

FUNCTION IN FIRE EXPERT JUDGEMENT REPORT WITH CLASSIFICATION IN ACCORDANCE WITH STN 92 0205: 2014/Z1: 2019

FIRES-JR-078-22-NURE

Name of the product: Cable bearing system VERGOKAN with cables PRYSMIAN, FABER and PRAKAB

Sponsor: VERGOKAN
Meersbloem Melden 16
9700 Oudenaarde
Belgium

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Task No.: PR-22-0156

Date of issue: 23. 05. 2022

Reports: 2
Copy No.: 1

Distribution list:

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1. INTRODUCTION

This expert judgement report with classification defines the function in fire classification assigned to element „Cable bearing system VERGOKAN with cables PRYSMIAN, FABER and PRAKAB” in accordance with the classes given in STN 92 0205: 2014/Z1: 2019.

This expert judgement report defines field of direct application and field of extended application according test standard. This expert judgement expresses the opinion of the FIRES and is based on the experience or internal rules of FIRES.

This product has already been classified by FIRES, s.r.o. and number of previous fire resistance expert judgement report with classification is FIRES-JR-061-16-NURE (issued on 14. 06. 2016) with validity until 14. 06. 2021. Document FIRES-JR-078-22-NURE replaces expert judgement report with classification FIRES-JR-061-16-NURE.

2. DETAILS OF CLASSIFIED PRODUCT

2.1 GENERAL

The element, cable bearing system VERGOKAN with cables PRYSMIAN, FABER and PRAKAB, is defined as a cable bearing system for power and communication halogen free cables with circuit integrity maintenance in fire.

2.2 PRODUCT DESCRIPTION

The element comprise of cable bearing system VERGOKAN – cable trays with accessories (consoles, brackets, screws etc.) with power and communication halogen free cables PRYSMIAN, FABER and PRAKAB with circuit integrity maintenance in fire.

Cable trays KBSI

Cable trays are made of steel sheet 1,0 mm thick. Height of side wall is 60 mm. Width of tray is 400 mm. The trays are perforated on the sides and on the bottom. Cable tray is equipped with integrated junction. Trays are jointed together with 5 pcs of screws VMK 6x10 (new trademark is VMK6.10). Maximum load of trays is 20 kg.m⁻¹. Tested trays were KBSI 60x400x1,00 (new trademark is KBSI60.400.100).

Brackets WKM

Brackets are made of steel sheet 2,5 mm thick. Dimensions of the base steel sheet is (70x175) mm and 8,0 mm thick and is equipped by holes for installation. Holes for installation of trays are in upper part of the brackets.

Tested brackets were WKM 400 (new trademark is HDWKM400).

Consoles HSMU

Consoles are made from steel sheet and are composed of a head plate and the U 50 profile. Dimensions of the base head is (123x123) mm and 4,0 mm thick or (135x135) mm and 5,0 mm thick and is equipped by holes for installation. Dimensions of the U profile is (50x50) mm and 2,5 mm thick and is equipped by holes for installation of brackets. Tested consoles were HSMU 50x1000 (new trademark is HDHSMU50.1000).

SPACER TSU50 and HDTSU50

Spacers are made of steel sheet 1,0 mm thick (TSU50) or 1,5 mm thick (HDTSU50).

Cables

Power and communication free halogen cables are specified for stationary distribution of electrical energy in dry and damp premises. Since they are free from halogens and exhibit enhanced fire performance, these cables are used in those applications where in the event of fire, the negative effect on concentrations of people and valuable material goods must be minimized. Suitable for hotels, hospitals, underground railways, airport etc. to protect people and technical building equipment in the event of fire where there is requirement for maintaining the functional integrity all cable installation in the event of fire. The cables develop in case of fire low heat released rate and smoke and no burning particles drop away during fire accident. Functional integrity all cable installation in the event of fire is guaranteed only with use specified supporting member and cables grips.

**Used cables by test**

PRYSMIAN cables (producer Prysmian, Viale Sarca 222, IT-20126 Milano, Italy)

- cable (N)HXH-J E30 4x50 RM (2x);
- cable (N)HXH-J E30 4x1,5 RE (2x);
- cable (N)HXCH E30 4x50 RM/25 (2x);
- cable (N)HXCH E30 4x1,5 RE/1,5 (2x);
- cable (N)HXHX-J E90 4x50 RM (2x);
- cable (N)HXHX-J E90 4x1,5 RE (2x);
- cable (N)HXCHX E90 4x50 RM/25 (2x);
- cable (N)HXCHX E90 4x2,5 RE/2,5 (2x);
- cable JE-H(St)H E30 2x2x0,8 (2x).

FABER cables (producer Klaus Faber AG, Lebacher Str. 152-156, D-66009 Saarbrücken, Germany)

- cable (N)HXH FE180 E90 4x50 RM FACAB (2x);
- cable (N)HXH FE180 E90 4x1,5 RE FACAB (2x);
- cable (N)HXCH FE180 E30 4x50 RM/25 FACAB (2x);
- cable (N)HXCH FE180 E30 4x1,5 RE/1,5 FACAB (2x);
- cable (N)HXH FE180 E30 4x50 RM FACAB (2x);
- cable (N)HXH FE180 E30 4x1,5 RE FACAB (2x);
- cable (N)HXCH FE180 E90 4x50 RM/25 FACAB (2x);
- cable (N)HXCH FE180 E90 4x1,5 RE/1,5 FACAB (2x);

PRAKAB cables (producer PRAKAB PRAŽSKÁ KABELOVNA, s.r.o., Ke Kablu 278, 102 09 Praha 15, Czech Republic)

- cable JE-H(St)H FE180 E90 2x2x0,8 (2x).

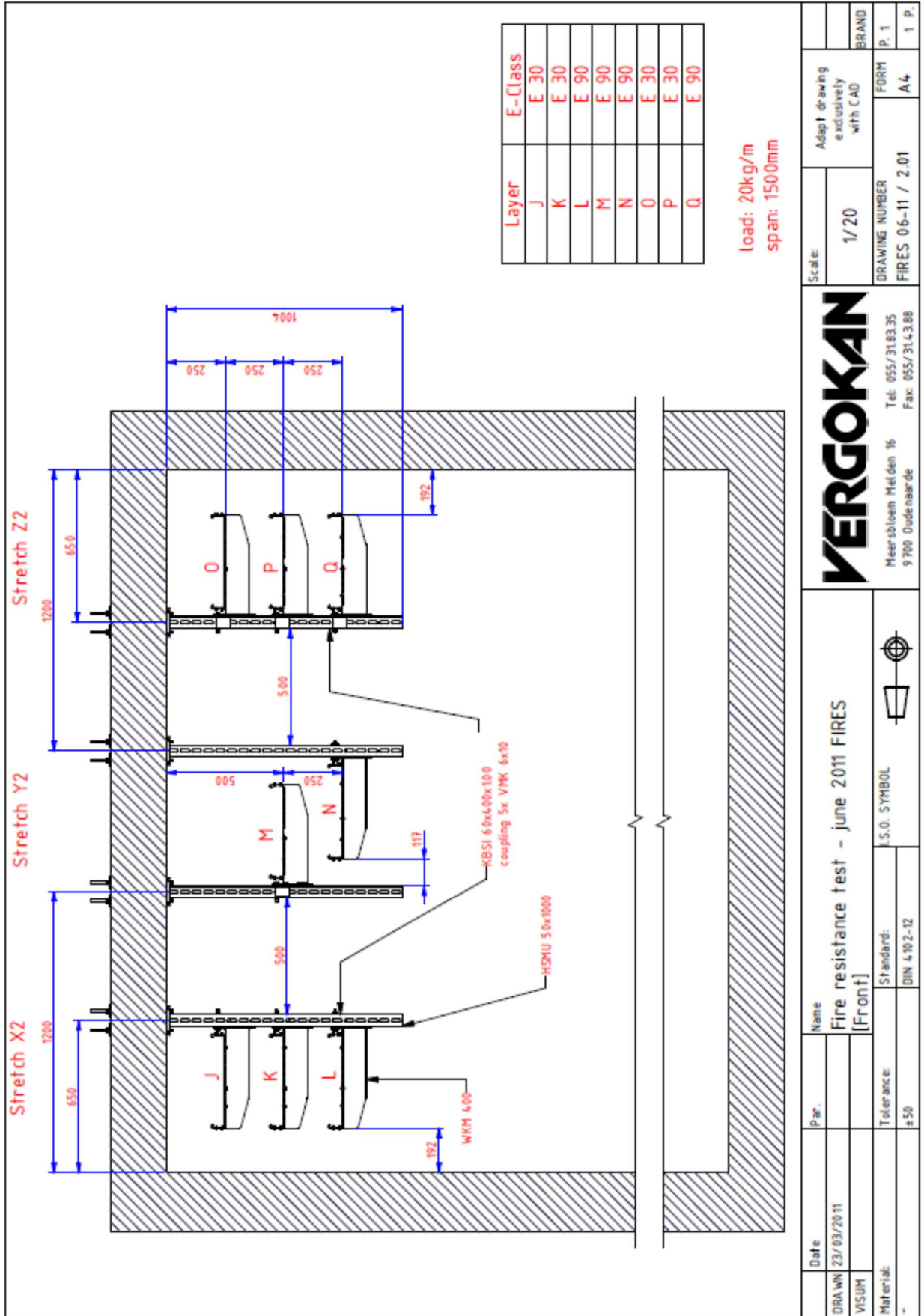
The length of cables was 5,5 m and 4,0 m from that was exposed to fire.

Power and communication cables were fixed to the steel sheet trays in the points of allowed bending radius by steel clamps according to the cable diameter.

More detailed information about product construction is shown in the drawings which form an integral part of test report [1]. Drawings were delivered by sponsor.



Assembly of the tested structure, more information in the test report [1].



Date	23/03/2011	Name	Fire resistance test - june 2011 FIRES [Front]
DRAWN	VISUM	Par.	
Material:	-	Tolerance:	±50
		Standard:	DIN 4102-42
		S.O. SYMBOL	
		VERGOKAN	
		Meersbloem Melken 16 9700 Oudenaarde	
		Tel: 055/31.63.35 Fax: 055/31.43.88	
		Scale:	1/20
		DRAWING NUMBER	FIRES 06-11 / 2.01
		Adapt drawing exclusively with CAD	FORM A4
		BRAND	P. 1
			1 P.



3. TEST REPORTS AND EXTENDED APPLICATION REPORTS IN SUPPORT OF CLASSIFICATION

3.1 TEST REPORTS AND EXTENDED APPLICATION REPORTS

No.	Name of laboratory	Name of sponsors	Test report No.	Date of the test	Test method
[1]	FIRES, s.r.o., Batizovce, Slovak Republic	VERGOKAN, Oudenaarde, Belgium	FIRES-FR- 119-11-AUNE	02. 06. 2011	STN 92 0205

3.2 TEST RESULTS

Test report No. /Test method	Specimen No.	Cables	Producer	Track No.	Time to first failure / interruption of conductor
[1] STN 92 0205	S1	cable (N)HXH-J E30 4x50 RM	Prysmian	X2-J	91 minutes
	S2	cable (N)HXH-J E30 4x50 RM	Prysmian	X2-J	91 minutes
	S3	cable (N)HXH-J E30 4x1,5 RE	Prysmian	X2-J	31 minutes
	S4	cable (N)HXH-J E30 4x1,5 RE	Prysmian	X2-J	39 minutes
	S5	cable (N)HXCH E30 4x50 RM/25	Prysmian	X2-K	83 minutes
	S6	cable (N)HXCH E30 4x50 RM/25	Prysmian	X2-K	93 minutes
	S7	cable (N)HXCH E30 4x1,5 RE/1,5	Prysmian	X2-K	39 minutes
	S8	cable (N)HXCH E30 4x1,5 RE/1,5	Prysmian	X2-K	93 minutes no failure / interruption
	S9	cable (N)HXHX-J E90 4x50 RM	Prysmian	X2-L	93 minutes no failure / interruption
	S10	cable (N)HXHX-J E90 4x50 RM	Prysmian	X2-L	93 minutes no failure / interruption
	S11	cable (N)HXHX-J E90 4x1,5 RE	Prysmian	X2-L	93 minutes no failure / interruption
	S12	cable (N)HXHX-J E90 4x1,5 RE	Prysmian	X2-L	93 minutes no failure / interruption
	S13	cable (N)HXCHX E90 4x50 RM/25	Prysmian	Y2-M	93 minutes no failure / interruption
	S14	cable (N)HXCHX E90 4x50 RM/25	Prysmian	Y2-M	93 minutes no failure / interruption
	S15	cable (N)HXCHX E90 4x2,5 RE/2,5	Prysmian	Y2-M	93 minutes no failure / interruption
	S16	cable (N)HXCHX E90 4x2,5 RE/2,5	Prysmian	Y2-M	93 minutes no failure / interruption
	S17	cable (N)HXH FE180 E90 4x50 RM FACAB	FABER	Y2-N	93 minutes no failure / interruption
	S18	cable (N)HXH FE180 E90 4x50 RM FACAB	FABER	Y2-N	76 minutes
	S19	cable (N)HXH FE180 E90 4x1,5 RE FACAB	FABER	Y2-N	93 minutes no failure / interruption
	S20	cable (N)HXH FE180 E90 4x1,5 RE FACAB	FABER	Y2-N	93 minutes no failure / interruption
	S21	cable (N)HXCH FE180 E30 4x50 RM/25 FACAB	FABER	Z2-O	79 minutes
	S22	cable (N)HXCH FE180 E30 4x50 RM/25 FACAB	FABER	Z2-O	93 minutes no failure / interruption
	S23	cable (N)HXCH FE180 E30 4x1,5 RE/1,5 FACAB	FABER	Z2-O	88 minutes
	S24	cable (N)HXCH FE180 E30 4x1,5 RE/1,5 FACAB	FABER	Z2-O	93 minutes no failure / interruption
	S25	cable (N)HXH FE180 E30 4x50 RM FACAB	FABER	Z2-P	86 minutes
	S26	cable (N)HXH FE180 E30 4x50 RM FACAB	FABER	Z2-P	93 minutes no failure / interruption
	S27	cable (N)HXH FE180 E30 4x1,5 RE FACAB	FABER	Z2-P	93 minutes no failure / interruption
	S28	cable (N)HXH FE180 E30 4x1,5 RE FACAB	FABER	Z2-P	93 minutes no failure / interruption
	S29	cable (N)HXCH FE180 E90 4x50 RM/25 FACAB	FABER	Z2-Q	73 minutes
	S30	cable (N)HXCH FE180 E90 4x50 RM/25 FACAB	FABER	Z2-Q	93 minutes
	S31	cable (N)HXCH FE180 E90 4x1,5 RE/1,5 FACAB	FABER	Z2-Q	83 minutes
	S32	cable (N)HXCH FE180 E90 4x1,5 RE/1,5 FACAB	FABER	Z2-Q	93 minutes no failure / interruption
	S52	cable JE-H(St)H E30 2x2x0,8	Prysmian	X2-J	93 minutes no failure / interruption
S53	cable JE-H(St)H E30 2x2x0,8	Prysmian	X2-K	65 minutes	
S54	cable JE-H(St)H FE180 E90 2x2x0,8	PRAKAB	Y2-N	66 minutes	
S55	cable JE-H(St)H FE180 E90 2x2x0,8	PRAKAB	Z2-Q	56 minutes	

[1] The fire test was discontinued in 94th minute at the request of test sponsor.

Specimens S1 – S32 were tested by three-phase voltage supply 3 x 230/400V with bulbs 240V / 60 W.
Specimens S52 – S55 were tested by one-phase voltage supply 1 x 110V with LED diodes 3V / 0,03W.

Circuit breakers with rating 3 A and performance characteristics B(gL) were used.



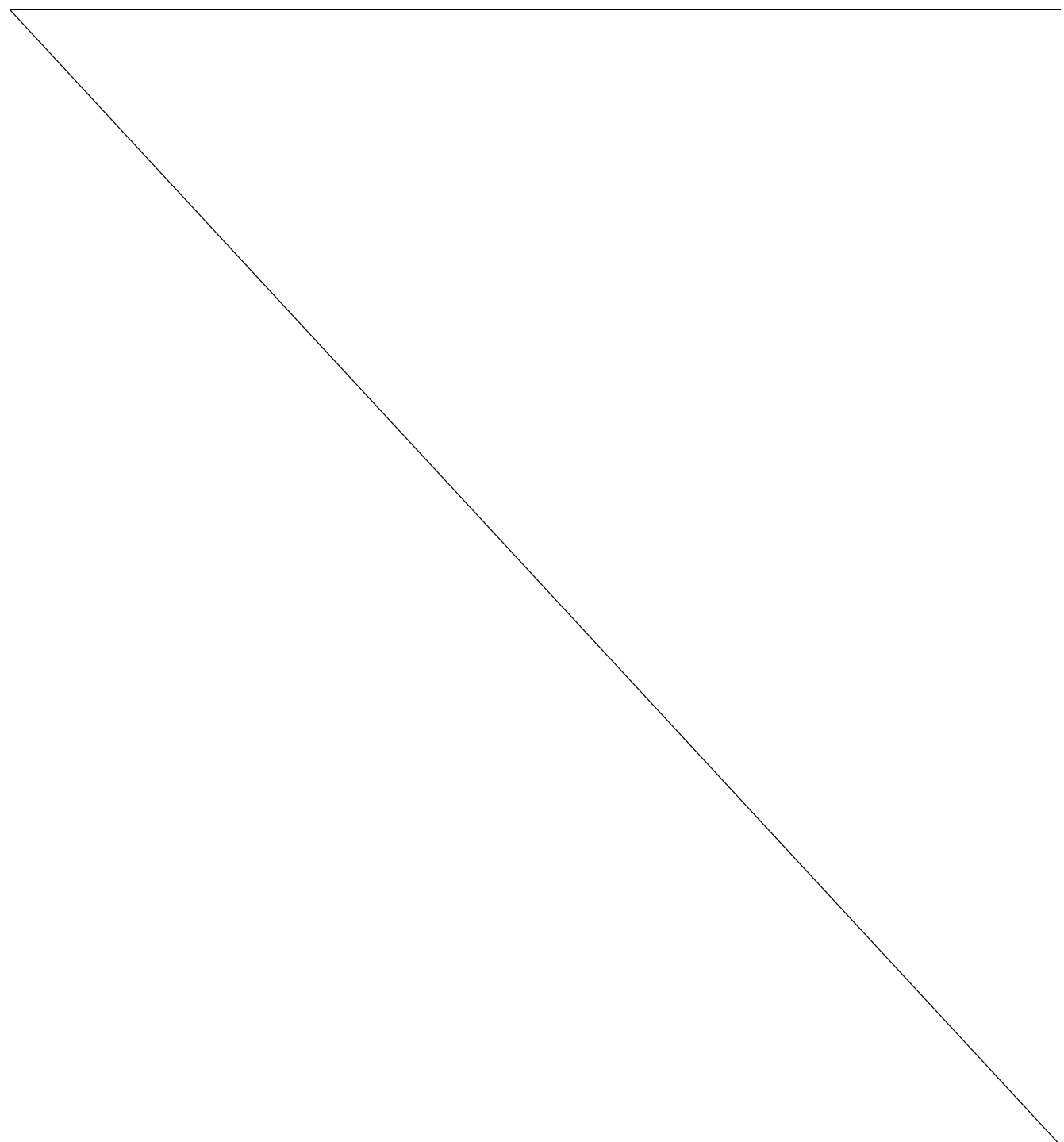
4. CHANGES OF PRODUCT OR PRODUCT FINAL USAGE WHICH EXCEED A RANGE OF DIRECT OR EXTENDED APPLICATION

In addition to the direct application, in this judgement report, application of test results stated in chap 6.1 is allowed also for use of single core cables.

5. REASONS SUPPORTING THE PERMIT OF CHANGES

Product changes referred to in cl. 4. of this document are permitted for the following reasons:

- single-core cables of the same type as tested, are of the same construction and of the same materials as the tested cables and the reduction in the number of cores does not influence the functional fire resistance of the product as mentioned to in clause 6.1 of this document.





6. CLASSIFICATION AND FIELD OF APPLICATION

6.1 CLASSIFICATION ACCORDING TO STN 92 0205: 2014/Z1: 2019

The element, cable bearing system VERGOKAN – cable trays with accessories (consoles, brackets, screws etc.) with power and communication halogen free cables PRYSMIAN, FABER and PRAKAB with circuit integrity maintenance in fire, is classified according to the following combinations of performance parameters and classes as appropriate.

Used cables PRYSMIAN by test are classified as follows:

Type of cable	Type of tested cable, single cross-sections and number of conductors	Arrangement	Classification for type of tested cable (by cross-sections and number of conductors)	Classification for type of cable
(N)HXH E30	(N)HXH-J E30 4x1,5 RE	In cable trays KBSI60.400.100. Ceiling consoles HDHSMU50.1000 wits brackets HDWKM400. Loading 20 kg.m ⁻¹ . Consoles in spacing of 1500 mm. Non-standard track X2-J.	PS 30	n x ≥ 1,5 mm ² n ≥ 1 PS 30
	(N)HXH-J E30 4x50 RM		PS 90	
JE-H(St)H E30	JE-H(St)H E30 2x2x0,8	Non-standard track X2-J and X2-K.	PS 60	n x 2 x ≥ 0,8 mm n ≥ 2 PS 60
(N)HXCH E30	(N)HXCH E30 4x1,5 RE/1,5	In cable trays KBSI60.400.100. Ceiling consoles HDHSMU50.1000 wits brackets HDWKM400. Loading 20 kg.m ⁻¹ . Consoles in spacing of 1500 mm. Non-standard track X2-K.	PS 30	n x ≥ 1,5/1,5 mm ² n ≥ 1 PS 30
	(N)HXCH E30 4x50 RM/25		PS 60	
(N)HXHX E90	(N)HXHX-J E90 4x1,5 RE	In cable trays KBSI60.400.100. Ceiling consoles HDHSMU50.1000 wits brackets HDWKM400. Loading 20 kg.m ⁻¹ . Consoles in spacing of 1500 mm. Non-standard track X2-L.	PS 90	n x ≥ 1,5 mm ² n ≥ 1 PS 90
	(N)HXHX-J E90 4x50 RM		PS 90	
(N)HXCHX E90	(N)HXCHX E90 4x2,5 RE/2,5	In cable trays KBSI60.400.100. Ceiling consoles HDHSMU50.1000 wits brackets HDWKM400. Loading 20 kg.m ⁻¹ . Consoles in spacing of 1500 mm. Non-standard track Y2-M.	PS 90	n x ≥ 2,5/2,5 mm ² n ≥ 1 PS 90
	(N)HXCHX E90 4x50 RM/25		PS 90	



Used cables FABER by test are classified as follows:

Type of cable	Type of tested cable, single cross-sections and number of conductors	Arrangement	Classification for type of tested cable (by cross-sections and number of conductors)	Classification for type of cable
(N)HXH FE180 E90 FACAB	(N)HXH FE180 E90 4x1,5 RE FACAB	In cable trays KBSI60.400.100. Ceiling consoles HDHSMU50.1000 wits brackets HDWKM400. Loading 20 kg.m ⁻¹ . Consoles in spacing of 1500 mm. Non-standard track Y2-N.	PS 90	n x ≥ 1,5 mm ² n ≥ 1 PS 60
	(N)HXH FE180 E90 4x50 RM FACAB		PS 60	
(N)HXCH FE180 E30 FACAB	(N)HXCH FE180 E30 4x1,5 RE/1,5 FACAB	In cable trays KBSI60.400.100. Ceiling consoles HDHSMU50.1000 wits brackets HDWKM400. Loading 20 kg.m ⁻¹ . Consoles in spacing of 1500 mm. Non-standard track Z2-O.	PS 60	n x ≥ 1,5/1,5 mm ² n ≥ 1 PS 60
	(N)HXCH FE180 E30 4x50 RM/25 FACAB		PS 60	
(N)HXH FE180 E30 FACAB	(N)HXH FE180 E30 4x1,5 RE FACAB	In cable trays KBSI60.400.100. Ceiling consoles HDHSMU50.1000 wits brackets HDWKM400. Loading 20 kg.m ⁻¹ . Consoles in spacing of 1500 mm. Non-standard track Z2-P.	PS 90	n x ≥ 1,5 mm ² n ≥ 1 PS 60
	(N)HXH FE180 E30 4x50 RM FACAB		PS 60	
(N)HXCH FE180 E90 FACAB	(N)HXCH FE180 E90 4x1,5 RE/1,5 FACAB	In cable trays KBSI60.400.100. Ceiling consoles HDHSMU50.1000 wits brackets HDWKM400. Loading 20 kg.m ⁻¹ . Consoles in spacing of 1500 mm. Non-standard track Y2-M.	PS 60	n x ≥ 1,5/1,5 mm ² n ≥ 1 PS 60
	(N)HXCH FE180 E90 4x50 RM/25 FACAB		PS 60	

Used cables PRAKAB PRAŽSKÁ KABELOVNA, s.r.o.by test are classified as follows:

Type of cable	Type of tested cable, single cross-sections and number of conductors	Arrangement	Classification for type of tested cable (by cross-sections and number of conductors)	Classification for type of cable
JE-H(St)H FE180 E90	JE-H(St)H FE180 E90 2x2x0,8	In cable trays KBSI60.400.100. Ceiling consoles HDHSMU50.1000 wits brackets HDWKM400. Loading 20 kg.m ⁻¹ . Consoles in spacing of 1500 mm. Non-standard track Y2-N and Z2-Q.	PS 45	n x 2 x ≥ 0,8 mm n ≥ 2 PS 45

The element, cable bearing system VERGOKAN – cable trays with accessories (consoles, brackets, screws etc.) with power and communication halogen free cables PRYSMIAN, FABER and PRAKAB with circuit integrity maintenance in fire, is classified to classes according to achieved test results of tested cables at tracks. Other classification is not allowed.



6.2 FIELD OF DIRECT APPLICATION

This classification is valid for the following end use applications:

General

- the circuit integrity shall not be affected negatively by adjacent building constructions. Although testing is only carried out on test specimens of cable systems arranged horizontally, test results also apply to sloped or vertical arrangement provided the next conditions given in this chapter are met. In such a case the cable system shall be effectively fixed in places where it turns from horizontal to vertical arrangement, i.e. the cable products shall be attached effectively in places of bending;
- direct application of test results obtained from tests of test specimen of cable system support and fixing structures is not possible to another construction project or to any other product from another manufacturer;
- test results obtained for cable system with cable trays are directly applicable also for usage of cable trays coverings; the coverings shall be ensured against movement with a proper manner;
- the condition for validity of direct application of test results is that the support and fixing structure is attached only to such building construction that statically allows it and meets the criterion of fire resistance R according to STN EN 13501-2 at least in the required time of function in fire;
- if the support and fixing structure is fixed directly to a building construction made of a rigid material such as concrete, bricks, aerated concrete or steel load-bearing construction, such anchoring components shall be used, which, in term of their properties, are suitable with respect to used material, used installation method, required thermal attack curve, required period of circuit integrity and mechanical action caused by the support and fixing structure with cables;
- without tests under considered fire temperatures the support and fixing structure may be fixed to a building construction only by means of bolted joints, riveted joints and welded joints made of elements standardized in term of their material and dimensions;
- in case when it is not possible to fix the support and fixing structure directly to a building construction, an additional construction may be used. Design of such construction shall apply all principles for design of support and fixing structure withstanding the fire effects for specified period. It is possible to verify the additional construction properties by means of a calculation in accordance with Eurocodes or by a test; for attachment of the additional construction to an element of building construction all requirements given in clauses 7.1.5 and 7.1.6 of STN 92 0205 apply;
- direct application of function in fire test results must not lead to such construction solutions of cable systems that are in conflict particularly with requirements of chapter 522 of standard STN 33 2000-5-52 and with the requirements of the method of installing cables in electrical installations according to the technical standard.

Cable systems with integrated circuit integrity maintenance

- when cable test specimens according to 6.4.4.1.2 or 6.4.4.1.4 or 6.4.4.1.5 of STN 92 0205 are used the test results are directly applicable to all constructions of tested type of cable product in a specific type of cable system. It is not permitted to transfer the test results between support and fixing structures, which in any parameter differ from standard support structures;
- test results of cable systems with cable trays or cable ladders are applicable to all cable trays and cable ladders with the same construction and with width less than tested. Direct application of test results is only for the tested methods of connecting cable trays and cable ladders;
- in case of test specimens of support structures made according to STN EN 61537 of steel with a finishing the test results are directly applicable also to support structures of the same type and made of stainless steel but not vice versa;
- test results of a test specimen of cable system with cable trays or cable ladders which are suspended on the floor using suspension devices are directly applicable to these cable systems fixed to a wall;
- test results of a test specimen of cable system with cable trays or cable ladders are directly applicable to all cable system parts used for changing of direction or dimension or for termination of lengths (elbows, fittings of shape T, cross elements) provided that individual disposition has been assessed by an accredited testing laboratory;
- in case of test with specimen of cable system with cable trays or cable ladders with joining point positioned in the middle of distance between supporting constructions, allowance of $\pm 5\%$, test result is directly applicable to any position of joining point between supporting constructions. If the position of joining point is closer to one of supporting constructions the test result is directly applicable only in case the point of cable tray or cable ladder joining is positioned in this reduced distance from supporting construction;



- test results of a test specimen of cable system with cable trays or cable ladders may be directly applied also in case of finishing by means of a coloured paint or spray representing a non-substantial component according to STN EN 13501; this painting or spraying may be realised only by manufacturer of cable trays or ladders. If the thickness of finishing layer is greater than given in STN EN 13501-1 a test according this standard shall be carried out;
- if a test specimen of cable for distribution of electric power with maximal cross-section of conductor less than 50 mm² is used, than test results are directly applicable to all cross-sections of conductors within a range from minimal to maximal tested conductor cross-section;
- in case of cable products for distribution of electric power with five or four conductors test results from tests with cable test specimen are directly applicable also to cable products with a less number of conductors (excepting cable products with one conductor);
- if test specimens of cables for electric power distribution with cross-section and number of conductors other than specified, then test results are directly applicable only to tested type of cable product with tested cross-section of conductor and type of cable system;
- in case only cable products for electric power distribution with minimal or maximal cross-section of the conductors passed the test satisfactorily, the test results are directly applicable only to tested type and cross-section of conductors and type of cable system;
- test results from testing of a test specimen of cables for control and communication are directly applicable to all constructions of specified type with diameter and number of conductors equal to or greater than those in cable test specimen;
- when test specimens of control and communication cables with a higher number of conductors are tested the test results are directly applicable only to cable product types with a number of conductors equal to or greater than that tested. The test results are directly applicable only to cable products with the same or greater diameter of conductor as used in cable test specimen;

6.3 FIELD OF EXTENDED APPLICATION

- classification for type of cable (by cross-sections and number of conductors) is valid only for tested cable types, number and cross-sections of conductors;
- classification for cable is valid for all numbers and cross-sections of tested cable type;
- test results of cable systems placed on a non-standard support structures are directly applied only to the tested cable systems;
- test result obtained from testing of cables with five or four conductors applies also to cables of the same type with smaller or greater number of conductors;
- **test result is applicable to welded head plate to steel U-shaped ceiling profiles;**
- **heavy joined steel brackets WKM... shall be fixed to steel U-shaped ceiling profiles HSMU from one or from two sides, providing the maximum loading of U-shaped ceiling profiles is not more than during the fire test and only if sufficient type of fixation of the head plates to ceiling is provided;**
- **is possible use the new type of spacer TSU50 instead of spacer HDTSU50;**
- **is possibly change the construction of tested console (base of console) type HDHSMU in accordance with construction drawings in part 6.4.**



6.4 CONSTRUCTION DRAWINGS

load: 20kg/m
span: 1,5m
no of layers: max. 3

5 VMK 6x10 in the coupling

Trays are fixated with 2 VMK 6x10 on each bracket.

no	qty	drawing	description	reference
9	3	44.001	Cable tray with interlocking ends	[KBSI 60x---x100]
8	11	VMK 6x10	Toothed round head bolt/nut	[VMK 6x10]
7	3	B 10x80 (DIN 933)	Bolt	[B 10x80]
6	3	TSU PROTO_01	Spacer	[TSU 50]
5	1	HSMU PROTO_03	Ceiling profile: U-shaped	[HSMU 50x-----]
4	2	-	Fire resistant plug	M 10
3	6	CRO 10 (DIN 9029)	Flat giant washer	[CRO 10]
2	5	M 10 (DIN 934)	Nut	[M 10]
1	3	4554.7	heavy joined bracket	[VMK ---]
no	qty	drawing	description	reference

VERGOKAN
Meerslooten Melden 16
9700 Oudenaarde

Scale: 1/10
DRAWING NUMBER: FIRES 06-11
FORM: A4
P. 1

Date: 23/03/2011
DRAWN: VISUM
Material: -
Tolerance: +50

Name: Fire resistance - june 2011 FIRES Without threaded rod, with KBSI 60x---x100
Standard: S.0. SYMBOL
DIN 4102-12



NOT FOR PRODUCTION Material dikte : 0.8/1/1.25

Type	Binnenmaat breedte :	Maat B		
		MD 0.8	MD 1.0	MD 1.25
KBSI 60*75	73	74.6	75	75.5
KBSI 60*100	98	99.6	100	100.5
KBSI 60*150	148	149.6	150	150.5
KBSI 60*200	198	199.6	200	200.5
KBSI 60*250	248	249.6	250	250.5
KBSI 60*300	298	299.6	300	300.5
KBSI 60*350	348	349.6	350	350.5
KBSI 60*400	398	399.6	400	400.5
KBSI 60*500	498	499.6	500	500.5
KBSI 60*600	598	599.6	600	600.5

Naam	Par.	Datum	Benaming	Aantal	Mtz.	A
GET. <small>Kort. Van. Compensat.</small>	<w>	02-01-08	Kabelbaan ineenschuifbaar			
VISUM	-	-	[KBSI 60*---*---*---*---*---]			
Materialid :	Tolerantie :		Norm :			
1.0037 (SendsInLx)	-		U.S. SYMBOL			

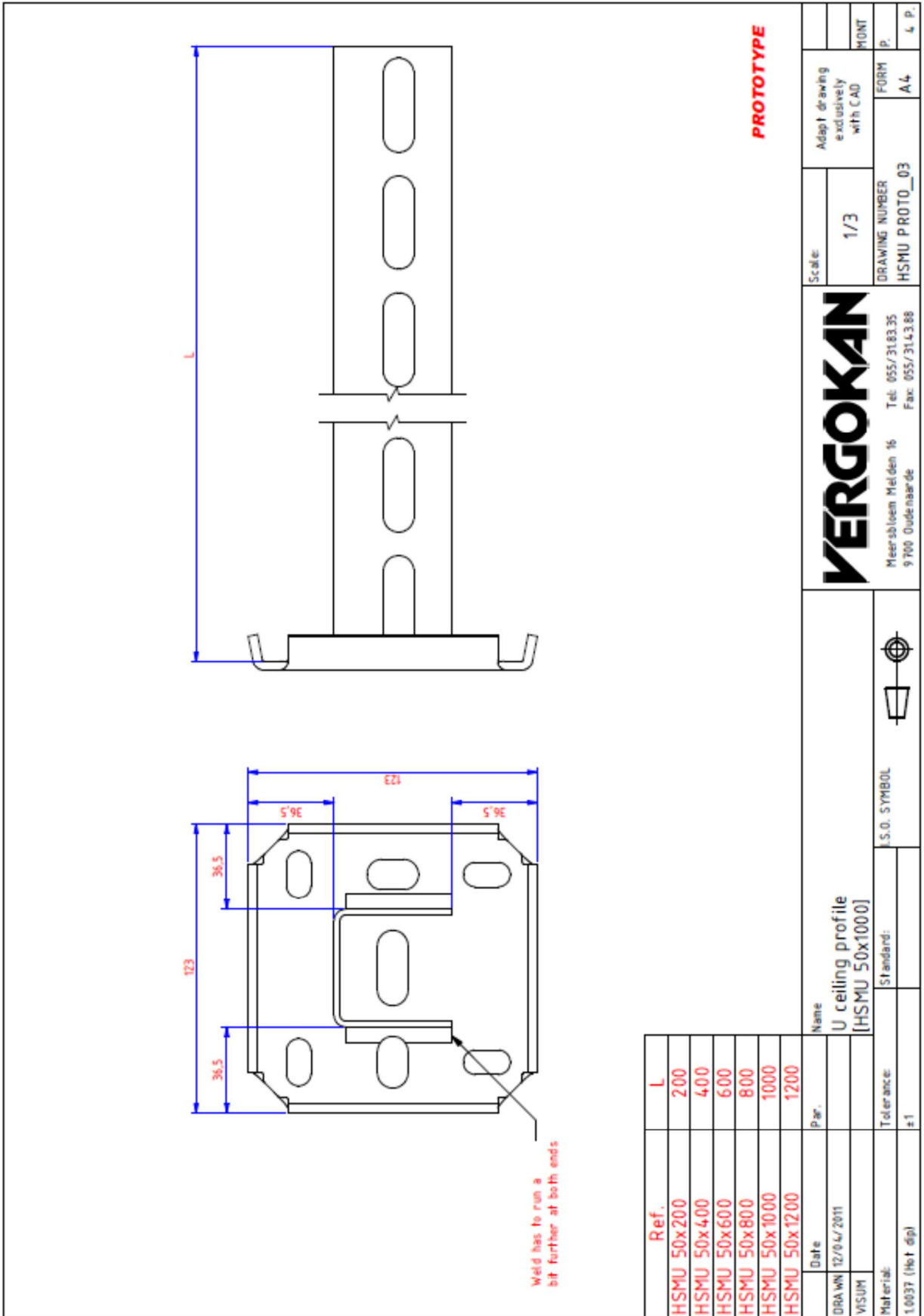
1	A	Aanpakking	Schied :	Telling	GET.	VISUM
		afwijkingen (NF KBSI 60075n1 00 25/05/2010)	1/4	enkel		
		25/05/2010		m.b.v. CAD		
		25/05/2010		garnissen		
			FLANKNUMER	FORM	OS/MS	KSAAN
			4.4.001	/ 4 /	-	k. 12
						12 r.



1	A	Aangepaste afwerkpatroon (NF 888 8007851 00 25/05/2010)	25/05/2010	Fabrik	GET.	-	VISUM
Aantal		Mt.z.	Omschrijving		Schied : 1/5		
				Telering enkel m.b.v. CAD garnissen			FORM
				PLANNUMMER			OS/MS
				4.4.001			/ 4 / -
				Tel. 055/314335			k. 11
				Fax. 055/315348			12 k.

NOT FOR PRODUCTION

Naam	Datum	Par.	Benoaming		
Get. Van Compelhou	02-01-08	<w>	Kabelbaan ineenschuifbaar		
Material : 1.0037 - Sandsis1.1r	Tolerantie : 10.5		Perforatiepatronen		
			Norm : -		





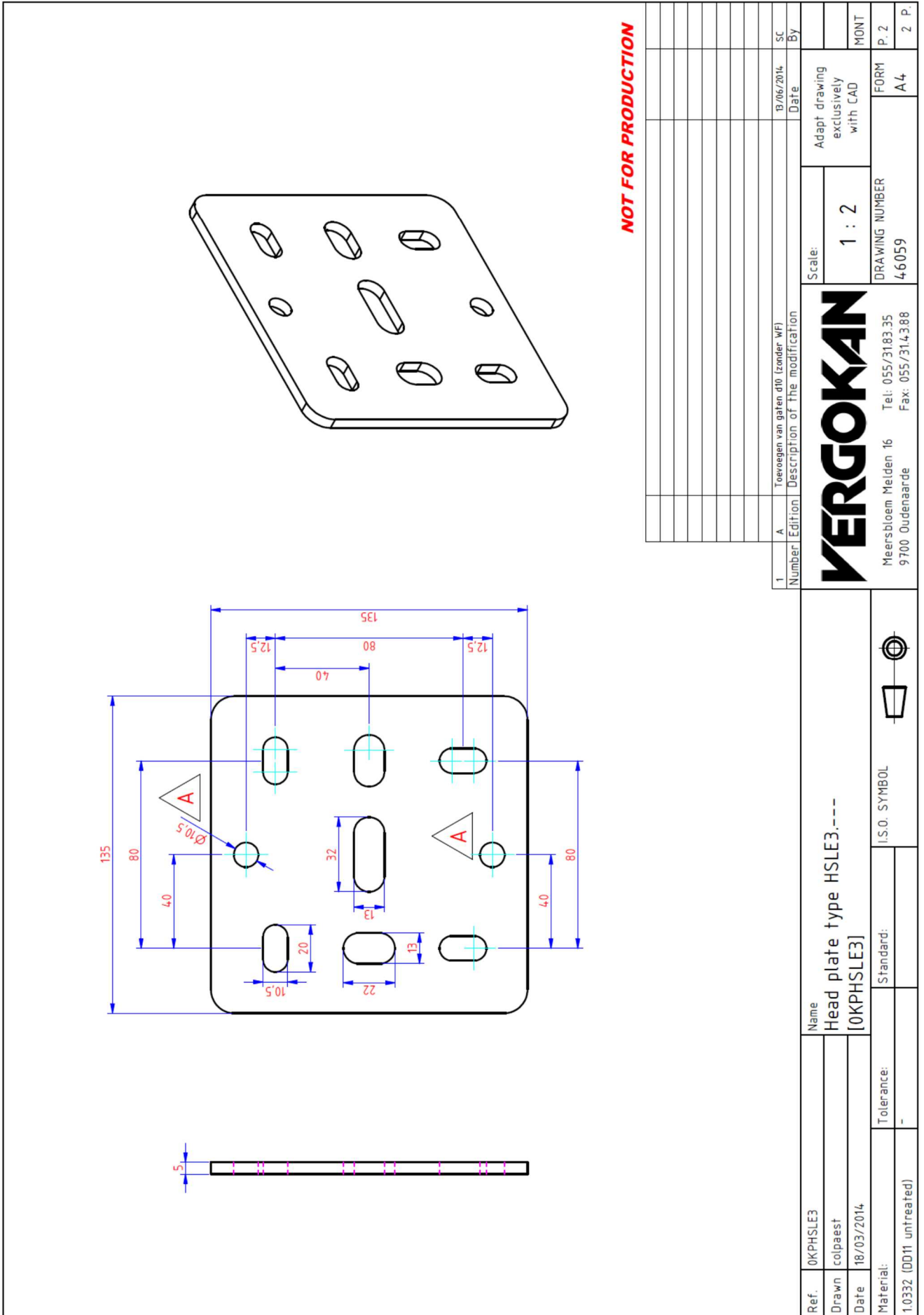
QUALITY APPROVED
Materialdikte: 4mm ±10%

VERGOKAN
Meersbloom Mieden 16
9700 Oudenaarde
Tél: 055/3183.35
Fax: 055/314.388

Aantal	Ed/Hr	Omschrijving van de wijziging	Datum	Visum

Schaal: 1/1		Tekening enkel m.b.v. CAD aanpassen	MONT
PLANKUMMER 44027			
FORM P. 1		FORM A4	2 P.

Datum	Par.	Benaming	L.S.O. SYMBOOL
GET. 11/04/2005		Kopplaat voor hangsteunen (000-KPHSLE)	
VISUM		Norm:	
Material: 1.0037 (Zwart)	Tolerantie: ±1		



NOT FOR PRODUCTION

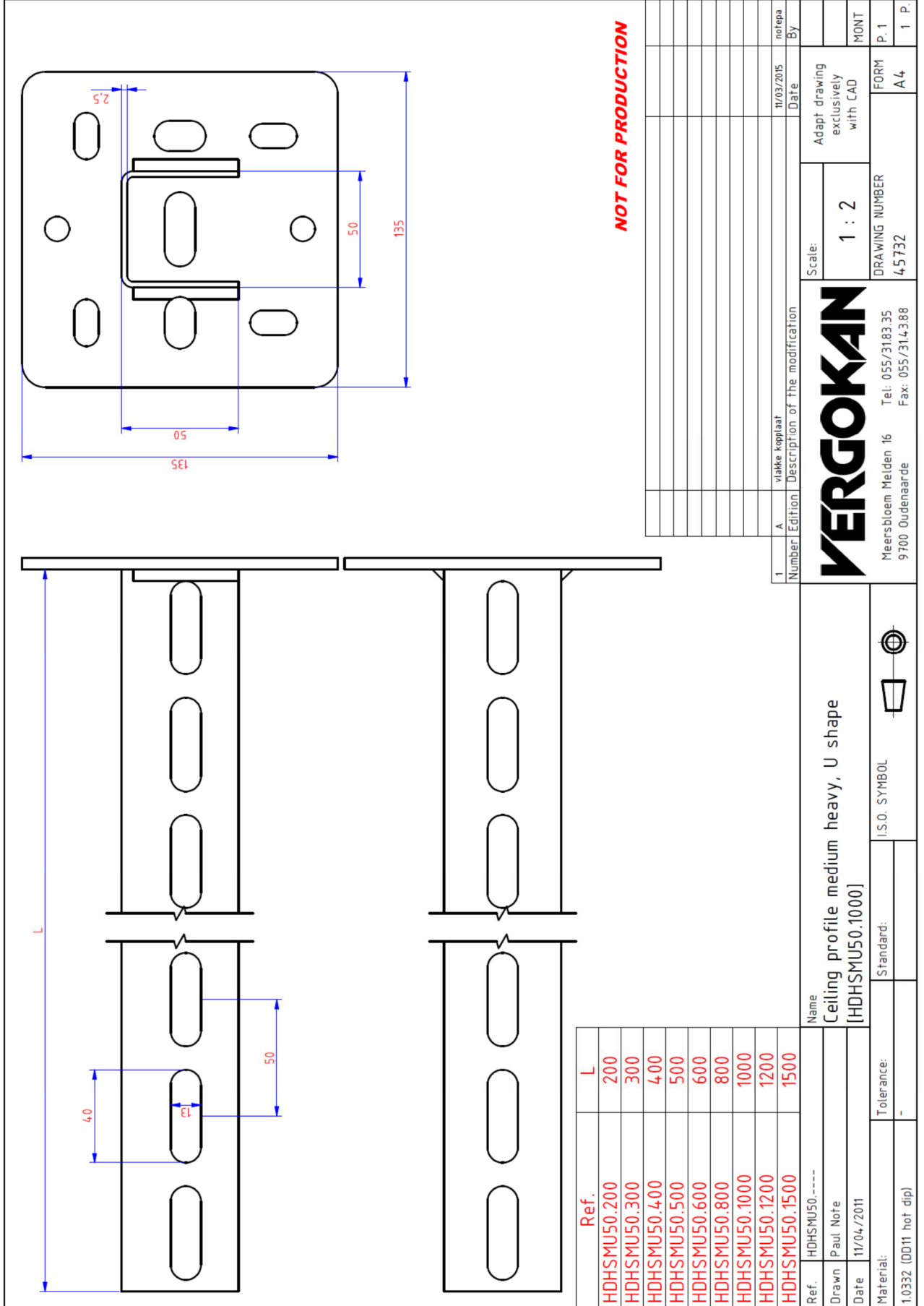
1	A	Toevoegen van gaten d10 (zonder WF)	13/06/2014	SC	By
Number		Edition		Description of the modification	
		Scale:		Adapt drawing exclusively with CAD	
		1 : 2		FORM P. 2	
		DRAWING NUMBER		A4	
		4-6059		2 P.	

VERGOKAN

Meersbloem Meiden 16
9700 Oudenaarde
Tel: 055/3183.35
Fax: 055/314.388

Ref.	OKPHSLE3	Name	Head plate type HSLE3.---
Drawn	colpaest		[OKPHSLE3]
Date	18/03/2014		
Material:	1.0332 (DD11 untreated)	Tolerance:	-
		Standard:	I.S.O. SYMBOL





NOT FOR PRODUCTION

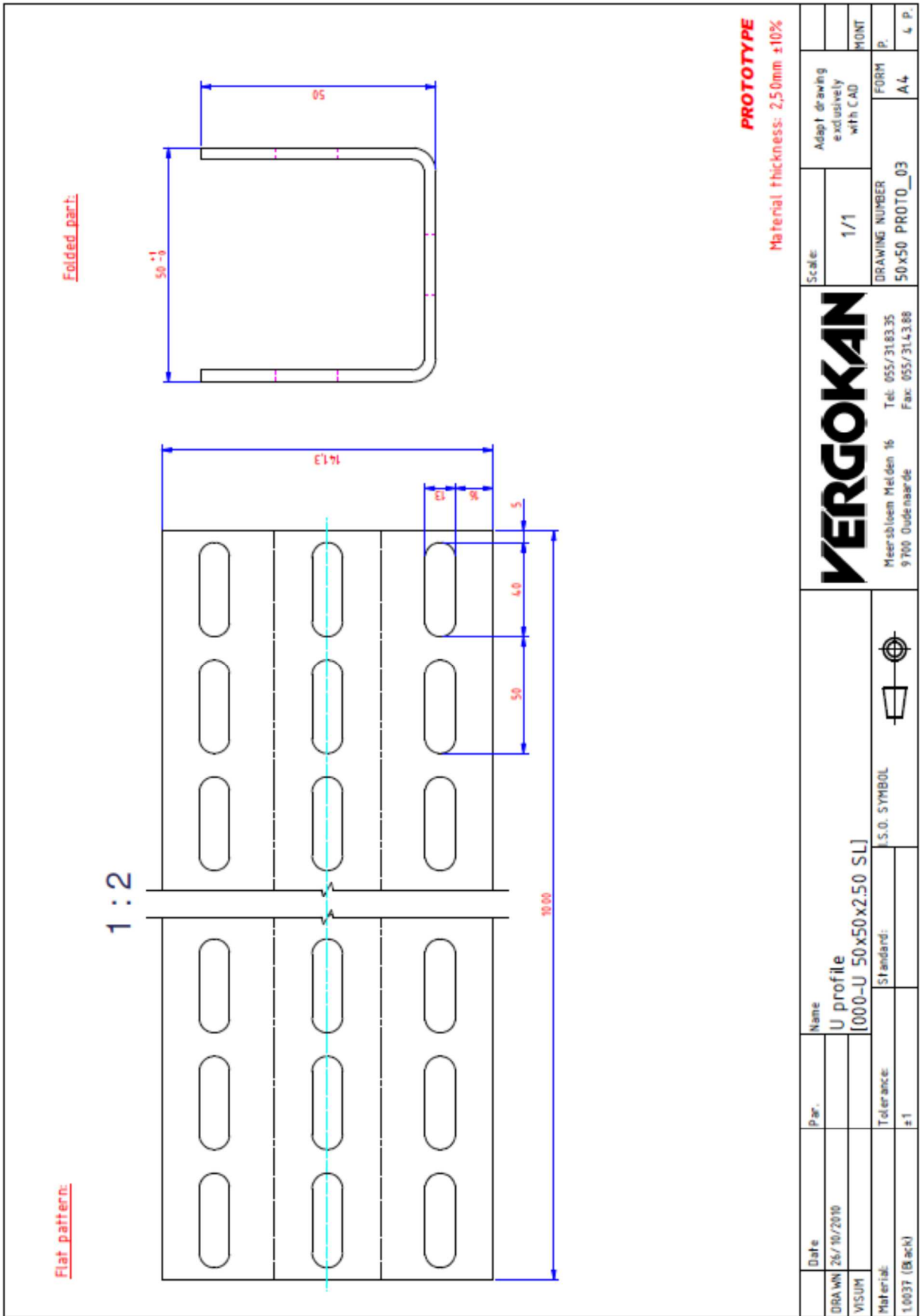
Ref.	L
HDHSMU50.200	200
HDHSMU50.300	300
HDHSMU50.400	400
HDHSMU50.500	500
HDHSMU50.600	600
HDHSMU50.800	800
HDHSMU50.1000	1000
HDHSMU50.1200	1200
HDHSMU50.1500	1500

Ref. HDHSMU50.----		Name Ceiling profile medium heavy, U shape [HDHSMU50.1000]	
Drawn Paul	Note	Standard:	
Date 11/04/2011		I.S.O. SYMBOL	
Material: 1.0332 (D011 hot dip)	Tolerance: -	Scale: 1 : 2	
		DRAWING NUMBER 4.5732	
		FORM P.1	
		A4	
		MONT	
		P.1	
		1 P.	

Number	Edition	Description of the modification	Date	By
1	A	vlakke koppelaar	11/03/2015	notepa



Meersbloem Melden 16
9700 Oudenaarde
Tel: 055/3183 35
Fax: 055/314.388





1	45729	[2TSU50]	TSU verzinkt
2	B 10x80 (DN 933)	[HDB10.86]	HD Zeskantbout
3	CRD 10 (DN 9021)	[HDCRD 10]	HD Carrossieronderstel
4	M 10 (DN 934)	[HDM10]	Zeskantmoer M10 (HD)
item	qty	drawing	reference
Parts list			
description			

NOT FOR PRODUCTION

Number	Edition	Description of the modification	Date	By

Scale:	1 : 1	Adapt drawing exclusively with CAD	MONT
DRAWING NUMBER		FORM	P.
45730		A4	3 P

VERGOKAN		Meersbloem Meliden 16 9700 Oudenaarde	Tel: 055/3183.35 Fax: 055/3143.88
Ref. HDTSU--	Name Spacer HDHSMU 50 [HDTSU50]	Tolerance:	I.S.O. SYMBOL
Drawn Paul Note		-	
Date 15/06/2011			
Material: 1.0037 (Hot-dip)			



1	1	M10x80 (DIN 933)	[B10.80]	Zeskantbout
2	2	M10 (DIN 9021)	[CRO10]	Carrossieronddiel
3	1	M10 (DIN 934)	[M10]	Zeskantmoer
4	1	45728	[TTSU50]	Spacer, HSHMU 50
item	qty	drawing	reference	description

Parts list	

NOT FOR PRODUCTION

1	A	Herontwerp naar aarleiding brandstreek 2015 (zw WF HDHSHMU00000 - 27 10 2015)	27/03/2015	notepa
Number	Edition	Description of the modification	Date	By

Scale:	1 : 2	Adapt drawing exclusively with CAD
DRAWING NUMBER		FORM
45730		A4
Meersbloem Melden 16 9700 Oudenaarde		MONT P.
Tel: 055/3183.35 Fax: 055/314.388		3 P.

Ref. TSU--	Name	Standard	I.S.O. SYMBOL	
Drawn Paul Note	Spacer HDHSHMU 50	[TTSU50]		
Date 15/06/2011				
Material: 10226 (DX51 Pregalva)	Tolerance: -			



Ref.	Head plate	Thickness head plate	Bracket	Thickness bracket	H	W
000-WKM 100	000-KPWK 300	5,00mm ±10%	000-CWKM 100	2,50mm ±10%	76,3	125
000-WKM 200	000-KPWK 400	5,00mm ±10%	000-CWKM 200	2,50mm ±10%	85,0	225
000-WKM 300	000-KPWKZ 300	8,00mm ±10%	000-CWKM 300	2,50mm ±10%	93,8	325
000-WKM 400	000-KPWKZ 300	8,00mm ±10%	000-CWKM 400	2,50mm ±10%	102,5	425

Number	1	Revision	
Edition		Description of the modification	
Date		Adapt drawing exclusively with CAD	
Scale	1/5	DRAWING NUMBER	FORM
		WKM FIRES 05-2011	A4
		PROTO_05	16 P.

		Meer sblom Mel den 16 9700 Oudenaarde	
Name Heavy joined bracket [000-WKM 100]		S.O. SYMBOL	
Date	21/03/2011	Tolerance	±1
DRAWN	VISUM		



6.5 LABELING OF CABLE TRACK

Contractor marks cable system by attachment of label which must contain the following informations:

- name of responsible person, who installed the system;
- name of cable system as it is stated in this judgement;
- class of circuit integrity maintenance and classification report number;
- real value of mechanical loading of cable system by cables
- date of assembly of cable system.

If the track is long, it is appropriate to repeat the labeling approximately every 50 m.

7. LIMITATIONS

Load-bearing construction elements for fixing of cable systems must be proved for at least the same fire resistance compare to classified function in fire of cable system.

The construction contractor is solely responsible for proper preparation.

This classification document does not represent type approval or certification of the product.

The classification is valid provided that the product, field of application and standards and regulations are not changed.

Approved by:

Ing. Štefan Rástocký
Head of the testing laboratory

Prepared by:

Miroslav Hudák
Technician of the testing laboratory