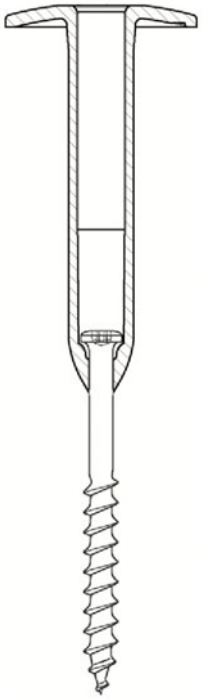
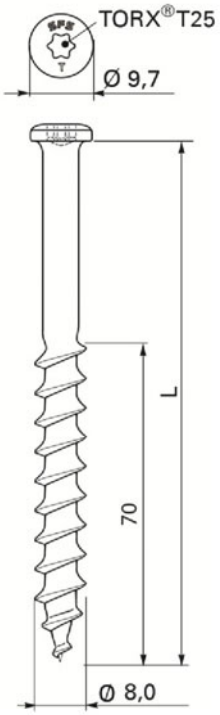
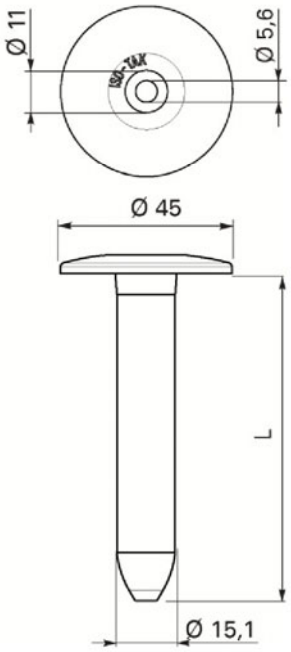


LBS-T25-8,0xL



R45xL



SFS intec flat roof fasteners

Combination 41
SFS intec LBS-T25-8,0xL
SFS intec R45xL

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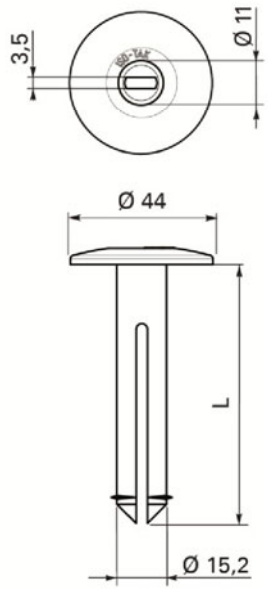
LB-45xL



SFS intec flat roof fasteners

SFS intec LB-45xL

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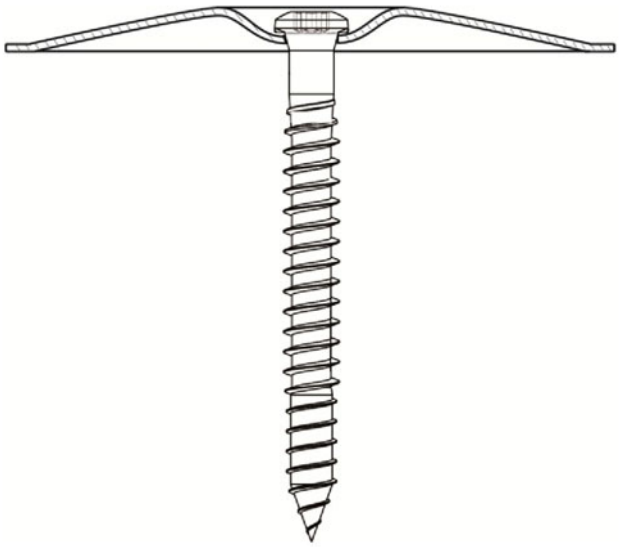
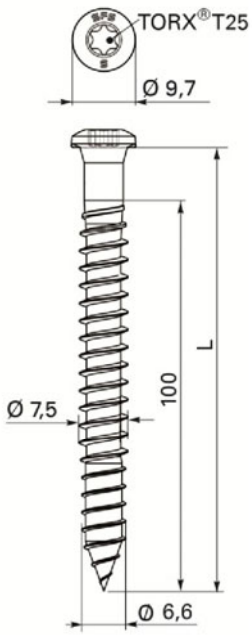
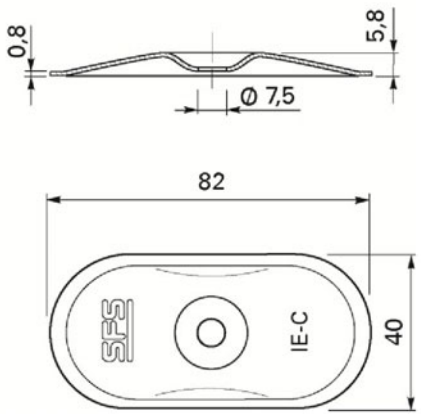


FB-S-T25-7,5xL



IE-C-82x40



SFS intec flat roof fasteners

Combination 43
SFS intec FB-S-T25-7,5xL
SFS intec IE-C-82x40

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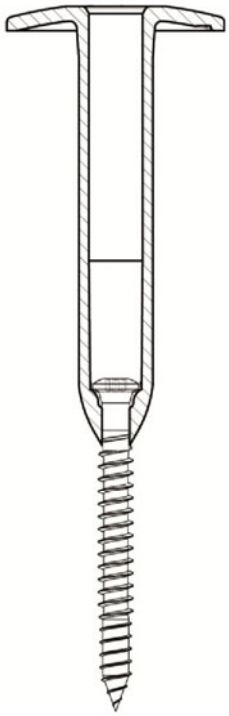
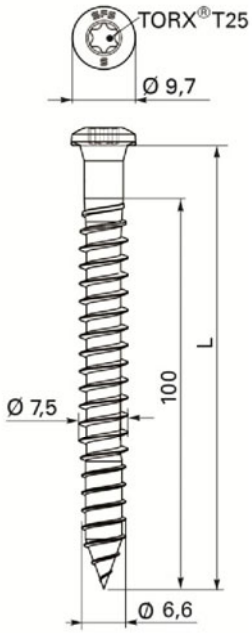
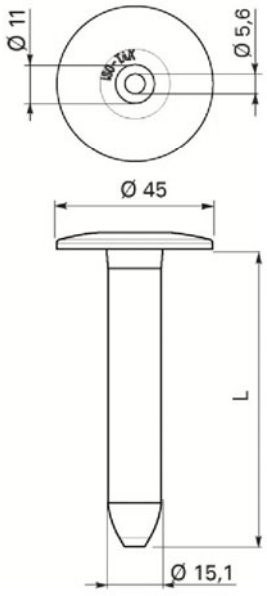
Deutsches Institut für Bautechnik DIBt



FB-S-T25-7,5xL



R45xL



SFS intec flat roof fasteners

Combination 44
SFS intec FB-S-T25-7,5xL
SFS intec R45xL

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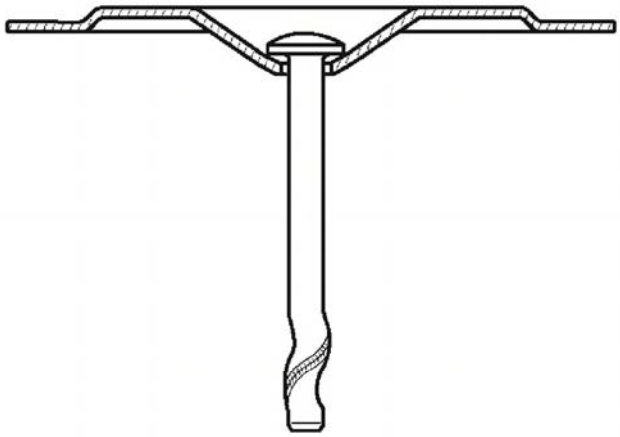
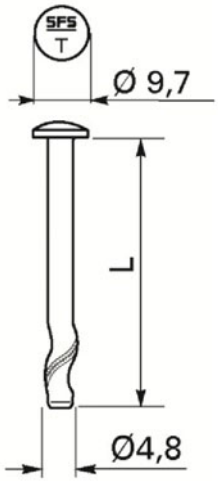
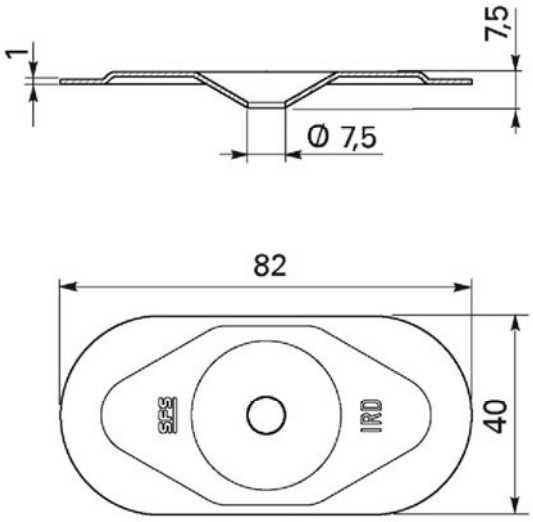


DT-4,8xL



IRD-82x40



SFS intec flat roof fasteners

Combination 45
SFS intec DT-4,8xL
SFS intec IRD-82x40

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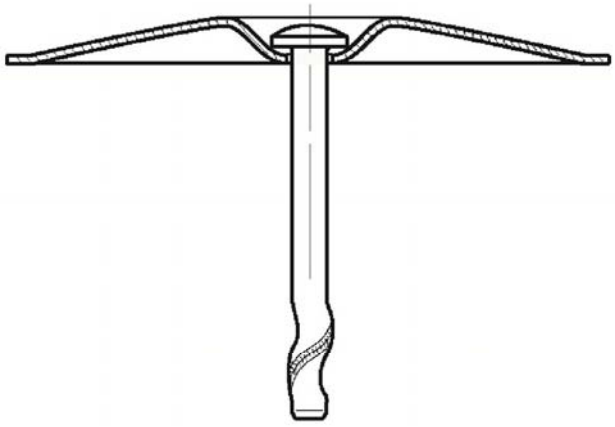
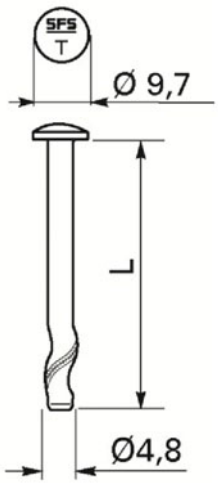
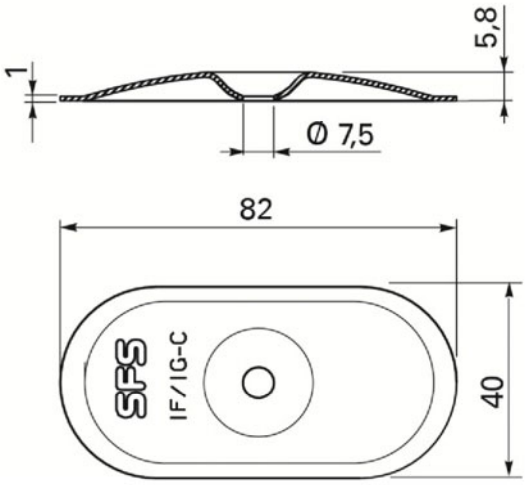


DT-4,8xL



IF/IG-C-82x40



SFS intec flat roof fasteners

Combination 46
SFS intec DT-4,8xL
SFS intec IF/IG-C-82x40

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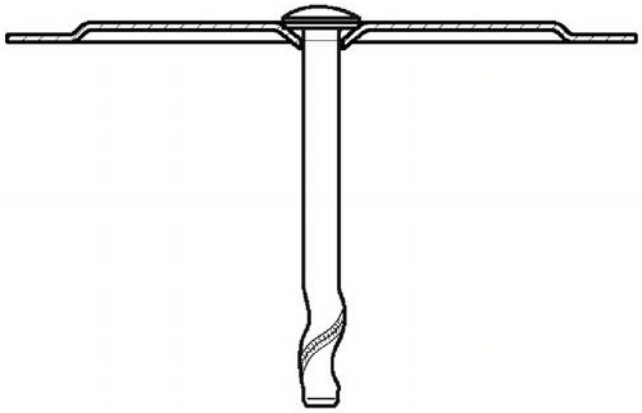
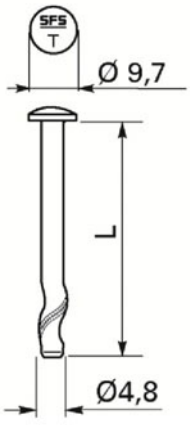
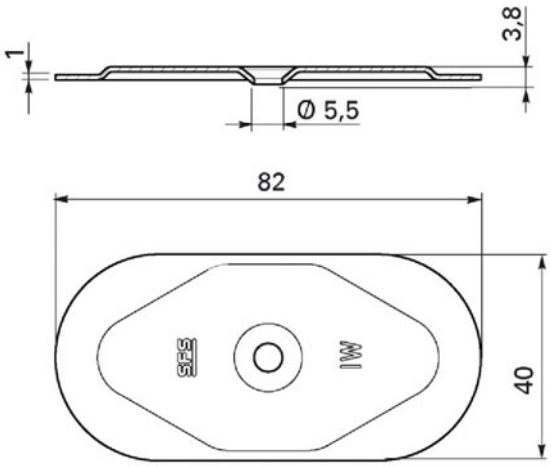


DT-4,8xL



IW-82x40



SFS intec flat roof fasteners

Combination 47
SFS intec DT-4,8xL
SFS intec IW-82x40

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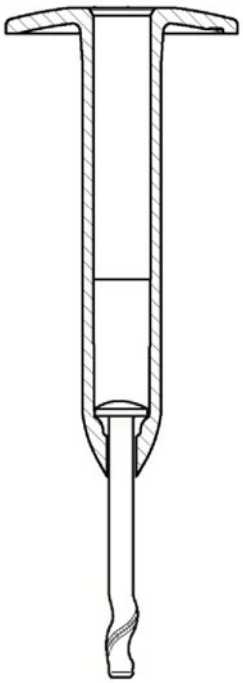
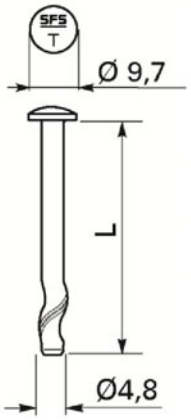
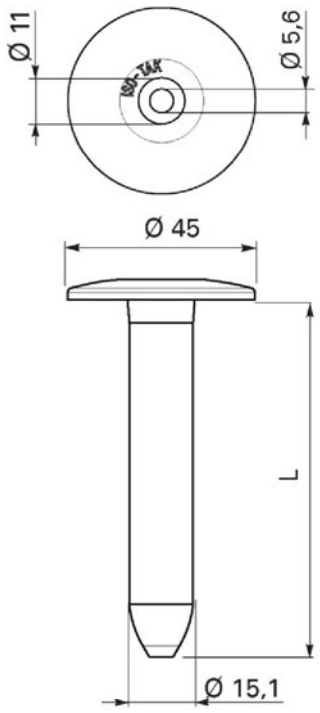


DT-4,8xL



R45xL



SFS intec flat roof fasteners

Combination 48
SFS intec DT-4,8xL
SFS intec R45xL

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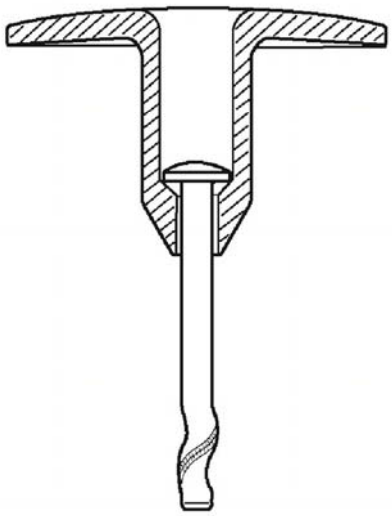
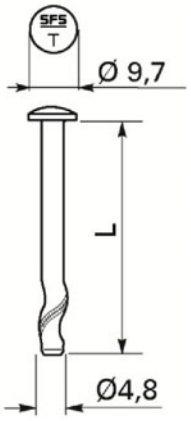
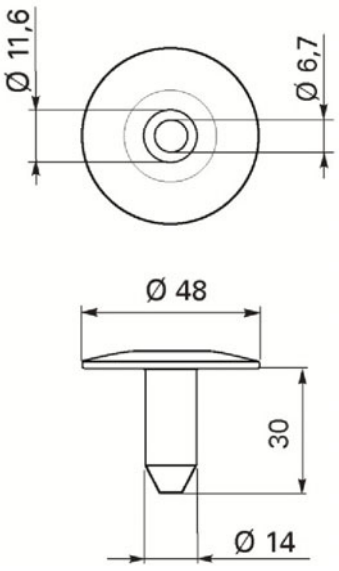


DT-4,8xL



TC-50-30



SFS intec flat roof fasteners

Combination 49
SFS intec DT-4,8xL
SFS intec TC-50-30

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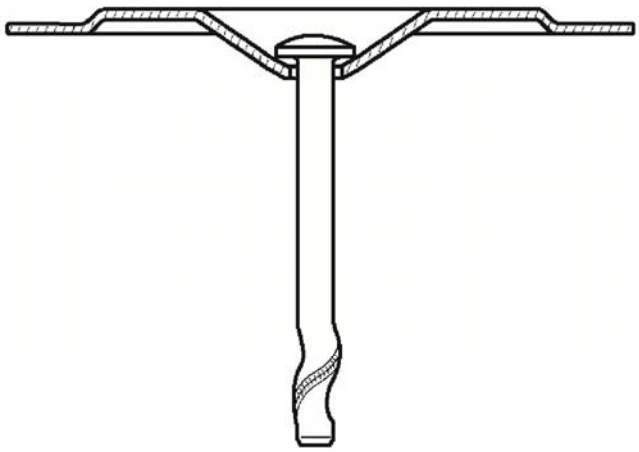
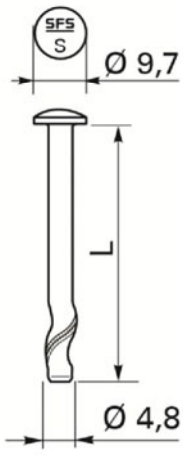
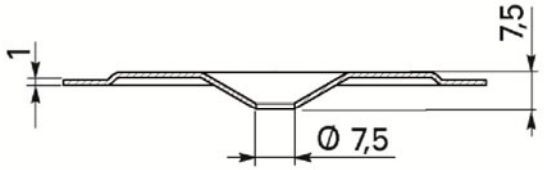
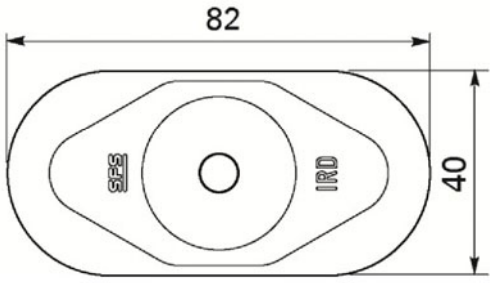


DT-S-4,8xL



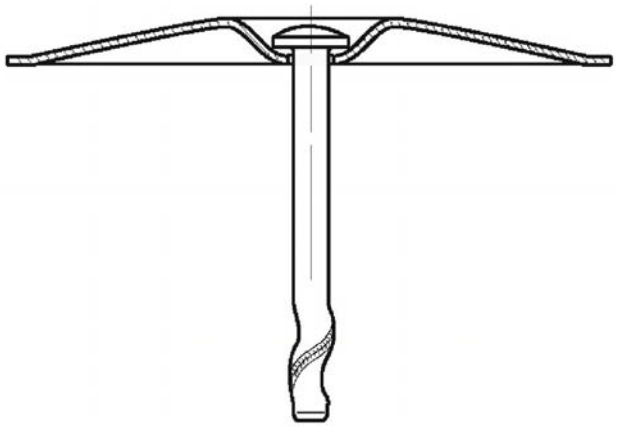
IRD-82x40



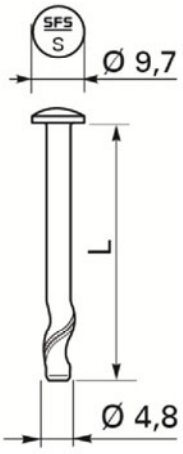


SFS intec flat roof fasteners	**Annex 50**
Combination 50 **SFS intec DT-S-4,8xL** **SFS intec IRD-82x40**	

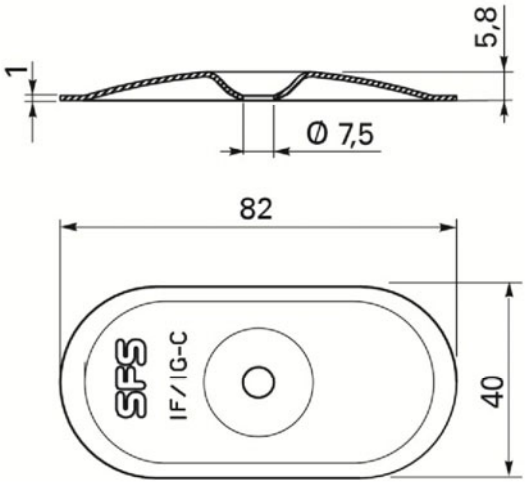
Deutsches Institut für Bautechnik DIBt



DT-S-4,8xL



IF/IG-C-82x40

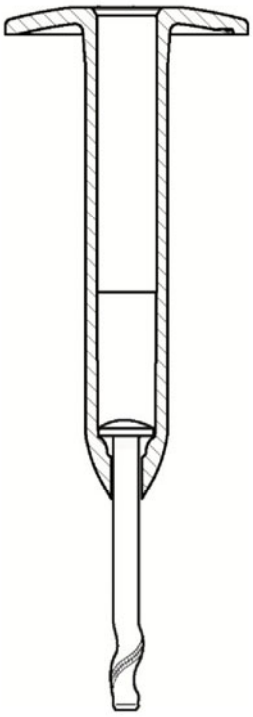


SFS intec flat roof fasteners

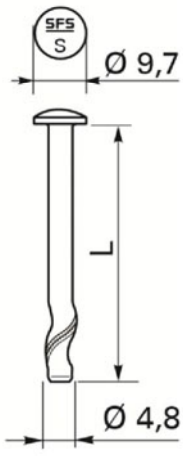
Combination 51
SFS intec DT-S-4,8xL
SFS intec IF/IG-C-82x40

Annex 51

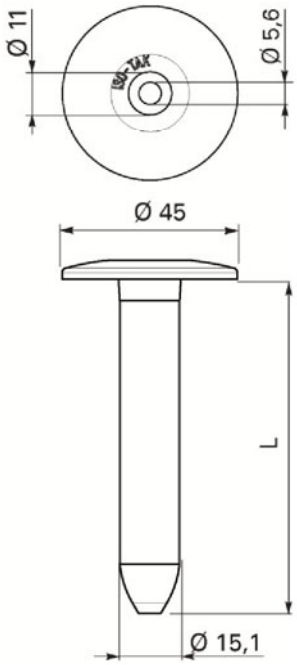
Deutsches Institut für Bautechnik DIBt



DT-S-4,8xL



R45xL

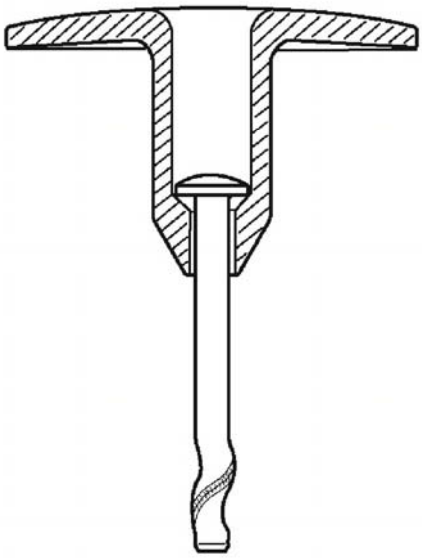


SFS intec flat roof fasteners

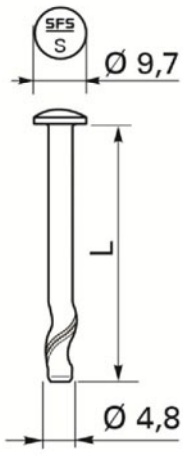
Combination 52
SFS intec DT-S-4,8xL
SFS intec R45xL

Annex 52

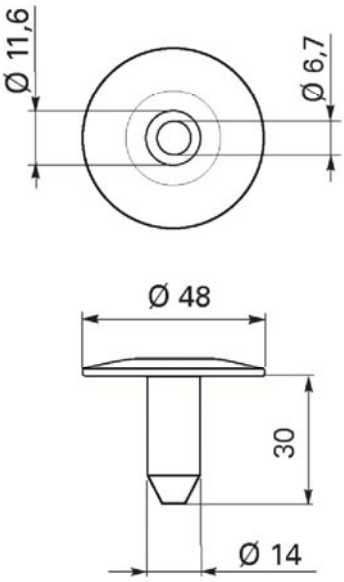
Deutsches Institut für Bautechnik DIBt



DT-S-4,8xL



TC-50-30



SFS intec flat roof fasteners

Combination 53
SFS intec DT-S-4,8xL
SFS intec TC-50-30

Annex 53

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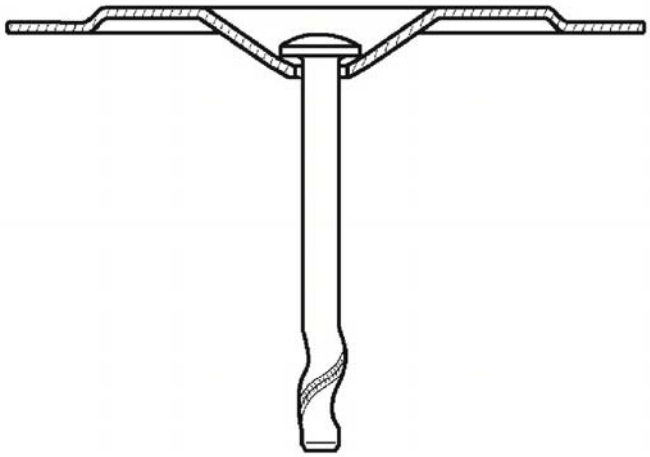
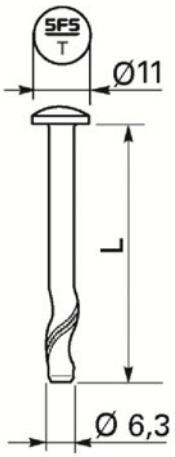
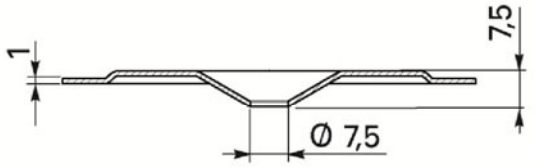
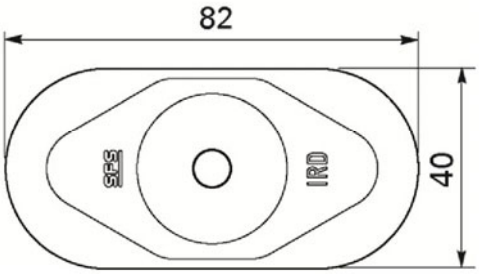


DT-6,3xL



IRD-82x40





SFS intec flat roof fasteners

Combination 54
SFS intec DT-6,3xL
SFS intec IRD-82x40

Annex 54

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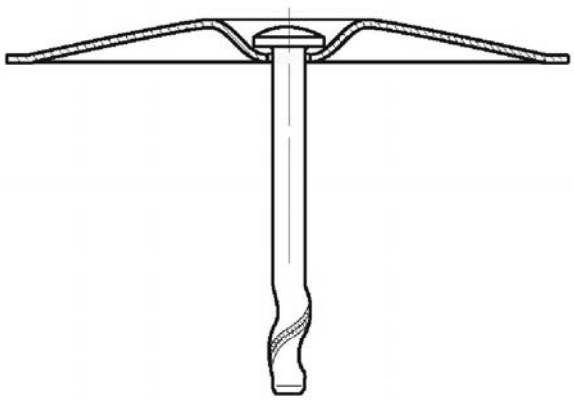
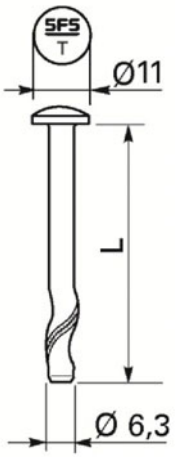
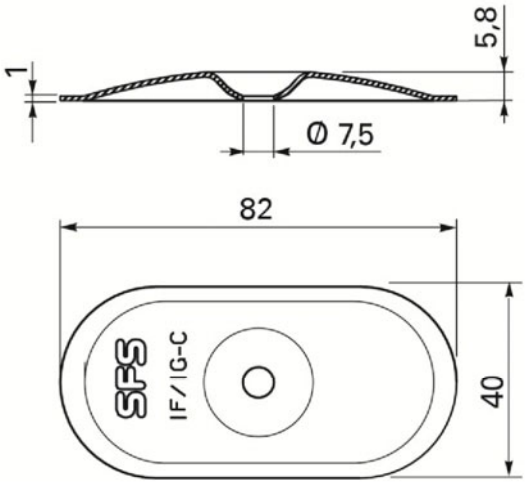


DT-6,3xL



IF/IG-C-82x40



SFS intec flat roof fasteners

Combination 55
SFS intec DT-6,3xL
SFS intec IF/IG-C-82x40

Annex 55

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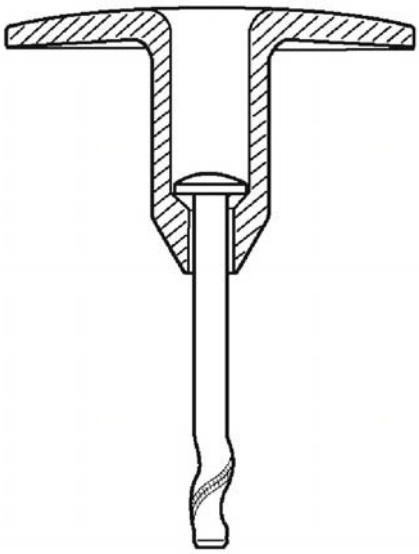
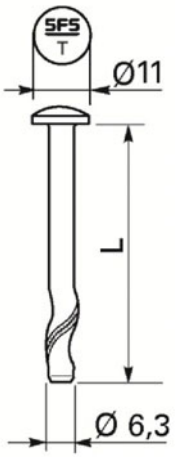
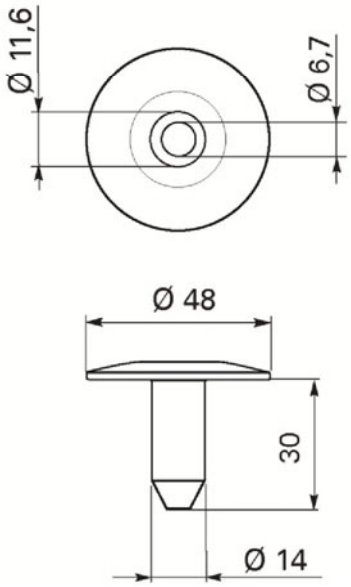


DT-6,3xL



TC-50-30



SFS intec flat roof fasteners

Combination 56
SFS intec DT-6,3xL
SFS intec TC-50-30

Annex 56

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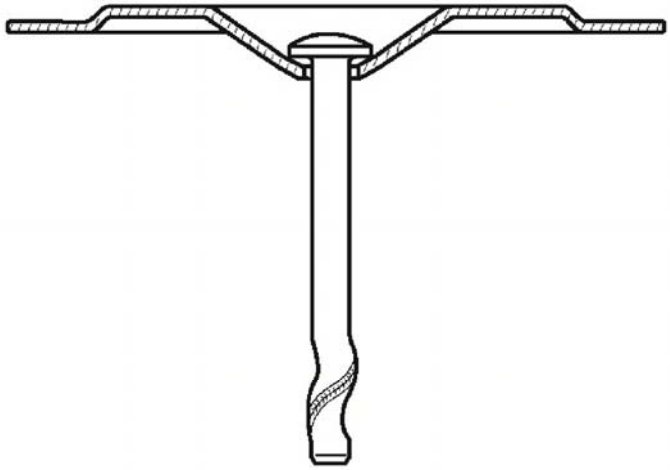
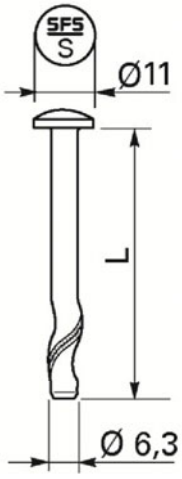
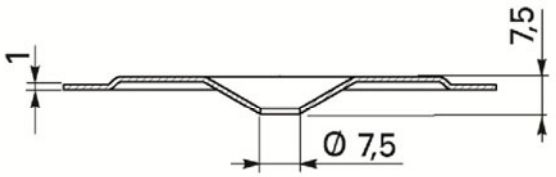
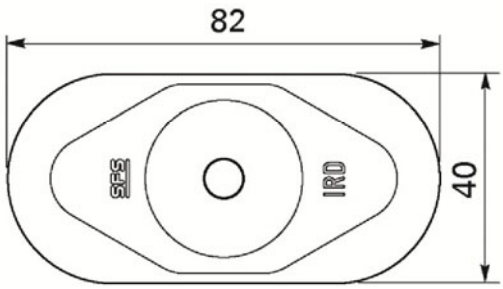


DT-S-6,3xL



IRD-82x40





SFS intec flat roof fasteners

Combination 57
SFS intec DT-S-6,3xL
SFS intec IRD-82x40

Annex 57

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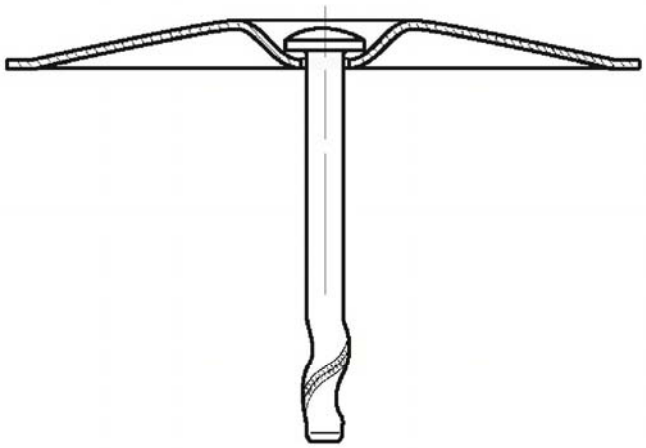
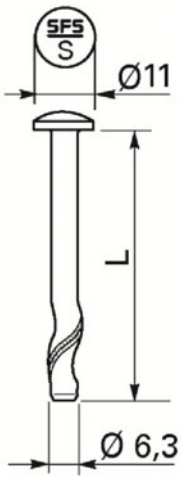
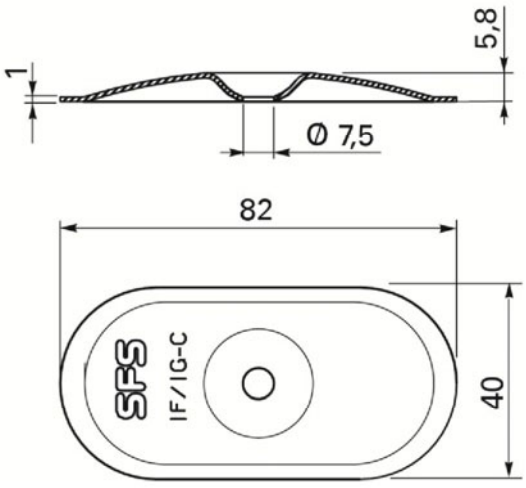


DT-S-6,3xL



IF/IG-C-82x40



SFS intec flat roof fasteners

Combination 58
SFS intec DT-S-6,3xL
SFS intec IF/IG-C-82x40

Annex 58

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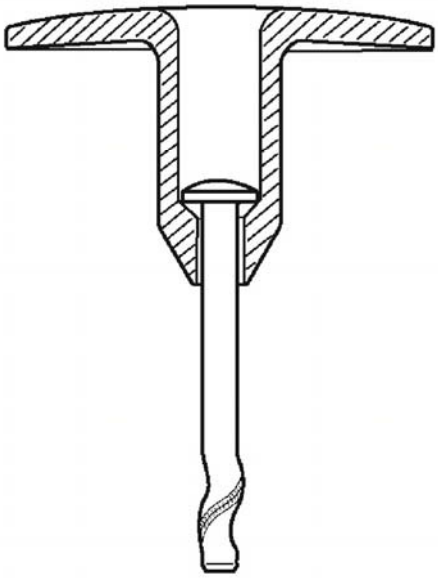
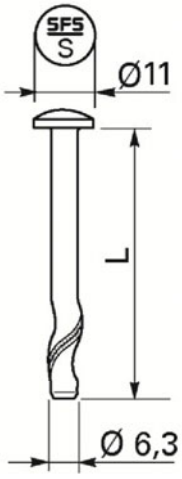
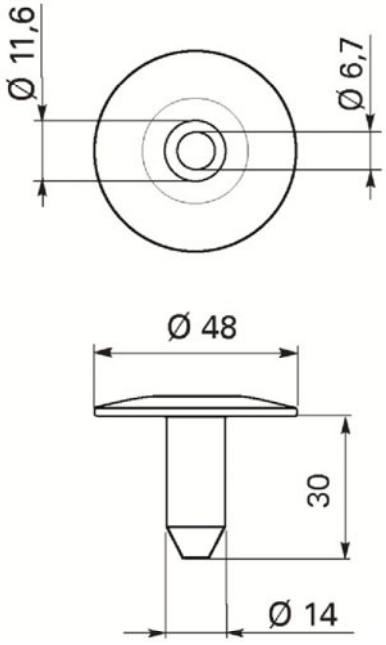


DT-S-6,3xL



TC-50-30



SFS intec flat roof fasteners

Combination 59
SFS intec DT-S-6,3xL
SFS intec TC-50-30

Annex 59

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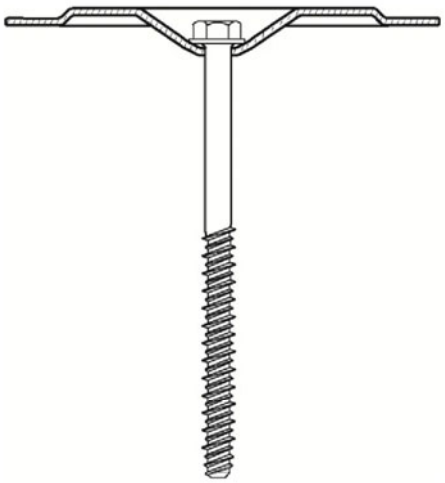
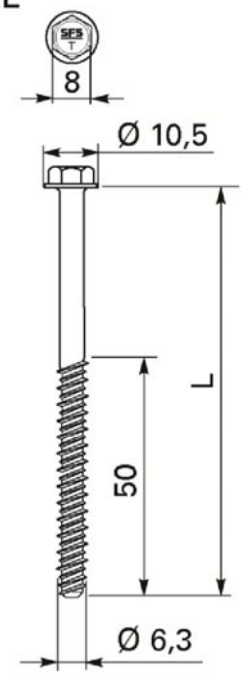
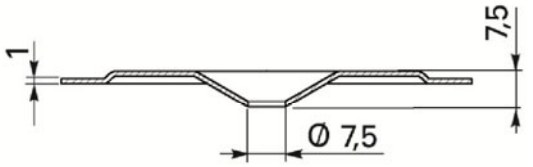
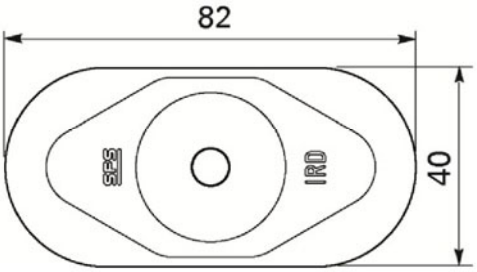


TI-6,3xL



IRD-82x40





SFS intec flat roof fasteners

Combination 60
SFS intec TI-6,3xL
SFS intec IRD-82x40

Annex 60

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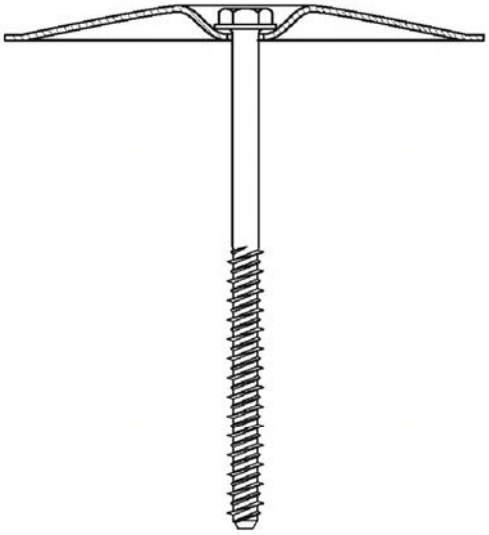
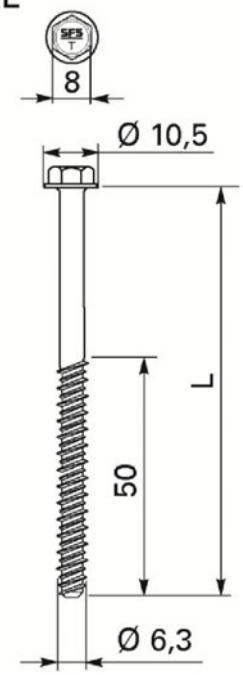
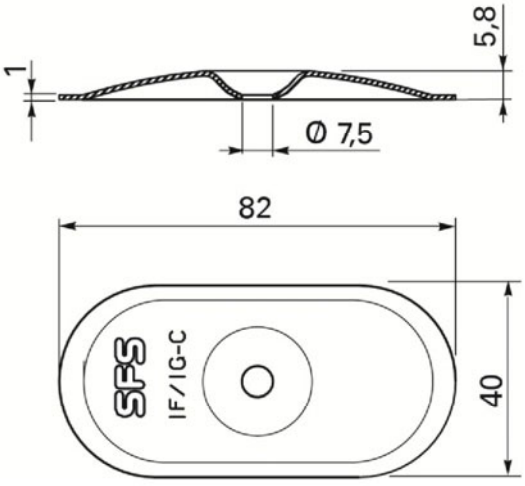


TI-6,3xL



IF/IG-C-82x40



SFS intec flat roof fasteners

Combination 61
SFS intec TI-6,3xL
SFS intec IF/IG-C-82x40

Annex 61

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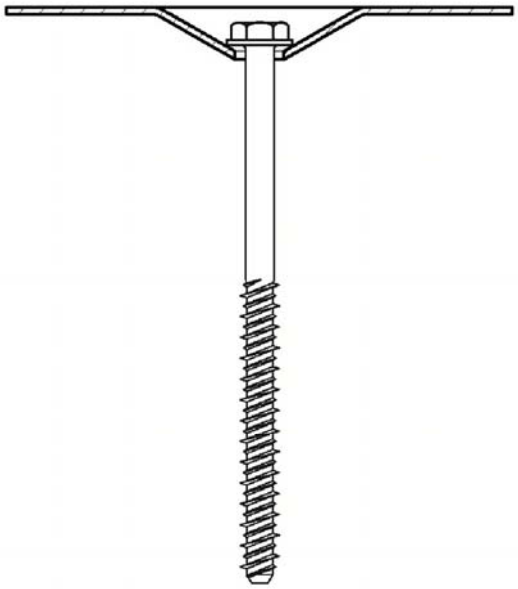
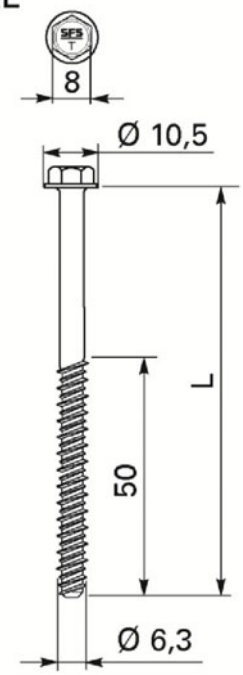
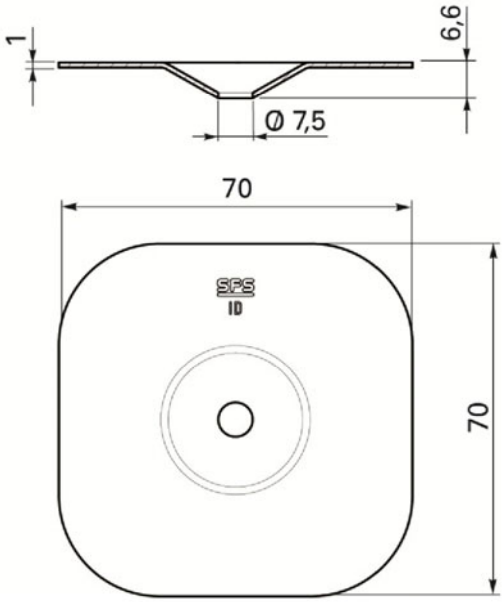


TI-6,3xL



ID-70x70

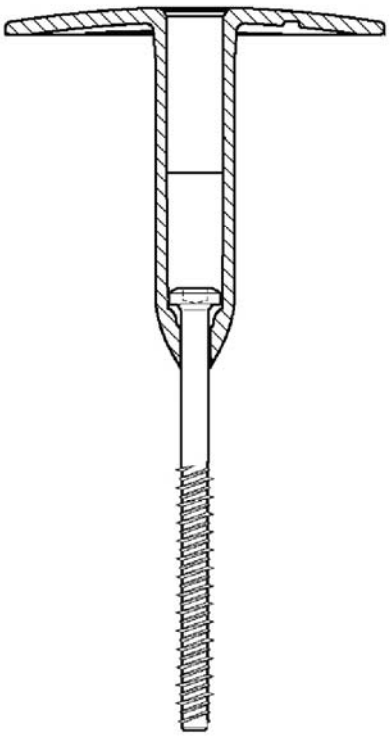


SFS intec flat roof fasteners

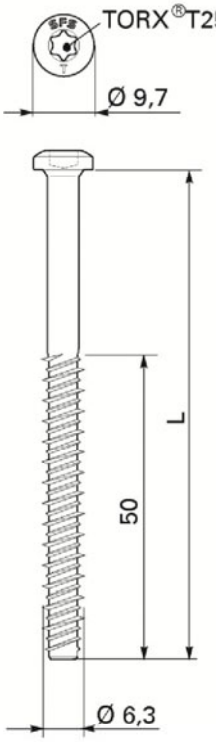
Combination 62
SFS intec TI-6,3xL
SFS intec ID-70x70

Annex 62

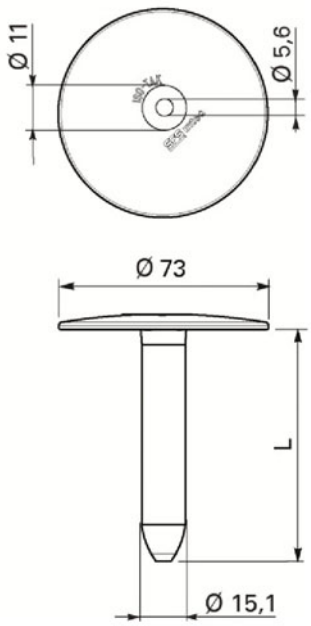
Deutsches Institut für Bautechnik DIBt



TI-T25-6,3xL



R75xL



SFS intec flat roof fasteners

Combination 63
SFS intec TI-T25-6,3xL
SFS intec R75xL

Annex 63

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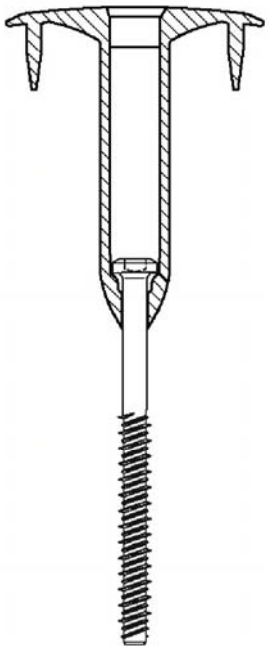
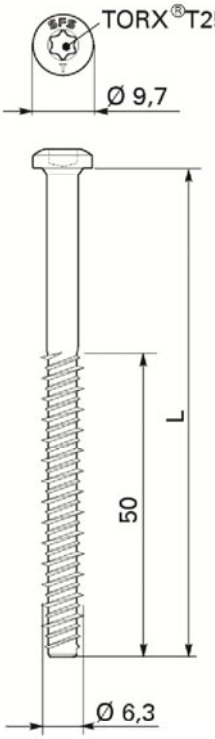
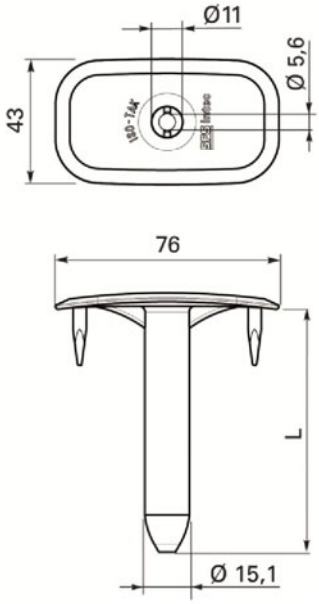


TI-T25-6,3xL



TPSxL



SFS intec flat roof fasteners

Combination 64
SFS intec TI-T25-6,3xL
SFS intec TPSxL

Annex 64

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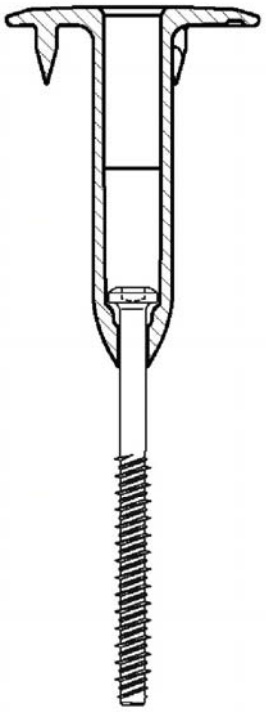
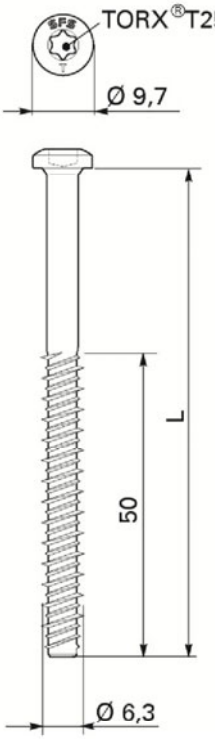
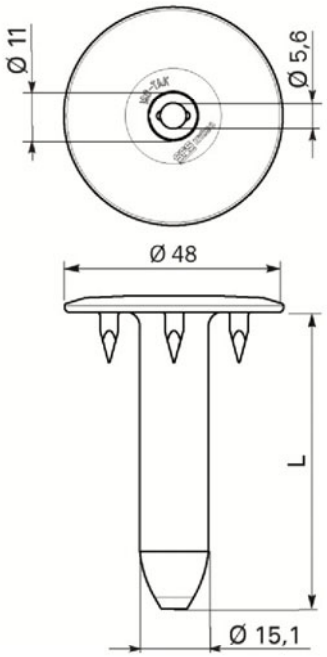


TI-T25-6,3xL



R48xL-3N

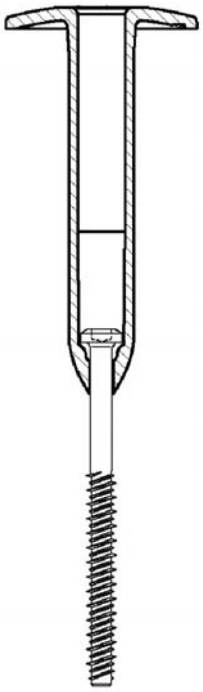


SFS intec flat roof fasteners

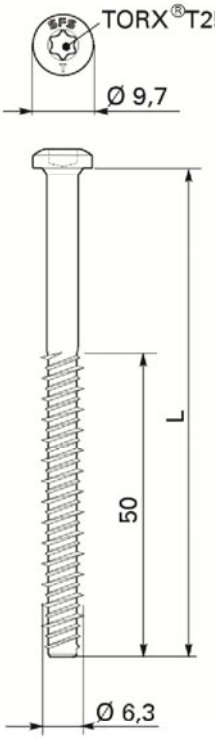
Combination 65
SFS intec TI-T25-6,3xL
SFS intec R48xL-3N

Annex 65

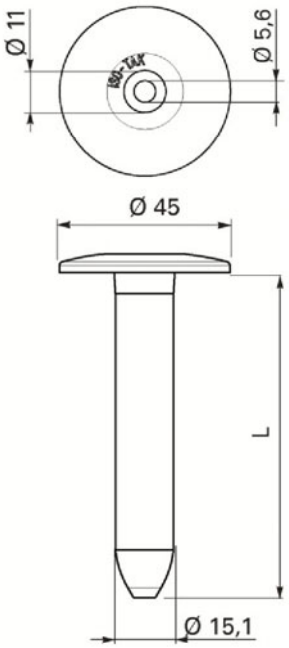
Deutsches Institut für Bautechnik DIBt



TI-T25-6,3xL



R45xL



SFS intec flat roof fasteners

Combination 66
SFS intec TI-T25-6,3xL
SFS intec R45xL

Annex 66

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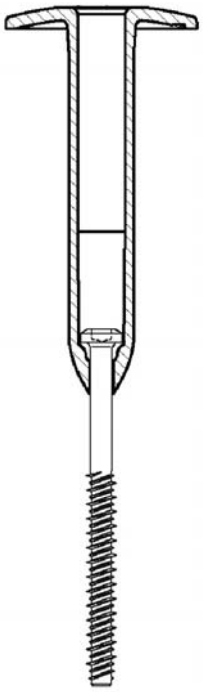
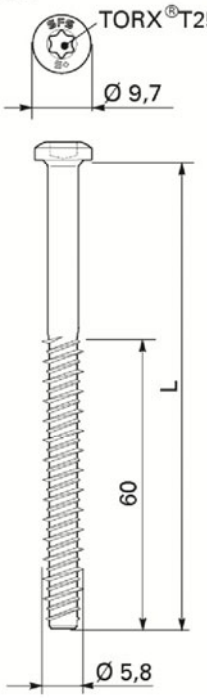
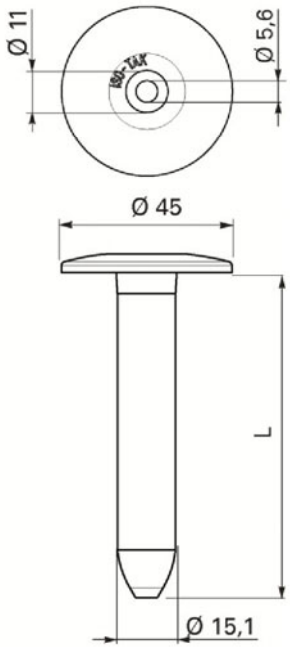


TI-S-T25-6,1xL



R45xL



SFS intec flat roof fasteners

Combination 67
SFS intec TI-S-T25-6,1xL
SFS intec R45xL

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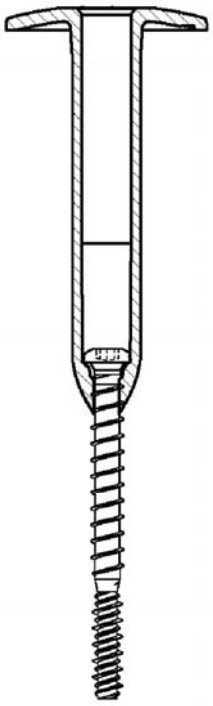
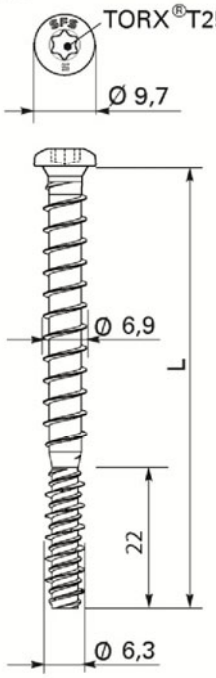
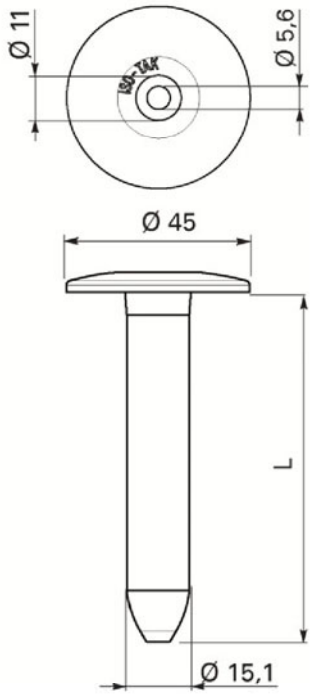


TIA-T25-6,3xL



R45xL



SFS intec flat roof fasteners

Combination 68
SFS intec TIA-T25-6,3xL
SFS intec R45xL

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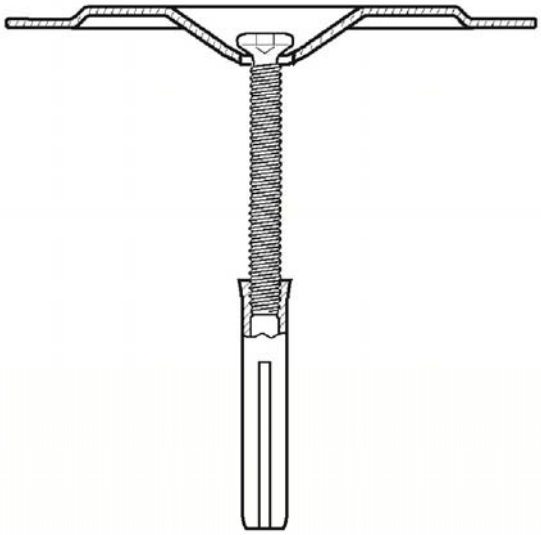
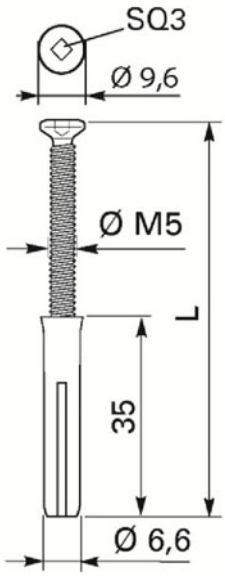
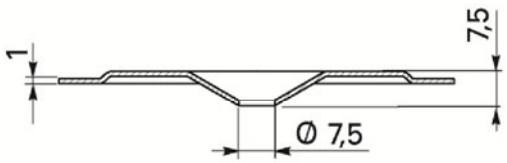
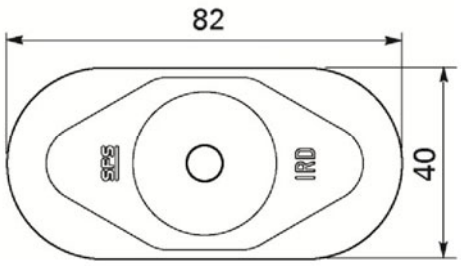


IE-6,3xL



IRD-82x40





SFS intec flat roof fasteners

Combination 69
SFS intec IE-6,3xL
SFS intec IRD-82x40

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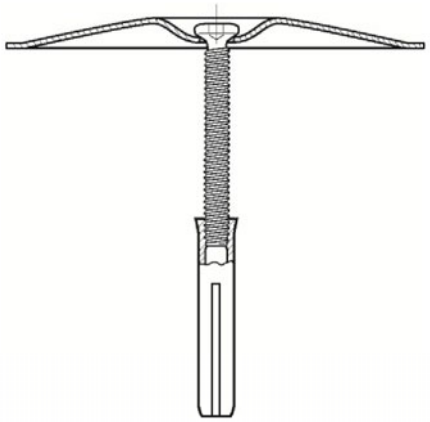
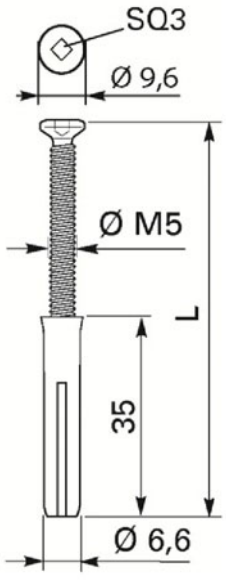
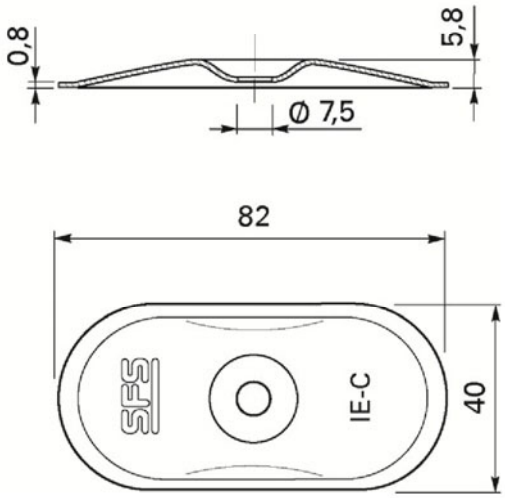


IE-6,3xL



IE-C-82x40



SFS intec flat roof fasteners

Combination 70
SFS intec IE-6,3xL
SFS intec IE-C-82x40

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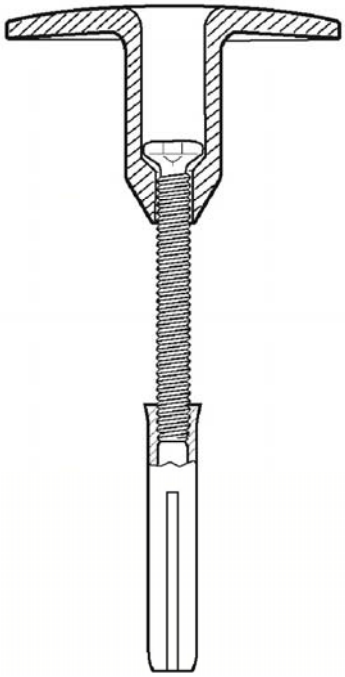
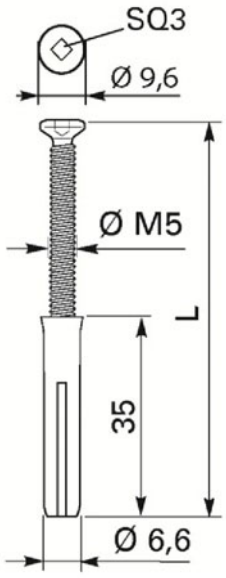
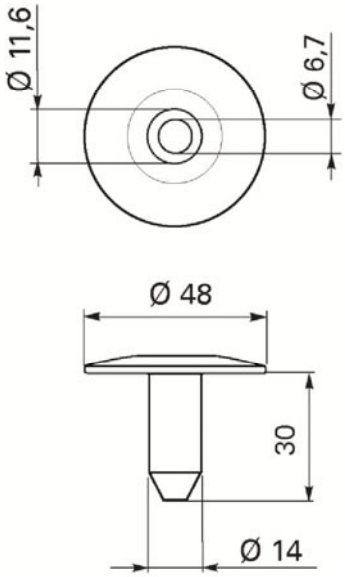


IE-6,3xL



TC-50-30



SFS intec flat roof fasteners

Combination 71
SFS intec IE-6,3xL
SFS intec TC-50-30

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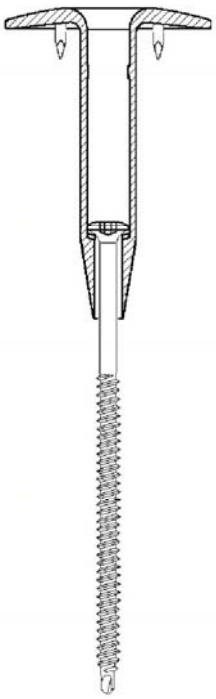
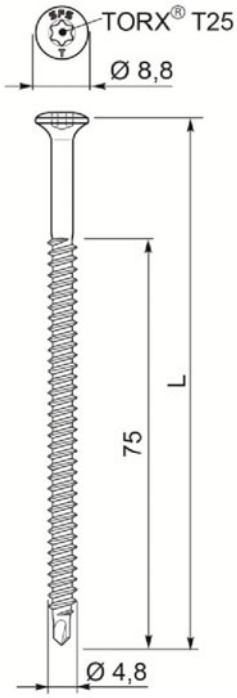
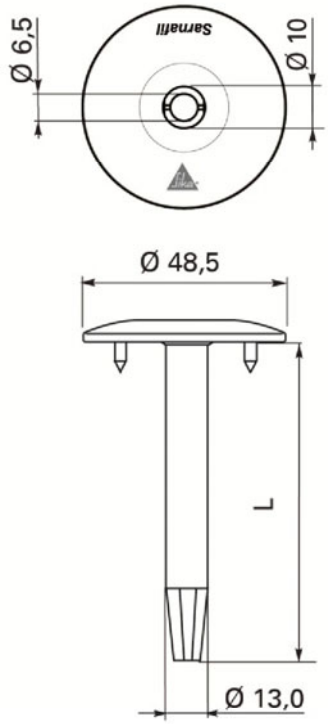


BS-4,8xL



Sarnafast Tube SFT-50xL



SFS intec flat roof fasteners

Combination 72
SFS intec BS-4,8xL
Sarnafast Tube SFT-50xL

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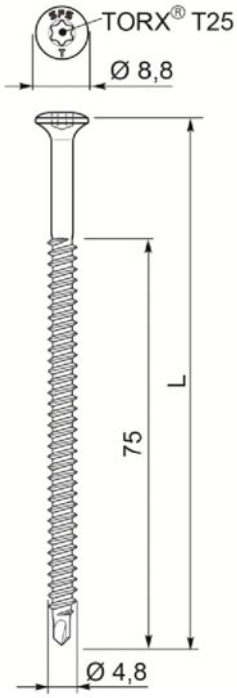
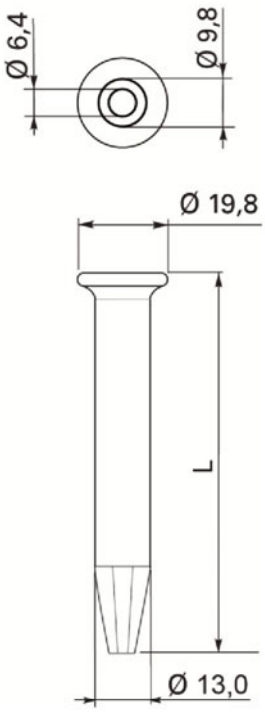
BS-4,8xL



Sarnabar Tube SBT-20xL



SFS intec flat roof fasteners

Combination 73
SFS intec BS-4,8xL
Sarnabar Tube SBT-20xL

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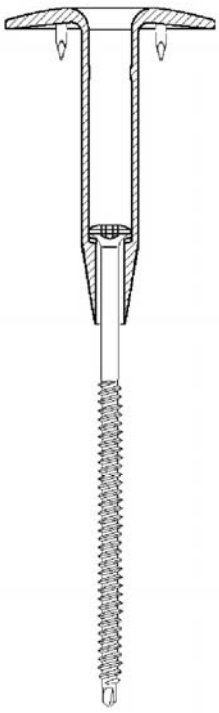
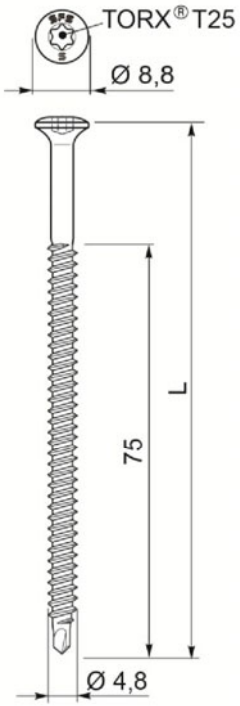
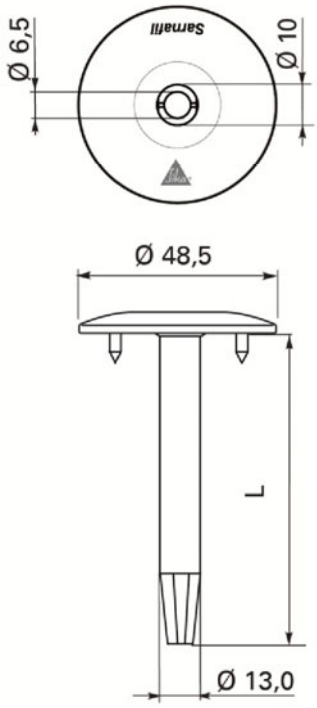


BS-S-4,8xL



Sarnafast Tube SFT-50xL



SFS intec flat roof fasteners

Combination 74
SFS intec BS-S-4,8xL
Sarnafast Tube SFT-50xL

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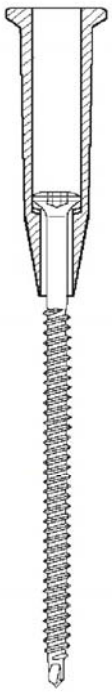
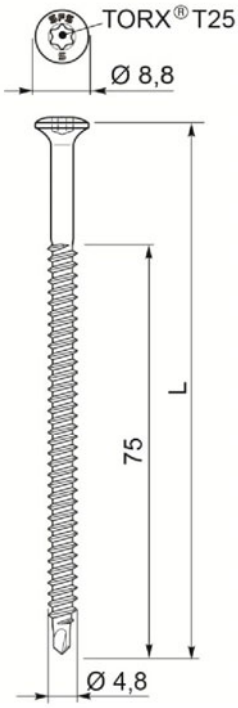
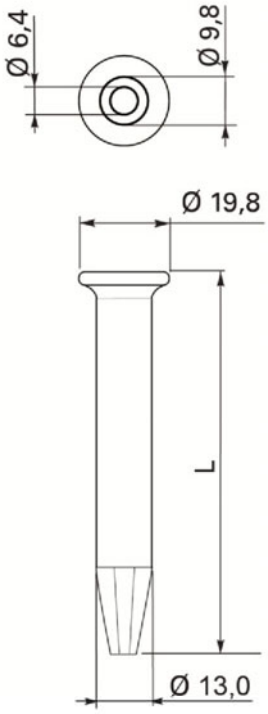


BS-S-4,8xL



Sarnabar Tube SBT-20xL



SFS intec flat roof fasteners

Combination 75
SFS intec BS-S-4,8xL
Sarnabar Tube SBT-20xL

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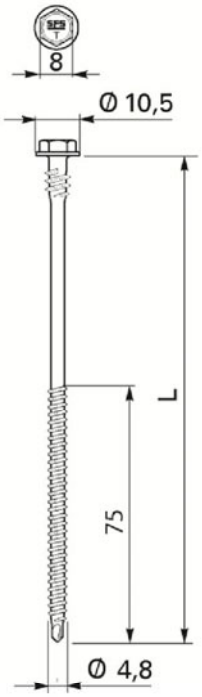
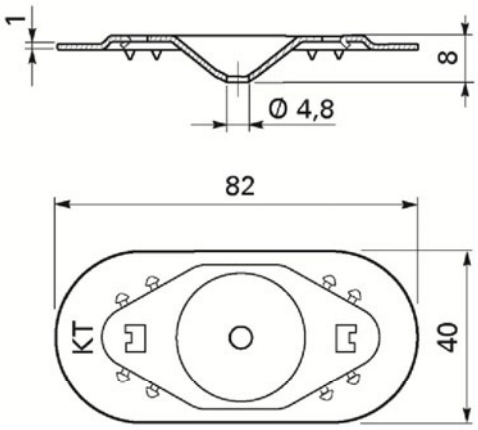
Sarnafast SF-4,8xL



Sarnafast KT-82x40



SFS intec flat roof fasteners

Combination 76
Sarnafast SF-4,8xL
Sarnafast KT-82x40

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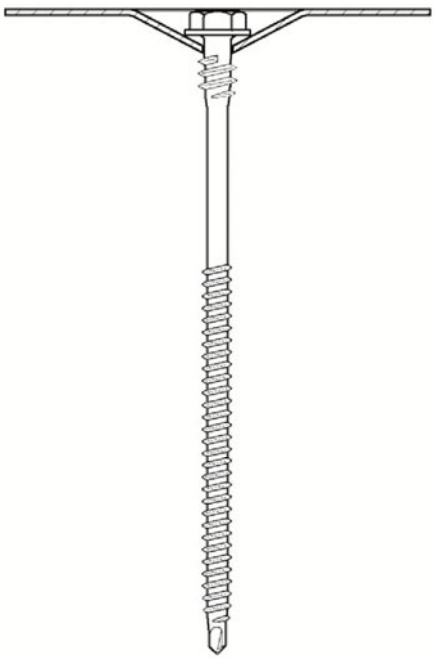
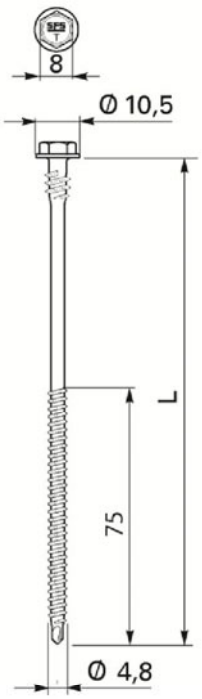
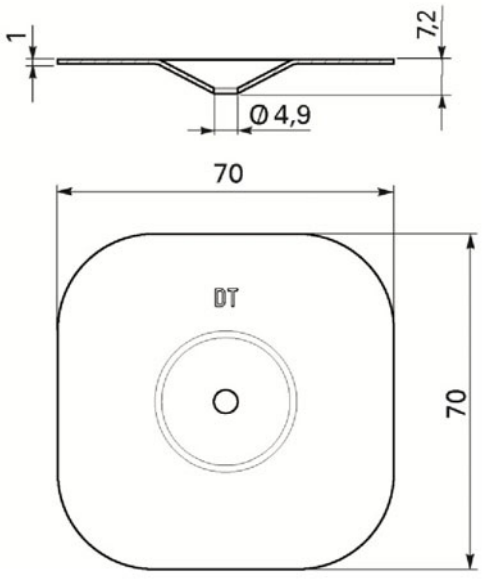


Sarnafast SF-4,8xL



Sarnafast DT-70x70



SFS intec flat roof fasteners

Combination 77
Sarnafast SF-4,8xL
Sarnafast DT-70x70

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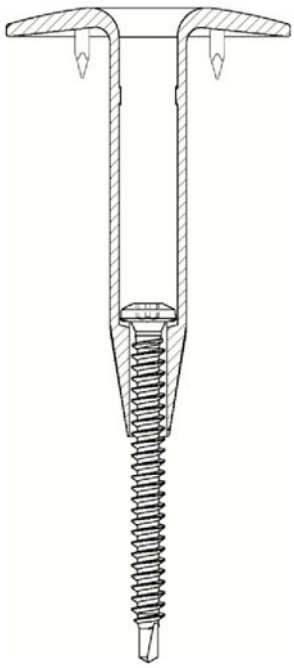
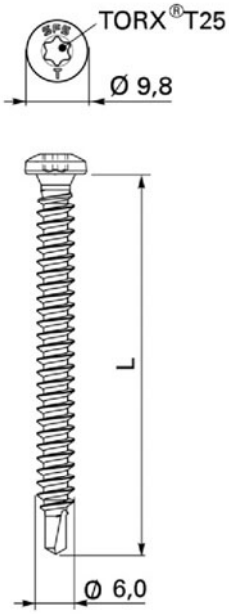
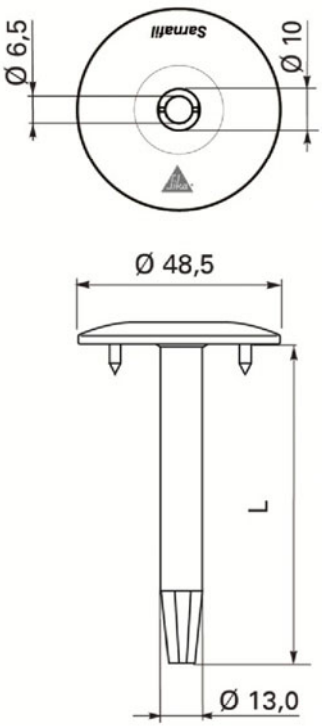


Sarnafast SBF-6,0xL



Sarnafast Tube SFT-50xL



SFS intec flat roof fasteners

Combination 78
Sarnafast SBF-6,0xL
Sarnafast Tube SFT-50xL

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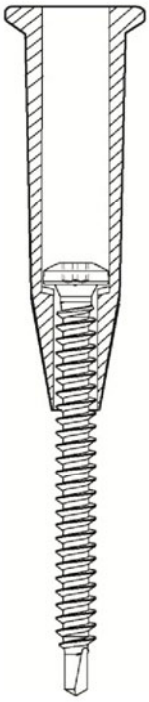
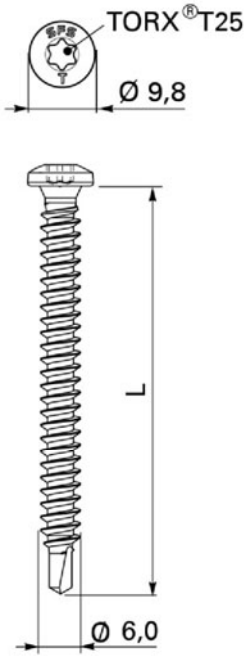
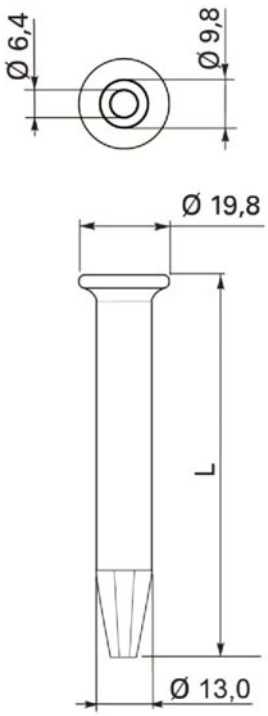


Sarnafast SBF-6,0xL



Sarnabar Tube SBT-20xL



SFS intec flat roof fasteners

Combination 79
Sarnafast SBF-6,0xL
Sarnabar Tube SBT-20xL

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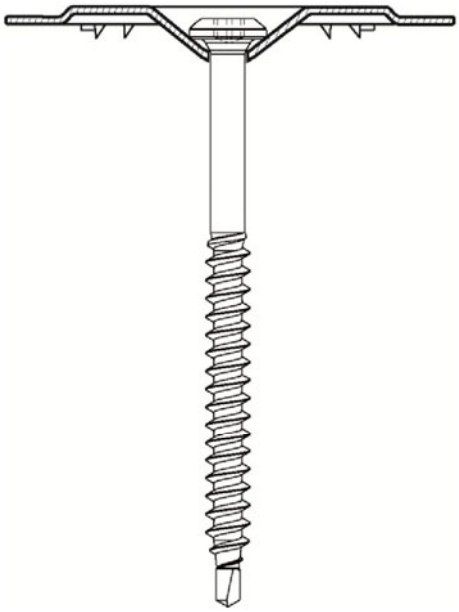
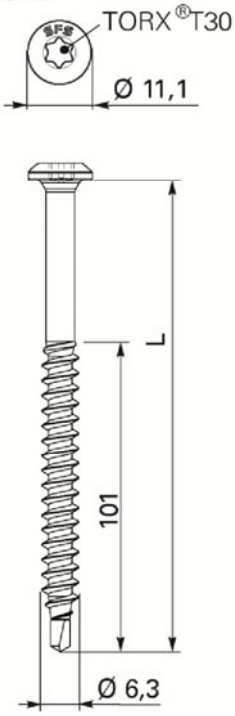
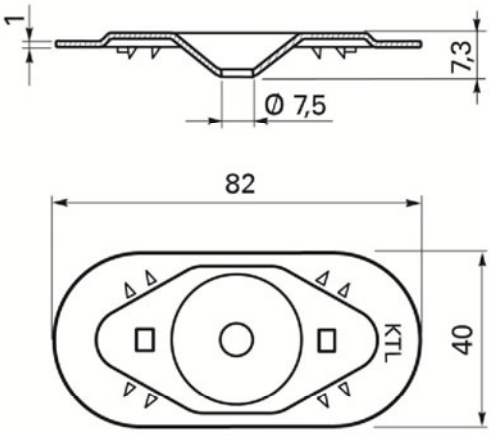


Sarnafast SB-6,3xL



Sarnafast KTL-82x40



SFS intec flat roof fasteners

Combination 80
Sarnafast SB-6,3xL
Sarnafast KTL-82x40

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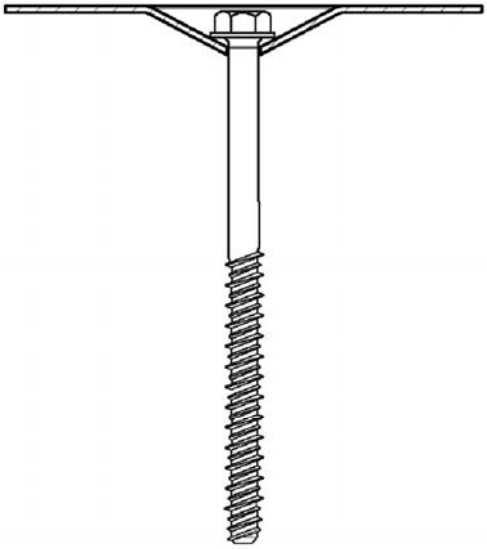
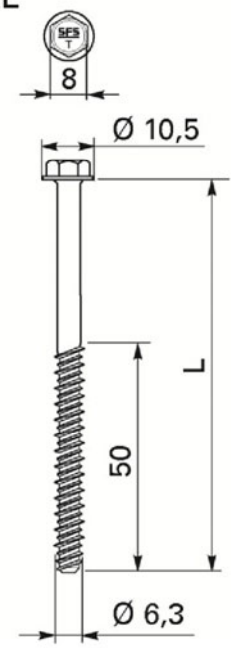
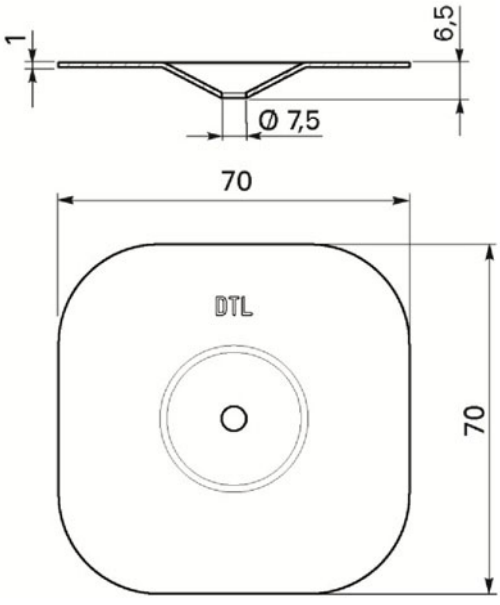


TI-6,3xL



Sarnafast DTL-70x70



SFS intec flat roof fasteners

Combination 81
SFS intec TI-6,3xL
Sarnafast DTL-70x70

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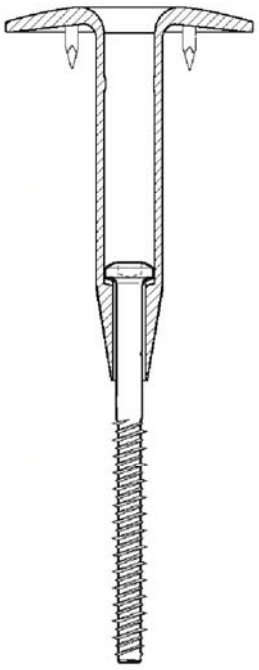
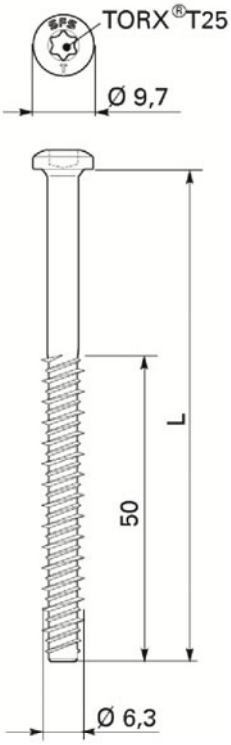
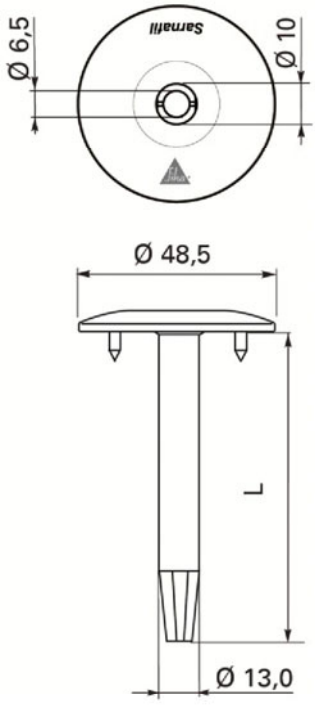


TI-T25-6,3xL



Sarnafast Tube SFT-50xL



SFS intec flat roof fasteners

Combination 82
SFS intec TI-T25-6,3xL
Sarnafast Tube SFT-50xL

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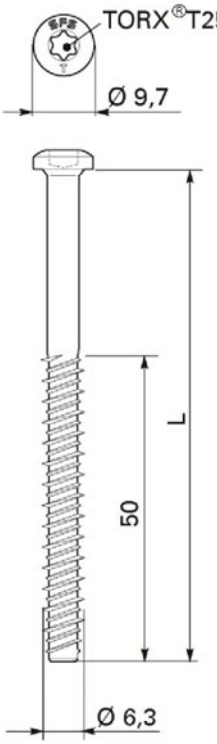
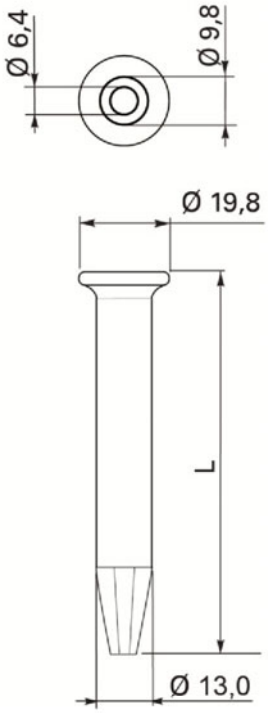
TI-T25-6,3xL



Sarnabar Tube SBT-20xL



SFS intec flat roof fasteners

Combination 83
SFS intec TI-T25-6,3xL
Sarnabar Tube SBT-20xL

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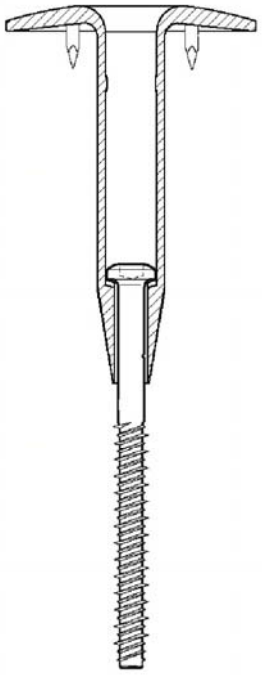
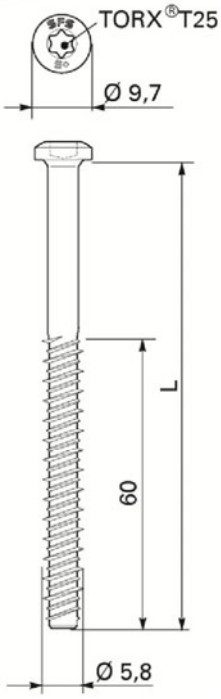
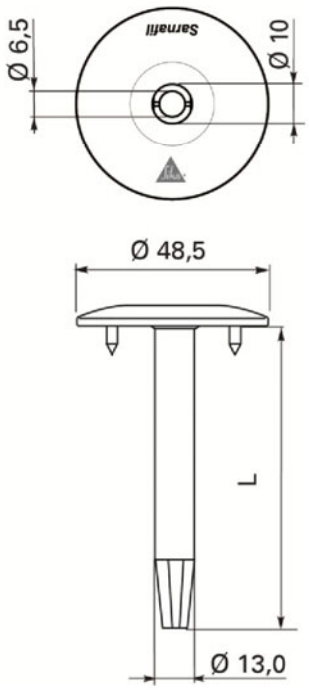


TI-S-T25-6,1xL



Sarnafast Tube SFT-50xL



SFS intec flat roof fasteners

Combination 84
SFS intec TI-S-T25-6,1xL
Sarnafast Tube SFT-50xL

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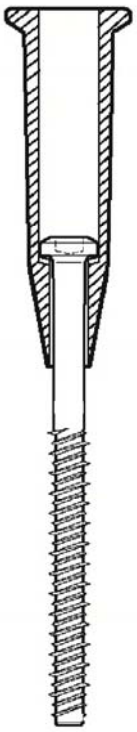
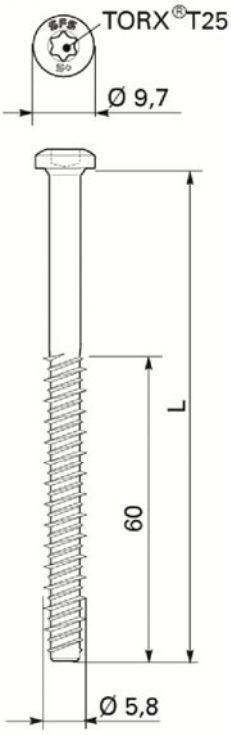
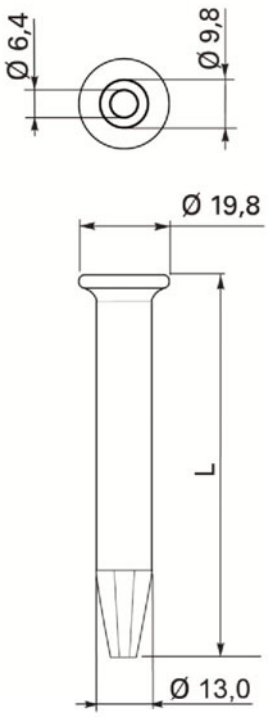


TI-S-T25-6,1xL



Sarnabar Tube SBT-20xL



SFS intec flat roof fasteners

Combination 85
SFS intec TI-S-T25-6,1xL
Sarnabar Tube SBT-20xL

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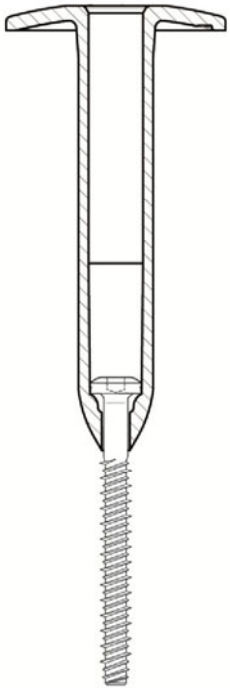
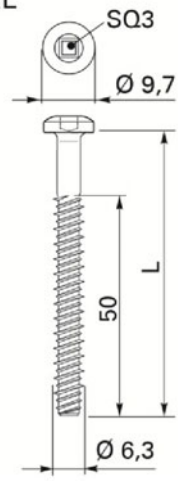
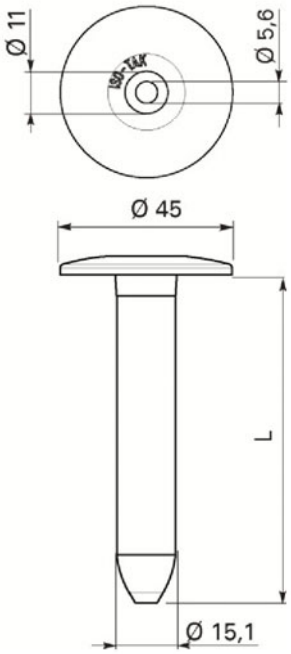


TI-S-Z10-6,3xL



R45xL

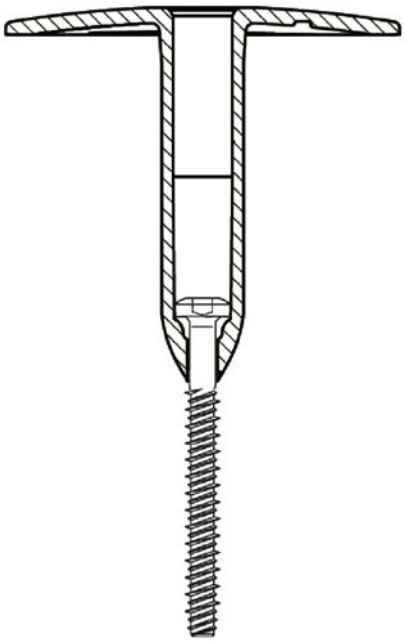


SFS intec flat roof fasteners

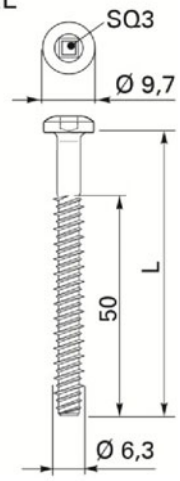
Combination 86
SFS intec TI-S-Z10-6,3xL
SFS intec R45xL

Annex 86

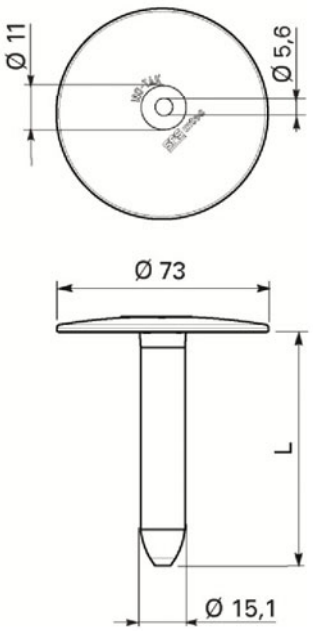
Deutsches Institut für Bautechnik DIBt



TI-S-Z10-6,3xL



R75xL

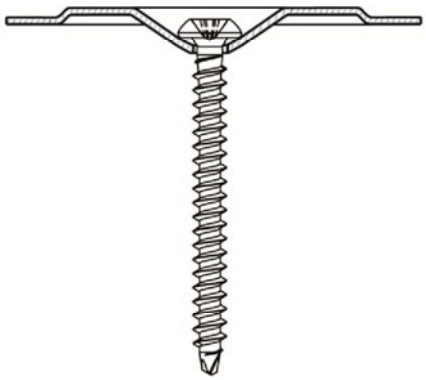


SFS intec flat roof fasteners

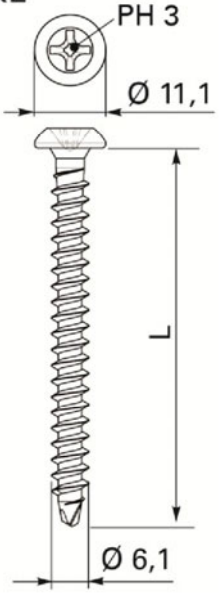
Combination 87
SFS intec TI-S-Z10-6,3xL
SFS intec R75xL

Annex 87

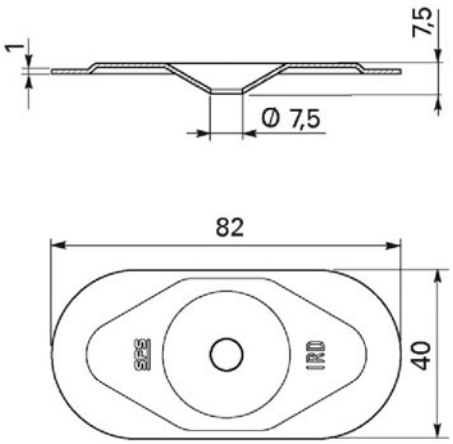
Deutsches Institut für Bautechnik DIBt



IF2-6,1xL



IRD-82x40



SFS intec flat roof fasteners

Combination 88
SFS intec IF2-6,1xL
SFS intec IRD-82x40

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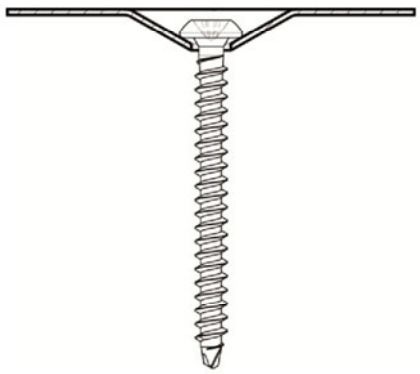
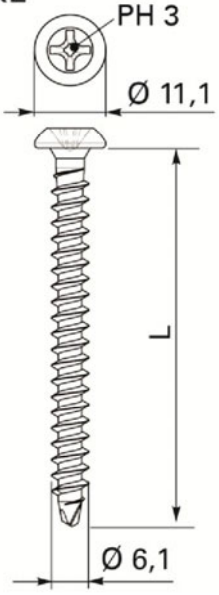
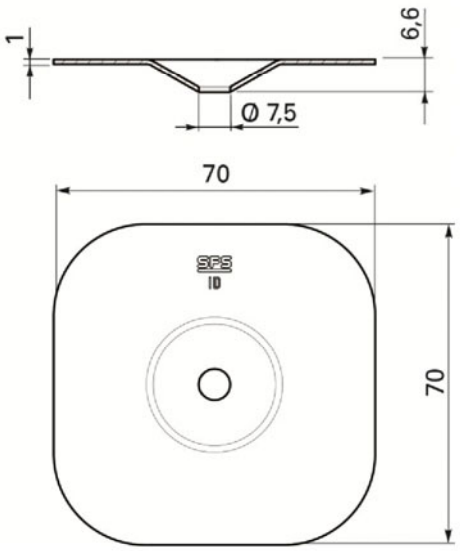


IF2-6,1xL



ID-70x70



SFS intec flat roof fasteners

Combination 89
SFS intec IF2-6,1xL
SFS intec ID-70x70

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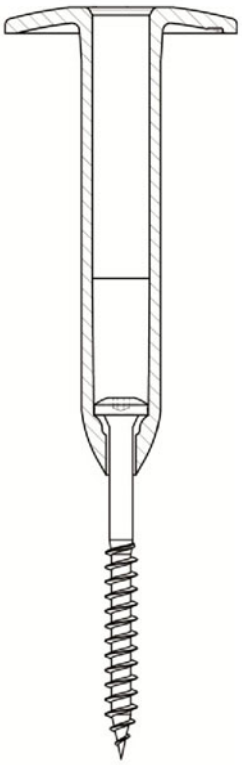
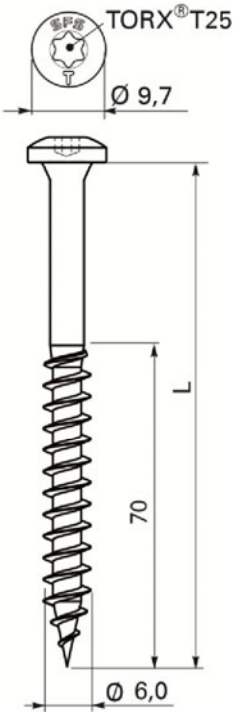
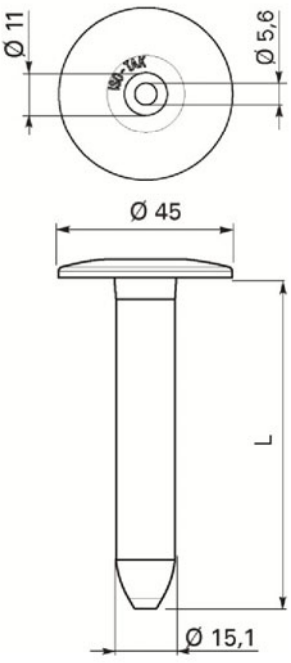
Deutsches Institut für Bautechnik DIBt



TS-T25-6,0xL



R45xL



SFS intec flat roof fasteners

Combination 90
SFS intec TS-T25-6,0xL
SFS intec R45xL

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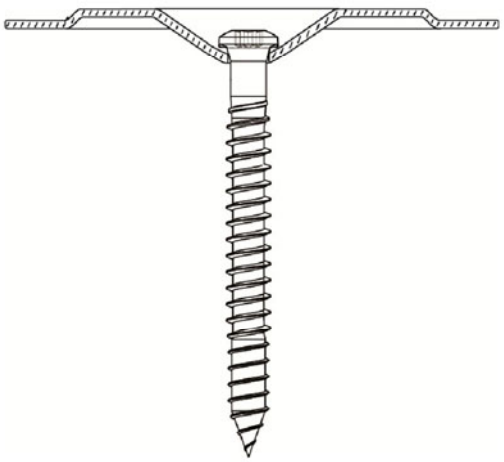
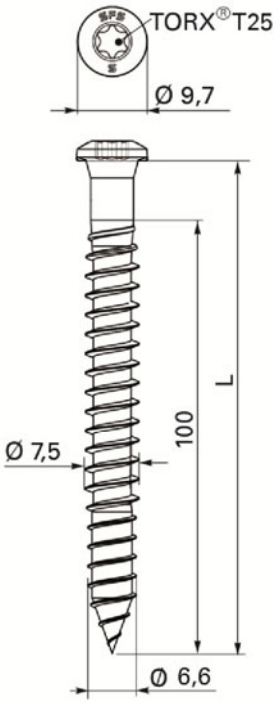
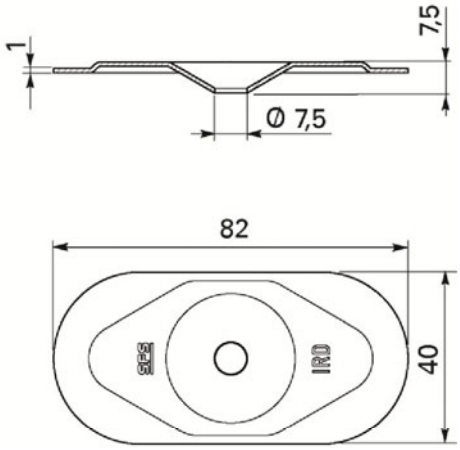
DIBt



FB-S-T25-7,5xL



IRD-82x40



SFS intec flat roof fasteners

Combination 91
SFS intec FB-S-T25-7,5xL
SFS intec IRD-82x40

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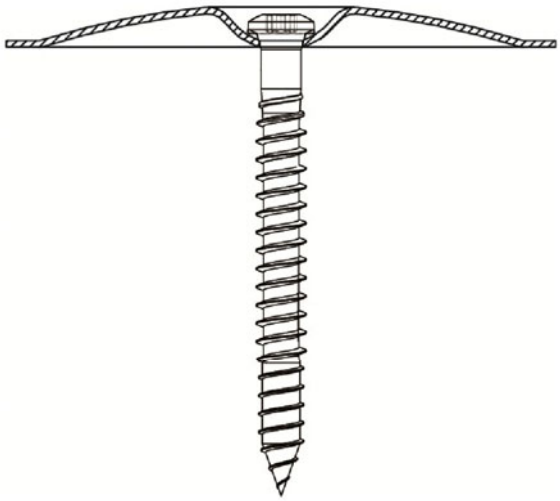
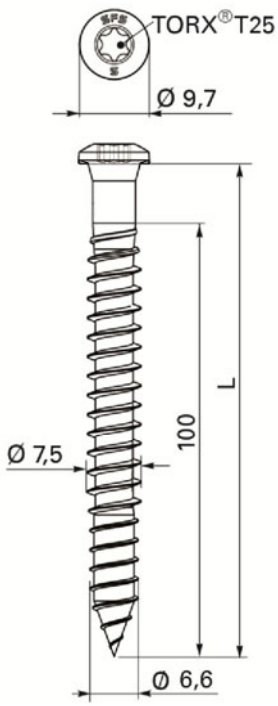
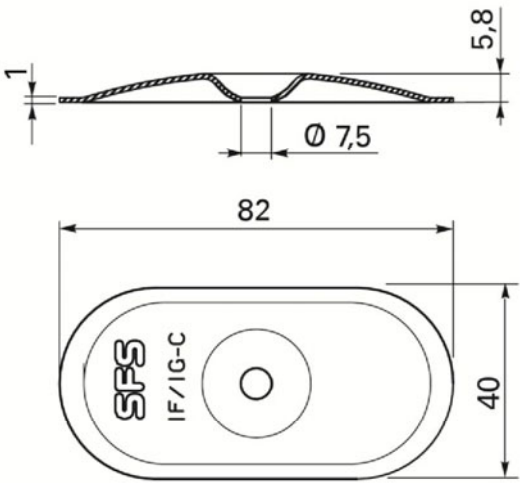


FB-S-T25-7,5xL



IF/IG-C-82x40



SFS intec flat roof fasteners

Combination 92
SFS intec FB-S-T25-7,5xL
SFS intec IF/IG-C-82x40

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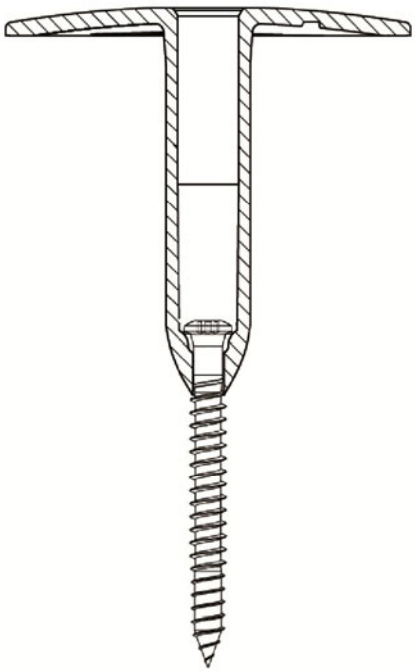
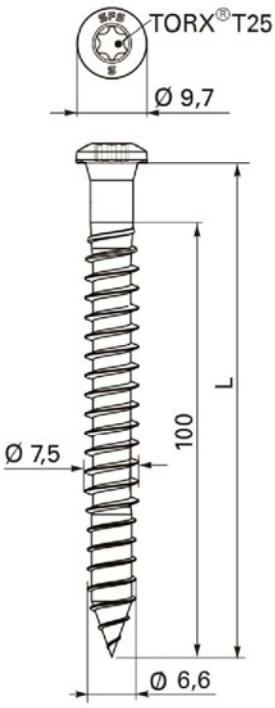
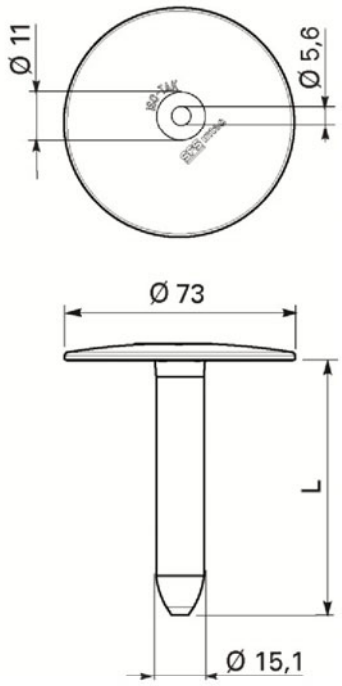
Deutsches Institut für Bautechnik DIBt



FB-S-T25-7,5xL



R75xL



SFS intec flat roof fasteners

Combination 93
SFS intec FB-S-T25-7,5xL
SFS intec R75xL

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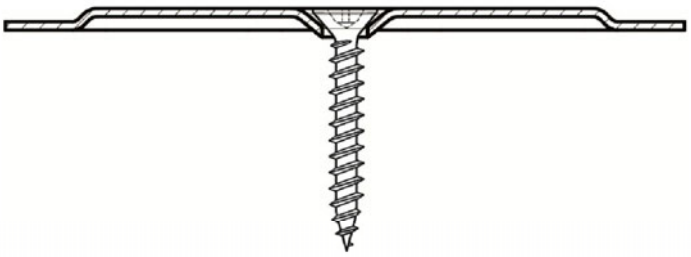
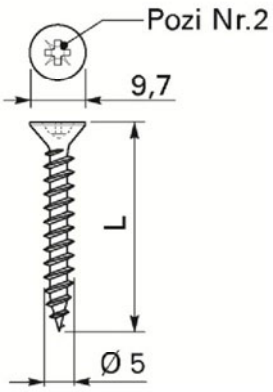
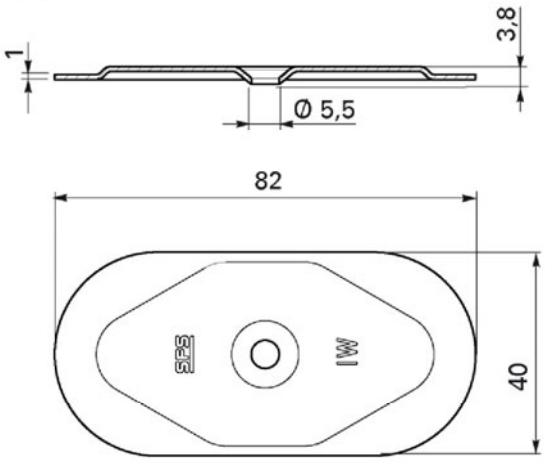


IW-S-5,0xL



IW-82x40



SFS intec flat roof fasteners

Combination 94
SFS intec IW-S-5,0xL
SFS intec IW-82x40

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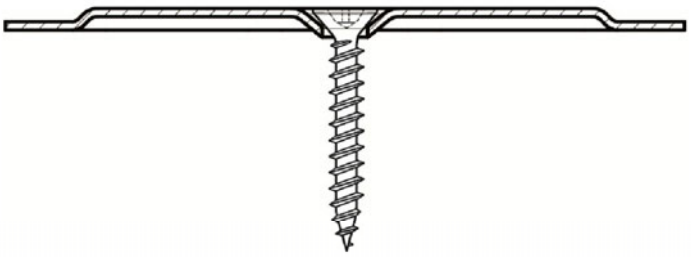
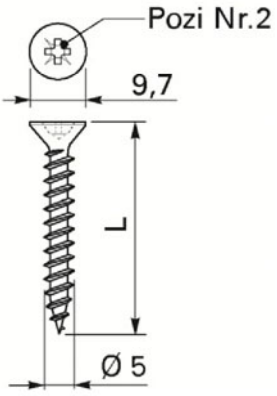
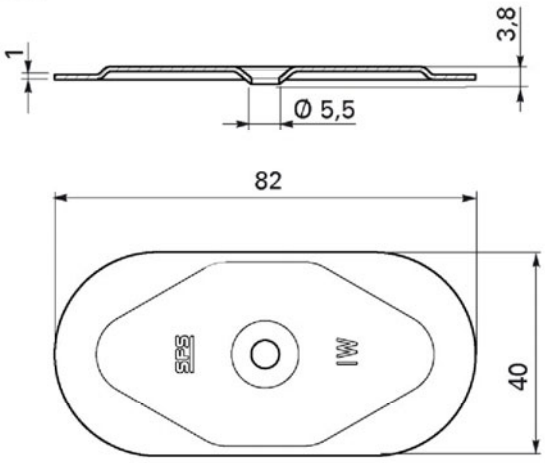
Deutsches Institut für Bautechnik DIBt



IW-T-5,0xL



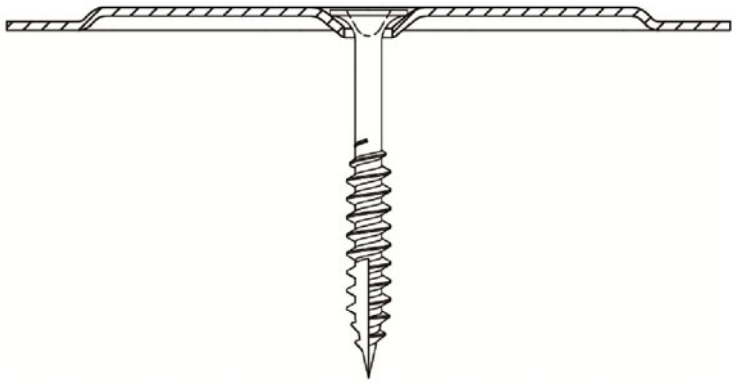
IW-82x40



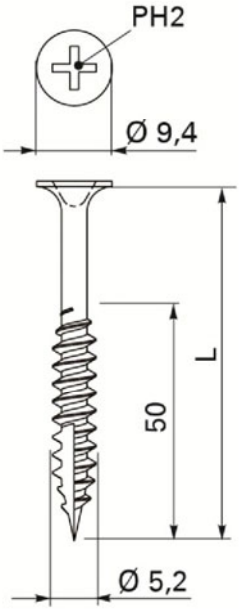
SFS intec flat roof fasteners

Combination 95
SFS intec IW-T-5,0xL
SFS intec IW-82x40

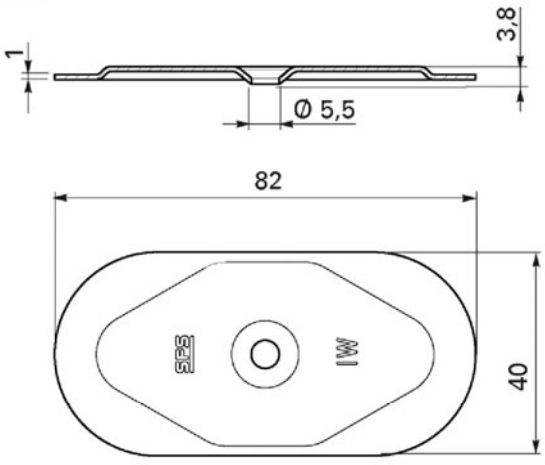
Annex 95



IWF-5,2xL



IW-82x40

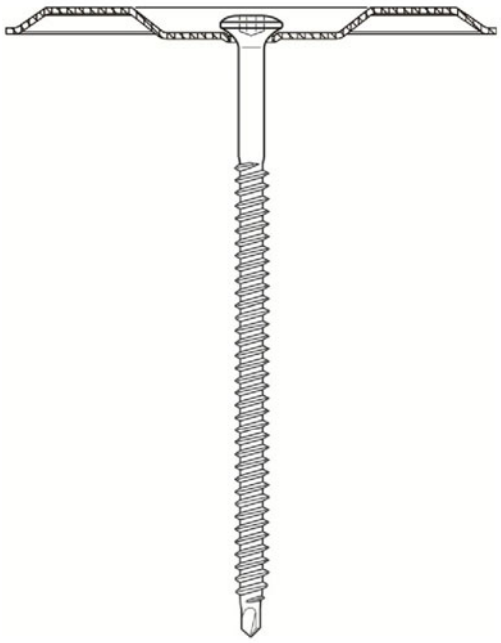


SFS intec flat roof fasteners

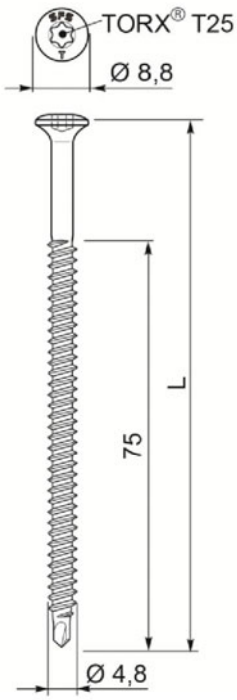
Combination 96
SFS intec IWF-5,2xL
SFS intec IW-82x40

Annex 96

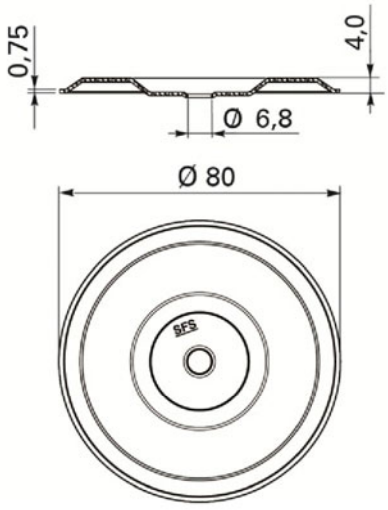
Deutsches Institut für Bautechnik DIBt



BS-4,8xL



FI-P-6,8

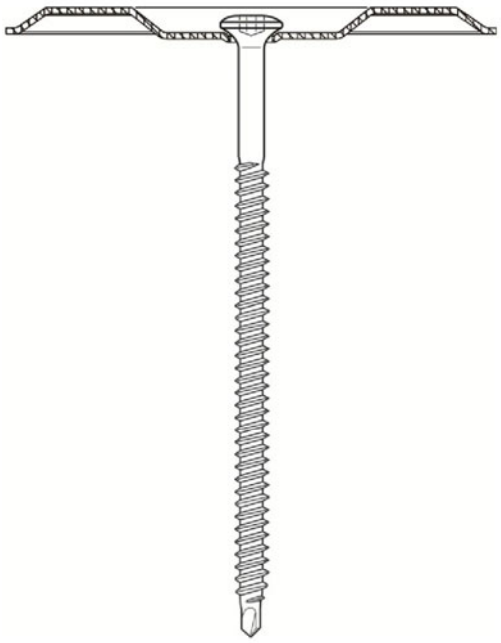


SFS intec flat roof fasteners

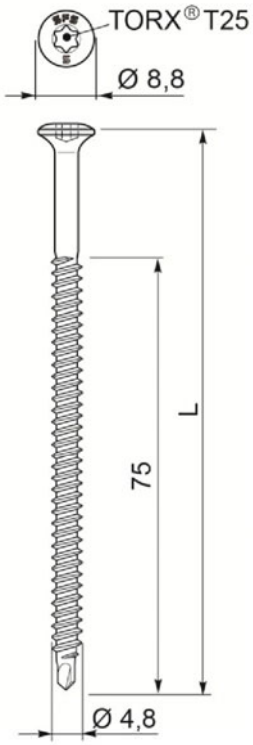
Combination 97
SFS intec BS-4,8xL
SFS intec FI-P-6,8

Annex 97

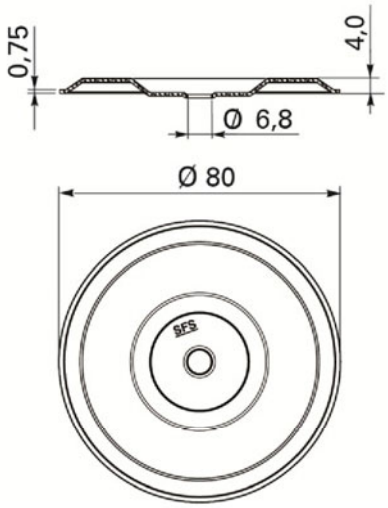
Deutsches Institut für Bautechnik DIBt



BS-S-4,8xL



FI-P-6,8



SFS intec flat roof fasteners

Combination 98
SFS intec BS-S-4,8xL
SFS intec FI-P-6,8

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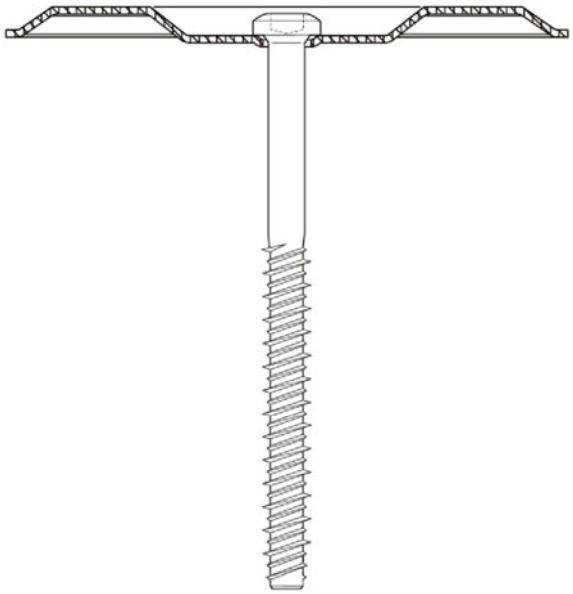
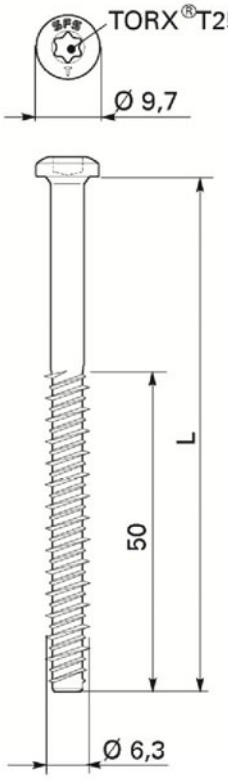
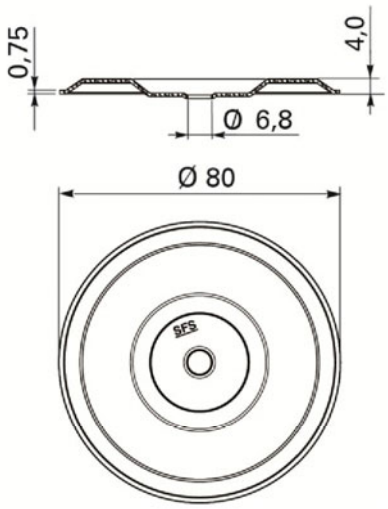


TI-T25-6,3xL



FI-P-6,8



SFS intec flat roof fasteners

Combination 99
SFS intec TI-T25-6,3xL
SFS intec FI-P-6,8

Annex 99

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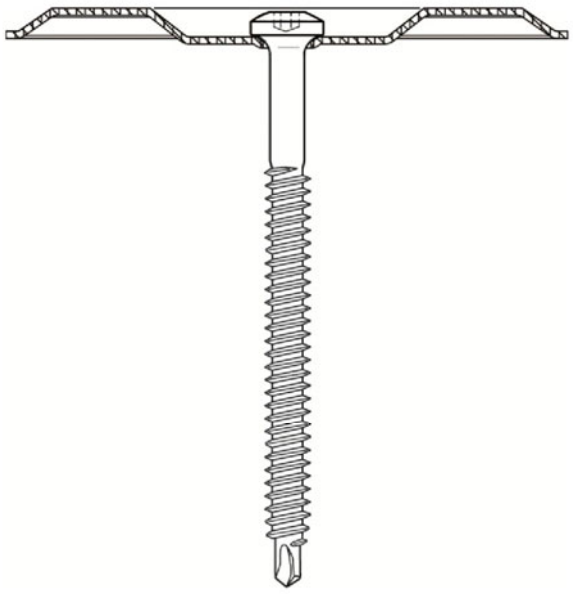
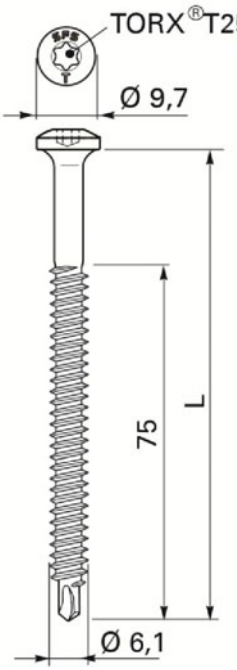
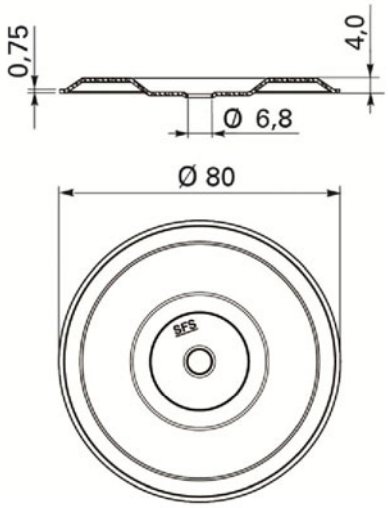


BS-6,1xL



FI-P-6,8



SFS intec flat roof fasteners

Combination 100
SFS intec BS-6,1xL
SFS intec FI-P-6,8

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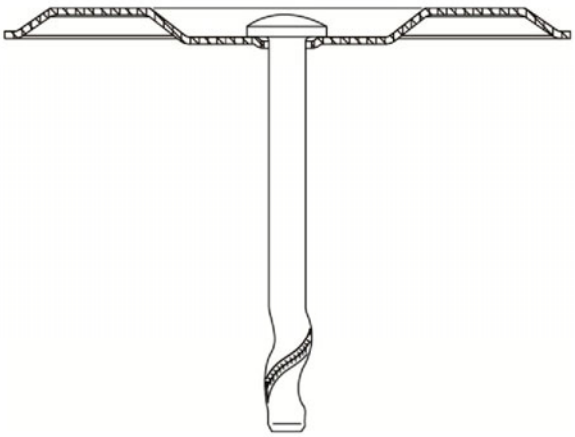
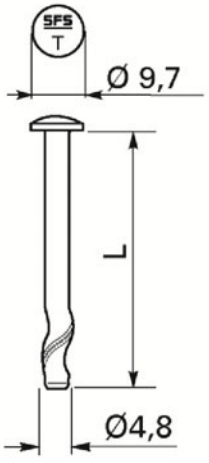
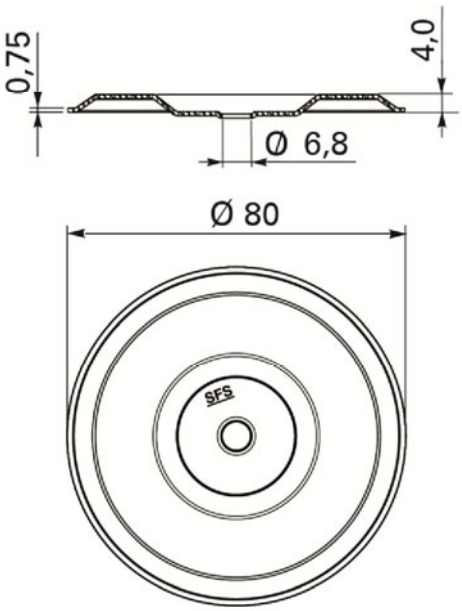
Deutsches Institut für Bautechnik DIBt



DT-4,8xL



FI-P-6,8

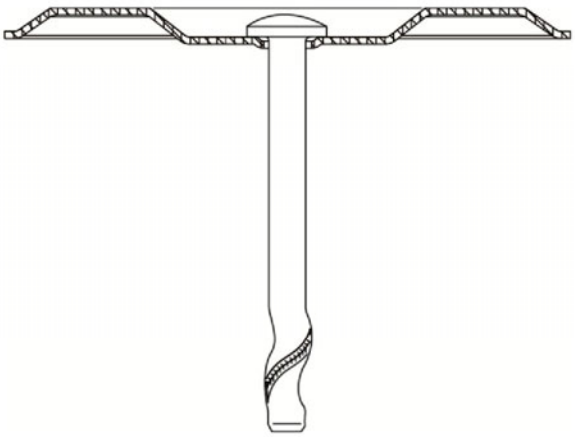


SFS intec flat roof fasteners

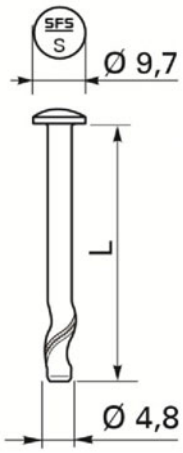
Combination 101
SFS intec DT-4,8xL
SFS intec FI-P-6,8

Annex 101

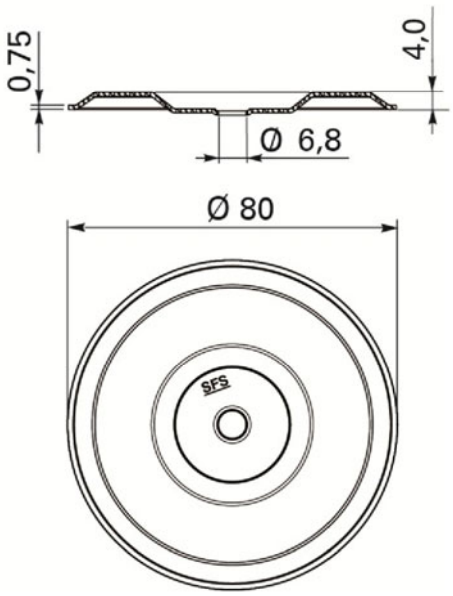
Deutsches Institut für Bautechnik DIBt



DT-S-4,8xL



FI-P-6,8

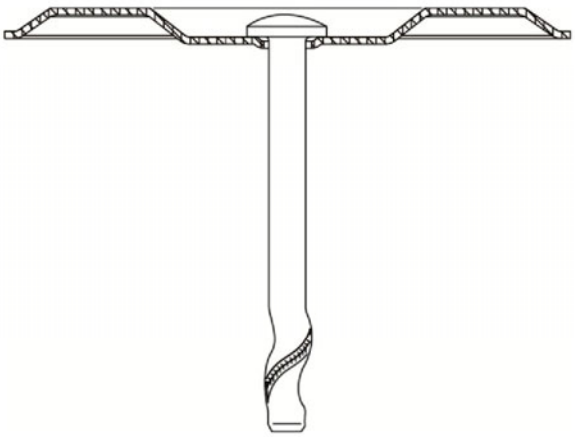


SFS intec flat roof fasteners

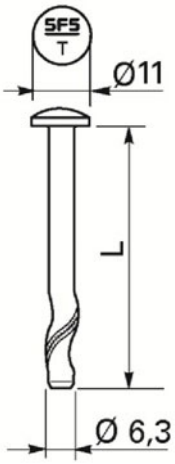
Combination 102
SFS intec DT-S-4,8xL
SFS intec FI-P-6,8

Annex 102

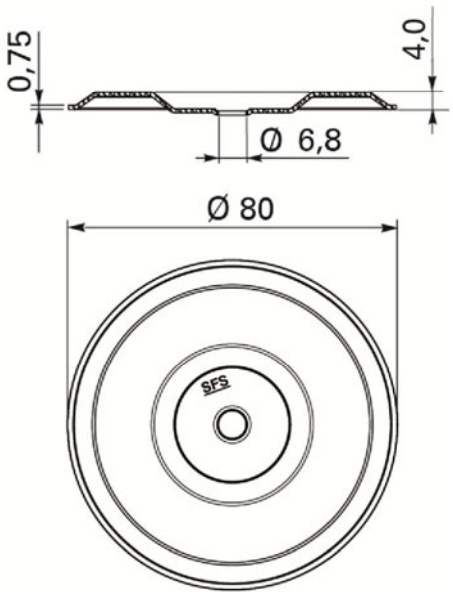
Deutsches Institut für Bautechnik DIBt



DT-6,3xL



FI-P-6,8

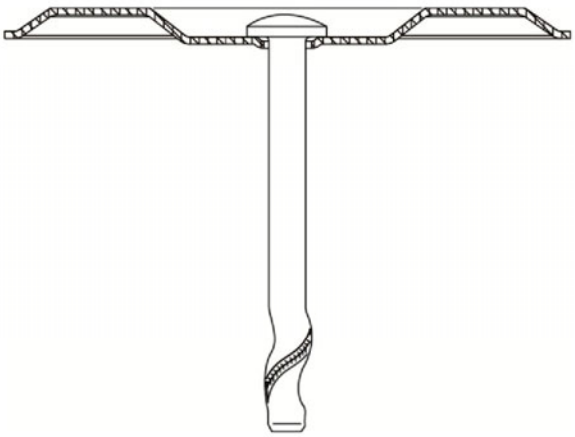


SFS intec flat roof fasteners

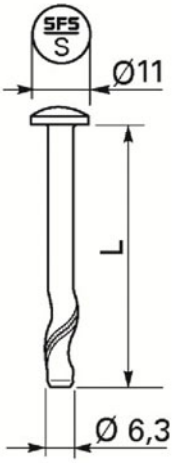
Combination 103
SFS intec DT-6,3xL
SFS intec FI-P-6,8

Annex 103

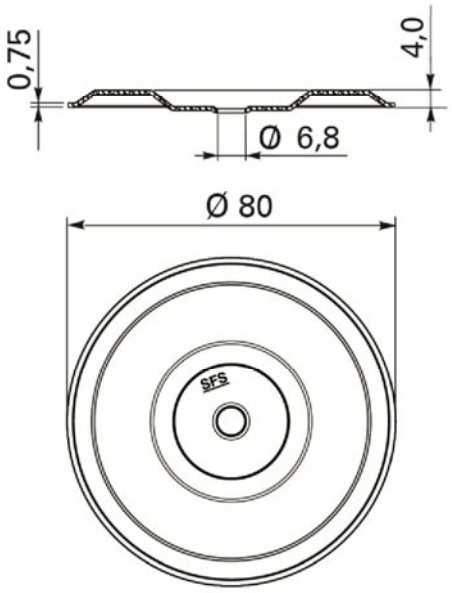
Deutsches Institut für Bautechnik DIBt



DT-S-6,3xL



FI-P-6,8



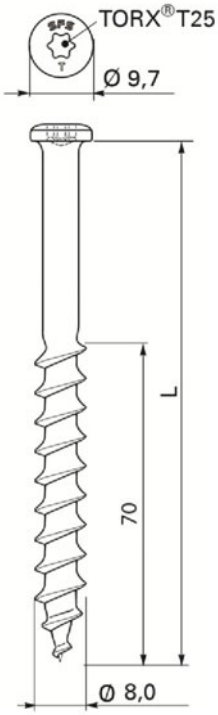
SFS intec flat roof fasteners

Combination 104
SFS intec DT-S-6,3xL
SFS intec FI-P-6,8

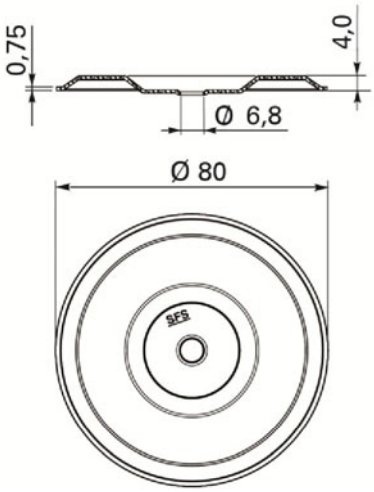
Annex 104

Deutsches Institut für Bautechnik DIBt

LBS-T25-8,0xL



FI-P-6,8



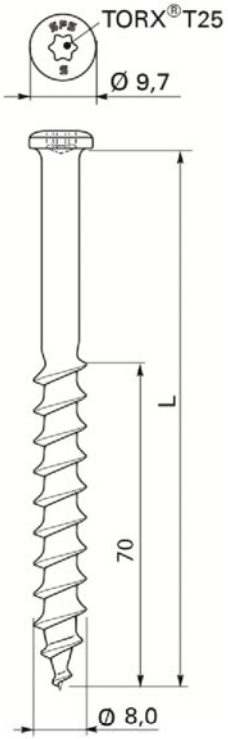
SFS intec flat roof fasteners

Combination 105
SFS intec LBS-T25-8,0xL
SFS intec FI-P-6,8

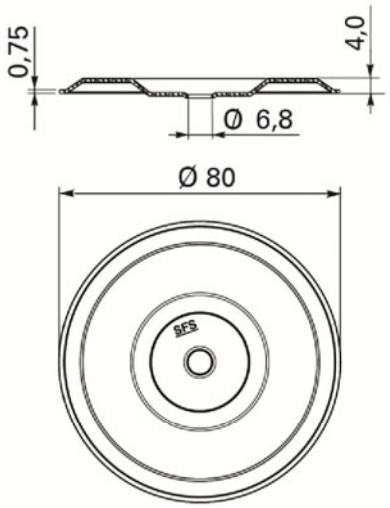
Annex 105

Deutsches Institut für Bautechnik DIBt

LBS-S-T25-8,0xL



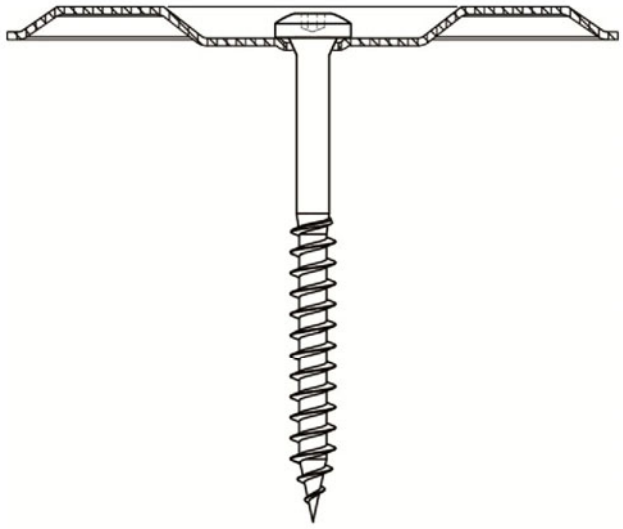
FI-P-6,8



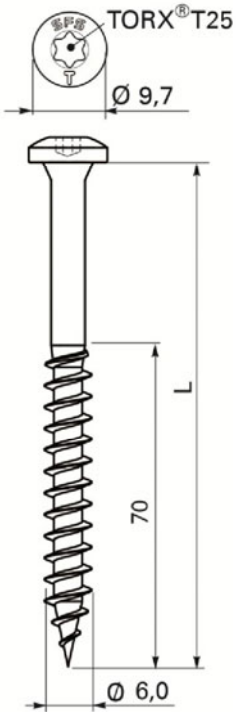
SFS intec flat roof fasteners

Combination 106
SFS intec LBS-S-T25-8,0xL
SFS intec FI-P-6,8

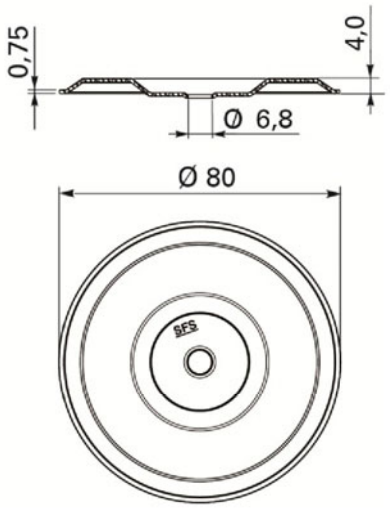
Annex 106



TS-T25-6,0xL



FI-P-6,8

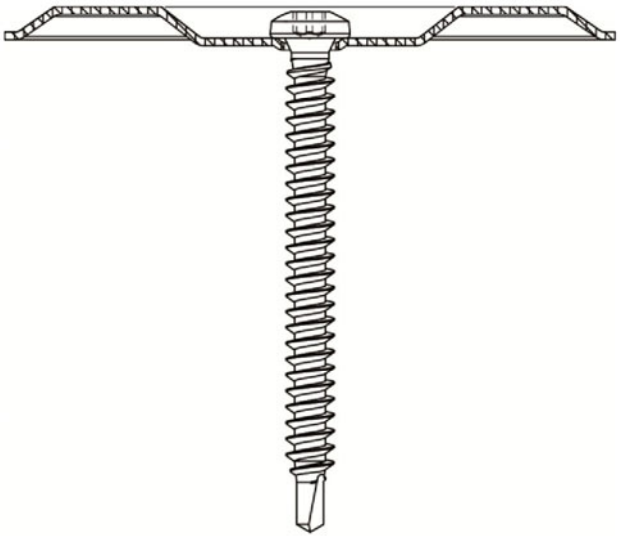


SFS intec flat roof fasteners

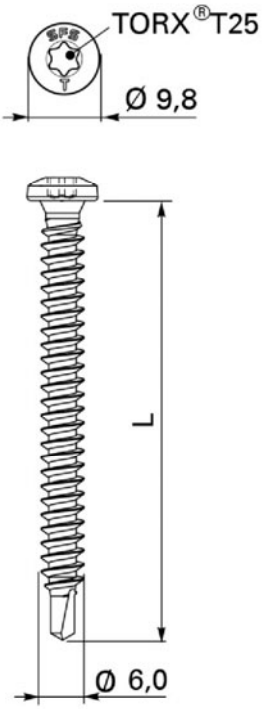
Combination 107
SFS intec TS-T25-6,0xL
SFS intec FI-P-6,8

Annex 107

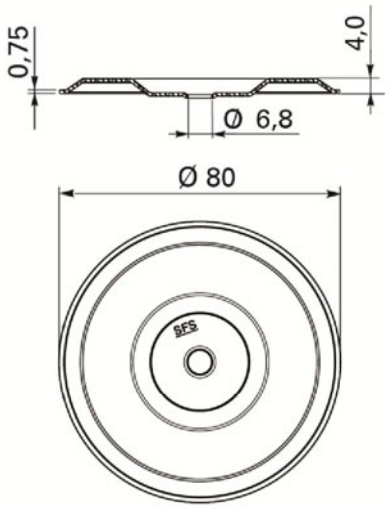
Deutsches Institut für Bautechnik DIBt



Sarnafast SBF-6,0xL



FI-P-6,8

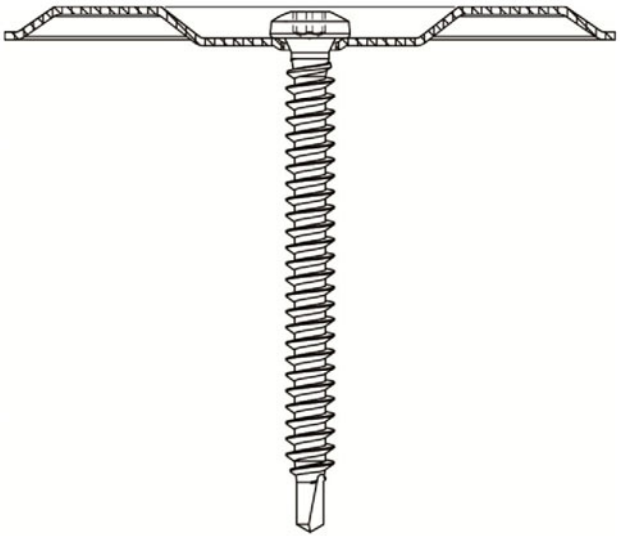


SFS intec flat roof fasteners

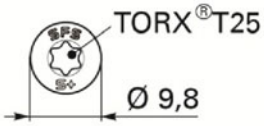
Combination 108
Sarnafast SBF-6,0xL
SFS intec FI-P-6,8

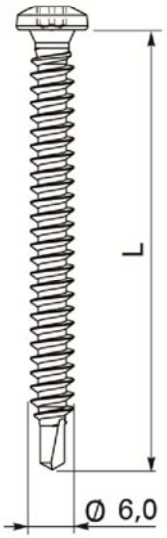
Annex 108

Deutsches Institut für Bautechnik DIBt

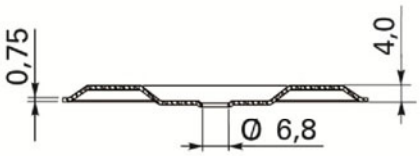


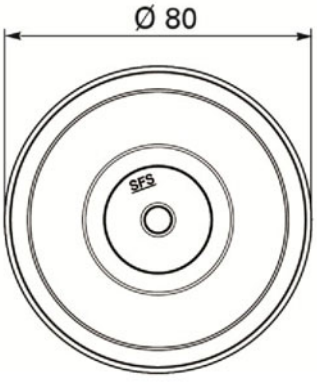
Sarnafast SBF-S-6,0xL





FI-P-6,8





SFS intec flat roof fasteners

Combination 109
Sarnafast SBF-S-6,0xL
SFS intec FI-P-6,8

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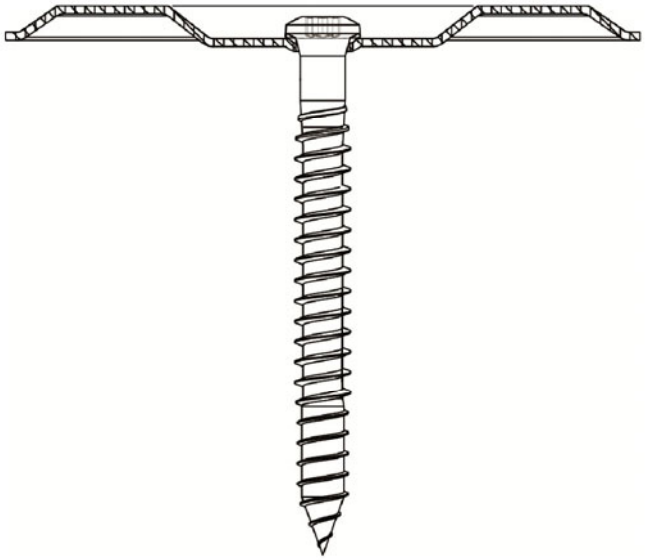
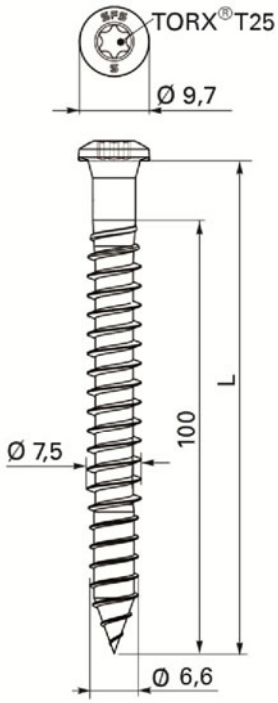
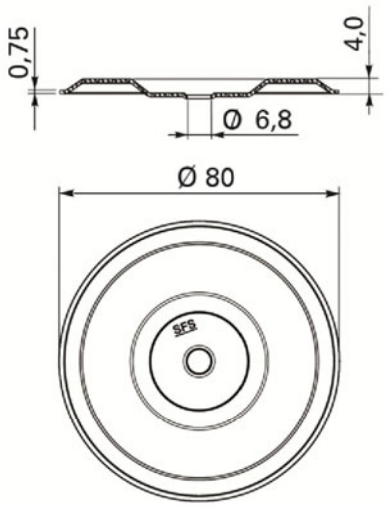


FB-S-T25-7,5xL



FI-P-6,8



SFS intec flat roof fasteners

Combination 110
SFS intec FB-S-T25-7,5xL
SFS intec FI-P-6,8

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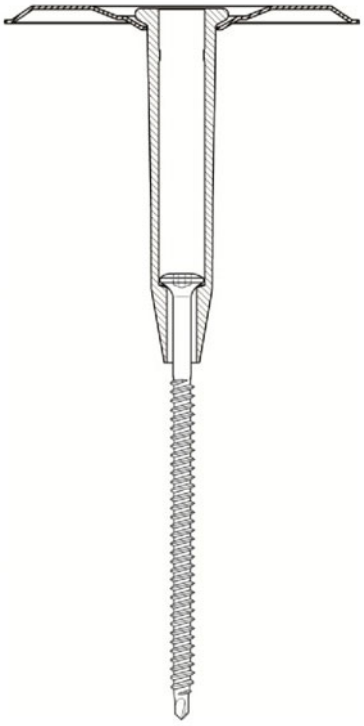
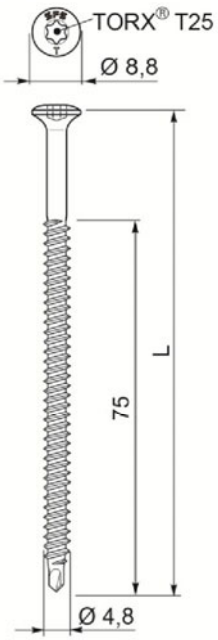
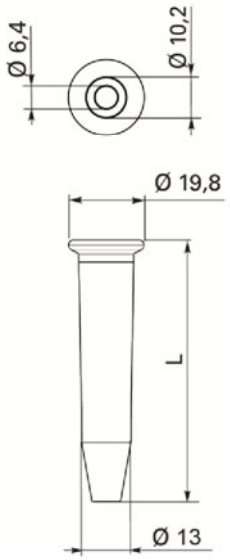
Deutsches Institut für Bautechnik DIBt



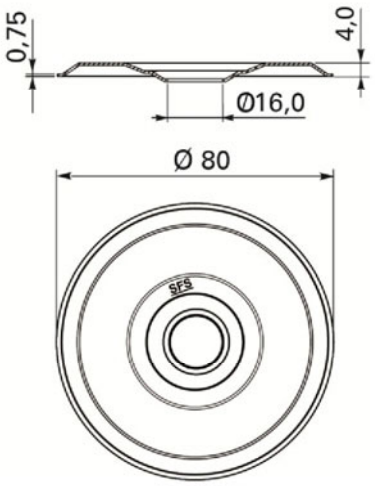
BS-4,8xL



FI-R-20xL



FI-P-16,0

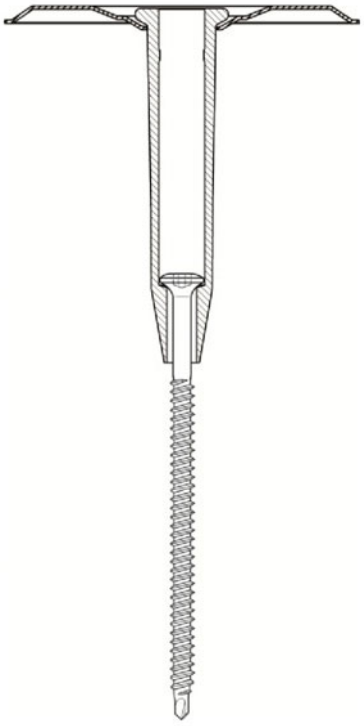


SFS intec flat roof fasteners

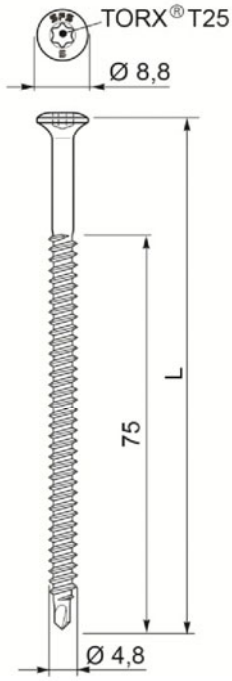
Combination 111
SFS intec BS-4,8xL
SFS intec FI-R-20xL
SFS intec FI-P-16,0

Annex 111

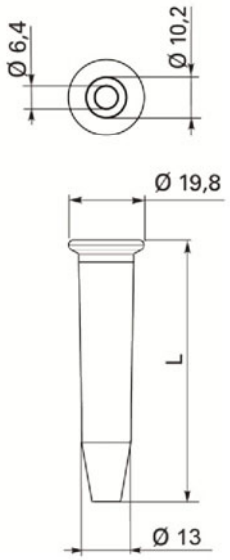
Deutsches Institut für Bautechnik DIBt



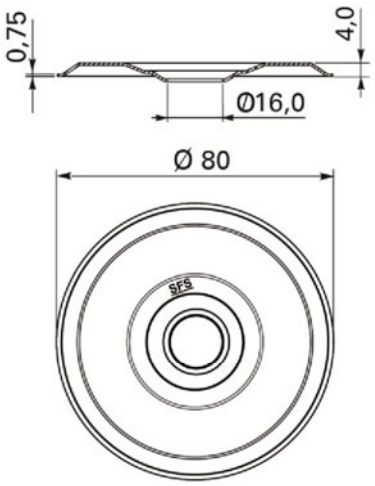
BS-S-4,8xL



FI-R-20xL



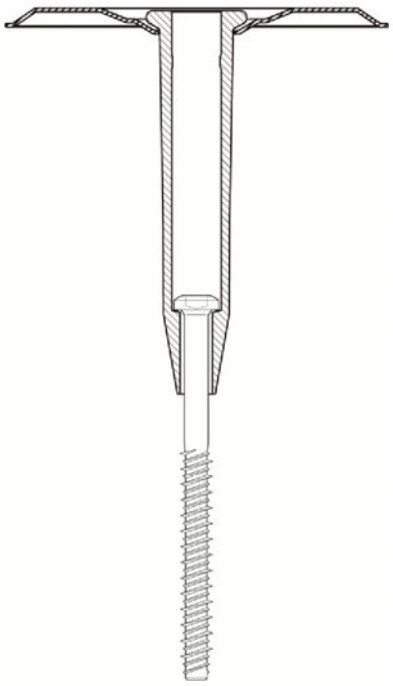
FI-P-16,0



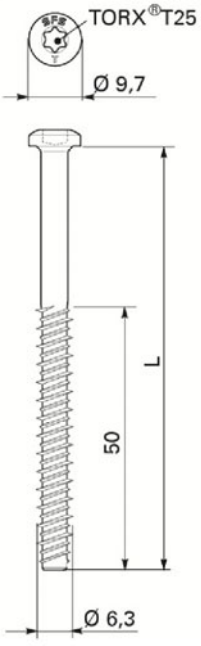
SFS intec flat roof fasteners

Combination 112
SFS intec BS-S-4,8xL
SFS intec FI-R-20xL
SFS intec FI-P-16,0

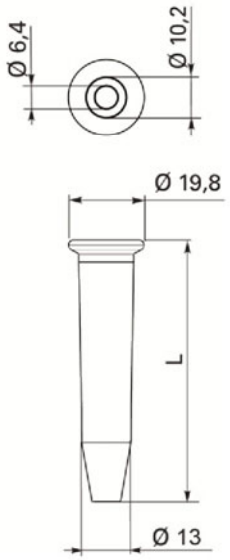
Annex 112



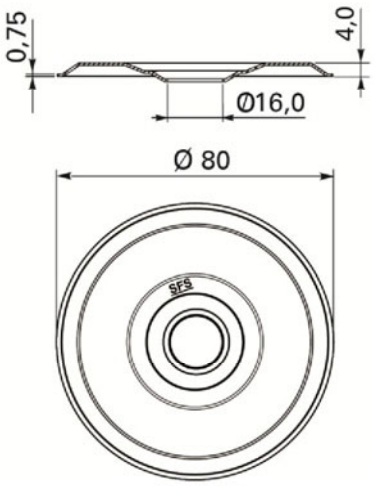
TI-T25-6,3xL



FI-R-20xL



FI-P-16,0

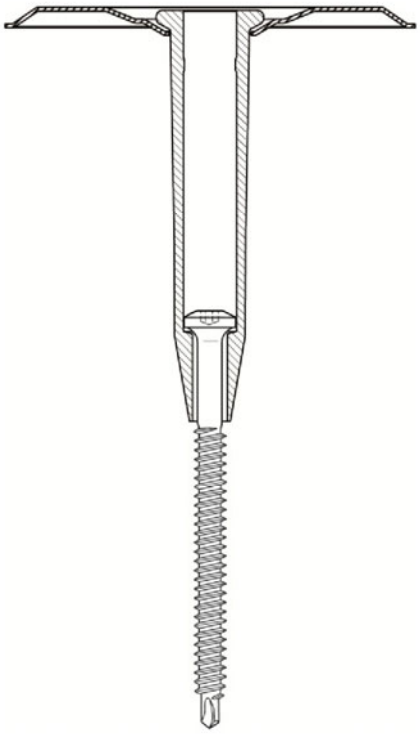


SFS intec flat roof fasteners

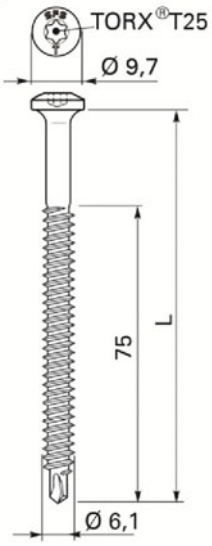
Combination 113
SFS intec TI-T25-6,3xL
SFS intec FI-R-20xL
SFS intec FI-P-16,0

Annex 113

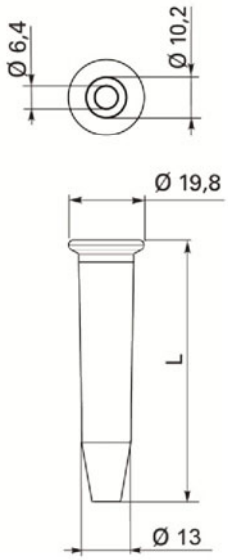
Deutsches Institut für Bautechnik DIBt



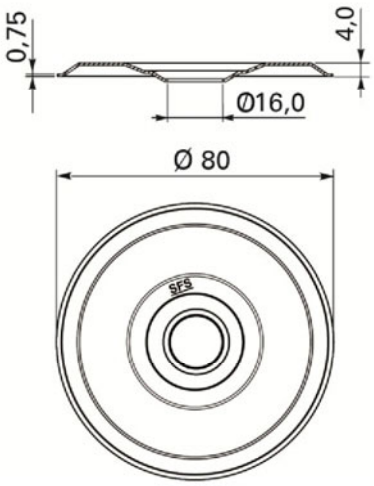
BS-6,1xL



FI-R-20xL



FI-P-16,0

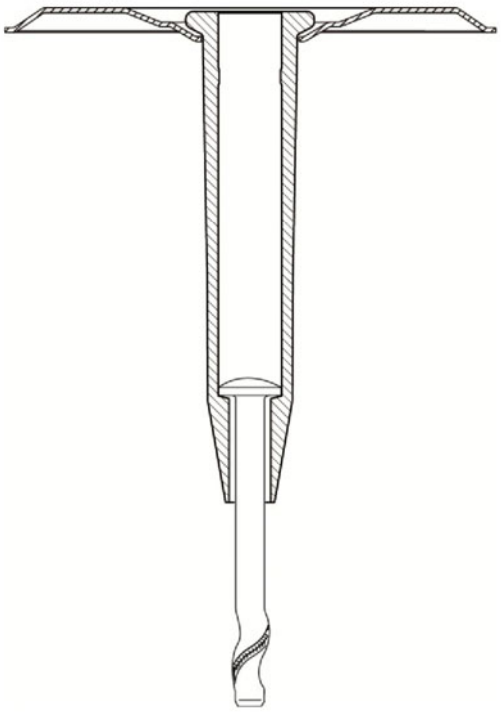


SFS intec flat roof fasteners

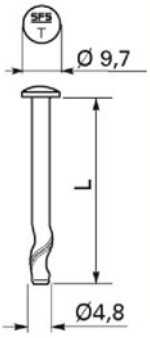
Combination 114
SFS intec BS-6,1xL
SFS intec FI-R-20xL
SFS intec FI-P-16,0

Annex 114

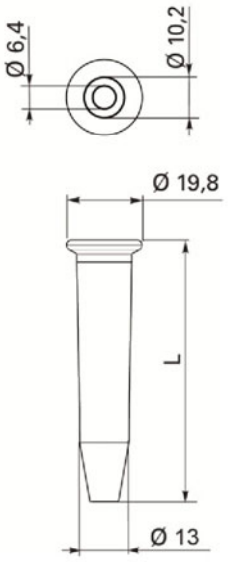
Deutsches Institut für Bautechnik DIBt



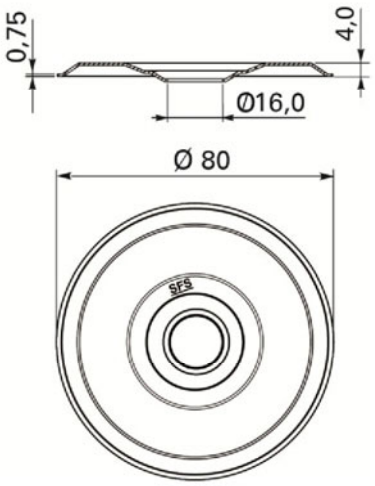
DT-4,8xL



FI-R-20xL



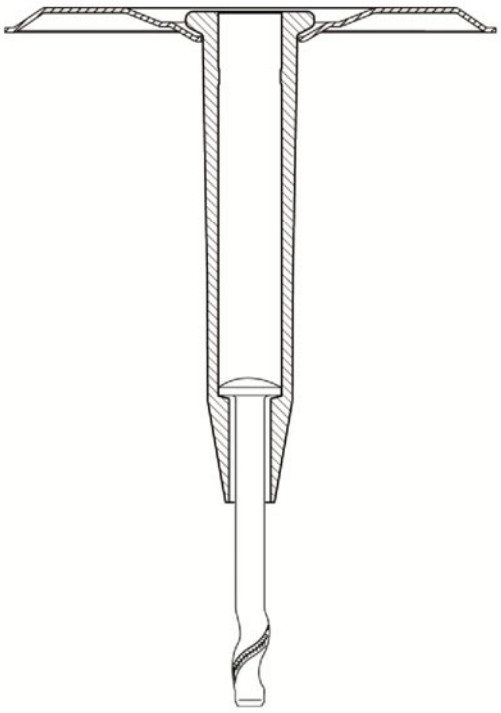
FI-P-16,0



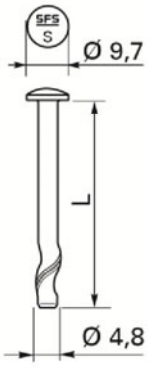
SFS intec flat roof fasteners

Combination 115
SFS intec DT-4,8xL
SFS intec FI-R-20xL
SFS intec FI-P-16,0

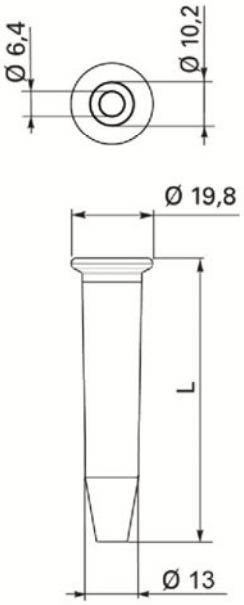
Annex 115



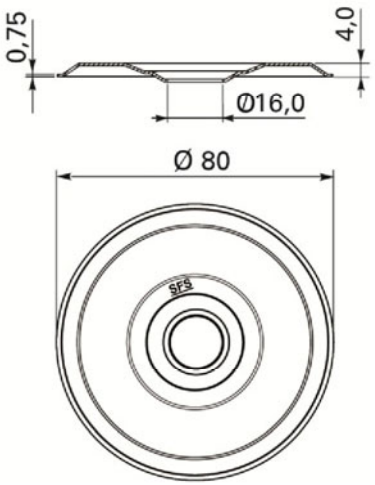
DT-S-4,8xL



FI-R-20xL



FI-P-16,0



SFS intec flat roof fasteners

Combination 116
SFS intec DT-S-4,8xL
SFS intec FI-R-20xL
SFS intec FI-P-16,0

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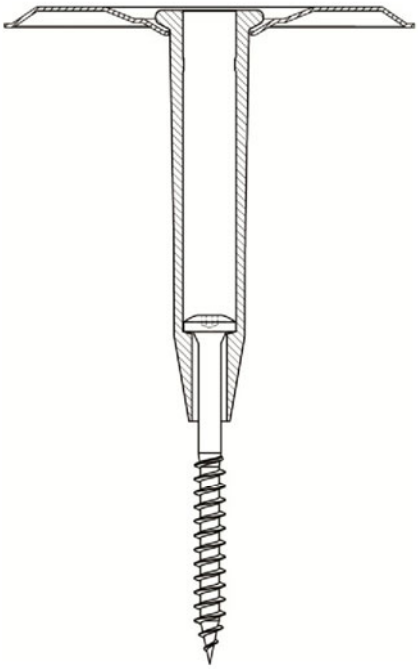
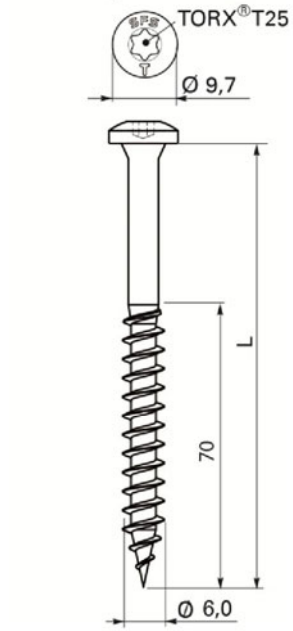
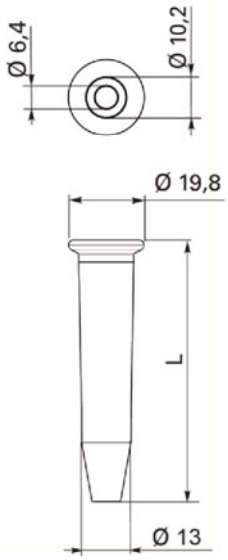


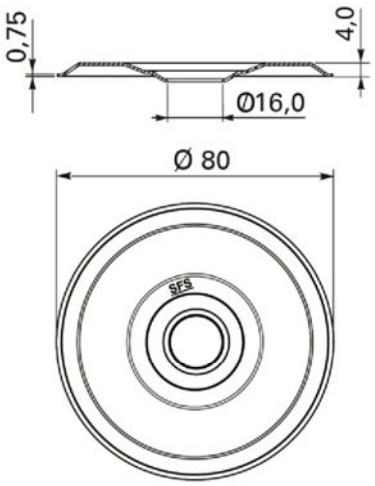
TS-T25-6,0xL



FI-R-20xL



FI-P-16,0



SFS intec flat roof fasteners

Combination 117
SFS intec TS-T25-6,0xL
SFS intec FI-R-20xL
SFS intec FI-P-16,0

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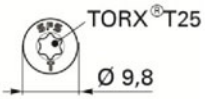
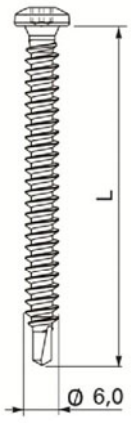
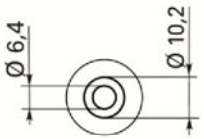
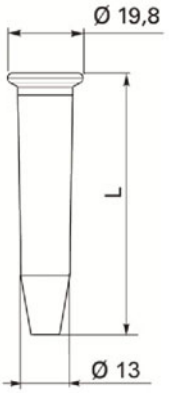
Sarnafast SBF-6,0xL



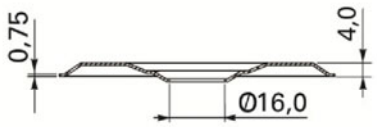


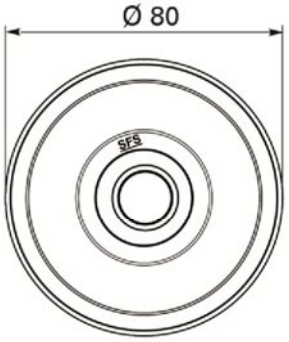
Fl-R-20xL





Fl-P-16,0





SFS intec flat roof fasteners

Combination 118
Sarnafast SBF-6,0xL
SFS intec Fl-R-20xL
SFS intec Fl-P-16,0

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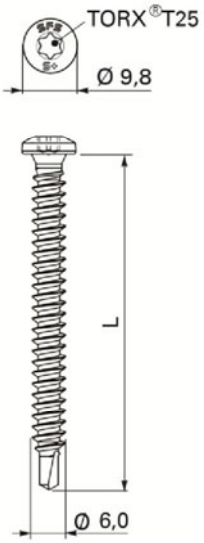
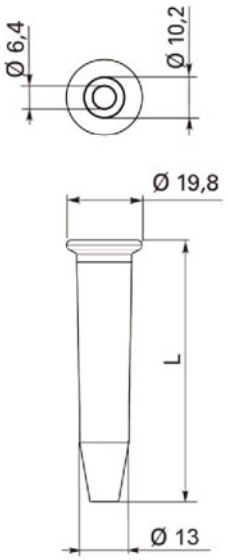
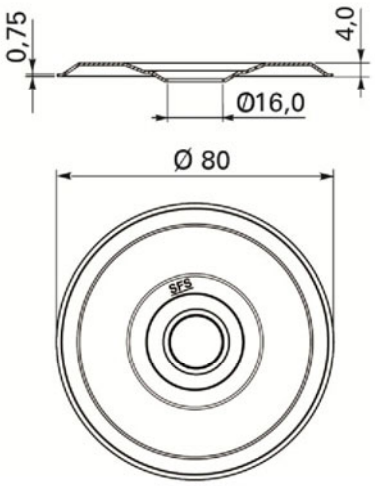
Sarnafast SBF-S-6,0xL



Fl-R-20xL



Fl-P-16,0



SFS intec flat roof fasteners

Combination 119
Sarnafast SBF-S-6,0xL
SFS intec Fl-R-20xL
SFS intec Fl-P-16,0

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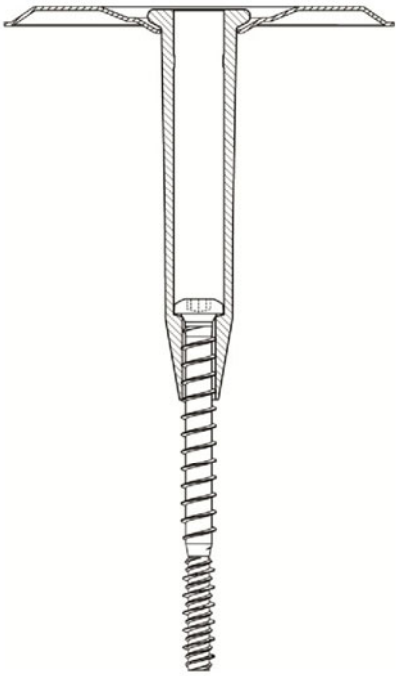
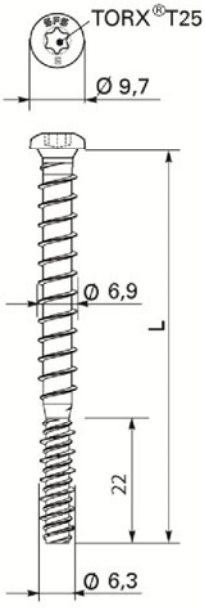
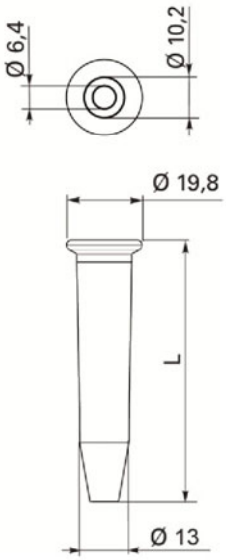


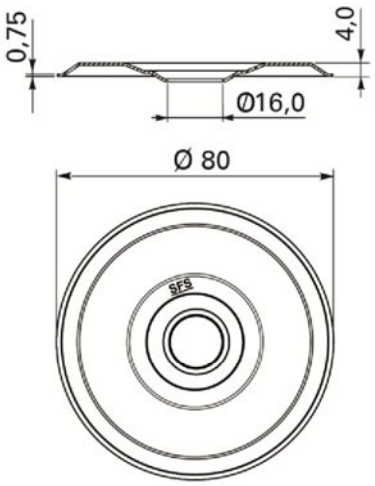
TIA-T25-6,3xL



FI-R-20xL



FI-P-16,0



SFS intec flat roof fasteners

Combination 120
SFS intec TIA-T25-6,3xL
SFS intec FI-R-20xL
SFS intec FI-P-16,0

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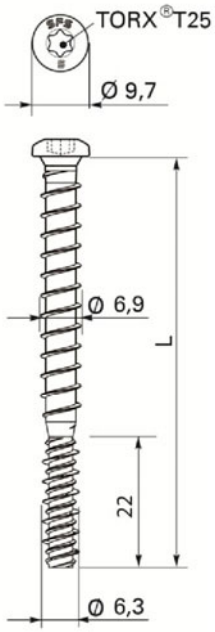
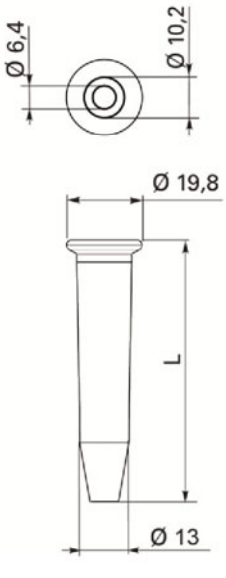
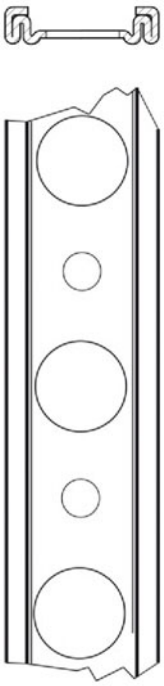
TIA-T25-6,3xL



FI-R-20xL



Sarnabar



SFS intec flat roof fasteners

Combination 121
SFS intec TIA-T25-6,3xL
SFS intec FI-R-20xL
Sarnabar

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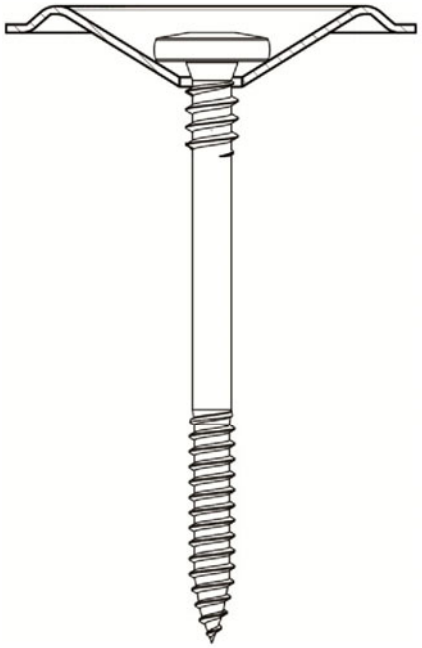
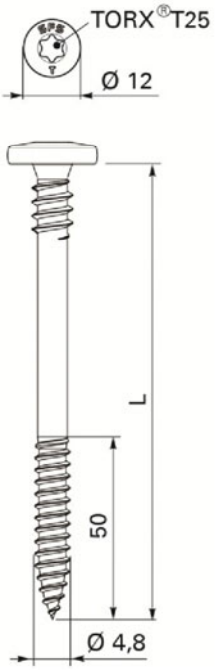
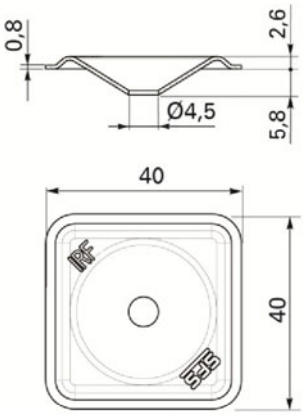


IRF-4,8xL



IRF-40x40



SFS intec flat roof fasteners

Combination 122
SFS intec IRF-4,8xL
SFS intec IRF-40x40

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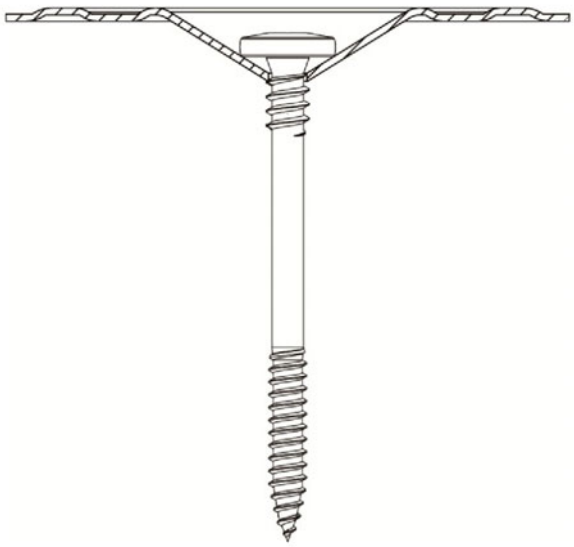
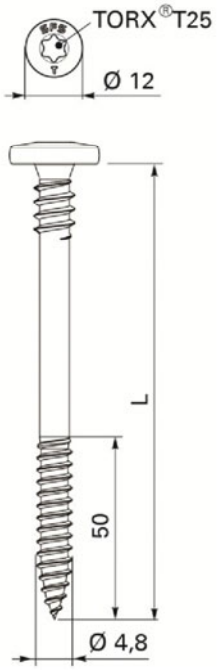
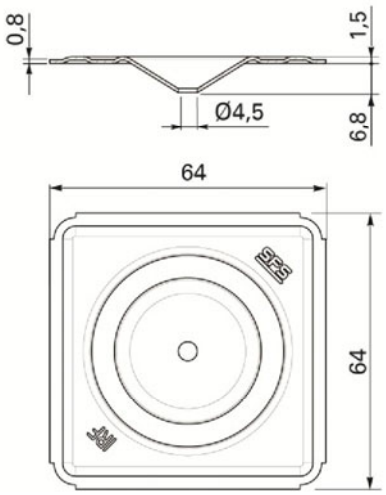


IRF-4,8xL



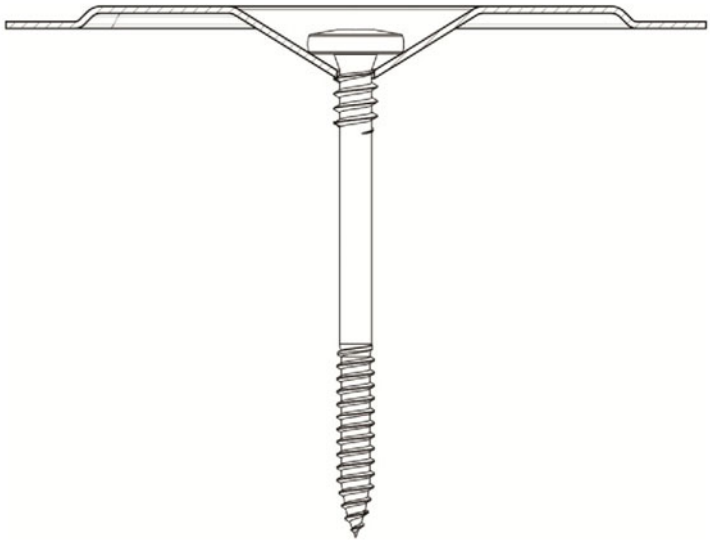
IRF-64x64



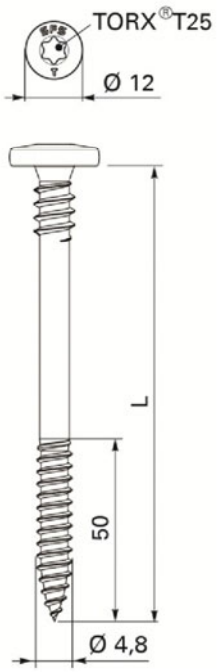
SFS intec flat roof fasteners

Combination 123
SFS intec IRF-4,8xL
SFS intec IRF-64x64

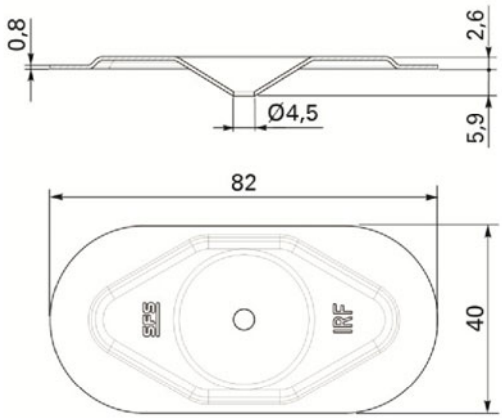
Annex 123



IRF-4,8xL



IRF-82x40



SFS intec flat roof fasteners

Combination 124
SFS intec IRF-4,8xL
SFS intec IRF-82x40

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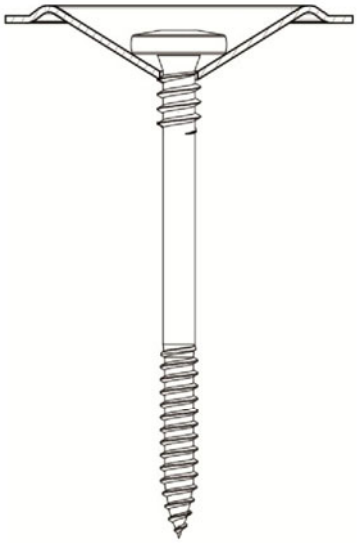
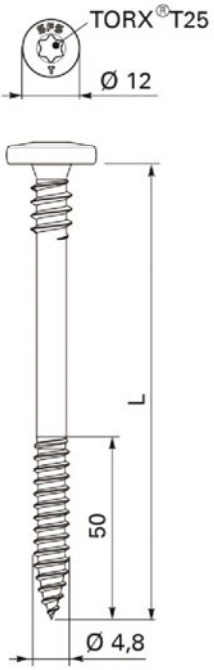
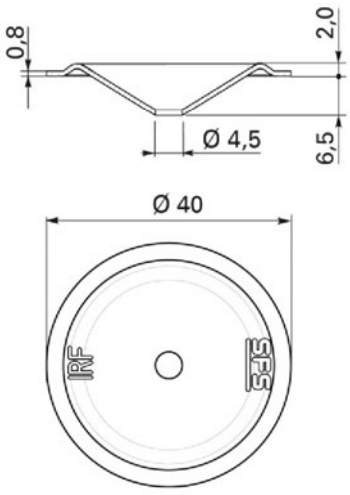


IRF-4,8xL



IRF-40



SFS intec flat roof fasteners

Combination 125
SFS intec IRF-4,8xL
SFS intec IRF-40

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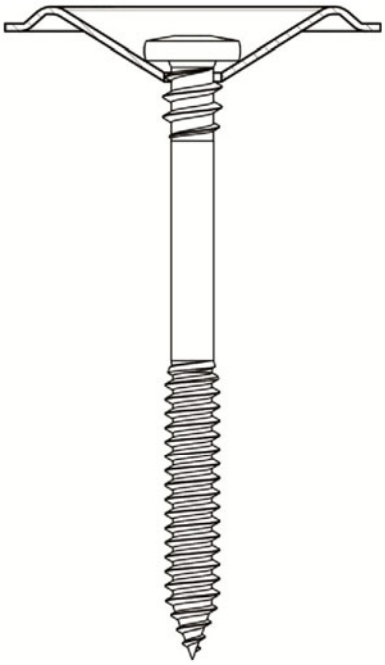
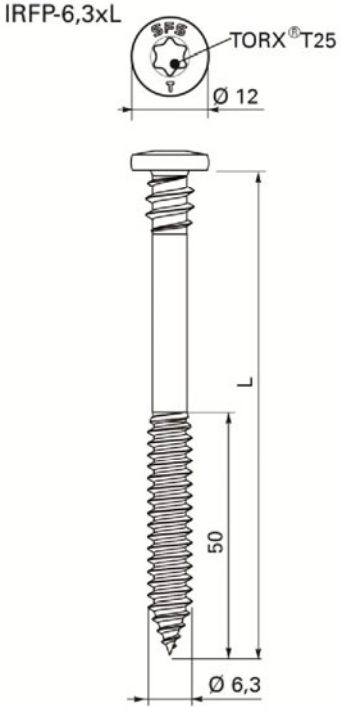
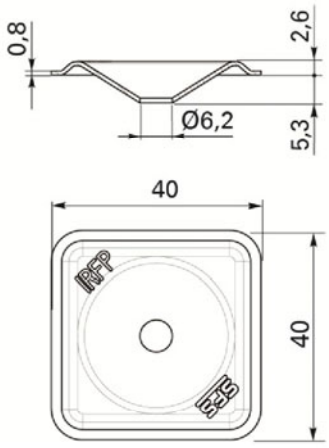


IRFP-6,3xL



IRFP-40x40



SFS intec flat roof fasteners

Combination 126
SFS intec IRFP-6,3xL
SFS intec IRFP-40x40

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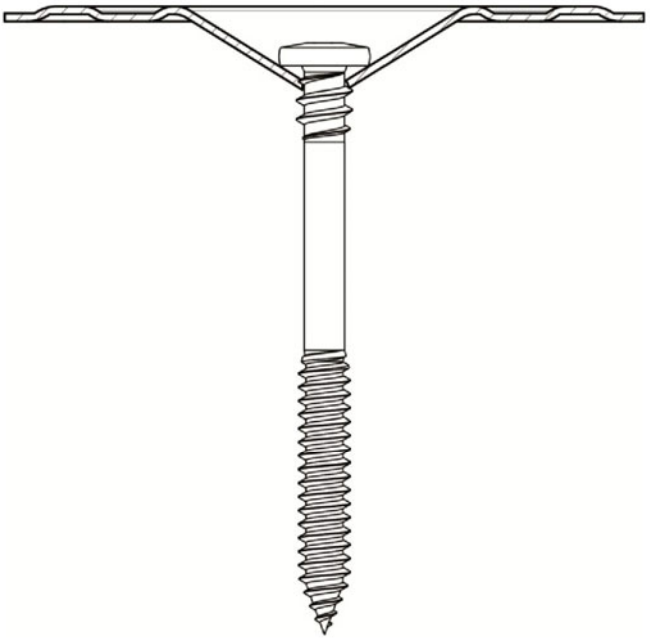
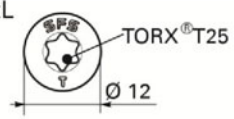
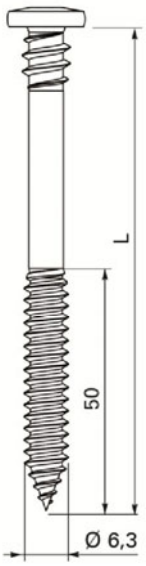
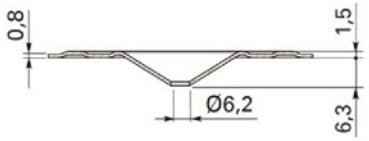


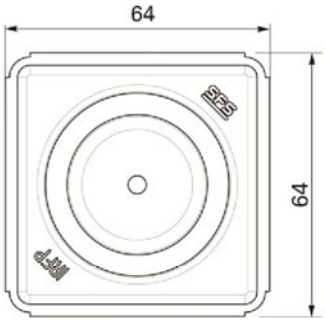
IRFP-6,3xL





IRFP-64x64





SFS intec flat roof fasteners

Combination 127
SFS intec IRFP-6,3xL
SFS intec IRFP-64x64

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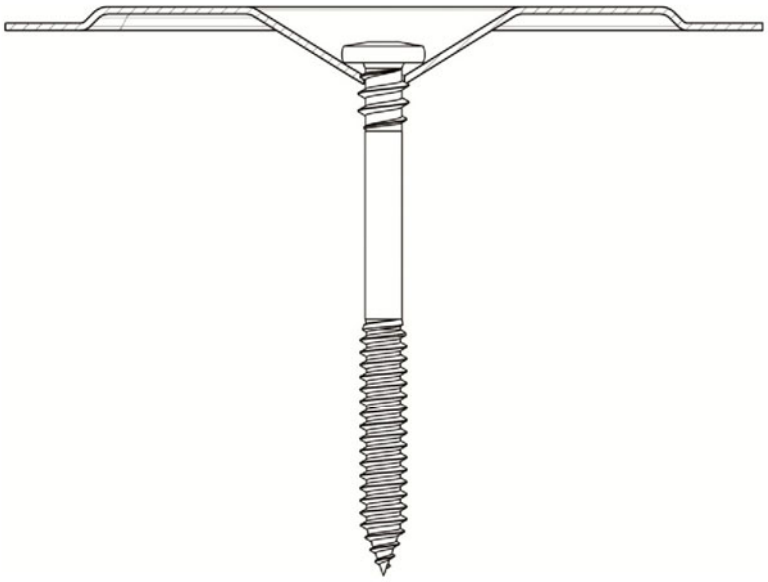

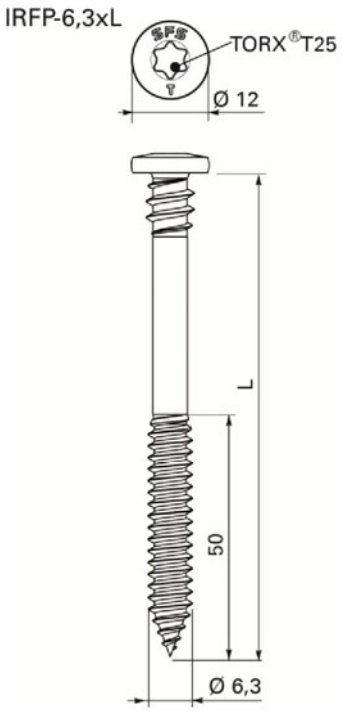

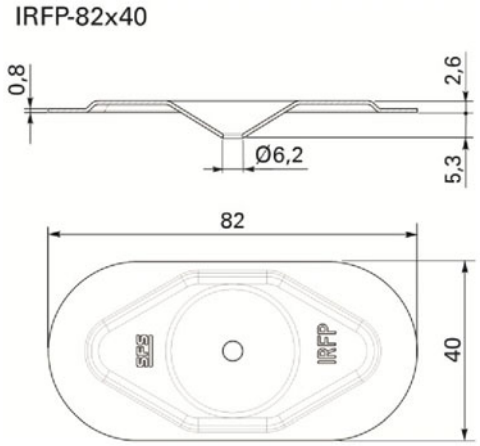

SFS intec flat roof fasteners

Combination 128
SFS intec IRFP-6,3xL
SFS intec IRFP-82x40

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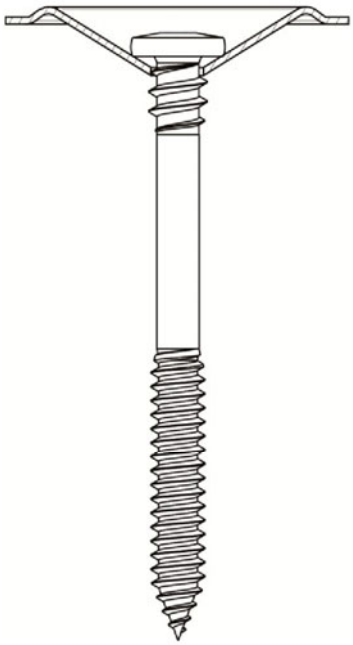
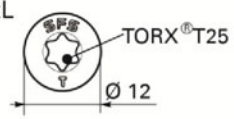
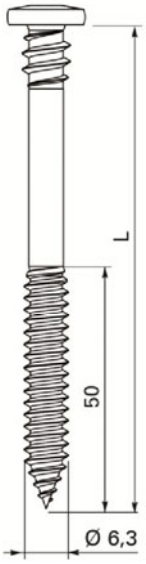
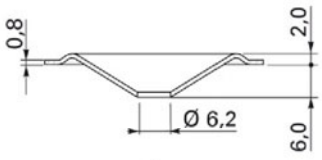


IRFP-6,3xL





IRFP-40



SFS intec flat roof fasteners

Combination 129
SFS intec IRFP-6,3xL
SFS intec IRFP-40

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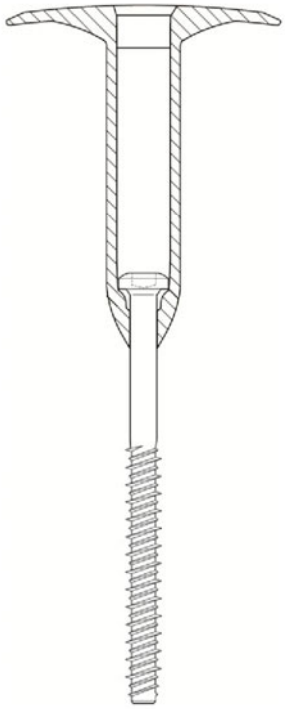
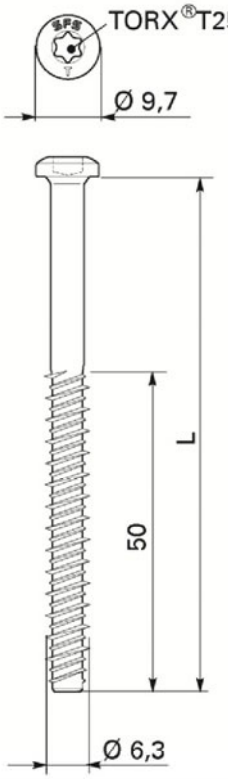
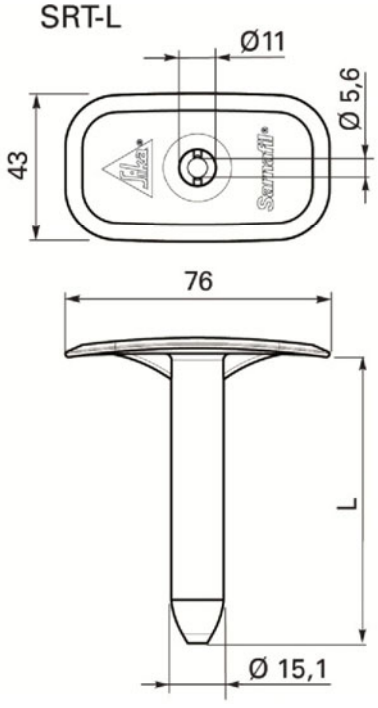


TI-T25-6,3xL



SRT-L



SFS intec flat roof fasteners

Combination 130
SFS intec TI-T25-6,3xL
SFS intec SRT-L

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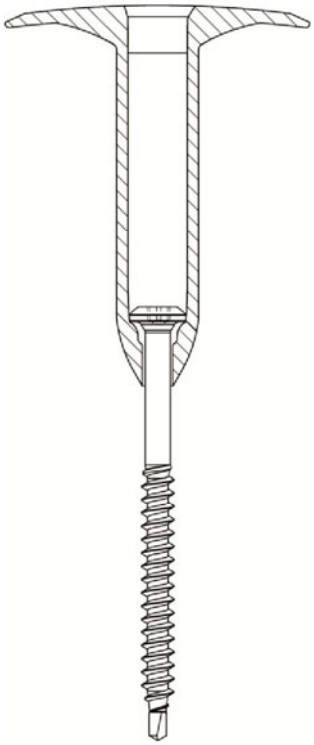
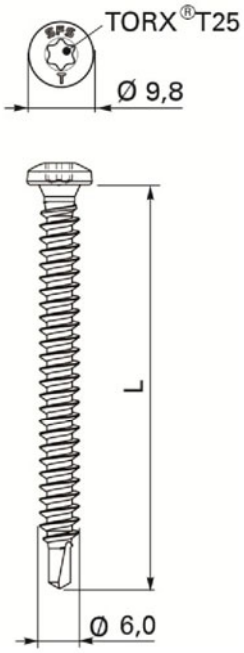
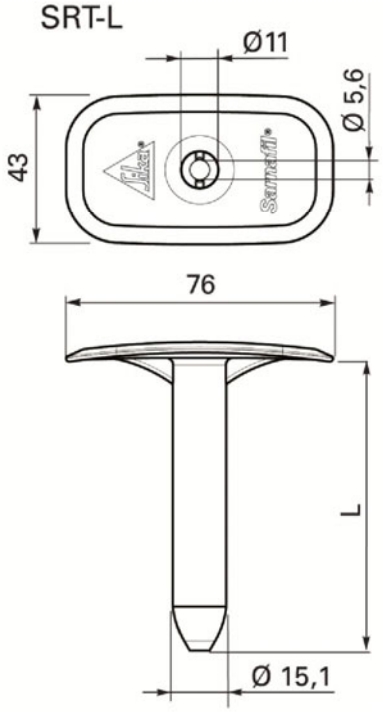


Sarnafast SBF-6,0xL



SRT-L



SFS intec flat roof fasteners

Combination 131
Sarnafast SBF-6,0xL
SFS intec SRT-L

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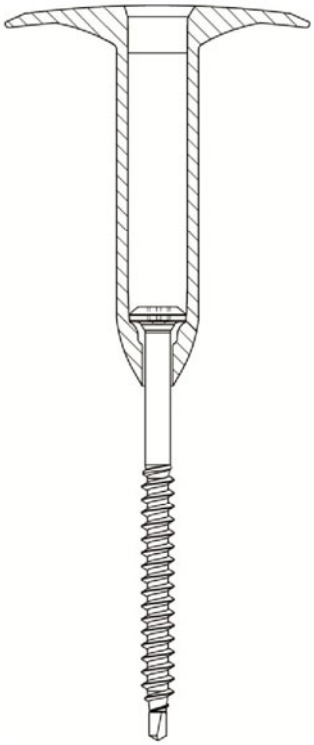
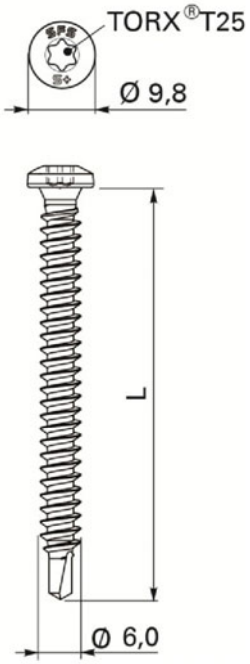
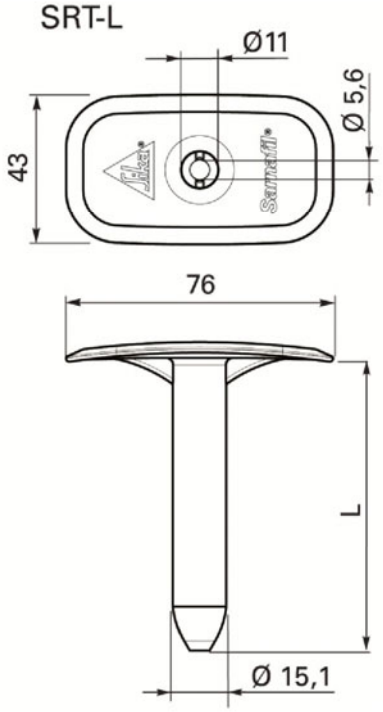


Sarnafast SBF-S-6,0xL



SRT-L



SFS intec flat roof fasteners

Combination 132
Sarnafast SBF-S-6,0xL
SFS intec SRT-L

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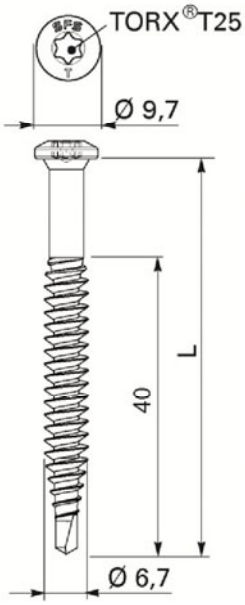
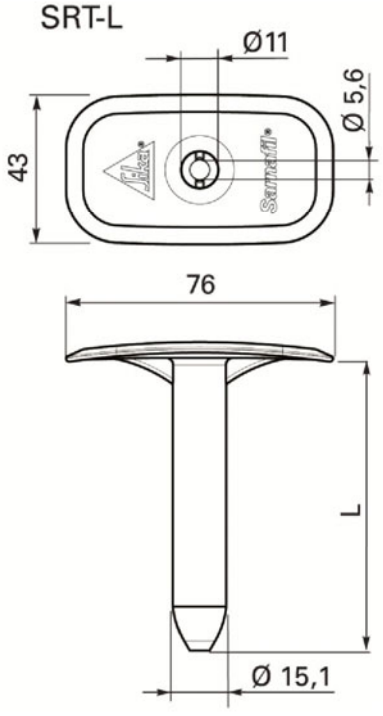
BS-6,7xL



SRT-L



SFS intec flat roof fasteners

Combination 133
SFS intec BS-6,7xL
SFS intec SRT-L

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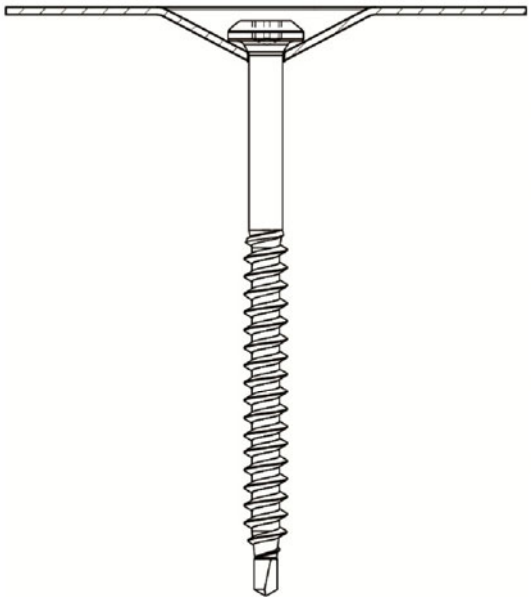
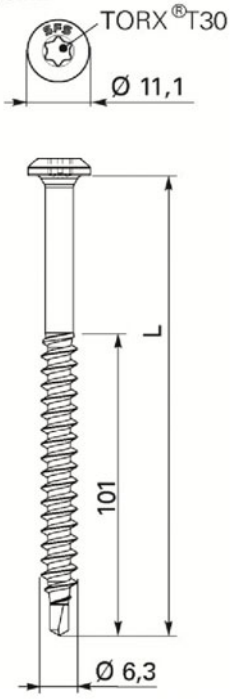
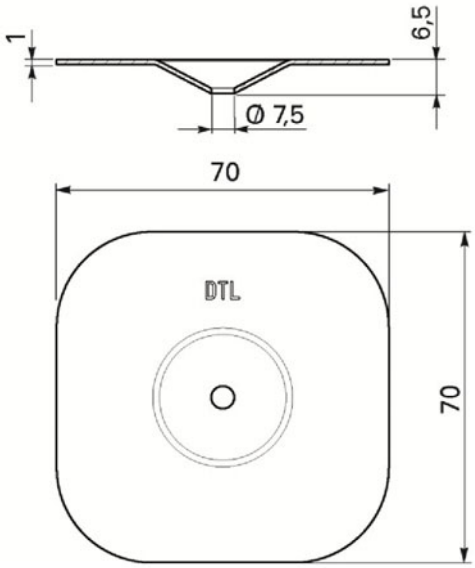


Sarnafast SB-6,3xL



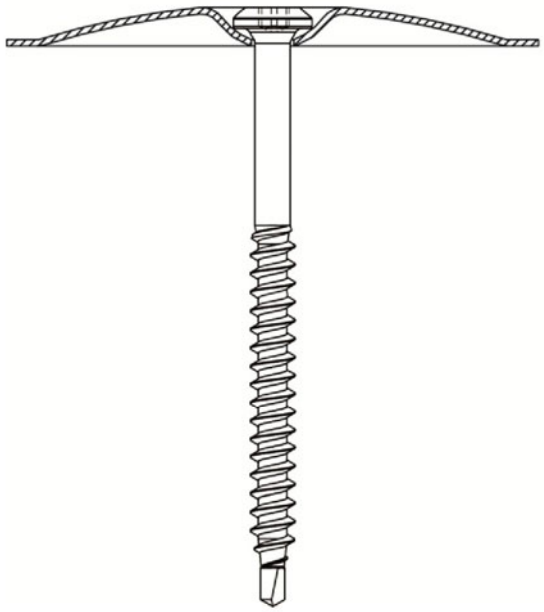
Sarnafast DTL-70x70



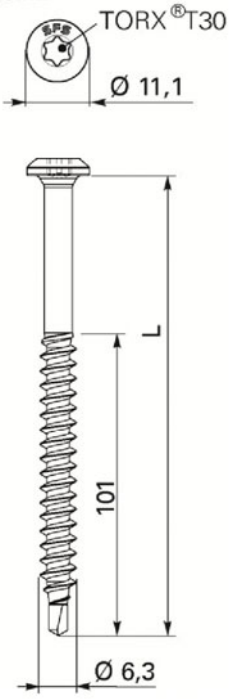
SFS intec flat roof fasteners

Combination 134
Sarnafast SB-6,3xL
Sarnafast DTL-70x70

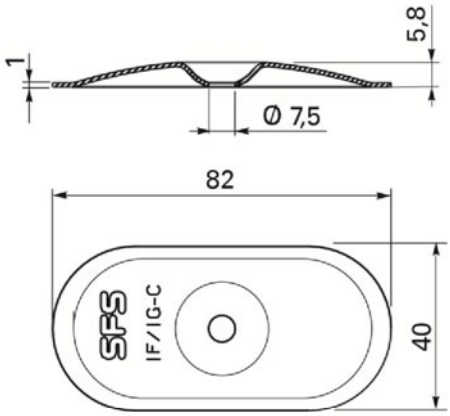
Annex 134



Sarnafast SB-6,3xL



IF/IG-C-82x40



SFS intec flat roof fasteners

Combination 135
Sarnafast SB-6,3xL
SFS intec IF/IG-C-82x40

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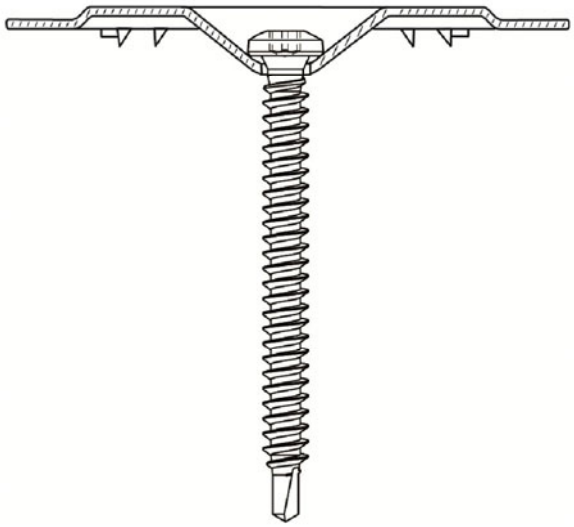
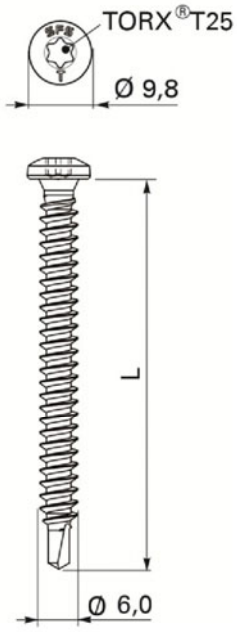
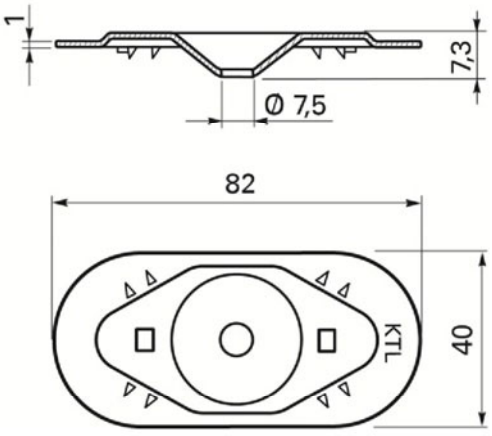


Sarnafast SBF-6,0xL



Sarnafast KTL-82x40



SFS intec flat roof fasteners

Combination 136
Sarnafast SBF-6,0xL
Sarnafast KTL-82x40

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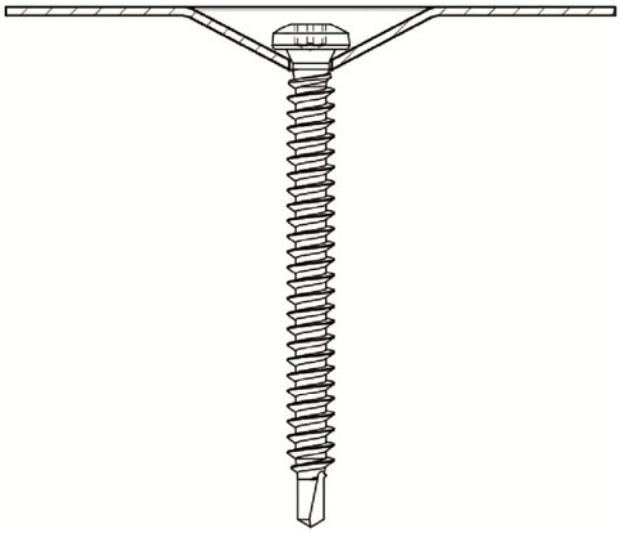
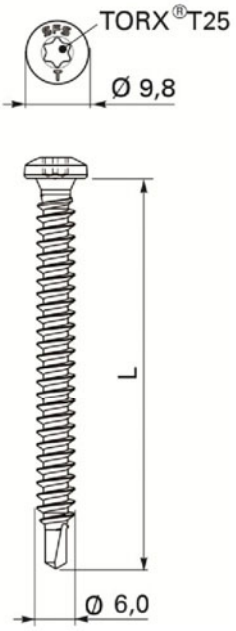
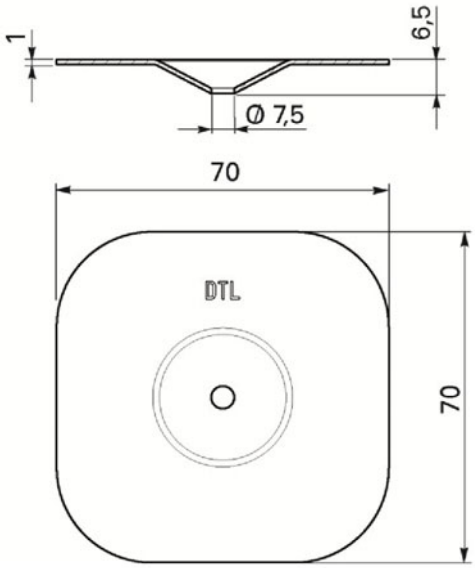
Deutsches Institut für Bautechnik DIBt



Sarnafast SBF-6,0xL



Sarnafast DTL-70x70



SFS intec flat roof fasteners

Combination 137
Sarnafast SBF-6,0xL
Sarnafast DTL-70x70

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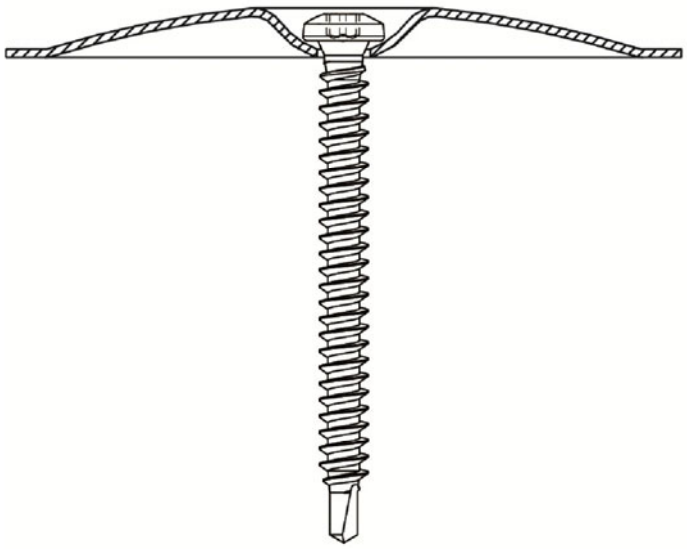
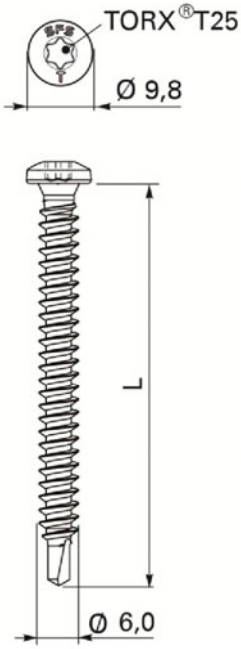
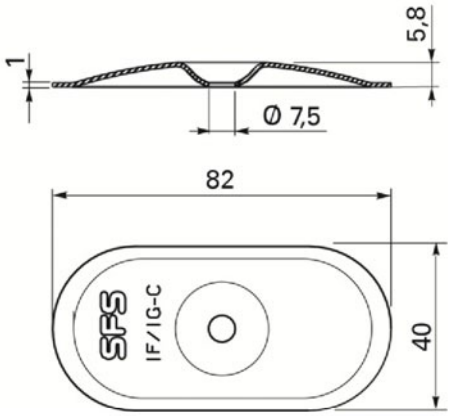


Sarnafast SBF-6,0xL



IF/IG-C-82x40



SFS intec flat roof fasteners

Combination 138
Sarnafast SBF-6,0xL
SFS intec IF/IG-C-82x40

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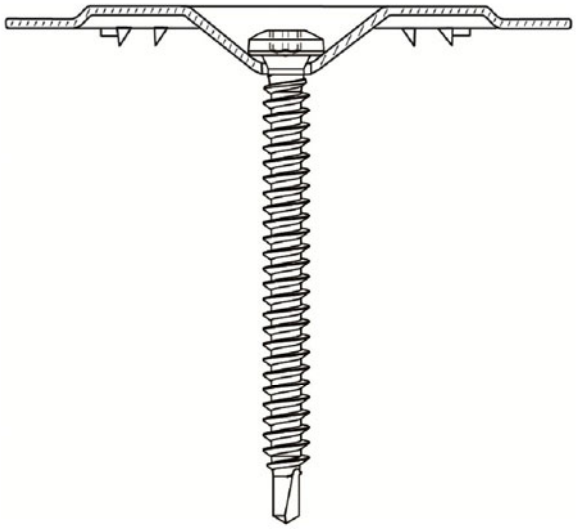
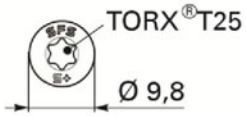
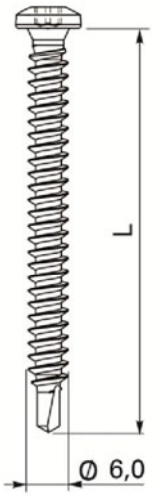
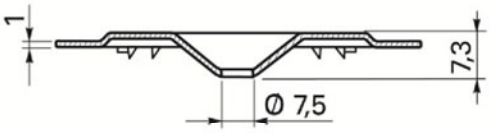


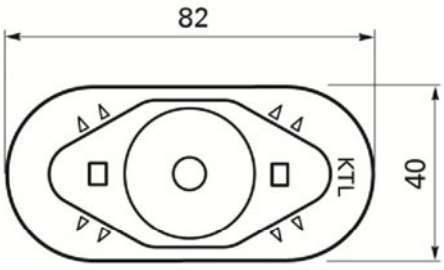
Sarnafast SBF-S-6,0xL





Sarnafast KTL-82x40





SFS intec flat roof fasteners

Combination 139
Sarnafast SBF-S-6,0xL
Sarnafast KTL-82x40

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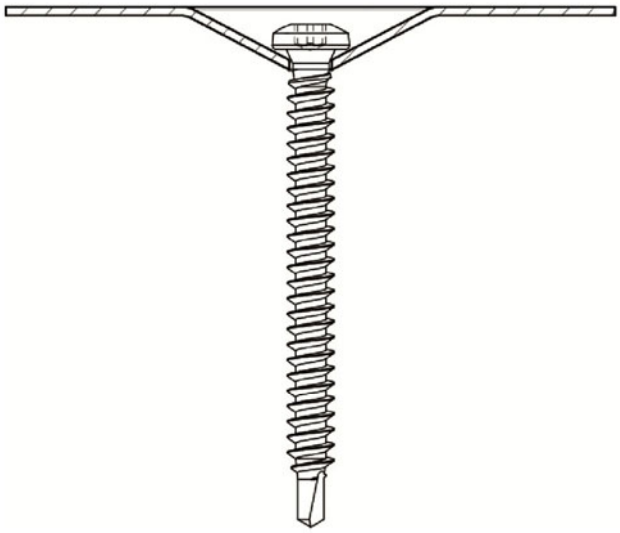
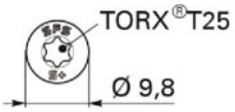
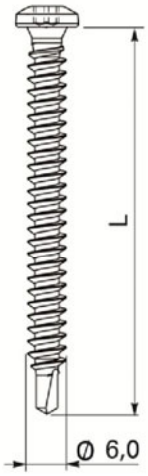
Deutsches Institut für Bautechnik DIBt

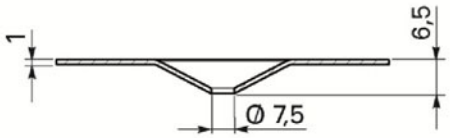


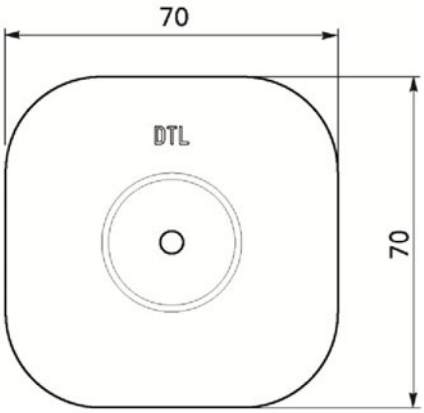
Sarnafast SBF-S-6,0xL





Sarnafast DTL-70x70





SFS intec flat roof fasteners

Combination 140
Sarnafast SBF-S-6,0xL
Sarnafast DTL-70x70

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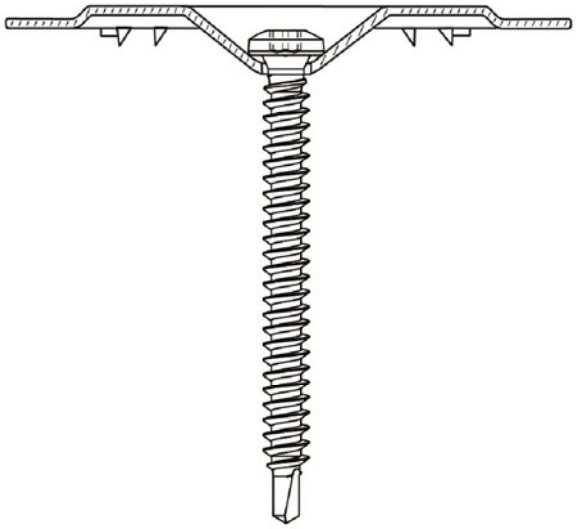
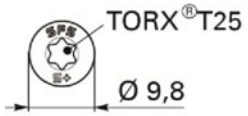
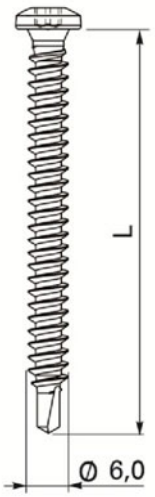
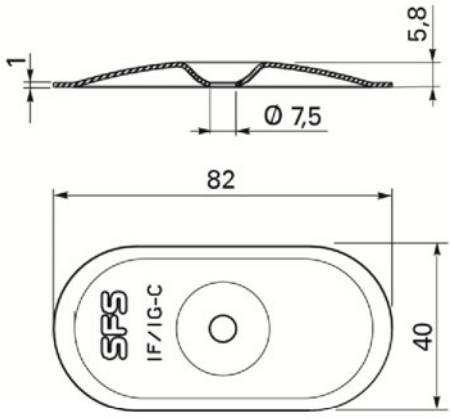


Sarnafast SBF-S-6,0xL





IF/IG-C-82x40



SFS intec flat roof fasteners

Combination 141
Sarnafast SBF-S-6,0xL
SFS intec IF/IG-C-82x40

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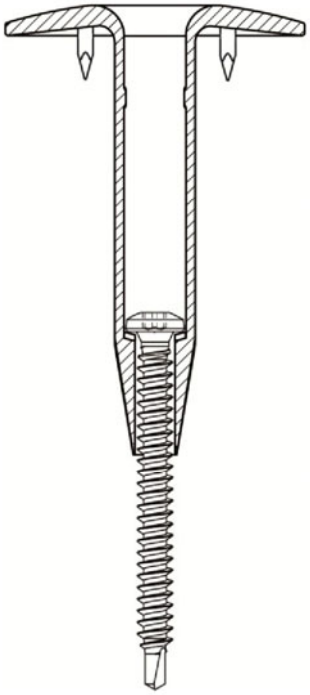
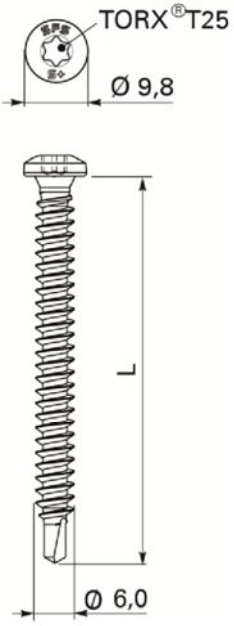
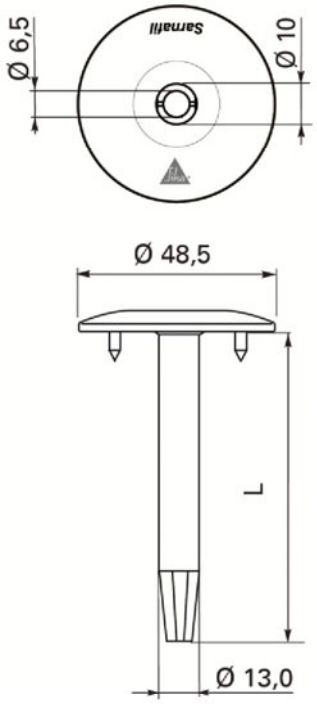


Sarnafast SBF-S-6,0xL



Sarnafast Tube SFT-50xL



SFS intec flat roof fasteners

Combination 142
Sarnafast SBF-S-6,0xL
Sarnafast Tube SFT-50xL

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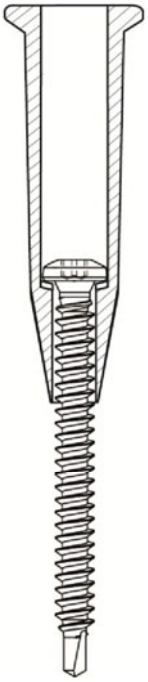
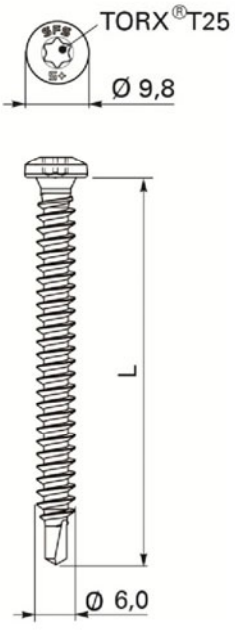
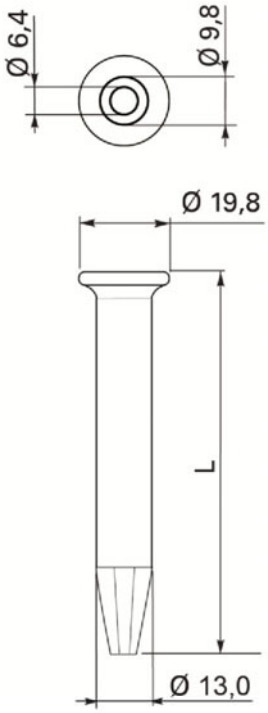


Sarnafast SBF-S-6,0xL



Sarnabar Tube SBT-20xL



SFS intec flat roof fasteners

Combination 143
Sarnafast SBF-S-6,0xL
Sarnabar Tube SBT-20xL

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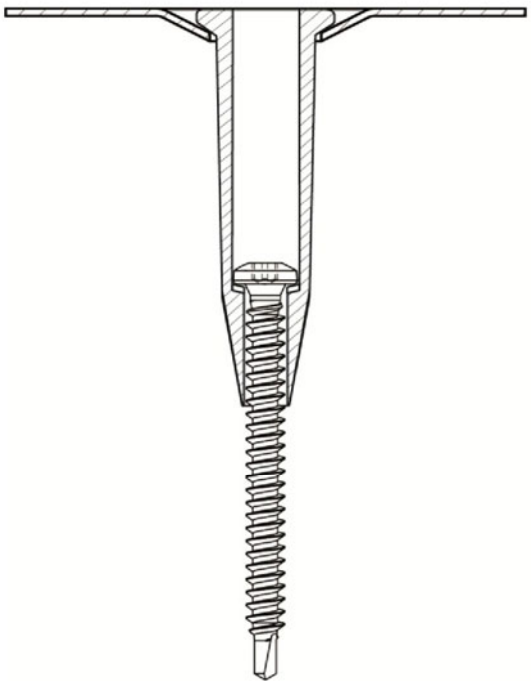
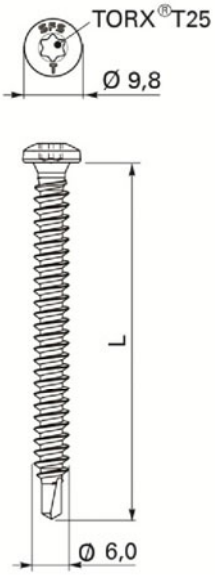
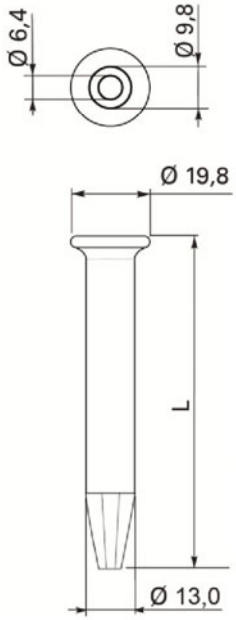


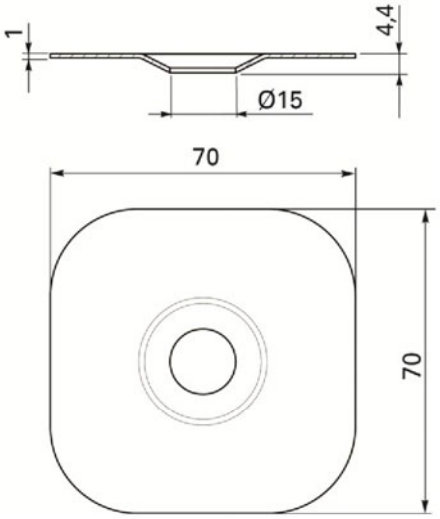
Sarnafast SBF-6,0xL



Sarnabar Tube SBT-20xL



SBIW-70x70



SFS intec flat roof fasteners

Combination 144
Sarnafast SBF-6,0xL
Sarnabar Tube SBT-20xL
SFS intec SBIW-70x70

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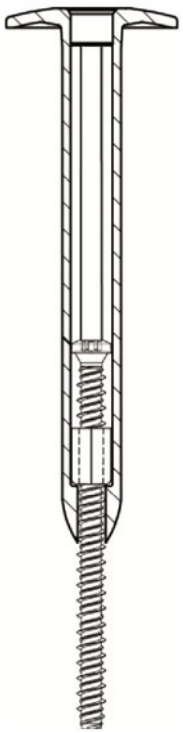
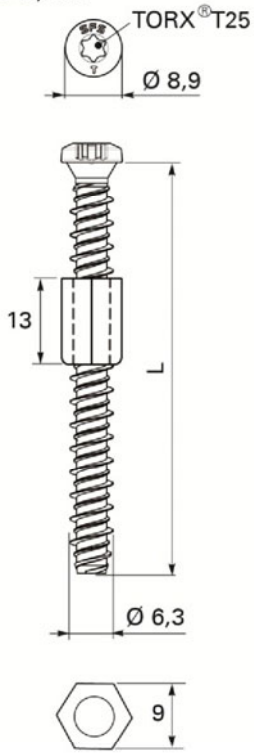
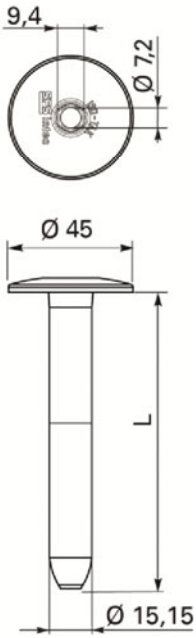
Deutsches Institut für Bautechnik DIBt



TIF-N-6,3xL



RH45xL



SFS intec flat roof fasteners

Combination 145
SFS intec TIF-N-6,3xL
SFS intec RH45xL

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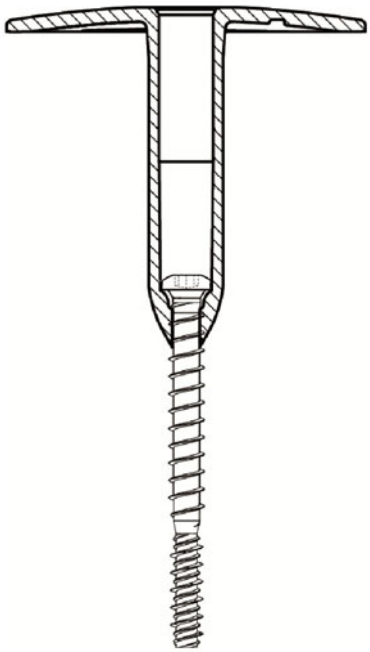
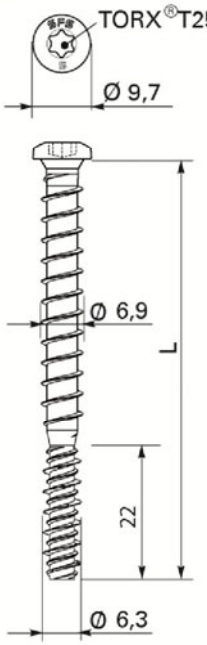
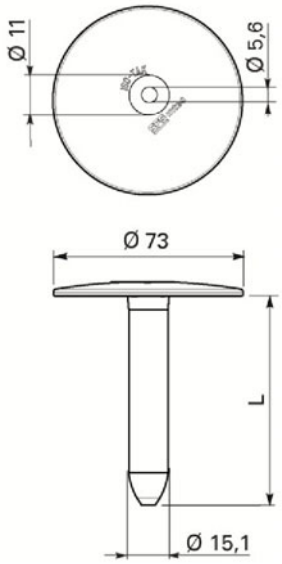


TIA-T25-6,3xL



R75xL



SFS intec flat roof fasteners

Combination 146
SFS intec TIA-T25-6,3xL
SFS intec R75xL

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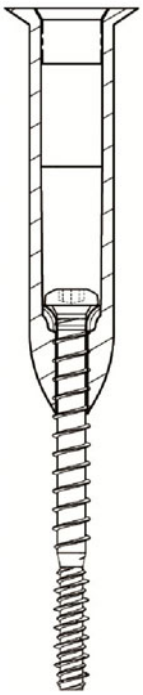
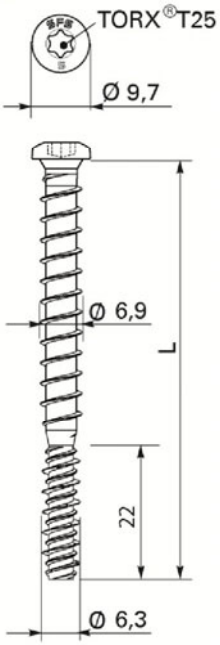
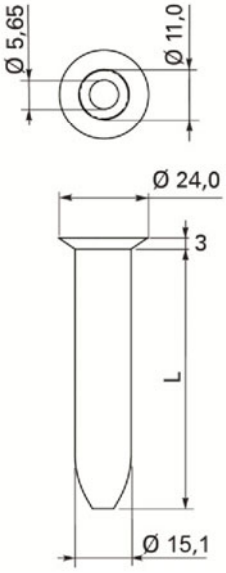
Deutsches Institut für Bautechnik DIBt



TIA-T25-6,3xL



ST-25xL



SFS intec flat roof fasteners

Combination 147
SFS intec TIA-T25-6,3xL
SFS intec ST-25xL

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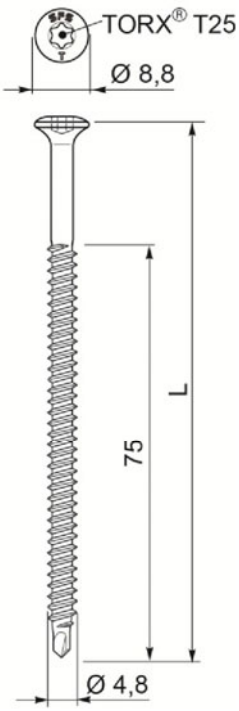
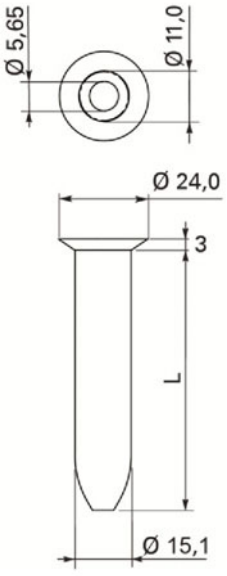
BS-4,8xL



ST-25xL

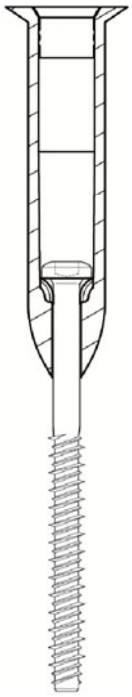


SFS intec flat roof fasteners

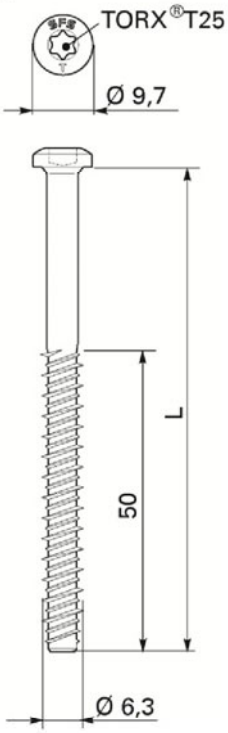
Combination 148
SFS intec BS-4,8xL
SFS intec ST-25xL

Annex 148

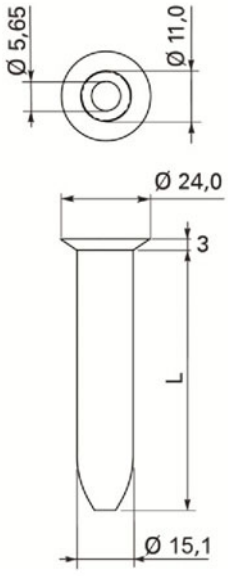
Deutsches Institut für Bautechnik DIBt



TI-T25-6,3xL



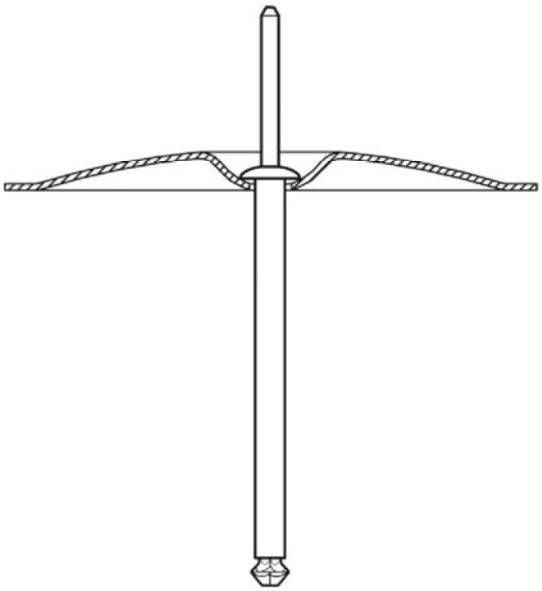
ST-25xL



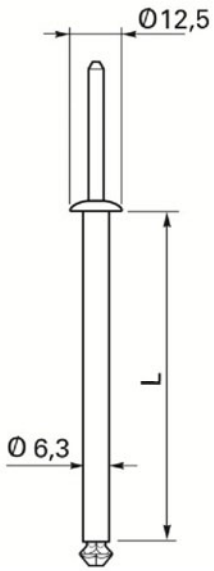
SFS intec flat roof fasteners

Combination 149
SFS intec TI-T25-6,3xL
SFS intec ST-25xL

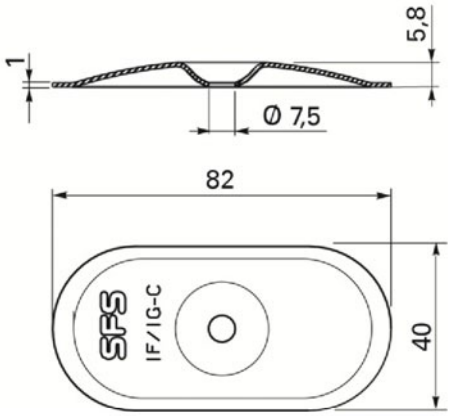
Annex 149



TPR-L-6,3xL



IF/IG-C-82x40



SFS intec flat roof fasteners

Combination 150
Sarnafast TPR-L-6,3xL
SFS intec IF/IG-C-82x40

Annex 150

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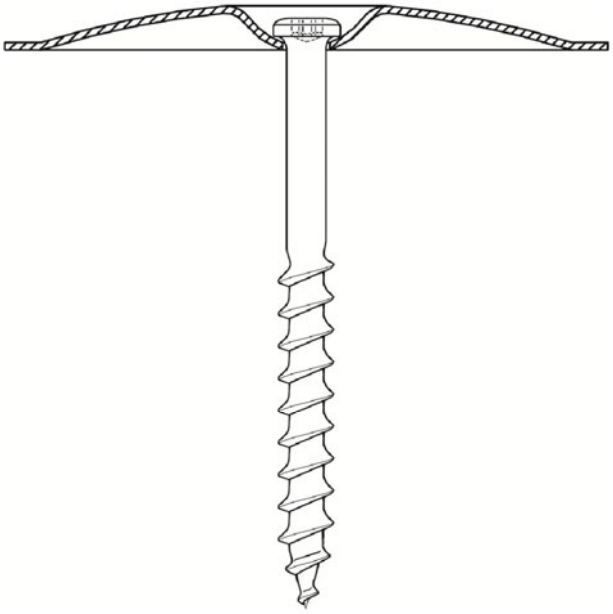
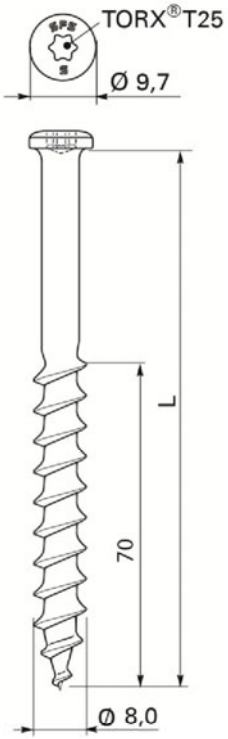
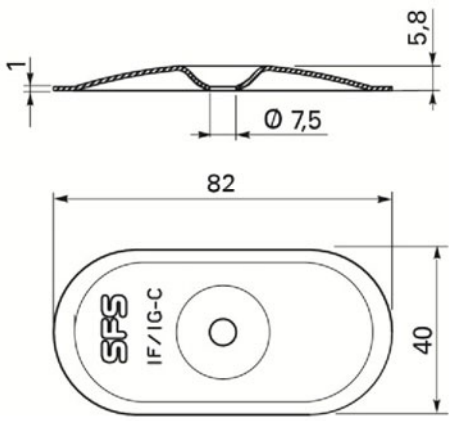


LBS-S-T25-8,0xL



IF/IG-C-82x40

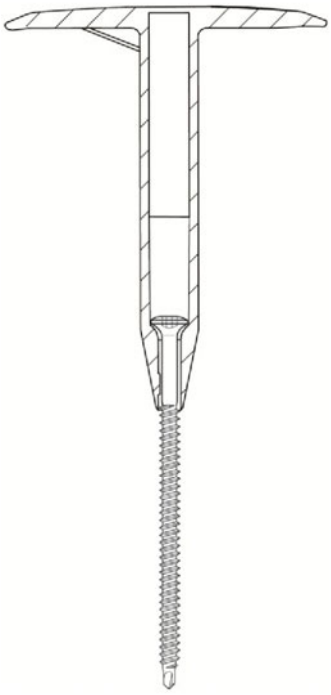


SFS intec flat roof fasteners

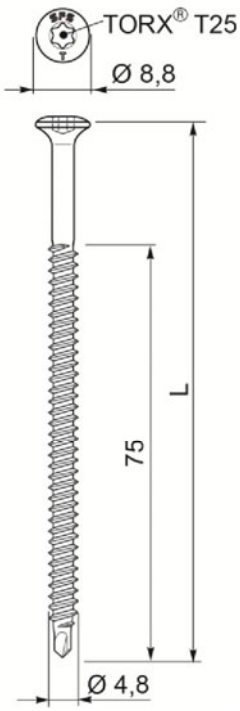
Combination 151
SFS intec LBS-S-T25-8,0xL
SFS intec IF/IG-C-82x40

Annex 151

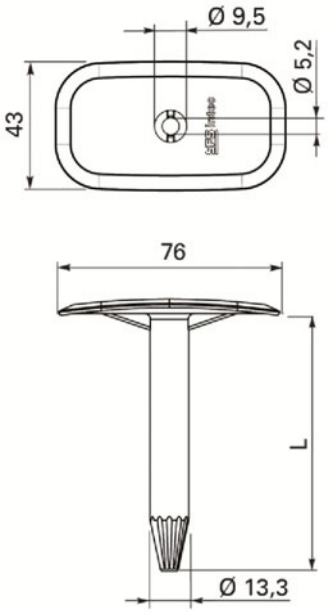
Deutsches Institut für Bautechnik DIBt



BS-4,8xL



NPPxL

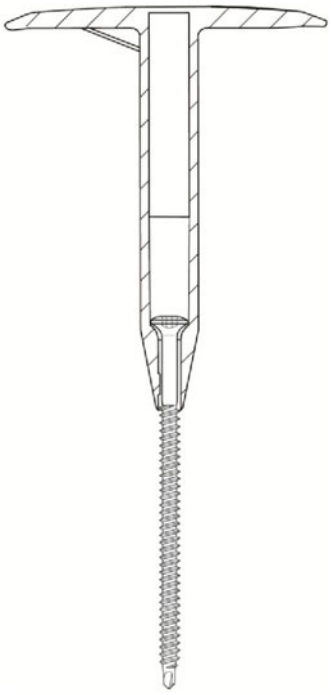


SFS intec flat roof fasteners

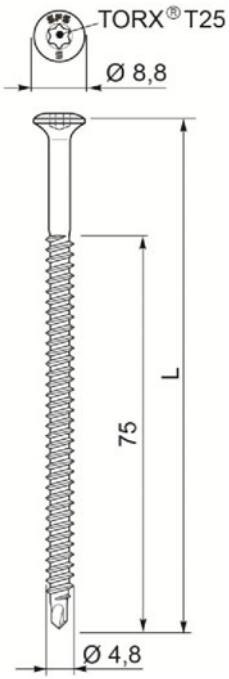
Combination 152
SFS intec BS-4,8xL
SFS intec NPPxL

Annex 152

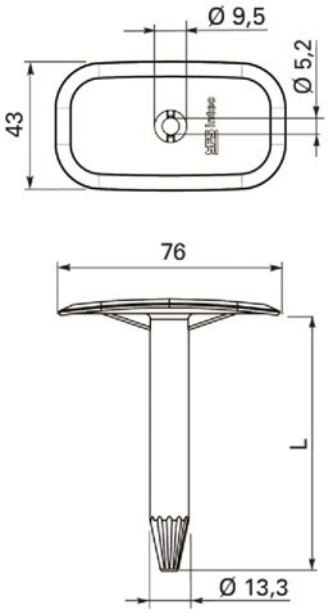
Deutsches Institut für Bautechnik DIBt



BS-S-4,8xL



NPPxL



SFS intec flat roof fasteners

Kombination 153
SFS intec BS-S-4,8xL
SFS intec NPPxL

Anhang 153

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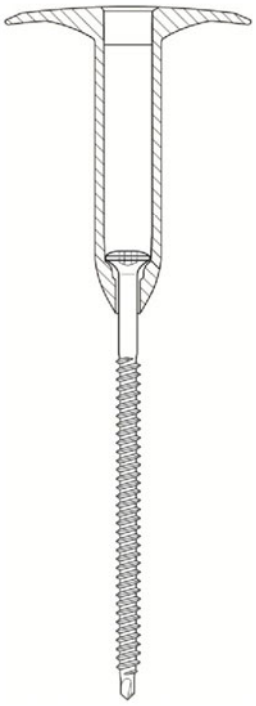
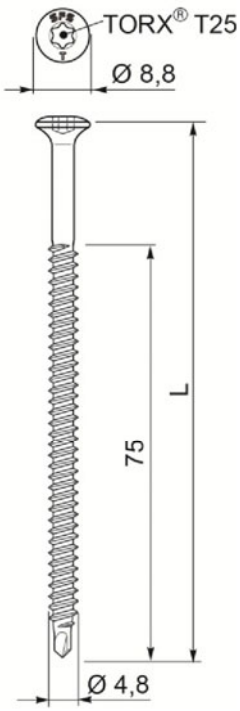
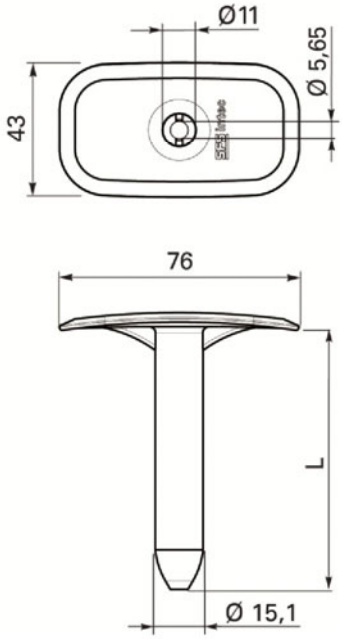


BS-4,8xL



NPSxL



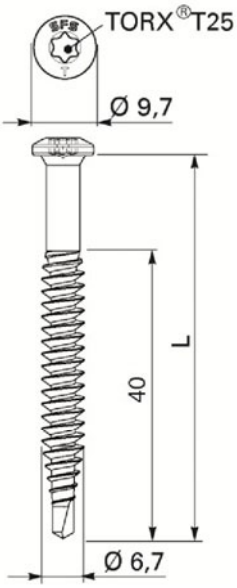
SFS intec flat roof fasteners

Combination 154
SFS intec BS-4,8xL
SFS intec NPSxL

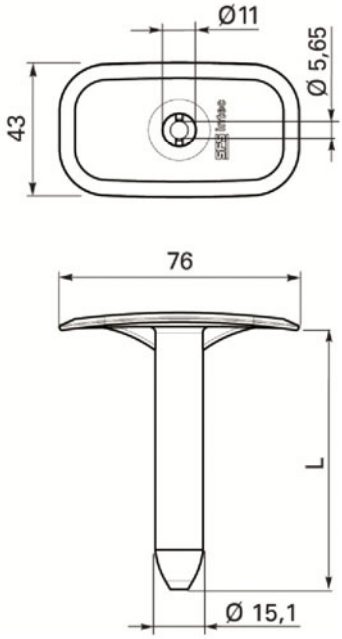
Annex 154

Deutsches Institut für Bautechnik

BS-6,7xL



NPSxL



SFS intec flat roof fasteners

Combination 155
SFS intec BS-6,7xL
SFS intec NPSxL

Annex 155

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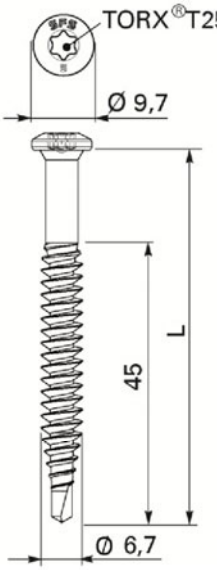
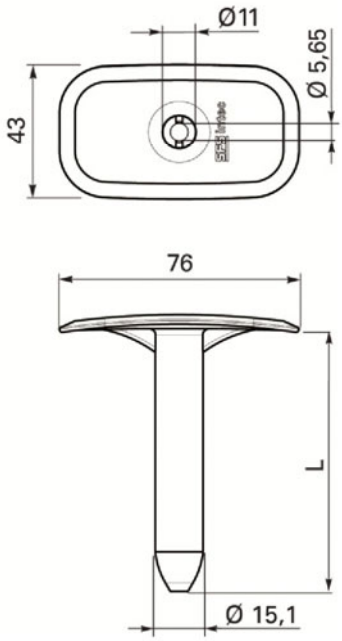
BS-S-6,7xL



NPSxL

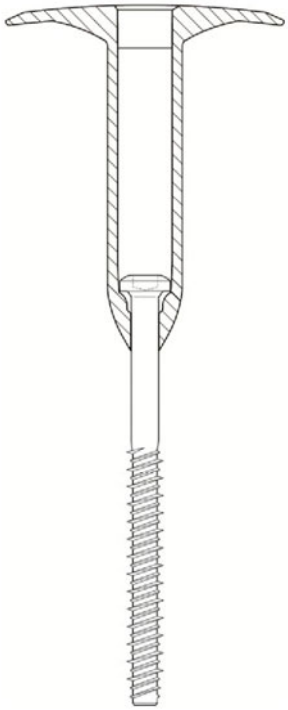


SFS intec flat roof fasteners

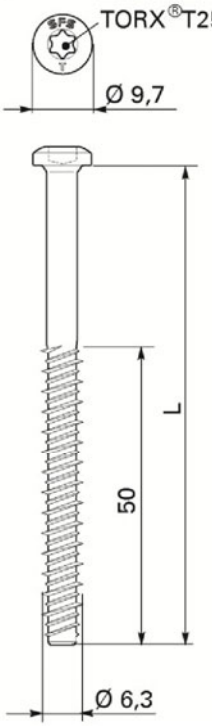
Combination 156
SFS intec BS-S-6,7xL
SFS intec NPSxL

Annex 156

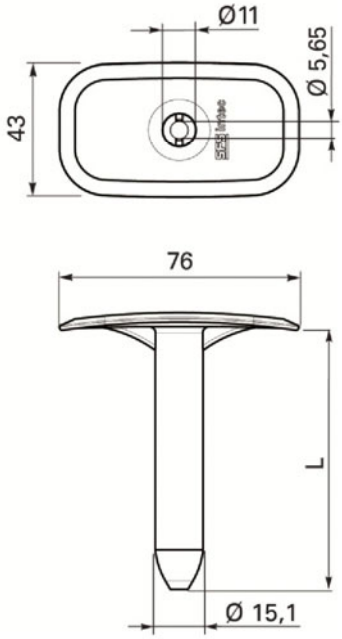
Deutsches Institut für Bautechnik DIBt



TI-T25-6,3xL



NPSxL



SFS intec flat roof fasteners

Combination 157
SFS intec TI-T25-6,3xL
SFS intec NPSxL

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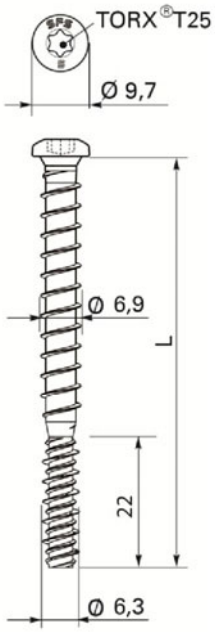
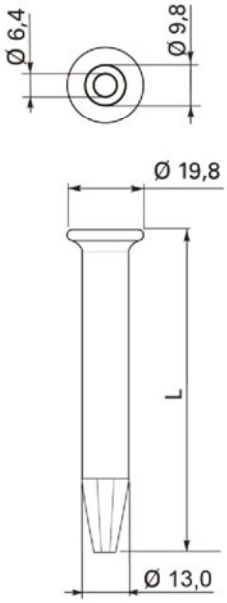
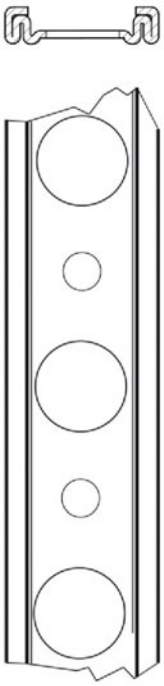
TIA-T25-6,3xL



Sarnabar Tube SBT-20xL



Sarnabar



SFS intec flat roof fasteners

Combination 158
SFS intec TIA-T25-6,3xL
Sarnabar Tube SBT-20xL
Sarnabar

Annex 158

Deutsches Institut für Bautechnik DIBt

Annex	SFS intec flat roof fasteners		Substructure						
			Steelsheets S320GD[1] EN 10346				Timber		
			t ≥				OSB3 EN 300 t ≥ 18 mm[2]	Structural Timber EN 338/C24 t ≥ 22 mm[3]	Particle board EN 312/P5 t ≥ 19 mm[4]
	Fastener	Plate	0,50 mm	0,63 mm	0,75 mm	1,00 mm			
1	IR2-4,8	IR-82x40	–	–	1,08	1,77	1,28	1,74	1,99
2	IR2-4,8	IF-70x70	–	–	1,08	1,77	1,28	1,74	1,99
3	IR2-S-4,8	IR-82x40	–	–	1,08	1,77	1,28	1,74	1,99
4	IR3-4,8	IR-82x40	–	–	–	1,36	–	–	–
5	IR3-S-4,8	IR-82x40	–	–	–	1,36	–	–	–
6	IR2-C-4,8	IRC/W-82x40	–	–	1,08	1,73	1,28	1,73	1,73
7	BS-4,8	RP45xL	–	–	1,08	1,77	1,28	1,74	1,99
8	BS-4,8	R45xL	–	–	1,08	1,38	1,28	1,38	1,38
9	BS-4,8	R75xL	–	–	1,08	1,38	1,28	1,38	1,38
10	BS-4,8	RP75xL	–	–	1,08	1,77	1,28	1,74	1,99
11	BS-4,8	TPSxL	–	–	1,08	1,38	1,28	1,38	1,38
12	BS-4,8	TPPxL	–	–	1,08	1,77	1,28	1,74	1,99
13	BS-4,8	R48xL-3N	–	–	1,08	1,38	1,28	1,38	1,38
14	BS-4,8	RP48xL-3N	–	–	1,08	1,77	1,28	1,74	1,99
15	BS-4,8	SH-18/65xL, Protan Steelbar	–	–	1,03	1,03	1,03	1,03	1,03
16	BS-S-4,8	RP45xL	–	–	1,08	1,77	1,28	1,74	1,99
17	BS-S-4,8	TPPxL	–	–	1,08	1,77	1,28	1,74	1,99
18	BS3-4,8	RP45xL	–	–	–	1,14	–	–	–
19	BS-6,1	RP45xL	–	1,13	–	2,19	–	–	–
20	BS-6,1	R45xL	–	1,13	–	1,38	1,21	1,38	1,29
72	BS-4,8	Sarnafast Tube SFT-50	–	–	1,08	1,66	1,28	1,66	1,66
73	BS-4,8	Sarnabar Tube SBT-20	–	–	1,08	1,77	1,28	1,74	1,89
74	BS-S-4,8	Sarnafast Tube SFT-50	–	–	1,08	1,66	1,28	1,66	1,66
75	BS-S-4,8	Sarnabar Tube SBT-20	–	–	1,08	1,66	1,28	1,66	1,66

[1] for steelsheets S280GD, the values have to be reduced to 92 %
[2] effective embedment depth (penetration length of threaded part) ≥ 18mm
[3] effective embedment depth (penetration length of threaded part) ≥ 22mm
[4] effective embedment depth (penetration length of threaded part) ≥ 19mm

SFS intec flat roof fasteners

Characteristic values of axial load resistance

Annex 159

Deutsches Institut für Bautechnik DIBt

Annex	SFS intec flat roof fasteners		Substructure						
			Steelsheets S320GD[1] EN 10346 t ≥				Timber		
	Fastener	Plate	0,50 mm	0,63 mm	0,75 mm	1,00 mm	OSB3 EN 300 t ≥ 18 mm[2]	Structural Timber EN 338/C24 t ≥ 22 mm[3]	Particle board EN 312/P5 t ≥ 19 mm[4]
76	Sarnafast SF-4,8	Sarnafast KT-82x40	–	–	1,08	1,77	1,28	1,74	1,99
77	Sarnafast SF-4,8	Sarnafast DT -70x70	–	–	1,08	1,77	1,28	1,74	1,99
78	Sarnafast SBF -6,0	Sarnafast Tube SFT-50	–	–	1,34	1,66	1,32	1,66	1,18
79	Sarnafast SBF -6,0	Sarnabar Tube SBT-20	–	–	1,34	1,88	1,32	1,88	1,18
80	Sarnafast SB-6,3	Sarnafast KTL -82x40	–	–	1,36	2,01	1,31	1,49	1,34
88	IF2-6,1	IRD-82x40	–	1,11	–	1,16	1,07	2,04	1,35
89	IF2-6,1	ID-70x70	–	1,11	–	1,16	1,07	2,04	1,35
97	BS-4,8	FI-P-6,8	–	–	1,08	1,77	1,28	1,74	1,99
98	BS-S-4,8	FI-P-6,8	–	–	1,08	1,77	1,28	1,74	1,99
100	BS-6,1	FI-P-6,8	–	1,13	–	2,13	1,21	2,10	1,29
108	Sarnafast SBF -6,0	FI-P-6,8	–	–	1,34	2,09	1,32	2,16	1,18
109	Sarnafast SBF -S-6,0	FI-P-6,8	–	–	1,34	2,09	1,25	2,02	0,97
111	BS-4,8	FI-R-20, FI-P-16,0	–	–	1,08	1,55	1,28	1,55	1,55
112	BS-S-4,8	FI-R-20, FI-P-16,0	–	–	1,08	1,55	1,28	1,55	1,55
114	BS-6,1	FI-R-20, FI-P-16,0	–	1,13	–	1,71	1,21	1,71	1,29
118	Sarnafast SBF -6,0	FI-R-20, FI-P-16,0	–	–	1,34	1,71	1,32	1,71	1,18
119	Sarnafast SBF -S-6,0	FI-R-20, FI-P-16,0	–	–	1,34	1,71	1,25	1,71	0,97
122	IRF-4,8	IRF-40x40	–	–	1,30	1,35	–	–	–
123	IRF-4,8	IRF-64x64	–	–	1,30	1,35	–	–	–
124	IRF-4,8	IRF-82x40	–	–	1,30	1,35	–	–	–
125	IRF-4,8	IRF-40	–	–	1,30	1,35	–	–	–
131	Sarnafast SBF -6,0	SRT-L	–	–	1,34	1,42	1,32	1,42	1,18
132	Sarnafast SBF -S-6,0	SRT-L	–	–	1,34	1,42	1,25	1,42	0,97
134	Sarnafast SB-6,3	Sarnafast DTL -70x70	–	–	1,36	2,01	1,31	1,49	1,34

[1] for steelsheets S280GD, the values have to be reduced to 92 %
[2] effective embedment depth (penetration length of threaded part) ≥ 18mm
[3] effective embedment depth (penetration length of threaded part) ≥ 22mm
[4] effective embedment depth (penetration length of threaded part) ≥ 19mm

SFS intec flat roof fasteners

Characteristic values of axial load resistance

Annex 160

Deutsches Institut für Bautechnik DIBt

Annex	SFS intec flat roof fasteners		Substructure						
			Steelsheets S320GD [1] EN 10346				Timber		
			t ≥				OSB3 EN 300 t ≥ 18 mm [2]	Structural Timber EN 338/C24 t ≥ 22 mm [3]	Particle board EN 312/P5 t ≥ 18 mm [4]
	Fastener	Plate	0,50 mm	0,63 mm	0,75 mm	1,00 mm			
135	Sarnafast SB-6,3	IF/IG-C-82x40	–	–	1,36	2,01	1,31	1,49	1,34
136	Sarnafast SBF -6,0	Sarnafast KTL -82x40	–	–	1,36	2,09	1,32	2,16	1,18
137	Sarnafast SBF -6,0	Sarnafast DTL -70x70	–	–	1,34	2,09	1,32	2,16	1,18
138	Sarnafast SBF -6,0	IF/IG-C-82x40	–	–	1,34	2,09	1,32	2,16	1,18
139	Sarnafast SBF -S-6,0	Sarnafast KTL -82x40	–	–	1,34	2,09	1,25	2,02	0,97
140	Sarnafast SBF -S-6,0	Sarnafast DTL -70x70	–	–	1,34	2,09	1,25	2,02	0,97
141	Sarnafast SBF -S-6,0	IF/IG-C-82x40	–	–	1,34	2,09	1,25	2,02	0,97
142	Sarnafast SBF -S-6,0	Sarnafast SFT -50	–	–	1,34	1,66	1,25	1,66	0,97
143	Sarnafast SBF -S-6,0	Sarnabar Tube SBT-20	–	–	1,34	1,66	1,25	1,66	0,97
144	Sarnafast SBF -6,0	Sarnabar Tube SBT-20, SBIW-70x70	–	–	1,34	2,09	1,32	2,16	1,18
148	BS-4,8	ST-25	–	–	1,08	1,38	1,28	1,38	1,38
152	BS-4,8	NPPxL	–	–	1,08	1,77	1,28	1,74	1,99
153	BS-S-4,8	NPPxL	–	–	1,08	1,77	1,28	1,74	1,99
154	BS-4,8	NPSxL	–	–	1,08	1,38	1,28	1,74	1,99

[1] for steelsheets S280GD, the values have to be reduced to 92 %
[2] effective embedment depth (penetration length of threaded part) ≥ 18mm
[3] effective embedment depth (penetration length of threaded part) ≥ 22mm
[4] effective embedment depth (penetration length of threaded part) ≥ 19mm

SFS intec flat roof fasteners

Characteristic values of axial load resistance

Annex 161

Deutsches Institut für Bautechnik DIBt

Annex	SFS intec flat roof fasteners		Substructure					
			Steelsheets S320GD[1] EN 10346 t ≥				Perforated Steelsheets[2] S320GD[1] t ≥ 0,75 mm	Aluminiumsheets R_m ≥ 195N/mm t ≥ 0,6 mm
	Fastener	Plate	0,50 mm	0,63 mm	0,75 mm	1,00 mm		
21	IFP2-6,7	IRP-82x40	–	–	–	–	0,87	–
22	BS-6,7	R45xL	–	–	–	–	0,87	–
23	BS-6,7	R75xL	–	–	–	–	0,87	–
24	BS-6,7	TPSxL	–	–	–	–	0,87	–
25	BS-S-6,7	R45xL	–	–	–	–	0,87	–
26	BS-S-6,7	R75xL	–	–	–	–	0,87	–
27	BS-S-6,7	TPSxL	–	–	–	–	0,87	–
28	TPR-L-6,3	IRD-82x40	0,88	–	–	1,36	–	0,58
29	TPR-L-6,3	IE-C-82x40	0,88	–	–	1,36	–	0,58
126	IRFP-6,3	IRFP-40x40	–	–	–	–	0,91	–
127	IRFP-6,3	IRFP-64x64	–	–	–	–	0,91	–
128	IRFP-6,3	IRFP-82x40	–	–	–	–	0,91	–
129	IRFP-6,3	IRFP-40	–	–	–	–	0,91	–
133	BS-6,7	SRT-L	–	–	–	–	0,87	–
150	TPR-L-6,3	IF/IG-C-82x40	0,88	–	–	1,20	–	0,58
155	BS-6,7	NPSxL	–	–	–	–	0,87	–
156	BS-S-6,7	NPSxL	–	–	–	–	0,87	–

[1] for steelsheets S280GD, the values have to be reduced to 92 %
[2] triangular array of holes, hole diameter 5,0 mm, distance of holes 12,5 mm

SFS intec flat roof fasteners

Characteristic values of axial load resistance

Annex 162

Deutsches Institut für Bautechnik DIBt

Annex	SFS intec flat roof fasteners		Substructure		
			Timber		
	Fastener	Plate	OSB3 EN 300 t ≥ 18 mm[3)]	Structural Timber EN 338/C24 t ≥ 22 mm[4)]	Particle board EN 312/P5 t ≥ 19 mm[5)]
30	IG-6,0	IRD-82x40	1,31	1,43	1,97
31	TS-T25-6,0	RP45xL	1,31	1,43	1,97
32	TS-T25-6,0	R45xL	1,31	1,38	1,38
33	IWF-5,2	MW-40-FH	1,39	1,07	1,39
34	IW-T-5,0	IRC/W-82x40	1,08	1,12	1,68
35	IW-S-5,0	IRC/W-82x40	1,08	1,12	1,68
90	TS-T25-6,0	R45xL	1,31	1,38	1,38
94	IW-S-5,0	IW-82x40	1,08	1,12	1,68
95	IW-T-5,0	IW-82x40	1,08	1,12	1,68
96	IWF-5,2	IW-82x40	1,07	1,39	1,39
107	TS-T25-6,0	FI-P-6,8	1,31	1,43	1,97
117	TS-T25-6,0	FI-R-20, FI-P 16,0	1,31	1,43	1,71

[3)] effective embedment depth (penetration length of threaded part) ≥ 18mm
[4)] effective embedment depth (penetration length of threaded part) ≥ 22mm
[5)] effective embedment depth (penetration length of threaded part) ≥ 19mm

SFS intec flat roof fasteners

Characteristic values of axial load resistance

Annex 163

Deutsches Institut für Bautechnik DIBt

Annex	SFS intec flat roof fasteners		Substructure			
			Concrete EN 206-1		embedment depth [mm]	drill hole diameter [mm]
	Fastener	Plate	C12/15	C25/30		
20	BS-6,1	R45xL	0,43	0,86	32,0	5,0
45	DT-4,8	IRD-82x40	2,40	2,56	25	4,8
46	DT-4,8	IF/IG-C-82x40	2,40	3,05	25,0	4,8
47	DT-4,8	IW-82x40	2,40	3,34	25	4,8
48	DT-4,8	R45xL	1,39	1,39	25	4,8
49	DT-4,8	TC-50-30	1,45	1,45	25	4,8
50	DT-S-4,8	IRD-82x40	2,56	2,56	25	4,8
51	DT-S-4,8	IF/IG-C-82x40	2,65	3,05	25,0	4,8
52	DT-S-4,8	R45xL	1,39	1,39	25	4,8
53	DT-S-4,8	TC-50-30	1,45	1,45	25	4,8
54	DT-6,3	IRD-82x40	2,93	3,68	32	6,3
55	DT-6,3	IF/IG-C-82x40	2,93	4,07	32,0	6,3
56	DT-6,3	TC-50-30	1,92	1,92	32	6,3
57	DT-S-6,3	IRD-82x40	2,23	3,10	32	6,3
58	DT-S-6,3	IF/IG-C-82x40	2,23	3,10	32,0	6,3
59	DT-S-6,3	TC-50-30	1,92	1,92	32	6,3
60	TI-6,3	IRD-82x40	1,83	1,83	20	5,0
			2,56	2,56	30	5,0
61	TI-6,3	IF/IG-C-82x40	1,83	2,73	20	5,0
			1,83	3,05	30	5,0
62	TI-6,3	ID-70x70	1,83	2,73	20	5,0
			1,83	3,79	30	5,0
63	TI-T25-6,3	R75xL	1,42	1,42	20	5,0
			1,42	1,42	30	5,0
64	TI-T25-6,3	TPSxL	1,42	1,42	20	5,0
			1,42	1,42	30	5,0

SFS intec flat roof fasteners

Characteristic values of axial load resistance

Annex 164

Annex	SFS intec flat roof fasteners		Substructure			
			Concrete EN 206-1		embedment depth [mm]	drill hole diameter [mm]
	Fastener	Plate	C12/15	C25/30		
65	TI-T25-6,3	R48xL-3N	1,42	1,42	20	5,0
			1,42	1,42	30	5,0
66	TI-T25-6,3	R45xL	1,42	1,42	20	5,0
			1,42	1,42	30	5,0
67	TI-S-T25-6,1	R45xL	1,42	1,42	20	5,0
68	TIA-T25-6,3	R45xL	1,42	1,42	20	5,0
69	IE-6,3	IRD-82x40	0,52	0,73	25[1)]	6,3
			0,80	1,13	35	6,3
70	IE-6,3	IE-C-82x40	0,52	0,73	25[1)]	6,3
			0,80	1,13	35	6,3
71	IE-6,3	TC-50-30	0,52	0,73	25[1)]	6,3
			0,80	1,13	35	6,3
81	TI-6,3	Sarnafast DTL -70x70	1,83	1,83	20	5,0
			2,56	2,56	30	5,0
82	TI-T25-6,3	Sarnafast Tube SFT-50	1,66	1,66	20	5,0
			1,66	1,66	30	5,0
83	TI-T25-6,3	Sarnabar Tube SBT-20	1,66	1,66	20	5,0
			1,66	1,66	30	5,0
84	TI-S-T25-6,1	Sarnafast Tube SFT-50	1,66	1,66	20	5,0
85	TI-S-T25-6,1	Sarnabar Tube SBT-20	1,66	1,66	20	5,0

[1)] Minimum thickness of the concrete component h ≥ 25 mm

SFS intec flat roof fasteners

Characteristic values of axial load resistance

Annex 165

Deutsches Institut für Bautechnik DIBt

Annex	SFS intec flat roof fasteners		Substructure			
			Concrete EN 206-1		embedment depth [mm]	Vorbohr diameter [mm]
	Fastener	Plate	C12/15	C25/30		
20	BS-6,1	R45xL	0,43	0,86	32,0	5,0
78	Sarnafast SBF -6,0	Sarnafast Tube SFT-50	0,72	1,45	32,0	5,0
79	Sarnafast SBF -6,0	Sarnabar Tube SBT-20	0,72	1,45	32,0	5,0
86	TI-S-Z10-6,3	R45xL	0,53	1,05	32,0	5,0
87	TI-S-Z10-6,3	R75xL	0,53	1,05	32,0	5,0
88	IF2-6,1	IRD-82x40	1,56	2,56	32,0	5,0
89	IF2-6,1	ID-70x70	1,56	3,12	32,0	5,0
90	TS-T25-6,0	R45xL	0,44	0,89	32,0	5,0
99	TI-T25-6,3	FI-P-6,8	1,83	2,73 / 2,86	20,0 / 30,0	5,0
100	BS-6,1	FI-P-6,8	0,43	0,86	32,0	5,0
101	DT-4,8	FI-P-6,8	2,40	2,83	25,0	4,8
102	DT-S-4,8	FI-P-6,8	2,65	2,83	25,0	4,8
103	DT-6,3	FI-P-6,8	2,93	3,82	32,0	6,3
104	DT-S-6,3	FI-P-6,8	2,23	3,10	32,0	6,3
107	TS-T25-6,0	FI-P-6,8	0,44	0,89	32,0	5,0
108	Sarnafast SBF -6,0	FI-P-6,8	0,72	1,45	32,0	5,0
109	Sarnafast SBF -S-6,0	FI-P-6,8	0,42	0,84	32,0	5,0
113	TI-T25-6,3	FI-R-20, FI-P-16,0	1,71	1,71	20,0	5,0
114	BS-6,1	FI-R-20, FI-P-16,0	0,43	0,86	32,0	5,0
115	DT-4,8	FI-R-20, FI-P-16,0	1,71	1,71	25,0	4,8
116	DT-S-4,8	FI-R-20, FI-P-16,0	1,71	1,71	25,0	4,8

SFS intec flat roof fasteners

Characteristic values of axial load resistance

Annex 166

Deutsches Institut für Bautechnik DIBt

Annex	SFS intec flat roof fasteners		Substructure			
			Concrete EN 206-1		embedment depth [mm]	Vorbohr diameter [mm]
	Fastener	Plate	C12/15	C25/30		
117	TS-T25-6,0	FI-R-20, FI-P-16,0	0,44	0,89	32,0	5,0
118	Sarnafast SBF -6,0	FI-R-20, FI-P-16,0	0,72	1,45	32,0	5,0
119	Sarnafast SBF -S-6,0	FI-R-20, FI-P-16,0	0,42	0,84	32,0	5,0
120	TIA-T25-6,3	FI-R-20, FI-P-16,0	1,68	1,68	20,0	5,0
121	TIA-T25-6,3	FI-R-20, Sarnabar	1,68	1,68	20,0	5,0
130	TI-T25-6,3	SRT-L	1,42	1,42	20,0	5,0
131	Sarnafast SBF -6,0	SRT-L	0,72	1,42	32,0	5,0
132	Sarnafast SBF -S-6,0	SRT-L	0,42	0,84	32,0	5,0
136	Sarnafast SBF -6,0	Sarnafast KTL -82x40	0,72	1,45	32,0	5,0
137	Sarnafast SBF -6,0	Sarnafast DTL -70x70	0,72	1,45	32,0	5,0
138	Sarnafast SBF -6,0	IF/IG-C-82x40	0,72	1,45	32,0	5,0
139	Sarnafast SBF -S-6,0	Sarnafast KTL -82x40	0,42	0,84	32,0	5,0
140	Sarnafast SBF -S-6,0	Sarnafast DTL -70x70	0,42	0,84	32,0	5,0
141	Sarnafast SBF -S-6,0	IF/IG-C-82x40	0,42	0,84	32,0	5,0
142	Sarnafast SBF -S-6,0	Sarnafast Tube SFT-50	0,42	0,84	32,0	5,0
143	Sarnafast SBF -S-6,0	Sarnabar Tube SBT-20	0,42	0,84	32,0	5,0
144	Sarnafast SBF -6,0	Sarnabar Tube SBT-20, SBIW-70x70	0,72	1,45	32,0	5,0
145	TIF-N-6,3	RH45xL	1,54	1,54	20,0	5,0
146	TIA-T25-6,3	R75xL	1,42	1,42	20,0	5,0
147	TIA-T25-6,3	ST-25	1,42	1,42	20,0	5,0
149	TI-T25-6,3	ST-25	1,42	1,42	20,0	5,0
157	TI-T25-6,3	NPSxL	1,42	1,42	20,0	5,0
158	TIA-T25-6,3	Sarnabar Tube SBT-20	1,83	1,83	20,0	5,0

SFS intec flat roof fasteners

Characteristic values of axial load resistance

Annex 167

Deutsches Institut für Bautechnik DIBt

Annex	SFS intec flat roof fasteners		Substructure				
			Pumice panel EN 1520 LAC 6, D 1,0	Aerated Concrete DIN 4223-1		embedment depth [mm]	drill hole diameter [mm]
	Fastener	Plate		P3,3 density 0,45	P4,4 density 0,55		
20	BS-6,1	R45xL	–	0,92	1,38	75,0	–
36	LBS-S-T25-8,0	IE-C-82x40	–	0,93	1,44	60	–
37	LBS-S-T25-8,0	R45xL	–	0,93	1,43	60	–
38	LBS-S-T25-8,0	TC-50-30	–	0,93	1,44	60	–
39	IGR-T-T25-8,0	IG8-C-82x40	–	0,93	1,44	60	–
40	LBS-T25-8,0	MW-40-LBS	–	0,93	1,44	60	–
41	LBS-T25-8,0	R45xL	–	0,93	1,43	60	–
42	LB-45		–	1,44	1,44	65	15
43	FB-S-T25-7,5	IE-C-82x40	0,59	–	–	17	4,8
44	FB-S-T25-7,5	R45xL	0,59	–	–	17	4,8
78	Sarnafast SBF -6,0	Sarnafast Tube SFT-50	–	0,35	0,58	75,0	–
79	Sarnafast SBF -6,0	Sarnabar Tube SBT-20	–	0,35	0,58	75,0	–
88	IF2-6,1	IRD-82x40	–	1,27	2,11	75,0	–
89	IF2-6,1	ID-70x70	–	1,27	2,11	75,0	–
90	TS-T25-6,0	R45xL	–	1,07	1,38	75,0	–
91	FB-S-T25-7,5	IRD-82x40	0,59	–	–	17,0	4,8
92	FB-S-T25-7,5	IF/IG-C-82x40	0,59	–	–	17,0	4,8
93	FB-S-T25-7,5	R75xL	0,59	–	–	17,0	4,8
100	BS-6,1	FI-P-6,8	–	0,92	1,53	75,0	–
105	LBS-T25-8,0	FI-P-6,8	–	0,93	1,44	60,0	–
106	LBS-S-T25-8,0	FI-P-6,8	–	0,93	1,44	60,0	–
107	TS-T25-6,0	FI-P-6,8	–	1,07	1,78	75,0	–
108	Sarnafast SBF -6,0	FI-P-6,8	–	0,35	0,58	75,0	–
109	Sarnafast SBF -S-6,0	FI-P-6,8	–	0,82	1,37	75,0	–
110	FB-S-T25-7,5	FI-P-6,8	0,59	–	–	17,0	4,8

SFS intec flat roof fasteners

Characteristic values of axial load resistance

Annex 168

Deutsches Institut für Bautechnik DIBt

Annex	SFS intec flat roof fasteners		Substructure				
			Pumice panel EN 1520 LAC 6, D 1,0	Aerated Concrete DIN 4223-1		embedment depth [mm]	drill hole diameter [mm]
	Fastener	Plate		P3,3 density 0,45	P4,4 density 0,55		
114	BS-6,1	FI-R-20xL, FI-P-16,0	–	0,92	1,53	75,0	–
117	TS-T25-6,0	FI-R-20xL, FI-P-16,0	–	1,07	1,71	75,0	–
118	Sarnafast SBF -6,0	FI-R-20xL, FI-P-16,0	–	0,35	0,58	75,0	–
119	Sarnafast SBF -S-6,0	FI-R-20xL, FI-P-16,0	–	0,82	1,37	75,0	–
131	Sarnafast SBF -6,0	SRT-L	–	0,35	0,58	75,0	–
132	Sarnafast SBF -S-6,0	SRT-L	–	0,82	1,37	75,0	–
136	Sarnafast SBF -6,0	Sarnafast KTL -82x40	–	0,35	0,58	75,0	–
137	Sarnafast SBF -6,0	Sarnafast DTL -70x70	–	0,35	0,58	75,0	–
138	Sarnafast SBF -6,0	IF/IG-C-82x40	–	0,35	0,58	75,0	–
139	Sarnafast SBF -S-6,0	Sarnafast KTL -82x40	–	0,82	1,37	75,0	–
140	Sarnafast SBF -S-6,0	Sarnafast DTL -70x70	–	0,82	1,37	75,0	–
141	Sarnafast SBF -S-6,0	IF/IG-C-82x40	–	0,82	1,37	75,0	–
142	Sarnafast SBF -S-6,0	Sarnafast Tube SFT-50	–	0,82	1,37	75,0	–
143	Sarnafast SBF -S-6,0	Sarnabar Tube SBT-20	–	0,82	1,37	75,0	–
144	Sarnafast SBF -6,0	Sarnabar Tube SBT -20, SBIW-70x70	–	0,35	0,58	75,0	–
151	LBS-S-T25-8,0	IF/IG-C-82x40	–	0,93	1,44	60,0	–

SFS intec flat roof fasteners

Characteristic values of axial load resistance

Annex 169