

FUNCTION IN FIRE EXPERT JUDGEMENT REPORT WITH CLASSIFICATION IN ACCORDANCE WITH ČSN 73 0895: 2016

FIRES-JR-082-22-NURE

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

Sponsor: VERGOKAN
Meersbloem Melden 16
9700 Oudenaarde
Belgium

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Slovak Republic

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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 DÄTWYLER, FABER and PRAKAB” in accordance with the classes given in ČSN 73 0895: 2016.

The test was carried out according to standard STN 92 0205 and meets also all requirements of ČSN 73 0895: 2016 and test results can be directly used for classification of tested products according to ČSN 73 0895: 2016.

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-088-16-NURE (issued on 14. 06. 2016) with validity until 14. 06. 2021. Document FIRES-JR-082-22-NURE replaces expert judgement report with classification FIRES-JR-088-16-NURE.

2. DETAILS OF CLASSIFIED PRODUCT

2.1 GENERAL

The element, cable bearing system VERGOKAN with cables DÄTWYLER, 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 DÄTWYLER, 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 head plate 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 300 (new trademark is HDWKM300) and 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:

DÄTWYLER cables (producer Dätwyler AG, Gotthardstrasse 31, CH-6460 Altdorf, Switzerland)

cable (N)HXH FE180 E30-E60 4x50 RM	(2x);
cable (N)HXH FE180 E30-E60 4x1,5 RE	(2x);
cable (N)HXCH FE180 E30-E60 4x50 RM/25	(2x);
cable (N)HXCH FE180 E30-E60 4x1,5 RE/1,5	(2x);
cable (N)HXH FE180 E90 4x50 RM	(2x);
cable (N)HXH FE180 E90 4x1,5 RE	(2x);
cable (N)HXCH FE180 E90 4x50 RM/25	(2x);
cable (N)HXCH FE180 E90 4x2,5 RE/2,5	(2x);
cable JE-H(St)H...Bd FE180 E30-E90 2x2x0,8	(6x);
cable JE-H(St)HRH...Bd FE180 E30-E90 2x2x0,8	(6x).

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

cable (N)HXCH FE 180 E90 4x50 RM/25 FACAB	(2x);
cable (N)HXCH FE 180 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).
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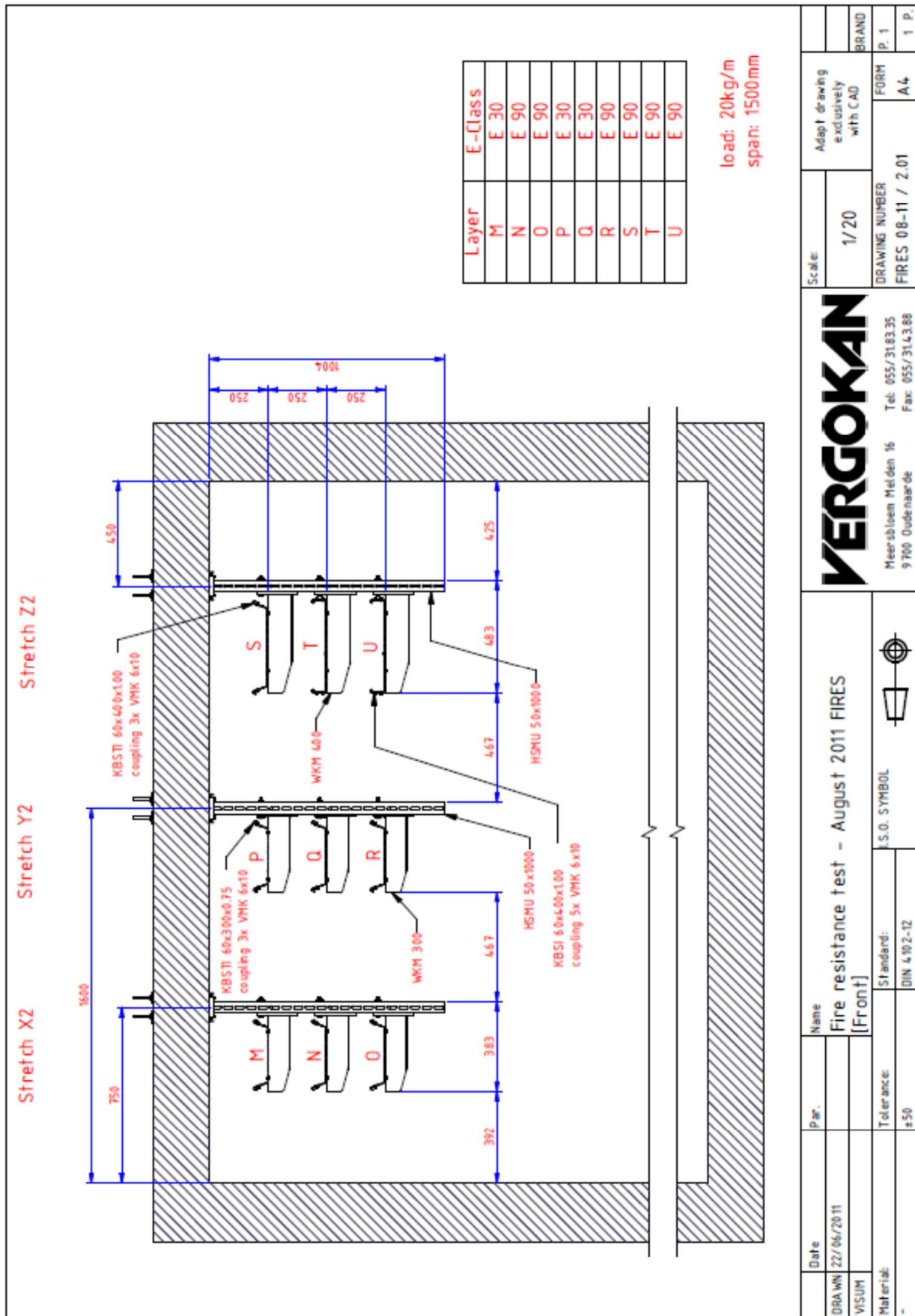
The length of cables was 5,5 m and 4,0 m from that was exposed to fire.

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].





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- 172-11-AUNE	18. 08. 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 FE180 E30-E60 4x50 RM	DÄTWYLER	X2 - M	93 minutes no failure / interruption
	S2	cable (N)HXH FE180 E30-E60 4x50 RM	DÄTWYLER	X2 - M	93 minutes no failure / interruption
	S3	cable (N)HXH FE180 E90 4x50 RM	DÄTWYLER	X2 - N	93 minutes no failure / interruption
	S4	cable (N)HXH FE180 E90 4x50 RM	DÄTWYLER	X2 - N	93 minutes no failure / interruption
	S5	cable (N)HXCH FE180 E90 4x50 RM/25	DÄTWYLER	X2 - O	93 minutes no failure / interruption
	S6	cable (N)HXCH FE180 E90 4x50 RM/25	DÄTWYLER	X2 - O	93 minutes no failure / interruption
	S7	cable (N)HXCH FE180 E30-E60 4x50 RM/25	DÄTWYLER	Y2 - P	93 minutes no failure / interruption
	S8	cable (N)HXCH FE180 E30-E60 4x50 RM/25	DÄTWYLER	Y2 - P	93 minutes no failure / interruption
	S9	cable (N)HXCH FE180 E30-E60 4x1,5 RE/1,5	DÄTWYLER	Y2 - Q	93 minutes no failure / interruption
	S10	cable (N)HXCH FE180 E30-E60 4x1,5 RE/1,5	DÄTWYLER	Y2 - Q	93 minutes no failure / interruption
	S11	cable (N)HXH FE180 E30-E60 4x1,5 RE	DÄTWYLER	Y2 - Q	93 minutes no failure / interruption
	S12	cable (N)HXH FE180 E30-E60 4x1,5 RE	DÄTWYLER	Y2 - Q	73 minutes
	S13	cable (N)HXCH FE180 E90 4x2,5 RE/2,5	DÄTWYLER	Y2 - R	93 minutes no failure / interruption
	S14	cable (N)HXCH FE180 E90 4x2,5 RE/2,5	DÄTWYLER	Y2 - R	93 minutes no failure / interruption
	S15	cable (N)HXH FE180 E90 4x1,5 RE	DÄTWYLER	Y2 - R	93 minutes no failure / interruption
	S16	cable (N)HXH FE180 E90 4x1,5 RE	DÄTWYLER	Y2 - R	93 minutes no failure / interruption
	S17	cable (N)HXCH FE 180 E90 4x50 RM/25 FACAB	FABER	Z2 - U	93 minutes no failure / interruption
	S18	cable (N)HXCH FE 180 E90 4x50 RM/25 FACAB	FABER	Z2 - U	81 minutes
	S19	cable (N)HXCH FE 180 E90 4x1,5 RE/1,5 FACAB	FABER	Z2 - U	93 minutes no failure / interruption
	S20	cable (N)HXCH FE 180 E90 4x1,5 RE/1,5 FACAB	FABER	Z2 - U	93 minutes no failure / interruption
S52	cable JE-H(St)H...Bd FE180 E30-E90 2x2x0,8	DÄTWYLER	X2 - M	35 minutes	
S53	cable JE-H(St)H...Bd FE180 E30-E90 2x2x0,8	DÄTWYLER	X2 - N	24 minutes	
S54	cable JE-H(St)HRH...Bd FE180 E30-E90 2x2x0,8	DÄTWYLER	X2 - O	23 minutes	
S55	cable JE-H(St)HRH...Bd FE180 E30-E90 2x2x0,8	DÄTWYLER	Y2 - P	29 minutes	
S56	cable JE-H(St)HRH...Bd FE180 E30-E90 2x2x0,8	DÄTWYLER	Z2 - S	33 minutes	
S57	cable JE-H(St)HRH...Bd FE180 E30-E90 2x2x0,8	DÄTWYLER	Z2 - S	93 minutes no failure / interruption	
S58	cable JE-H(St)H...Bd FE180 E30-E90 2x2x0,8	DÄTWYLER	Z2 - S	30 minutes	
S59	cable JE-H(St)H...Bd FE180 E30-E90 2x2x0,8	DÄTWYLER	Z2 - S	93 minutes no failure / interruption	
S60	cable JE-H(St)HRH...Bd FE180 E30-E90 2x2x0,8	DÄTWYLER	Z2 - T	41 minutes	
S61	cable JE-H(St)HRH...Bd FE180 E30-E90 2x2x0,8	DÄTWYLER	Z2 - T	51 minutes	
S62	cable JE-H(St)H...Bd FE180 E30-E90 2x2x0,8	DÄTWYLER	Z2 - T	35 minutes	
S63	cable JE-H(St)H...Bd FE180 E30-E90 2x2x0,8	DÄTWYLER	Z2 - T	93 minutes no failure / interruption	
S64	cable JE-H(St)H FE180 E90 2x2x0,8	PRAKAB	Z2 - U	93 minutes no failure / interruption	
S65	cable JE-H(St)H FE180 E90 2x2x0,8	PRAKAB	Z2 - U	12 minutes	

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

Specimens S1 – S20 were tested by three-phase voltage supply 3 x 230/400V with bulbs 240V / 60 W.
Specimens S52 – S65 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. CLASSIFICATION AND FIELD OF APPLICATION

4.1 CLASSIFICATION ACCORDING TO ČSN 73 0895: 2016

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

Used cables DÄTWYLER 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... Bd FE180 E30-E90	JE-H(St)H...Bd FE180 E30-E90 2x2x0,8	In cable trays KBSI60.400.100. Ceiling consoles HDHSMU50.1000 wits brackets HDWKM400. Loading 20 kg.m ⁻¹ .	P30-R	n x 2 x ≥ 0,8 mm n ≥ 2 P30-R
JE-H(St)HRH... Bd FE180 E30-E90	JE-H(St)HRH...Bd FE180 E30-E90 2x2x0,8	Consoles in spacing of 1500 mm. Non-standard track Z2-T.	P30-R	n x 2 x ≥ 0,8 mm n ≥ 2 P30-R

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)HXCH FE 180 E90 FACAB	(N)HXCH FE 180 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 .	P90-R	n x ≥ 1,5 mm ² n ≥ 1 P60-R
	(N)HXCH FE 180 E90 4x50 RM/25 FACAB	Consoles in spacing of 1500 mm. Non-standard track Z2-U.	P60-R	

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 Z2-U.	Without classification	Without classification

The element, cable bearing system VERGOKAN – cable trays with accessories (consoles, brackets, screws etc.) with power and communication halogen free cables by company DÄTWYLER, 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.



4.2 FIELD OF DIRECT APPLICATION

This classification is valid for the following end use applications:

General

- cable track functionality shall not be affected negatively by adjacent building or technological elements, another cable tracks, piping tracks or other technological device;
- test results are applicable only in case the cable track in practice will be fixed to a building construction which is sufficient in term of its statics performance for period of functionality in fire, i. e. the element meets the loadbearing criterion R according to ČSN EN 13501-2;
- if the cable track is fixed directly to a building construction element made of material such as concrete, bricks, aerated concrete or steel supporting structure, 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 functionality in fire, mechanical actions caused by cable support construction with cables;
- the cable track can be fixed for example by means of bolted joints, riveted joints, welded joints, joints of direct assembling (inserting). Suitability of fixing type for the purpose shall be demonstrated by a test or statics calculation;
- if it is not possible to fix the cable route directly to element of building construction, an additional construction may be used. Design of such construction shall apply all principles for projection of cable support construction 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. When fixing the additional construction to an element of building construction all requirements given in previous clauses apply.
- the number of cables placed on the cable support construction in horizontal arrangement is limited just by area disposition, but the maximal load acting on the cable support construction, stated by manufacturer, shall not be exceeded. Manufacturer specification of the number of cables, if available, shall also be respected;
- if cables run freely they need not be fixed by clips when they are arranged horizontally on trays or ladders;
- on their whole length the cables shall be installed in such a manner, that the minimal bend radius stated by manufacturer is observed;
- also cables without functionality in fire may be placed on cable system together with cables with functionality in fire but only under the condition, that minimum distance of 200 mm is observed between them or they are separated by means of suitable fire screen. In addition the common cable management is possible only in case when each power cable or conductor is insulated to maximal voltage used in power management system;
- communication, data and signal cables shall be placed in such a way, that at all events a distance minimum of 100 mm is provided between those cables and power cables;

When the cable routes are installed in sloped or vertical position following shall be met:

- in points where it turns from horizontal to other orientation the cable route shall be effectively attached and in orientation other than horizontal the cables shall be fixed firmly also in places of bending whereas the allowable support position maximal distances and the allowable minimal bend radius are retained;
- cable tracks installed in arrangement with the angle between the horizontal plane and their longitudinal axis is less than 20° are considered as horizontal;

Cables and cable support systems

- test results are applicable to tested cable route, it means to combination of type, cross-section and manufacturer of the cable and of type and manufacturer of the cable support system. Further direct application possibilities are given in following statements.

Test results for power cables are directly applicable as follows:

- where test specimens according to ČSN 73 0895 are used, the worst test result obtained from testing of these specimens applies to all dimensions and tested arrangement method of tested cable;
- if cables with maximal cross-section of the core less than 50 mm² are tested, the worst test result applies to all cross-sections of cables in range of tested cross-sections;
- 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;
- in case only cables with minimal or maximal tested cross-section passed successfully the test, the test result is applicable only to the same type of cable, section and arrangement method as tested;



Test results obtained from testing of communication or signal cables are directly applicable as follows:

- test results are applicable to all constructions of specified type with diameter (cross-section) and number of cores equal to or greater than that of test specimen;

Test results obtained from testing of metallic data cables are directly applicable as follows:

- test results from perimeter integrity test apply for tested arrangement method for all dimensions of specified type with diameter (cross-section) and number of cores equal to or greater than that of test specimen;

Test results for cable supports systems are directly applicable as follows:

- test results obtained from testing of installation on cable trays or cable ladders suspended on floor suspension devices are allowed to be applied to support constructions attached to a wall;
- In case the test was carried out with cable tray or ladder with jointing point placed in the middle between support constructions ($\pm 5\%$ of their distance) the test results apply to any position of jointing point between support constructions;
- test results from test with specimen of cable trays or ladders are applicable also to event when the surface is treated with a colour painting or spraying in layer of surface density $< 1,0 \text{ kg/m}^2$ or of thickness $< 1,0 \text{ mm}$ in accordance with ČSN EN 13501-1. When the thickness or surface density of this layer is of greater value it is necessary to carry out a test according to this standard;
- when test specimens of support constructions made in conformity with EN 61537 ed. 2 form steel with surface treatment are used, the test results are directly applicable to support constructions of the same type made of stainless steel but not vice versa. However, it is necessary to demonstrate the mechanical characteristics of stainless steel in range of test temperatures are equal to or greater than those of steel used in test specimens.

For non-standard cable support constructions the test results are directly applicable as follows:

- results from tests carried out on cable trays and cable ladders are applicable to all cable trays and cable ladders of identical construction of smaller width than tested.
- direct application of test results from test on a test specimen is not possible to different design nor to any other product made by another manufacturer;

4.3 FIELD OF EXTENDED APPLICATION

- test result obtained for test specimen of cable tray lengths and cable ladder lengths is applicable to all parts of system, which are used for changing of direction and dimension or for ending of lengths. Typical examples of system parts are elbows, T shaped parts, cross-over parts;
- application of test results for cable tray jointing and cable ladder jointing other than as specified in standard;
- test results obtained for cable system with cable trays are applicable also for usage of coverings of cable trays. However these shall be ensured against movement. It is necessary to include the cover mass into overall load;
- application of test results to different fire scenario than used in test. However, the fire scenario upon which the test results are to be applied shall be as follows: its temperature value for each point of the temperature-time curve has to be lower than respective temperature value for fire scenario used in the test at the same time. When comparing two fire scenarios, it is possible to move the scenarios (their courses) each other along the time axis;
- **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.**



4.4 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.

9	3	44001	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	45547	heavy joined bracket	[VMK ---]
no	qty	drawing	description	reference

Meerslooten Meldeën 16 Tel: 055/3183.35
9700 Oudenaarde Fax: 055/314.388

Date	Par.	Name	Scale:
DRAWN 23/03/2011		Fire resistance - june 2011 FIRES	1/10
VISUM		Without threaded rod, with KBSI 60x---x100	
Material:	Tolerance:	Standard:	DRAWING NUMBER
-	+50	DIN 4102-12	FIRES 06-11
		S.O. SYMBOL	FORM
			A4
			P. 1
			1 P.



NOT FOR PRODUCTION Material dikte : 0.8/1/1.25

Type	Binnenmaat breedte :	Maat B			MD 1.25
		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	

1	A	Aangepaste afwerkingsprofiel (NF KBSI 60x75x1.00 25/05/2010)	25/05/2010	GET.	-
1	A	Aangepaste afwerkingsprofiel (NF KBSI 60x75x1.00 25/05/2010)	25/05/2010	GET.	-
Naam		Par.		Datum	
KBSI 60*75		KBSI 60*75		05-01-08	
GET.		-		-	
VSLIM		-		-	
Materialid :		Tolerantie :		-	
1.0037 (SendsInLx)		-		-	

		Schaal : 1/4 Tekening enkel m.b.v. CAD aanpassen	
PLANNUMMER 4.4.001 / 4 / -		FORM 05/MS k. 12	
Tel. 055/316335 Fax. 055/315348		KSAAN	

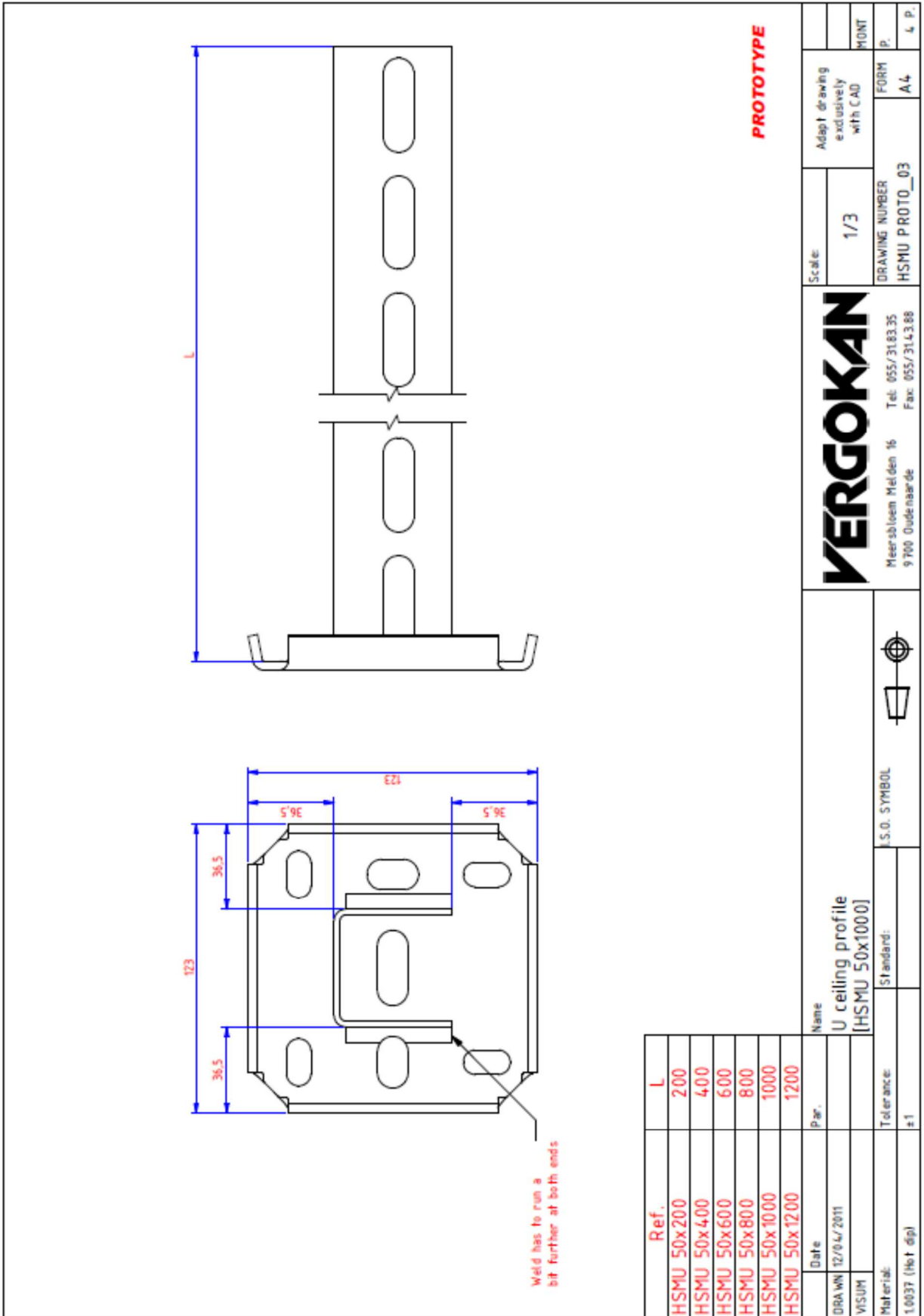
Kabelbaan ineenschuifbaar [KBSI 60*---*#---*]	
Norm : ---	U.S. SYMBOL

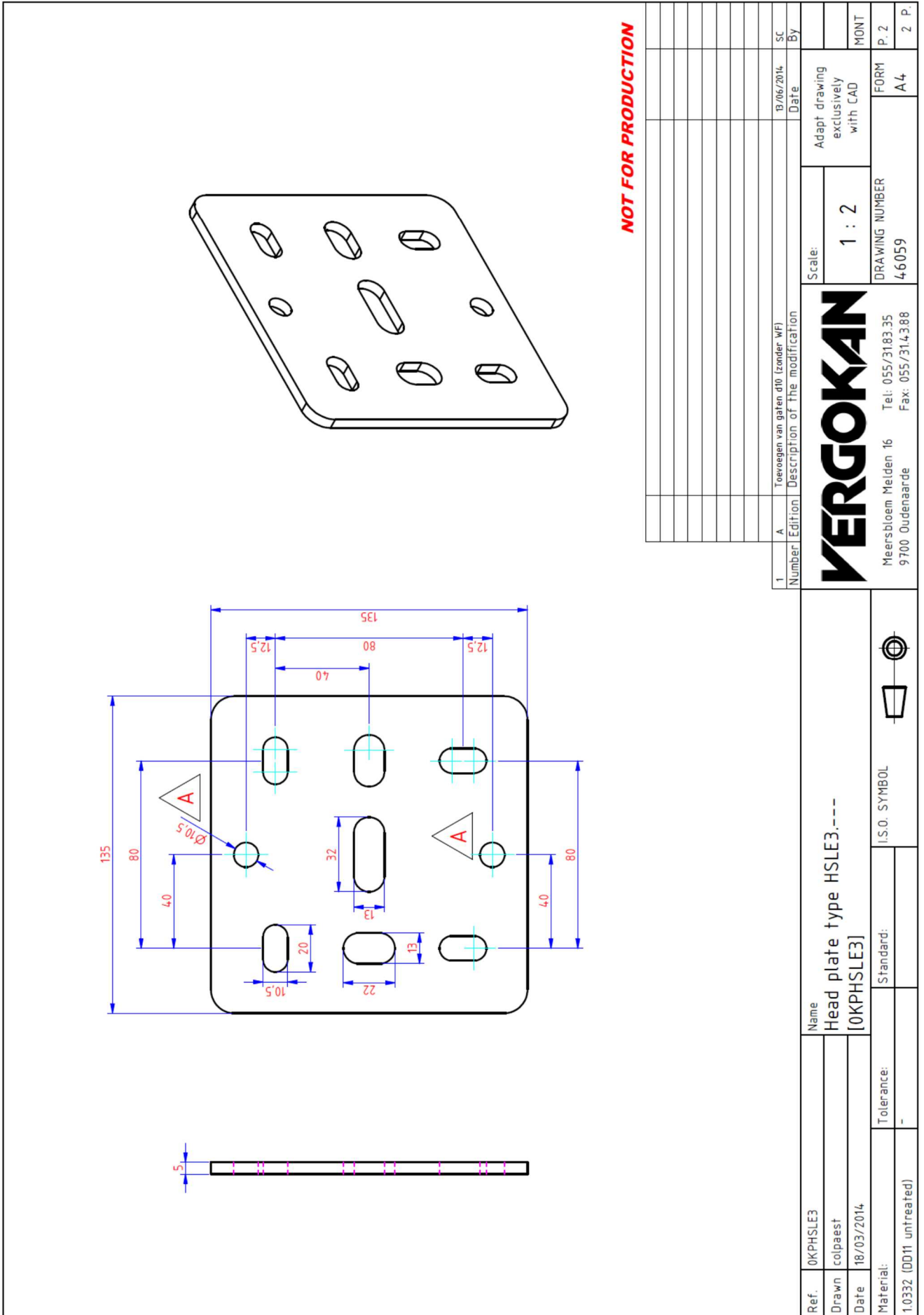


1	A	Aangepaste aluminiumpatronen (NF 888 80075x1 tot 25/05/2010)	25/05/2010	Fabrik	GET.	-	VISUM
Aantal		Mt.z.	Omschrijving		Schied : 1/5		
				Telering enkel m.b.v. CAD programma's			FORM
				FLANNUMMER 4.4.001 / 4 / -			OS/MS
				Tel. 055/314335			k. 11
				Fax. 055/314348			12 k.

NOT FOR PRODUCTION

Naam	Datum	Par.	Benoaming
Surf. Van Compasheut	02-01-08	<wvc>	Kabelbaan ineenschuifbaar Perforatiepatronen
Material	Toleranties		Norm :
1.0037 - Sands. In. It.	±0.5		U.S.A. SYMBOL





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		
Date	18/03/2014		
Material:	1.0332 (DD11 untreated)	Tolerance:	-
		Standard:	I.S.O. SYMBOL





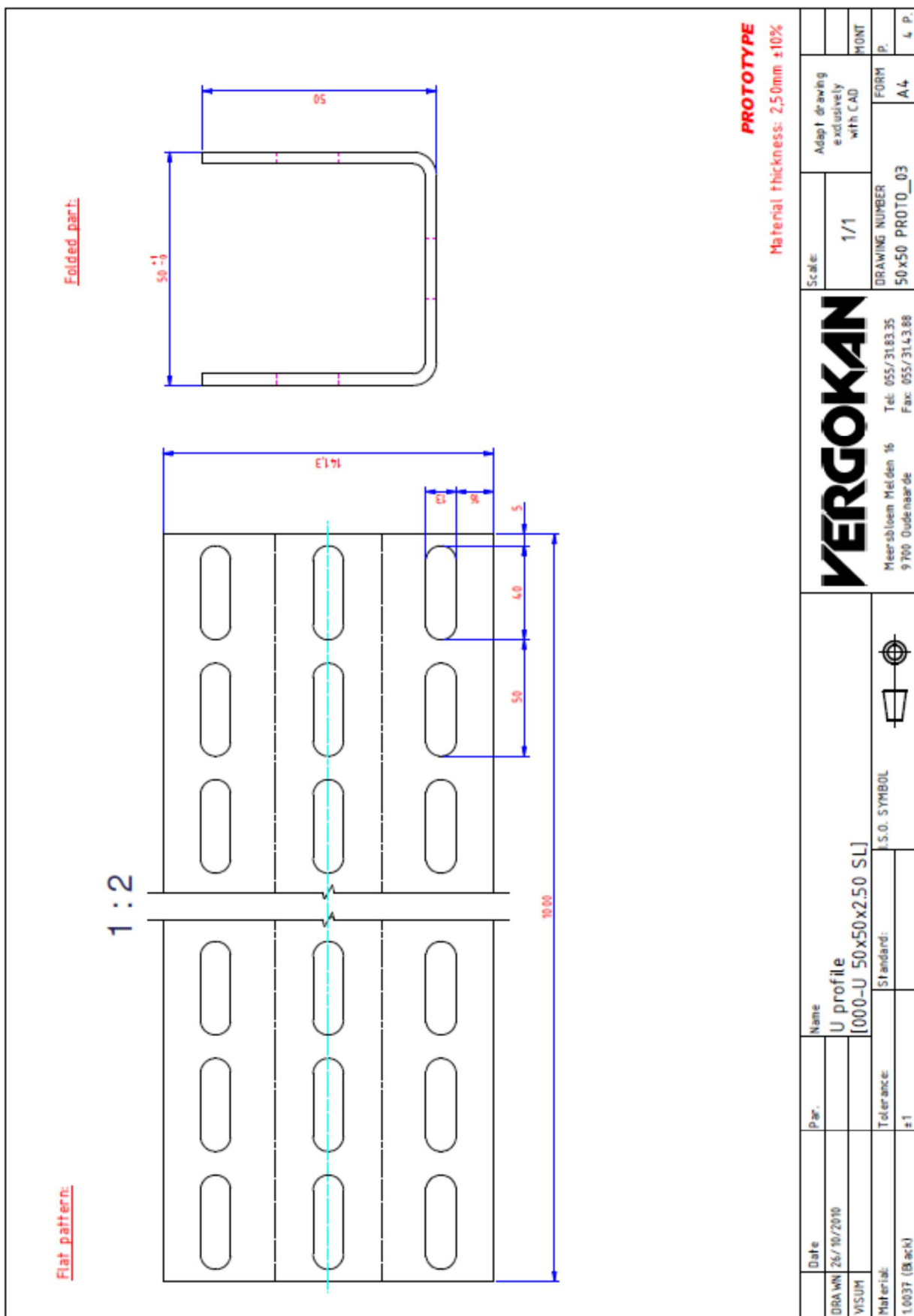
NOT FOR PRODUCTION

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	
Date	11/04/2011		
Material:	1.0332 (0011 hot dip)	Tolerance:	-
		Standard:	I.S.O. SYMBOL

Number	1	Edition	A	Author	viaakke koppelaar	Date	11/03/2015
Description of the modification							
Scale:		1 : 2					
Adapt drawing exclusively with CAD		MONT					
DRAWING NUMBER		4.5732					
FORM		A4					
P. 1		1 P.					

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





1	45729	[2TSU50]	TSU verzinkt
2	B 10x80 (DN 933)	[HDB10.86]	HD Zeskantbout
3	CRD 10 (DN 902U)	[HDCRD 10]	HD Carrossieronderstel
4	M 10 (DN 934)	[HDM10]	Zeskantmoer M10 (HD)

item	qty	drawing	reference	description
Parts list				

NOT FOR PRODUCTION

Number	Edition	Description of the modification	Date	By

VERGOKAN	Meersbloem Meliden 16 9700 Oudenaarde	Tel: 055/3183.35 Fax: 055/3143.88	Scale: 1 : 1	Adapt drawing exclusively with CAD
DRAWING NUMBER 45730			FORM A4	MONT P. 3 P

Ref. HDTSU--	Name Spacer HDHSMU 50	I.S.O. SYMBOL			
Drawn Paul Note	[HDTSU50]	Standard:			
Date 15/06/2011		Tolerance:	-		
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

VERGOKAN	Meersbloem Melden 16 9700 Oudenaarde	Tel: 055/3183.35 Fax: 055/314.388	Scale: <div style="font-size:1.5em; font-weight:bold; text-align:center;">1 : 2</div> Adapt drawing exclusively with CAD
DRAWING NUMBER 4.5730			FORM A.4
			MONT P.
			3 P.



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

Name		Heavy joined bracket		S.O. SYMBOL	
Par.		[000-WKM 100]		S.O. SYMBOL	
Date	21/03/2011	Tolerance:	±1		
Material:	1.0037 (Zwart)				

		Meer sbloem Mel den 16 9700 Oudenaarde		Tel: 055/31.83.35 Fax: 055/31.43.88	
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4.5 LABELING OF CABLE TRACK

The contractor shall always label the cable track at the accessible place and by permanent way. Label contains following information:

- the name of individual or legal person whose workers have installed the system;
- indication of cable bearing system which is stated in classification report;
- class of function in fire, number of classification report;
- year of installation of cable bearing system.

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

5. 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