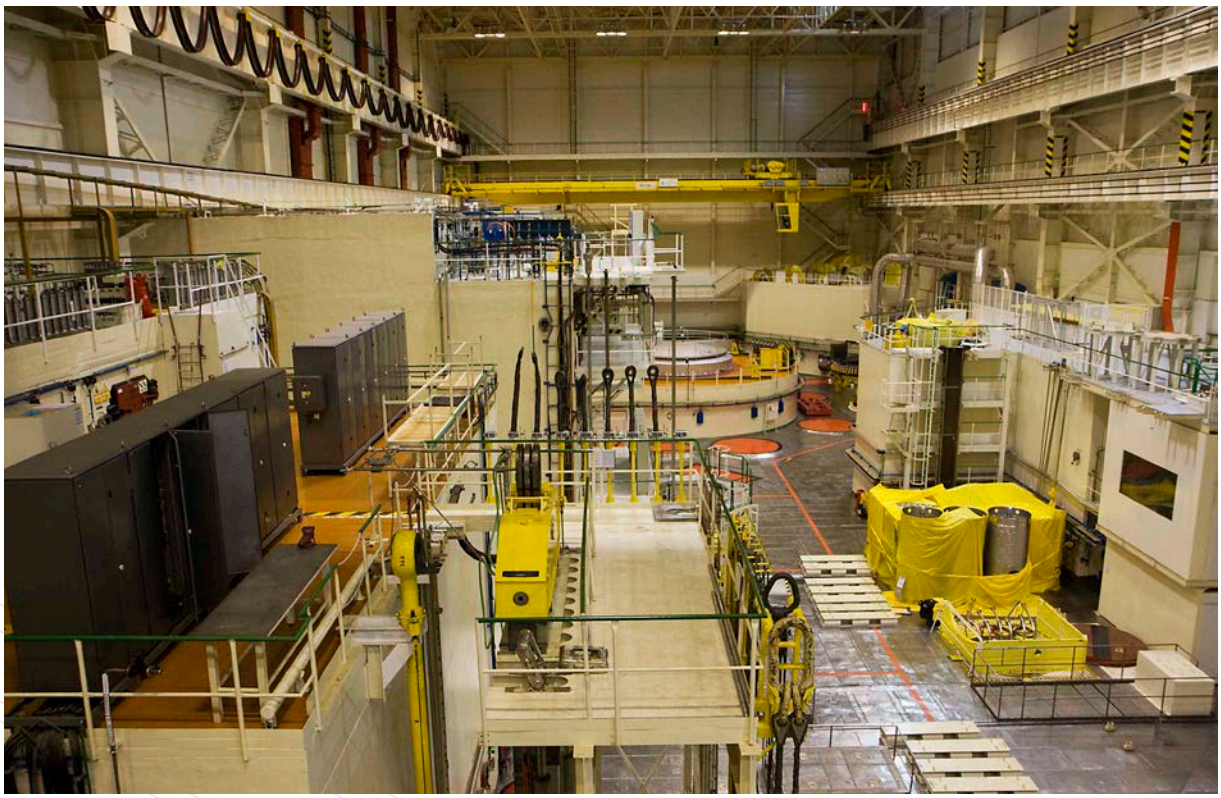
Kabelovna Kabex® products for nuclear energetics are specified for application in a hermetic zone of a nuclear power plant in all operating modes including course and decay of LOCA event – maximum project accident. The products can be used also in various environments with an occurrence of ionizing radiation such as appropriate areas of medicine.
Kabelovna Kabex is a unique manufacturer who can deliver the whole cable system comprising a cable, cable connectors and hermetic cable penetration from the primary to the secondary zone NPP. All parts manufactured in one factory ensuring perfect compatibility, which has a direct impact on the safety and reliability of operation.

SPECIAL CABLES AND CABLE ACCESSORIES FOR THE NUCLEAR POWER INDUSTRY

LOCA cables
Cable heat-shrinkable accessories
Correction sets for penetrations of the following types: PGKK, PGSK and Elox
Hermetic cable penetrations



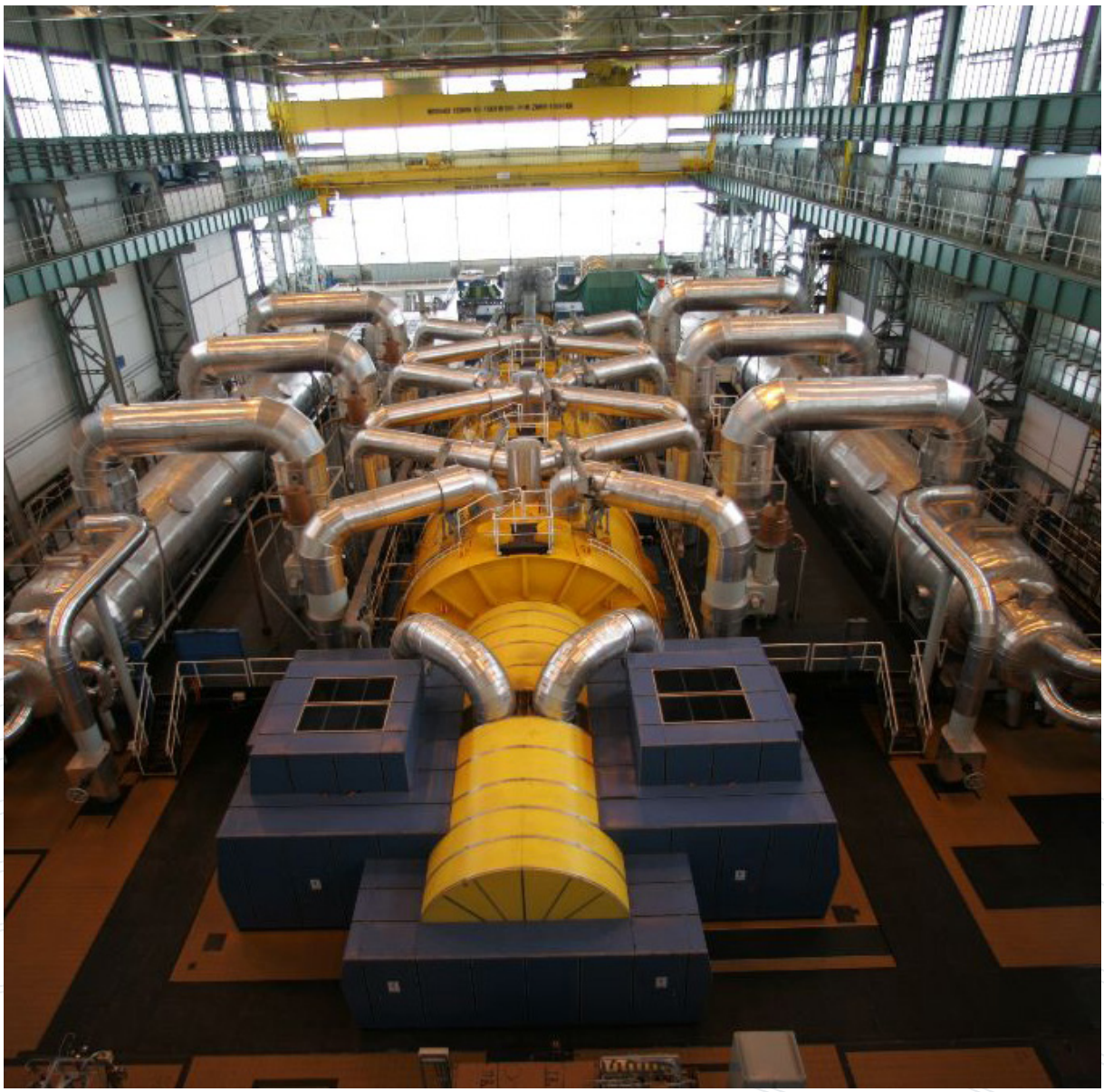
INDEX OF TERMS

HKP – Hermetic Cable Penetration
NHKP –Low-voltage HKP
VHKP – High-voltage HKP
KS – Cable accessories
LOCA – a supplementary marking for a cable, a KS or similar items, indicating that they are designated and eligible for installation in a hermetic zone of a nuclear plant in any operation mode, including the maximum project disaster (LOCA - Loss of coolant accident), and its aftermath post-LOCA
NPP – Nuclear Power Plant
HZ –Hermetic Zone
NHZ – Non-hermetic Zone
HKM – Hermetic Cable Module

ENVIROMENT PARAMETERS

ENVIRONMENT CONDITIONS

The products are qualified for conditions of the NP environment type of VVER. The products resist effects of temperatures, humidity, chemical substances, ionizing radiation, vibration and seismic influence.



THE PRODUCTS ARE QUALIFIED BY RESISTANCE TO ENVIRONMENT ACCORDING TO THE FOLLOWING STANDARDS:

- IEEE Std. 323-2003 Qualifying Class 1E Equipment for Nuclear Power Generating Stations
- IEEE Std. 383-2003 IEEE Standard for Type Test of Class 1E Electric Cables, Field Splices, and Connections for Nuclear Power Generating Stations
- IEEE Std. 317-1983 (IEC 773 (1983-01) – Electrical Penetration Assemblies in Containment Structures for Nuclear Power Generating Stations
- IEC 60780 – Nuclear power plants – Electrical equipment of the safety system - Qualification.
- IEC 61226 – Nuclear power plants - Instrumentation and control important to safety - Classification of instrumentation and control

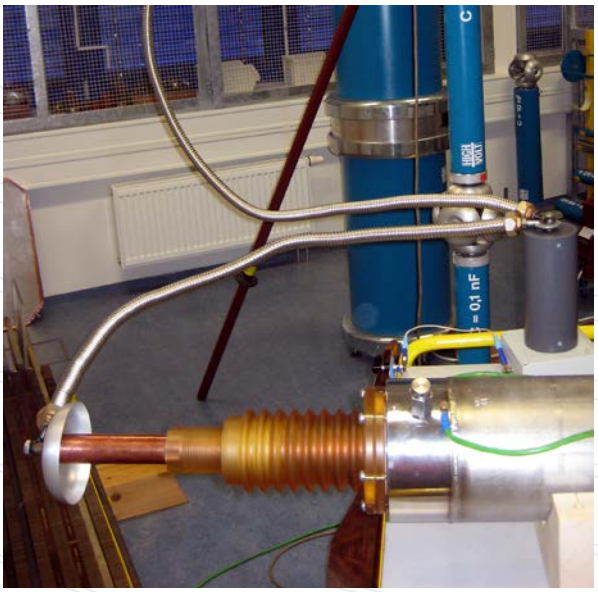
1)

Operation mode / monitored parameters	Normal operation mode	Emergency mode "minor leak"	Emergency mode "maximum accident" – LOCA
Temperature (°C)	≤ 60	≤ 90	≤ 158
Pressure [MPa]	≤ 0,103	≤ 0,120	≤ 0,560
Relative humidity [%]	≤ 90	≤ 95	≤ 100
Radiation intake [Gy/ hr.]	≤ 1	≤ 1	≤ 1000
Mode duration [hrs.]	---	≤ 5	≤ 10
Frequency for 50 years of NP operation	---	25 x	1 x

2) The products must also be resistance to an intensive H2O solution at a temperature of 90 °C in the following concentrations:
a) Boric acid (H3BO3) at concentration of 16 ± 0.5 g/l containing 0.30 ± 0.1 g/l of potassium hydroxide (KOH) and 25 ± 0.5 g/l. of hydrazine monohydrate (N2H4 . H2O)
b) Sodium hydroxide (NaOH) at concentration of 5% with 0.1% of potassium permanganate (KMnO4).
c) Oxalic acid dihydrate (H2C2O4 . 2H2O) at concentration of 1 to 3% with 0.1% concentration of nitric acid (HNO3).
Surface elements are to be washed using the following solutions:
1.7% H3BO3 + 3.3% KOH + 0.84% N2H4. H2O and a pure condensate at with temperature of 90°C.

3) The products are tested and resist earthquake intensity conditions equivalent to 9° MSK-64 for altitude level of +60 m.

4) They are resistant to oil-based products such as IRM 902 or IRM 903



LOCA CABLES

Within the LOCA nuclear power assortment, Kabex® a.s. manufactures power cables rated up to 1 KV, including shielded and armoured variants, paired light-current with compound shielding, coaxial cables, OPTEX® optic fibre cables, compensating and extending lines with thermo-electrical pairs according to the standards IEC 60584 and GOST. LOCA cables produced by Kabex® a.s. are made exclusively using halogen-free and smokeless materials. The cables feature increased resistance to fire spreading according to EN 60332-3-22 and fire resistance according to IEC 60331 for at least 180 min. They are halogen-free and when on fire, they produce smoke of low-density IEC 61034 -2 and low gas acidity according to IEC 60754-2.

LIGHT-CURRENT CABLES FOR VOLTAGES OF UP TO 500 V
Wire dimensions and count
Class 1 core diameter: from 0.3 to 1.78 mm
Class 2 and 5 stranded core cross-section: from 0.22 to 2.5 mm^2
Number of wires, pairs, triplets, quadruplets: 1–100

EXTENDING AND COMPENSATING CABLES
Types of thermo-electric pairs:
TX, TC, UX, UC, JX, LX, EX, KX, KCA, KCB, NX, NC, SCA, SCB, RCA, RCB, BC, AC,Chromel K-Kopel, Chromel KM-Kopel, Chromel T-Kopel, Chromel TM-Kopel, Chromel K-Alumel, Chromel KM-Alumel, Chromel T-Alumel, Chromel TM-Alumel
Wire dimensions and count
Class 1 core diameter: from 0.5 mm to 5 mm
Class 2 and 5 stranded core cross-section: from 0.22 to 16 mm^2
Number of pairs: 1–100

POWER CABLES – 0.6/1 KV
Wire dimensions and count
Wire cross-section: from 0.5 – to 300 mm^2
Wire count: 1–100
Optical cables
SM and MM fibres E9/125, G50/125, G62,5/125 and others
Fibre count 1–288

COAXIAL CABLES
- 50 and 75 Ohm, with special dielectric diameter

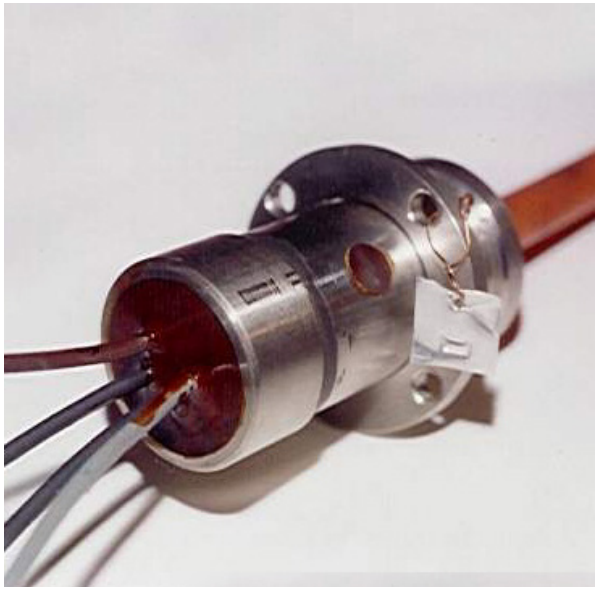
SPECIAL CABLES
These include cables that fall into some of the aforementioned groups with some modification such as an addition of various shielding elements, silver-coated conductors for applications such as very accurate measurement in nuclear power industry – the neutron fluence measurement for example.

CABLE ACCESSORIES

The cable accessories made by Kabex® are intended for connect, link, termination, seal and branch cables or hermetic cable modules with a nominal voltage of up to 8/12 kV on the cable route in order to maintain the cable homogeneity as much as possible. If the cable contains a concentric conductor, that conductor is full-value in a part of the cable junction. If the cable is armoured, the armour layer is also connected into a conductive joint at the junction point.

The cable accessories feature increased resistance to fire spreading according to EN 60332-3-22 and fire resistance according to IEC 60331 for 180 min. They are halogen-free and when on fire, they produce smoke of low-density IEC 61034 -2 and low gas acidity according to IEC 60754-2

The KS are tested for a long time water submersion according to HD 605 – 5.3.1. Throughout the full duration of the test, they exhibit full water and pressure resistance, with no change of electrical parameters whatsoever. The individual cable accessories may be placed in cable ducts arranged behind or next to each other without increasing the fire safety load. They are not provided by any additional fire-safety coating.



ADVANTAGES OF CABLE ACCESSORIES MADE BY Kabex® a.s.

- The cable accessories always meet the same specification as the cable route.
- The cable accessories design is in full ownership of Kabex® a. s.
- The construction of the accessories always meets all technical requirements applied for the cable.
- The junctions allow to connect any number of cables from both sides.

THE CABLE ACCESSORIES MADE BY KABEX® FORM THE FOLLOWING GROUPS:

- KS joints and their modifications

are sets that ensure connection of cables (and various frames) in a cable route as well as a cable concourse.

- KS terminations and their modifications

Ensure interconnection of a hermetic cable bushing with cables of the hermetic and non-hermetic zone

- KS units and their modifications

Are component sets used to repair hermetic cable bushings, including HKM and KS cable connections for both hermetic and non-hermetic zone

KS are addressed on the entire following spread 8–9.

KS sealing and their modifications

ensure hermetic sealing of the HKP hermetic cable bushing with no cables connected or a cable that is not connected to anything

- KZ cable endings and their modifications

Provide defined endings of cables and prevent axial humidity leaking into the cable

HKM – HERMETIC CABLE MODULE

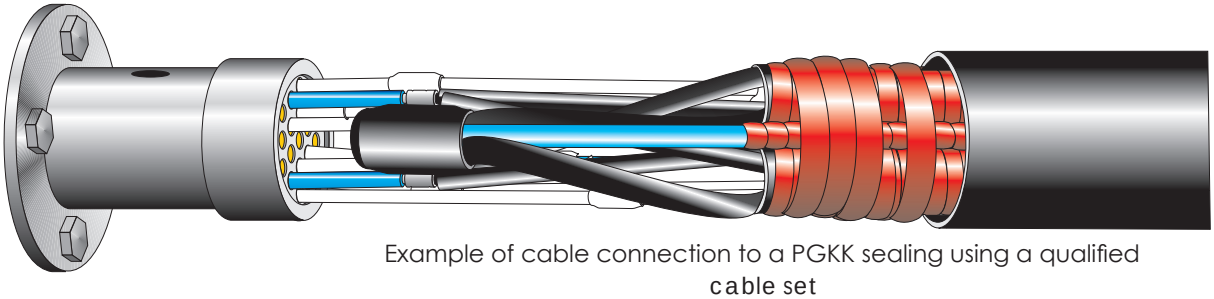
- Removable part, ordered and supplied separately
- Contains a sealed cable or conductor and is inserted into the penetration as a unit.

The sealing is double – for primary and secondary side. This sealing is referred to as HKPS (Hermetic Cable Bushing Sealing).

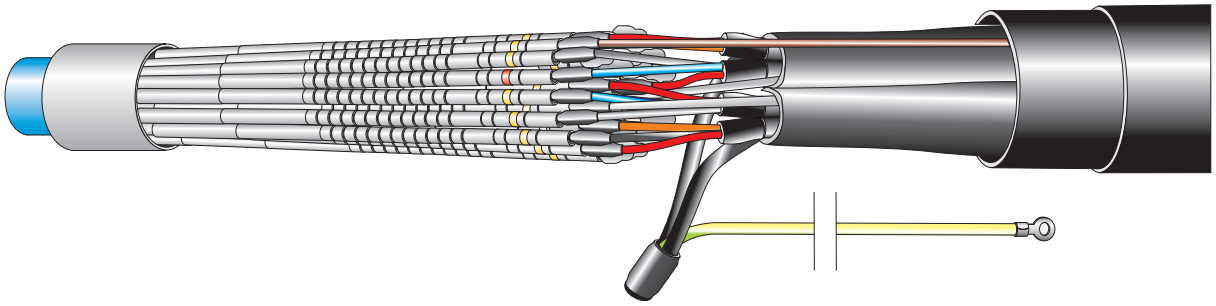
- For the PGKK bushing, each HKPS is separate and is connected by the sealed cable. The primary side is connected into the HKP body, followed by the creation of the HKPS on the other end of the cable at the secondary side of the bushing.

HKP REPAIR SETS FOR PGKK, PGSK AND ELOX

The KS units are mostly used for repairs and modernization of the existing hermetic cable penetrations in nuclear power plants. For the repair sets, Kabex® a. s. manufactures axially tight qualified cables that significantly support the hermetic properties of the entire passage. This solution is protected as a patent by Kabex® a.s.



Example of cable connection to a PGKK sealing using a qualified cable set



Example of cable connection to a ELOX fire-resistant plug using a qualified cable set

ADVANTAGES OF THE NEW HKP PGKK CABLE SEALING AND SIMILAR APPLICATIONS

- The sealant material is a fire-retardant, non-corrosive and smoke-free material; the sealing of PGKK HKP is defined – no leaks were detected during the qualification, the inner body contains the installation and tightness locks.
- All other materials, including cables, are fire-retardant, non-corrosive and smoke-free.
- Metal elements are made of austenitic steel.
- The seal is calked onto the penetration body through a silicone forming ring by a steel ring and torque bolts.

HERMETIC CABLE PENETRATIONS

Our HKPs are intended to provide a cable passage through the hermetic borderline of a nuclear power plant, designed to keep the hermetic properties of the containment, prevent radiation leaks and fulfill the role of a fire safety barrier – even in cases of project accidents. HKPs Kabex® are marked as HKP Kabex® 2002.

TRIPLE FIRE SAFETY (SPECIFIED FOR CLASS 1E ACCORDING TO IEEE323)

1. Construction sections of fire-safe areas (sections)
fire-safety resistance of the HKP is at least EI 90 minutes according to EN 1363 - 1

2. No fire spreading across the cables
The supplied cables are self-produced with guaranteed anti-fire-spreading variant, including the sets and connecting sets.

3. Maintaining the insulation integrity of the circuit according to IEC 60331
Fire safety is verified even at the level of separate cables or modules.

- HKP protection class – IP68
- HKP are built for a maximum overpressure of 0.56 MPa.

SUBDIVISION OF HKP

NHKP low-voltage hermetic cable bushing with 7 modules
NHKP -DI low-voltage hermetic cable bushing with 1 module – diagnostic
VHKP -1 high-voltage hermetic cable bushing with 1 conductor

MAIN ADVANTAGES OF HKP KABEX® 2002

Maintenance-free / unification of HKP

The Kabex® 2002 hermetic cable penetration is designed as a maintenance-free device. It is not necessary to maintain the operational overpressure inside the HKP during the operation. However, it might be useful as monitoring information.

The Kabex® solution is unified for both type VVER 440 and VVER 1000. This means the same training and procedures for both power plant types. During the qualification, the bushing was subjected to two LOCA profiles without interruption (with the 1st profile VVER 440 transitioning into the 2nd profile VVER 1000). HKP Kabex® are VVRR 1200 ready.

Modern Solution

The design of the Kabex® 2002 bushing is based on a 2000 design, guaranteeing modern solution and prevention of errors that occur for earlier models of hermetic cable penetrations.

Pressure Monitoring

Kabex® features two instances of pressure monitoring. The pressure can be monitored in a pressured device plus via a pressure gauge, with separate monitoring for the pressured area between the penetration body and the wall itself. This safety element is very important as it can determine the quality of welds at the protective tiling and provide a full-time

monitoring of an area that had been a "blind spot" up until this point. The HKP body's internal area does not have to be pressured during operation. It is up to the operator of the nuclear power block to determine whether the HKP overpressure is required. The pressure gauge system is intended for performing various inspection tests (inspections) an overpressure monitoring in case this type of operation is required by another regulation.

Cable Tightness

Kabex® provides their penetrations with axially tight qualified cables that support the hermetic properties of the entire passage. This solution is protected as a patent by Kabex®; verified and qualified by Nuclear Research Institute Rez.

Multi-assurance of Hermetic Properties

HKP Kabex® 2002 is designed as a two-side system of hermetic barriers with a middle area that is mostly used to monitor or inspect the hermetic properties. Each system is formed by three separate hermetic elements, separately providing hermetic properties in all project operation modes of the NP's production block, thus protecting the NP's hermetic zone from other areas via six hermetic elements.

Module Sealing

The sealing is performed along the full length, including the separation of the primary and secondary part as described by the standard.

Module storage

The individual modules can be demounted independently by simply loosening the nuts according to the immediate needs without having to demount other cable connections or the entire HKP. This approach does not require any kind of intervention into the wall, meaning the ordering party merely specifies which type (cable) of the seven is to be changes, followed by Kabex® delivering an entire module, sealed and prepared for immediate assembly without further sealing or unnecessary intervention into the wall (body) of the penetration. It only requires insertion, tightening via a torque wrench and connection to the existing cable lines via KSO. This significantly reduces the time required to replace the VHKP. The staff spend less time within the hermetic zone.

Level of Biological Protection

Based on the measurements from JE DUKOVANY (VVER 440) and JE TEMELÍN (VVER 1000). The Kabex® solution utilizes a material combination that is twice-sufficient for demands of any NP operation. It can also be extended for purposes states beyond the project. The entire shielding property is empowered by a design element – the sloped module positioning, providing protection against neutron "penetration".

Fire-safety Properties

The hermetic cable penetration modules comply with the requirements of insulation integrity for 180 min. when on fire according to IEC 60331 and fire spreading prevention according to IEC 60332-3-22. The penetrations provide tri-fold fire safety. Additionally, all components meet the requirements of low corrosiveness and smoke-generation levels according to EN 60754 – 2 and EN 61034-2.

Electrical Properties and Continuity of Transmission Parameters

The penetration is designed in order to preserve continuity in the homogeneity of transmission parameters across the entire cable route, even regarding EMC. The passing cable, contained transmission elements and the applied connection respect the separation of all grounding and shielding potentials according to the strictest design standards that do not involve removal of insulation for sealing; they provide equal levels of insulation for the bushings during any and all operation modes.

Cables of Different Systems Within One penetration

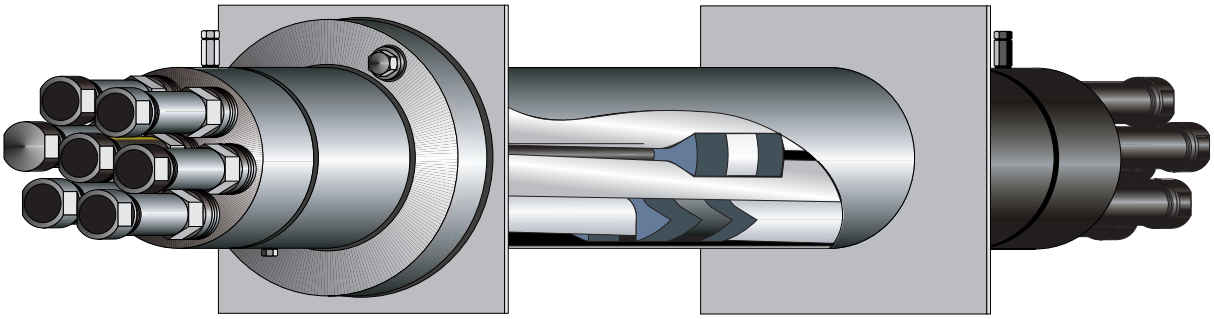
It is allowed to install cables for different systems into one bushing body. The circuit separation is provided by the frame where each module effectively becomes a separate bushing. The conductor in the bushing is a full-fledged cable, i.e. including all shielding layers. The module case, a stainless steel, provides another shielding barrier. The HKP can also be fitted into connection boxes.

NHKP - LOW VOLTAGE MODULE PENETRATION

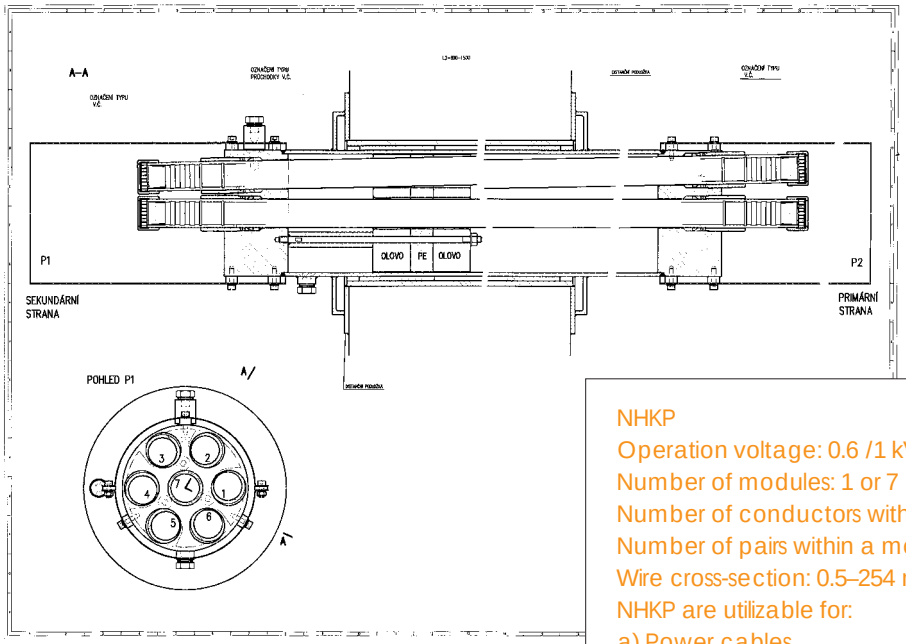
The penetration can be fitted with seven modules of different variants
Sub-group (module) type:

- KNC – the module is fitted with insulated Cu rods
- KNK – the module is fitted with insulated Cu wires
- KKK – the module is fitted with pass-through cables (inspection)
- KZM – blank module

NHKP are designed for wall thicknesses of 400–3500 mm
NHKP body diameter – 168 mm
NHKP-DI body diameter – 70 mm



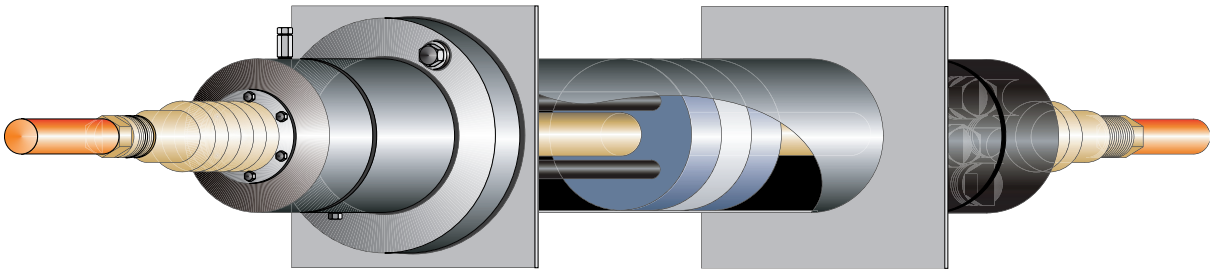
Penetrations with connected cables via KSO made by Kabex® a.s. are resistant to interference – EMC according to EN 61000-4-3 and EN 61000-4-6
Upon request from the ordering party, it is possible to deliver bushings of different body diameters – such as 25" or different (non-circular) bushing body profile (square, rectangular etc.)
Kabex® a. s. fits their bushings with axially tight qualified cables that significantly support the hermetic properties of the entire passage; this solution is protected by Kabex® a.s. as a patent.

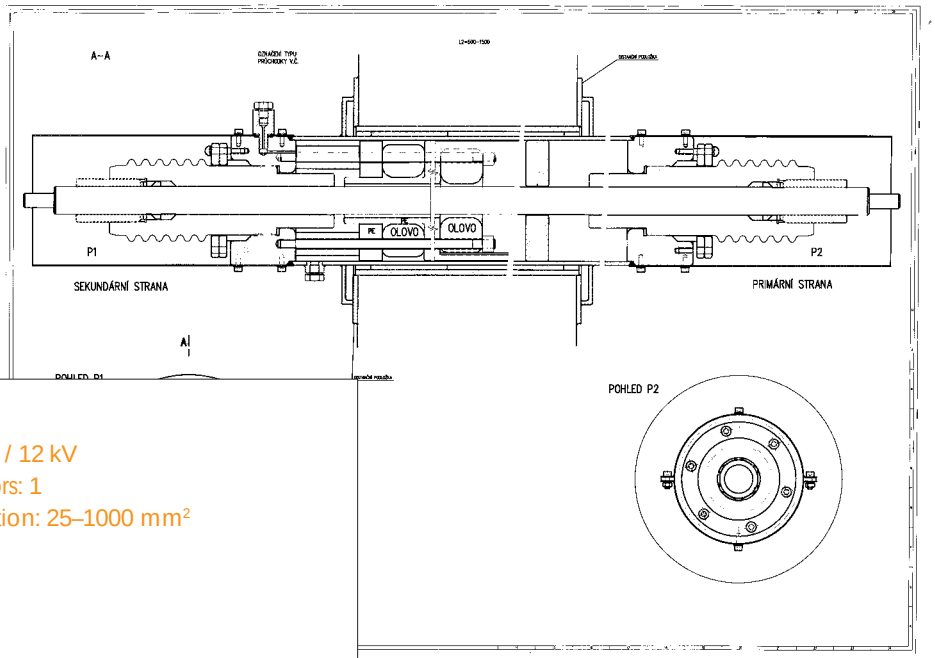


NHKP
Operation voltage: 0.6 /1 kV
Number of modules: 1 or 7
Number of conductors within a module: 1–55
Number of pairs within a module: 1–22
Wire cross-section: 0.5–254 mm"
NHKP are utilizable for:
a) Power cables
b) Monitoring and measurement cables
c) Paired cables
d) Coaxial cables
e) Extension lines to thermal elements

VHKP - HIGH VOLTAGE CABLE PENETRATION

VHKP are designed for wall thicknesses of 400–3500 mm
VHKP body diameter – 168 mm
Upon request from the ordering party, it is possible to deliver bushings of different body diameters – such as 25" or different (non-circular) bushing body profile (square, rectangular etc.)





VHKP
Operation voltage: 8 / 12 kV
Number of conductors: 1
Conductor cross-section: 25–1000 mm^2

KABEX 2010 HERMETIC CABLE PENETRATIONS

Manufactured by Kabex, a.s. the KABEX 2010 hermetic cable penetrations are intended for monitoring, data and power cables conducting direct or alternated current through concrete walls of a VVER nuclear plant equipped with a metal protective tiling. They are designed to maintain the hermetic properties of the containment, prevent radiation leaks, resist aggressive environment and act as a fire safety barrier in nuclear power plant conditions, even in case of emergency for the duration specified by the project.

THEY ARE MANUFACTURED IN TWO BASIC TYPES

- MNHKP (MNHKP-7/10/14/16) is used for connection of cables of up to 1kV employed for the control, communication and indication section
- VHKP (MVHKP-1) is used for passages of power lines for voltage levels of 10/12 kV used to power equipment such as main circulating pumps.

BASIC DESIGN DESCRIPTION OF HKP KABEX 2010

The penetrations are made of austenic steel and installed into pipes placed in the containment wall. They are welded from the inside and outside to the protective tiling via collets.

The penetration body is fitted with faces used as passages for the individual exchange modules. The module is fixed in the faces via sealing assembly group and a nut. The inside of the penetration contains biological protection that prevents radiation leaks. The penetration body is welded via collets to the tiling at the inner (primary) and outer (secondary) side of the containment.

There is a pressure gauge opening on the outside of the pipe body at the side of NHZ. The pressure gauge set allows to pressurize the interior of the bushing body and monitor hermetic properties of the entire bushing at the same time. The same opening is located on a collet at the NHZ side to control the quality of assembly welds and hermetic properties between the tiling.

The modules consist of an austenitic steel pipe. The modules are fitted with electro-conductive rods, insulated wires or cables, depending on the module type. Their axial tightness is ensured. If the module is fitted with a cable, all of the cable's electrical properties remain the same. The KZM modules (blank sealing modules – for unused bushing positions) ensure full hermeticity and are equipped with a biological protection system.

The module (HKM) is positioned within the penetration body as a replaceable piece. The basis of the module consists of a 38 mm pipe, hermetically sealed within the faces of the bushing via sealing block.

HKM are equipped with cables or wires, depending on the type:

KNC – the module is fitted with insulated Cu rods
KNK – the module is fitted with insulated Cu wires
KKK – the module is fitted with pass-through cables
KZM – blank module

ADVANTAGES OF THE KABEX 2010 HERMETIC CABLE PENETRATIONS

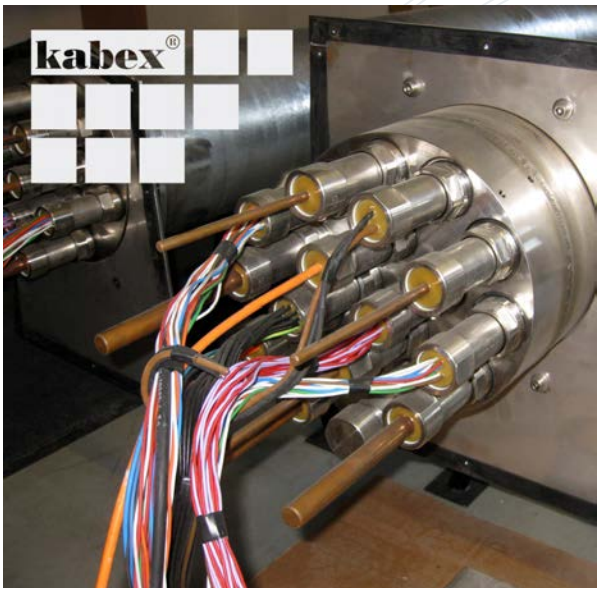
HKP Kabex 2010 is designed as a maintenance-free device. It is not necessary to maintain the operational overpressure inside the HCB during the operation. However, it might be useful as monitoring information.

HKP can be manufactured for any wall thickness, starting at. For standard variants housing 1, 7, 10 and 14 modules, it is potential possible to manufacture according to a task specification.

Thanks to the KABEX 2010 design solution, it is allowed to install cables for different systems into one bushing body. The circuit separation is provided by the frame, where each module effectively becomes a separate bushing. The conductor in the bushing is a full-fledged cable, i.e. including all shielding layers. The module case, a stainless steel, provides another shielding barrier. It is possible to use modules with various voltage levels in the HKP-body – there are no limitations.

Kabex 2010 uses axially tight qualified conductors that meet requirements of all NP operation modes. There are safety locks created within the modules using qualified polysuflone-based materials to prevent the insulation properties of the bushing from dropping.

The penetration is designed in order to preserve continuity in the homogeneity of transmission parameters across the entire cable route, even regarding EMC. The passing conductors and the connection respect separation of all grounding and shielding potentials. This design ensures unchanged insulation properties of the bushings for all operation modes.



PACKAGING AND EXPEDITION

By default, the hermetic cable penetrations are delivered from Kabex® in typified plywood crates, providing maximum protection for the product during both transportation and the subsequent storage.
HKP can be filled with nitrogen or an inert gas for the duration of transportation and/or storage.

SELECTED REFERENCES FROM VARIOUS NPS

JE Dukovany (CZ)
- KABEX 2002 hermetic cable penetrations
- KS-R/LOCA repair accessories for PGKK
- Full cable production assortment

JE Temelín (CZ)
- LOCA cables
- LOCA cable accessories
- Full cable production assortment

JE Jaslovské Bohunice (SK)
- KS-R/LOCA ELOX connection – repair sets for ELOX
- KS-R/LOCA repair sets for PGKK
- Full cable production assortment

JE Mochovce (SK)
- KABEX 2002 hermetic cable penetrations
- KS-R/LOCA ELOX connection – repair sets for ELOX
- KS-R/LOCA repair sets for PGKK
- Full cable production assortment

JE Rovno (UA)
- KS-R/LOCA repair sets for PGKK

JE Chmelnická (UA)
- LOCA cables

JE Záporožská (UA)
- LOCA cables

JE Jižně Ukrajinská (UA)
- LOCA cables

JE Belene (BG)
- LOCA cables

JE Kudan Kulam (India)
- LOCA cables

JE Novovoroněžská - 2 (RU)
- KABEX 2010 hermetic cable penetrations

CERTIFICATES

ČEZ, a. s.
DIVIZE VÝROBA
ŘÍZENÍ DODAVATELSKÉHO SYSTÉMU

OPRÁVNĚNÍ ORGANIZACE

Kabelovna Kabex a.s.
Politických vězňů 84
345 62 HOLÝŠOV
IČO 25208721

tímto potvrzujeme, že výše uvedená společnost splňuje požadavky specifikované zákazníkem a požadavky vyhlášky 132/2008 Sb. a je kvalifikovaným dodavatelem s oprávněním:

k vývoji, výrobě a dodávkám silových bezhalogenních a ohniodolných kabelů, sdělovacích bezhalogenních a ohniodolných kabelů, koaxiálních kabelů a vodičů, sdělovacích kabelů LOCA, silových kabelů LOCA včetně hermetických průchodek a spojek v souladu se schválenými technickými podmínkami pro ČEZ a. s.
Oprávnění ČEZ, a. s. je vystaveno s platností do 31. května, 2017.

Ověření shody bylo provedeno na základě společného auditu ČEZ, a. s. a OT Energy Services a.s. č. 38/2014/CEZ/S provedeného dne 15. května, 2014.
Oprávnění je vystaveno s tím, že dodavatel se zavazuje průběžně oznamovat všechny podstatné změny s vlivem na jadernou bezpečnost, kvalitu dodávek a poskytovaných služeb.

Praha dne: 27. června, 2014

Ondřej Povalač
ředitel útvaru
řízení dodavatelského systému

ČEZ, a. s., Duhová 2/1444, 140 53 Praha 4, IČ 45274649, DIČ 45274649, www.cez.cz

OT ENERGY SERVICES

OT Energy Services a.s.

PROHLÁŠENÍ

č. 14.03

KABELOVNA KABEX a.s.
Politických vězňů 84
345 62 Holýšov

Firma OT Energy Services a.s. potvrzuje, že ověřila

SYSTÉM MANAGEMENTU KVALITY DODAVATELE

dle požadavků stanovených OT Energy Services a.s. a ČEZ, a.s. (38/2014/CEZ/S) na základě norem ISO 9001:2008 a vyhlášky SÚJB č. 132/2008 Sb. – dohled nad dodavatelem ve smyslu § 7, odst. (3), písmeno b).

Dodavatel je odborně způsobilý k vývoji, výrobě a dodávkám silových bezhalogenních a ohniodolných kabelů, sdělovacích bezhalogenních a ohniodolných kabelů, koaxiálních kabelů a vodičů, sdělovacích kabelů LOCA, silových kabelů LOCA včetně hermetických průchodek a spojek v souladu se schválenými technickými podmínkami.

Platnost do 31.5.2017

Třebíč 26.6.2014

Ing. Miluše Málková
Hlavní auditor OT Energy Services a.s.

OT Energy Services a.s., Pražská 684/49, 674 01 Třebíč
tel.: +420 568 893 111, fax: +420 568 893 999, e-mail: obchod@otenergy.eu
ID 49433431, TAXID CZ49433431, www.otenergy.eu
Zapsána v obchodním rejstříku vedeném Krajským soudem v Brně, oddíl B, vložka 4153.

ŠKODA JS a.s.

ŠKODA JS a.s.
Orlík 266
316 00 Plzeň

tímto potvrzuje, že níže uvedená společnost

KABELOVNA KABEX a.s.
Politických vězňů 84, 345 62 Holýšov

je kvalifikovaným dodavatelem pro:

dodávky kabelů, kabelových svazků a kabelových průchodek
pro zakázky jaderného a nejaderného typu
dle požadavků ŠKODA JS a.s.
s platností na 3 roky.

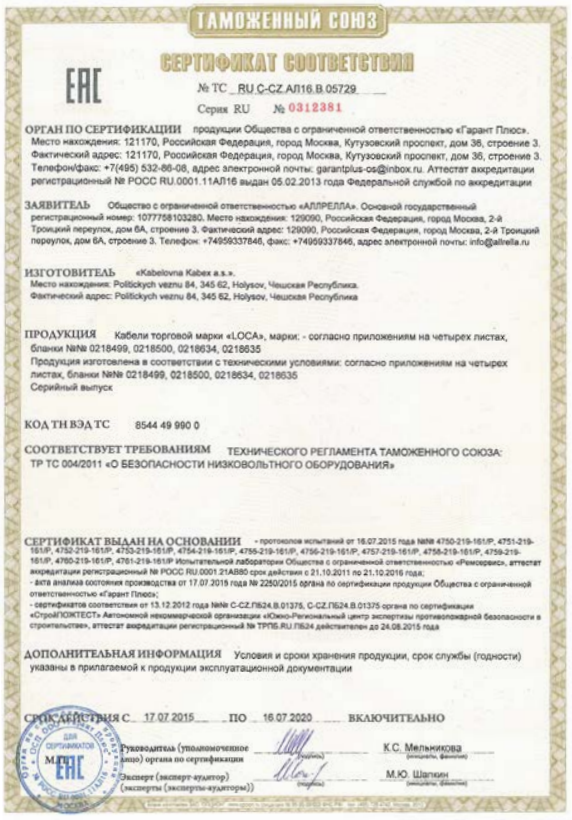
Kvalifikace je udělena na základě prověření auditem dne 28. 5. a 1. 7. 2015.
Kvalifikace je platná do 27. května 2018.

Udělená kvalifikace vstupuje v platnost dnem provedení vyhovujícího auditu, avšak v případě nevyhovujících zjištění může být kdykoliv omezena nebo i odebrána.

15.6.2015
Datum vystavení

Ředitel úseku Management jakosti

Registrační číslo: 21/CER/15



ТАМОЖЕННЫЙ СОЮЗ

СЕРТИФИКАТ СООТВЕТСТВИЯ

№ ТС RU C-CZ.АЛ16.В.05729
Серия RU № 0312381

ОРГАН ПО СЕРТИФИКАЦИИ продукции Общества с ограниченной ответственностью «Гарант Плюс». Место нахождения: 121170, Российская Федерация, город Москва, Кутузовский проспект, дом 36, строение 3. Фактический адрес: 121170, Российская Федерация, город Москва, Кутузовский проспект, дом 36, строение 3. Телефон/факс: +7(495) 532-86-08, адрес электронной почты: garantplus-os@inbox.ru. Аттестат аккредитации регистрационный № РОСС RU.0001.11АЛ16 выдан 05.02.2013 года Федеральной службой по аккредитации

ЗАЯВИТЕЛЬ Общество с ограниченной ответственностью «АЛЛРЕЛЛА». Основной государственный регистрационный номер: 1077758103280. Место нахождения: 129090, Российская Федерация, город Москва, 2-й Троицкий переулок, дом 8А, строение 3. Фактический адрес: 129090, Российская Федерация, город Москва, 2-й Троицкий переулок, дом 8А, строение 3. Телефон: +74959337846, факс: +74959337846, адрес электронной почты: info@allrella.ru

ИЗГОТОВИТЕЛЬ «Kabelovna Kabex a.s.». Место нахождения: Politických vezňu 84, 345 62, Holysov, Чешская Республика. Фактический адрес: Politických vezňu 84, 345 62, Holysov, Чешская Республика

ПРОДУКЦИЯ Кабели торговой марки «LOCA», марки: - согласно приложениям на четырех листах, бланки №№ 0218499, 0218500, 0218634, 0218635
Продукция изготовлена в соответствии с техническими условиями: согласно приложениям на четырех листах, бланки №№ 0218499, 0218500, 0218634, 0218635
Серийный выпуск

КОД ТН ВЭД ТС 8544 49 990 0

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ ТЕХНИЧЕСКОГО РЕГЛАМЕНТА ТАМОЖЕННОГО СОЮЗА: ТР ТС 004/2011 «О БЕЗОПАСНОСТИ НИЗКОВОЛЬТНОГО ОБОРУДОВАНИЯ»

СЕРТИФИКАТ ВЫДАН НА ОСНОВАНИИ - протоколов испытаний от 16.07.2015 года №№ 4750-219-161/P, 4751-219-161/P, 4752-219-161/P, 4753-219-161/P, 4754-219-161/P, 4755-219-161/P, 4756-219-161/P, 4757-219-161/P, 4758-219-161/P, 4759-219-161/P, 4760-219-161/P, 4761-219-161/P Испытательной лаборатории Общества с ограниченной ответственностью «Ремсервис», аттестат аккредитации регистрационный № РОСС RU.0001.21АВ80 срок действия с 21.10.2011 по 21.10.2016 года;
- акта анализа состояния производства от 17.07.2015 года № 2250/2015 органа по сертификации продукции Общества с ограниченной ответственностью «Гарант Плюс»;
- сертификатов соответствия от 13.12.2012 года №№ C-CZ.ПБ24.В.01375, C-CZ.ПБ24.В.01375 органа по сертификации «СтройПОЖТЕСТ» Автономной некоммерческой организации «Южно-Региональный центр экспертизы противопожарной безопасности в строительстве», аттестат аккредитации регистрационный № ТРПБ.RU.ПБ24 действителен до 24.08.2015 года

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ Условия и сроки хранения продукции, срок службы (годности) указаны в прилагаемой к продукции эксплуатационной документации

СРОК ДЕЙСТВИЯ С 17.07.2015 ПО 16.07.2020 ВКЛЮЧИТЕЛЬНО

М.П. Руководитель (уполномоченное лицо) органа по сертификации К.С. Мельникова
Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы)) М.Ю. Шапкин

ZERTIFIKAT ■ CERTIFICATE ■ 認證證書 ■ СЕРТИФИКАТ ■ CERTIFICADO ■ CERTIFICAT

Management Service

CERTIFICATE

The Certification Body
of TÜV SÜD Management Service GmbH

certifies that

KABELOVNA KABEX a.s.
Politických vězňů 84
345 62 Holýšov
Czech Republic

has established and applies
a Quality Management System for

Development, production and sale of power, communication, coaxial, data and optical cables and conductors, halogen-free and fire-proof cables including hermetic cable bushings and connections. Development, production of cable compounds.

An audit was performed, Report No. **70012793**.

Proof has been furnished that the requirements
according to

ISO 9001:2008

are fulfilled.

The certificate is valid from **2015-08-13** until **2018-08-01**.

Certificate Registration No.: **12 100 8383 TMS**.

Product Compliance Management
Munich, 2015-08-13

IAF

DAkkS Deutsche Akkreditierungsstelle D-ZM-14143-01-03

MS/01-07/2014

CONTACTS

Kabelovna Kabex®
Politických vězňů 84
345 62 Holýšov
Czech Republic

SECRETARY

tel.:	+420 377 010 520
fax:	+420 379 491 154
mobile:	+420 775 851 262
business dpt.:	+ 420 377 040 524 - 5
export dpt.:	+ 420 377 010 526
purchasing dpt.:	+ 420 377 010 535
financial dpt.:	+ 420 377 010 521

kabex@kabex.cz
www.kabex.cz