



Systems of extinguishing fire Sapfir Proteng

2015

CE Certificate

KONŠTRUKTA – Defence, a.s.
Prevádzka špeciálneho skúšobníctva Lieskovec, 018 41 Dubnica nad Váhom
Notifikovaná osoba 1395, Notified body 1395

ES CERTIFIKÁT TYPU
EC CERTIFICATE OF TYPE
podľa smernice 2007/23/ES
according to Directive 2007/23/EC

CE

Číslo / №.: PA 1395-0040/2015

Názov výrobku: <i>Name of article:</i>	Modul práškového hasenia "Tungus" MPH-065
Typ pyrotechnického výrobku: <i>Type of pyrotechnic article:</i>	Iné pyrotechnické výrobky, P1, plynový generátor <i>Other pyrotechnic articles, P1, gas generator</i>
Subtyp: <i>Subtype</i>	pyrotechnické hasiace zariadenie <i>pyrotechnic fire-fighting device</i>
Ovodené varianty: <i>Derived variants</i>	Modul práškového hasenia "Tungus" MPH-2, Modul práškového hasenia "Tungus" MPH-2,8, Modul práškového hasenia "Tungus" MPH-4, Modul práškového hasenia "Tungus" MPH-5, Modul práškového hasenia "Tungus" MPH-5M, Modul práškového hasenia "Tungus" MPH-6, Modul práškového hasenia "Tungus" MPH-9, Modul práškového hasenia "Tungus" MPH-10st, Modul práškového hasenia "Tungus" MPH-24
Registračné číslo: <i>Registration number</i>	1395-P1-0040/2015
Výrobca: <i>Manufacturer:</i>	Sapfir, s.r.o. Záhradná 19 900 24 Veľký Biel Slovenská republika
Žiadateľ: <i>Applicant</i>	Sapfir, s.r.o. Záhradná 19 900 24 Veľký Biel Slovenská republika

Notifikovaná osoba 1395 potvrdzuje na základe nariadenia vlády SR č. 485/2008 Z. z., že uvedený výrobok spĺňa všetky relevantné základné bezpečnostné požiadavky smernice 2007/23/ES.

Podkladom na vystavenie tohto certifikátu boli skúšky a certifikácia predloženej skúšobnej vzorky a technická dokumentácia výrobku. Certifikát nemožno použiť ako certifikát výrobku, pri ktorom sa vykonala bez súhlasu Notifikovanej osoby 1395 zmena, ovplyvňujúca zhodu s použitými dokumentmi a predpismi.


Notified body 1395 certifies, based on Government Ordinance №. 485/2008 Z. z. that the aforementioned article has been found to be in conformity with all relevant requirements of Directive 2007/23 /EC.

Examinations and certifications of the submitted sample and technical documentation represent the base of issuing the certificate. The certificate cannot be used as a certificate for product where a change influencing conformity with the applied documents and provisions was done without of the Notified body 1395.

Podklad na vydanie certifikátu: Záverečný protokol č. PA 1395-0040/2015 zo dňa 20.03.2015.
Basis for issuing the certificate: Final report №. PA 1395-0040/2015 from 20.03.2015.

Certifikát je platný bez časových obmedzení.
The certificate is valid without temporal restrictions.

V Dubnici nad Váhom dňa 20.03.2015


Ing. Daniel Nemček
riadiateľ NO 1395
Director NB 1395

063518

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Certificate of Compliance

TSU TECHNICKÝ SKUSOBNÝ ÚSTAV PIEŠŤANY, s.p.
Krajinská cesta 2929/9
921 01 Piešťany, Slovak Republic
Authorized body No. SK03

SK03
Reg. No. 008P-018

SK CERTIFICATE

of constancy of performance of the essential characteristics of the construction product
SK03 - ZSV - 0587

In compliance with Act No. 133/2013 Coll. of Laws on construction products and on amendments to certain laws, this certificate applies to the construction product

Powder fire extinguishing modules TUNGUS

Type: TUNGUS 065 (MPP(N)-065-I-GE-U2)	TUNGUS 9 (MPP(N)-9-I-GE-U2)
TUNGUS 2 (MPP(N)-2-I-GE-U2)	TUNGUS 10 (MPP(N)-10-I-GE-U2)
TUNGUS 4 (MPP(N)-4-I-GE-U2)	TUNGUS 10st (MPP(N)-10(st)-I-GE-U2)
TUNGUS 5 (MPP(N)-5-I-GE-U2)	TUNGUS 24 (MPP(N)-24-I-GE-U2)
TUNGUS 6 (MPP(N)-6-I-GE-U2)	

intended for fire protection of buildings and technological equipment against fires class A, B, C and E. They can work in automatic or manual mode.
Modules in design (N) are not intended for use in the risk of explosion

produced for
Technopark PS s.r.o., Záhradná 19, 900 24 Veľký Biel, Slovak Republic

and produced in the manufacturing plant
ZAO „Istochnik Plus“, 1 Socialisticheskaya St., 659322 Biysk, Altay region, Russian Federation

This certificate attests that all provisions concerning the assessment and verification of constancy by manufacturer declared performance of the essential characteristics of the construction product (hereinafter "assessment of performance") and the performances described in Slovak technical assessment

SK TP - 14/0080

under system of assessment of performance I are applied and that
the product fulfils all the prescribed requirements set out above.

This certificate was first issued on September 12th, 2014 and will remain valid as long as the SK technical assessment, remains valid and the manufacturing conditions in the plant or the factory production control itself are not modified significantly.

TSU
TECHNICKÝ SKUSOBNÝ ÚSTAV PIEŠŤANY
SK03
PIEŠŤANY

Ing. Janka LEVICKÁ
on behalf of authorized body

Piešťany September 12th,

TECHNICKÝ SKUSOBNÝ ÚSTAV PIEŠŤANY, s.p.
Krajinská cesta 2929/9, 921 01 Piešťany
Slovenská republika

Testing laboratory TSÚ – Laboratory of technical equipment of buildings and structures (TZBaS)
Tel.: +421-33-7957200 Fax: +421-33-7723716 E-mail: tzbas@tsu.sk www.tsu.sk

POS: 14240002/314 en Page: 1 of 17

Test Report No.: 142400002/314 en

Test name: TEST of WORMANSHIP, MECHANICAL, FUNCTIONAL AND OPERATIONAL PROPERTIES

Test subject - name: POWDER FIRE EXTINGUISHING MODULE TUNGUS

Type - marking: TUNGUS 065, TUNGUS 2, TUNGUS 4, TUNGUS 5, TUNGUS 6, TUNGUS 9, TUNGUS 10, TUNGUS 10st, TUNGUS 24

Manufacturer: ZAO „Istochnik Plus“, 1 Socialisticheskaja St., 659322 Biysk, Altay region, Russian Federation

Applicant: Technopark PS s.r.o., Záhradná 19, 900 24 Veľký Biel, Slovak Republic

Application no: O04/14/0011/11 (TSUS, n.o., Bratislava) of 27.01.2014

Test performed in: TSÚ Piešťany, s.p.

Test method - procedure: TNI CEN/TR 15276-1: 2009, EN 3-7: 2004+A1: 2007

Test performed on: April 03rd, 2014 – June 19th, 2014

Date of issue: June 24th, 2014

Testing and Test Report made by:

Ing. Jozef Chrapka

Responsible and approval person:

Peter Summer
Head of Testing Lab TZBaS

Note: This issue is a translation of the Slovak Test Report No. 142400002/314 and its Supplement No. 1 of 24.06.2014. In case of doubt only the Slovak versions of this report and its supplement are valid.

The results of the tests referred to in this Protocol shall apply only on the test subject and do not replace other documents that are required by state regulatory authorities and by other specific regulations. The test report may be reproduced or published as a whole only, in parts only with the written consent of TSU testing laboratory.
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T-10-131-0

Why choose MPH “SapfirProteng”?

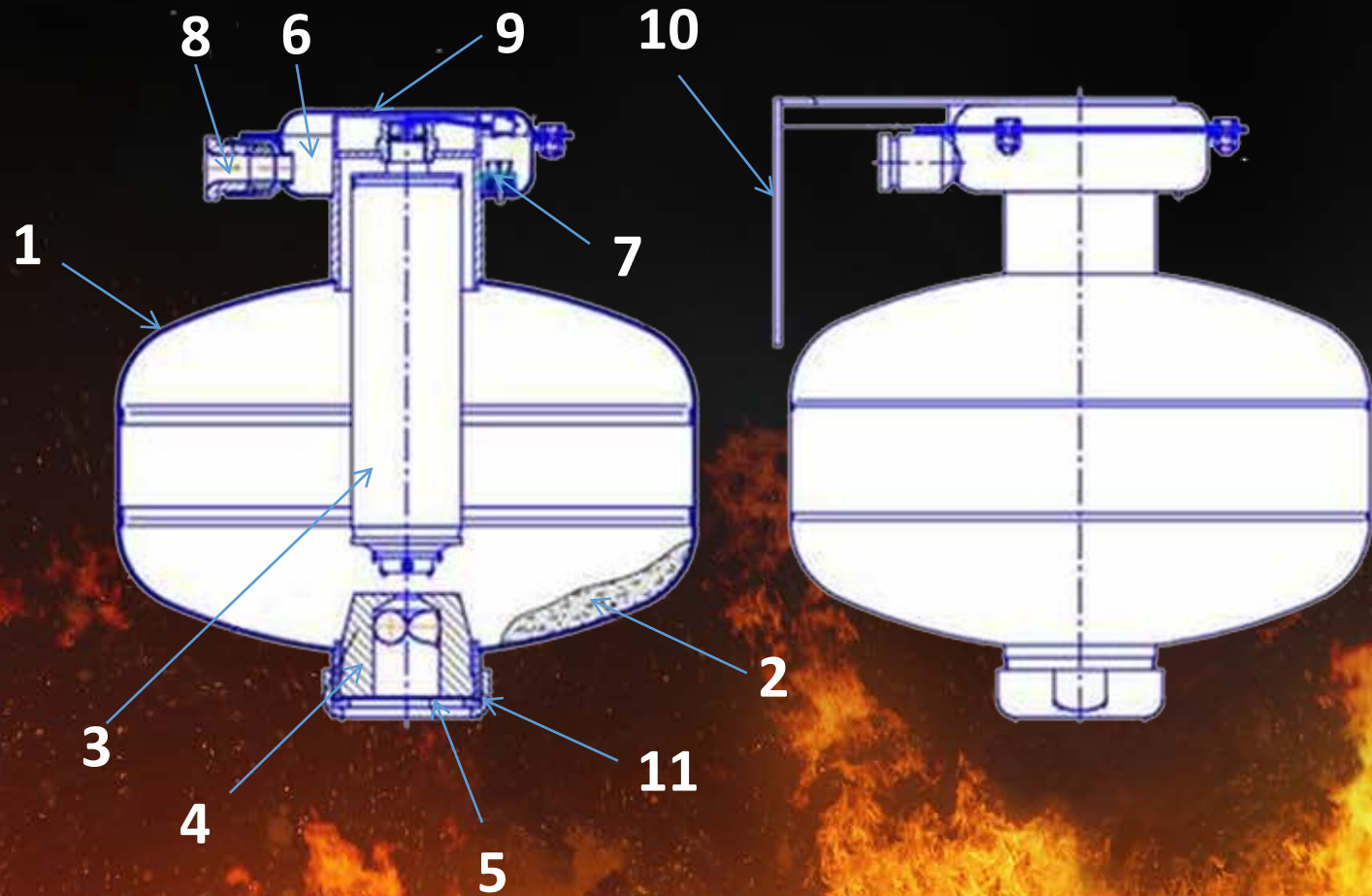
1. High reliability and efficiency
2. Relatively low price
3. 12 years of operation without the necessary maintenance
4. Easy installation and operation
5. Blocking the fire at an early stage in the self-triggering or automatic modes
6. Versatility - putting out fires all classes, including electrical units under voltage

Contruccion of a module

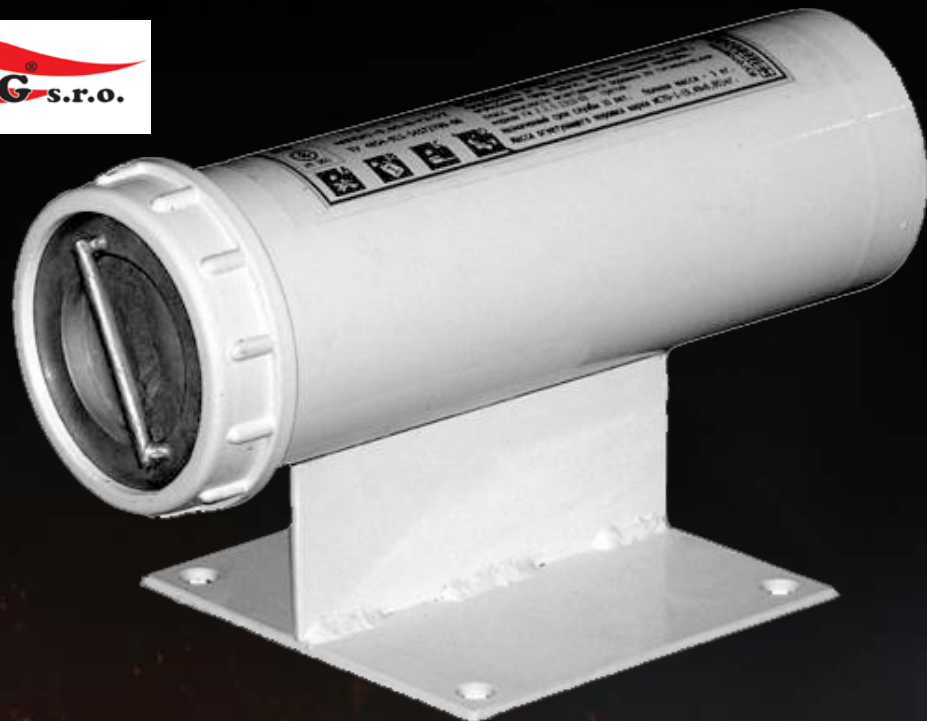


- 1 - Trunk of a module
- 2 - Fir extinguishing powder
- 3 - Cold gas generator
- 4 - Electric activator
- 5 - Dispenser
- 6 - Membrane

Contruaction of a module



- 1 - Trunk of a module
- 2 - Fire extinguishing powder
- 3 - Cold gas generator
- 4 - Dispenser
- 5 - Membrane
- 6 - Electrical box
- 8 - Electrical input
- 9 - Mount cover
- 10 - Console



MPH - 0.65



Technical parameters

The module is designed to extinguish hotbeds of ignition in closed cabinets with electronic and electrical equipment of small volume, cable channels, technological equipment

Name of a parameter		Value
The volume of housing, liter		0.49
Total weight, kg		3.0
Weight of the fire extinguishing powder ISTO-1, kg		0.49
Size, mm	height	130
	length	230
Protected surface (S), m ²	Class A	1.2
	Class B	1.2
Protected volume, m ³	Class A	2.4
	Class B	1.2
Activation current, A		0.12
Service life, years		10
Antiexplosion label	0ExialIBT3 X, RP Exial X	



Technical parameters

The module is designed to extinguish hotbeds of ignition in closed cabinets with electronic and electrical equipment of small volume, cable channels, technological equipment on the surface up to 15 m² and volume up to 28 m³

Name of a parameter		Value
The volume of housing, liter		2.2
Total weight, kg		5.0
Weight of the fire extinguishing powder ISTO-1, kg		1.9
Size, mm	diameter	124
	length	280
Protected surface, m ²	Class A	15
	Class B	13
Protected volume, m ³	Class A	28
	Class B	18
Activation current, A		0.12
Service life, years		10
Antiexplosion label	0ExiaIIBT3 X, RP ExiaI X	



The module is designed to extinguish hotbeds of ignition in closed cabinets with electronic and electrical equipment of small volume, cable channels, technological equipment on the surface up to 32 m² and volume up to 65 m³

Technical parameters

Name of a parameter		Value
Objem krytu, liter		2.8
Total weight, kg		5.0
Weight of the fire extinguishing powder ISTO-1, kg		4.8
Size, mm	diameter	155
	length	215
Protected surface, m ²	Class A	32
	Class B	14
Protected volume, m ³	Class A	65
	Class B	17
Activation current, A		0.12
Service life, years		12
Antiexplosion label		0ExialIBT3 X, RP Exial X



Technical parameters

Name of a parameter		Value
The volume of housing, liter		4.3
Total weight, kg		7.0
Weight of the fire extinguishing powder ISTO-1, kg		4.0
Size, mm	diameter	280
	length	195
Protected surface, m ²	Class A	40
	Class B	16
Protected volume, m ³	Class A	100
	Class B	20
Activation current, A		0.12
Service life, years		10
Antiexplosion label	0ExiaIIBT3 X, RP ExiaI X	

The module is designed to extinguish hotbeds of ignition in closed cabinets with electronic and electrical equipment of small volume, cable channels, technological equipment on the surface up to 40 m² and volume up to 100 m³



The module is designed to extinguish hotbeds of ignition in closed cabinets with electronic and electrical equipment of small volume, cable channels, technological equipment on the surface up to 78 m² and volume up to 100 m³

Application Area:

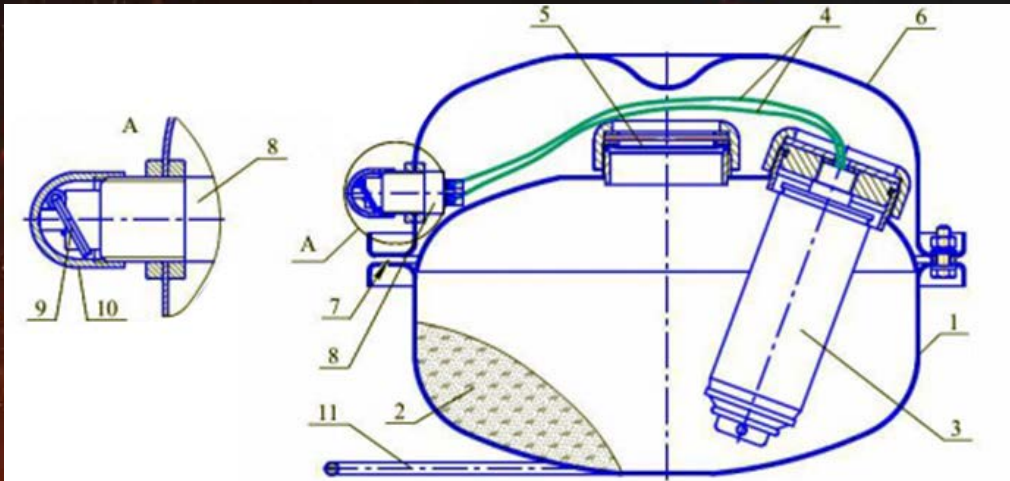
Raised floors and suspended ceilings, attic and basement

Technical parameters

Name of a parameter		Value
The volume of housing, liter		4.4
Total weight, kg		8.2
Weight of the fire extinguishing powder ISTO-1, kg		4.4
Size, mm	diameter	280
	length	210
Protected surface, m ²	Class A	78
	Class B	-
Protected volume, m ³	Class A	100
	Class B	40
Activation current, A		0.12
Service life, years		10
Antiexplosion label	0ExialIBT3 X, RP Exial X	



Technical parameters



Name of a parameter		Value
The volume of housing, litre		4.7
Total weight, kg		8.2
Weight of the fire extinguishing powder ISTO-1, kg		4.4
Size, mm	diameter	300
	length	280
Protected surface, m ²	Class A	200
	Class B	78
Protected volume, m ³	Class A	100
	Class B	40
Activation current, A		0.12
Service life, years		10
Antiexplosion label		0ExialIBT3 X, RP Exial X

Module meant to be thrown into the fire, with manual start



Technical parameters

The module is designed to extinguish hotbeds of ignition in closed cabinets with electronic and electrical equipment of small volume, cable channels, technological equipment on the surface up to 50 m² and volume up to 150 m³

Name of a parameter		Value
The volume of housing, liter		6.5
Total weight, kg		10.0
Weight of the fire extinguishing powder ISTO-1, kg		6.0
Size, mm	diameter	286
	length	233
Protected surface, m ²	Class A	50
	Class B	27
Protected volume, m ³	Class A	150
	Class B	38
Activation current, A		0.12
Service life, years		10
Antiexplosion label	0ExiaIIBT3 X, RP ExiaI X	



MPH - 9

Technical parameters

The module is designed to extinguish hotbeds of ignition in closed cabinets with electronic and electrical equipment of small volume, cable channels, technological equipment on the surface up to 72 m² and volume up to 216 m³

Name of a parameter		Value
The volume of housing, liter		9.0
Total weight, kg		13.0
Weight of the fire extinguishing powder ISTO-1, kg		8.6
Size, mm	diameter	286
	length	268
Protected surface (S), m ²	Class A	72
	Class B	33
Protected volume, m ³	Class A	216
	Class B	42
Activation current, A		0.12
Service life, years		10
Antiexplosion label	0ExialIBT3 X, RP Exial X	



MPH - 10



Technical parameters

The module is designed to extinguish hotbeds of ignition in closed cabinets with electronic and electrical equipment of small volume, cable channels, technological equipment on the surface up to 36 m² and volume up to 216 m³

Name of a parameter		Value
The volume of housing, liter		9.5
Total weight, kg		17.0
Weight of the fire extinguishing powder ISTO-1, kg		9.5
Size, mm	diameter	240
	length	340
Protected surface (S), m ²	Class A	36
	Class B	18
Protected volume, m ³	Class A	216
	Class B	75
Activation current, A		0.12
Service life, years		10
Antiexplosion label	0ExiaIIBT3 X, RP ExiaI X	

Technical parameters

Name of a parameter		Value
The volume of housing, liter		9.5
Total weight, kg		20.0
Weight of the fire extinguishing powder ISTO-1, kg		9.5
Size, mm	diameter	397
	length	305
Protected surface , m ²	Class A	310
	Class B	80
Protected volume, m ³	Class A	36
	Class B	240
Activation current, A		0.12
Service life, years		10
Antiexplosion label	0ExialIBT3 X, RP Exial X	



The module is designed to extinguish hotbeds of ignition in closed cabinets with electronic and electrical equipment of small volume, cable channels, technological equipment on the surface up to 80 m² and volume up to 240 m³



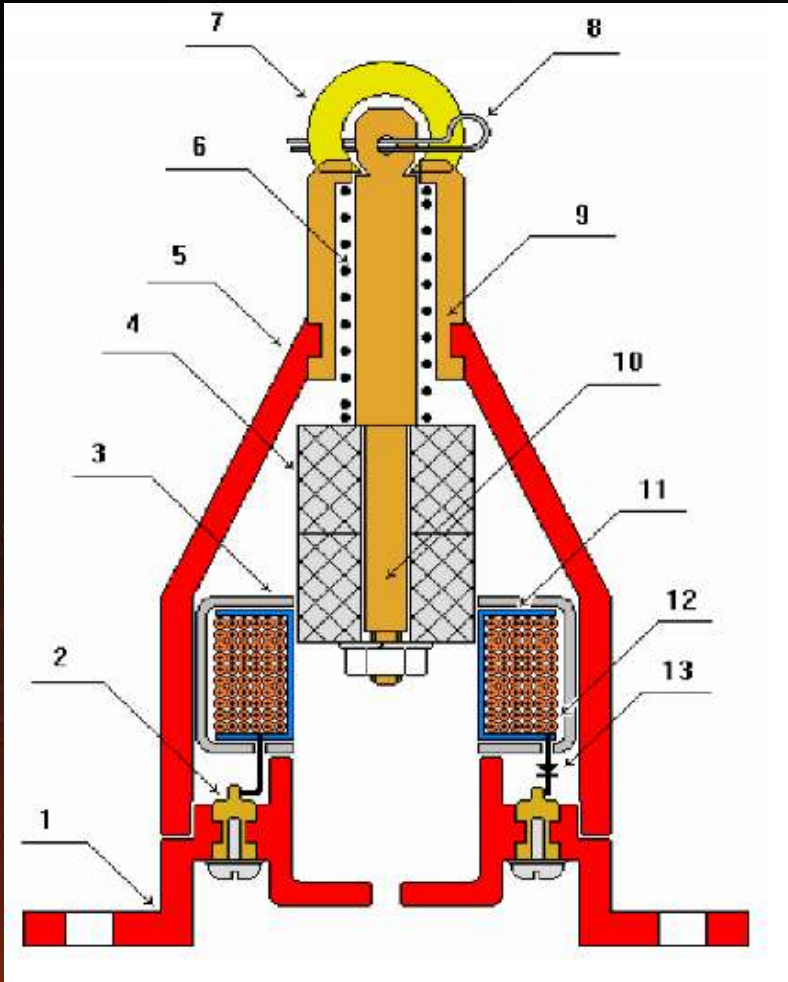
The module is designed to extinguish hotbeds of ignition in closed cabinets with electronic and electrical equipment of small volume, cable channels, technological equipment on the surface up to 75 m² and volume up to 250 m³

Technical parameters

Name of a parameter		Value
The volume of housing, liter		24.0
Total weight, kg		36.0
Weight of the fire extinguishing powder ISTO-1, kg		22.0
Size, mm	diameter	245
	length	694
Protected surface , m ²	Class A	75
	Class B	58
Protected volume, m ³	Class A	250
	Class B	-
Activation current, A		0.2
Service life, years		10
Antiexplosion label		0ExialIBT3 X, RP Exial X

Device of the autonomous activation TPS – 01

Thermal fire-fighting sensor



Purpose:

Autonomous launch of up to 6 MPE modules in case of fire

Modifications:

Autonomous launch of up to 6 MPE modules in case of fire

1. TPS – 01-72
2. TPS – 01-93
3. TPS – 01-110
4. TPS – 01-M

Thermal fire-fighting sensor



Name		Value
Weight, g		≤ 200
Size	Diameter, mm	65,0
	Length, mm	85,0
Operational temperature range, °C		-60 ÷ +55
Temperature of automatic activation, °C		+72 ± 5
Impulse, generated by 1 Ohm resistance	Amplitude, V	3.5
	Amplitude, A	3.0
	Length, ms	1
Antiexplosion label		1ExibIIBT4
Service span without maintenance		10

Purpose: *TPS is unique autonomous Thermal activation and detection device that allows you to capture fire and activate powder, aerosol or gas fire suppression system. The apparatus also includes the possibility of sending a signal to the fire panel and a switch to electronic equipment or activating the alarm system.*

Made in Slovakia

TPS – 01-93

Thermal fire-fighting sensor



Name		Value
Weight, g		≤ 200
Size	Diameter, mm	65,0
	Length, mm	85,0
Operational temperature range, °C		-60 + +70
Temperature of automatic activation, °C		+93 ± 5
Impulse, generated by 1 Ohm resistance	Amplitude, V	3.5
	Amplitude, A	3.0
	Length, ms	1
Antiexplosion label		1ExibIIBT4
Service span without maintenance		10

Purpose: TPS is unique autonomous Thermal activation and detection device that allows you to capture fire and activate powder, aerosol or gas fire suppression system. The apparatus also includes the possibility of sending a signal to the fire panel and a switch to electronic equipment or activating the alarm system.

Made in Slovakia

TPS – 01-110

Thermal fire-fighting sensor



Name		Value
Weight, g		≤ 200
Size	Diameter, mm	65,0
	Length, mm	85,0
Operational temperature range, °C		-60 ÷ +100
Temperature of automatic activation, °C		+110 ± 5
Impulse, generated by 1 Ohm resistance	Amplitude, V	3.5
	Amplitude, A	3.0
	Length, ms	1
Antiexplosion label		1ExibIIBT4
Service span without maintenance		10

Purpose: TPS is unique autonomous Thermal activation and detection device that allows you to capture fire and activate powder, aerosol or gas fire suppression system. The apparatus also includes the possibility of sending a signal to the fire panel and a switch to electronic equipment or activating the alarm system.

Made in Slovakia

TPS – 01-110

Thermal fire-fighting sensor

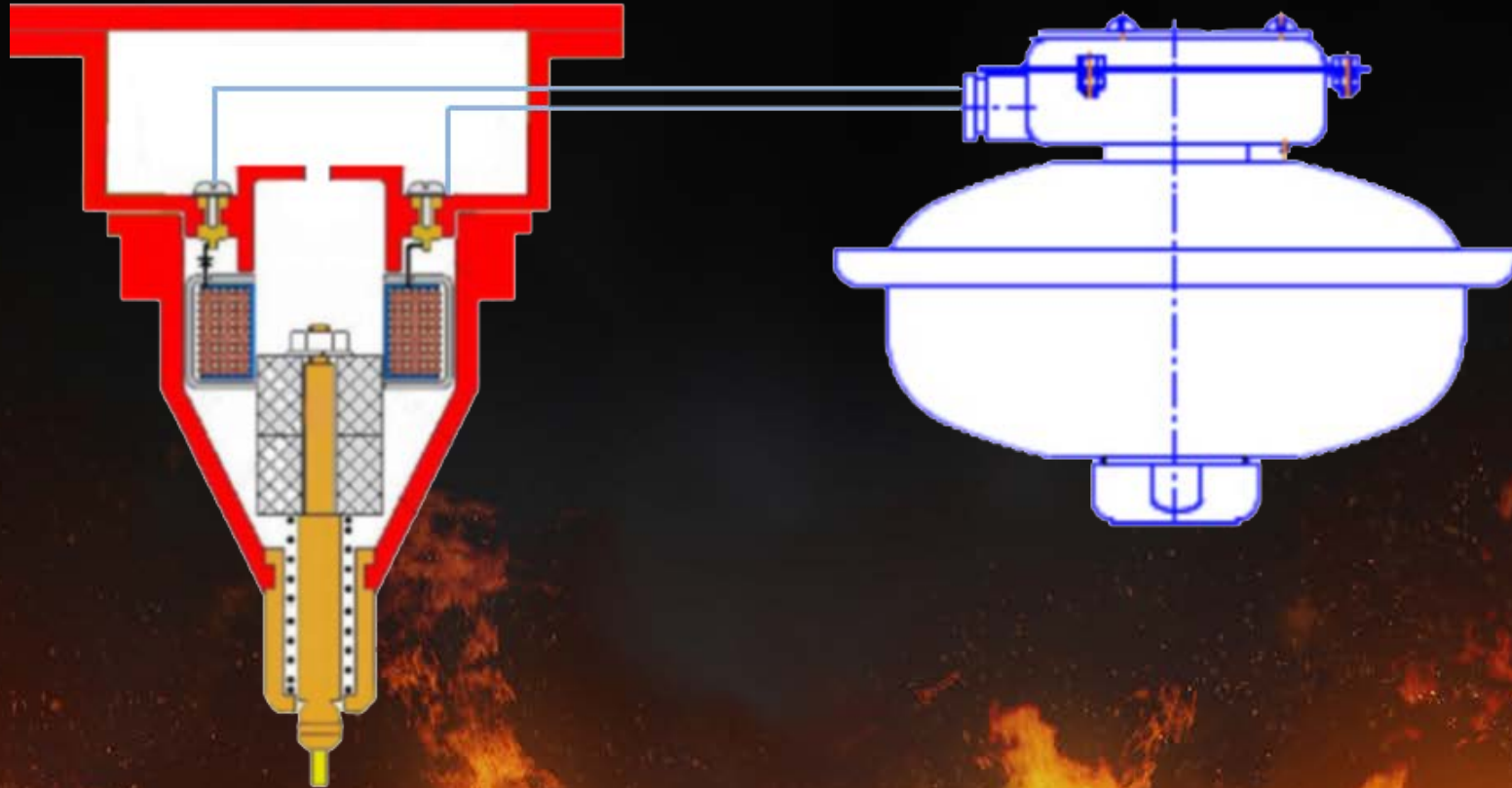


Name		Value
Weight, g		≤ 200
Size	Diameter, mm	65,0
	Length, mm	85,0
Operational temperature range, °C		-60 ÷ +100
Temperature of activation, °C		manual
Impulse, generated by 1 Ohm resistance	Amplitude, V	3.5
	Amplitude, A	3.0
	Length, ms	1
Antiexplosion label		1ExibIIBT4
Service span without maintenance		12

Purpose: TPS is unique autonomous Thermal activation and detection device that allows you to capture fire and activate powder, aerosol or gas fire suppression system. The apparatus also includes the possibility of sending a signal to the fire panel and a switch to electronic equipment or activating the alarm system.

Made in Slovakia

Device of the autonomous activation TPS – 01



Installation of TPS – 01

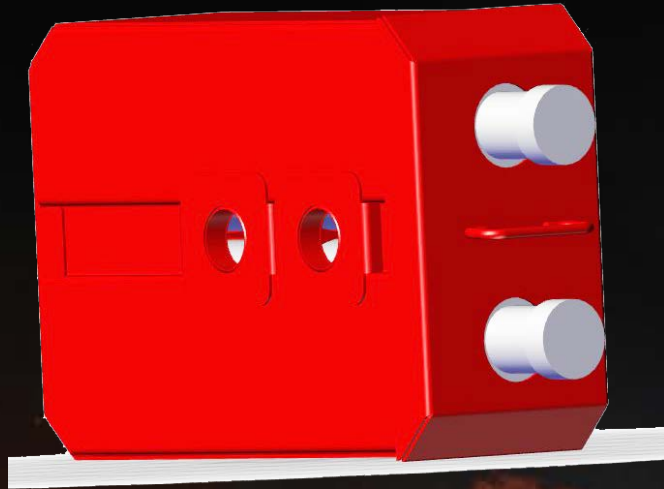


Installation:

Set in the protected area on the ceiling or wall in the vicinity of the MPE



Fire extinguishing cassette TPS-2.24



Usage:

Usage of the cassette as a part of the fire protection vehicle, visibly raises the abilities of the fire extinguishing squad and lowers the chance of burns and various dangers when extinguishing fires on the height. It also allows to easily block the hotbeds and protect the personell in the rooms where fire has already spread.

Cassette TPS-2.24 is built from two modules of powder fire extinguishing MPH MPH-24 and is a device of the multiple usage. It also does not require any technical maintenance for 12 years of service.

Name of the parameter	Value
Number of modules in a single system	12
Protected surface, m ²	150
Protected volume, m ³	500
Operational temperature range, °C:	-50 ÷ +50
Service span, years	12

Made in Slovakia

Mobile fire fighting system TPS-12.24



Name		Value
Weight (without carrier), kg		≤ 630
Size, mm	Height	1400,0
	Length	2000,0
	Width	1500,0
Protected surface, m ²	Class A	900
	Class B	700
Protected volume, m ³	Class A	6000
	Class B	-
Activation method		Manual
Operational temperature, °C		-50 ÷ +50
Span of service without maintenance, years		12

Made in Slovakia

Mobile fire-fighting system TPS-12.24



Made in Slovakia

Mobile fire-fighting system TPS-12.24



TPS-S

For the protection of military facilities



Technical characteristics TPS-S-02

Size, mm	650×350×350
Weight, kg	≤ 40
Activation temperature, °C	72 (93)
Weight of extinguishing powder, kg	12 (20)
The activation time MPH, s	7÷10
Shot time (time to shoot powder), s	1÷10
The protected area for fire of Class A, m ²	16
Protected volume for fire of Class B, m ³ :	32
Operating temperature range, °C	-50 ÷ +50.

The alarm siren with beacon



Technical characteristics SA-01

Size of the siren, mm	76 × 79 × 204
Size of the box, mm	245 × 190 × 100
Weight, kg	
Rated voltage, V	230.0
Power, W	6.0
Sound pressure, dB	92.0
Consumption of electricity, A	0.1
Color of a lamp	Orange
Type of acoustic signal	Klaxon
Degree of protection	(IP) IP43
Triggering device	TPS-01
Operating temperature range, ° C	-30 to +50

Made in Slovakia

CRH (Slovensko) a.s.

Antifire system SA 020206 2015

Antifire system SA 020206 2015



Made in Slovakia

MPH – 9



MPH – 6



MPH – 6



MPH – 9



MPH – 6



MPH – 6



MPH – 6



MPH – 24



MPH – 9





MPH – 6



MPH – 5M



MPH – 6



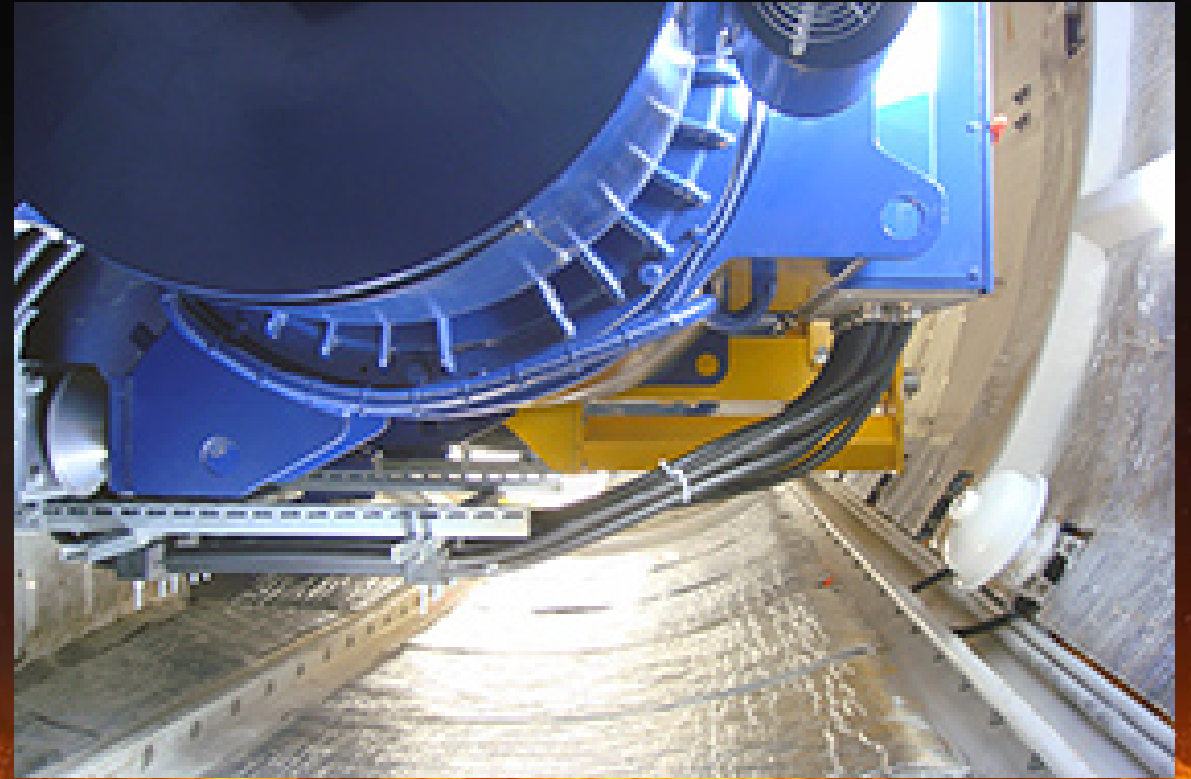
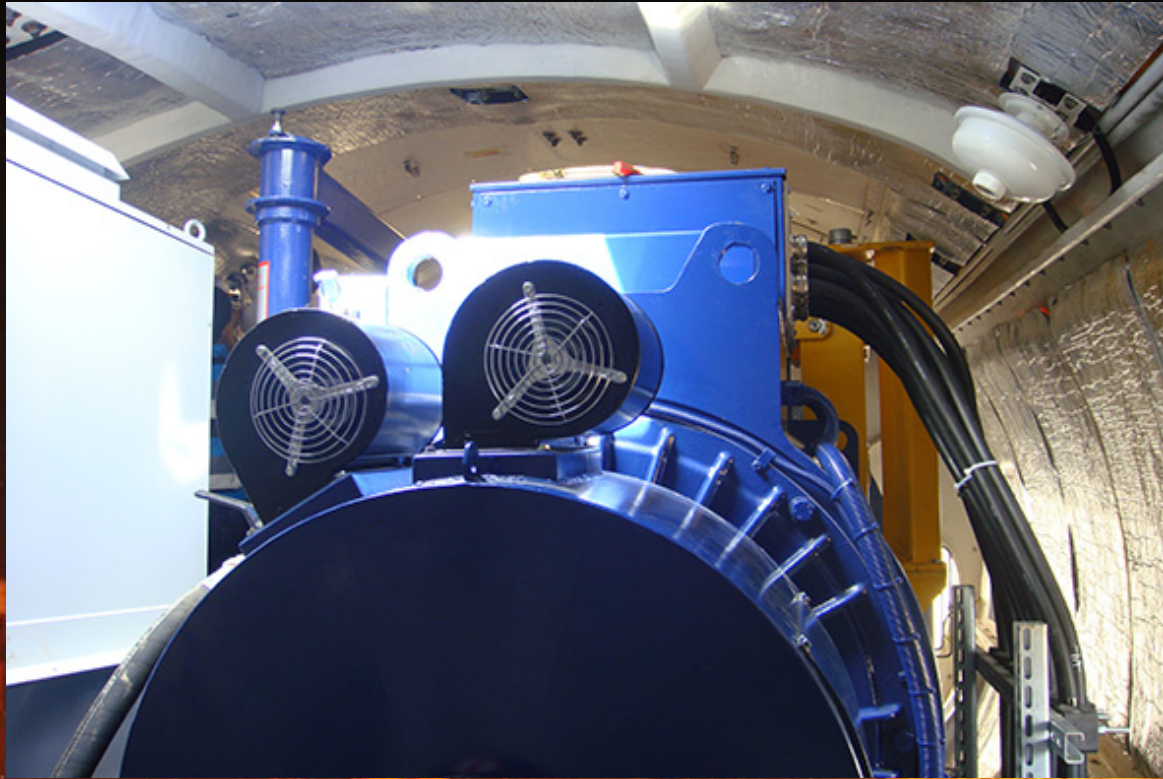
MPH – 10 st



MPH – 6



MPH – 4



MPH – 10 st





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