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Członek EOTA

European Technical Approval

ETA-12/0579

English language translation - the original version is in Polish language

Nazwa handlowa

Trade name

IDP łączniki do dachów płaskich

IDP Flat Roof Fasteners

Właściciel aprobaty

Holder of approval

P.H. HAMAR Sp. J. B. i H. Grzesiak

**ul. Hutnicza 7
81-061 Gdynia
Poland**

Rodzaj i przeznaczenie wyrobu

*Generic type and use
of construction products*

**Łączniki do mocowania elastycznej warstwy
wodochronnej dachów płaskich**

Fasteners for flexible roof waterproofing systems

Termin ważności

Valid

**od
from
do
to**

27.12.2012

27.12.2017

Zakład produkcyjny

Manufacturing plant

**P.H. HAMAR Sp. J. B. i H. Grzesiak
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Niniejsza Europejska

Aprobata Techniczna zawiera

*This European Technical
Approval contains*

33 strony, w tym 27 Załączników

33 pages including 27 Annexes



Europejska Organizacja ds. Aprobatach Technicznych

European Organisation for Technical Approvals

I LEGAL BASES AND GENERAL CONDITIONS

1. This European Technical Approval is issued by Instytut Techniki Budowlanej 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 products¹, amended by the Council Directive 93/68/EEC of 22 July 1993²;
 - ustawa z dnia 16 kwietnia 2004 r. o wyrobach budowlanych (law on construction products from 16th April 2004)³;
 - rozporządzenie Ministra Infrastruktury z dnia 14 października 2004 r. w sprawie europejskich aprobat technicznych oraz polskich jednostek organizacyjnych upoważnionych do ich wydawania (regulation of Ministry of Infrastructure of 14th October 2004 on the European Technical Approvals and Polish bodies entitled to issue them)⁴;
 - Common Procedural Rules for Requesting, Preparing and the Granting of European Technical Approvals set out in the Annex of Commission Decision 94/23/EC⁵;
 - Guideline for European Technical Approval of „Systems of mechanically fastened flexible roof waterproofing membranes”, ETAG 006.
2. Instytut Techniki Budowlanej 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 Instytut Techniki Budowlanej, in particular after information by the Commission on the basis of 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 Instytut Techniki Budowlanej. 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 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, 11.02.1989, p. 12

² Official Journal of the European Communities № L 220, 30.08.1993, p. 1

³ Official Journal of Polish Republic № 92/2004, pos. 881

⁴ Official Journal of Polish Republic № 237/2004, pos. 2375

⁵ Official Journal of the European Communities № L 17, 20.01.1994, p. 34

II SPECIFIC CONDITIONS OF THE EUROPEAN TECHNICAL APPROVAL

1 Definition of product and intended use

1.1 Definition of product

The construction products are mechanical fasteners IDP Flat Roof Fasteners. The fasteners comprise a screw made of coated carbon steel and a washer with integrated sleeve made of plastic material (polypropylene or polyamide) or a washer made of metallic-coated steel.

1.2 Intended use

The fasteners are intended to be used for fastening of flexible roof waterproofing membranes according to ETAG 006. The possible substrates are steel decks, concrete or timber structures.

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 or Approval Body, 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 product and methods of verification

2.1 Characteristics of product

The fasteners shall correspond to the drawings and information given in Annexes 1 to 23. The material properties, dimensions and tolerances not indicated in these Annexes shall correspond to the respective information laid down in the technical documentation⁶ of this European Technical Approval.

2.2 Safety in use (ER 4)

The characteristic values and mean values of the axial load resistance of the fasteners are given in Annexes 24 to 27. 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 evaluated on the basis of existing field experience of the manufacturer.

⁶ The technical documentation of this European Technical Approval is deposited at Instytut Techniki Budowlanej and, as far as relevant for the tasks of the approved body involved in the attestation of conformity procedure, may be handed over only to the approved body involved.

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 and the polypropylene or polyamide components of the fasteners.

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

The test results of the impact resistance and brittleness of plastic components showed a drop height 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 of conformity of the product and CE-marking

3.1 Attestation of conformity system

According to the Decision 99/143/EG of the European Commission⁷ the system 2+ of attestation of conformity applies.

This system of attestation of conformity is defined as follows:

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

(a) Tasks of the manufacturer:

- (1) initial type-testing of the product,
- (2) factory production control,
- (3) testing of samples taken at the factory by the manufacturer in accordance with a prescribed test plan.

(b) Tasks of 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.

3.2 Responsibilities

3.2.1 Tasks of 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 product is in conformity with this European Technical Approval.

⁷ Official Journal of the European Communities L 80 of 18.03.1998

The manufacturer may only use raw materials stated in the technical documentation of this European Technical Approval.

The factory production control shall be in accordance with the control plan⁸ 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 at Instytut Techniki Budowlanej.

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 of 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 section 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 product is in conformity with the provisions of this European Technical Approval.

3.2.2 Tasks of the approved body

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 product stating the conformity with the provision 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 Instytut Techniki Budowlanej without delay.

3.3 CE-marking

The CE-marking shall be affixed on each packaging of the fasteners. The symbol „CE” shall be accompanied by the following information:

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

⁸ The control plan has been deposited at Instytut Techniki Budowlanej and may be handed over only to the approved body involved in the procedure of attestation of conformity.

4 Assumptions under which the fitness of the product for the intended use was favorably assessed

4.1 Manufacturing

The European Technical Approval is issued for the product on the basis of agreed data/information, deposited at Instytut Techniki Budowlanej which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to the Instytut Techniki Budowlanej before the changes are introduced. Instytut Techniki Budowlanej will decide whether or not such changes affect the ETA and consequently the validity of the CE marking on the basis of the ETA and if so whether further assessment or alterations to the ETA shall be necessary.

4.2 Installation

The installation shall be carried out according to the manufacturer's instructions. The manufacturer hands over the assembly instruction to the assemblers.

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 the provisions of the ETA is confirmed by the executing company.

5 Recommendations for the manufacturer

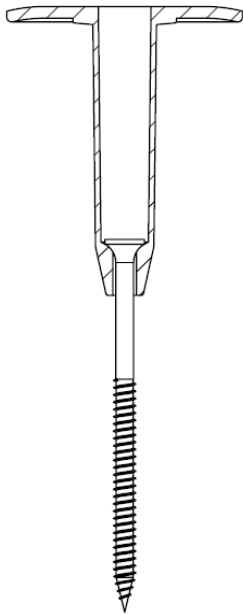
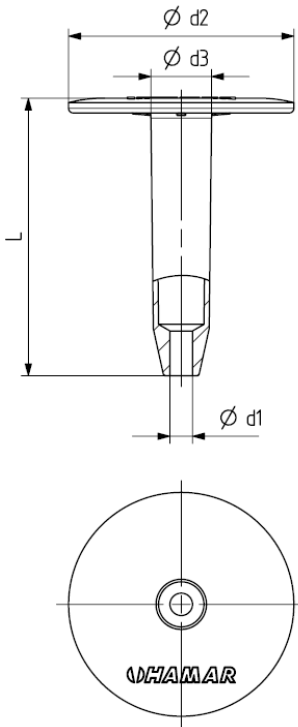
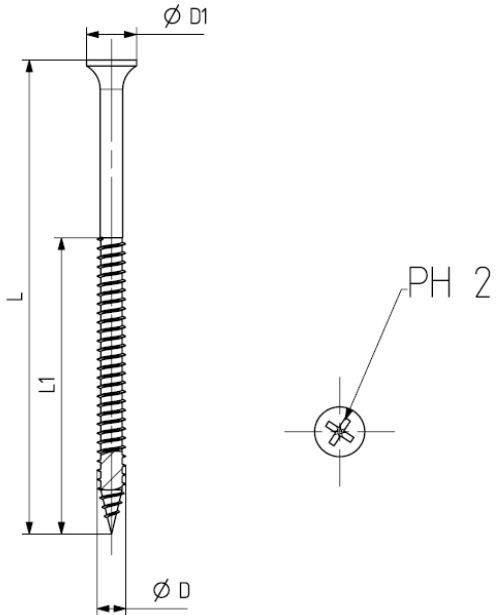
5.1 Recommendations on packaging, transport and storage

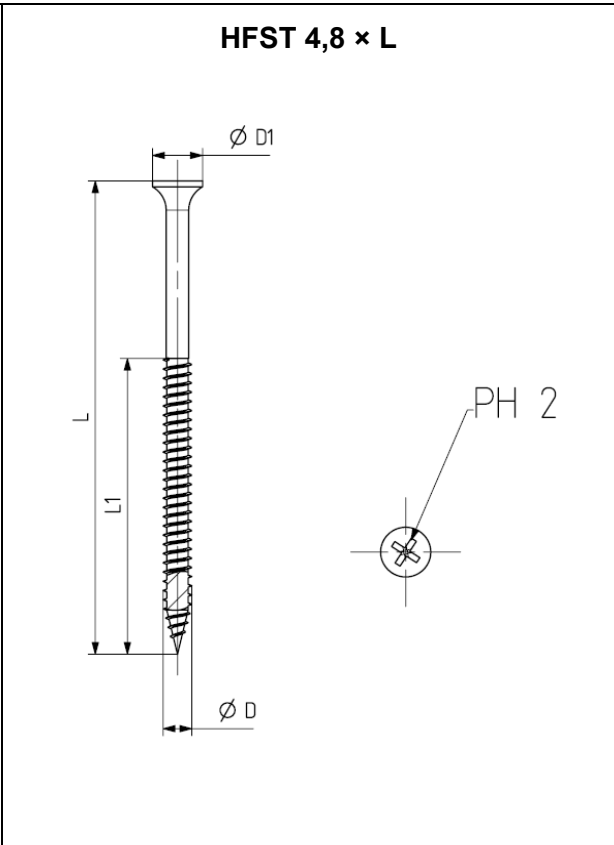
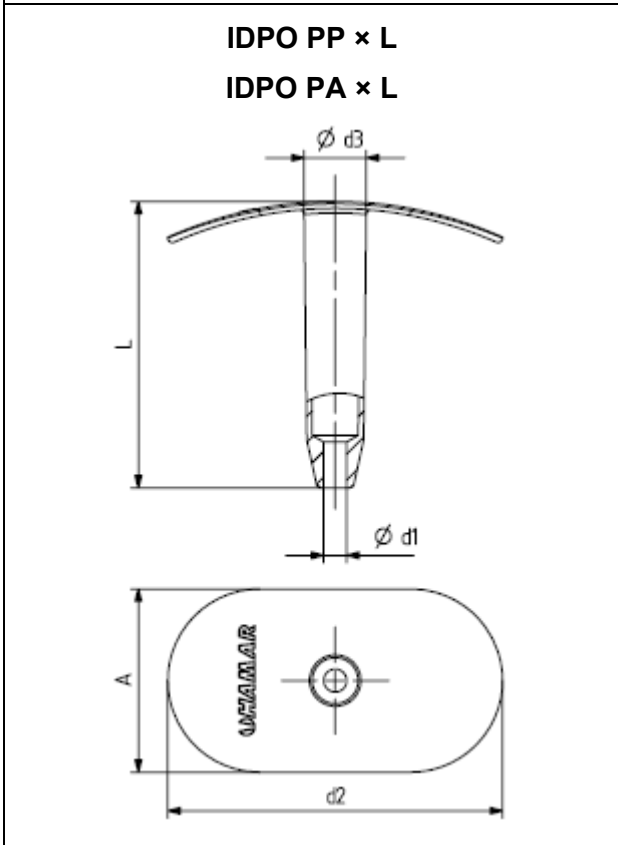
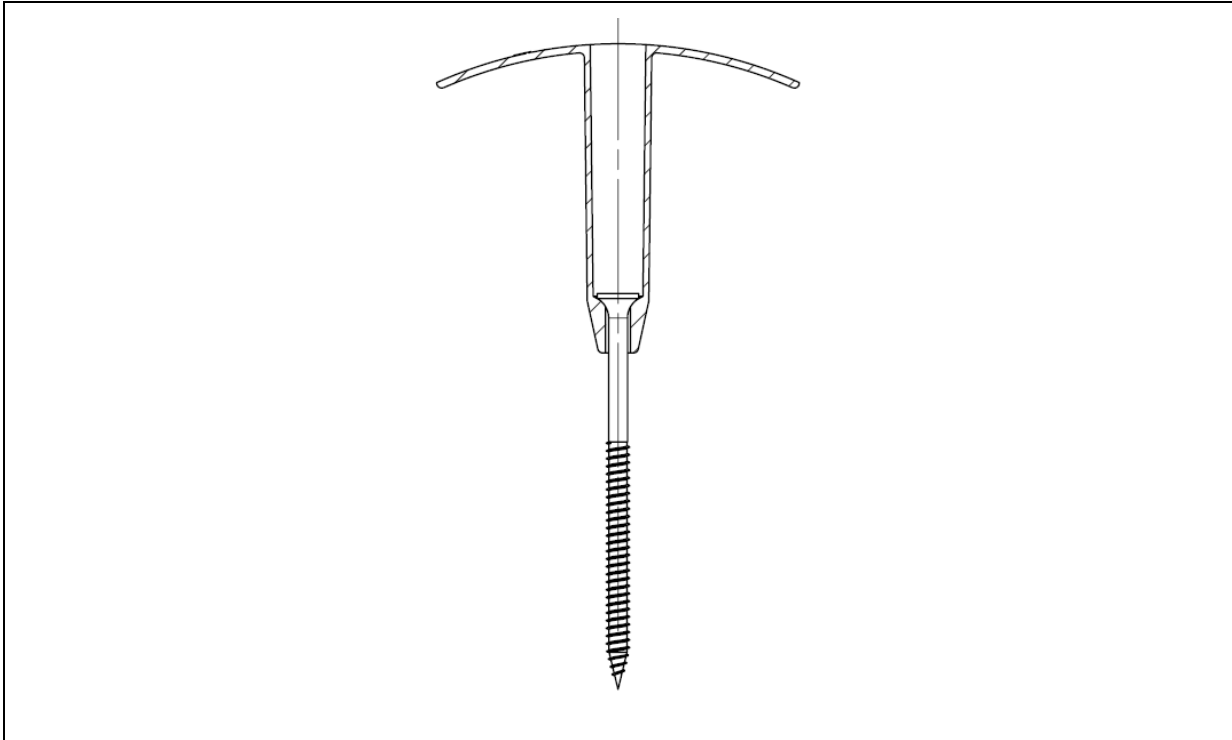
It is the responsibility of the manufacturer to ensure that the information on the specific conditions according to 1, 2 and 4 is given to those who are concerned. This information may be made by reproduction of the respective parts of the European Technical Approval. In addition all installation data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

On behalf of Instytut Techniki Budowlanej



Marek Kaproń
Deputy Director of ITB

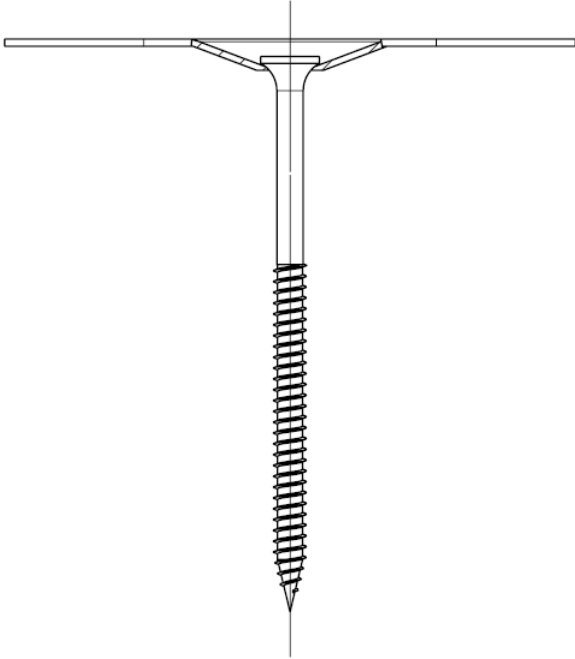
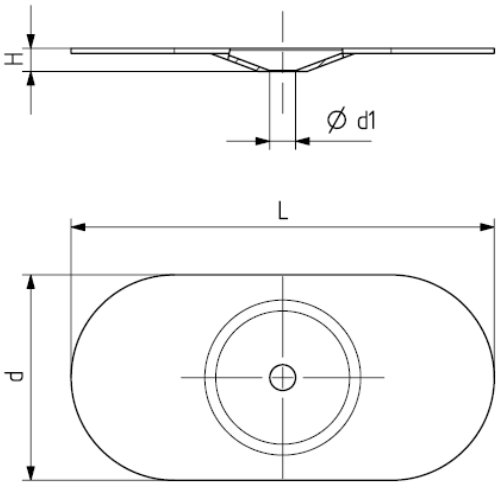
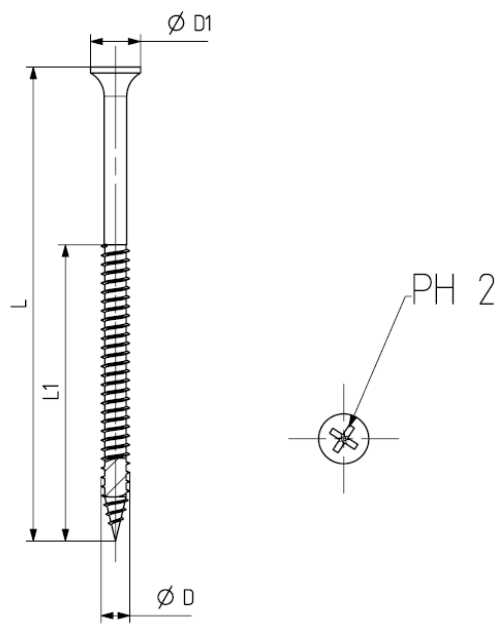
	
<p>IDP PP × L IDP PA × L</p> 	<p>HFST 4,8 × L</p> 
IDP Flat Roof Fasteners	
<p>Combination 1 IDP PP × L and HFST 4,8 × L or IDP PA × L and HFST 4,8 × L</p>	
<p>Annex 1 of European Technical Approval ETA-12/0579</p>	

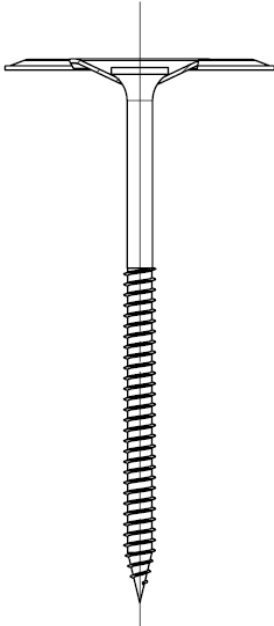
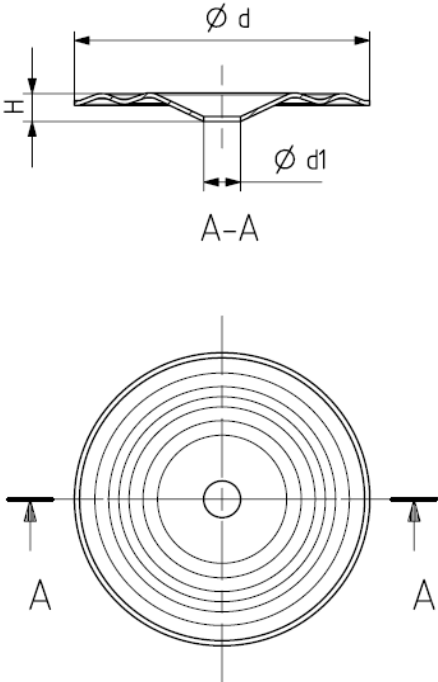
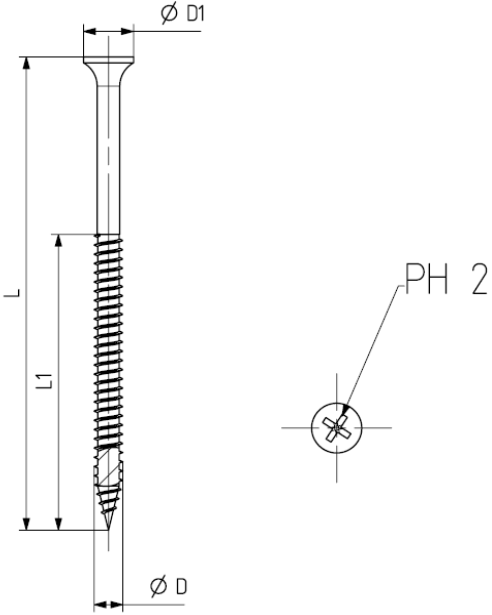


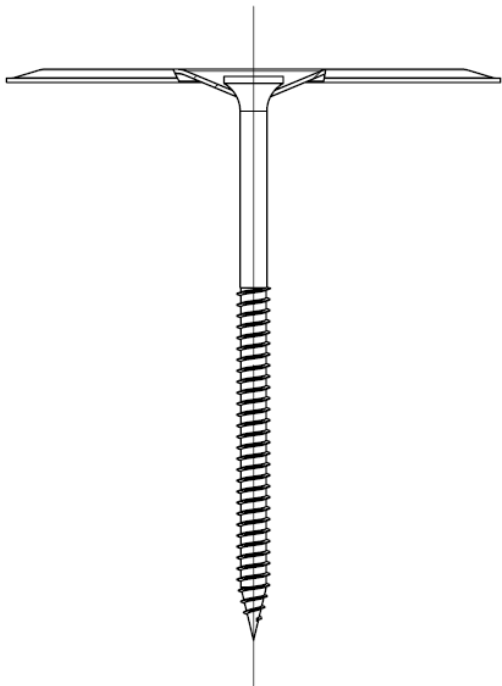
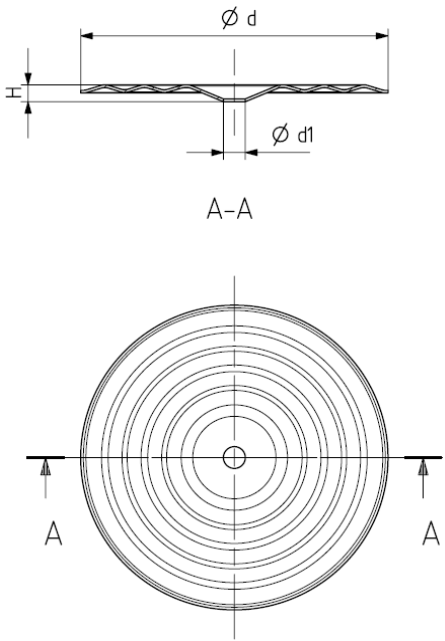
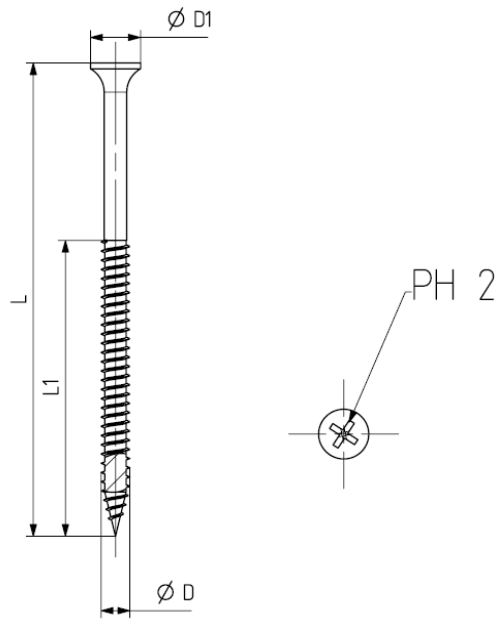
IDP Flat Roof Fasteners

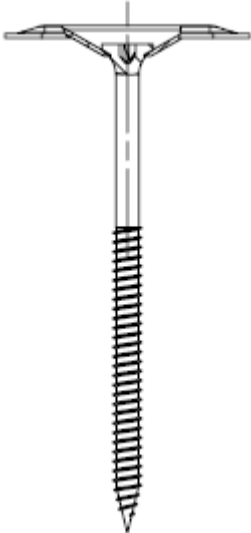
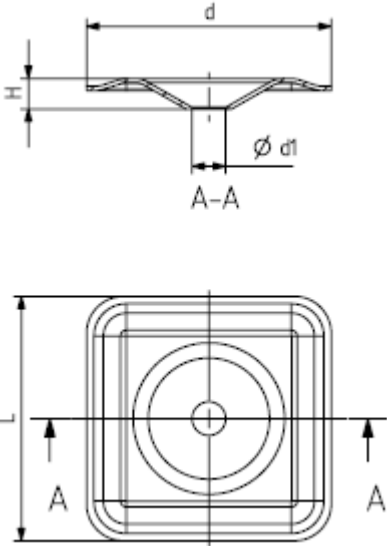
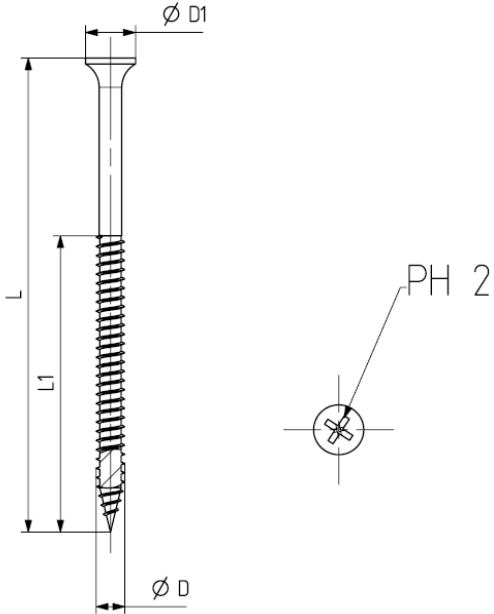
Combination 2
 IDPO PP × L and HFST 4,8 × L or IDPO PA × L and HFST 4,8 × L

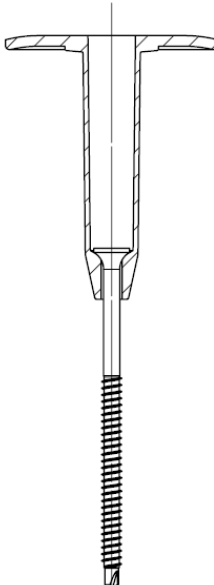
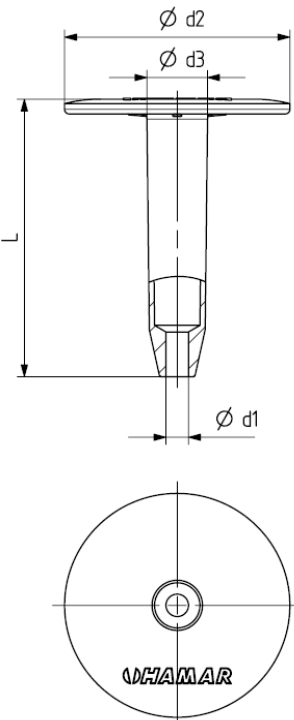
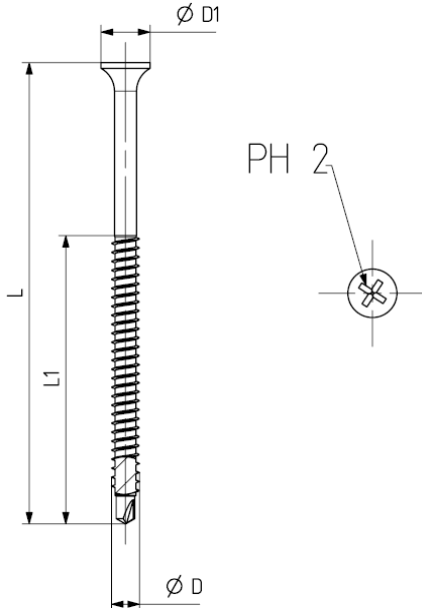
Annex 2
 of European
 Technical Approval
 ETA-12/0579

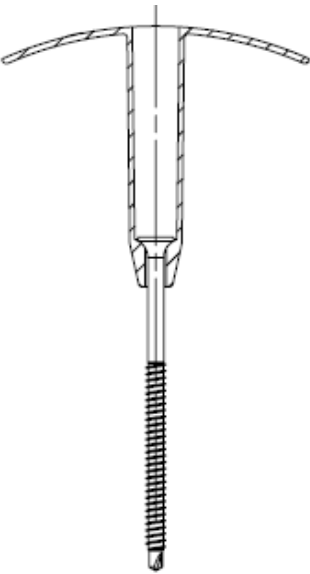
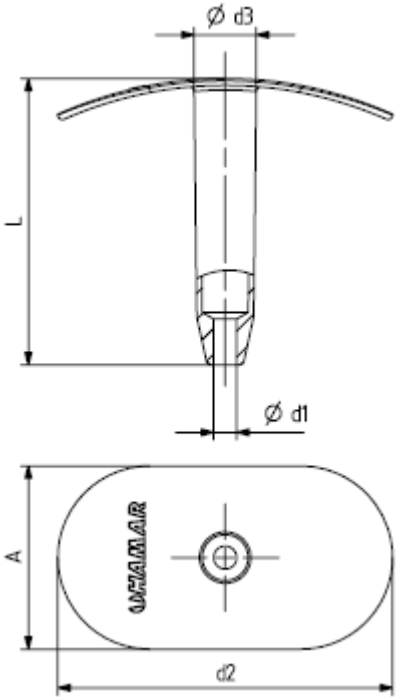
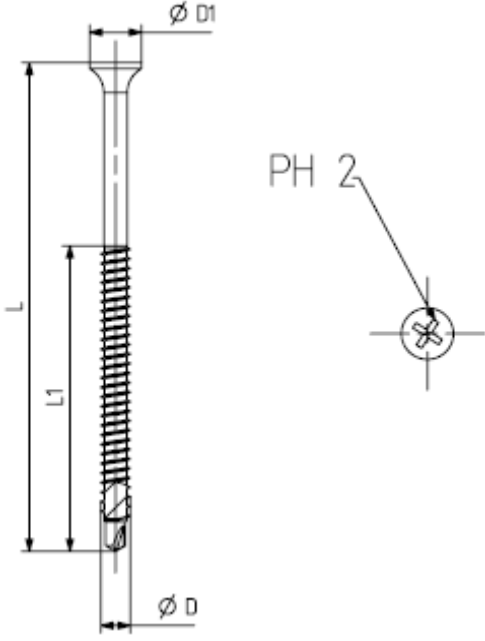
	
<p>LI 40 × 82</p> 	<p>HFST 4,8 × L</p> 
<p>IDP Flat Roof Fasteners</p>	
<p>Combination 3 LI 40 × 82 and HFST 4,8 × L</p>	
<p>Annex 3 of European Technical Approval ETA-12/0579</p>	

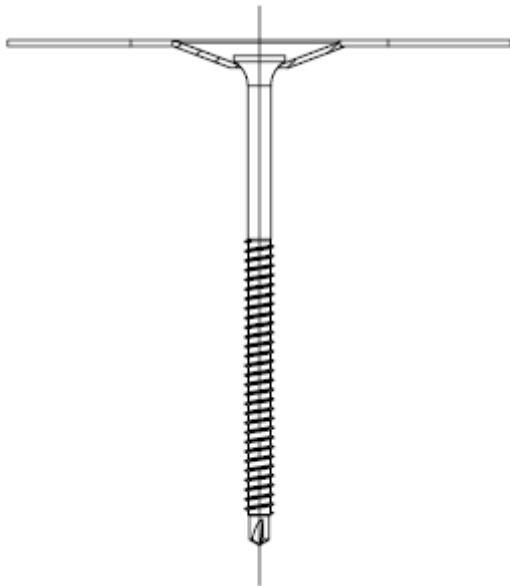
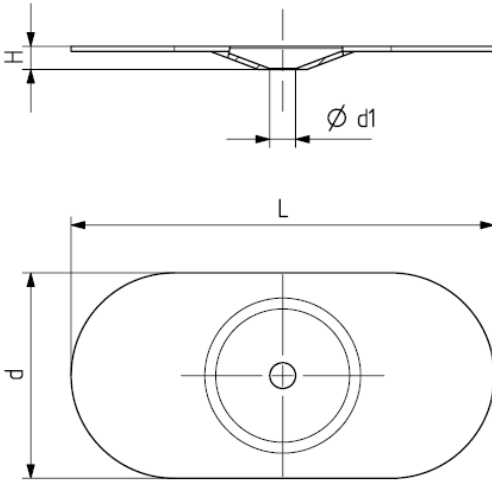
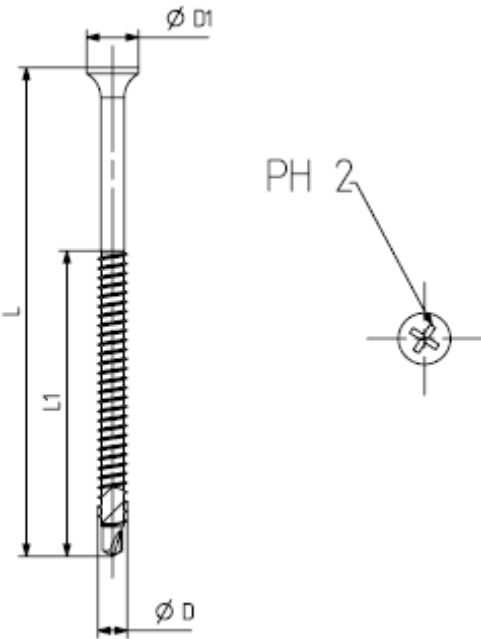
		
LI 40 	HFST 4,8 × L 	
IDP Flat Roof Fasteners		Annex 4
Combination 4 LI 40 and HFST 4,8 × L		of European Technical Approval ETA-12/0579

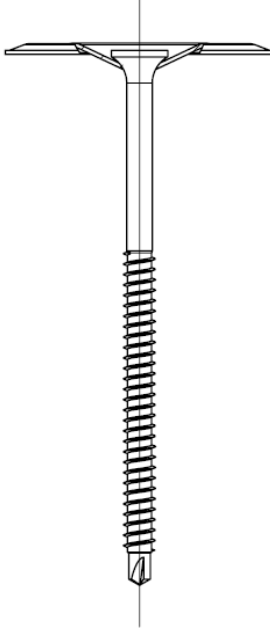
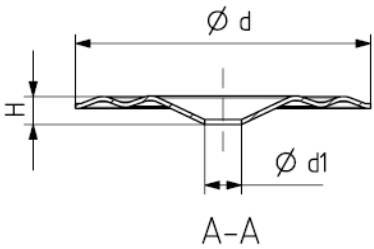
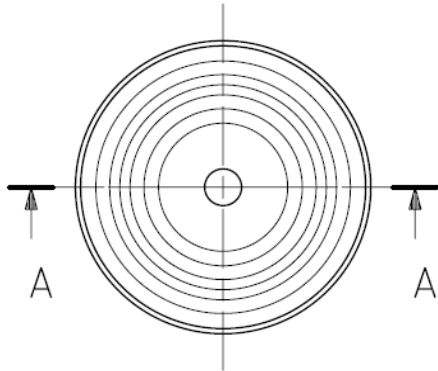
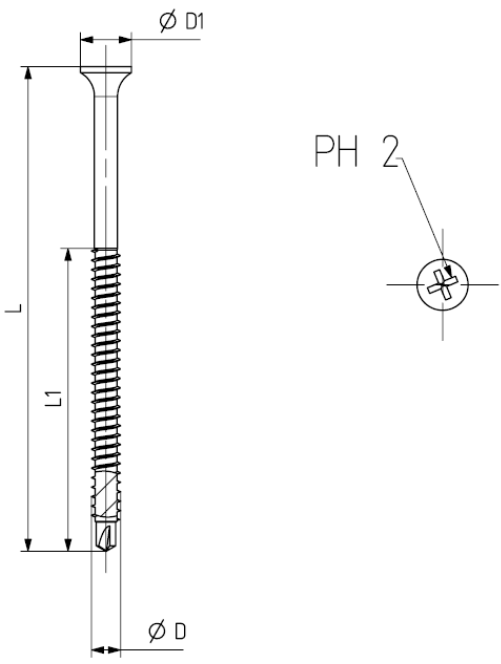
		
LI 70 	HFST 4,8 × L 	
IDP Flat Roof Fasteners		Annex 5 of European Technical Approval ETA-12/0579
Combination 5 LI 70 and HFST 4,8 × L		

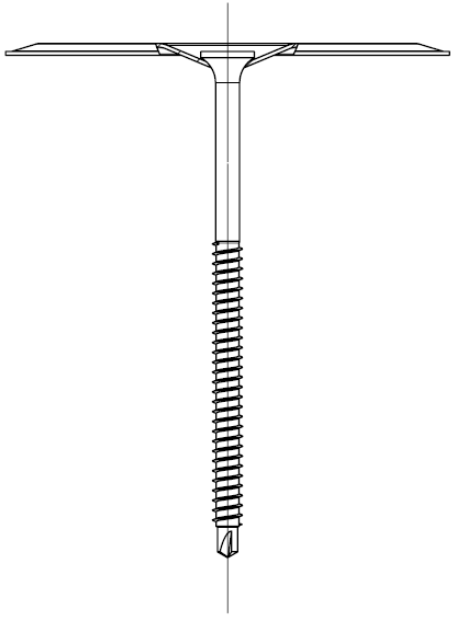
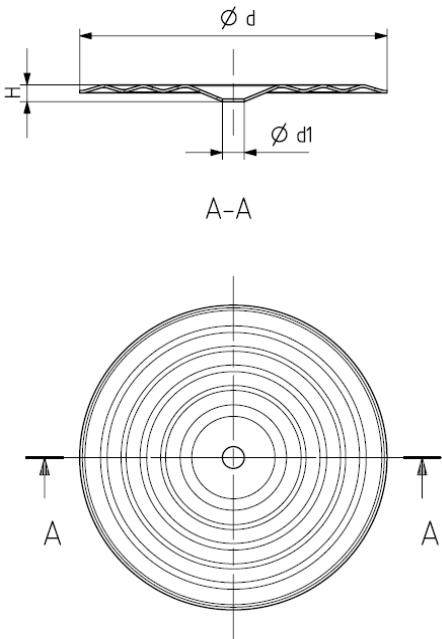
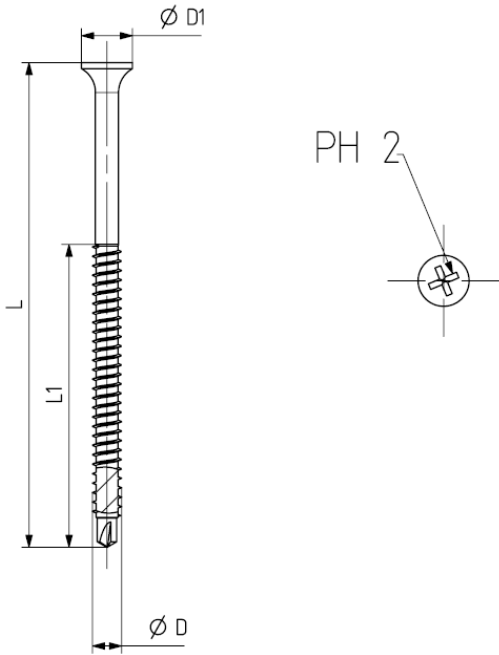
	
<p>LI 40 × 40</p> 	<p>HFST 4,8 × L</p> 
<p>IDP Flat Roof Fasteners</p>	
<p>Combination 6 LI 40 × 40 and HFST 4,8 × L</p>	
<p>Annex 6 of European Technical Approval ETA-12/0579</p>	

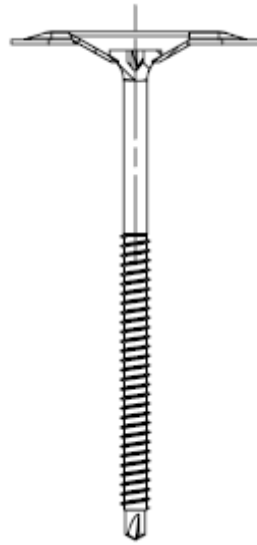
	
<p>IDP PP × L IDP PA × L</p> 	<p>HFSD 4,8 × L</p> 
<p>IDP Flat Roof Fasteners</p>	
<p>Combination 7 IDP PP × L and HFSD 4,8 × L or IDP PA × L and HFSD 4,8 × L</p>	
<p>Annex 7 of European Technical Approval ETA-12/0579</p>	

	
<p>IDPO PP × L IDPO PA × L</p> 	<p>HFSD 4,8 × L</p> 
<p>IDP Flat Roof Fasteners</p>	
<p>Combination 8 IDPO PP × L and HFSD 4,8 × L or IDPO PA × L and HFSD 4,8 × L</p>	
<p>Annex 8 of European Technical Approval ETA-12/0579</p>	

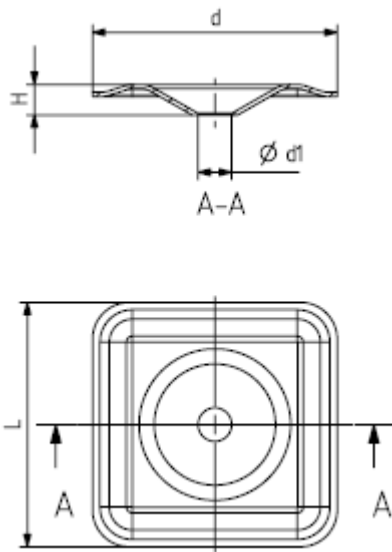
	
<p>LI 40 × 82</p> 	<p>HFSD 4,8 × L</p> 
<p>IDP Flat Roof Fasteners</p>	
<p>Combination 9 LI 40 × 82 and HFSD 4,8 × L</p>	
<p>Annex 9 of European Technical Approval ETA-12/0579</p>	

	
<p>LI 40</p>  	<p>HFSD 4,8 × L</p> 
<p>IDP Flat Roof Fasteners</p>	
<p>Combination 10 LI 40 and HFSD 4,8 × L</p>	
<p>Annex 10 of European Technical Approval ETA-12/0579</p>	

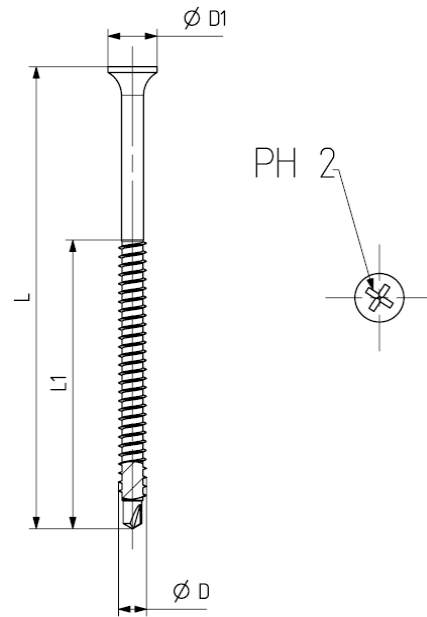
	
<p>LI 70</p> 	<p>HFSD 4,8 × L</p> 
<p>IDP Flat Roof Fasteners</p>	
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<p>Annex 11 of European Technical Approval ETA-12/0579</p>	



LI 40 × 40



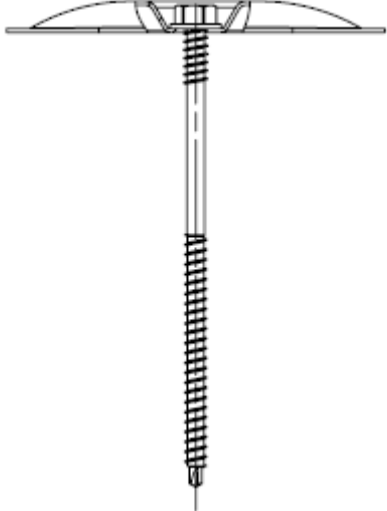
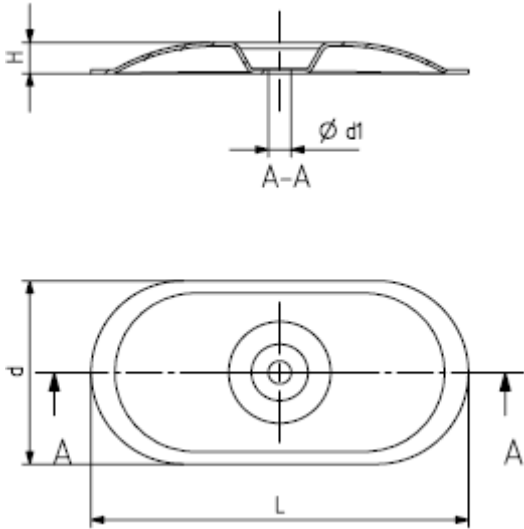
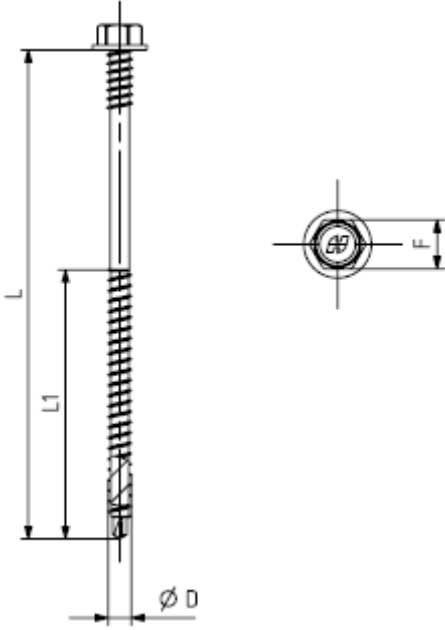
HFSD 4,8 × L

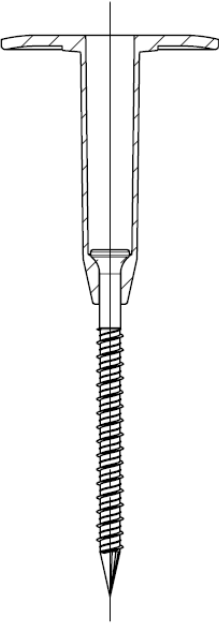
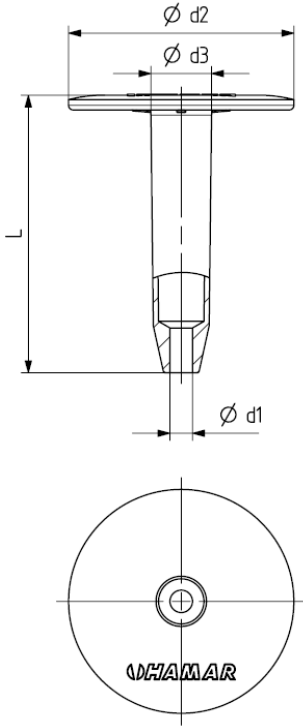
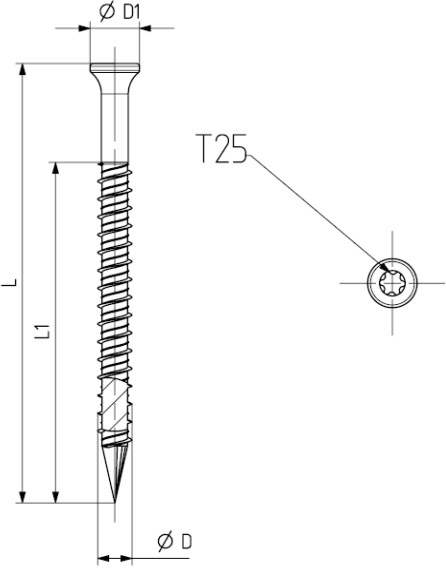


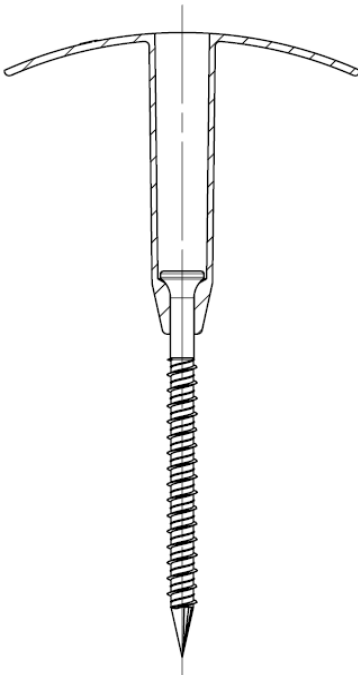
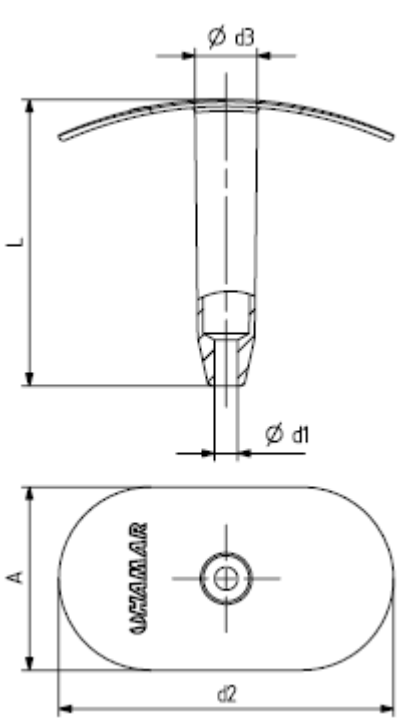
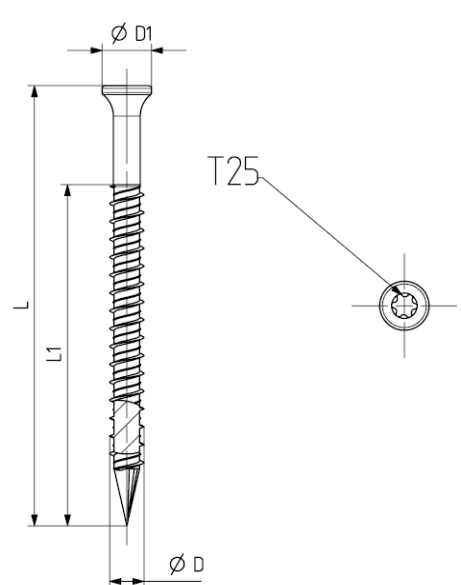
IDP Flat Roof Fasteners

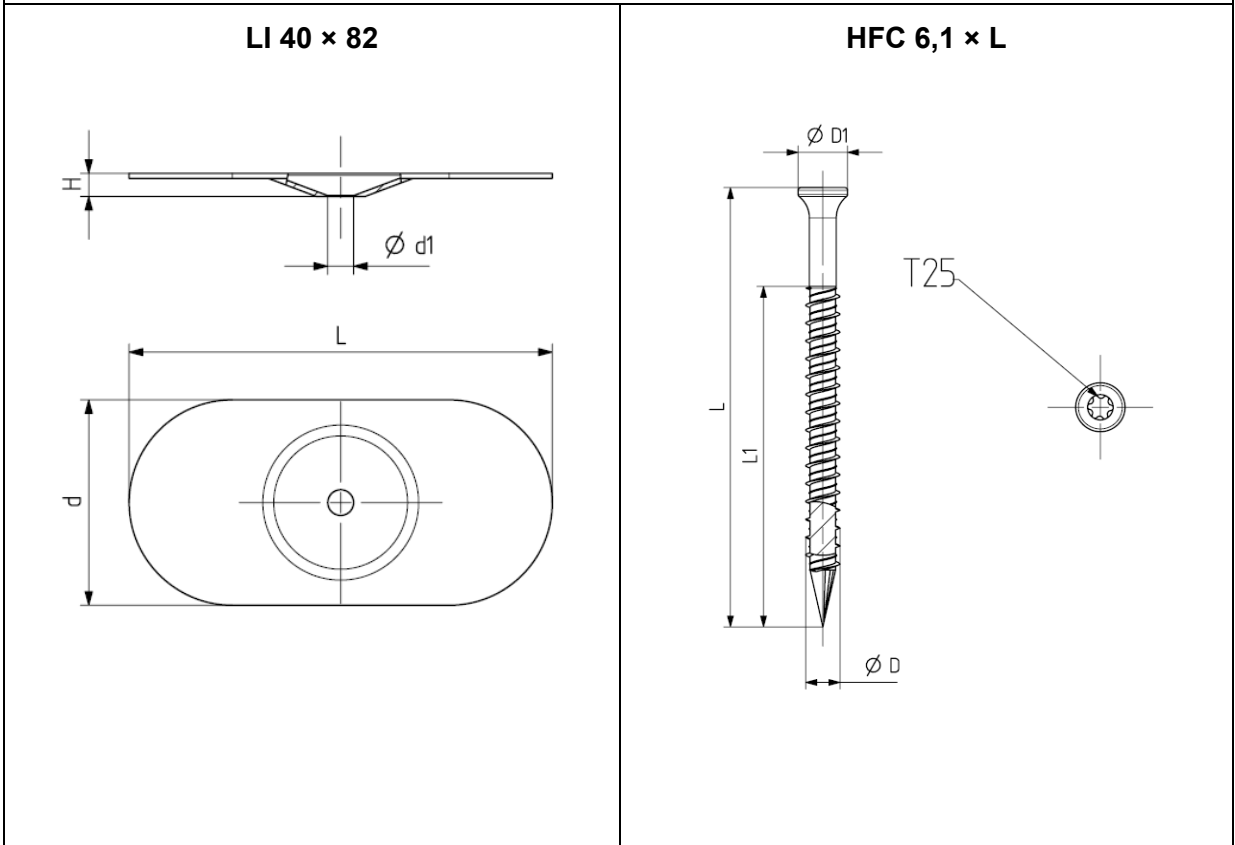
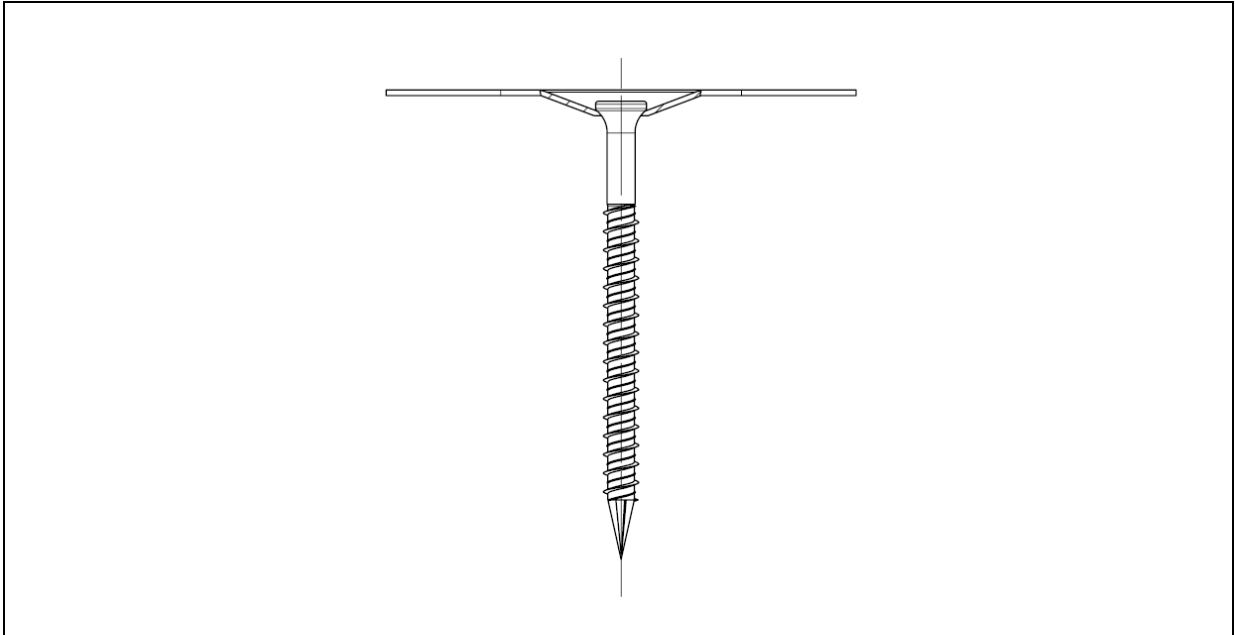
Combination 12
 LI 40 × 40 × L and HFSD 4,8 × L

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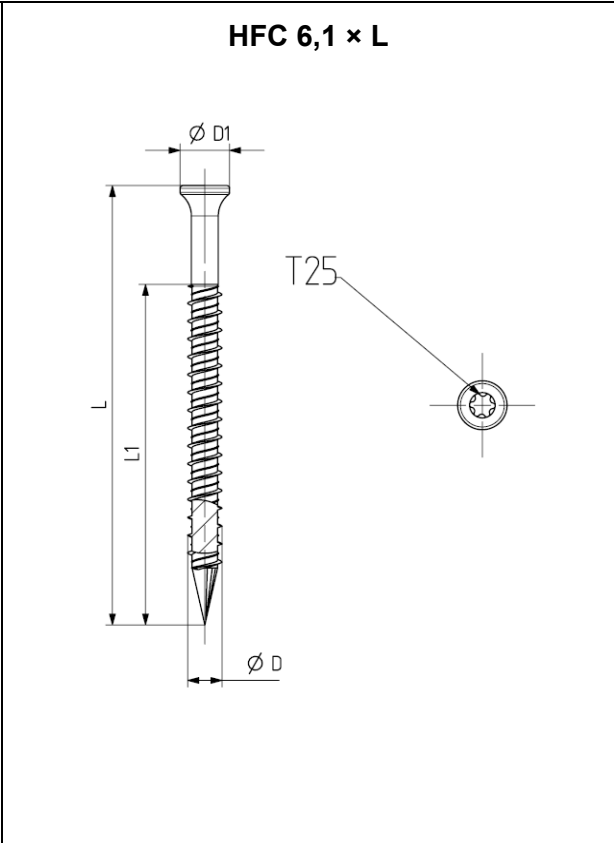
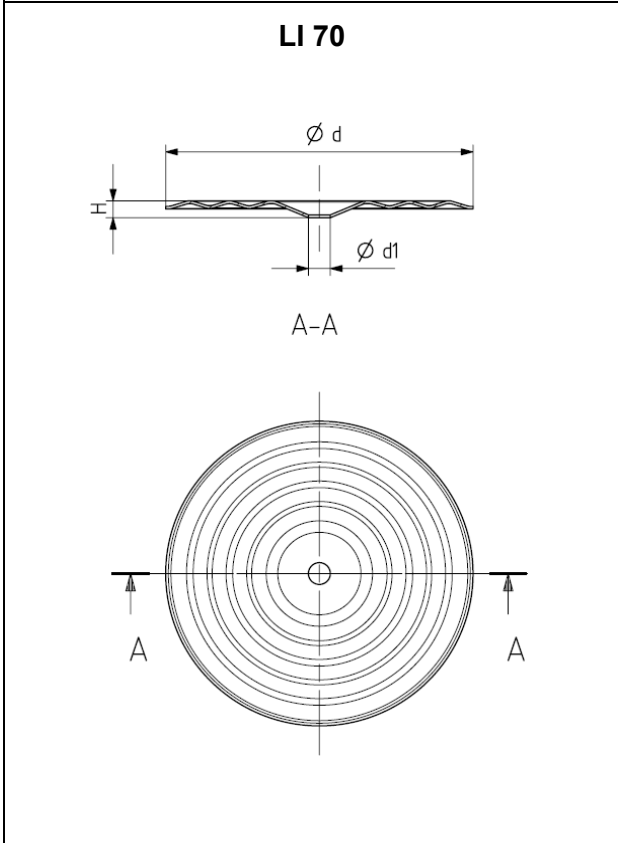
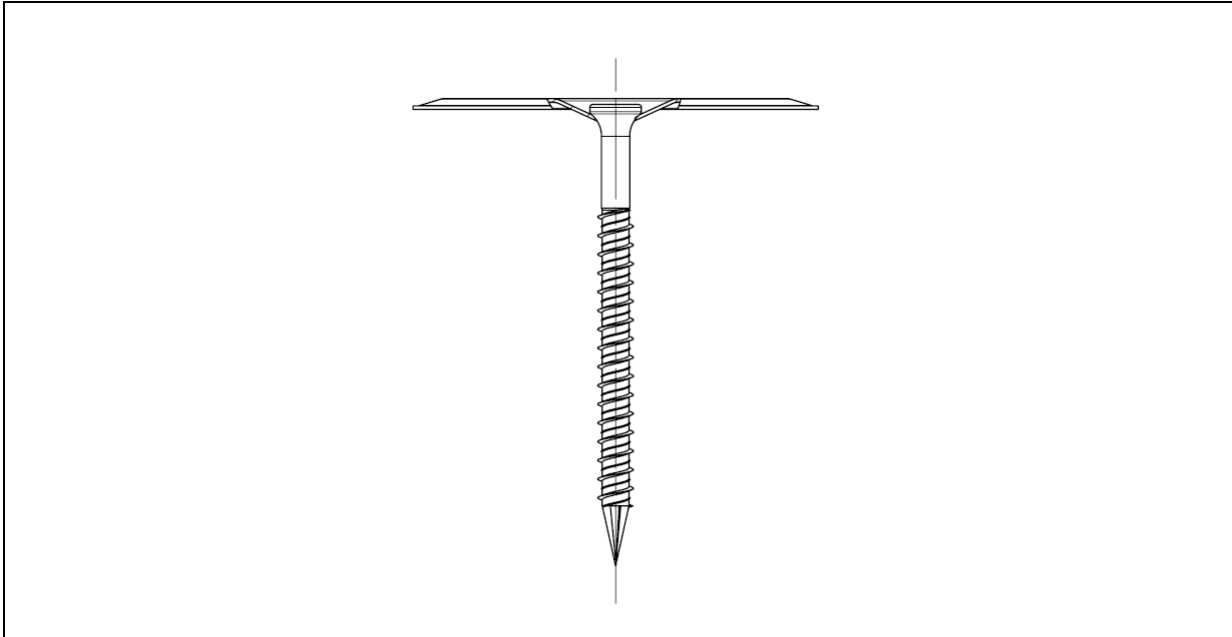
	
<p>LI 40 × 82 H</p> 	<p>HFHD 4,8 × L</p> 
<p>IDP Flat Roof Fasteners</p>	
<p>Combination 13 LI 40 × 82 H and HFHD 4,8 × L</p>	
<p>Annex 13 of European Technical Approval ETA-12/0579</p>	

	
<p>IDP PP × L IDP PA × L</p> 	<p>HFC 6,1 × L</p> 
<p>IDP Flat Roof Fasteners</p>	
<p>Combination 14 IDP PP × L and HFC 6,1 × L or IDP PA × L and 6,1 × L</p>	
<p>Annex 14 of European Technical Approval ETA-12/0579</p>	

	
<p>IDPO PP × L IDPO PA × L</p> 	<p>HFC 6,1 × L</p> 
<p>IDP Flat Roof Fasteners</p>	
<p>Combination 15 IDPO PP × L and HFC 6,1 × L or IDPO PA × L and HFC 6,1 × L</p>	
<p>Annex 15 of European Technical Approval ETA-12/0579</p>	



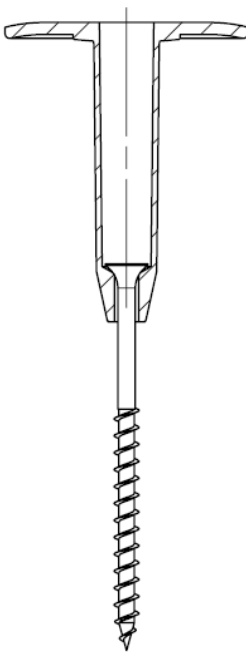
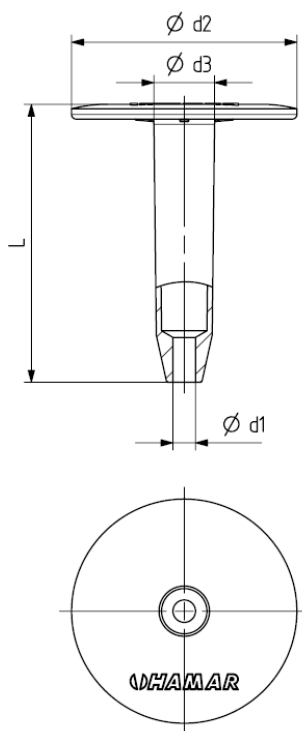
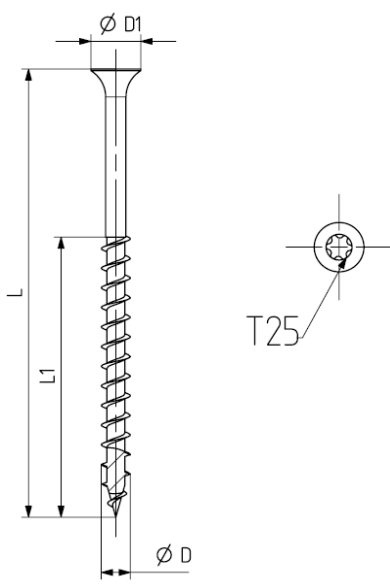
IDP Flat Roof Fasteners	Annex 16 of European Technical Approval ETA-12/0579
Combination 16 LI 40 × 82 and HFC 6,1 × L	

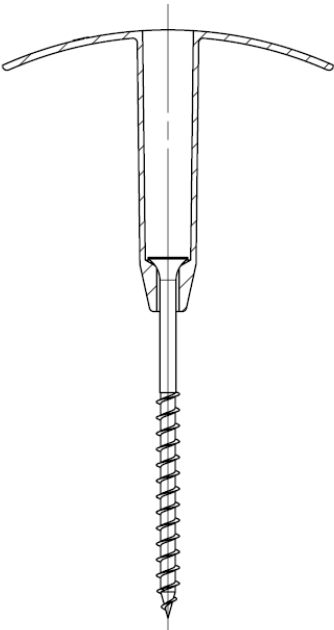
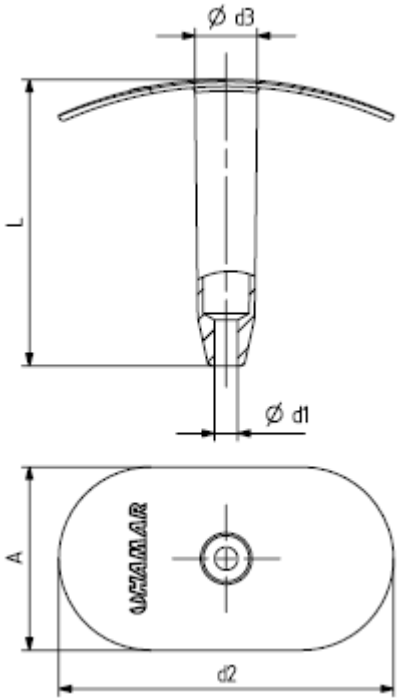
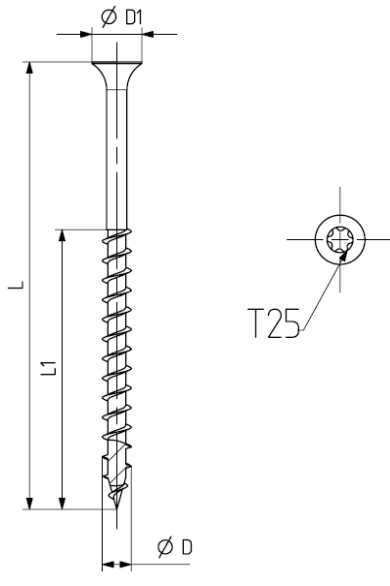


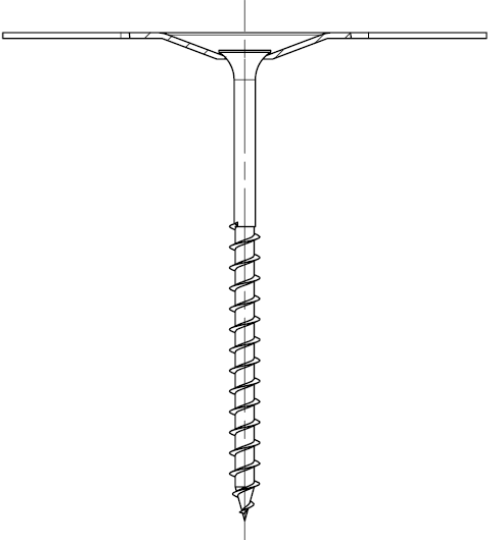
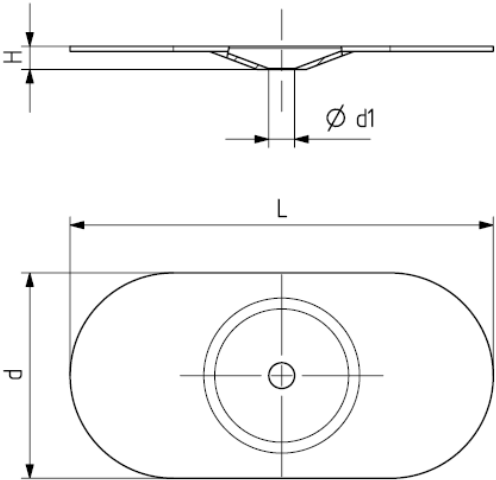
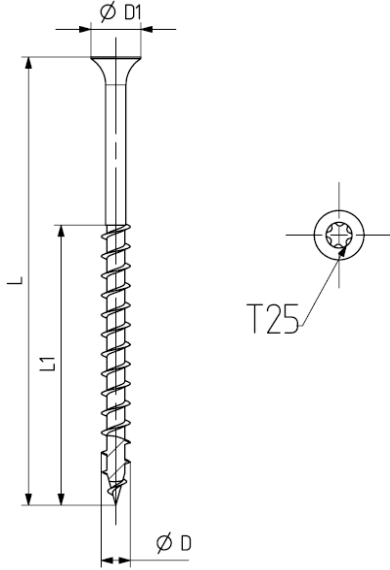
IDP Flat Roof Fasteners

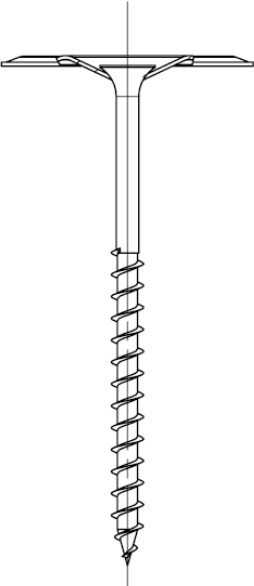
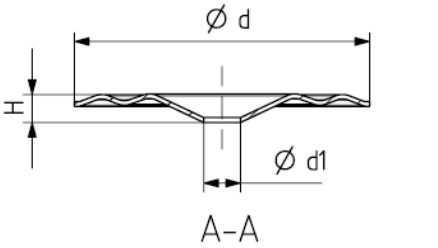
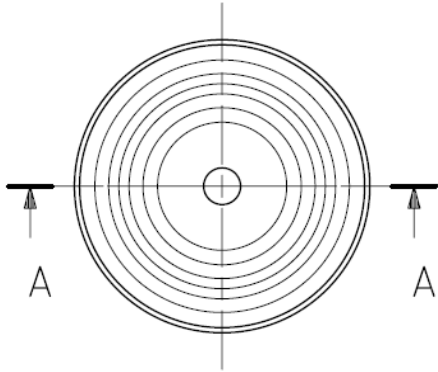
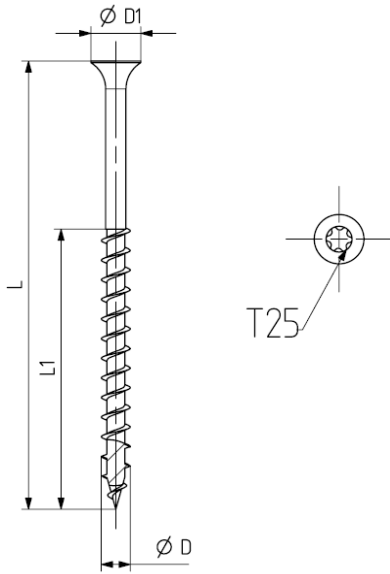
Combination 17
 LI 70 and HFC 6,1 × L

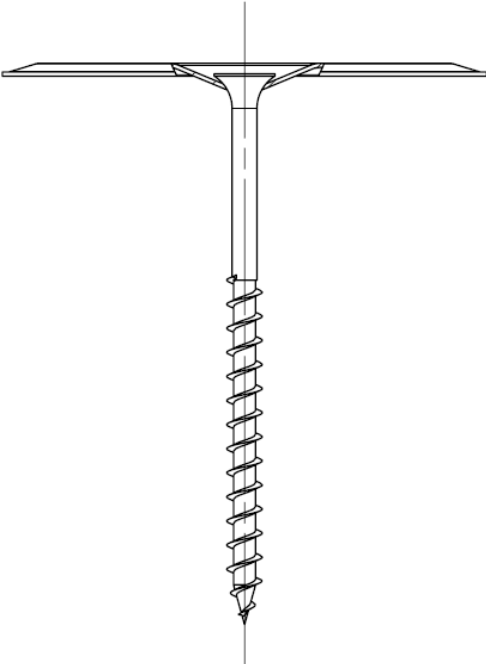
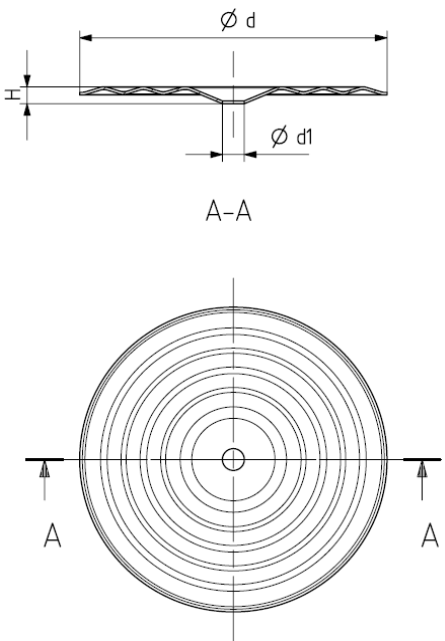
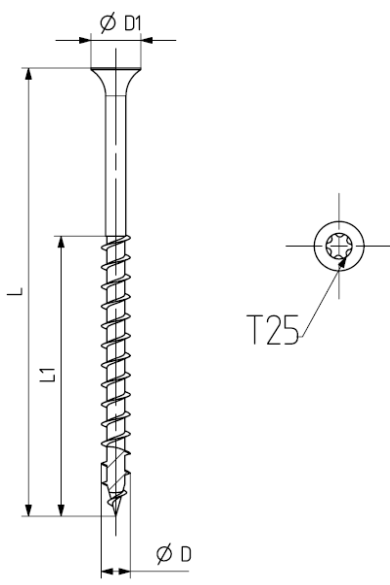
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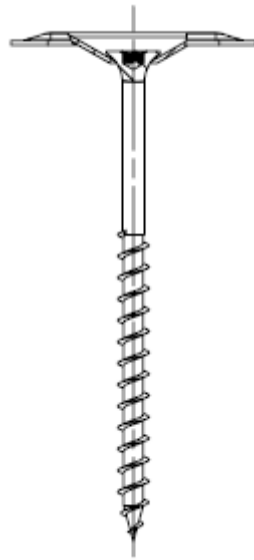
	
<p>IDP PP × L IDP PA × L</p> 	<p>HFW 5,0 × L</p> 
<p>IDP Flat Roof Fasteners</p>	
<p>Combination 18 IDP PP × L and HFW 5,0 × L or IDP PA × L and HFW 5,0 × L</p>	
<p>Annex 18 of European Technical Approval ETA-12/0579</p>	

	
<p>IDPO PP × L IDPO PA × L</p> 	<p>HFW 5,0 × L</p> 
<p>IDP Flat Roof Fasteners</p>	
<p>Combination 19 IDPO PP × L and HFW 5,0 × L or IDPO PA × L and HFW 5,0 × L</p>	
<p>Annex 19 of European Technical Approval ETA-12/0579</p>	

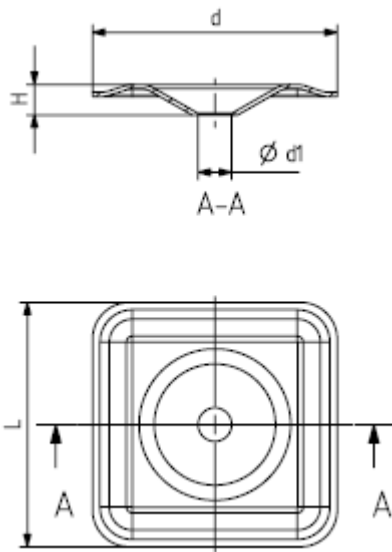
	
<p>LI 40 × 82</p> 	<p>HFW 5,0 × L</p> 
<p>IDP Flat Roof Fasteners</p>	
<p>Combination 20 LI 40 × 82 and HFW 5,0 × L</p>	
<p>Annex 20 of European Technical Approval ETA-12/0579</p>	

	
<p>LI 40</p>  <p style="text-align: center;">A-A</p>  <p style="text-align: center;">A A</p>	<p>HFW 5,0 × L</p>  <p style="text-align: right;">T25</p>
<p>IDP Flat Roof Fasteners</p>	
<p>Combination 21 LI 40 and HFW 5,0 × L</p>	
<p>Annex 21 of European Technical Approval ETA-12/0579</p>	

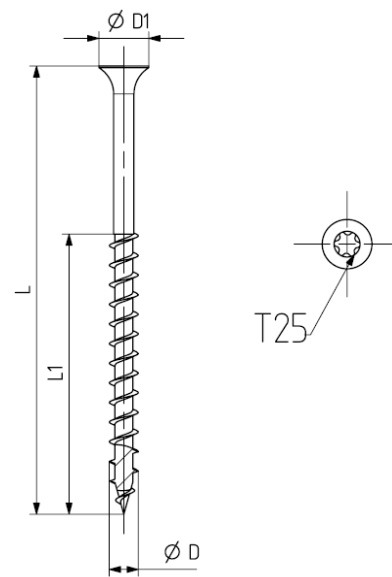
	
<p>LI 70</p> 	<p>HFW 5,0 × L</p> 
<p>IDP Flat Roof Fasteners</p>	
<p>Combination 22 LI 70 and HFW 5,0 × L</p>	
<p>Annex 22 of European Technical Approval ETA-12/0579</p>	



LI 40 × 40



HFW 5,0 × L



IDP Flat Roof Fasteners

Combination 23
 LI 40 × 40 and HFW 5,0 × L

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Characteristic values of axial load resistance [kN]								
Ann. No.	IDP Flat Roof Fasteners		Substrate					
			Steel sheet S280GD acc. to EN 10346					
			Fastener	Washer	t ≥ 0,50 mm	t ≥ 0,63 mm	t ≥ 0,75 mm	t ≥ 0,88 mm
1	HFST	IDP PP	0,79	1,26	1,32	1,35	-	-
		IDP PA				1,72		
2		IDPO PP				1,34		
		IDPO PA				1,72		
3		LI 40x82						
4		LI 40						
5		LI 70						
6	LI 40x40							
7	HFSD	IDP PP	-	-	1,02	1,27	1,35	1,35
		IDP PA					1,51	1,79
8		IDPO PP					1,34	1,34
		IDPO PA					1,51	1,80
9		LI 40x82						
10		LI 40						1,99
11		LI 70						
12	LI 40x40							
13	HFHD	LI 40x82 H	-	-	1,02	1,27	1,51	1,99

IDP Flat Roof Fasteners	Annex 24 of European Technical Approval ETA-12/0579
Characteristic values of axial load resistance	

Characteristic values of axial load resistance [kN]					
Ann. No.	IDP Flat Roof Fasteners		Concrete acc. to EN 206-1	Embedment depth [mm]	Drill hole diameter [mm]
	Fastener	Washer	C20/25		
14	HFC	IDP PP	1,36	30	5
		IDP PA	1,84		
15		IDPO PP	1,33		
		IDPO PA	1,85		
16		LI 40x82	2,23		
17		LI 70	2,88		

Characteristic values of axial load resistance [kN]					
Ann. No.	IDP Flat Roof Fasteners		Wood acc. to EN 14081	Embedment depth [mm]	Drill hole diameter [mm]
	Fastener	Washer	≥ C24		
18	HFW	IDP PP	1,38	20	-
		IDP PA	1,96		
19		IDPO PP	1,37		
		IDPO PA	1,94		
20		LI 40x82	1,96		
21		LI 40			
22		LI 70			
23		LI 40x40			

IDP Flat Roof Fasteners	Annex 25 of European Technical Approval ETA-12/0579
Characteristic values of axial load resistance	

Mean values of axial load resistance [kN]									
Ann. No.	IDP Flat Roof Fasteners		Substrate						
			Steel sheet S280GD acc. to EN 10346						
	Fastener	Washer	t ≥ 0,50 mm	t ≥ 0,63 mm	t ≥ 0,75 mm	t ≥ 0,88 mm	t ≥ 1,00 mm	t ≥ 1,25 mm	
1	HFST	IDP PP	0,96	1,58	1,70	1,39	-	-	
		IDP PA				2,47			
IDPO PP		1,41							
IDPO PA		2,47							
LI 40x82									
LI 40									
LI 70									
LI 40x40									
7		HFSD	IDP PP	-	-	1,32	1,83	1,39	1,39
			IDP PA					1,84	1,94
IDPO PP			1,41					1,41	
IDPO PA			1,84					1,98	
LI 40x82									
LI 40									
LI 70									
LI 40x40	2,45								
13	HFHD	LI 40x82 H	-	-	1,32	1,83	1,84	2,45	

IDP Flat Roof Fasteners	Annex 26 of European Technical Approval ETA-12/0579
Mean values of axial load resistance	

Mean values of axial load resistance [kN]					
Ann. No.	IDP Flat Roof Fasteners		Concrete acc. to EN 206-1	Embedment depth [mm]	Drill hole diameter [mm]
	Fastener	Washer	C20/25		
14	HFC	IDP PP	1,42	30	5
		IDP PA	1,92		
15		IDPO PP	1,41		
		IDPO PA	1,96		
16		LI 40x82	2,53		
17		LI 70	3,05		

Mean values of axial load resistance [kN]					
Ann. No.	IDP Flat Roof Fasteners		Wood acc. to EN 14081	Embedment depth [mm]	Drill hole diameter [mm]
	Fastener	Washer	≥ C24		
18	HFW	IDP PP	1,42	20	-
		IDP PA	2,64		
19		IDPO PP	1,42		
		IDPO PA	2,05		
20		LI 40x82	2,64		
21		LI 40			
22		LI 70			
23		LI 40x40			

IDP Flat Roof Fasteners	Annex 27 of European Technical Approval ETA-12/0579
Mean values of axial load resistance	



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