

FUNCTION IN FIRE EXPERT JUDGEMENT REPORT WITH CLASSIFICATION IN ACCORDANCE WITH DIN 4102-12: 1998-11

FIRES-JR-077-22-NURE

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

Sponsor: VERGOKAN
Meersbloem Melden 16
9700 Oudenaarde
Belgium

Prepared by: FIRES, s.r.o.
Approved Body No. SK01
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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 and PRAKAB” in accordance with the classes given in DIN 4102-12: 1998-11.

Test of function in fire was carried out according to standard STN 92 0205. Similar standards for tests of function in fire is DIN 4102-12: 1998-11.

Deviations from standard at the test according to DIN 4102-12: 1998-11: This test was carried out according to standard STN 92 0205: 2012 and meets requirements of DIN 4102-12: 1998-11. Basic deviation in process and carrying out of test between these standards is in measuring and in control of temperature in the test furnace. According to STN 92 0205: 2012, plate thermometers according to EN 1363-1: 1999 are used. According to DIN 4102-12: 1998-11, common thermocouples of construction which was used for this measurement till issue of EN 1363-1:1999 are used. Measurement by plate thermometers acc. to EN 1363-1: 1999 can be considered as stricter method of temperature control in test furnace in compare with thermocouples used till issue of EN 1393-1: 1999. Therefore, it is possible to use results of test according to STN 92 025: 2012 for classification of tested cables according to DIN 4102-12: 1998-11, but not conversely. Identified deviation results in stricter course of test and it can lead to reduced classification of tested cables what is accepted as enhanced security in practice.

This expert judgement report defines field of application which is outside the field of direct 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-060-16-NURE (issued on 14. 06. 2016) with validity until 14. 06. 2021. Document FIRES-JR-077-22-NURE replaces expert judgement report with classification FIRES-JR-060-16-NURE.

2. DETAILS OF CLASSIFIED PRODUCT

2.1 GENERAL

The element, cable bearing system VERGOKAN with cables DÄTWYLER 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 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)

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

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

cablе (N)HXCH FE 180 E90 4x50 RM/25	(2x);
cablе (N)HXCH FE 180 E90 4x1,5 RE/1,5	(2x);
cablе JE-H(St)H FE180 E90 2x2x0,8	(2x).

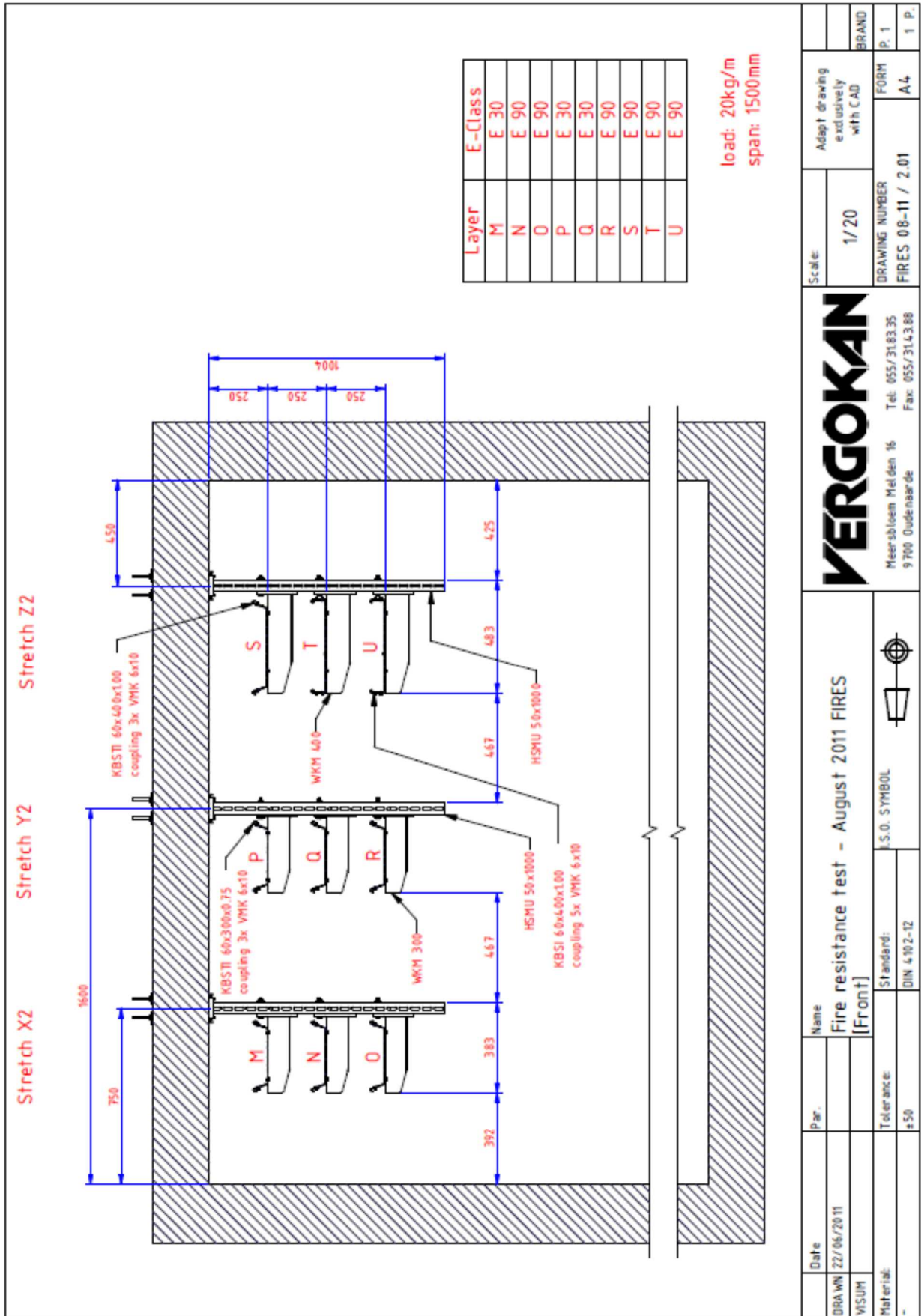
The length of cables was 5,5 m and 4,0 m from that was exposed to fire.

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	22/06/2011	Name	Fire resistance test - August 2011 FIRES [Front]
DRAWN	VISUM	Par.	
Material:	-	Tolerance:	±50
		Standard:	DIN 4102-12
		S.O. SYMBOL	
		Meersbloem Melken 16 9700 Oudehaarde Tel: 055/3143.35 Fax: 055/3143.88	
		Scale:	1/20
		DRAWING NUMBER	FIRES 08-11 / 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- 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	PRAKAB	Z2 - U	93 minutes no failure / interruption
	S18	cable (N)HXCH FE 180 E90 4x50 RM/25	PRAKAB	Z2 - U	81 minutes
	S19	cable (N)HXCH FE 180 E90 4x1,5 RE/1,5	PRAKAB	Z2 - U	93 minutes no failure / interruption
	S20	cable (N)HXCH FE 180 E90 4x1,5 RE/1,5	PRAKAB	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	PRAKAB	Z2 - U	93 minutes no failure / interruption	
S65	cable JE-H(St)H FE180 E90 2x2x0,8 - Prakab	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 DIN 4102-12: 1998-11

The element, cable bearing system VERGOKAN – cable trays with accessories (consoles, brackets, screws etc.) with power and communication halogen free cables by company DÄTWYLER and PRAKAB with circuit integrity maintenance in fire, 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 . Consoles in spacing of 1500 mm. Non-standard track Z2-T.	E 30	n x 2 x ≥ 0,8 mm n ≥ 2 E 30
JE-H(St)HRH... Bd FE180 E30-E90	JE-H(St)HRH...Bd FE180 E30-E90 2x2x0,8		E 30	n x 2 x ≥ 0,8 mm n ≥ 2 E 30

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
(N)HXCH FE 180 E90	(N)HXCH FE 180 E90 4x1,5 RE/1,5	In cable trays KBSI60.400.100. Ceiling consoles HDHSMU50.1000 wits brackets WKM 400. Loading 20 kg.m ⁻¹ . Consoles in spacing of 1500 mm. Non-standard track Z2-U.	E 90	n x ≥ 1,5 mm ² n ≥ 1 E 60
	(N)HXCH FE 180 E90 4x50 RM/25		E 60	
JE-H(St)H FE180 E90	JE-H(St)H FE180 E90 2x2x0,8		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 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 APPLICATION

This classification is valid for the following end use applications:

- throughout the period during which circuit integrity is to be maintained, neighboring building components shall not have a negative effect on circuit integrity;
- although testing is only carried out on cables arranged horizontally, test results also apply to cables arranged either diagonally or vertically (e.g. in risers), as long as the cable system is supported in transitional areas (i.e. where it switches from a horizontal to a vertical arrangement) in such a manner that the cables will not slip or kink at corners;
- test results of function in fire test of cables tested at standard supporting construction are also applicable for tested standard supporting construction of other producers;
- test results of function in fire test of cables tested at standard supporting construction are also applicable for cables of other producers tested at standard supporting construction;
- where risers are used, circuit integrity classification only applies if the cable is effectively supported (i.e. with a spacing of supports of 3 500 mm or less and the distance between cable clips is ≤ 300 mm). Figure 5 of standard DIN 4102-12 shows a suitable means of mounting cables on risers. Cables may also be stabilized by a seal at penetrations in floors, provided that the sealant material is of a suitable material class, or using clips of proven suitability. The suitability of any design other than that shown in figure 5 may only be assessed by an accredited test laboratory;
- for vertical systems, the test results obtained for cables mounted singly on the ceiling using single clips apply. Brackets of proven suitability may also be used, as long as their spacing is equal to that of the single clips tested;
- test results of testing single cables on the ceiling apply also to cables mounted horizontally on walls;
- test results of testing bunched cables on a ladder or tray also apply to support construction attached to a wall. However, such constructions required proof of suitability by means of a test certificate or other document issued by an accredited testing laboratory;

4.3 FIELD OF APPLICATION BEYOND THE APPLICATION DEFINED IN STANDARD

- 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 results of cables tested at cable trays or ladders are applicable also for another products trays and ladders (cross, elbow, T-bend, bends and etc.);
- 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;
- direct application of test results is only for the tested methods of connecting cable trays and cable ladders;
- 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 weight of the cover must be added to the total load;
- **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.

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

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

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



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	Aangepaste afwerkingsprofiel (NF KBSI 60x75x1.00 25/05/2010)	25/05/2010	GET.	VISUM
		Geodriehoek vlijzig			
		Schaal :		Tekening enkel m.b.v. CAD aanpassen	
			1/4		
		PLANNUMMER	4.4.001	FORM	05/MS
			/ 4 /		k. 12
					12 r.

Tel. 055/316335
Fax. 055/315348

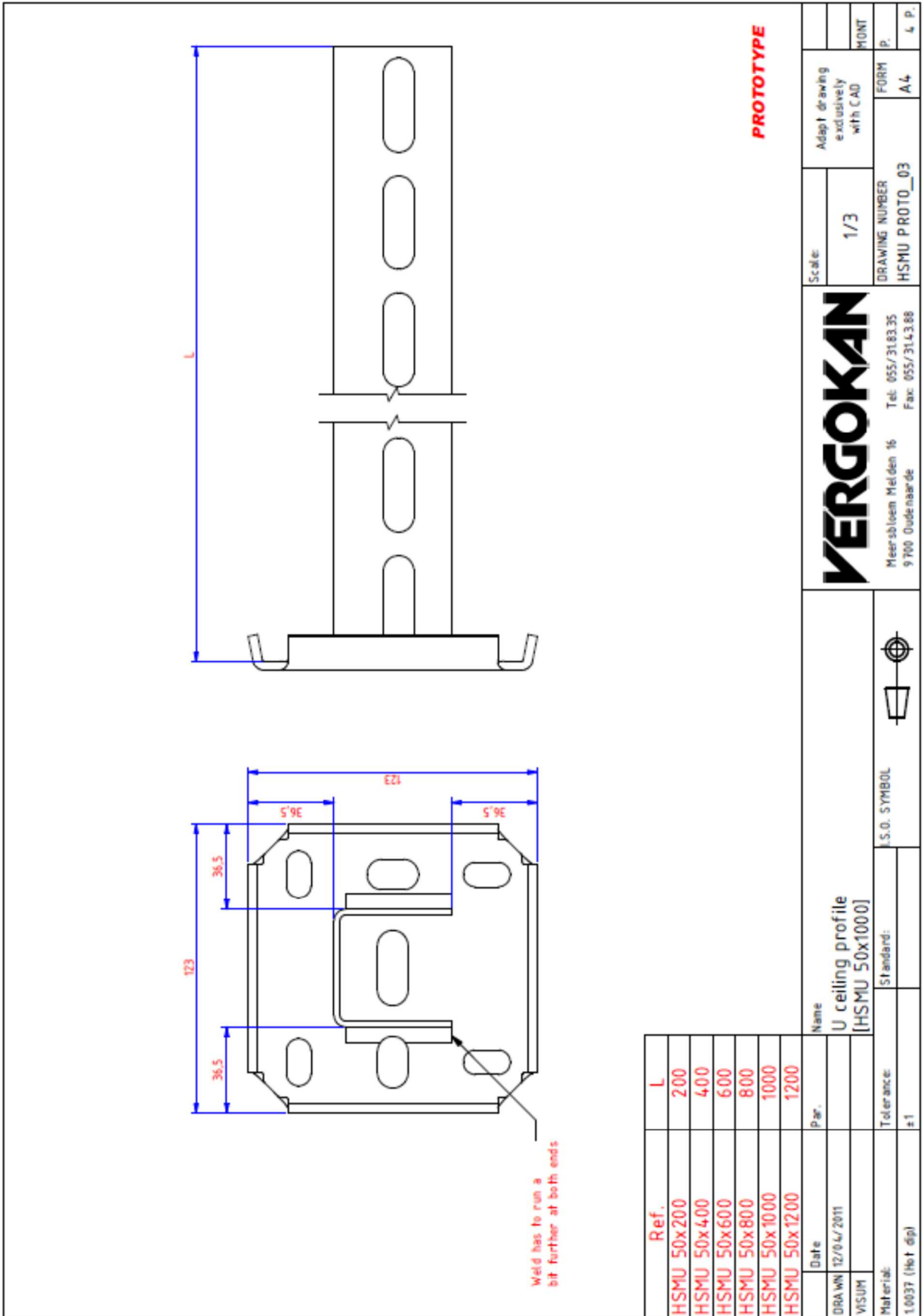


1	A	Aangepaste afwerkpatroon (NF 888 80075x1 00 25/05/2010)	25/05/2010	Fabrik	GET.	-	VISUM
Aantal		Mt.z. Omschrijving	Schied : 1/5		Tekenring enkel m.b.v. CAD programma's		FORM 05/MS
		PLANNUMMER 4.4.001		/ 4 /		k. 11	
		Tel. 055/314335		Fax. 055/314348		12 k.	

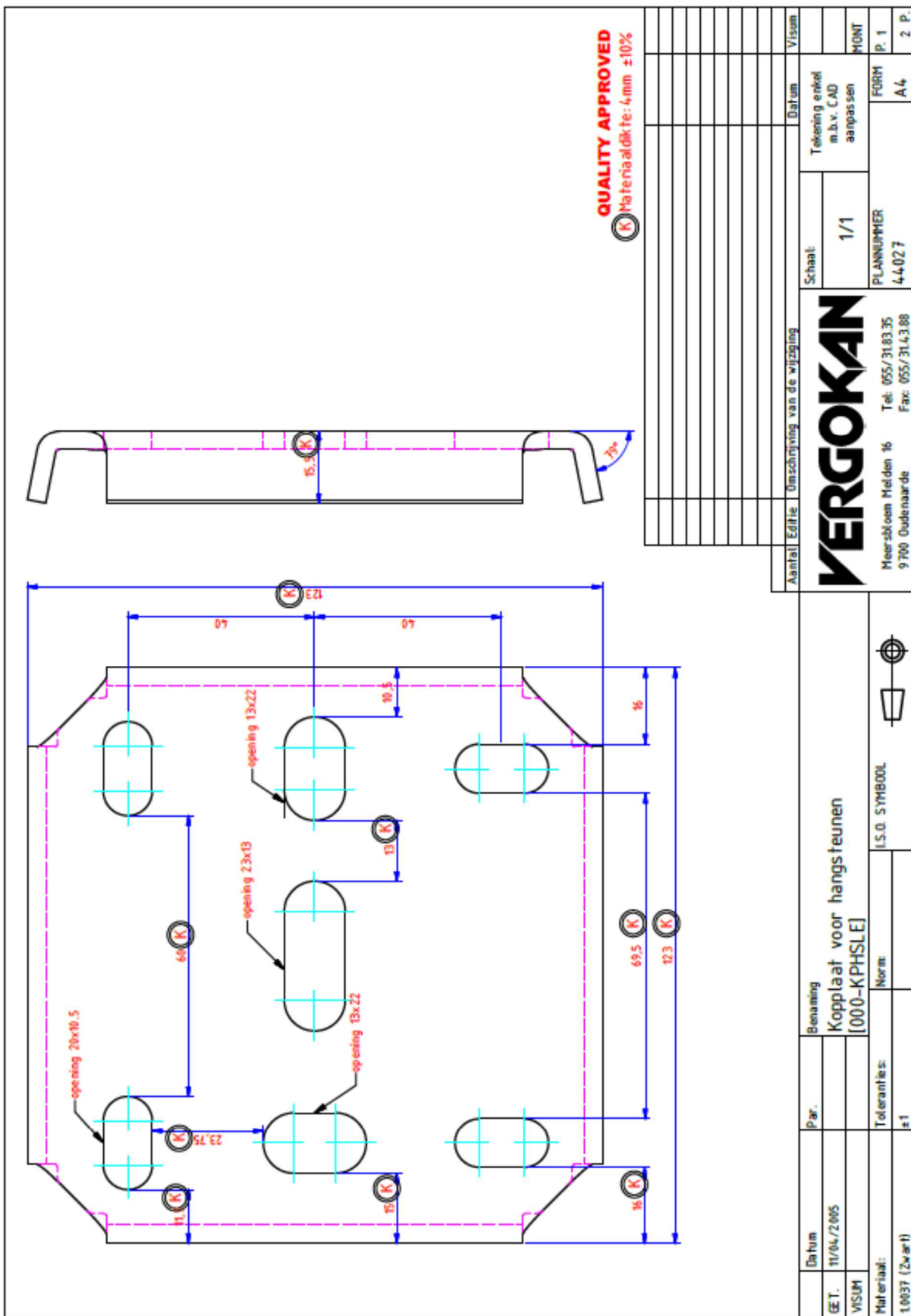
NOT FOR PRODUCTION

Naam	Par.	Datum	Par.	Benoaming
GET. Kunt. Ver. Compensat	<w>	02-01-08	<w>	Kabelbaan ineenschuifbaar
VISUM	-	-	-	Perforatiepatronen
Materialid :	Tolerantie :	1.0037	Sands. In. It.	1.0..5

Norm :	U.S. SYMBOL	
-		



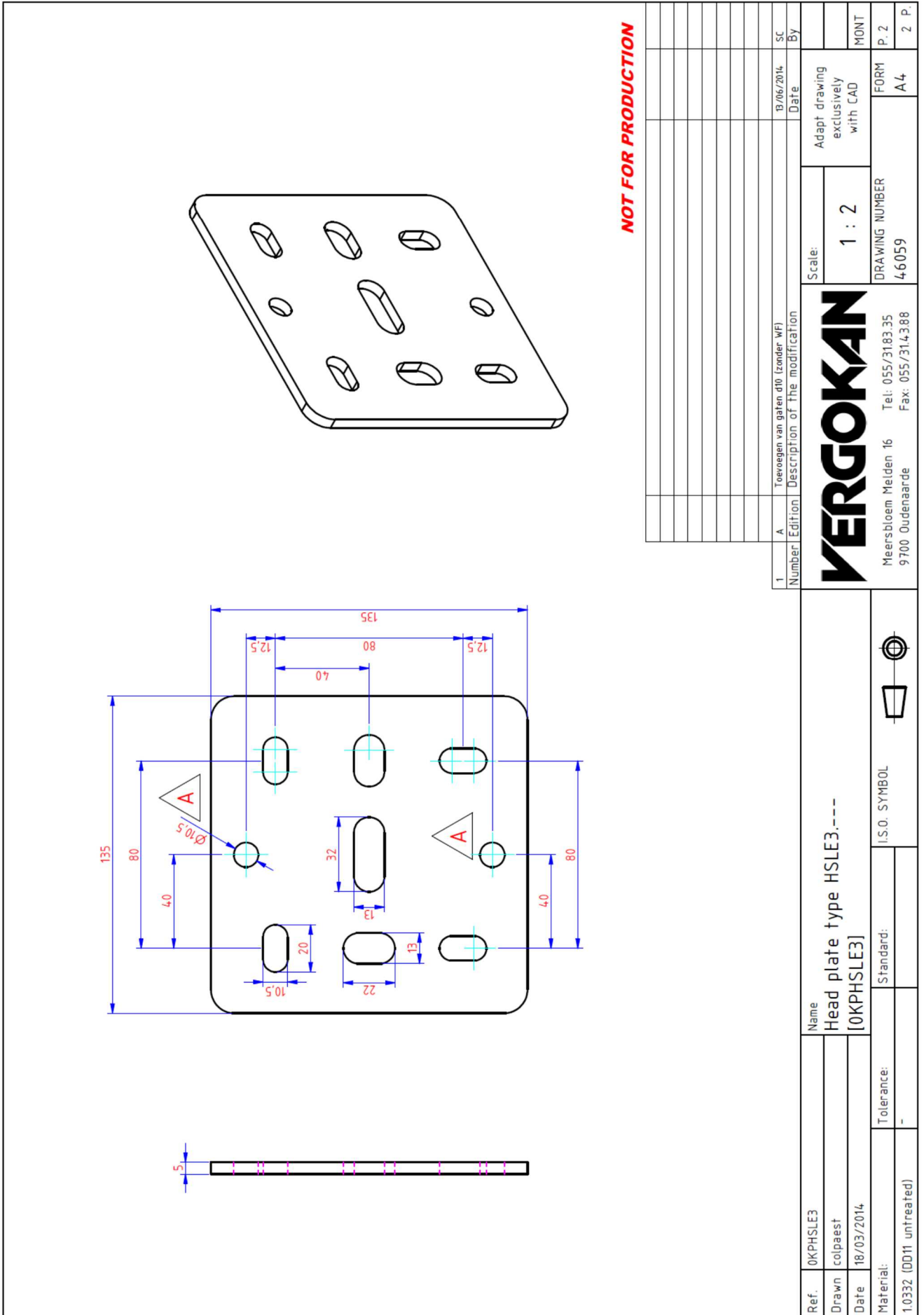
Scale: 1/3		Adapt drawing exclusively with CAD		MONT	
DRAWING NUMBER HSMU PROTO_03		FORM A4		P.	
VERGOKAN		Meersblomm Mielden 16 9700 Oudehaarde		Tel: 055/318335 Fax: 055/314388	
Name U ceiling profile [HSMU 50x1000]		S.O. SYMBOL			
Date 12/04/2011	Par.	Standard:		Tolerance: ±1	
VISUM					
Material: 1.0037 (Hot dip)					



Aantal Ed/He		Omschrijving van de wijziging		Datum		Visum	
		Schaal:		Tekening enkel m.b.v. CAD aanpassen		MONT	
		1/1				FORM P. 1	
		PLANKNUMMER		FORM A4		P. 1	
		4.4.027				2 P.	

VERGOKAN
Meersbloem Melden 16
9700 Oudenaarde
Tel: 055/31.83.35
Fax: 055/31.4.3.88

Datum		Benaming		I.S.O. SYMBOL	
GET. 11/06/2005		Kopplaat voor hangsteunen		☐	
VISUM		[000-KPHSLE]		☉	
Materiaal:		Norm:		I.S.O. SYMBOL	
1.0037 (Zwart)		±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

Name
Head plate type HSLE3.---
[0KPHSLE3]



I.S.O. SYMBOL

Standard:

Tolerance:

Material:
1.0332 (DD11 untreated)



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

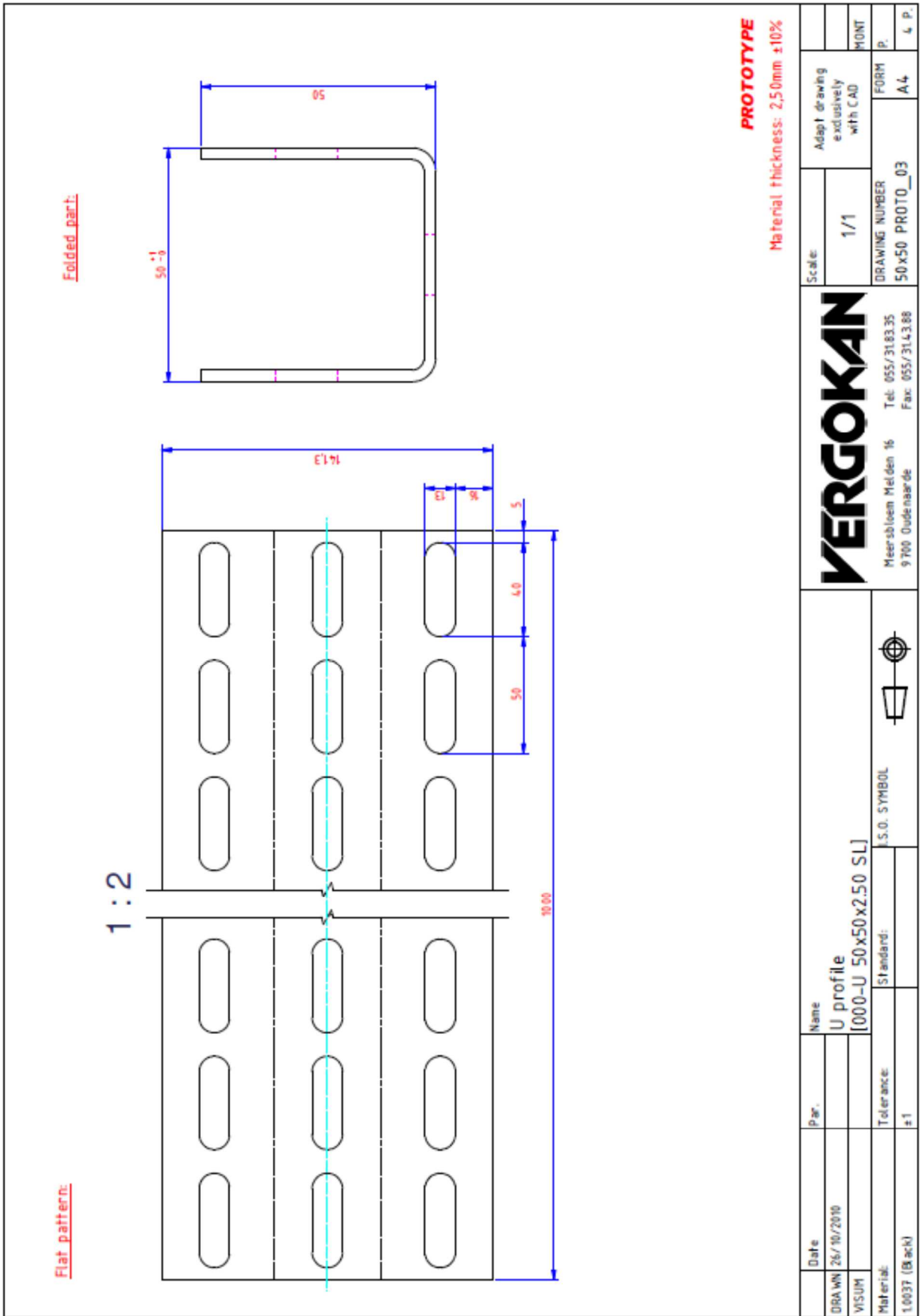
Ref.	HDHSMU50.----
Drawn	Paul
Date	11/04/2011
Material:	1.0332 (0011 hot dip)
Tolerance:	-

Name Ceiling profile medium heavy, U shape [HDHSMU50.1000]	
Standard:	I.S.O. SYMBOL

Number	1	viaakje koppilaaf	Description of the modification		11/03/2015	notepa
Edition	A					By

Scale:	1 : 2	Adapt drawing exclusively with CAD
DRAWING NUMBER	4.5732	FORM A4
MONT		P. 1
		1 P.

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



PROTOTYPE

Material thickness: 2,50mm ±10%

Date	Par.	Name	S.O. SYMBOL		
DRAWN 26/10/2010		U profile	[000-U 50x50x2.50 SL]		
VISUM			Tolerance:	±1	
Material:			Standard:		
1.0037 (Black)					
			Meerstroom Melden 16 9700 Oudehaarde		
Scale: 1/1			Adapt drawing exclusively with CAD		
DRAWING NUMBER 50x50 PROTO_03			FORM P. A4		
			MONT		
			L. P.		



1	45729	[2TSU50]	TSU verzinkt
2	B 10x80 (DN 933)	[HDB10.86]	HD Zeskantbout
3	CRD 10 (DN 9020)	[HDCRD 10]	HD Carrossieronderstel
4	M 10 (DN 934)	[HDM10]	Zeskantmoer M10 (HD)

item	qty	drawing	reference	description
Parts list				

1 2 3 4

69 46 1

NOT FOR PRODUCTION

Number	Edition	Description of the modification	Date	By

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

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]	Spaeker, HSMU 50
item	qty	drawing	reference	description

Parts list	

NOT FOR PRODUCTION

1	A	Herontwerp naar aarleiding brandstreek 2015 (zw WF HDHSMU50.000 - 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

VERGOKAN	
Meersbloem Melden 16 9700 Oudenaarde	Tel: 055/3183.35 Fax: 055/314.388

Ref. TSU--	Name	Standard	I.S.O. SYMBOL	
Drawn Paul Note	Spacer HDHSMU 50			
Date 15/06/2011	[TTSU50]			
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

000-CWKM 100

000-CWKM 200

000-CWKM 300 or 000-CWKM 400

000-KPWKZ 300

PROTOTYPE

Date	21/03/2011	Name	Heavy joined bracket	Number / Edition	Description of the modification	Date	Visum
Par.							
Material:	1.0037 (Zwart)	Tolerance:	±1	Scale:	1/5	Adapt drawing exclusively with CAD	
Standard:		S.O. SYMBOL		DRAWING NUMBER	WKM FIRES 05-2011		FORM
						A4	p.
							16 P.

VERGOKAN
 Meer sbloem Mel den 16
 9700 Oudehaarde
 Tel: 055/3183.35
 Fax: 055/3143.88



4.5 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.

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