

KRASO[®]

SIMPLE + TIGHT



Sealing Inserts



Utility Connection -
Outlets



Pump Sumps



Cable Penetrations



Solutions for Fresh
Concrete Composite
Films (FBV)



Utility Connection -
Entries



Heat Pumps



Special Designs



KRASOflex[®]
Joint Tapes



Pipe Penetrations

KRASO[®] Catalogue 2025

WATER PRESSURE TIGHT INSTALLATION PARTS FOR CONCRETE ENGINEERING
SEALING SOLUTIONS FOR CABLES + PIPES

Dear customers, dear dealers!

Sustainability is the benchmark for all products and processes, also in the construction industry. Climate and resource-friendly construction starts in the construction supply industry. At **KRASO®**, we meet this challenge with innovative solutions. With the 'star tube of the future', we have succeeded in reducing the consumption of resources for desired crack elements by up to 35 %, while at the same time making them even safer. The **KRASO® Star Tube (p. 142)** does not require any inner tube at all! This saves material and prevents unintentional cavities in the waterproof construction. The **KRASO® Star Tube** has a general building authority test certificate (abP, water pressure up to 2 bar) and has even been successfully tested by the materials testing institute up to 5 bar.

In the field of utility connections, we have made our **Builder's Convenience Box - floor** - even more convenient: the new **Builder's Convenience Box - floor - SETI (p. 46)** now contains the entire installation kit pre-assembled and safely stored throughout the entire construction process. This eliminates the need for a cross-trade handover!

Energy supply is the keyword of our time – also with regard to heating. We take account of the diversification of heating types with further products: with our **KRASO® Utility Connection WP-DUO** (heat pump connection universal above ground, **p. 64**), heat pump lines can be easily installed into the house with two core drillings of only 100 mm diameter, even in existing buildings. Local and district heating also play a major role in the new energy mix: the new **KRASO® Sealing Insert Type VD/FW** with especially soft sealing rubber (shore hardness 40 A) has been developed for district heating pipes (**p. 24**).

Renovating existing (residential) buildings also requires new utility connections for water, electricity or telecommunications. With the **KRASO® Inject series** (from **p. 34**), we now offer three solutions for almost all common wall types, so that cables can be easily and tightly installed into or out of the building using injection technology.

Furthermore, we have expanded our manufacturing expertise and know-how in the field of joint sealing and are pleased to be able to offer you construction and expansion joint tapes that now comply with our factory standard and come with a general building authority test certificate (abP), in accordance with DIN 18541 and DIN 18541 BV (bitumen compatible) (**from p. 152**). We have also expanded our range of mineral-coated cement composite plates for joint sealing with joint plates (**from p. 145**). We not only offer you solutions for a reliable waterproof construction method, but also support you in your waterproof planning from the very beginning. Just contact us! We are your partner for sealing technology systems, everything from a single source.

Finally, we would like to point out that we are now ISO 9001 certified! This internationally recognised quality seal from TÜV Austria confirms that our maximum quality standards for the highest customer satisfaction, which we achieve by constantly optimising our processes and quality management, have been met.



Jürgen Krasemann sen.
Managing Partner



Jürgen Krasemann
Managing Partner



Dennis Krasemann
Managing Partner



Christoph Bölting
General Manager



KRASO® Catalogue 2025

Product innovations



KRASO®
Sealing Insert
Type VD/FW

Effective
sealing for district heating
connections
p. 24



KRASO®
Inject FE

The true diameter
inject casing for
existing buildings
p. 34



KRASO®
Fibre Cement
Casing

Water pressure
tight wall penetration
with homogenous
connection to the concrete
p. 101



KRASO®
Wall Collar

Fast, simple
and tight
p. 91

KRASO® WP-DUO

Above-ground
heat pump connection
p. 64



The star tube of the future:
tight, stable, sustainable!
WITHOUT INNER TUBE!
p. 142

KRASOflex® Star Tube



KRASO® Builder's Convenience Box - floor - SET

Multi utility
connection with
integrated installation kit
p. 46

KRASO® Builder's Convenience Box floor - garden - SET

For more
convenience in
the garden
p. 68



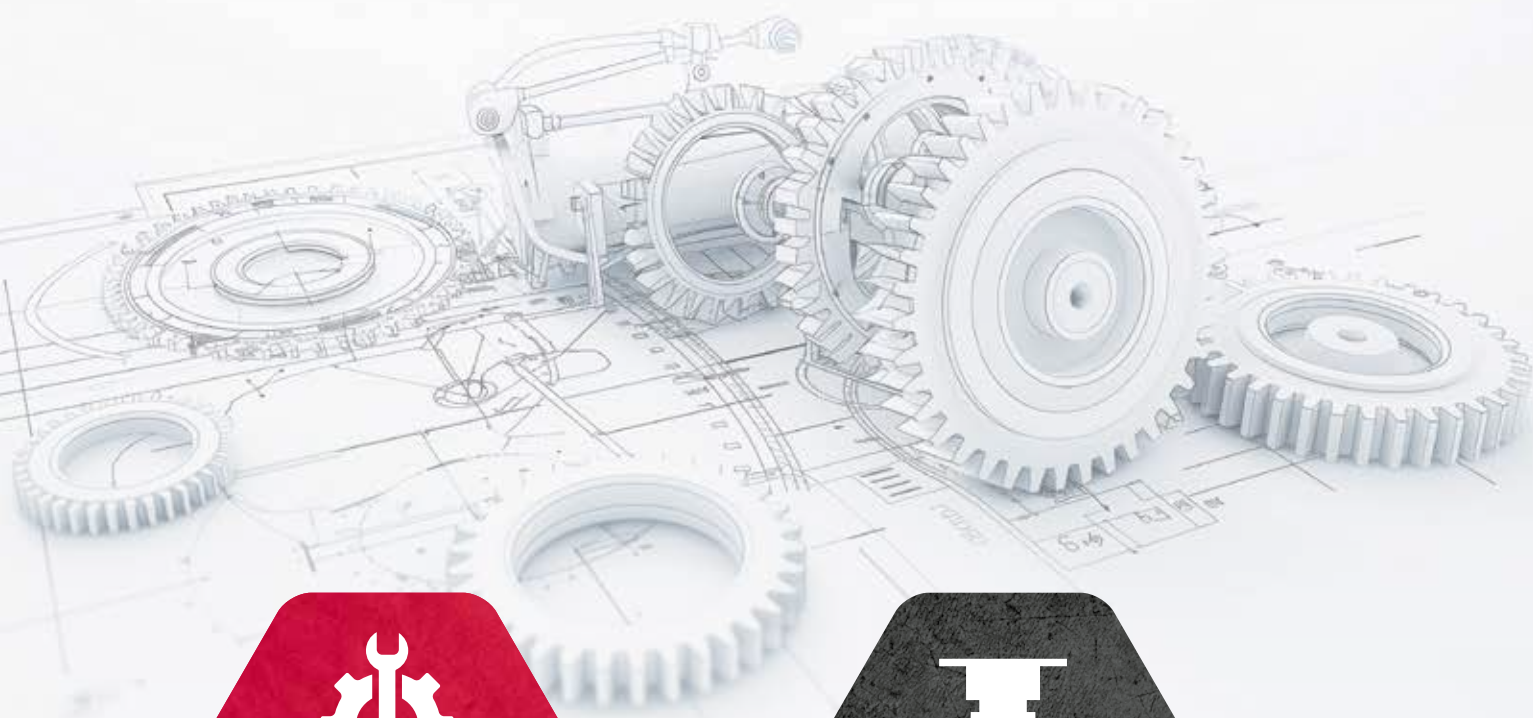
KRASO®

SIMPLE + TIGHT

KRASO® Expertise and OEM

Our piece of the puzzle for your perfect product

With over 40 years of technical know-how and comprehensive manufacturing expertise in steel, concrete and plastic, we develop customised solutions for our customers in industry and the construction sector. Whether customised components or **KRASO® Products** configured according to customer requirements - we offer solutions for the small details as well as for the big picture!



Product development



CNC technology



Laser cutting



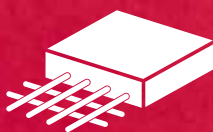
Water jet
cutting



Injection moulding



Extrusion



Reinforced concrete



Stainless steel



Special Designs

Table of contents



Sealing Inserts

Universal DD p. 17 + Type ED + DD + VD p. 19 + Type SD p. 20 + Universal Multiple - split - p. 21 + Type GR p. 22 + Type IN-GR® p. 23 + Type VD/FW p. 24 + Type TD-X p. 26 + Foil Clamping Flange Type FKF p. 28 + Plastic Flange Plate Type KFP - split - p. 31 + Casing Inject FE p. 34 + Empty Pipe Inject LR p. 35 + Wall Penetration Inject FR p. 36 + Multi-Flange Plate Type MFP p. 38 + Fixed-Loose Flange Type FL from p. 39



Utility Connection - Entries

Builder's Convenience Box - floor - SET p. 46 + - floor - 110 p. 50 + - floor - 150 p. 52 + - floor - NFE p. 54 + Builder's Convenience Boxes - wall p. 57 + - wall - NFE p. 59 + - wall - ESH p. 61 + - wall - SWP p. 63 + Heat Pump Connection WP-DUO p. 64 + BKP Sealing Inserts p. 65 + BKP Gas Installation Sets p. 66 + Flexible Empty Pipe System FLS 90 p. 66



Utility Connection - Outlets

Builder's Convenience Box - floor - garden - SET p. 68 +
Builder's Convenience Box - wall - garden p. 71



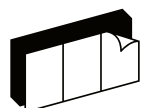
Cable Penetrations

Cable Penetration KDS (double) wall penetration p. 74 + Cable Inlet Box System KDS 150 p. 79 + Flexible Empty Pipe System FLS p. 80 + KDS Accessories p. 81 + Swan Neck p. 84 + Sealing Insert Universal Multiple - split - p. 86



Pipe Penetrations

Floor Penetration Type BDF p. 88 + Universal Funnel p. 90 + Wall Collar p. 91 + Wall Collar Lightning Protection Duo p. 93 + Wall Penetration Type B p. 94 + Type FR p. 96 + Type Universal p. 97 + Type B/SF 5 p. 98 + Type DFW p. 99 + Casings Type FE p. 100 + Fibre Cement Casing p. 101 + Tie Points p. 106 + Drains from p. 107 + Flange Pipes p. 116



Solutions for Fresh Concrete Composite Films (FBV)

Floor Penetration Type FBV-BDF p. 120 + Wall Penetration Type FBV-FR p. 121 + Casing Type FBV-FE p. 122 + Cable Penetration FBV-KDS p. 123 + Sealing Insert Type FBV/GF p. 124 + FBV solutions made of concrete p. 124



Pump Sumps

Pump Sump - concrete - p. 126 + Pump Sump Type Q p. 127 + Covers p. 128 + Inspection Shaft - concrete - p. 131 + Backwater Shaft Type Q - sewage - p. 131 + Pump Sump Type Q - sewage - p. 133 + Pump Sump Poly 400 from p. 134 + Accessories p. 138



KRASOflex® Joint Tapes

KRASOflex® 155 p. 140 + Duo-Fix 150 "plus" p. 141 + Star Tubes p. 142 + AFW p. 144 + Joint Plate ZVB p. 145 + Joint Plate ZVB - Desired Crack Elements p. 146 + Formwork Elements p. 148 + Swelling Rubbers p. 149 + Construction and Expansion Joint Tapes from p. 152 + Joint Tape Constructions from p. 156 + Clamp Constructions p. 160



Special Designs

Stainless steel p. 162 + Plastic p. 164 + Concrete p. 166

Standards, regulations and rules p. 8 + Contact persons p. 170 +
Terms and conditions p. 174

DIN 18532

Waterproofing of areas made of concrete with traffic

DIN 18534

Waterproofing of interior spaces

DIN 18531

Waterproofing of roofs, balconies and walkways

DIN 18533

Waterproofing of elements in contact with soil

DIN 18535

Waterproofing of water tanks and pools


Standards, regulations and rules

DIN 18533 - Waterproofing of elements in contact with soil

In order to get an effective waterproofing of elements in contact with soil, the type of water impact is defined for DIN 18533. The impact differs depending on type and intensity. Which of the four water classes is given results from the measured water level or the measured groundwater level to be determined in relation to the object (HWG) or the measured high water level (HHW). The following water impact classes are defined:

- **W1-E** Soil moisture and non-pressing water
- **W1.1 -E** Soil moisture with base plates
- **W1.2 -E** Soil moisture and non-pressing water with walls and base plates in contact with soil
- **W2-E** Pressing water
- **W2.1 -E** Moderate impact of pressing water (water column ≤ 3 metres)
- **W2.2 -E** High impact of pressing water (water column ≥ 3 metres)
- **W3-E** Non-pressing water on an underground covered by earth
- **W4-E** Splashed water on the wall base and capillary water in and below walls in contact with soil

DIN 18533
– waterproofing
of elements in
contact with
soil



DAfStb's guideline "waterproof concrete structures" (waterproof concrete guideline)

DAfStb's guideline "waterproof concrete structures" (waterproof concrete guideline)

The waterproof concrete guideline of the German Committee for Reinforced Concrete (DAfStb e. V.) specifies detailed requirements for planning and execution. Building physics and other utilisation-related requirements are to be considered separately by the planner and are not covered by the waterproof concrete guideline. Information and specifications on this can be found in the DBV leaflet "high-quality utilisation of basements". The regulations of the guideline represent a supplement to the verification of usability in accordance with DIN EN 1992-1-1 and mark the current state of the art. They should therefore be contractually agreed for components within the scope of the guideline. The "waterproofing of buildings" group of norms (DIN 18195 and DIN 18531 to DIN 18535) expressly does not include waterproof concrete structures and is therefore not applicable. The waterproof concrete guideline applies to waterproof concrete structures and components partially or fully embedded in the ground as well as ceilings and roofs in general building and commercial construction. The scope of application therefore includes watertight basements ("white tanks"), watertight ceilings and roofs as well as the analogous implementation of the regulations for concrete structures and components with the function of water proofing (e.g. basins, retaining walls, underground engineering structures, etc.). The waterproof concrete guideline does not apply to structures according to ZTV-ING and ZTV-W or to prefabricated concrete garages.

Two stress classes are defined in the waterproof concrete guideline:

- **Stress class 1 (BKL-1):** standing and occasionally pressing water (ground water, high water, stratum water, occasionally standing seepage water)
- **Stress class 2 (BKL-2):** ground moisture and water running down the wall (non-standing seepage water)

DIN 18322, VOB Part C - general technical specifications in construction contracts (ATV) underground cable laying work

Among other things, this standard defines the general technical contractual conditions that apply to underground line laying regarding construction materials, the design, the primary and ancillary services, billing as well as for laying cables, protective hoses, micro pipes and micro pipes bundles, along with the manufacturing and maintenance of cable ducts.

DIN 18336, VOB Part C - A - general technical specifications in construction contracts (ATV) - sealing work

This defines, among others, the waterproofing of components in contact with soil including manufacturing of the necessary insulation, vapour barrier and protective layers. It also applies to retrofit waterproofing of components in contact with soil.


AGFW FW 419 work sheet, DVGW GW 390 work sheet, VDE-AR-N 4223 application guide

This worksheet or application guide for building penetrations and their sealing for underground lines were put together by a working group of specialist associations, including: AGFW e. V. (district heating), DVGW e. V. (gas/water), VDE e. V. (electricity/telecommunication).

**DIN 18322,
VOB Part C –
underground cable
laying work**

**DIN 18336,
VOB Part C –
sealing work**

**AGFW FW 419
work sheet,
DVGW GW 390
work sheet,
VDE-AR-N 4223
application guide**



WTA leaflet 4-6-14/D

WTA leaflet 4-6-14/D

Subsequent sealing of components in contact with soil is defined in this work sheet from the Wissenschaftlich-Technische Arbeitsgemeinschaft für Bauwerkserhaltung und Denkmalpflege (Scientific and Technical Working Group for Building Conservation and Monument Preservation).



DIN EN 1401 (KG pipe)

DIN EN 1401 (KG pipe)

This European standard sets out the requirements for solid wall pipes, moulded parts and pipeline systems made out of plasticiser-free polyvinylchloride (PVC-U) for sewers and pipelines that are used in underground gravity drainage systems both within and outside the structure of the building. It applies to pipes made of unfoamed PVC-U with smooth ends as well as with a formed sleeve.

DIN EN 14758 (KG 2000 pipe)

DIN EN 14758 (KG 2000 pipe)

This European standard specifies the requirements for solid wall pipes, moulded parts and pipeline systems made out of mineral-filled polypropylene (PP-MD) for sewers and pipelines that are used in underground gravity drainage systems outside the structure of the building. It applies to pipes made of PP-MD, both with and without formed plug-in sleeve.

DIN EN 61386-24

This European standard contains, among other things, the requirements and tests for underground electrical installation systems consisting of installation pipes and accessory parts and applies to metallic, non-metallic as well as mixed systems.

DBV technical leaflets - detailed and practical publications on all aspects of building with concrete

The leaflets and booklets of the Deutscher Beton- und Bautechnik-Verein e. V. (German Concrete and Construction Technology Association) contain specialist knowledge on exposed concrete, steel fibre concrete, multi-storey car parks and underground car parks.

The collection of leaflets is divided into five subject areas and covers the categories of construction, construction in existing buildings, construction products, construction technology and concrete technology. As standard literature in the construction industry, the DBV technical leaflets provide knowledge from research, development and construction practice. The leaflets are detailed and practical and are available both individually and as a collection of leaflets. The DBV leaflet series currently comprises over 50 leaflets.



DIN EN 61386-24

DBV technical leaflets - detailed and practical publications on all aspects of building with concrete

DBV leaflet "Coated joint plate systems" - application aid for planning, work preparation and materials

Application aid for planning, work preparation and material: the new DBV leaflet provides information on planning, work preparation and material selection for coated joint plate systems in accordance with the requirements of the waterproof concrete guideline of the German Committee for Reinforced Concrete (DAfStb). Despite the widespread use of coated joint plates, the planning rules and application instructions were previously only available from general building authority test certificates (abPs) and specific processing guidelines from the individual manufacturers. The leaflet summarises the diversity of this type of joint sealing with general instructions and regulations and provides important application aids for execution as well as examples for the documentation of the work carried out.

DBV leaflet "injection hose systems and swelling inserts for construction joints"

The construction product-related DBV leaflet "injection hose systems and swelling inserts for construction joints" provides comprehensive information on planning and tendering, work preparation and material selection for injection hose systems and swelling joint inserts in waterproof concrete structures. Practical application aids for execution and quality assurance as well as examples for the documentation of the work carried out supplement the information.

DIN 18197 - sealing joints in concrete with joint tapes

Scope of application

This standard applies to the planning, dimensioning, handling, processing and installation of joint tapes that are

- the DIN 7865 norm
- the DIN 18541 norm

series of standards. The joint tapes are used to seal joints and desired crack cross-sections against ground moisture, non-pressing or pressing water as well as for joint closure and are embedded in concrete when creating joints in concrete components or structures made of waterproof concrete. This standard also applies to seals against contact media that chemically attack the joint tapes, provided that proof is provided that the joint tapes are sufficiently durable for the specific project and other regulations do not conflict with this.



DIN 18197



DIN 18541

DIN 18541 - materials and application of joint tapes in concrete

This DIN was developed by the working committee NA005-02-14AA “materials and application of joint tapes in concrete” in the DIN Standards Committee for Construction (NABau). DIN 18541 consists of the following parts under the general title joint tapes made of thermoplastics for sealing joints in concrete:

- **Part 1:** terms, shapes, dimensions, labelling
- **Part 2:** requirements for materials and testing
- **Part 3:** factory production control (FPC)

PVC-P according to DIN 18541

Plasticised PVC joint tapes in “DIN” quality are ideal for use in structures subject to very high stresses. These joint tapes meet the high standards of DIN 18541. The consistently high level of quality is ensured by continuous production control. The special composition further improves the characteristic properties of these joint tapes. They are more elastic and have a higher elongation at break and tensile strength.

DIN 7865 - elastomeric joint tapes for sealing joints in concrete

This document was developed by the working committee NA045-02-10AA “Joint sealing profiles” in the DIN Elastomer Technology Standards Committee (NET). It defines the shapes and dimensions of these joint tapes that correspond to the current state of the art. The material characteristics specified in DIN 7865-2 are an integral part of this document. The elastomer joint tapes defined in this document allow application-related products from different manufacturers to be combined while retaining the polymer. Attention is drawn to the possibility that some elements of this document may infringe patent rights. DIN is not responsible for identifying some or all of the patent rights involved.



DIN 7865

Factory standard / bitumen compatibility

PVC-P according to factory standard

Plasticised PVC joint tapes in “factory standard” quality are ideal for use in concrete structures subject to normal stresses. The advantages of this quality lie in its good workability, weldability, durability and economic optimisation. The usability is regulated in a general building authority test certificate (abP) and is labelled with the ‘Ü’ mark and monitored accordingly.

Bitumen compatibility

Joint tapes correspond to quality NB (not bitumen-compatible) as standard. Optionally, the joint tapes are available in quality BV (bitumen-compatible).



Factory
standard /
bitumen
compatibility

General building authority test certificate (abP) - General building authority approval (abZ)

General building authority test certificate (abP)

In addition to the general building authority approval (abZ) and the approval in individual cases (ZiE), the general building authority test certificate (abP) is a proof of usability of non-regulated construction products and types of construction in accordance with the state building regulations of the German federal states and is identified on a construction product by the conformity mark.

A general building authority test certificate can be issued for construction products and types of construction whose use does not serve to fulfil significant requirements for the safety of structural systems or which are assessed according to generally recognised test methods.

The type of certificate of usability required is published in the Building Rules List by the German Institute for Building Technology (DIBt) together with the relevant technical rules in agreement with the supreme building supervisory authority. A general building authority test certificate is issued by a test centre recognised by the building authorities for non-regulated construction products or types of construction if their usability has been proven.

The proof of usability in the form of a general building authority test certificate is only valid if the construction complies with the assembly and installation guidelines described therein and the structural requirements. Furthermore, the period of validity is limited: From a building law perspective, the validity until the time of construction is relevant; from a civil law perspective, the validity must be at least for the duration of the execution and installation of the construction work until approval.

General building authority approval (abZ)

The general building authority approval (abZ) is a certificate of usability for construction products issued by the building authorities. The aim of the approval is to guarantee the safe usability of innovative and other construction products. General building authority approvals are issued by the German Institute for Building Technology (DIBt) on application, if necessary in combination with a general type of construction approval.

The legal basis for the granting of general building authority approvals (and general type of construction approvals) are the German federal state building regulations. In some cases, water law aspects are also dealt with as part of the DIBt's general building authority approvals (and general type of construction approvals).

The relevant legal bases here are the Federal Water Act (WHG) and the Ordinance on Requirements for the Discharge of Waste Water into Water Bodies (AbwV) at federal level as well as the federal state ordinances for determining the suitability of construction products and types of construction under water law by means of verification in accordance with the respective federal state building regulations (WasBauPVO).

General building
authority test certificate
(abP) -
General building
authority approval
(abZ)

Regulation on installations for handling substances hazardous to water (AwSV)

Regulation on installations for handling substances hazardous to water (AwSV)

The Ordinance on Installations for the Handling of Substances Hazardous to Water (AwSV) is an ordinance issued by the German Federal Government to protect water from substances hazardous to water released from stationary installations. It thus serves to implement the Water Framework Directive (WFD) and the Nitrates Directive of the European Union, among other things. To this end, it regulates the classification of substances and their mixtures according to their hazardousness for water bodies, technical and organisational requirements for facilities handling such substances and requirements for experts, specialist inspectors and specialist companies to be used in this context.



Tested products – proven on site

- + With more than 40 years of experience in sealing technology, thousands of convinced customers and successfully sealed buildings we know what really matters: simple and tight!
Following our own philosophy, our products must be simple in use with a reliable sealing.
- + We offer a complete and co-ordinated product range for the secure sealing of buildings - always paying close attention to the highest quality standards in construction, material and production!
- + The quality of our products is regularly verified by independent institutes! Tested in the laboratory and proven on the construction site - always be on the safe side with **KRASO® Products**.



KRASO® Products with the “FHRK Quality” seal satisfy the test principles of the **Fachverband Hauseinführungen für Rohre und Kabel e.V. (FHRK e. V.)**. The tests cover all loads to which sealing inserts, utility connection systems, pipe penetrations and casings are exposed: these include, among other things, standards regarding impermeability to gas and water, abrasion resistance when filling the casing or durability when compressing the excavation pit.



KRASO® Products with the “FHRK Radon Tight” seal have been tested in accordance with FHRK and/or DVGW testing principles regarding gas and water tightness and also have successfully completed an IAF test for diffusion resistance. Products with this seal are considered to be radon-tight!



The **KRASO® Builder's Convenience Box** has the approval from **DVGW (German Technical and Scientific Association for Gas and Water)** according to **DVGW VP 601** as utility connection for gas and water and therefore fulfils all directives for a gas- and water pressure tight installation.



As far as our wall and pipe penetrations are concerned, our **KRASO® 4 Seal** reliably protects against pressing water: the material testing institute certifies a water pressure tightness up to 10 bar! Due to its construction, the **KRASO® 4 Seal** is mechanically fixed with the concrete. The monolithic (force-fit) connection to the solid wall pipe completely prevents underflow or leakage due to pressing water.



Whether **KRASO® Pump Sumps** made of concrete, Flange Pipes, Tie Points or Sealing Inserts: they all offer reliable protection against pressing water due to their construction, material and processing. All these products have been tested by independent material testing institutes regarding their water pressure tightness and are water pressure tight up to **10 bar**!



Not only against pressing water – **KRASO® Sealing Inserts** are gas- and odour-tight and therefore rated high-quality in terms of **TA-Air**! Due to a successful examination in a material testing institute, our sealing inserts fulfil the administrative regulation to the Federal Immission Control Act: “Technical Instructions on Air Quality Control”.



Radon (Rn) is a radioactive noble gas that occurs in rock earth and can enter basement rooms through leakages. Radon is the second most reason for lung cancer. Pipe penetrations with **KRASO® 4 Seal** and **KRASO® Sealing Inserts** are gas-tight and protect securely against radon: IAF-tested!



The DVGW research centre at the Engler-Bunte Institute (EBI) of the Karlsruhe Institute of Technology has tested **KRASO® Sealing Inserts** according to **DIN EN 13611 (chapter 7.2)** and confirmed their gas-tightness. This means that our sealing inserts fulfil important criteria of the German Technical and Scientific Association for Gas and Water.



The fire resistance class indicates the categorisation of building materials and components according to their fire resistance as regulated by the DIN standard. It consists of the code letter “F” and the duration of functional integrity in the event of fire in minutes. The fire resistance class **F 180** stands for a “highly fire resistant” component with 180 minutes of functional integrity.



The “general building authority test certificate” (**abP**) and the “general building authority approval” (**abZ**) ensure compliance with building regulations and the usability of building products based on state building regulations or the model building regulations.



Products with Torque Control Nut **KRASO® DKM** can be installed without a torque wrench. The **KRASO® DKM** specifies the appropriate torque, which makes installation extremely easy and helps to avoid installation errors.



The material quality seal of **Warenzeichenverband Edelstahl Rostfrei e. V.** confirms the correct use of materials and correct processing of non-corrosive stainless steel in our products.

KRASO®

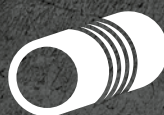
SIMPLE + TIGHT

KRASO® Sealing solutions for projects of any size

Whether house or flat construction, industrial, commercial or infrastructure projects - **KRASO® Products** seal simply and effectively against pressurised and non-pressurised water and gas! From pump sumps as precast concrete parts to joint seals, house connection systems and sealing solutions for cables and pipes, whether black or white tanks or fresh concrete composite systems: **KRASO®** offers comprehensive 360° sealing solutions for your project!



Sealing Inserts



Pipe Penetrations



Cable Penetrations



Solutions for Fresh
Concrete Composite
Films (FBV)



Utility Connection -
Entries



Utility Connection -
Outlets




KRASOflex®
Joint Tapes



Pump Sumps



Special Designs



Sealing Inserts

“White Tank“ Solutions

Sealing Insert Universal DD p. 17 + Sealing Insert Universal DD/M p. 18 + Sealing Insert Type ED + DD + VD p. 19 + Sealing Insert Type SD p. 20 + Sealing Insert Universal Multiple - split - p. 21 + Sealing Insert Type GR p. 22 + Sealing Insert Type IN-GR® p. 23 + Sealing Insert Type VD/FW p. 24 + Sealing Insert Type TD-X p. 26 + Sealing Insert Type FIX p. 27 + Sealing Insert Type Blind ED + DD + VD p. 27 + Plastic Flange Plate Type KFP p. 32 + Multi-Flange Plate Type MFP p. 38 + Flange Plate p. 43

Casing Inject FE p. 34 + Empty Pipe Inject LR p. 35 + Wall Penetration Inject FR p. 36

“Black Tank“ Solutions

Foil Clamping Flange Type FKF p. 28 + Foil Clamping Flange Type FKF DD/GR p. 30 + Foil Clamping Flange Type FKF Universal p. 30 + Plastic Flange Plate Type KFP - Foil Flange from p. 31 + Casing Type FL/ZA p. 40 + Casing Type FL/ZE p. 41 + Sealing Insert Typ FL p. 42



KRASO® Sealing Inserts

Simply just better

- + For core drillings or casings
- + **KRASO® Sealing Insert quality:** 5 mm thick clamping plates made of non-corrosive stainless steel V2A, a specially developed rubber mixture with even better sealing characteristics, welded-on studs instead of through bolts, more studs for even pressure distribution.
- + **Torque Control Nut KRASO® DKM:** integrated torque limiter - no torque wrench required!
- + Tested gas-tight according to DIN EN 13611 (chapter 7.12) proven by the DVGW research centre at the Engler-Bunte-Institute (EBI) of the Institute for Technology in Karlsruhe!
- + MPA-tested: protects reliably against pressing water up to 10 bar!
- + Gas- and odour-tight – high-quality in terms of TA-Air!
- + Radon tightness IAF tested - meets the requirements for radon precautionary areas according to FHRK leaflet MB 101
- + Certified with the quality seal of the FHRK e. V.
- + **KRASO® Sealing Insert Configurator** – simple and fast: configure the matching sealing insert online or via our app!

KRASO® Sealing Insert
Universal DD



KRASO® Sealing Insert
Type ED + DD + VD



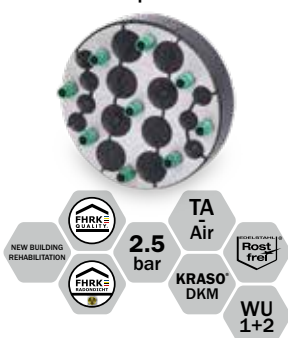
KRASO® Sealing Insert
Type Blind ED + DD + VD



KRASO® Sealing Insert
Type GR



KRASO® Sealing Insert
Universal Multiple
- split -



KRASO® Sealing Insert
Type SD



KRASO® Sealing Insert
Type TD-X



Patented technology!
KRASO® DKM
Torque Control Nut

- + Total control over torque and contact pressure!
- + Audible and tactile signal indicates the ideal torque!
- + Installation has never been so easy: no torque wrench required!
- + Can be loosened and retightened with automatic torque limitation!
- + Over-twisting and fretting: impossible!



KRASO® Sealing Insert Universal DD
Check the installation video
(just scan the QR code!)

One for all:
water-, radon- and
gas-tight!



SEALING INSERTS



KRASO® Sealing Insert Universal DD

Simple, tight, universal use

- + For core drillings or casings
- + Onion ring technology: universal use for various external diameters of media pipes or cables!
- + **KRASO® Sealing Insert quality:** non-corrosive stainless steel V2A, high quality 40 mm rubber seal, welded-on studs instead of through bolts
- + **Torque Control Nut KRASO® DKM:** integrated torque limiter - no torque wrench required!
- + MPA-tested: protects reliably against pressing water up to 3 bar!
- + Gas- and odour-tight – high-quality in terms of TA-Air!
- + Radon tightness IAF tested - meets the requirements for radon precautionary areas according to FHRK leaflet MB 101!
- + Certified with the quality seal of the FHRK e. V.
- + DafStB waterproof concrete guideline: stress class 1 + 2



Universal 80 DD



Universal 100 DD



Universal 100 DD/T



Universal 110 DD



Universal 110 DD/T



Universal 150 DD



Universal 150 DD/T



Universal 160 DD/T



Universal 200 DD



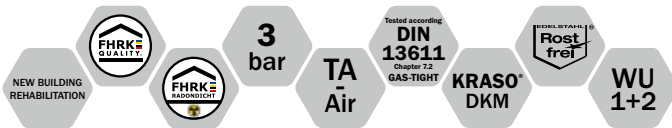
Universal 200 DD/T



Universal 250 DD



Universal 250 DD/T



KRASO® Sealing Insert Universal DD **LG 1**

for installation of pipes or cables, double sealing against pressing water up to 3 bar. Can also be used as blind plug until later installation of pipes or cables (except **KRASO® Universal 250 DD** and **Universal 250 DD/T**) | **DafStB waterproof concrete guideline: stress class 1 + 2**



Type / Item	KRASO® Universal DD					
Core drilling / casing in mm	Universal 80 DD	Universal 100 DD	Universal 100 DD/T (split design for retrofit installation)	Universal 110 DD	Universal 110 DD/T (split design for retrofit installation)	Universal 150 DD
A sealing insert for all pipes or cables listed in the table on the right (in mm)	stepless onion ring technology:	stepless onion ring technology:	stepless onion ring technology:	stepless onion ring technology:	stepless onion ring technology:	110 DN 110 KG pipe, DN 110 SML pipe
	18 - 43 mm or blind	18 - 65 mm or blind	18 - 65 mm or blind	18 - 75 mm or blind	18 - 75 mm or blind	90 DN 80 steel pipe, PE pipe
						75 DN 70 HT pipe
						blind
KRASO® Universal DD	52 €	56 €	62 €	61 €	67 €	84 €



Type / Item	KRASO® Universal DD					
Core drilling / casing in mm	Universal 150 DD/T (split design for retrofit installation)	Universal 160 DD/T (split design for retrofit installation)	Universal 200 DD	Universal 200 DD/T (split design for retrofit installation)	Universal 250 DD	Universal 250 DD/T (split design for retrofit installation)
A sealing insert for all pipes or cables listed in the table on the right (in mm)	stepless onion ring technology:	stepless onion ring technology:	160 DN 160 KG pipe, DN 160 SML pipe	stepless onion ring technology:	210 DN 200 SML pipe	210 DN 200 SML pipe
			135 DN 125 SML pipe		200 DN 200 KG pipe, DN 200 KG 2000	200 DN 200 KG pipe, DN 200 KG 2000
			125 DN 125 KG pipe		180 DN 170 PE pipe	180 DN 170 PE pipe
			110 DN 110 KG pipe, DN 110 SML pipe		170 steel/cast pipe	170 steel/cast pipe
			blind		160 DN 160 KG pipe, DN 160 SML pipe	160 DN 160 KG pipe, DN 160 SML pipe
KRASO® Universal DD	96 €	106 €	113 €	124 €	144 €	158 €



KRASO® Sealing Insert Universal DD/M **LG 1**

for simultaneous installation of up to 5 cables or pipes, double sealing against pressing water up to 3 bar, **Torque Control Nut KRASO® DKM**, non-corrosive stainless steel V2A, 40 mm seal. Can also be used as blind plug until later installation of pipes or cables | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASO® Universal DD/M
Core drilling / casing in mm	100
A sealing insert for all pipes or cables listed in the table on the right (in mm)	1 x 8 - 10 mm or blind
	1 x 11 - 13 mm or blind
	1 x 14 - 16 mm or blind
	1 x 17 - 19 mm or blind
	and 1 x stepless onion ring technology: 20 - 35 mm or blind
KRASO® Universal DD/M	72 €



KRASO® Sealing Insert Type ED + DD + VD
Check the installation video
(just scan the QR code!)



KRASO® Type ED



KRASO® Type ED/T
(split design for retrofit
installation)



KRASO® Type DD



KRASO® Type DD/T
(split design for retrofit
installation)



KRASO® Typ VD



KRASO® Sealing Insert Type ED + DD + VD **LG1**

for installation of pipes, Torque Control Nut **KRASO® DKM**, non-corrosive stainless steel V2A, single sealing, against pressing water up to 1 bar, 20 mm seal (**KRASO® Type ED**, **KRASO® Type ED/T**), double sealing, against pressing water up to 3 bar, 40 mm seal (**KRASO® Type DD**, **KRASO® Type DD/T**), quadruple sealing, against pressing water up to 8 bar, 80 mm seal (**KRASO® Type VD**) | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Type ED • KRASO® Type DD • KRASO® Type VD • KRASO® Type ED - split - • KRASO® Type DD - split -									
Core drilling / casing in mm (from - to)	80 (79 - 83)	100 (99 - 103)	125 (124 - 128)	150 (149 - 153)	200 (198 - 203)	250 (248 - 253)	300 (298 - 303)	350 (348 - 353)	400 (398 - 403)	500 (497 - 503)
Media line (from - to)	25 (20 - 26)	32 (29 - 35)	63 (58 - 64)	75 (70 - 76)	110 (105 - 111)	160 (156 - 162)	200 (196 - 202)	200 (196 - 202)	273 (269 - 275)	400 (397 - 402)
	32 (29 - 35)	43 (38 - 44)	75 (72 - 78)	80 (75 - 81)	114 (113 - 119)	170 (165 - 171)	210 (206 - 212)	210 (206 - 212)	280 (276 - 282)	429 (426 - 431)
	43 (38 - 44)	50 (45 - 51)	80 (75 - 81)	90 (85 - 91)	125 (120 - 126)	180 (176 - 182)	219 (215 - 221)	219 (215 - 221)	315 (311 - 317)	450 (447 - 452)
		63 (58 - 64)		110 (105 - 111)	135 (130 - 136)	200 (196 - 202)	225 (221 - 227)	225 (221 - 227)	326 (322 - 328)	
					140 (135 - 141)	210 (206 - 212)	250 (246 - 252)	250 (246 - 252)		
					160 (155 - 161)			273 (269 - 275)		
								280 (276 - 282)		
KRASO® Type ED (20 mm)	51 €	56 €	69 €	77 €	106 €	125 €	164 €	178 €	192 €	276 €
KRASO® Type ED/T (20 mm - split design for retrofit installation)	59 €	64 €	79 €	89 €	122 €	144 €	189 €	205 €	221 €	317 €
KRASO® Type DD (40 mm)	61 €	70 €	86 €	102 €	128 €	149 €	216 €	257 €	298 €	374 €
KRASO® Type DD/T (40 mm - split design for retrofit installation)	70 €	81 €	99 €	117 €	147 €	171 €	248 €	296 €	343 €	430 €
KRASO® Type VD (80 mm)	76 €	88 €	108 €	128 €	160 €	186 €	270 €	321 €	373 €	468 €

Other diameters available as special sealing insert! All sealing inserts available in V4A for an additional charge!



KRASO® Sealing Insert Type SD
Check the installation video
(just scan the QR code!)

Usually ready
for dispatch
within 24
hours!



KRASO® Type SD 30



KRASO® Type SD 30 - T



KRASO® Type SD 30 - GF



KRASO® Type SD 60



KRASO® Type SD 60 - T



KRASO® Type SD 60 - GF

KRASO® Sealing Insert Type SD

The solution for special situations

- + For core drillings and casings
- + Individual and custom-made solution: with large flange or split!
- + **KRASO® Sealing Insert quality:** 5 mm thick clamping plates made of non-corrosive stainless steel V2A, 30 or 60 mm seal made of a specially developed rubber mixture, welded-on studs instead of through bolts
- + **Torque Control Nut KRASO® DKM:** integrated torque limiter - no torque wrench required!
- + MPA-tested: protects reliably against pressing water up to 2.5 bar / 5 bar!
- + Gas- and odour-tight – high-quality in terms of TA-Air!
- + Radon tightness IAF tested - meets the requirements for radon precautionary areas according to FHRK leaflet MB 101!
- + Certified with the quality seal of the FHRK e. V.
- + With arrangement template: see the arrangement at a glance!
- + Generally available within 24 hours!
- + Available at an additional charge: stainless steel V4A / KTW-recommendation / NBR - oil- and petrol-resistant / temperature resistant up to 220 °C
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASO® Sealing Insert Type SD 30 • KRASO® Sealing Insert Type SD 60 **LG 1**

for installation of pipes or cables, Torque Control Nut **KRASO® DKM*** | DafStB waterproof concrete guideline: stress class 1 + 2

KRASO® Type SD 30 / KRASO® Type SD 30 - T, split / KRASO® Type SD 30 - GF, large flange

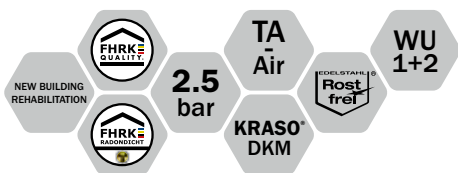
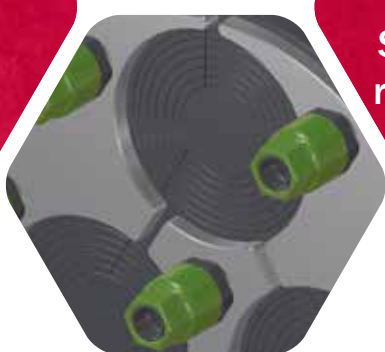
KRASO® Type SD 60 / KRASO® Type SD 60 - T, split / KRASO® Type SD 60 - GF, large flange

Core drilling / casing in mm (from - to)	50 (49 - 52)	60 (59 - 62)	70 (69 - 72)	80 (79 - 83)	100 (99 - 103)	125 (124 - 128)	150 (149 - 153)	200 (198 - 203)	250 (248 - 253)	300 (298 - 303)	350 (348 - 353)	400 (398 - 403)	450 (448 - 453)	500 (497 - 503)
max. external diameter pipe or cable														
from	0	0	0	0	0	0	0	0	0	0	0	0	0	0
to	25	35	45	55	75	100	125	175	225	275	325	375	425	475
KRASO® Type SD 30														
KRASO® Type SD 30	96 €	96 €	96 €	103 €	103 €	131 €	149 €	193 €	260 €	333 €	399 €	457 €	539 €	600 €
KRASO® Type SD 30 - T	110 €	110 €	110 €	119 €	119 €	151 €	171 €	223 €	299 €	382 €	459 €	525 €	620 €	689 €
KRASO® Type SD 30 - GF	105 €	105 €	105 €	113 €	113 €	145 €	164 €	212 €	286 €	365 €	439 €	502 €	592 €	659 €
Surcharge: additional drilling	up to 5 drillings each additional drilling 17 €, each further additional drilling 11 €													
KRASO® Type SD 60														
KRASO® Type SD 60	128 €	138 €	138 €	138 €	147 €	181 €	212 €	274 €	356 €	466 €	542 €	604 €	714 €	835 €
KRASO® Type SD 60 - T	148 €	158 €	158 €	158 €	169 €	208 €	244 €	315 €	408 €	537 €	624 €	694 €	821 €	961 €
KRASO® Type SD 60 - GF	141 €	151 €	151 €	151 €	162 €	200 €	233 €	301 €	391 €	513 €	596 €	664 €	785 €	919 €
Surcharge: additional drilling	up to 5 drillings each additional drilling 17 €, each further additional drilling 11 €													

* In some cases, allen screws must be used due to the design

All sizes and diameters available on request!

Stepless onion ring technology



KRASO® Sealing Insert Universal Multiple - split – Universally usable – multiply flexible

- + For core drillings and casings
- + Stepless onion ring technology: universally usable for various external diameters of media lines / cables - also for multiple installation! Split design for retrofit installation!
- + **KRASO® Sealing Insert quality:** 5 mm thick clamping plates made of non-corrosive stainless steel V2A, 40 mm seal made of specially developed rubber mixture, welded-on studs instead of through bolts
- + **Torque Control Nut KRASO® DKM:** integrated torque limiter - no torque wrench required!
- + MPA-tested: protects reliably against pressing water up to 2.5 bar!
- + Gas- and odour-tight – high-quality in terms of TA-Air!
- + Radon tightness IAF tested - meets the requirements for radon precautionary areas according to FHRK leaflet MB 101!
- + Certified with the quality seal of the FHRK e. V.
- + DafStB waterproof concrete guideline: stress class 1 + 2

Stepless onion ring technology!

Example

KRASO® Sealing Insert Universal Multiple 150 - split -

Design 2:

4 x 6 - 18 mm or blind

6 x 6 - 33 mm or blind



KRASO® Sealing Insert Universal Multiple - split - **LG 1**

for the installation of several media lines/cables, split design for retrofit installation | **DafStB waterproof concrete guideline: stress class 1 + 2**

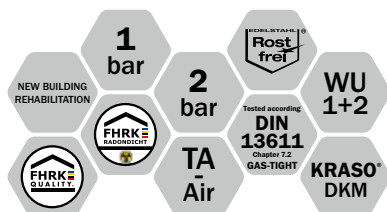
Type / Item	KRASO® Sealing Insert Universal Multiple - split -			
Core drilling / casing in mm	100	125	150	200
stepless onion ring technology: external cable diameter from... to ... in mm				
Design 1	4 x 6 - 33 mm or blind	6 x 6 - 28 mm or blind	3 x 6 - 52 mm or blind	3 x 6 - 28 mm or blind 4 x 6 - 52 mm or blind
Design 2	3 x 6 - 18 mm or blind 2 x 6 - 33 mm or blind	-	4 x 6 - 18 mm or blind 6 x 6 - 33 mm or blind	7 x 6 - 18 mm or blind 8 x 6 - 33 mm or blind
Design 3	8 x 6 - 18 mm or blind	-	6 x 6 - 38 mm or blind	-
KRASO® Sealing Insert Universal Multiple - split -	100 €	108 €	152 €	236 €

Further arrangements available at short notice!



KRASO® Sealing Insert Type GR
Check the installation video
(just scan the QR code!)

**Specially for
ribbed media
pipes**



KRASO® Sealing Insert Type GR

The sealing insert for ribbed media pipes

- + For core drillings and casings
- + For corrugated and ribbed pipes!
- + With a specially developed soft rubber seal – double sealing with 40 mm seal or quadruple sealing with 80 mm seal – and central pressure disk for even pressure distribution
- + **KRASO® Sealing Insert quality:** 5 mm thick clamping plates made of non-corrosive stainless steel V2A, more studs for even pressure distribution, welded-on studs instead of through bolts
- + **Torque Control Nut KRASO® DKM:** integrated torque limiter - no torque wrench required!
- + MPA-tested: protects reliably against pressing water up to 1 bar / 2 bar!
- + Gas- and odour-tight – high-quality in terms of TA-Air
- + Radon tightness IAF tested - meets the requirements for radon precautionary areas according to FHRK leaflet MB 101
- + Certified with the quality seal of the FHRK e. V.
- + DafStB waterproof concrete guideline: stress class 1 + 2



KRASO® Type DD/GR
ribbed media pipes



KRASO® Type VD/GR
ribbed media pipes

KRASO® Sealing Insert Type GR **LG 1**

for installation of ripped or corrugated media pipes | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Type DD/GR • KRASO® Type VD/GR								
Core drilling / casing in mm (from - to)	100 (99 - 103)	125 (124 - 128)	150 (149 - 153)	200 (198 - 203)	250 (248 - 253)	300 (298 - 303)	350 (348 - 353)	400 (398 - 403)	500 (497 - 503)
max. external diameter pipe or cable from ... to ... in mm	0 - 75	0 - 100	0 - 125	0 - 175	0 - 225 ¹	0 - 275 ¹	0 - 325 ¹	0 - 375 ¹	0 - 475 ¹
KRASO® Type DD/GR (40 mm)	123 €	151 €	178 €	224 €	260 €	378 €	449 €	521 €	655 €
KRASO® Type VD/GR (80 mm)	155 €	189 €	224 €	281 €	326 €	474 €	558 €	647 €	814 €

¹ From 200 mm external diameter of pipe or cable: **KRASO® Sealing Insert Type DD/GR** with 60 mm seal

Further sizes and diameters available on request! All sealing inserts available in V4A for an additional charge!

Inner seal for ribbed media pipes



Stepless onion ring technology!

Example

KRASO® Sealing Insert Type IN-GR® DN 110 - split -
1 x 5 - 18 mm, 1 x 5 - 38 mm



KRASO® Sealing Insert Type IN-GR® - split - Inner seal for ribbed media pipes

- + Sealing insert for the internal sealing of one or several media lines in cable protective hoses Type-R
- + Stepless onion ring technology: universally suitable for a wide range of external diameters of media lines/ cables – even for multiple installation! Split design for retrofit installation!
- + **Torque Control Nut KRASO® DKM**: integrated torque limiter - no torque wrench required!
- + Certified with the quality seal of the FHRKE e. V.
- + Non-corrosive stainless steel V2A, 30 mm seal
- + DafStB waterproof concrete guideline: stress class 1 + 2

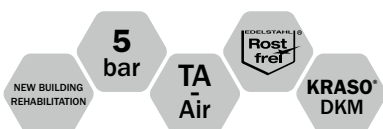
KRASO® Sealing Insert Type IN-GR® - split - **LG 1**

inner seal for cable protective hoses Type-R / corrugated pipes for the installation of one or several media lines or cables | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASO® Type IN-GR® - split -						
Corrugated pipe diameter DN in mm (internal diameter in mm)	90 (75)	110 (92)	110 (92)	110 (92)	160 (136)	160 (136)	160 (136)
Stepless onion ring technology: external diameter cable from ... to ... in mm	1 x 5 - 33 mm or blind	1 x 5 - 48 mm or blind	1 x 5 - 18 mm 1 x 5 - 38 mm or blind	4 x 5 - 18 mm or blind	3 x 5 - 43 mm or blind	4 x 5 - 38 mm or blind	6 x 5 - 33 mm or blind
KRASO® Type IN-GR® - split -	89 €	95 €	118 €	118 €	145 €	145 €	145 €

Further sizes and diameters available on request! All sealing inserts available in V4A for an additional charge!





KRASO® Sealing Insert Type VD/FW

Effective sealing for district heating connections

- + For core drillings and casings
- + For the sealing of local and district heating connections in the wall
- + For insulated district heating lines: smooth, corrugated or ribbed
- + Extra soft rubber seal: shore hardness 40 A
- + 80 mm seal width (2 x 40 mm): against pressing water up to 5 bar!
- + **KRASO® Sealing Insert quality:** 5 mm thick clamping plates made of non-corrosive stainless steel V2A, more studs for even pressure distribution, welded-on studs instead of through bolts
- + **Torque Control Nut KRASO® DKM:** integrated torque limiter - no torque wrench required!
- + Optional: additional drillings for cables
- + DafStB waterproof concrete guideline: stress class 1 + 2

Example:
KRASO® Type VD/FW
with optional additional drillings
for electricity and control cables



KRASO® Sealing Insert Type VD/FW **LG 1**

for the installation of local and district heating lines and additional control cables (optional) | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Type VD/FW			
Core drilling / casing in mm	150	200	250	300
max. external diameter pipe or cable from ... to ... in mm	0 - 125	0 - 175	0 - 225	0 - 275
KRASO® Type VD/FW	224 €	281 €	326 €	474 €
Surcharge: additional drillings for cable	each drilling 27 €			

Further sizes and diameters available on request! All sealing inserts available in V4A for an additional charge!

KRASO®

SIMPLE + TIGHT

KRASO® Quality Management Certification according to ISO 9001

Since 1981, **KRASO®** has stood for innovative sealing solutions with the highest quality standards. This also includes constant optimisation of production processes and our quality management to ensure maximum customer satisfaction. With the ISO 9001 certification, the quality standards at **KRASO®** have now been confirmed with the internationally recognised seal of quality by TÜV Austria.



Processes



Certification



Standardisation



Quality



Trust



Communication



Customer
satisfaction



Analysis



Documentation

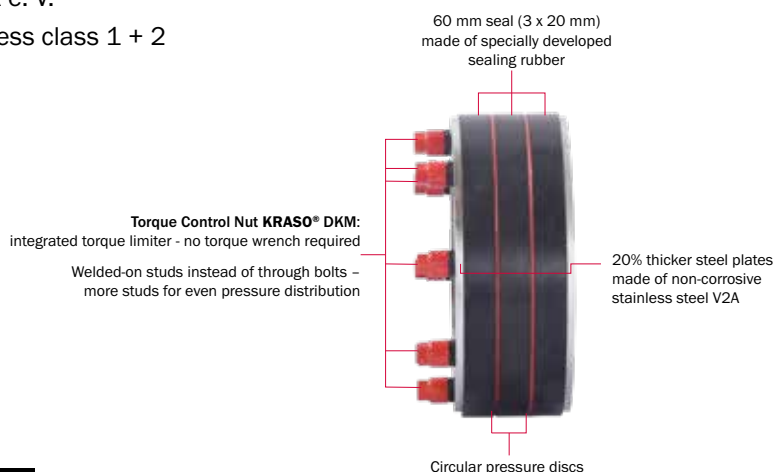
10 bar!
For special tasks!



KRASO® Sealing Insert Type TD-X

The trio seal of a superior class

- + For core drillings or casings
- + 20% thicker steel plates made of non-corrosive stainless steel V2A!
- + Triple sealing with 60 mm seal made of specially developed sealing rubber!
- + Two circular pressure discs guarantee optimal pressure distribution!
- + More studs for even pressure distribution, welded-on studs instead of through bolts!
- + **Torque Control Nut KRASO® DKM**: integrated torque limiter - no torque wrench required!
- + MPA-tested: protects reliably against pressing water up to 10 bar!
- + Gas- and odour-tight – high-quality in terms of TA-Air!
- + Radon tightness IAF tested - meets the requirements for radon precautionary areas according to FHRK leaflet MB 101!
- + Certified with the quality seal of the FHRK e. V.
- + DafStB waterproof concrete guideline: stress class 1 + 2



KRASO® Sealing Insert Type TD-X **LG 1**

for installation of pipes, **Torque Control Nut KRASO® DKM*** | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Type TD-X									
Core drilling / casing in mm	80	100	125	150	200	250	300	350	400	500
(from - to)	(79 - 83)	(99 - 103)	(124 - 128)	(149 - 153)	(198 - 203)	(248 - 253)	(298 - 303)	(348 - 353)	(398 - 403)	(497 - 503)
max. external diameter pipe or cable from ... to ... in mm	0 - 55	0 - 75	0 - 100	0 - 125	0 - 175	0 - 225	0 - 275	0 - 325	0 - 375	0 - 475
KRASO® Type TD-X	127 €	143 €	167 €	200 €	264 €	318 €	469 €	589 €	709 €	1,004 €

* In some cases, allen screws must be used due to the design

All sizes and diameters available on request! All sealing inserts available in V4A for an additional charge!



KRASO® Sealing Insert Type FIX **LG 1**

for installation of pipes, with mounting bracket for fixing to the wall, **Torque Control Nut KRASO® DKM***, non-corrosive stainless steel V2A, single sealing, against pressing water up to 1 bar, 20 mm seal (**KRASO® Type ED/FIX**), double sealing, against pressing water up to 3 bar, 40 mm seal (**KRASO® Type DD/FIX**) | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Type ED/FIX • KRASO® Type DD/FIX									
Core drilling / casing in mm	80	100	125	150	200	250	300	350	400	500
(from - to)	(79 - 83)	(99 - 103)	(124 - 128)	(149 - 153)	(198 - 203)	(248 - 253)	(298 - 303)	(348 - 353)	(398 - 403)	(497 - 503)
max. external diameter pipe or cable from ... to ... in mm	0 - 55	0 - 75	0 - 100	0 - 125	0 - 175	0 - 225	0 - 275	0 - 325	0 - 375	0 - 475
KRASO® Type ED/FIX	64 €	70 €	84 €	100 €	131 €	160 €	234 €	294 €	354 €	503 €
KRASO® Type DD/FIX	96 €	108 €	126 €	150 €	198 €	239 €	351 €	442 €	533 €	754 €

* In some cases, allen screws must be used due to the design

All sizes and diameters available on request! All sealing inserts available in V4A for an additional charge!



KRASO® Type Blind ED 250

KRASO®
Sealing Insert
Type Blind ED + DD + VD
from DN 250 with inner core to distribute the pressure:

- lower installation weight
- easy installation
- perfect pressure distribution



KRASO® Type Blind DD 250



KRASO® Type Blind VD 250



KRASO® Type Blind ED



KRASO® Type Blind DD



KRASO® Type Blind VD

KRASO® Sealing Insert Type Blind ED + DD + VD **LG 1**

blind plug, for pressing water, **Torque Control Nut KRASO® DKM**, non-corrosive stainless steel V2A, single sealing, against pressing water up to 1 bar, 20 mm seal (**KRASO® Type Blind ED**), double sealing, against pressing water up to 3 bar, 40 mm seal (**KRASO® Type Blind DD**), quadruple sealing, against pressing water up to 8 bar, 80 mm seal (**KRASO® Type Blind VD**), from DN 250 with central distribution plate: lower installation weight, easier installation, perfect pressure distribution | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Type Blind ED • KRASO® Type Blind DD • KRASO® Type Blind VD									
Core drilling / casing in mm	80	100	125	150	200	250	300	350	400	500
(from - to)	(79 - 83)	(99 - 103)	(124 - 128)	(149 - 153)	(198 - 203)	(248 - 253)	(298 - 303)	(348 - 353)	(398 - 403)	(497 - 503)
KRASO® Type Blind ED (seal 20 mm)	56 €	62 €	76 €	85 €	117 €	138 €	180 €	196 €	211 €	304 €
KRASO® Type Blind DD (seal 40 mm)	67 €	77 €	95 €	112 €	141 €	164 €	238 €	283 €	328 €	411 €
KRASO® Type Blind VD (seal 80 mm)	84 €	96 €	118 €	140 €	176 €	205 €	297 €	353 €	410 €	514 €

Further diameters available on request! All sealing inserts available in V4A for an additional charge!

The
alternative
to a
fixed-loose
flange!



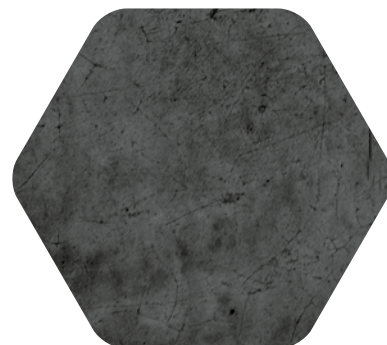
KRASO® Foil Clamping Flange Type FKF

When “tight” means simply tight –
sealing solutions for the “black tank”

- + Designers and building contractors face numerous structural-physical conditions. The protection of below-ground structural elements against moisture and water is regulated by DIN 18533, stating different water exposure classes and provisions regarding the waterproofing of buildings.
- + For the sealing of utility lines in regard to buildings with exterior sealing (“black tank”) we offer our **KRASO® Casing Type FL** with fixed-loose flange construction according to DIN 18533 W1-E or W2-E.
- + According to DIN 18533, the **KRASO® Foil Clamping Flange Type FKF** is an effective alternative for the integration of media lines into the sealing of larger areas.

Your advantages

- + Cost-effective, saves time and money
- + Test-certificate from material testing institute in North-Rhine-Westphalia: water pressure tight up to 2.5 bar
- + We are able to adjust the type of sealing sheets or foils individually
- + Noticeably lower weight than a fixed-loose flange construction, for an easier installation, helps to avoid installation errors
- + Suitable for every external diameter of media lines and all kinds of materials
- + Metal components made of non-corrosive stainless steel V2A
- + For new buildings and rehabilitation





KRASO®
Foil Clamping Flange Type FKF
Check the installation video
(just scan the QR code!)

The
alternative
to a
fixed-loose
flange!

SEALING INSERTS



KRASO® Foil Clamping Flange Type FKF

The revolution in terms of the integration of media lines into the sealing of larger areas



- + Innovative: water pressure tight sealing of any even and stable cable with our **KRASO® Foil Clamping Flange Type FKF** foil flange!
- + Suitable for all external diameters of media lines and for all materials!
- + We can individually customise the type of sealing sheets or foils:
e.g. PVC, EPDM, FPO, Resitrix®, PP, PE, **KRASO®-Fol**, PYE-PV 200 S5 etc.
- + **Torque Control Nut KRASO® DKM**: integrated torque limiter - no torque wrench required!
- + Metal components made of non-corrosive stainless steel V2A
- + For new buildings and rehabilitation! Various designs for almost every situation!
- + Simple and fast mounting!
- + MPA-tested: water pressure tight up to 2.5 bar!
- + Certified with the quality seal of the FHRK e. V.
- + DIN 18533 W1 -E and W2.1 -E

Included in the scope of supply
- **KRASO® PU 50** - high-quality sealant
- pressure roller
- serrated spatula
- pencil for marking



KRASO® Foil Clamping Flange Type FKF - in front of the wall -



KRASO® Foil Clamping Flange Type FKF - in front of the wall - split -



KRASO® Foil Clamping Flange Type FKF - in the core drilling -



KRASO® Foil Clamping Flange Type FKF - in the core drilling - split -

KRASO® Foil Clamping Flange Type FKF **LG 1**

for the sealing of media of all kinds of materials in front of a wall or in the core drilling, with foil flange 1.2 mm, according to DIN 16937, oil- and bitumen resistant, surrounding approx. 15 cm, 30 mm seal | **DIN 18533 W1 -E and W2.1 -E**

Core drilling / casing in mm	(from - to)	max. external diameter pipe or cable from ... to ... in mm	KRASO® Foil Clamping Flange Type FKF - in front of the wall -	KRASO® Foil Clamping Flange Type FKF - in front of the wall - - split -	KRASO® Foil Clamping Flange Type FKF - in the core drilling -	KRASO® Foil Clamping Flange Type FKF - in the core drilling - - split -
80	(79 - 83)	0 - 40	219 €	297 €	219 €	241 €
100	(99 - 103)	0 - 63	231 €	332 €	231 €	254 €
125	(124 - 128)	0 - 80	265 €	377 €	265 €	291 €
150	(149 - 153)	0 - 110	321 €	446 €	321 €	354 €
200	(198 - 203)	0 - 160	402 €	561 €	402 €	441 €
250	(248 - 253)	0 - 200	548 €	783 €	548 €	602 €
300	(298 - 303)	0 - 250	753 €	1,022 €	753 €	828 €

Scope of supply: **KRASO® Foil Clamping Flange Type FKF**, adhesive and sealant **KRASO® PU 50**, serrated spatula, pressure roller and pencil

Further sizes and diameters available on request! Also available with other sealing sheets!

Specially for ribbed media pipes



KRASO® Foil Clamping Flange Type FKF DD/GR **LG 1**

for the sealing of media of all kinds of material in front of a wall or in the core drilling, with foil flange 1.2 mm, according to DIN 16937, oil and bitumen resistant, surrounding approx. 15 cm, 40 mm especially soft seal, central pressure distribution plate for even pressure distribution with corrugated media pipes, against pressing water up to 1 bar, Torque Control Nut **KRASO® DKM**, non-corrosive stainless steel V2A | **DIN 18533 W1-E** and **W2.1-E**

Core drilling / casing in mm	(from - to)	max. external diameter pipe or cable from ... to ... in mm	KRASO® Foil Clamping Flange Type FKF DD/GR - in front of the wall -	KRASO® Foil Clamping Flange Type FKF DD/GR - in front of the wall - split -	KRASO® Foil Clamping Flange Type FKF DD/GR - in the core drilling -	KRASO® Foil Clamping Flange Type FKF DD/GR - in the core drilling - split -
100	(99 - 103)	0 - 63	311 €	426 €	311 €	331 €
125	(124 - 128)	0 - 80	357 €	491 €	357 €	378 €
150	(149 - 153)	0 - 110	434 €	595 €	434 €	457 €
200	(198 - 203)	0 - 160	542 €	745 €	542 €	571 €
250	(248 - 253)	0 - 200 ¹	739 €	1.016 €	739 €	833 €
300	(298 - 303)	0 - 250 ¹	1,017 €	1,397 €	1,017 €	1,098 €

¹ From 200 mm external diameter of the pipe or cable: **KRASO® Foil Clamping Flange Type FKF DD/GR** with 60 mm seal

Scope of supply: **KRASO® Foil Clamping Flange Type FKF DD/GR**, adhesive and sealant **KRASO® PU 50**, serrated spatula, pressure roller and pencil
Further sizes and diameters available on request! Also available with other sealing sheets!



KRASO® Foil Clamping Flange Type FKF Universal **LG 1**

for the sealing of media of all kinds of material in front of the wall or in the core drilling, with foil flange 1.2 mm, according to DIN 16937, oil- and bitumen resistant, surrounding approx. 15 cm, 40 mm seal, against pressing water up to 1.5 bar, Torque Control Nut **KRASO® DKM**, non-corrosive stainless steel V2A | **DIN 18533 W1-E** and **W2.1-E**

External diameter or core drilling in mm	KRASO® Foil Clamping Flange Type FKF Universal 100	KRASO® Foil Clamping Flange Type FKF Universal 150	KRASO® Foil Clamping Flange Type FKF Universal 200
A sealing insert for all pipes or cables listed in the table on the right (in mm)	stepless onion ring technology: 18 - 65 mm or blind	110 (DN 110 KG pipe) (DN 110 SML pipe)	160 (DN 160 KG pipe) (DN 160 SML pipe)
		90 (DN 80 steel pipe, PE pipe)	135 (DN 125 SML pipe)
		75 (DN 70 HT pipe)	125 (DN 125 KG pipe)
		0	110 (DN 110 KG pipe) (DN 110 SML pipe)
			0
KRASO® Foil Clamping Flange Type FKF Universal - in the core drilling -	203 €	277 €	339 €
KRASO® Foil Clamping Flange Type FKF Universal - in front of the wall -	203 €	277 €	339 €

Scope of supply: **KRASO® Foil Clamping Flange Type FKF Universal**, adhesive and sealant **KRASO® PU 50**, serrated spatula, pressure roller and pencil

Further sizes and diameters available on request! Also available with other sealing sheets!



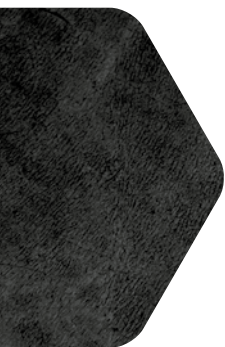
KRASO® Plastic Flange Plate Type KFP - split -
Check the installation video
(just scan the QR code!)



SEALING INSERTS

KRASO® Plastic Flange Plate Type KFP - split - A proven solution reinvented

- + Like a “split casing”: the flange plate made of high-strength special plastic can be installed retrospectively
- + No core drilling: no need for the separation of media pipes for installation!
- + Installation in front of a wall made of waterproof concrete or as **KRASO® Type KFP** with foil flange in front of a wall with sealing of larger areas
- + Easy installation by just one person thanks to the low weight!
- + Latest CNC production technology: absolute dimensional compliance – no tolerances like they are usual with solutions involving metal
- + Tongue and groove system: the two halves of the plastic flange plate pull together with 100% accurate fit automatically. Installation errors are thus avoided due to this innovation!
- + Subsequent sealing of the media lines in the plastic flange plate using a sealing insert
- + DafStB waterproof concrete guideline: stress class 1 + 2, with foil flange DIN 18533 W1 -E and W2.1 -E



KRASO® Plastic Flange Plate
Type KFP - split -



KRASO® Plastic Flange Plate Type
KFP - Foil Flange - split -

KRASO® Plastic Flange Plate Type KFP - split - **LG 1**

for installation of pipes or cables using a sealing insert (not included in the scope of supply), ID = InternalDiameter | **DafStB waterproof concrete guideline: stress class 1 + 2, with foil flange DIN 18533 W1 -E and W2.1 -E**

Type / Item	KRASO® Type KFP - split - • KRASO® Type KFP - Foil Flange - split -						
InternalDiameter ID	80	100	125	150	200	250	300
max. external diameter pipe or cable from ... to ... in mm	0 - 55	0 - 75	0 - 100	0 - 125	0 - 175	0 - 225	0 - 275
Plate size approx. in mm	d = 240	d = 260	d = 285	d = 310	d = 360	d = 410	d = 460
KRASO® Plastic Flange Plate Type KFP - split -	363 €	374 €	403 €	422 €	488 €	556 €	613 €
KRASO® Plastic Flange Plate Type KFP - Foil Flange - split -	454 €	469 €	505 €	527 €	611 €	696 €	765 €

Scope of supply: KRASO® Plastic Flange Plate Type KFP - split - or KRASO® Plastic Flange Plate Type KFP - Foil Flange - split -, EPDM flat seal to the component and fixing material, adhesive and sealant **KRASO® PU 50**

Further sizes and diameters available on request!



KRASO® Plastic Flange Plate
Type KFP - Foil Flange



KRASO® Plastic Flange Plate Type KFP

The flange plate made of high-strength special plastic

- + Due to changes in the groundwater level the rehabilitation of old buildings and the sealing of basements become necessary from time to time. Existing pipes and cables should also be sealed using the latest technology.
- + The sealing of the media lines inside the plastic flange plate is completed by using a sealing insert.
- + DafStB waterproof concrete guideline: stress class 1 + 2, with foil flange DIN 18533 W1 -E and W2.1 -E

KRASO® Plastic Flange Plate Type KFP **LG 1**

for installation of pipes or cables using a sealing insert (not included in the scope of supply), no core drilling required, EPDM flat seal, ID = InternalDiameter | DafStB waterproof concrete guideline: stress class 1 + 2, with foil flange DIN 18533 W1 -E and W2.1 -E

Type / Item	KRASO® Type KFP • KRASO® Typ KFP - Foil Flange						
InternalDiameter ID	80	100	125	150	200	250	300
max. external diameter pipe or cable from ... to ... in mm	0 - 55	0 - 75	0 - 100	0 - 125	0 - 175	0 - 225	0 - 275
Plate size approx. in mm	d = 240	d = 260	d = 285	d = 310	d = 360	d = 410	d = 460
KRASO® Plastic Flange Plate Type KFP	259 €	268 €	288 €	302 €	349 €	398 €	439 €
KRASO® Plastic Flange Plate Type KFP - Foil Flange	325 €	334 €	360 €	378 €	438 €	496 €	548 €

Scope of supply: KRASO® Plastic Flange Plate Type KFP or KRASO® Plastic Flange Plate Type KFP - Foil Flange, EPDM flat seal to the component and fixing material, adhesive and sealant KRASO® PU 50

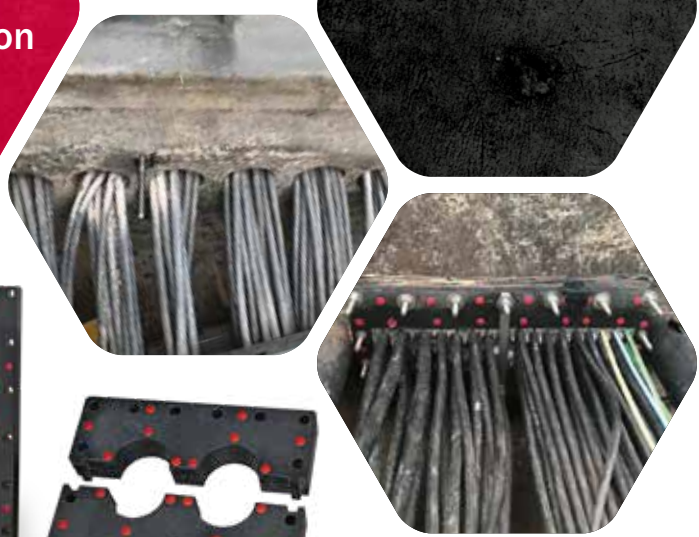
Further sizes and diameters available on request!

KRASO® KFP Installation Kit

suitable for KRASO® Plastic Flange Plate Type KFP: KRASO® Torque Wrench, socket wrench insert 8, Ø 19 mm nut, cartridge pressing pistol, blower for drilled holes



A proven solution
reinvented!



SEALING INSERTS

KRASO® Plastic Flange Plate Type KFP - multiple / multiple split

- + The flange plate made of high-strength special plastic can be installed retrospectively
- + Installation in front of a wall made of waterproof concrete (WU) or in front of a wall with sealing of larger areas
- + Subsequent sealing of the media lines in the plastic flange plate using a sealing insert

Heinze



KRASO® Tenders for your building project!

- + Free of charge and convenient: find tenders for **KRASO® Products** quickly and easily, including product images and installation situations! Also available as download for your digital tenders, allocation and billing: Word, Excel, PDF, RTF, TXT, GAEB, Datannorm 5, ÖNORM files
- + **KRASO® Tenders**, product lines, contact details etc. on heinze.de
KRASO® Tenders on ausschreiben.de

AUSSCHREIBEN.DE

For all
standard wall
types!

Inject sealing insert with IDK
(integrated torque control)



KRASO® Inject FE

The true diameter inject casing for existing buildings

- + Thick-walled true diameter plastic casing for retrofit installation
- + Fast and easy installation: injection system with fast-curing expansion resin
- + Suitable for all common types of walls – also for hollow bricks
- + With sealing flange for exterior sealing (“black tank”)
- + Ideal for rehabilitation and new connections into existing buildings
- + Integrated torque control (IDK) – no torque wrench required
- + For the sealing of cables or pipes using a sealing insert (not included in the scope of supply):
e.g. **KRASO® Sealing Insert Type ED**
- + Gas and water pressure tight up to 1 bar
- + DIN 18533 W2.1 -E (“moderate impact of pressing water”)
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASO® Inject FE **LG 6**

recess for retrofit installation of cables and pipes using a sealing insert (not included in the scope of supply), with injection system
| DIN 18533 W2.1 -E, DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Inject FE	
Diameter DN	100	150
Wall thickness from ... to ...	200 - 600 mm	
Diameter core drilling min... max ...	149 - 153 mm	199 - 203 mm
External diameter sealing flange	250 mm	300 mm
KRASO® Inject FE	325 €	495 €

Scope of supply: KRASO® Inject FE, including inject sealing insert with IDK (integrated torque control), thick-walled true diameter plastic casing, wall fixing ring, expansion resin

Further diameters and wall thicknesses available on request!

For all
standard wall
types!



KRASO® Inject LR

Empty pipe as retrofit wall penetration
for existing buildings

- + Empty pipe for retrofit installation
- + Fast and easy installation: injection system with fast-curing expansion resin
- + Suitable for all common types of walls – also for hollow bricks
- + With sealing flange for exterior sealing (“black tank”)
- + Ideal for rehabilitation and new connections into existing buildings
- + Integrated torque control (IDK) – no torque wrench required
- + With option to connect casing pipes
- + Casing pipe end plugs for electricity/water, telecommunication or fibreglass
- + Gas and water pressure tight up to 1 bar
- + DIN 18533 W2.1 -E (“moderate impact of pressing water”)
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASO® Inject LR

empty pipe as recess for retrofit installation of cables and pipes using a casing pipe end plug (electricity/water, telecommunication or fibreglass), with injection system | DIN 18533 W2.1 – E, DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Inject LR		
Core drilling / casing in mm (from - to)	100 (99 - 103)		
Wall thickness from ... to ...	200 - 600 mm		
External diameter sealing flange in mm	200 mm		
Casing pipe end plug, optional	Electricity/water	Telecommunication	Glass fibre
External diameter in mm	25 - 63	2 x 5 - 7 4 x 7 - 13 1 x 13 - 21	2 x 5 - 7 2 x 7 - 13 1 x 12 - 16 1 x 23 - 40
KRASO® Inject LR (for wall thickness 200 - 600 mm)	195 €		
KRASO® Inject LR (for wall thickness 200 - 1,200 mm)	295 €		

Scope of supply: KRASO® Inject LR, including inject sealing insert with IDK (integrated torque control), thick-walled true diameter casing, wall fixing ring, expansion resin, casing pipe end plug

Further diameters and wall thicknesses available on request!

For all
standard wall
types!

Inject sealing insert with IDK
(integrated torque control)



KRASO® Inject FR

The inject wall penetration with flow direction (FR)
for existing buildings

- + Quick and easy to install wall penetration for e.g. sewage pipes
- + One flow direction! Including pipe with sleeve and spigot for the connection of KG/KG 2000 pipes
- + Suitable for all common types of walls – also for hollow bricks
- + With sealing flange for exterior sealing (“black tank”)
- + Ideal for rehabilitation and new connections into existing buildings
- + Integrated torque control (IDK) – no torque wrench required
- + Injection system with fast-curing expansion resin
- + Gas and water pressure tight up to 1 bar
- + DIN 18533 W2.1 -E (“moderate impact of pressing water”)
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASO® Inject FR **LG 6**

wall penetration for the connection of KG/KG 2000 pipes, with injection system
| DIN 18533 W2.1 -E, DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Inject FR	
Diameter DN	110	160
Wall thickness in mm from ... to ...*	200 - 400	
Diameter core drilling min ... max ... in mm	149 - 153	199 - 203
External diameter sealing flange in mm	250	300
Length KG pipe* in cm	50	
KRASO® Inject FR	295 €	425 €

* Extendable on-site

Scope of supply: KRASO® Inject FR, including inject sealing insert with IDK (integrated torque control), pipe with sleeve and spigot, wall fixing ring, expansion resin


Further diameters and wall thicknesses available on request!

KRASO® Mobile

The mobile exhibition stand for your events, in-house exhibitions and campaign days

- + Are you planning an in-house exhibition, an action day, a craftsmen's breakfast or another customised event? We will come to you - with the **KRASO® Mobile**, our mobile exhibition stand - and present **KRASO® Products** and waterproofing solutions to your customers!
- + The **KRASO® Mobile** is ready for use as an exhibition stand in just a few minutes: numerous product samples in installation situations, a seating area for in-depth discussions with customers, a large TV screen for presentations!
- + **KRASO® Employees** on site: our waterproofing experts will come to you with the **KRASO® Mobile**, take care of setting up and dismantling and are available to answer all your customers' questions!
- + Information and advertising material: whether information flyers or promotional gifts - the **KRASO® Mobile** has everything a trade fair stand needs!
- + Make it easy for yourself: book the **KRASO® Mobile** for your next event - absolutely free of charge! The **KRASO® Mobile** only requires approx. 50 m² of floor space and a power connection.

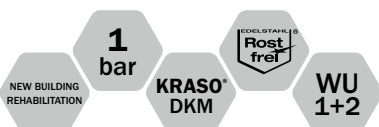
We look forward to your enquiry

- + +49(0)28 72 - 95 35-0
- + WhatsApp +49(0)28 72 - 95 35-888 
- + marketing@kraso.de





KRASO® Multi-Flange Plate Type MFP
Check the installation video
(just scan the QR code!)



KRASO® Multi-Flange Plate Type MFP

Smart combination – innovative solution

- + Combination of high-quality **KRASO® Sealing Insert** and flange plate made of high-strength special plastic!
- + Fast and easy installation thanks to the low weight – even by just one person!
- + Installation in front of the waterproof concrete wall. EPDM flat seal, fixing material and adhesive and sealant **KRASO® PU 50** are included in the scope of supply.
- + For new buildings and rehabilitation! Easy and fast installation and sealing of all kinds of media lines, also retrospectively. Special designs can usually be produced and dispatched within 24 hours.
- + MPA-tested: water pressure tight up to 1 bar!
- + **Torque Control Nut KRASO® DKM**: integrated torque limiter - no torque wrench required!
- + DafStB waterproof concrete guideline: stress class 1 + 2



KRASO® Multi-Flange Plate Type MFP, EPDM flat seal, fixing material, adhesive and sealant **KRASO® PU 50**

KRASO® Multi-Flange Plate Type MFP **LG 1**

for installation of pipes, sealing width to the media pipe or cable 20 mm | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Multi-Flange Plate Type MFP						
Diameter integrated KRASO® Sealing Insert	80	100	125	150	200	250	300
Plate size approx. in mm	d = 206	d = 226	d = 243	d = 273	d = 323	d = 373	d = 423
Diameter pipe or cable from ... to ... in mm	22 - 25	32 - 35	60 - 63	78 - 80	108 - 110	158 - 160	200
	32 - 35	40 - 43	75 - 77	88 - 90	114 - 118	168 - 170	210
	40 - 43	48 - 50	78 - 80	108 - 110	123 - 125	177 - 180	219
		60 - 63			133 - 135	200	225
					139 - 140	210	250
					158 - 160		
KRASO® Multi-Flange Plate Type MFP	213 €	225 €	244 €	261 €	315 €	361 €	444 €

Scope of supply: **KRASO® Multi-Flange Plate Type MFP**, EPDM flat seal incl. fixing material, adhesive and sealant **KRASO® PU 50**

Further sizes and diameters available on request!



KRASO® Casing Type FL/ZA
for dowel-fixing - non-corrosive
stainless steel - with special coating

- threaded protective caps protect the threaded bolts against contamination with thick coating
- spacers prevent the thick coating from being pressed off



KRASO® Casing and Sealing Insert Type FL

Fixed-loose flange for dowel-fixing or for concreting and as a sealing insert

- + For buildings with exterior sealing ("black tank"): according to DIN 18533 ("sealing of below-ground structural elements")
- + Each design available as separate types for pressing and non-pressing water
- + Available in non-corrosive stainless steel V2A or V4A and in electrogalvanised steel!
- + Upon request available with special coating for buildings with thick coating (e.g. KMB)!
- + DIN 18533: water exposure classes W2.1 -E and W2.2 -E
("medium impact of pressing water" - water column ≤ 3 metres) /
("high impact of pressing water" - water column ≥ 3 metres)

KRASO® Casing Type FL/ZA
- for dowel-fixing -



non-corrosive stainless steel V2A

KRASO® Casing Type FL/ZE
- for concreting -



non-corrosive stainless steel V2A

KRASO® Sealing Insert Type FL/DD
- double sealing -



non-corrosive stainless steel V2A



electrogalvanised



electrogalvanised,
with plastic casing



electrogalvanised



KRASO® Casing Type FL/ZA
Check the installation video
(just scan the QR code!)



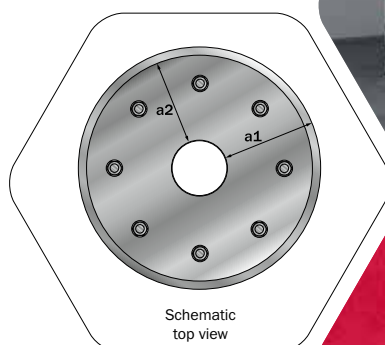
KRASO® Casing Type FL/ZA - fixed-loose flange for dowel-fixing **LG2**

fixed-loose flange for dowel-fixing, with casing, for installation of media pipes using a sealing insert (not included in the scope of supply), for buildings with exterior sealing ("black tank") according to DIN 18533. Available in non-corrosive stainless steel V2A or electrogalvanised, each with or without special coating. ID = InternalDiameter | **DIN 18533 W2.1 -E and W2.2 -E**

Type / Item	KRASO® Casing Type FL/ZA - DIN 18533 W2.2 -E: HIGH IMPACT OF PRESSING WATER (WATER COLUMN ≥ 3 METRES)						
Casing Internal Diameter ID	80	100	125	150	200	250	300
Protrusion in mm	80						
Diameter fixed-flange a1	surrounding 160 mm - t = 10 mm						
Diameter loose-flange a2	surrounding 150 mm - t = 10 mm						
KRASO® Casing Type FL/ZA - non-corrosive stainless steel V2A -	766 €	863 €	931 €	1,045 €	1,262 €	1,486 €	1,737 €
KRASO® Casing Type FL/ZA - electrogalvanised -	546 €	616 €	671 €	747 €	884 €	1,085 €	1,332 €
EPDM supplement (2 pcs.)	32 €	35 €	39 €	44 €	58 €	75 €	86 €
Surcharge special coating	144 €	151 €	166 €	183 €	201 €	222 €	243 €

Type / Item	KRASO® Casing Type FL/ZA - DIN 18533 W2.1 -E: SOIL MOISTURE AND NON-PRESSING WATER						
Casing Internal Diameter ID	80	100	125	150	200	250	300
Diameter fixed-flange a1	surrounding 70 mm - t = 6 mm						
Diameter loose-flange a2	surrounding 60 mm - t = 6 mm						
KRASO® Casing Type FL/ZA - non-corrosive stainless steel V2A -	514 €	603 €	650 €	751 €	939 €	1,181 €	1,423 €
KRASO® Casing Type FL/ZA - electrogalvanised -	384 €	448 €	499 €	585 €	730 €	907 €	1,142 €
EPDM supplement (2 pcs.)	22 €	23 €	28 €	30 €	39 €	53 €	61 €
Surcharge special coating	122 €	129 €	135 €	142 €	149 €	157 €	164 €

Scope of supply: KRASO® Casing Type FL/ZA, casing with welded fixed-flange, loose-flange, dowels M8 x 100, bolts, nuts and washers M20 /M12
Further diameters and protrusions available on request! Also available in V4A!





KRASO® Casing Type FL/ZE
Check the installation video
(just scan the QR code!)



KRASO® Casing Type FL/ZE - fixed-loose flange for concreting

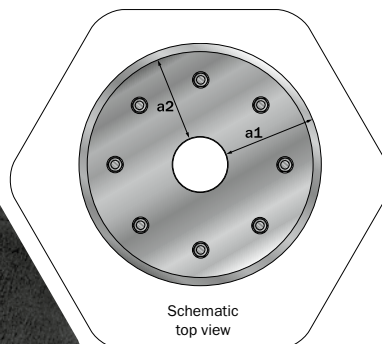
fixed-loose flange for concreting, with casing, for installation of media pipes using a sealing insert (not included in the scope of supply) for buildings with exterior sealing ("black tank") against pressing /non-pressing water according to DIN 18533. Available in non-corrosive stainless steel V2A or electrogalvanised with plastic casing, each with or without special coating. ID = InternalDiameter | **DIN 18533 W2.1 -E and W2.2 -E**

Type / Item	KRASO® Casing Type FL/ZE - DIN 18533 W2.2 -E: HIGH IMPACT OF PRESSING WATER (WATER COLUMN ≥ 3 METRES)						
Casing Internal Diameter ID	80	100	125	150	200	250	300
Wall thickness in cm	20 • 24 • 25 • 30 • 35 • 36,5 • 40 • 45 • 50						
Diameter fixed-flange a1	surrounding 160 mm - t = 10 mm						
Diameter loose-flange a2	surrounding 150 mm - t = 10 mm						
KRASO® Casing Type FL/ZE - non-corrosive stainless steel V2A -	839 €	918 €	997 €	1,121 €	1,400 €	1,722 €	2,036 €
KRASO® Casing Type FL/ZE - electrogalvanised -	587 €	642 €	698 €	785 €	980 €	1,206 €	1,425 €
EPDM supplement (2 pcs.)	32 €	35 €	39 €	44 €	58 €	75 €	86 €
Surcharge special coating	144 €	151 €	166 €	183 €	201 €	222 €	243 €

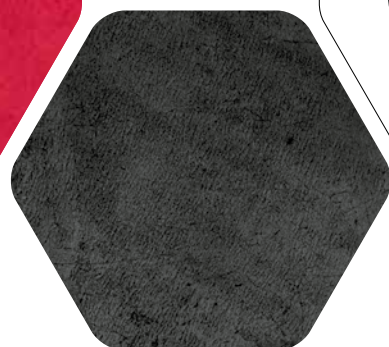
Type / Item	KRASO® Casing Type FL/ZE -DIN 18533 W2.1 -E: SOIL MOISTURE AND NON-PRESSING WATER						
Diameter fixed-flange a1	surrounding 70 mm - t = 6 mm						
Diameter loose-flange a2	surrounding 60 mm - t = 6 mm						
KRASO® Casing Type FL/ZE - non-corrosive stainless steel V2A -	622 €	679 €	759 €	874 €	1,169 €	1,666 €	1,833 €
KRASO® Casing Type FL/ZE - electrogalvanised -	436 €	476 €	531 €	612 €	818 €	1,166 €	1,283 €
EPDM supplement (2 pcs.)	22 €	23 €	28 €	30 €	39 €	53 €	61 €
Surcharge special coating	122 €	129 €	135 €	142 €	149 €	157 €	164 €

Scope of supply: KRASO® Casing Type FL/ZE, with welded fixed-flange, loose-flange, dowels M8 x 100, bolts, nuts and washers M20 or M12

Further diameters and wall thicknesses available on request! Also available in V4A!



Schematic
top view





KRASO® Sealing Insert Type FL
Check the installation video
(just scan the QR code!)



KRASO® Sealing Insert Type FL - fixed-loose flange **LG 2**

fixed-loose flange with **KRASO® Sealing Insert**, for installation of media pipes for buildings with exterior sealing ("black tank") according to DIN18533. Available in non-corrosive stainless steel V2A or electrogalvanised, each with or without special coating, **Torque Control Nut KRASO® DKM | DIN 18533 W2.1 -E and W2.2 -E**

Diameter DN	80	100	125	150	200	250	300
max. external diameter pipe or cable							
from	0	0	0	0	0	0	0
to	55	75	100	125	175	225	275

Type / Item	KRASO® Sealing Insert Type FL/DD - DIN 18533 W2.2 -E: HIGH IMPACT OF PRESSING WATER (WATER COLUMN ≥ 3 METRES)						
Diameter fixed-flange a1	surrounding 160 mm - t = 10 mm						
Diameter loose-flange a2	surrounding 150 mm - t = 10 mm						
KRASO® Sealing Insert Type FL/DD - non-corrosive stainless steel V2A -	779 €	876 €	954 €	1,063 €	1,258 €	1,543 €	1,900 €
KRASO® Sealing Insert Type FL/DD - electrogalvanised -	546 €	616 €	671 €	747 €	884 €	1,085 €	1,332 €
EPDM supplement (2 pcs.)	32 €	35 €	39 €	44 €	58 €	75 €	86 €
Surcharge special coating	144 €	151 €	166 €	183 €	201 €	222 €	243 €

Type / Item	KRASO® Sealing Insert Type FL/ED - DIN 18533 W1 -E: SOIL MOISTURE AND NON-PRESSING WATER						
Diameter fixed-flange a1	surrounding 70 mm - t = 6 mm						
Diameter loose-flange a2	surrounding 60 mm - t = 6 mm						
KRASO® Sealing Insert Type FL/ED - non-corrosive stainless steel V2A -	550 €	639 €	711 €	833 €	1,038 €	1,293 €	1,632 €
KRASO® Sealing Insert Type FL/ED - electrogalvanised -	384 €	448 €	499 €	585 €	730 €	907 €	1,143 €
EPDM supplement (2 pcs.)	22 €	23 €	28 €	30 €	39 €	53 €	61 €
Surcharge special coating	122 €	129 €	135 €	142 €	149 €	157 €	164 €

Scope of supply: KRASO® Sealing Insert Type FL/DD / KRASO® Sealing Insert Type FL/ED, sealing insert with welded fixed-flange, loose-flange, dowels M8 x 100, bolts, nuts and washers M20 or M12, 40 mm or 20 mm seal

Further diameters available on request! Also available in V4A!



KRASO® Flange Plate non-corrosive stainless steel V2A **LG 2**

for installation of pipes or cables using a sealing insert (not included in the scope of supply), in front of a core drilling in concrete or masonry wall, made of non-corrosive stainless steel V2A, EPDM flat seal. ID = InternalDiameter | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASO® Flange Plate non-corrosive stainless steel V2A						
InternalDiameter ID tubular sleeve	80	100	125	150	200	250	300
Protrusion in mm	80	80	80	80	80	80	80
Plate size in mm	d = 240	d = 260	d = 290	d = 310	d = 360	d = 410	d = 460
KRASO® Flange Plate non-corrosive stainless steel V2A	228 €	236 €	252 €	265 €	308 €	348 €	384 €

Scope of supply: KRASO® Flange Plate - non-corrosive stainless steel V2A, with welded stainless steel tubular sleeve, EPDM flat seal incl. fixing material and adhesive and sealant **KRASO® PU 50**

Further sizes and diameters available on request! Available for an additional charge: split design, fixed-loose flange construction according to DIN 18533, stainless steel V4A!



KRASO® Flange Plate electrogalvanised **LG 2**

for installation of pipes or cables using a sealing insert (not included in the scope of supply), in front of a core drilling in concrete or masonry wall, electrogalvanised steel, EPDM flat seal. ID = InternalDiameter | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASO® Flange Plate electrogalvanised						
InternalDiameter ID tubular sleeve	80	100	125	150	200	250	300
Protrusion in mm	80	80	80	80	80	80	80
Plate size in mm	d = 240	d = 260	d = 290	d = 310	d = 360	d = 410	d = 460
KRASO® Flange Plate electrogalvanised	171 €	177 €	190 €	199 €	230 €	262 €	289 €

Scope of supply: KRASO® Flange Plate electrogalvanised, with welded tubular sleeve, EPDM flat seal incl. fixing material and adhesive and sealant **KRASO® PU 50**

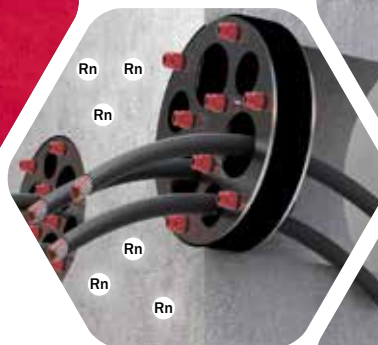
Further sizes and diameters available on request!

Non-corrosive steel or galvanised? Note the following:

- + **Long-lasting quality:** non-corrosive stainless steel has got an especially high proportion of chromium. Combined with further alloying constituents, this is a protective layer ("chromium-oxide") providing a special protection against corrosion and acids
- + **Cost-effective alternative:** electrogalvanised steel has got a protective coating made of zinc. However, the coating is only a few microns. If this is damaged e.g. on the construction site, the risk of corrosion increases. If there is constant dampness, it is advisable to use the quality of non-corrosive steel.



Protection
against radon!



KRASO® Sealing Inserts Protection against radon!

- + Radon is a naturally occurring noble gas. An accumulation of the radioactive gas in rooms is harmful to health!
- + **KRASO® Sealing Inserts** and **KRASO® Pipe Penetrations with 4 Seal** do not only protect against pressing water, but they are also gas-tight – MPA- and IAF-tested!
For a reliable protection against radon, look out for the label „RADON-TIGHT!“ and the „FHRK Radon Tight“ seal!

KRASO® Sealing Insert Configurator – Online and as app

- + Simple and fast: configure the fitting sealing insert and request an offer online or via app. Just enter the quantity and diameters of the media lines and the sealing insert configurator proves the feasibility or proposes the suitable diameter for a core drilling.
Available free of charge for iOS or at **KRASO.de/en**.



KRASO® Sealing Insert Configurator
(just scan the QR code!)





Utility Connection -
Entries



Heat Pumps

Floor

Builder's Convenience Box - floor - **SET** p. 46 + - floor - 110 p. 50 + - floor - 150 p. 52 +
- floor - NFE p. 54

Wall

Builder's Convenience Box - wall p. 57 + - wall - NFE p. 59 +
- wall - ESH p. 61 + - wall - SWP p. 63 + heat pump connection WP-DUO p. 64 +

Accessories

BKP - Sealing Inserts p. 65 + BKP Gas Installation Kits p. 66 +
Flexible Empty Pipe System FLS 90 p. 66



KRASO® Builder's Convenience Box
- floor - **SET**
Check the installation video
(just scan the QR code!)

With integrated
installation kit:
no need to pass on
across installers

UTILITY - ENTRIES

Multi utility
connection for
buildings without
basement



KRASO® Builder's Convenience Box - floor - **SET**

The multi utility connection with integrated installation kit

- + The convenient solution for builders: safe and tight installation of gas, water, electricity and telecommunication lines into buildings without basement!
- + DVGW-certified according to VP 601: overall system is gas- and water pressure tight up to 1 bar! Gas- and odour-tight – high-quality in terms of TA-Air!
- + Radon-tight! Resistant to methane gas!
- + **KRASO® 4 Seal**: exterior sealing of concrete: 10 bar!
Overall system is gas- and water pressure tight up to 1 bar!
- + Simple installation due to stable installation device and visual check of the snap-on-socket - helps to avoid installation errors
- + Hose diameter: external 90 mm - internal 80 mm
- + With integrated installation kit: ready-assembled components for the utility connection of electricity, water and telecommunication lines, including floor screed insert and height fixation. No need to pass on the installation kit to other installers
- + For flush-mount installation in the base plate - no tripping hazards, no wall damages! Including building period installation cover
- + Easy integration of vapour barrier foils due to the roughened trowel flange!
- + Height-adjustable base plate as well as floor screed
- + **KRASO® BKP Gas Installation Kits** optionally available!
- + Split end plugs for easy installation!
- + Including extension set!
- + DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1.1 -E



M-1.4-PK-EN-v1.0-WeS.DK

Builder's Convenience Box - floor - **SET** with integrated installation kit

In line with
the construction progress:

1./2. Shell construction phase

The installation kit in the **SET** is securely closed with a building period protective cover. After the pouring of the base plate the vapour barrier foil can be applied to the roughened trowel flange.

3. Screed/floor structure

The floor screed insert is pulled out of the **SET** and adjusted to the desired height (0 - 250 mm). The floor screed insert can be fixed with the height fixation.

4. Installation phase

The lines for water, electricity and telecommunication can now be installed in the building and then sealed with the appropriate **KRASO® Sealing Insert** from the installation kit. A passing on across installers is not necessary!

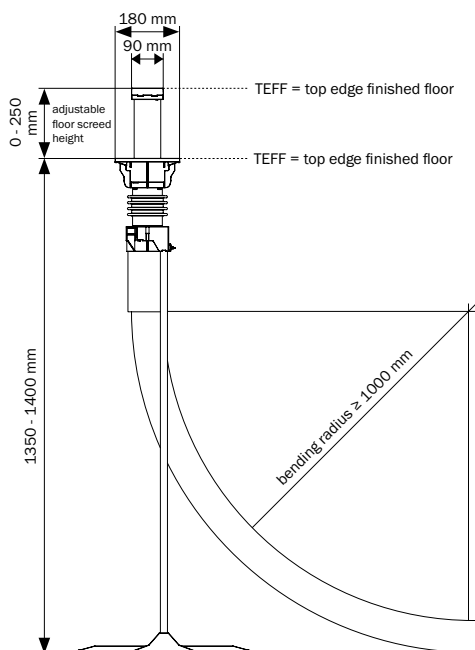
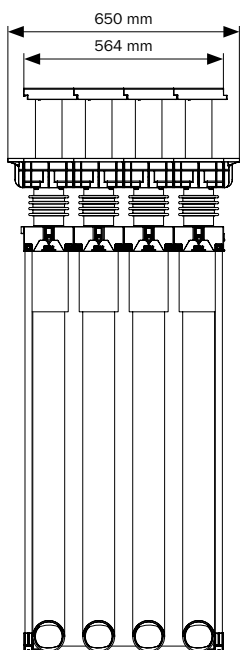
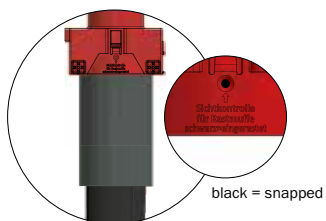
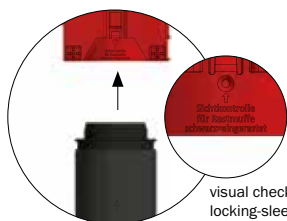
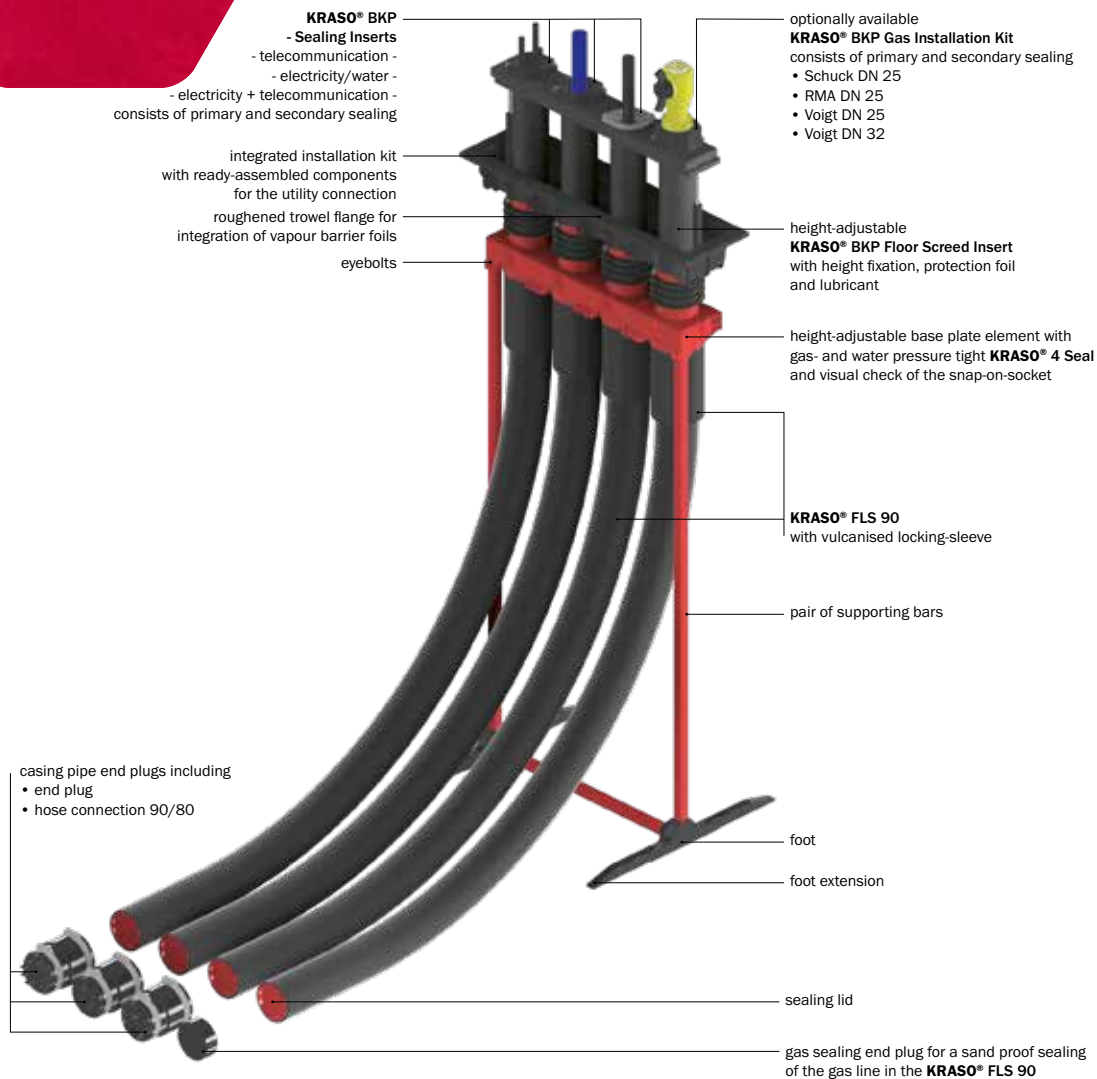
1. Shell construction phase

2. Shell construction phase

3. Screed laying

4. Installation phase







KRASO® Builder's Convenience Box - floor - SET LG 5

multi utility connection for supply lines (gas, water, electricity, telecommunication) for buildings without basement incl. **KRASO® FLS 90**, incl. installation kits for electricity/water (2 x), telecommunication, electricity + telecommunication as standard configuration for **KRASO® BKP - floor - SET** - 4-fold, desired configuration for the **KRASO® BKP - floor - SET** - 3-fold, 2-fold, 1-fold, **KRASO® BKP Gas Installation Kits** are optionally available | **DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1.1-E**

Type / Item		KRASO® BKP - floor - SET						
Height-adjustable to TEUF* in mm from ... to ...		1350 - 1400						
Height-adjustable to TEFF** in mm from ... to ...		0 - 250						
Bending radius in mm		≥ 1000						
incl. KRASO® FLS 90 (hose length per section)		3 metres	4 metres	6 metres	9 metres	10 metres	12 metres	15 metres
Design	Dimensions floor screed insert wiping edge in mm							
1-fold	141 x 90	404 €	424 €	463 €	521 €	541 €	580 €	638 €
2-fold	284 x 90	553 €	592 €	670 €	787 €	826 €	904 €	1,021 €
3-fold	423 x 90	834 €	893 €	1,010 €	1,185 €	1,244 €	1,361 €	1,536 €
4-fold	564 x 90	963 €	1,041 €	1,197 €	1,431 €	1,509 €	1,665 €	1,899 €
5-fold	705 x 90	1,237 €	1,335 €	1,530 €	1,821 €	1,919 €	2,115 €	2,407 €

Scope of supply: the following details are for the **KRASO® Builder's Convenience Box - floor - SET** - 4-fold with **KRASO® FLS 90** (3 metres), the delivery is differing with regard to other designs (3-fold, 2-fold, 1-fold)

- foot
- foot extension
- pair of supporting bars
- height-adjustable base plate element 4-fold with gas- and water pressure tight **KRASO® 4 Seal**, trowel flange, visual check for locking-sleeve and integrated installation kit with building period installation cover
- 4 x Flexible Empty Pipe System **KRASO® FLS 90** (3 metres) with vulcanised locking-sleeve and closure cover
- height-adjustable **KRASO® BKP Floor Screed Insert** with protective cover and lubricant
- height fixation for **KRASO® BKP Floor Screed Insert** (2 pcs.)
- installation instructions
- **KRASO® Builder's Convenience Box - floor - SET**
- **KRASO® BKP - floor - Extension Set** including
 - 4 x adapter tube (DN 90 to DN 75)
 - 8 x shrink hose 95/25
- installation kits including
 - **KRASO® BKP - Sealing Insert - electricity/water** - 2 pcs. with stepless onion ring technology 26 - 50 mm or blind
 - primary sealing + secondary sealing electricity/water
 - casing pipe end plugs including
 - end plugs electricity/water - split -
 - hose connection 90/75
 - **KRASO® BKP - Sealing Insert - telecommunication** - clamping range: 5 - 13 mm, 3 x 7 - 13 mm, 13 - 21 mm
 - primary sealing + secondary sealing telecommunication
 - casing pipe end plugs including
 - end plug telecommunication - split -
 - hose connection 90/75

- **KRASO® BKP - Sealing Insert - electricity + telecommunication** - clamping range: electricity 25 - 36 mm / telecommunication 2 x 5 - 10 mm, 3 x 7 - 14 mm
 - primary sealing + secondary sealing electricity + telecommunication
 - casing pipe end plugs including
 - end plug electricity + telecommunication
 - hose connection 90/75
 - a tube of lubricant

optionally available **KRASO® BKP Gas Installation Kits:**

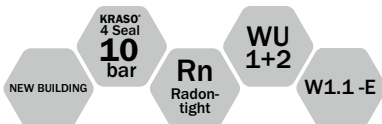
- Schuck DN 25 consisting of primary and secondary sealing as well as gas end plug
- RMA DN 25 consisting of primary and secondary sealing as well as gas end plug
- Voigt DN 25 consisting of primary and secondary sealing as well as gas end plug
- Voigt DN 32 consisting of primary and secondary sealing as well as gas end plug

* TEUF = Top Edge Unfinished Floor, ** TEFF = Top Edge Finished Floor

Single utility
connection for
buildings without
basement

UTILITY - ENTRIES

suitable for
Heat Pumps



KRASO® Builder's Convenience Box - floor - 110

The flexible utility connection for heat pumps, local, district or geothermal heating, gas, water or electricity

- + The secure utility connection for heat pumps for buildings without basement:
 - **KRASO® Builder's Convenience Box - floor - 110** for water-to-water heat pumps and brine-water-heat pumps (probe and collector)
 - **KRASO® Builder's Convenience Box - floor - 110 - SWP** for air-to-water heat pump (split)
- + Flexible: also usable for configuring with local, district or geothermal piping systems, gas, water or electricity up to DN 50
- + With water pressure tight surrounding **KRASO® 4 Seal**: exterior sealing of concrete: 10 bar!
- + Radon-tight!
- + Hose diameter: external 110 mm - internal 100 mm!
- + Stable installation device with foot extension for a save position and an easy installation
- + For flush-mount installation in the base plate – no tripping hazards, no wall damages! Including building period protection cover
- + Incl. empty pipe insert (25 cm, internal diameter: 100 mm) for a flexible floor construction
- + Incl. Flexible Empty Pipe System **KRASO® FLS 110** (internal diameter: 100 mm): bending radius 1000 mm. Incl. hose adapter 110 and end plug
- + DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1.1 -E



KRASO®
Builder's Convenience
Box - floor - 110
also available as multi utility
connection!

KRASO® Builder's Convenience Box - floor - 110

with KRASO® Sealing Insert Universal 100 DD with large flange for internal installation of the lines

Scope of application:

- stepless onion ring technology
18 - 65 mm or blind



KRASO® Builder's Convenience Box - floor - 110 - SWP

with KRASO® Sealing Insert Type SWP with large flange for internal installation of the lines

Scope of application:

- for control cables, closed:
stepless onion ring technology
2 x 5 - 18 mm, with plug
- for refrigerant pipes, split:
 - onion ring technology 1 x 6 - 13 mm for 1/4 or 3/8 inch pipes, with plug
 - onion ring technology 1 x 6 - 18 mm for 1/4, 3/8, 1/2 or 5/8 inch pipes, with plug



incl. empty pipe insert
(25 cm, internal diameter: 100 mm)

KRASO® Builder's Convenience Box - floor - 110 **LG 5**

(including installation set)

KRASO® Builder's Convenience Box (BKP) - floor - 110 - 1-fold, single utility connection for supply lines (heat pump, local/district/geothermal heating, gas, water or electricity) for buildings without basement, incl. **KRASO® FLS 110**. | **DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1.1 -E**

Type / Item	KRASO® BKP - floor - 110 / KRASO® BKP - floor - 110 - SWP			
Height to TEUF in mm	approx. 1185			
Height-adjustable to TEFF in mm to max.	approx. 1435			
Bending radius in mm	1000			
incl. KRASO® FLS 110	3 metres	6 metres	9 metres	12 metres
KRASO® BKP - floor - 110	715 €	814 €	913 €	1,012 €
KRASO® BKP - floor - 110 - SWP	750 €	849 €	948 €	1,047 €

Scope of supply: stable installation device with foot extension, wall penetration for installation flush with the base plate, Flexible Empty Pipe System **KRASO® FLS 110** (internal diameter: 100 mm), radius: 1000 mm, incl. hose adapter 110, installation set including: empty pipe insert ID 100, approx. 25 cm, **KRASO® Sealing Insert Universal 100 DD** with large flange, end plug FLS 110 Universal or **KRASO® Sealing Insert Type SWP** with large flange, end plugs

6 x 6 - 38 mm
or blind4 x 6 - 18 mm and
6 x 6 - 33 mm
or blind3 x 6 - 52 mm
or blind1 x 50 - 92 mm
or blind

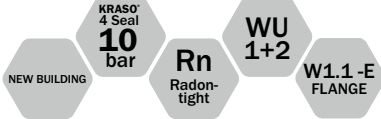
Hose adapter DN 160



Hose adapter DN 110



Sleeve DN 160



KRASO® Builder's Convenience Box - floor - 150

The safe utility connection for larger media lines

- + The safe utility connection for larger media lines for buildings without basement, e.g. electricity or water for residential buildings or commercial buildings
- + Usable with **KRASO® Sealing Insert** with large flange as utility connection entry or outlet: e.g. for charging stations in residential buildings (flat ownership modernisation law – WEMoG)
- + With water pressure tight surrounding **KRASO® 4 Seal**: exterior sealing of concrete: 10 bar!
- + Radon-tight!
- + Stable installation device incl. rigid empty pipe with bending radius from 1000 mm
- + For flush-mount installation in the base plate – no tripping hazards, no wall damages! Including building period protection cover
- + Including empty pipe insert (25 cm, internal diameter: 150 mm) for a flexible floor construction
- + Internal installation of media lines via **KRASO® Sealing Inserts**: various designs with stepless onion ring technology
- + External optional connection possibilities: connection to **KRASO® FLS**, cable protective hoses DN 110 or DN 160 or KG empty pipe systems with DN 160
- + Optionally available: **KRASO® Trowel Flange**
- + DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1.1 -E



Optional
KRASO®
Trowel Flange



KRASO®
Empty Pipe Insert

KRASO® Builder's Convenience Box - floor - 150 **LG 5**

single utility connection for supply lines, for buildings without basement, with water pressure tight surrounding **KRASO® 4 Seal** | **DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1.1-E**

Type / Item	KRASO® BKP - floor - 150			
Height to TEUF in mm	approx. 1220			
Height-adjustable to TEFF in mm to max.	approx. 1470			
Bending radius mm	1000			
KRASO® KRASO Sealing Insert with large flange optionally:	Design 1	Design 2	Design 3	Design 4
Stepless onion ring technology: external diameter cable from ... to ... in mm	3 x 6 - 52 mm or blind	4 x 6 - 18 mm and 6 x 6 - 33 mm or blind	6 x 6 - 38 mm or blind	1 x 50 - 92 mm or blind
KRASO® System Cover KDS – optionally:	Design 1	Design 2	Design 3	
	Hose adapter 160	Hose adapter 110	Sleeve DN 160	
KRASO® BKP - floor - 150	821 €			
optionally: KRASO® Trowel Flange	93 €			

Scope of supply: rigid empty pipe 150 incl. stable installation device, empty pipe insert ID150, approx. 25 cm, **KRASO® Sealing Insert** with large flange for the installation in **KRASO® Empty Pipe Insert**, **KRASO® System Cover KDS** for the connection of on-site empty pipe



Trusting in knowledge - building tightly **KRASO®** is a member of FHRK e. V.

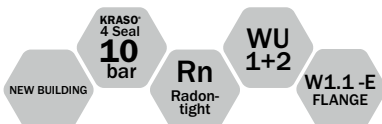
- + As a member of the **Fachverband Hauseinführungen für Rohre und Kabel** (Professional association house entries for pipes and cables, **FHRK e. V.**), together with other manufacturers and users such as utility companies, we develop test principles and technical guidelines that ensure the quality of sealing solutions for house entries and make them comparable.



suitable for

Heat Pumps

Simple,
comfortable,
tight to the heat pump
or to the local, district
and geothermal energy
network

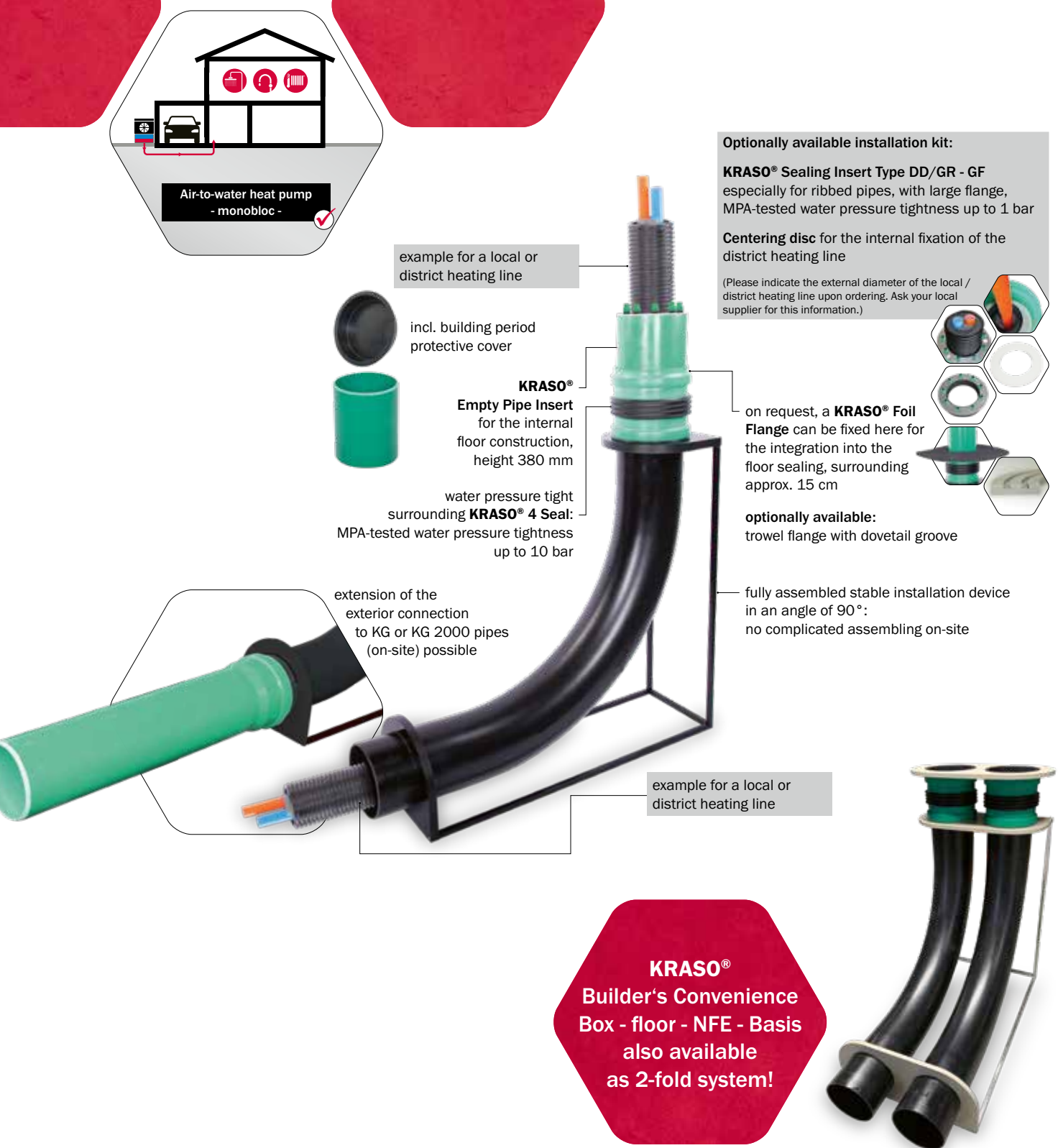


KRASO® Builder's Convenience Box - floor - NFE - Basis

Simple, comfortable, tight to the heat pump or
to the local, district and geothermal energy network

- + The comfortable solution for the connection to air-water-heat pump (monobloc) or to the local, district and geothermal energy network – for flexible and insulated pipelines with integrated supply and reflux
- + Fully assembled stable installation device: positioning – arrangement – concreting – connection – ready!
- + For buildings without basement: single-/multi-family houses, public and commercial buildings
- + On request also available with **KRASO® Foil Flange** – for the integration into the floor sealing
- + **KRASO® Builder's Convenience Box - floor - NFE - Basis** including:
 - **KRASO® Builder's Convenience Box - floor - NFE - Basis DN 200, DN 250 or DN 315** with water pressure tight surrounding **KRASO® 4 Seal**
 - **KRASO® Empty Pipe Insert KG 2000**: for the internal floor construction
 - Building period protection cover
- + DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1.1 -E





KRASO® Builder's Convenience Box - floor - NFE - Basis **LG 5**

for the connection to the local, district and geothermal energy network. Optionally available: **KRASO® Foil Flange** for the integration into the floor sealing | DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1.1 - E

Type / Item	KRASO® BKP - floor - NFE - Basis				
Diameter DN	DN 200	DN 200	DN 200	DN 250	DN 315
Bending radius in mm	800	1000	1250	800	1000
KRASO® BKP - floor - NFE - Basis	914 €	955 €	1,017 €	991 €	1,154 €
KRASO® Foil Flange (optionally available)	237 €	237 €	237 €	309 €	400 €
Installation kit (optionally available)	284 €	284 €	284 €	339 €	434 €

Scope of supply: KRASO® Builder's Convenience Box - floor - NFE - Basis with installation device, empty pipe insert and building period protection cover - optionally available: **KRASO® Foil Flange**, installation kit with **KRASO® Sealing Insert Type DD/GR - GF** and centering disc

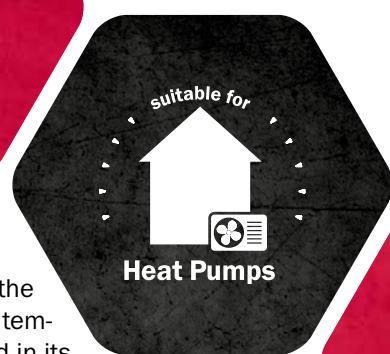
Two-fold version on request!

Heat Pumps

Technologies and properties

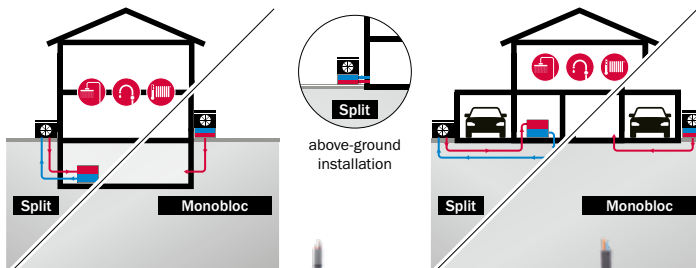
The basic principle is the same for all heat pump technologies: heat is extracted from the environment (air, earth, water), and this heat meets a liquid refrigerant with a low boiling temperature in the heat exchanger. The refrigerant vaporises and is additionally compressed in its gas state in the compressor.

This increases the temperature, so that the heat is transferred to the heating water circuit in the condenser. The cooled refrigerant then becomes liquid again. This principle also works in winter, when most heating is naturally required. The temperature of water and earth is relatively constant throughout the year, and even when generating energy from the air, air-to-water heat pumps can still operate at outside temperatures in the double-digit minus range.



Air-to-water heat pump

- Heat source:** ambient air
- Suitable for:** new building and rehabilitation
- Split:** split heat pump with outdoor and indoor installation
- Monobloc:** heat is generated in the outdoor installation and directed into the interior of the building



KRASO® Builder's Convenience Box - wall - SWP

Air-to-water heat pump - split - for buildings with basement



KRASO® Builder's Convenience Box - wall - NFE

Air-to-water heat pump - monobloc - for buildings with basement



KRASO® WP-DUO

Air-to-water heat pump - split - for above-ground installation



KRASO® Builder's Convenience Box - floor - 110 - SWP

Air-to-water heat pump - split - for buildings without basement

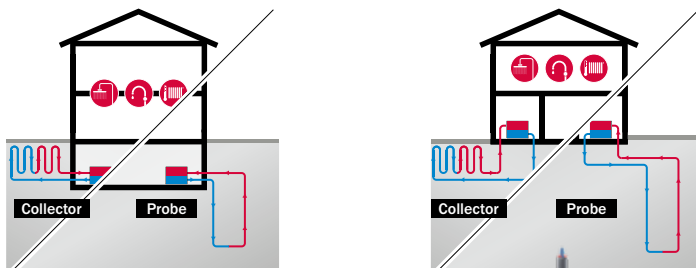


KRASO® Builder's Convenience Box - floor - NFE

Air-to-water heat pump - monobloc - for buildings without basement

Brine-to-water heat pump

- Heat source:** geothermal heat
- Suitable for:** new building and rehabilitation
- Collector:** horizontally and surface-mounted geothermal heat exchanger for the use of near-surface geothermal energy (approx. 1.5 m depth)
- Probe:** vertical drilling into the ground for heat extraction



KRASO® Builder's Convenience Box - wall - NFE

Brine-to-water heat pump - monobloc - / - split - for buildings with basement



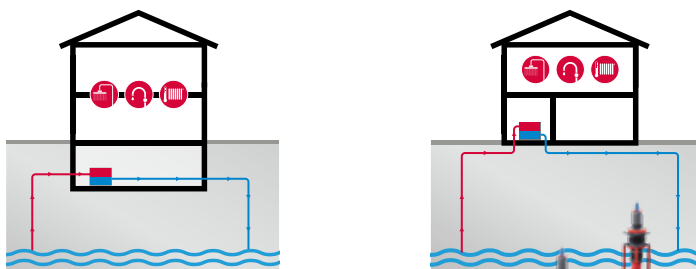
KRASO® Builder's Convenience Box - floor - 110

Brine-to-water heat pump - monobloc - / - split - for buildings without basement

Water-to-water heat pump

- Heat source:** ground water
- Suitable for:** new building and rehabilitation

Uses the relatively constant high temperature of the groundwater throughout the year, which is extracted via a production well and then returned via an infiltration well.



KRASO® Builder's Convenience Box - wall - NFE

Water-to-water heat pump for buildings with basement



KRASO® Builder's Convenience Box - Floor - 110

Water-to-water heat pump for buildings without basement



KRASO® Builder's Convenience Box - wall
Check the installation video
(just scan the QR code!)

Multi utility connection for buildings with basement



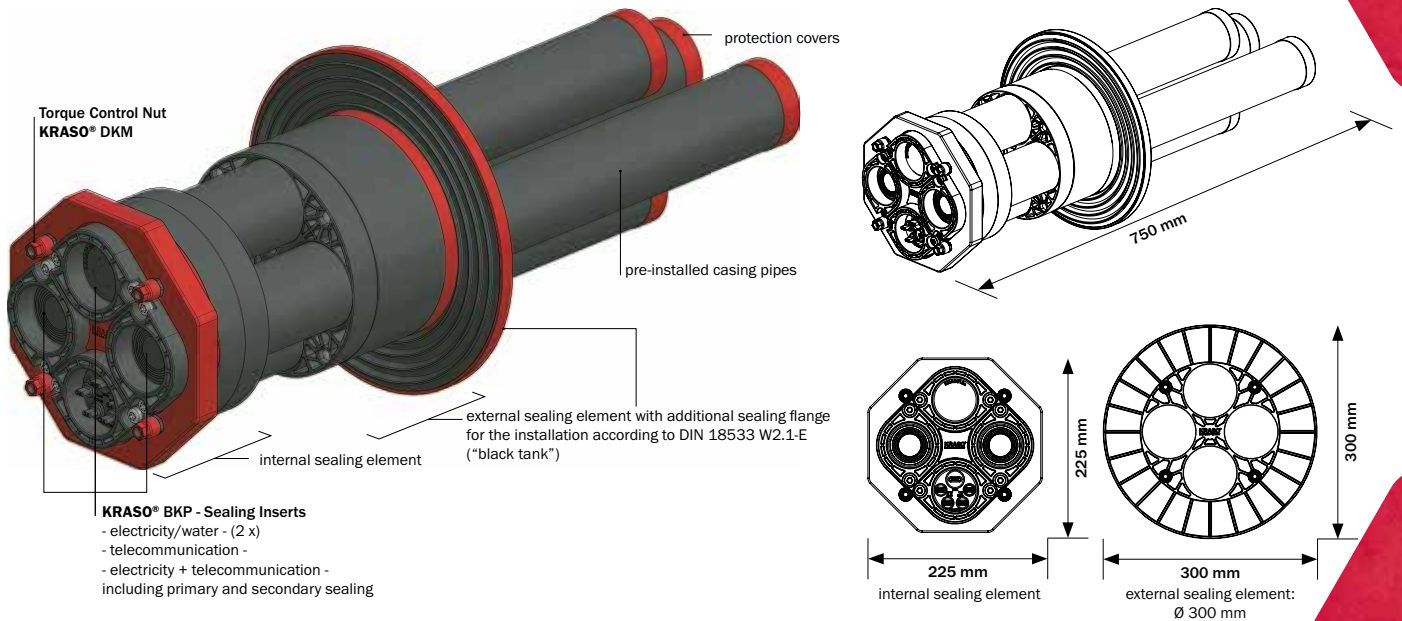
KRASO® BKP - wall - Extension Set including
- 4 x double sleeve DN 75
- 8 x sealing ring
- lubricant



KRASO® Builder's Convenience Box - wall

Multi utility connection for buildings with basement: gas, water, electricity and telecommunication

- + DVGW-certified according to VP 601: complete system is gas- and water pressure tight up to 1 bar!
- + For core drilling and casing DN 200 (199 - 203 mm). For precast walls and in-situ concrete walls!
- + External sealing element with sealing flange according to DIN 18533! Seal width: 80 mm
- + Tight in waterproof concrete structures with stress class 1 (permanently or temporarily pressing water)
- + Radon tightness IAF tested - meets the requirements for radon precautionary areas according to FHRK leaflet MB 101! Resistant to methane gas!
- + **Torque Control Nut KRASO® DKM:** integrated torque limiter - no torque wrench required!
- + Split end plugs for easy installation!
- + Ready for the network connection of gas, water, electricity and telecommunication: tested in accordance with DVGW! Including **KRASO® BKP - Sealing Inserts** for electricity/water, telecommunication, electricity + telecommunication
- + Optionally available **KRASO® BKP Gas Installation Kits:**
 - gas utility connection Schuck DN 25
 - gas utility connection RMA DN 25
 - gas utility connection Voigt DN 25
 - gas utility connection Voigt DN 32
- + Including **KRASO® BKP - wall - Extension Set!**
- + DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E



KRASO® Builder's Convenience Box - wall **LG 5**

multi utility connection for supply lines (gas, water, electricity, telecommunication) for buildings with basement, **KRASO® BKP Gas Installation Kits** optionally available | **DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E**

Type / Item	KRASO® Builder's Convenience Box - wall
Wall thickness from ... to ...	200 - 500 mm
Diameter core drilling min ... max ...	199 - 203 mm
Length complete system	750 mm
Length x width internal sealing element	225 x 225 mm
Diameter external sealing element	300 mm
Internal diameter casing pipes	68 mm
External diameter casing pipes	75 mm
KRASO® Builder's Convenience Box - wall	772 €

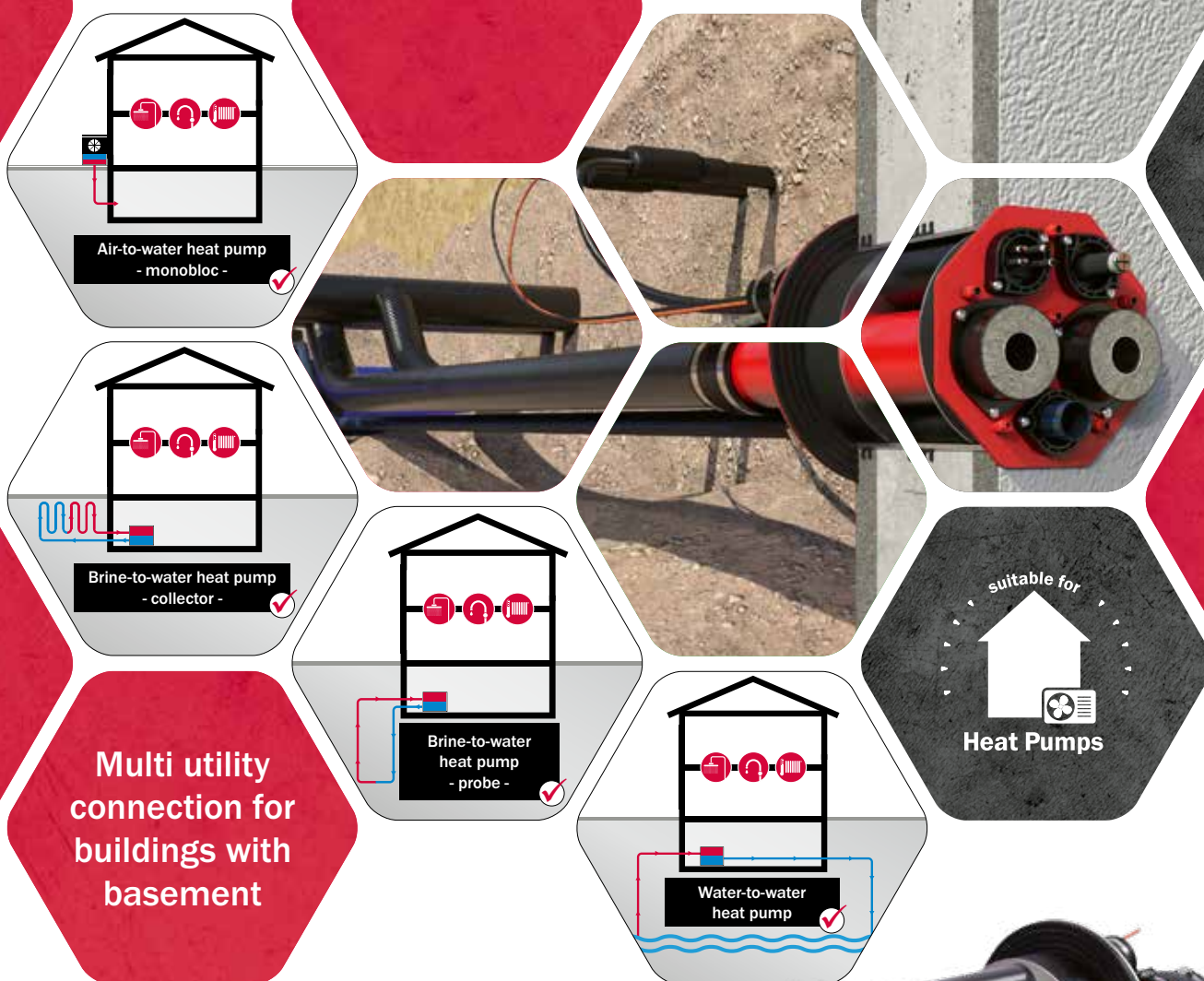
Scope of supply:

- **KRASO® Builder's Convenience Box - wall** including
 - internal sealing element with pre-installed casing pipes incl. protective covers for the installation of supply lines such as gas, water, electricity, telecommunication
 - external sealing element
- **KRASO® BKP - wall - Extension Set** including
 - 4 x double sleeve DN 75
 - 8 x sealing rings
 - lubricant
- installation instructions **KRASO® Builder's Convenience Box - wall**
- installation kits including
 - **KRASO® BKP - Sealing Insert - electricity/water** - 2 pcs. with stepless onion ring technology 26 - 50 mm or blind
 - primary sealing + secondary sealing electricity/water
 - casing pipe end plugs including
 - end plug electricity/water - split -
 - hose connection 80
 - **KRASO® BKP - Sealing Insert - telecommunication** - clamping range: 5 - 13 mm, 3 x 7 - 13 mm, 13 - 21 mm
 - primary sealing + secondary sealing telecommunication
 - casing pipe end plugs including
 - end plug telecommunication - split -
 - hose connection 80

- **KRASO® BKP - Sealing Insert - electricity + telecommunication** - clamping range: electricity 25 - 36 mm / telecommunication 2 x 5 - 10 mm, 3 x 7 - 14 mm
 - primary sealing + secondary sealing electricity + telecommunication
 - casing pipe end plugs including
 - end plug electricity + telecommunication
 - hose connection 80
 - a tube of lubricant

optionally available **KRASO® BKP Gas Installation Kits**:

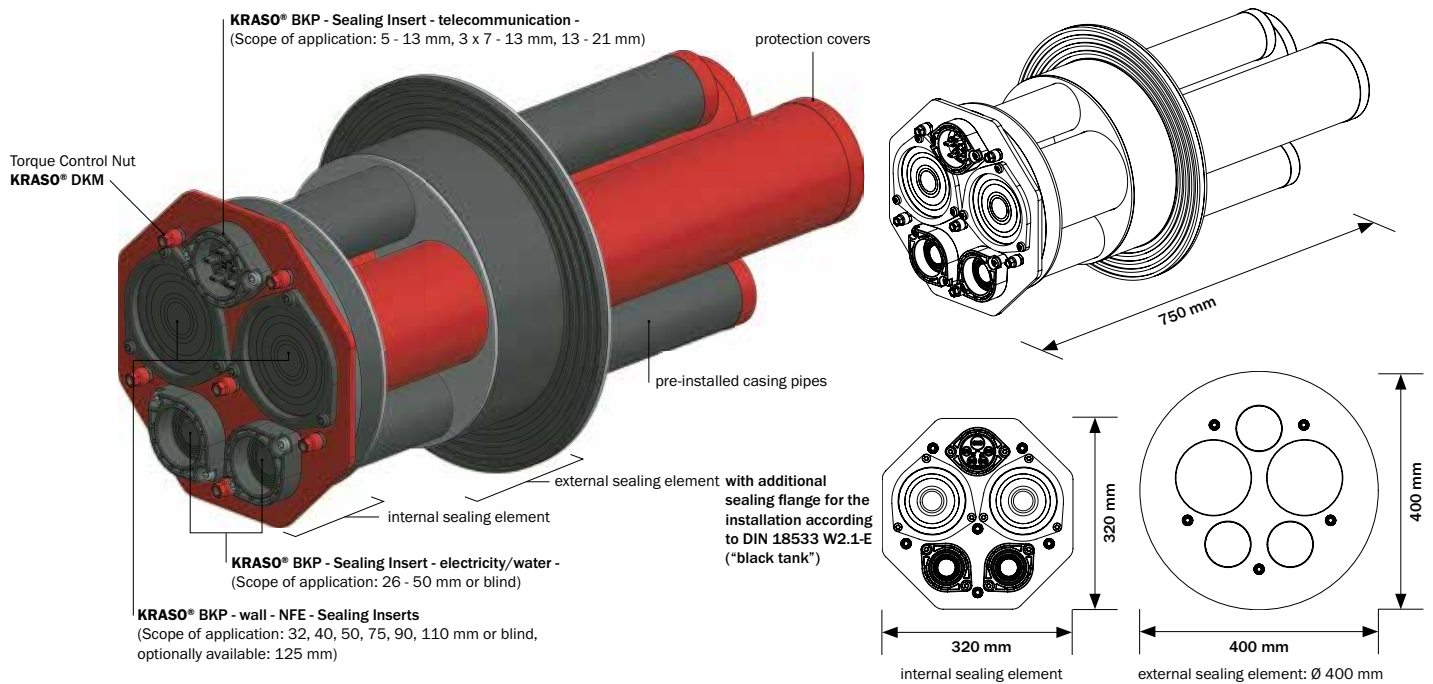
- Schuck DN 25 consists of primary and secondary sealing as well as gas end plug
- RMA DN 25 consists of primary and secondary sealing as well as gas end plug
- Voigt DN 25 consists of primary and secondary sealing as well as gas end plug
- Voigt DN 32 consists of primary and secondary sealing as well as gas end plug



KRASO® Builder's Convenience Box - wall - NFE

Comfortable connection to your basement: heat pump, local, district or geothermal heating

- + Heat pump or local, district or geothermal heating system each with supply and reflux!
- + For heat pumps or local, district or geothermal heating lines with diameter 110, 90, 75, 50, 40 or 32 mm, optionally available with a diameter of 125 mm
- + For core drilling and casing DN 300 (299 - 303 mm). For precast walls and in-situ concrete walls!
- + External sealing element with sealing flange according to DIN 18533! Seal width: 90 mm.
- + Gas- and odour-tight - high-quality in terms of TA-Air!
- + Certified up to 1 bar!
- + Radon tightness IAF tested - according to FHRK leaflet MB 101! Resistant to methane gas!
- + **Torque Control Nut KRASO® DKM:** integrated torque limiter - no torque wrench required!
- + Including all components for a secure grid connection of heat pump, local, district or geothermal heating, water, electricity and telecommunication!
- + Including casing pipe end plugs - warm bridges are avoided!
- + Optionally available: **KRASO® BKP - wall - NFE - Extension Set** - for cable protective hoses, **KRASO® FLS** or rigid casing pipes!
- + DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E



KRASO® Builder's Convenience Box - wall - NFE **LG 5**

multi utility connection for supply lines (local, district or geothermal heating, water, electricity, telecommunication) for buildings with basement
| DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1 -E and W2.1 - E

Type / Item	KRASO® BKP - wall - NFE
Wall thickness from ... to ...	200 - 500 mm
Diameter core drilling min ... max ...	299 - 303 mm
Length complete system	750 mm
Length x width internal sealing element	320 x 320 mm
Diameter external sealing element	400 mm
Seal width external sealing element	90 mm
Internal diameter casing pipes	68 mm
External diameter casing pipes	75 mm
Internal diameter casing pipes NFE	118 mm
External diameter casing pipes NFE	125 mm
KRASO® BKP - wall - NFE	1,225 €

Scope of supply: KRASO® Builder's Convenience Box - wall - NFE including

- internal sealing element with 5 casing pipes for the installation of supply lines for heat pump, local, district or geothermal heating (supply and reflux), water, electricity and telecommunication incl. protection covers
- external sealing element
- installation instructions
- KRASO® Builder's Convenience Box - wall - NFE**
- installation kit including
 - **KRASO® BKP - wall - NFE - Sealing Insert** - 2 pcs.
scope of application: 32, 40, 50, 75, 90, 110 mm or blind, optionally available: 125 mm
 - primary sealing + secondary sealing NFE
 - 2 x end plug NFE
 - 2 x hose connection 125/125

- **KRASO® BKP - Sealing Insert - electricity/water** - 2 pcs.
with stepless union ring technology 26 - 50 mm or blind
 - primary sealing + secondary sealing electricity/water
- casing pipe end plugs including
 - end plug electricity/water - split -
 - hose connection 80
- **KRASO® BKP - Sealing Insert - telecommunication** -
clamping range: 5 - 13 mm, 3 x 7 - 13 mm, 13 - 21 mm
 - primary sealing + secondary sealing telecommunication
- casing pipe end plugs including:
 - end plug telecommunication - split -
 - hose connection 80

Optionally available:

- **KRASO® BKP - wall - NFE - Extension Set**

Further wall thicknesses available on request!



KRASO® Builder's Convenience Box - wall - ESH
Check the installation video
(just scan the QR code!)

**Single
utility connection
for buildings with
basement**



UTILITY - ENTRIES



KRASO® Builder's Convenience Box - wall - ESH Convenient, safe, tight connection to the network – gas, water, electricity or telecommunication

- + Simple and safe single utility connection for new buildings or rehabilitation for buildings with basement
- + Flexible installation: gas, water, electricity or telecommunication – including installation / mounting set
- + Double installation possible: electricity and telecommunication!
- + DVGW-certified according to VP 601: complete system is gas- and water pressure tight up to 1 bar!
- + For core drilling and casing DN 100 (99 - 103 mm). For precast walls and in-situ concrete walls!
- + For wall thicknesses from 160 – 500 mm
- + Tight in waterproof concrete structures with stress class 1 (permanently or temporarily pressing water)
- + External sealing element with sealing flange according to DIN 18533! Seal width: 80 mm
- + Radon tightness IAF tested - according to FHRK leaflet MB 101! Resistant to methane gas!
- + Gas- and odour-tight – high-quality in terms of TA-Air!
- + Split end plugs for easy installation!
- + Including extension set
- + DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E



KRASO® Builder's Convenience Box - wall - ESH **LG 5**

(including installation set)

single utility connection for supply lines (gas, water, electricity or telecommunication) for buildings with basement, incl. extension set | **DafStB** waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E

Type / Item	KRASO® BKP - wall - ESH
Wall thickness from ... to ...	160 - 500 mm
Diameter casing or core drilling min ... max ...	99 - 103 mm
Length complete system	630 mm
Length x width internal sealing element	120 x 120 mm
Seal width internal sealing element	40 mm
Diameter external sealing element with flange seal	160 mm
Seal width external sealing element with flange seal	80 mm
Internal diameter casing pipe	68 mm
External diameter casing pipe	75 mm
KRASO® BKP - wall - ESH	277 €

Scope of supply: KRASO® Builder's Convenience Box - wall - ESH including

- internal sealing element with pre-assembled casing pipe incl. protective cover for the installation of supply lines such as gas, water, electricity or telecommunication
 - external sealing element
 - installation instructions **KRASO® BKP - wall - ESH**

- KRASO® BKP - wall - ESH - Extension Set** including
 - double sleeve DN 75
 - 2 x sealing ring
 - lubricant

as well as one of the following, optionally available installation kits or BKP gas installation kits:

- KRASO® BKP - Sealing Insert - electricity/water**
 - with stepless onion ring technology 26 - 50 mm or blind
 - primary sealing + secondary sealing electricity/water
 - casing pipe end plugs including
 - end plug electricity/water - split -
 - hose connection 80
- KRASO® BKP - Sealing Insert - telecommunication**
 - clamping range: 5 - 13 mm, 3 x 7 - 13 mm, 13 - 21 mm
 - primary sealing + secondary sealing telecommunication
 - casing pipe end plugs including
 - end plug telecommunication - split -
 - hose connection 80

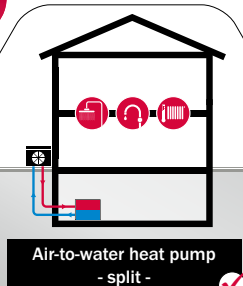
- KRASO® BKP - Sealing Insert - electricity + telecommunication**
 - clamping range: electricity 25 - 36 mm / telecommunication 2 x 5 - 10 mm, 3 x 7 - 14 mm
 - primary sealing + secondary sealing electricity + telecommunication
 - casing pipe end plugs including:
 - end plug electricity + telecommunication
 - hose connection 80
 - a tube of lubricant

- Schuck DN 25 consists of primary and secondary sealing as well as gas end plug
- RMA DN 25 consists of primary and secondary sealing as well as gas end plug
- Voigt DN 25 consists of primary and secondary sealing as well as gas end plug
- Voigt DN 32 consists of primary and secondary sealing as well as gas end plug

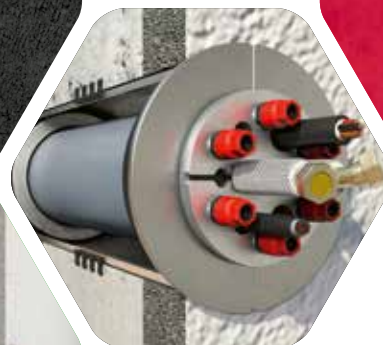
Further wall thicknesses available on request!

Single
utility connection
for heat pumps

suitable for
Heat Pumps



Air-to-water heat pump
- split -



UTILITY - ENTRIES



KRASO® Builder's Convenience Box - wall - SWP

Utility connection for air-water heat pumps (split)

- + Simple and safe single utility connection for new buildings and rehabilitation of buildings with a basement
- + For core drilling and casing DN 150 (149 - 153 mm). For precast walls, in-situ concrete walls and brickwork, for wall thicknesses from 160 – 500 mm
- + External sealing element with sealing flange according to DIN 18533! Seal width: 80 mm
- + With **KRASO® Sealing Insert Type SWP** with large flange for internal installation.
Scope of application:
For control cables, closed: stepless onion ring technology
2 x 5 - 18 mm, with plug
For refrigerant lines, split:
 - onion ring technology 1 x 6 - 13 mm
for 1/4 or 3/8 inch pipes, with plug
 - onion ring technology 1 x 6 - 18 mm
for 1/4, 3/8, 1/2 or 5/8 inch pipes, with plug
- + Radon tightness IAF tested - according to FHRK leaflet MB 101!
- + DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E

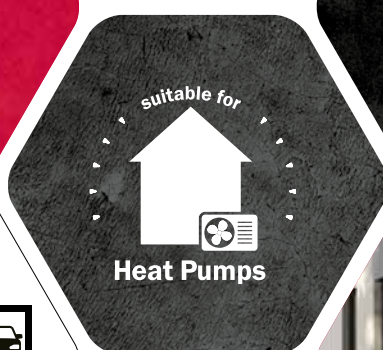
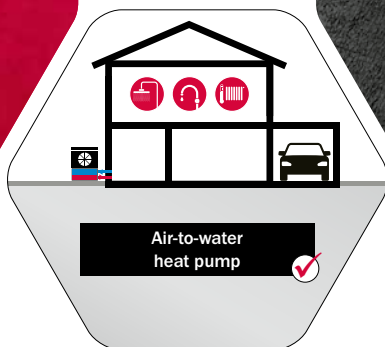
KRASO® Builder's Convenience Box - wall - SWP **LG 5**

single utility connection for control cables and refrigerant lines of air-water heat pumps (split) for buildings with basement
| DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E

Type / Item	KRASO® BKP - wall - SWP
Wall thickness from ... to ...	160 - 500 mm
Diameter casing or core drilling min ... max ...	149 - 153 mm
Length complete system	630 mm
Seal width internal sealing element	30 mm
Diameter external sealing element	250 mm
Seal width external sealing element	80 mm
Internal diameter casing pipe	100 mm
External diameter casing pipe	110 mm
KRASO® BKP - wall - SWP	353 €

Scope of supply: KRASO® Builder's Convenience Box - wall - SWP incl. **KRASO® Sealing Insert Type SWP** with large flange

Further wall thicknesses available on request!



NEW BUILDING
REHABILITATION

KRASO® WP-DUO

The above-ground heat pump connection

- + The fast and simple solution for the heat pump connection: air-to-water
- + Easy installation by one person freehand: core drillings of 100 mm each for supply and reflux
- + For all wall types (plaster, clinker, timber frame construction) and wall thicknesses up to 60 cm
- + Insulated system: avoids thermal bridges and fulfils the requirements of the German Building Energy Act (GEG), soundproof
- + Optionally extendable wall thickness
- + Protection against splash water and driving rain proof
- + Separate installation of supply and reflux, power lines and control cables
- + Metal components made of non-corrosive stainless steel V2A
- + Protection against bird picking
- + For new buildings and rehabilitation

KRASO® WP-DUO **LG 5**

heat pump connection universal, above-ground for supply or reflux as well as power lines and control cables
















Type / Item	KRASO® WP-DUO
Wall thickness	from 50 mm
Diameter casing min ... max ...	99 - 103 mm
External diameter	140 mm
Assignable diameters: electricity/control cables	2 x 0 - 16 mm
Diameter supply or reflux	1 x 0 or 22 - 30 mm
KRASO® WP-DUO - Set	479 €

Scope of supply: 2 pcs. KRASO® WP-DUO



KRASO® BKP - Sealing Inserts **LG 5**

installation kits for **KRASO® Builder's Convenience Box - floor - SET** and **KRASO® Builder's Convenience Box - wall, wall - NFE** and **wall - ESH**: electricity/ water, telecommunication, electricity + telecommunication. Tested in accordance with DVGW!

Sealing insert including		Casing pipe end plug (optional) including		
Primary sealing	Secondary sealing	End plug	Hose connection	
 <p>Primary sealing electricity/water for internal installation of the electricity cable or water pipeline. Clamping range: 26- 50 mm</p>	 <p>Secondary sealing electricity/water for internal installation of electricity cable or water pipeline</p>	 <p>End plug electricity/water - split - for external installation of electricity cable or water pipeline</p>	 <p>Hose connection 90/75 for KRASO® BKP - floor - SET for the connection with the casing pipe and fitting of the end plug for electricity/water - split -</p>	 <p>Hose connection 80 for KRASO® BKP - wall for the connection with the casing pipe and fitting of the end plug for electricity/water - split -</p>
 <p>Primary sealing telecommunication for internal installation of the telecommunication lines Clamping range: 5 - 13 mm 3 x 7- 13 mm 13 - 21 mm</p>	 <p>Secondary sealing telecommunication for internal installation of telecommunication lines</p>	 <p>End plug telecommunication - split - for external installation of telecommunication lines</p>	 <p>Hose connection 90/75 for KRASO® BKP - floor - SET for the connection with the casing pipe and fitting of the end plug for telecommunication - split -</p>	 <p>Hose connection 80 for KRASO® BKP - wall for the connection with the casing pipe and fitting of the end plug for telecommunication - split -</p>
 <p>Primary sealing electricity + telecommunication for internal installation of the electricity- and telecommunication lines Clamping range: electricity 25 - 36 mm telecom. 2 x 5 - 10 mm 3 x 7 - 14 mm</p>	 <p>Secondary sealing electricity + telecommunication for internal installation of electricity- and telecommunication lines</p>	 <p>End plug electricity + telecommunication for external installation of electricity- and telecommunication lines</p>	 <p>Hose connection 90/75 for KRASO® BKP - floor - SET for the connection with the casing pipe and fitting of the end plug for electricity + telecommunication</p>	 <p>Hose connection 80 for KRASO® BKP - wall for the connection with the casing pipe and fitting of the end plug for electricity + telecommunication</p>
Type / Item	- electricity/water -		- telecommunication -	- electricity + telecommunication -
KRASO® BKP - Sealing insert			54 €	
Casing pipe end plug (optional)			32 €	

Scope of supply: as an installation kit for electricity/water, telecommunication or electricity + telecommunication, **KRASO® BKP - Sealing Insert**, including primary sealing and secondary sealing, optionally available casing pipe end plugs including end plug and hose connection 90/75 (floor) or hose connection 80 (wall)



KRASO® BKP Floor Screed Insert
1-fold



KRASO® BKP Floor Screed Insert **LG 5**

for **KRASO® Builder's Convenience Box - floor - SET** - 1- to 4-fold, with height fixation, protection foil and lubricant, adjustable height from 12 to 280 mm or 12 to 590 mm

Type / Item	1-fold	2-fold	3-fold	4-fold
KRASO® BKP Floor Screed Insert (12 - 280 mm)	55 €	109 €	163 €	217 €
KRASO® BKP Floor Screed Insert (12 - 590 mm)	83 €	165 €	248 €	330 €

Scope of supply: **KRASO® BKP Floor Screed Insert** with height fixation, protection foil and lubricant

Further heights on request!

KRASO® BKP Gas Installation Kits **LG 5**

for anti-twist and tear-off protection of gas utility connections, according to DVGW VP 601, incl. primary and secondary sealing elements, gas end plug and self-cutting screws



Type / Item	KRASO® BKP Gas Installation Kit			
Gas utility connection	Schuck DN 25	RMA DN 25*	Voigt DN 25	Voigt DN 32
KRASO® BKP Gas Installation Kit	64 €	64 €	64 €	171 €

* For rigid and flexible designs

Scope of supply: KRASO® BKP Gas Installation Kit

KRASO® BKP - Extension Sets **LG 5**

for the extension of the casing pipes for water, electricity and telecommunication in **KRASO® Builder's Convenience Boxes** with a cable protection hose provided on-site

Type / Item	KRASO® BKP - Extension Sets				
System KRASO® BKP - floor - SET	1-fold	2-fold	3-fold	4-fold	5-fold
KRASO® BKP - floor - SET - Extension Set	29 €	56 €	81 €	108 €	135 €
KRASO® BKP - wall - Extension Set	20 €				
KRASO® BKP - wall - NFE - Extension Set	104 €				

Scope of supply:

KRASO® BKP - floor - SET - Extension Set per system including 1 x hose connection 90 and 2 x shrink hose (DN 90 to DN 75) DN 75

KRASO® BKP - wall - Extension Set including 4 x double sleeve DN 75, 8 x sealing ring, lubricant

KRASO® BKP - wall - NFE - Extension Set including 6 x heat-shrink hose 95/25, 3 x adapter pipe DN 75



KRASO® FLS 90 - Flexible Empty Pipe System **LG 4**

flexible empty pipe system as a cable protective hose for the extension of the **KRASO® Builder's Convenience Box - floor - SET** using the **KRASO® BKP - Extension Set**, with a smooth interior for easy cable pulling, smooth exterior for optimal sealing, flexible, increased pressure and vacuum resistance, high axial resistance, resistant to alkalis and acids, resistant to brine and sea water, good UV and ozone resistance, gas-tight and liquid-tight, RoHS-compliant (Restriction of Hazardous Substances), compression resistance 629 N, tests in line with DIN EN 61386-24 lead to the following classifications: type 250 - impact resistance: normal - classification code: N250

Type / Item	KRASO® FLS 90
InternalDiameter ID in mm	80
External diameter in mm	88
Bending radius in mm	200
Weight in kg/m approx.	1.5
Material thickness in mm	4
Compression resistance	629 N
Classification according to DIN EN 61386-24	N250 (reached test force F: 364 N)
Stock length in m	30
KRASO® FLS 90	22 € per metre
Cutting costs*	16 €

* without discount

Scope of supply: KRASO® FLS 90



Utility Connection -
Outlets

Floor

Builder's Convenience Box - floor - garden - **SET** p. 68

Wall

Builder's Convenience Box - wall - garden - **p. 71 +**

Accessories

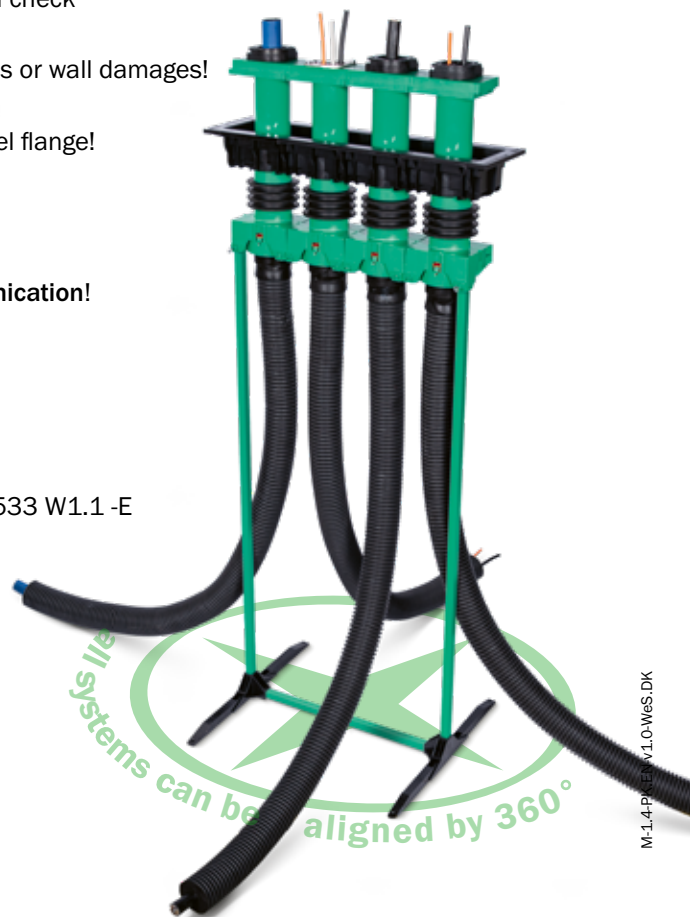
BKP - garden - Extension Set **p. 69**



KRASO® Builder's Convenience Box - floor - garden - SET

For more convenience in the garden!

- + Choose the **KRASO® Builder's Convenience Box - floor - garden - SET** for any project in your garden or courtyard: lighting, pool, garden sauna, wall box etc.
- + For buildings without basement: simple and tight routing of electricity, water and telecommunication lines from the utility connection space to the garden!
- + **KRASO® 4 Seal**: exterior sealing of concrete: 10 bar! Radon-tight! Resistant to methane gas!
- + Simple installation due to the stable installation device and visual check of the snap-on socket – helps to avoid installation errors!
- + For flush-mount installation in the base plate – no tripping hazards or wall damages! Including building period protective cover
- + Easy integration of vapour barrier foils due to the roughened trowel flange!
- + Height-adjustable base plate and floor screed
- + Combinable with **KRASO® Builder's Convenience Box - floor - SET** as utility connection
- + Including **KRASO® BKP - Sealing Insert - electricity + telecommunication!**
clamping range: electricity 25 - 36 mm,
telecommunication: 2 x 5 - 10 mm, 3 x 7 - 14 mm
- + Optionally available **KRASO® BKP - Sealing Inserts**:
 - **KRASO® BKP - Sealing Insert - electricity/water**
 - **KRASO® BKP - Sealing Insert - telecommunication**
- + DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1.1-E



KRASO® Builder's Convenience Box - floor - garden -

SET = 1 system

Adaptable!

Compatible with further systems,
also with **KRASO® BKP - floor - SET**!

all systems
alignable
by 360°



UTILITY - OUTLETS

KRASO® Builder's Convenience Box - floor - garden - SET LG 5

single utility connection / outlet for electricity, water or telecommunication for buildings without basement incl. cable protective hose (DN 75, 10 metres), incl. installation kits for electricity + telecommunication | **DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1.1 -E**

Type / Item	KRASO® BKP - floor - garden - SET - 1-fold
Height-adjustable to TEUF* in mm from ... to ...	1350 - 1400
Height-adjustable to TEFF** in mm from ... to ...	12 - 280
Bending radius in mm	≥ 1000
Dimensions floor screed insert wiping edge in mm	141 x 90
Incl. cable protective hose DN 75	1 x 10 metres
KRASO® BKP - floor - garden - SET - 1-fold	194 €

Scope of supply: KRASO® Builder's Convenience Box - floor - garden - SET - 1-fold with cable protective hose (10 metres)

- foot
- foot extension
- pair of supporting bars
- height-adjustable base plate element 1-fold with gas- and water pressure tight **KRASO® 4 Seal**, trowel flange, visual check of the snap-on socket and pre-installed building period installation cover
- height-adjustable **KRASO® BKP Floor Screed Insert** with protective cover and lubricant
- height fixation for **KRASO® BKP Floor Screed Insert**
- installation instructions
- **KRASO® Builder's Convenience Box - floor - SET**
- installation kit including
 - **KRASO® BKP - Sealing Insert - electricity + telecommunication** - clamping range: electricity 25 - 36 mm / telecommunication 2 x 5 - 10 mm, 3 x 7 - 14 mm
 - primary sealing + secondary sealing electricity + telecommunication
 - casing pipe end plugs including
 - end plug electricity + telecommunication
 - hose connection 80
 - a tube of lubricant

* TEUF = Top Edge Unfinished Floor, ** TEFF = Top Edge Finished Floor



KRASO® BKP - garden - Extension Set LG 5

for the extension of the cable protective hoses of **KRASO® BKP - floor - garden - SET** and - wall - garden, incl. 10 metres cable protective hose DN 75

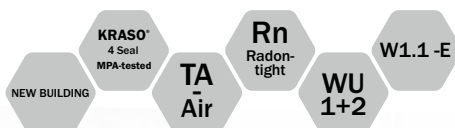
Type / Item	KRASO® BKP - garden - Extension Set
KRASO® BKP - garden - Extension Set	60 €

Scope of delivery: double plug-in sleeve DN 75, 2 sealing rings, 10 metres cable protective hose DN 75



Whether
inside or outside:
conveniently
connected

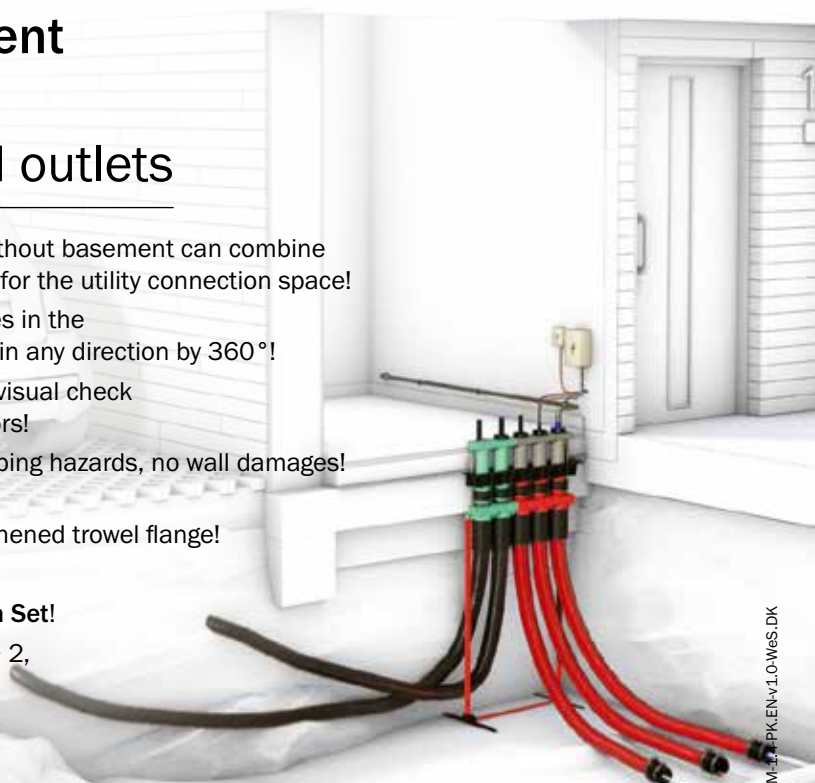
Combinable utility
connection entries
and outlets!



KRASO® Builder's Convenience Boxes for buildings without basement

The clever combination of
utility connection entries and outlets

- + **KRASO® Builder's Convenience Boxes** for buildings without basement can combine utility connection entries and outlets: a clean solution for the utility connection space!
- + Flexible empty pipe systems and cable protective hoses in the **KRASO® Builder's Convenience Boxes** can be aligned in any direction by 360°!
- + Easy installation due to stable installation device and visual check of the snap-on-socket – helps to avoid installation errors!
- + For flush-mount installation in the base plate – no tripping hazards, no wall damages! Including building period protective cover
- + Easy integration of vapour barrier foils due to the roughened trowel flange!
- + Height-adjustable base plate and floor screed
- + Optionally available: **KRASO® BKP - garden - Extension Set!**
- + DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1.1 -E



M-T-PK-EN-v1.0-WeS-DK



KRASO® Builder's Convenience Box - wall - garden

More convenience in the garden

- + Choose the **KRASO® Builder's Convenience Box - wall - garden** for any project in your garden or courtyard: lighting, pool, garden sauna, wall box etc.
- + For core drilling and casing DN 200 (199 - 203 mm). For precast walls and in-situ concrete walls!
- + Tight in waterproof concrete structures with stress class 1 (permanently or temporarily pressing water)
- + Radon-tight! Resistant to methane gas!
- + **Torque Control Nut KRASO® DKM**: integrated torque limiter - no torque wrench required!
- + Split end plugs for easy installation!
- + Ready for the utility connection of water, electricity and network lines: tested in accordance with DVGW! Including **KRASO® BKP - Sealing Inserts** for electricity/water (2 x), telecommunication, electricity + telecommunication
- + Optionally available: external sealing element with sealing flange according to DIN 18533! Seal width: 80 mm
- + DafStB waterproof concrete guideline: stress class 1 + 2, with optional external sealing element DIN 18533 W1 -E and W2.1 -E

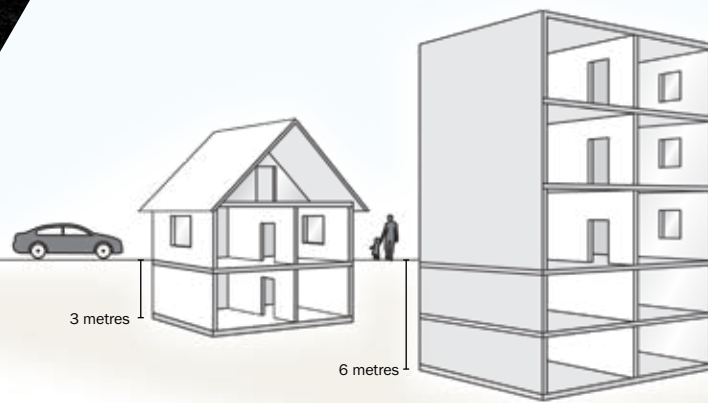
KRASO® Builder's Convenience Box - wall - garden **LG 5**

multi utility connection for electricity, water or telecommunication for buildings with basement, incl. installation kits for electricity/water (2 x), telecommunication, electricity + telecommunication | **DafStB waterproof concrete guideline: stress class 1 + 2, optional external sealing element DIN 18533 W1 -E and W2.1 -E**

Type / Item	KRASO® BKP - wall - garden
Wall thickness from ... to ...	200 - 500 mm
Diameter core drilling min ... max ...	199 - 203 mm
Length complete system	750 mm
Length x width internal sealing element	225 x 225 mm
Diameter external sealing element (optionally available)	300 mm
Internal diameter casing pipes	68 mm
External diameter casing pipes	75 mm
KRASO® BKP - wall - garden	554 €
Optional external sealing element	225 €

Scope of supply:

- **KRASO® Builder's Convenience Box - wall - garden** including
 - internal sealing element with pre-installed casing pipes incl. protective cover for the installation of supply lines such as water, electricity, telecommunication
- installation instructions **KRASO® Builder's Convenience Box - wall**
- installation kits including
 - **KRASO® BKP - Sealing Insert - electricity/water** - 2 pcs. with stepless onion ring technology 26 - 50 mm or blind
 - primary sealing + secondary sealing electricity/water
 - end plug
 - **KRASO® BKP - Sealing Insert - telecommunication** - clamping range: 5 - 13 mm, 3 x 7 - 13 mm, 13 - 21 mm
 - primary sealing + secondary sealing telecommunication
 - end plug
 - **KRASO® BKP - Sealing Insert - electricity + telecommunication** - clamping range: electricity 25 - 36 mm / telecommunication 2 x 5 - 10 mm, 3 x 7 - 14 mm
 - primary sealing + secondary sealing electricity + telecommunication
 - end plug
 - a tube of lubricant
- Optionally available: external sealing element



KRASO® Products

What does water pressure tight mean?

- + You may receive a test certificate regarding the water pressure tightness for the majority of our products issued by an approved material testing institute. However, what does that mean?
- + Water pressure tightness is a theoretical value, stated in the unit “bar”, providing information regarding the pressure at which a component remains water-tight.
- + With a so-called water column that is 10 metres high, the resulting pressure is 1 bar. At a height of 25 metres this is 2.5 bar, at 35 metres 3.5 bar, etc.

25 metres = 2.5 bar

35 metres = 3.5 bar



KRASO® Product Trainings

How to become an expert!

- + We offer regular training courses, where our dealers learn which product provides the right solution for particular sealing situations. At our location in Rhede/North Rhine-Westphalia, participants acquire the necessary knowledge about our products, learn about the areas of application and can discuss with our staff. Afterwards, the participants are real **KRASO® Product Experts** and can provide competent advice on sealing problems and the use of **KRASO® Products**!



Cable Penetrations

CABLE PENETRATIONS

Floor

Cable Inlet Box System KDS 150 p. 79 +

Wall

Cable Penetration KDS double wall penetration p. 74 + Cable Penetration KDS single wall penetration p. 75 + Cable Penetration KDS/DFW double wall penetration p. 75 + Cable Penetration KDS/DFW single wall penetration p. 76 + Cable Penetration KDS 150 single wall penetration with plug-in sleeve p. 76 + Cable Penetration KDS 150 single wall penetration with hose connection p. 76 + Cable Penetration KDS 150 double wall penetration with trowel flange p. 77 + Cable Penetration KDS 150 single wall penetration with trowel flange p. 77 + Protrusion Flange FDS 150 p. 77 + Cable Penetration KDS 150 double wall penetration - 45 degrees p. 78 + Cable Penetration KDS 150 FL/ZE double wall penetration p. 78 + Cable Penetration KDS 150 FL/ZA p. 78

Roof

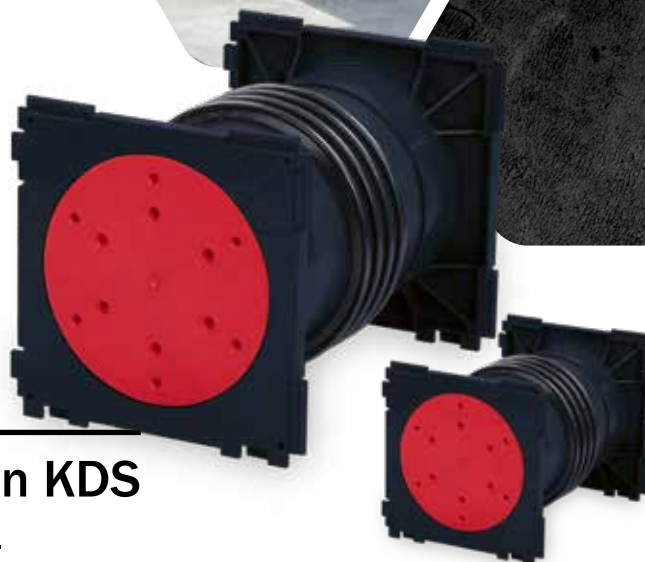
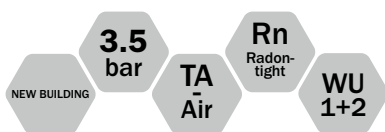
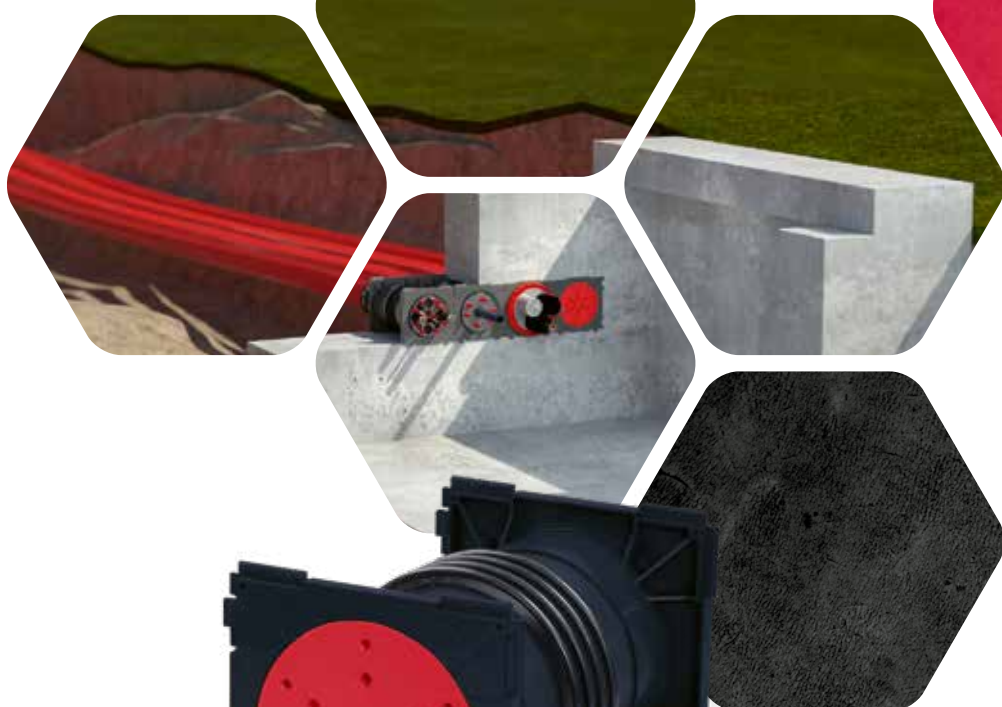
Swan Neck p. 84 + Swan Neck - thermally insulated - p. 85

Accessories

FLS - Flexible Empty Pipe System p. 80 + Quick Sealing Plug for FLS p. 81 + Hose Connection p. 81 + Spacer p. 81 + System Sealing Insert KDS 150 Universal Multiple - split - p. 81 + System Cover KDS 150 with hose adapter p. 82 + System Cover KDS 150 with sleeve p. 82 + System Cover KDS 150 - heat-shrink technology - p. 82 + System Cover KDS 90 with hose adapter 90 p. 83 + System Cover KDS 90 with heat-shrink hose p. 83 + System Sealing Insert KDS 90 Universal p. 83 + Y-Wrench p. 83 + Sealing Insert Universal Multiple - split - p. 86



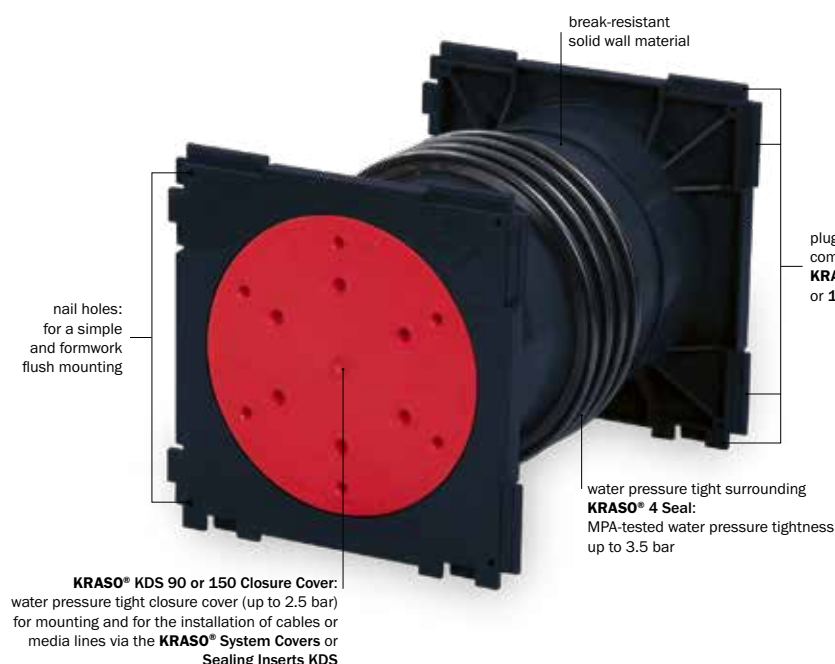
KRASO® Cable Penetration KDS
Check the installation video
(just scan the QR code!)

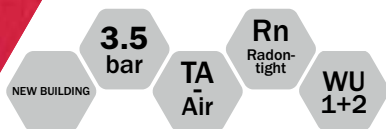


KRASO® Cable Penetration KDS

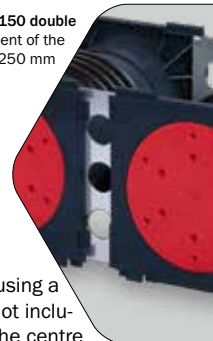
Compatible, tight, secure - the double wall penetration system

- + Compatible with all other current systems! Tight due to our water pressure tight **KRASO® 4 Seal!**
Secure due to break-resistant solid wall material!
- + The intelligent, all-purpose and flexible cable penetration system for complex new buildings:
public buildings, hospitals, technical-scientific institutions or in the industrial and commercial sector
- + Horizontal and vertical combination possible, installation at an angle of 45° with pre-installed clamps possible,
also available for precast walls or as integration into the sealing of larger areas
- + The matching accessories for every purpose!
- + DafStB waterproof concrete guideline: stress class 1 + 2





KRASO® Spacer 40 mm for KDS 150 double wall penetration for the enlargement of the centre distance from 210 mm to 250 mm



KRASO® Cable Penetration KDS double wall penetration **LG 1**

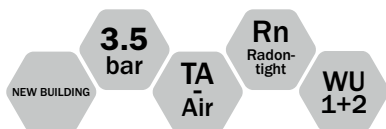
cable penetration system for concreting, with plug-in system on both sides for forming packages, for the later installation of media lines using a **KRASO® System Sealing Insert** (not included in the scope of supply) or for connecting empty pipe hoses using **KRASO® System Cover** (not included in the scope of supply). Optionally available: **KRASO® Spacer 40 mm for KDS 150 double wall penetration** for the enlargement of the centre distance from 210 mm to 250 mm | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASO® KDS double wall penetration											
Available standard wall thicknesses in cm	12	15	17.5	20	24	25	30	35	36.5	40	45	50
KRASO® KDS 90 double wall penetration	34 €											
KRASO® KDS 150 double wall penetration	39 €											
Surcharge per penetration: KRASO® Spacer 40 mm for KDS 150 double wall penetration	13 €											

Scope of supply: KRASO® Cable Penetration KDS 90 or 150 double wall penetration, 2 KDS closure covers •

Optionally available: **KRASO® Spacer 40 mm for KDS 150 double wall penetration**, factory-assembled

Further wall thicknesses available on request!



KRASO® Spacer 40 mm for KDS 150 single wall penetration for the enlargement of the centre distance from 210 mm to 250 mm



KRASO® Cable Penetration KDS single wall penetration **LG 1**

cable penetration system for concreting, with gas- and water pressure tight surrounding **KRASO® 4 Seal** and KDS closure covers, with plug-in system on one side for forming packages, for the later installation of media lines using a **KRASO® System Sealing Insert** (not included in the scope of supply) or for connecting empty pipe hoses using **KRASO® System Cover** (not included in the scope of supply). Optionally available: **KRASO® Spacer 40 mm for KDS 150 single wall penetration** for the enlargement of the centre distance from 210 mm to 250 mm | **DafStB waterproof concrete guideline: stress class 1 + 2**

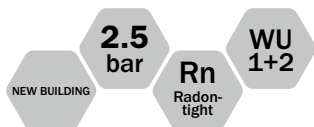
Type / Item	KRASO® KDS single wall penetration													
Available standard wall thicknesses in cm	6 ^{1, 2}	7 ²	10 ²	15	17.5	20	24	25	30	35	36.5	40	45	50
KRASO® KDS 90 single wall penetration	29 €													
KRASO® KDS 150 single wall penetration	34 €													
Surcharge per penetration: KRASO® Spacer 40 mm for KDS 150 single wall penetration	9 €													

¹ Only for KRASO® Cable Penetration KDS 90 single wall penetration, ² For technical production reasons partly KRASO® 2 Seal

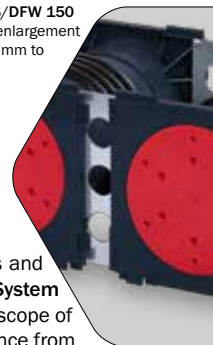
Scope of supply: KRASO® Cable Penetration KDS 90 or KDS 150 single wall penetration, KDS closure cover, **KRASO® Cover** as an installation aid

• Optionally available: **KRASO® Spacer 40 mm for KDS 150 single wall penetration**, factory-assembled

Further wall thicknesses available on request!



KRASO® Spacer 40 mm for KDS/DFW 150 double wall penetration for the enlargement of the centre distance from 210 mm to 250 mm



KRASO® Cable Penetration KDS/DFW double wall penetration **LG 1**

cable penetration system for installation into triple walls, with gas- and water pressure tight surrounding **KRASO® 2 Seal** on both sides and 2 KDS closure covers, with plug-in system on both sides for forming packages, for the later installation of media lines using a **KRASO® System Sealing Insert** (not included in the scope of supply) or for connecting empty pipe hoses using **KRASO® System Cover** (not included in the scope of supply). Optionally available: **KRASO® Spacer 40 mm for KDS/DFW 150 double wall penetration** for the enlargement of the centre distance from 210 mm to 250 mm | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASO® KDS/DFW double wall penetration										
Available standard wall thicknesses in cm	15	17.5	20	24	25	30	35	36.5	40	45	50
KRASO® KDS/DFW 90 double wall penetration	34 €										
KRASO® KDS/DFW 150 double wall penetration	39 €										
Surcharge per penetration: KRASO® Spacer 40 mm for KDS/DFW 150 double wall penetration	13 €										

Scope of supply: KRASO® Cable Penetration KDS/DFW 90 or KDS/DFW 150 double wall penetration, 2 KDS closure covers •

Optionally available: **KRASO® Spacer 40 mm for KDS/DFW 150 double wall penetration**, factory-assembled

Further wall thicknesses available on request!



KRASO® Spacer 40 mm for KDS 150
single wall penetration for the
enlargement of the centre distance from
210 mm to 250 mm



KRASO® Cable Penetration KDS/DFW single wall penetration **LG 1**

cable penetration system for installation into triple walls, with gas- and water pressure tight surrounding **KRASO® 2 Seal** on one side and KDS closure cover, with plug-in system on one side for forming packages, for the later installation of media lines using a **KRASO® System Sealing Insert** (not included in the scope of supply) or for connecting empty pipe hoses using **KRASO® System Cover** (not included in the scope of supply). Optionally available: **KRASO® Spacer 40 mm for KDS/DFW 150 single wall penetration** for the enlargement of the centre distance from 210 mm to 250 mm

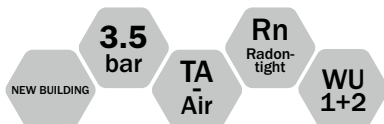
| DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® KDS/DFW single wall penetration													
Available standard wall thicknesses in cm	6 ¹	7	10	15	17.5	20	24	25	30	35	36.5	40	45	50
KRASO® KDS/DFW 90 single wall penetration	29 €													
KRASO® KDS/DFW 150 single wall penetration	34 €													
Surcharge per penetration: KRASO® Spacer 40 mm for KDS/DFW 150 single wall penetration	9 €													

¹ Only for **KRASO® Cable Penetration KDS/DFW 90 single wall penetration**

Scope of supply: **KRASO® Cable Penetration KDS/DFW 90** or **KDS/DFW 150 single wall penetration**, KDS closure cover, **KRASO® Cover** as an installation aid • Optionally available: **KRASO® Spacer 40 mm for KDS/DFW 150 single wall penetration**, factory-assembled

Further wall thicknesses available on request!



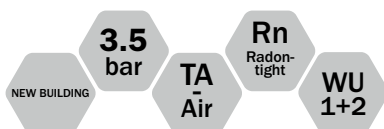
KRASO® Cable Penetration KDS 150 single wall penetration with plug-in sleeve **LG 1**

for later installation of cables or pipes using **KRASO® System Sealing Insert KDS 150** (not included in the scope of supply) or **KRASO® System Cover KDS 150** (not included in the scope of supply), with water pressure tight surrounding **KRASO® 4 Seal**, with plug-in system on one side for forming packages, one side with plug-in sleeve including connection for KG, HT or KG 2000 pipes DN 160 | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASO® KDS 150 single wall penetration with plug-in sleeve								
Available standard wall thicknesses in cm	20	24	25	30	35	36.5	40	45	50
KRASO® KDS 150 single wall penetration with plug-in sleeve	48 €								

Scope of supply: **KRASO® Cable Penetration KDS 150 single wall penetration with plug-in sleeve**, KDS 150 closure cover and **KRASO® Cover** as an installation aid

Further wall thicknesses available on request!



KRASO® Cable Penetration KDS 150 single wall penetration with hose connection **LG 1**

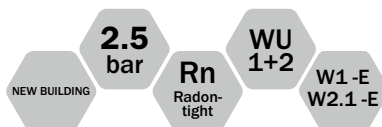
for later installation of cables or pipes using **KRASO® System Sealing Insert KDS 150** (not included in the scope of supply) or **KRASO® System Cover KDS 150** (not included in the scope of supply), with water pressure tight surrounding **KRASO® 4 Seal**, with plug-in system on one side for forming packages, one side with hose connection e.g. for **KRASO® FLS - Flexible Empty Pipe System**

| DafStB waterproof concrete guideline: stress class 1 + 2

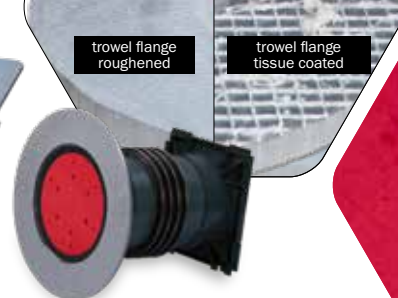
Type / Item	KRASO® KDS 150 single wall penetration with hose connection
Available standard wall thicknesses in cm	30
KRASO® KDS 150 single wall penetration with hose connection 110	113 €
KRASO® KDS 150 single wall penetration with hose connection 160	117 €

Scope of supply: **KRASO® Cable Penetration KDS 150 single wall penetration with hose connection**

Further wall thicknesses available on request!



KRASO® Cable Penetration KDS 150
double wall penetration with trowel flange also
for forming packages



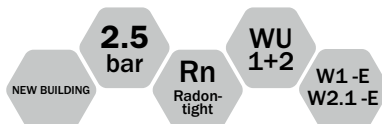
KRASO® Cable Penetration KDS 150 double wall penetration with trowel flange **LG 1**

cable penetration system for concreting, with gas- and water pressure tight surrounding **KRASO® 4 Seal**, incl. 2 KDS closure covers, with trowel flange, tissue coated or roughened, surrounding approx. 7 cm for a secure connection of bitumen or reactive sealing (e.g. KMB) or a fresh concrete composite system, for later installation of media lines using **KRASO® System Sealing Insert KDS** or for connecting empty pipe hoses using **KRASO® System Cover** | DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E

Type / Item	KRASO® KDS 150 double wall penetration with trowel flange										
Available standard wall thicknesses in cm	15	17.5	20	24	25	30	35	36.5	40	45	50
KRASO® KDS 150 double wall penetration with trowel flange - roughened -	86 €										
KRASO® KDS 150 double wall penetration with trowel flange - tissue coated -	97 €										

Scope of supply: **KRASO® Cable Penetration KDS 150 double wall penetration with trowel flange**, 2 KDS closure covers

Further wall thicknesses available on request!



trowel flange
roughened
trowel flange
tissue coated

CABLE PENETRATIONS

KRASO® Cable Penetration KDS 150 single wall penetration with trowel flange **LG 1**

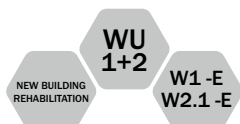
cable penetration system for concreting, with gas- and water pressure tight surrounding **KRASO® 4 Seal**, incl. KDS closure cover, with trowel flange, tissue coated or roughened, surrounding approx. 7 cm, for a secure connection of bitumen and reactive sealing or a fresh concrete composite system, for later installation of media lines using **KRASO® System Sealing Insert KDS** or for connecting empty pipe hoses using **KRASO® System Cover** | DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E

Type / Item	KRASO® KDS 150 single wall penetration with trowel flange										
Available standard wall thicknesses in cm	15	17.5	20	24	25	30	35	36.5	40	45	50
KRASO® KDS 150 single wall penetration with trowel flange - R - (roughened)	81 €										
KRASO® KDS 150 single wall penetration with trowel flange - G - (tissue coated)	91 €										

Scope of supply: **KRASO® Cable Penetration KDS 150 single wall penetration with trowel flange**, KDS closure cover,

KRASO® Cover as installation aid

Further wall thicknesses available on request!



KRASO® Protrusion Flange FDS 150 **LG 1**

protrusion flange made of stainless steel-reinforced plastic, for dowel-fixing in front of a core drilling for the connection of **KRASO® System Cover KDS 150** with hose adapter for **KRASO® FLS**, **KRASO® System Sealing Insert KDS 150** | DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E

Type / Item	KRASO® Protrusion Flange FDS 150
KRASO® Protrusion Flange FDS 150	116 €

Scope of supply: **KRASO® Protrusion Flange FDS 150** with EPDM flat seal, fixing material, adhesive and sealant **KRASO® PU 50**

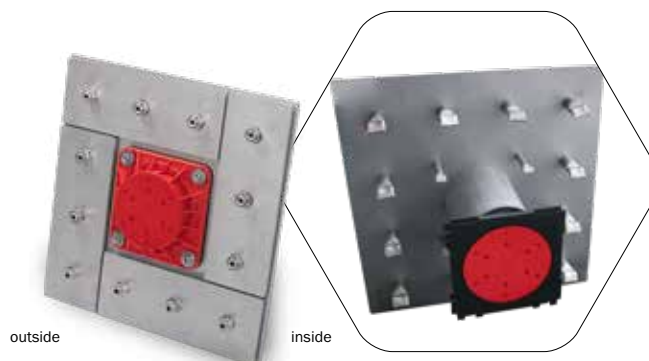
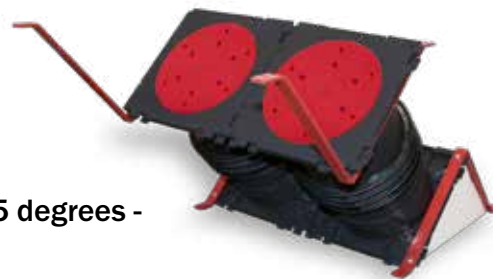


KRASO® Cable Penetration KDS 150 double wall penetration - 45 degrees -

with pre-installed clamps and styrofoam holders for installation at an angle of 45°

| DafStB waterproof concrete guideline: stress class 1 + 2

Prices on request! Further inclination angles available on request!



KRASO® Cable Penetration KDS 150 FL/ZE double wall penetration **LG2**

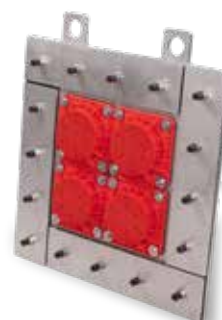
cable penetration KDS 150 FL/ZE as double wall penetration, with fixed-loose flange and exterior protrusion flange FDS 150 for concreting, for installation of media pipes using **KRASO® System Sealing Inserts KDS 150** (not included in the scope of supply) or for connection of **KRASO® KDS 150 Accessories** (e.g. system cover) with bayonet fitting, made of non-corrosive stainless steel V2A, one side with water pressure tight surrounding **KRASO® 2 Seal**, for buildings with exterior sealing ("black tank") against pressing / non-pressing water according to DIN 18533. Available in non-corrosive stainless steel V2A or with special coating | **DIN 18533 W2.1 -E and W2.2 -E**

KRASO® Cable Penetration KDS 150 FL/ZE double wall penetration - DIN 18533 W2.2 -E: HIGH IMPACT OF PRESSING WATER (WATER COLUMN ≥ 3 METRES)	
Pipe InternalDiameter ID	155
Available standard wall thicknesses in cm	15 · 17.5 · 20 · 24 · 25 · 30 · 35 · 36.5 · 40 · 45 · 50
Dimensions fixed-flange	Dimensions a x b 577 mm - t = 10 mm
Dimensions loose-flange	Dimensions a x b 567 mm - t = 10 mm
KRASO® KDS 150 FL/ZE double wall penetration - non-corrosive stainless steel V2A -	1,251 €
EPDM supplement (2 pcs.)	69 €
KRASO® KDS 150 FL/ZE double wall penetration with special coating - non-corrosive stainless steel V2A -	1,325 €

KRASO® Cable Penetration KDS 150 FL/ZE double wall penetration - DIN 18533 W1 -E: SOIL MOISTURE AND NON-PRESSING WATER	
Pipe InternalDiameter ID	155
Available standard wall thicknesses in cm	15 · 17.5 · 20 · 24 · 25 · 30 · 35 · 36.5 · 40 · 45 · 50
Dimensions fixed-flange	Dimensions a x b 397 mm - t = 6 mm
Dimensions loose-flange	Dimensions a x b 387 mm - t = 6 mm
KRASO® KDS 150 FL/ZE double wall penetration - non-corrosive stainless steel V2A -	898 €
EPDM supplement (2 pcs.)	50 €
KRASO® KDS 150 FL/ZE double wall penetration with special coating - non-corrosive stainless steel V2A -	966 €

Scope of supply: KRASO® Cable Penetration KDS 150 FL/ZE double wall penetration, with fixed-loose flange and exterior **KRASO® Protrusion Flange FDS 150**, 2 KDS 150 closure covers

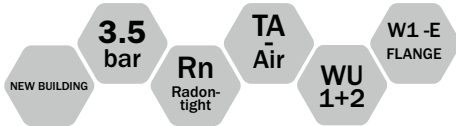
Further wall thicknesses available on request! Also available in V4A! Also available as formed packages!



KRASO® Cable Penetration KDS 150 FL/ZE
as multiple wall penetration - with fixed-loose flange and exterior protrusion flange FDS 150, for dowel-fixing (special design)



KRASO® Cable Inlet Box System KDS 150
Check the installation video
(just scan the QR code!)



KRASO® Cable Inlet Box System KDS 150

The flexible system for industry and commercial buildings

- + The secure and reliable way for the installation of cables and pipes right into buildings: with a radius of 650 mm or 1000 mm, main pipes and cable protective hoses can be connected at a 90-degree angle to buildings without basements
- + **KRASO® Cable Penetration System KDS 150:** flexible and combinable in various ways
- + The **KRASO® Cable Inlet Box System KDS 150** can be expanded to any number of rows thanks to the plug-in system - depending on your requirements!
- + For the installation of cables and pipes such as water, electricity, telecommunication etc. into buildings without a basement: the perfect solution for industrial and commercial buildings!
- + Sealing of the base plate by water pressure tight surrounding **KRASO® 4 Seal**
- + With stable installation device for correct positioning before concreting
- + Flexible plug-in possibilities on the outer side using **KRASO® Cable Penetration System KDS 150**
- + Additional media pipe sealing from the inside using **KRASO® Sealing Inserts**
- + Included in the scope of supply: **KRASO® KDS 150 Empty Pipe Insert** with bayonet fitting for a floor construction with floor heating, insulation and screed
- + DafStB waterproof concrete guideline: stress class 1 + 2, with optional trowel flange DIN 18533 W1 -E

KRASO® Cable Inlet Box System KDS 150
available with **KRASO® Trowel Flange**
roughened plastic-trowel flange for the
integration into the floor sealing / sealing
sheets



KRASO® KDS 150 Empty Pipe Insert
example of installation of media lines using
KRASO® Sealing Inserts



KRASO® Cable Inlet Box System KDS 150 **LG 2**

for the installation of cables and utility lines such as e.g. water - electricity - telecommunication etc. in buildings without basement. Attention: do not use a **KRASO® System Sealing Insert KDS 150** for the sealing of media lines, but use **KRASO® Sealing Inserts** instead (see p. 17 - 21)! | **DafStB** waterproof concrete guideline: stress class 1 + 2, with optional trowel flange DIN 18533 W1 -E

Type / Item	KRASO® Cable Inlet Box System KDS 150			
Available standard systems	1 x 1	1 x 2	1 x 3	1 x 4
KRASO® Cable Inlet Box System KDS 150 - bending radius 650 mm	589 €	990 €	1,361 €	1,696 €
KRASO® Cable Inlet Box System KDS 150 - bending radius 1000 mm	658 €	1,106 €	1,521 €	1,896 €

Scope of supply: **KRASO® Cable Inlet Box System KDS 150**, **KRASO® KDS 150 Empty Pipe Insert** 25 cm, 90° empty pipe system, installation device and KDS 150 closure cover

Further combinations available on request!

KRASO® KDS - Accessories

Appropriate accessories for KRASO® Cable Penetration KDS + Cable Inlet Box System KDS 150

- + With the appropriate accessories, **KRASO® Cable Penetration KDS 90 / KDS 150** as wall penetrations and **KRASO® Cable Inlet Box System KDS 150** can be combined to a complete individual system - as it is required for challenging construction projects.
- + Our experts are happy to assist you regarding the numerous possibilities – even on your construction site!

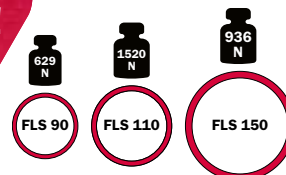
NEW BUILDING

KRASO® FLS - Flexible Empty Pipe System **LG 2**

flexible empty pipe system as a cable protective hose for gas- and water tight connection to **KRASO® Cable Penetration KDS**, over-pressures of 4 or 3 bar, under-pressures of 0.7 or 0.5 bar, heavy design for high mechanical load, smooth interior for smooth cable pulling, smooth exterior for optimal sealing, flexible, enhanced resistance against pressure and vacuum, high axial resistance, resistant to alkalis and acids, resistant to brine and sea water, good UV and ozone resistance, gas-tight and liquid-tight, RoHS compliant (Restriction of Hazardous Substances)

**KRASO® FLS -
sturdy and flexible!**

KRASO® FLS 90
rigid PVC spiral



Type / Item	KRASO® FLS 90	KRASO® FLS 110*	KRASO® FLS 150* **
InternalDiameter ID in mm	80	101	150
External diameter in mm	88	113	163
Bending radius in mm	200	350	600
Weight in kg/m approx.	1.5	2.9	4.3
Material thickness in mm	4	6	6.5
Compression resistance	629 N	1520 N	936 N
Classification according to DIN EN 61386-24	N250 (reached test force F: 364 N)	N250 (reached test force F: 293 N)	N250 (reached test force F: 388 N)
Stock length in m	30	30	25
KRASO® FLS	23 € per metre	35 € per metre	45 € per metre
Cutting cost***	17 €	23 €	-

* Minimum order 10 m ** Freight charges for **KRASO® FLS 150** only on request *** No discount applicable



KRASO® Quick Sealing Plug for FLS **LG 1**

for sealing the **KRASO® FLS** - Flexible Empty Pipe System

Type / Item	KRASO® Quick Sealing Plug for FLS		
FLS	FLS 90	FLS 110	FLS 150
KRASO® Quick Sealing Plug for FLS	46 €	53 €	65 €

Further diameters available on request!



KRASO® Hose Connection **LG 1**

for the connection of e.g. **KRASO® FLS** - Flexible Empty Pipe System

Type / Item	KRASO® Hose Connection			
Diameter DN	90	110	125	150
KRASO® Hose Connection	53 €	71 €	75 €	79 €

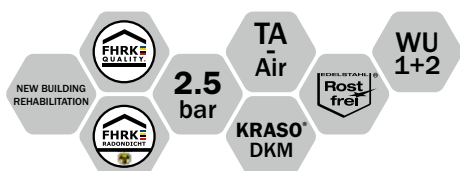


KRASO® Spacer **LG 1**

guarantees sufficient distance between flexible empty pipes, light, impact resistant, weather- and rot-proof plastic spacer

Type / Item	KRASO® Spacer 110	KRASO® Spacer 150
InternalDiameter ID in mm	110	165
KRASO® Spacer 1 x 2	15 €	16 €
KRASO® Spacer 2 x 2	19 €	20 €
KRASO® Spacer 2 x 4	24 €	25 €

Further spacers available on request!



KRASO® System Sealing Insert KDS 150 Universal Multiple - split - **LG 1**

for installation of one or several media lines/cables, for installation into the bayonet fitting of **KRASO® Cable Penetration KDS 150**, split design for retrofit installation, **Torque Control Nut KRASO® DKM**, 30 mm seal, external diameter 160 mm, specifically for the use in cable penetrations | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® System Sealing Insert KDS 150 Universal Multiple - split -			
	Universal	Design 1	Design 2	Design 3
Drillings or stepless onion ring technology: external cable diameter from ... to ... in mm	1 x 63, 75, 90 or 110 mm	3 x 6 - 52 mm or blind	4 x 6 - 18 mm or blind 6 x 6 - 33 mm or blind	6 x 6 - 38 mm or blind
KRASO® System Sealing Insert KDS 150 Universal Multiple - split -	112 €	133 €	133 €	133 €

Further special designs available on request!



NEW BUILDING

2.5 bar

WU 1+2



KRASO® System Cover KDS 150 with hose adapter **LG 1**

incl. bayonet fitting with union nut and anti-twist lock, hose adapter for the connection of **KRASO® FLS**, PE corrugated pipes or PVC and PP pipes to **KRASO® Cable Penetration KDS 150**. In combination with **KRASO® FLS** water pressure tight up to 2.5 bar. Scope of application as per table below | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	Hose adapter 110	Hose adapter 125	Hose adapter 160
Scope of application in mm	100 - 115	110 - 125	150 - 165
KRASO® System Cover KDS 150 with hose adapter	85 €	89 €	92 €

Scope of supply: **KRASO® System Cover KDS 150 with hose adapter**

NEW BUILDING



KRASO® System Cover KDS 150 with sleeve **LG 1**

incl. bayonet fitting with union nut and anti-twist lock, sleeve for the connection of PVC and PP pipes to **KRASO® Cable Penetration KDS 150**

Type / Item	KRASO® System Cover KDS 150 with sleeve		
Diameter DN	110	125	160
KRASO® System Cover KDS 150 with sleeve	79 €	84 €	86 €

Scope of supply: **KRASO® System Cover KDS 150 with sleeve**

NEW BUILDING

1 bar

WU 1+2



KRASO® System Cover KDS 150 - heat-shrink technology - **LG 1**

incl. bayonet fitting with union nut and anti-twist lock (prevents unintentional opening), with 1, 3 or 7 adapters for installation of pipes or cables, incl. shrink hose (length approx. 20 cm), connection via heat-shrink technology, **KRASO® System Cover KDS 150 - heat-shrink technology - 3-fold** and **7-fold** with factory-installed, water pressure tight cover, simple opening by knocking off before installation (on-site), scope of application as per table below | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	System Cover KDS 150 1-fold - heat-shrink technology -	System Cover KDS 150 3-fold - heat-shrink technology -	System Cover KDS 150 7-fold - heat-shrink technology -
Diameter pipe or cable from ... to ... in mm	1 x 34 - 101	3 x 22 - 59	7 x 13 - 33
KRASO® System Cover KDS 150 - heat-shrink technology -	96 €	105 €	118 €

Scope of supply: **KRASO® System Cover KDS 150 - heat-shrink technology - 1-fold, 3-fold, 7-fold with shrink hose/shrink hoses**

Further diameters available on request!



KRASO® System Cover KDS 90 with hose adapter 90 **LG 1**

incl. bayonet fitting, hose adapter for connection of **KRASO® FLS**, PE corrugated pipes or PVC pipes to **KRASO® Cable Penetration KDS 90** | **DafStB** waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® System Cover KDS 90 with hose adapter 90
Scope of application in mm	80 - 95
KRASO® System Cover KDS 90 with hose adapter 90	83 €

Scope of supply: KRASO® System Cover KDS 90 with hose adapter 90

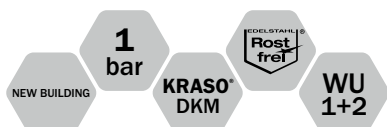


KRASO® System Cover KDS 90 with shrink hose **LG 1**

KRASO® System Cover KDS 90 including shrink hose

Type / Item	KRASO® System Cover KDS 90 with shrink hose
KRASO® System Cover KDS 90 with shrink hose for all pipes and cables according to the table on the right (in mm)	1 x 25 - 95
KRASO® System Cover KDS 90 with shrink hose	43 €

Scope of supply: KRASO® System Cover KDS 90 with shrink hose



KRASO® System Sealing Insert KDS 90 Universal **LG 1**

system sealing insert especially for installation in **KRASO® Cable Penetration KDS 90**, 20 mm seal, against pressing water up to 1 bar, **Torque Control Nut KRASO® DKM**, non-corrosive stainless steel V2A. Also usable as blind plug until feed-through of pipes or cables. | **DafStB** waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® System Sealing Insert KDS 90 Universal
Stepless onion ring technology: external cable diameter from ... to ... in mm	6 - 52 mm or blind
KRASO® System Sealing Insert KDS 90 Universal	83 €
KRASO® System Sealing Insert KDS 90 Universal - split -	92 €

Further special designs on request!



KRASO® Y-Wrench **LG 1**

Y-Wrench to open/close the KDS closure cover, available for **KRASO® Cable Penetration KDS 90** and **KDS 150**

Type / Item	KRASO® Y-Wrench
KRASO® Y-Wrench 90	53 €
KRASO® Y-Wrench 150	62 €



KRASO® Swan Neck
Check the installation video
(just scan the QR code!)

**KRASO®
DKM**

NEW BUILDING

KRASO® Swan Neck

Innovative, secure, tight – the **KRASO®** Flat Roof Penetration

- + Integration in the roof sealing sheeting using **KRASO® Foil Clamping Flange Type FKF**: oil- and bitumen resistant, water pressure tightness tested up to 2.5 bar
- + **Torque Control Nut KRASO® DKM**: integrated torque limiter - no torque wrench required!
- + UV protection with surrounding peripheral drip edge and anti-twist lock
- + Can be swivelled by 360 degrees!
- + Flat roof penetration available made of galvanised steel, non-corrosive stainless steel V2A or V4A. Also available as thermally insulated version!
- + We can adjust the type of sealing sheets or foils: e.g. EPDM, Thermofol U15, FPO, Resitrix®, PP, PE, **KRASO®-Fol**, PYE-PV 200 S5 etc.
- + Included in the scope of supply: fastening dowels M8 x 100 V2A and EPDM sealing, adhesive and sealant **KRASO® PU 50**.



UV protection with surrounding peripheral drip edge at the underside, anti-twist lock, **KRASO® Foil Clamping Flange Type FKF**



Second sealing layer possible



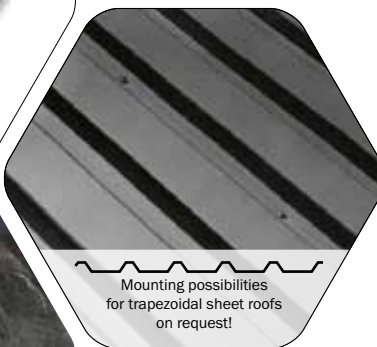
Cables can be sealed without any problems by using **KRASO® Sealing Insert Universal Multiple - split** - (see page 86)



With innovative foil clamping flange sealing instead of drip cover



UV protection with surrounding peripheral drip edge at the underside, anti-twist lock



Mounting possibilities for trapezoidal sheet roofs on request!

KRASO® Swan Neck **LG2**

flat roof penetration for installation of cables using **KRASO® Sealing Insert Universal Multiple - split** - (not included in the scope of supply), integration in the roof sealing sheeting using **KRASO® Foil Clamping Flange Type FKF**

Type / Item	KRASO® Swan Neck			
Nominal Width NW	100*	150*	200*	300**
	Diameter pipe or cable from ... to ... in mm			
Design 1	4 x 6 - 33 mm or blind	3 x 6 - 52 mm or blind	3 x 6 - 28 mm or blind 4 x 6 - 52 mm or blind	e.g. 3 x 0 - 110 or 5 x 0 - 85 or 9 x 0 - 63
Design 2	3 x 6 - 18 mm or blind 2 x 6 - 33 mm or blind	4 x 6 - 18 mm or blind 6 x 6 - 33 mm or blind	7 x 6 - 18 mm or blind 8 x 6 - 33 mm or blind	
Design 3	8 x 6 - 18 mm or blind	6 x 6 - 38 mm or blind	-	
KRASO® Swan Neck - galvanised -	799 €	937 €	1,290 €	1,776 €
KRASO® Swan Neck - non-corrosive stainless steel V2A -	999 €	1,172 €	1,612 €	2,221 €
Surcharge: second sealing layer	233 €	326 €	408 €	764 €

* KRASO® Sealing Insert Universal Multiple - split - (not included in the scope of supply) ** KRASO® Replaceable Sealing Insert - split - (not included in the scope of supply)

Scope of supply: KRASO® Swan Neck, EPDM seal, KRASO® Foil Clamping Flange Type FKF, UV protection, fastening dowels M8 x 100 V2A, adhesive and sealant KRASO® PU 50

Further sizes available on request!



CABLE PENETRATIONS



KRASO® Swan Neck - thermally insulated - **LG2**

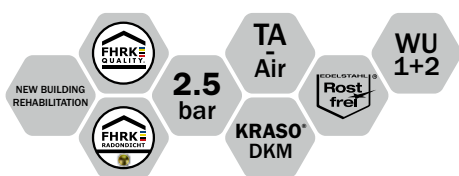
flat roof penetration, for dowel-fixing, for installation of cables using **KRASO® Sealing Insert Universal Multiple - split** - (not included in the scope of supply), can be swivelled by 360°, integration in the roof sealing sheeting using **KRASO® Foil Clamping Flange Type FKF**, oil- and bitumen resistant, Torque Control Nut **KRASO® DKM**, UV protection with surrounding peripheral drip edge and anti-twist lock, foot seal with EPDM seal for the opening of the roof

Type / Item	KRASO® Swan Neck - thermally insulated -			
Nominal Width NW	100*	150*	200*	300**
	Diameter pipe or cable from ... to ... in mm			
Design 1	4 x 6 - 33 mm or blind	3 x 6 - 52 mm or blind	3 x 6 - 28 mm or blind 4 x 6 - 52 mm or blind	e.g. 3 x 0 - 110 or 5 x 0 - 85 or 9 x 0 - 63
Design 2	3 x 6 - 18 mm or blind 2 x 6 - 33 mm or blind	4 x 6 - 18 mm or blind 6 x 6 - 33 mm or blind	7 x 6 - 18 mm or blind 8 x 6 - 33 mm or blind	
Design 3	8 x 6 - 18 mm or blind	6 x 6 - 38 mm or blind	-	
KRASO® Swan Neck - thermally insulated - galvanised -	1,386 €	1,719 €	2,301 €	2,813 €
KRASO® Swan Neck - thermally insulated - non-corrosive stainless steel V2A -	1,871 €	2,322 €	3,107 €	3,797 €
Surcharge: second sealing layer	317 €	395 €	539 €	887 €

* KRASO® Sealing Insert Universal Multiple - split - (not included in the scope of supply) ** KRASO® Replaceable Sealing Insert - split - (not included in the scope of supply)

Scope of supply: KRASO® Swan Neck - thermally insulated -, EPDM seal, KRASO® Foil Clamping Flange Type FKF, UV protection, fastening dowels M8 x 100 V2A, adhesive and sealant KRASO® PU 50

Further sizes available on request! Mounting possibility for trapezoidal sheet roofs on request!



KRASO® Sealing Insert Universal Multiple - split – Universally usable – multiply flexible

- + For core drillings and casings
- + Stepless onion ring technology: universally usable for various external diameters of media lines / cables - also for multiple installation! Split design for retrofit installation!
- + **KRASO® Sealing Insert quality:** 5 mm thick clamping plates made of non-corrosive stainless steel V2A, 40 mm seal made of specially developed rubber mixture, welded-on studs instead of through bolts
- + **Torque Control Nut KRASO® DKM:** integrated torque limiter - no torque wrench required!
- + MPA-tested: protects reliably against pressing water up to 2.5 bar!
- + Gas- and odour-tight – high-quality in terms of TA-Air!
- + Radon tightness IAF tested - meets the requirements for radon precautionary areas according to FHRK leaflet MB 101!
- + Certified with the quality seal of the FHRK e. V.
- + DafStB waterproof concrete guideline: stress class 1 + 2




Stepless onion ring technology!
Example
KRASO® Sealing Insert Universal Multiple 150 - split -
Design 2:
4 x 6 - 18 mm or blind
6 x 6 - 33 mm or blind

KRASO® Sealing Insert Universal Multiple - split - **LG 1**

for the installation of several media lines/cables, split design for retrofit installation | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Sealing Insert Universal Multiple - split -			
Core drilling / casing in mm	100	125	150	200
Stepless onion ring technology: external cable diameter from ... to ... in mm				
Design 1	4 x 6 - 33 mm or blind	6 x 6 - 28 mm or blind	3 x 6 - 52 mm or blind	3 x 6 - 28 mm or blind 4 x 6 - 52 mm or blind
Design 2	3 x 6 - 18 mm or blind 2 x 6 - 33 mm or blind	-	4 x 6 - 18 mm or blind 6 x 6 - 33 mm or blind	7 x 6 - 18 mm or blind 8 x 6 - 33 mm or blind
Design 3	8 x 6 - 18 mm or blind	-	6 x 6 - 38 mm or blind	-
KRASO® Sealing Insert Universal Multiple - split -	100 €	108 €	152 €	236 €

Further arrangements available at short notice!



Pipe Penetrations

PIPE PENETRATIONS

Floor and wall penetrations

Floor Penetration Type BDF p. 88 + Rodding Eye for **KRASO**® Type BDF p. 89 + Universal Funnel p. 90 + Wall Penetration Type B p. 94 + Wall Penetration Type SML p. 95 + Wall Penetration Type FR p. 96 + Wall Penetration Type Universal p. 97 + NBR seal p. 97 + Wall Penetration Type B/SF 5 p. 98 + Wall Penetration Type DFW p. 99 + Slip-on Sleeve p. 105 + 15° | 30° | 45° Bend p. 105 + DWS - System p. 106 + DWS - Accessories p. 106 + Flange Pipe KG p. 116 + Type KMB p. 118 + Type ÜSF - slip-on flange p. 118

Drains

Floor Drain p. 108 + Floor Drain Type FS - frost proof p. 109 + Floor Drain - Accessories p. 110 + Floor Drain Type FS - RS - frost proof - backwater safe p. 111 + Basement Drain p. 112 + Drains - Accessories p. 113 + Yard/Parking Level Drain p. 114 + Type LES p. 115

Casings

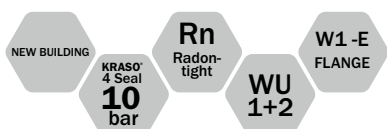
Casing Type FE p. 100 + Fibre Cement Casing p. 101 + Casing Type DFW/FE p. 102 + Casing Type FE/SF 5 p. 102 + Casing E/FE/KF p. 103 + Casing K/FE/KF p. 103 + Casing Type E/FE p. 104 + VA - tubular sleeve p. 104 + Casing Type E/FE/M p. 104 + Flange Pipe FE p. 116

Wall Collar

Wall Collar p. 91 + Wall Collar DKS Universal p. 92 + Wall Collar DKS p. 92 + Wall Collar Lightning Protection Duo p. 93



KRASO® Floor Penetration Type BDF
Check the installation video
(just scan the QR code!)



KRASO® Floor Penetration Type BDF

Simple, tight and approved

- + **KRASO® 4 Seal** – MPA-tested up to 10 bar!
- + IAF-tested: radon-tight!
- + Made of dimensionally stable and pressure-resistant solid wall material: low abrasion, easy installation at low temperatures
- + Also available for KG 2000: polypropylene (PP), mineral-filled, smooth walls, long-lasting
- + Also available with oil- and bitumen resistant **KRASO® Foil Flange**
- + Formed plug-in sleeve on one side for connection to KG/HT pipes
- + Including **KRASO® Cover** as building period protective cover
- + Also available as thermally insulated floor penetration!
- + DafStB waterproof concrete guideline: stress class 1 + 2, with foil flange DIN 18533 W1-E

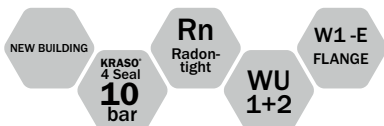
KRASO® Floor Penetration Type BDF **LG 1**

for connection to KG/HT pipes, also available with **KRASO® Foil Flange**, oil- and bitumen resistant, surrounding approx. 15 cm. For the integration of the foil flange, we recommend our adhesive and sealant **KRASO® PU 50** | DafStB waterproof concrete guideline: stress class 1 + 2, with foil flange DIN 18533 W1-E

Type / Item	KRASO® Type BDF • KRASO® Type BDF with foil flange							
Diameter DN	110	125	160	200	250	315	400	500
Delivery length (in cm)	50							
KRASO® Type BDF	39 €	42 €	51 €	67 €	132 €	203 €	256 €	395 €
KRASO® Type BDF with foil flange	74 €	80 €	87 €	118 €	187 €	256 €	414 €	563 €
KRASO® PU 50	22 €							

Scope of supply: KRASO® Type BDF or KRASO® Type BDF with foil flange, KRASO® Cover as building period protective cover

Further diameters and lengths from 50 cm available on request!



KRASO® Floor Penetration Type BDF for KG 2000 **LG 1**

for the connection to system KG 2000 lines, also available with **KRASO® Foil Flange**, oil- and bitumen resistant, surrounding approx. 15 cm. For the integration of the foil flange, we recommend our adhesive and sealant **KRASO® PU 50** | DafStB waterproof concrete guideline: stress class 1 + 2, with foil flange DIN 18533 W1-E

Type / Item	KRASO® Type BDF for KG 2000 • KRASO® Type BDF for KG 2000 with foil flange							
Diameter DN	110	125	160	200	250	315	400	500
Delivery length (in cm)	50							
KRASO® Type BDF for KG 2000	50 €	56 €	74 €	107 €	255 €	343 €	448 €	612 €
KRASO® Type BDF for KG 2000 with foil flange	84 €	92 €	109 €	156 €	309 €	398 €	596 €	794 €
KRASO® PU 50	22 €							

Scope of supply: KRASO® Type BDF for KG 2000 or KRASO® Type BDF for KG 2000 with foil flange, KRASO® Cover as building period protective cover

Further diameters and lengths from 50 cm on request!



KRASO® Floor Penetration Type BDF - thermally insulated - **LG 1**

for connection to KG/HT pipes or KG 2000 lines, with thermally insulated body surrounding approx. 5 cm, **KRASO® Cover** as an installation aid | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Type BDF - thermally insulated -							
Diameter DN	110	125	160	200	250	315	400	500
Delivery length (in cm)	50							
KRASO® Type BDF - thermally insulated -	189 €	201 €	224 €	307 €	492 €	616 €	711 €	833 €

Scope of supply: KRASO® Type BDF - thermally insulated -, KRASO® Cover as building period protective cover

Further diameters and lengths from 50 cm on request!



Rodding eye for KRASO® Type BDF **LG 1**

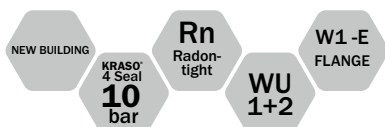
15 x 15 cm - screwable -



Diameter DN	110
Rodding eye for KRASO® Type BDF	292 €



KRASO® Universal Funnel
Check the installation video
(just scan the QR code!)



KRASO® Universal Funnel

The floor penetration for more flexibility

- + **KRASO® 4 Seal** – MPA-tested up to 10 bar!
- + IAF-tested: radon-tight!
- + Break-resistant solid wall material, KG 2000 system compatible
- + Displaced fall pipes can be corrected easily up to 45 degrees!
- + Integrated plug-in sleeve with diameter DN 110 and threefold reinforced lip ring
- + Surrounding connection flange with textured surface
- + Optionally available: screwable stainless steel clamping flange for fixed-loose flange construction
- + Easy installation: ready-to-use, lugs, including walkable building period protective cover
- + DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1-E



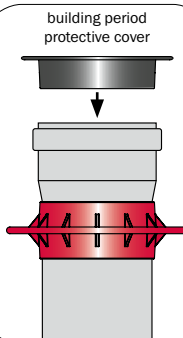
KRASO® Universal Funnel **LG 1**

for the installation in waterproof concrete base plates for the connection of displaced KG/HT pipes and for the connection to KG/KG 2000 lines, with one-sided spigot, walkable building period protective cover. Optionally available: screwable **KRASO® Stainless Steel Clamping Flange** for the connection to non-adhesive foils | **DafStB waterproof concrete guideline: stress class 1 + 2**

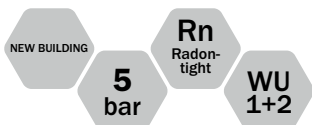
Type / Item	KRASO® Universal Funnel
Pipe: diameter DN	110
KRASO® Universal Funnel	53 €
KRASO® Stainless Steel Clamping Flange	70 €

Scope of supply: KRASO® Universal Funnel, walkable building period protective cover, additional protective cover
Optionally available: **KRASO® Stainless Steel Clamping Flange**





**Tool-free
assembly!
Including building
period protective
cover**



KRASO® Wall Collar

Fast, simple and tight

- + The fast, simple and tight solution for sealing pipes in waterproof concrete structures – base plate and wall!
- + Water pressure tight connection of pipelines: MPA-tested up to 5 bar!
- + IAF-tested: radon-tight!
- + Resistant to methane gas!
- + For all smooth pipes in DN 110, DN 125, DN 160 and DN 200!
- + Tool-free assembly – simple and fast: simply pull the **KRASO® Wall Collar** over the pipe
- + Including **KRASO® Cover** as building period protective cover
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASO® Wall Collar **LG 1**

for water pressure tight connection of pipelines with a smooth surface (KG, KG 2000, HT) in waterproof concrete structures: base plate and wall, MPA-tested up to 5 bar | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Wall Collar			
Diameter pipe	DN 110	DN 125	DN 160	DN 200
KRASO® Wall Collar	15 €	17 €	22 €	27 €

Scope of supply: KRASO® Wall Collar, KRASO® Cover as building period protective cover

Further special designs available on request!



KRASO® Wall Collar DKS Universal

Simple, tight, universally usable!

- + The fast, simple and tight solution for sealing pipes in waterproof concrete structures – base plate and wall!
- + Stepless onion ring technology! Scope of application 10 - 50 mm or 50 - 90 mm! For all smooth cables and pipes!
- + Water pressure tight connection of pipelines: MPA-tested up to 5 bar!
- + Radon-tight – according to FHRK leaflet MB 101!
- + Resistant to methane gas!
- + With **Torque Control Wrench KRASO® DKS**: for safe and easy tightening of straps
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASO® Wall Collar DKS Universal **LG 1**

Type / Item	KRASO® Wall Collar DKS Universal 10 - 50	KRASO® Wall Collar DKS Universal 50 - 90
Scope of application	10 - 50 mm	50 - 90 mm
KRASO® Wall Collar DKS Universal	21 €	24 €

Scope of supply: KRASO® Wall Collar DKS Universal with Torque Control Wrench KRASO® DKS, 2 stainless steel straps

Further special designs available on request!



KRASO® Wall Collar DKS

Simple and fast sealing!

- + The fast, simple and tight solution for sealing pipes in waterproof concrete structures – base plate and wall!
- + Water pressure tight connection of pipelines: MPA-tested up to 5 bar!
- + Radon-tight – according to FHRK leaflet MB 101!
- + Resistant to methane gas!
- + With **Torque Control Wrench KRASO® DKS**: for safe and easy tightening of straps
- + DafStB waterproof concrete guideline: stress class 1 + 2

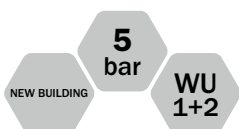


KRASO® Wall Collar DKS **LG 1**

Type / Item	KRASO® Wall Collar DKS							
Diameter pipe	DN 25	DN 32	DN 40	DN 50	DN 63	DN 75	DN 80	DN 90
KRASO® Wall Collar DKS	16 €	16 €	16 €	16 €	19 €	19 €	19 €	19 €

Scope of supply: KRASO® Wall Collar DKS with Torque Control Wrench KRASO® DKS, 2 stainless steel straps

Further special designs available on request!



KRASO® Wall Collar Lightning Protection Duo

Double the benefit, half the storage!

- + For the water pressure tight integration of earthing cables with factory-sealed openings: square earthing strap (30 x 3.5 mm) and earthing wire (Ø 8 - 10 mm)
- + With **Torque Control Wrench KRASO® DKS**: for safe and easy tightening of straps
- + MPA-tested up to 5 bar!
- + Resistant to methane gas!
- + Radon-tight – according to FHRK leaflet MB 101!
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASO® Wall Collar Lightning Protection Duo **LG 1**

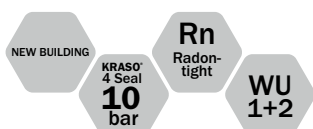
Type / Item	KRASO® Wall Collar Lightning Protection Duo
KRASO® Wall Collar Lightning Protection Duo	22 €

Scope of supply: KRASO® Wall Collar Lightning Protection Duo with Torque Control Wrench KRASO® DKS, 2 stainless steel straps

Further special designs available on request!



KRASO® Wall Penetration Type B
Check the installation video
(just scan the QR code!)



KRASO® Wall Penetration Type B

The proven wall penetration made of solid wall material

- + **KRASO® 4 Seal** – MPA-tested up to 10 bar!
- + IAF-tested: radon-tight!
- + Dimensionally and pressure-resistant solid wall material: low abrasion, easy installation at low temperatures
- + In accordance with DIN EN 1401 (KG) or DIN EN 14758 (KG 2000)
- + Also available for KG 2000: polypropylene (PP), mineral-filled, smooth walls, long-lasting
- + Formed plug-in-sleeve on both sides for connection to KG/HT pipes
- + Including two **KRASO® Covers** as an installation aid!
- + Also available as thermally insulated wall penetration!
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASO® Wall Penetration Type B **LG 1**

in accordance with DIN EN 1401, for connection to KG/HT pipes on both sides, with water pressure tight surrounding **KRASO® 4 Seal** | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Type B							
Diameter DN	110	125	160	200	250	315 ¹	400 ¹	500 ¹
Available standard wall thicknesses in cm	20 · 24 · 25 · 30 · 35 · 36.5 · 40 · 45 · 50							
KRASO® Type B	52 €	62 €	69 €	97 €	239 €	395 €	473 €	571 €
Surcharge: special dimensions up to 50 cm	21 €				34 €			

¹ Only usable as push-through sleeve, because the plug-in length is not suitable for double-sided usage according to EN 1401-1

Scope of supply: KRASO® Type B, 2 KRASO® Covers as an installation aid

Further diameters and wall thicknesses available on request!



KRASO® Wall Penetration Type B for KG 2000 **LG 1**

in accordance with DIN EN 14758, for installation in waterproof concrete walls for connection of KG 2000 pipes, with water pressure tight surrounding, thermally welded **KRASO® 4 Seal**, formed plug-in sleeve on both sides, 2 **KRASO® Covers** as an installation aid | **DafStB waterproof concrete guideline: stress class 1 + 2**

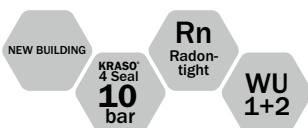
Type / Item	KRASO® Type B for KG 2000							
Diameter DN	110	125	160	200	250	315 ¹	400 ¹	500 ^{1,2}
Available standard wall thicknesses in cm	20 · 24 · 25 · 30 · 35 · 36.5 · 40 · 45 · 50							
KRASO® Type B for KG 2000	72 €	81 €	111 €	169 €	287 €	476 €	617 €	1,067 €
Surcharge: special dimensions up to 50 cm	21 €				34 €			

¹ Only usable as push-through sleeve because the plug-in length according to EN 1401-1 is not suitable for double-sided usage

² For product technical reasons wall thickness 20 cm with **KRASO® 3 Seal**

Scope of supply: **KRASO® Type B for KG 2000**, 2 **KRASO® Covers** as an installation aid

Further diameters and wall thicknesses available on request!



KRASO® Wall Penetration Type B - thermally insulated - **LG 1**

in accordance with DIN EN 14758, for installation in waterproof concrete walls, thermally welded **KRASO® 4 Seal** on both sides, formed plug-in sleeve on both sides, 2 **KRASO® Covers** as an installation aid and thermally insulated body surrounding approx. 5 cm | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASO® Type B - thermally insulated -							
Diameter DN	110	125	160	200	250	315 ¹	400 ¹	500 ¹
Available standard wall thicknesses in cm	20 · 24 · 25 · 30 · 35 · 36.5 · 40 · 45 · 50							
KRASO® Type B - thermally insulated -	249 €	275 €	302 €	352 €	533 €	799 €	925 €	1,646 €

¹ Only usable as push-through sleeve, because the plug-in length is not suitable for double-sided usage according to EN 1401-1

Scope of supply: **KRASO® Type B - thermally insulated -**, 2 **KRASO® Covers** as an installation aid

Further diameters and wall thicknesses available on request!



KRASO® Wall Penetration Type SML **LG 1**

grey iron waste water pipe according to DIN EN 877 for installation in waterproof concrete walls for connection to SML pipes on both sides, with water pressure tight surrounding **KRASO® 4 Seal** and styrofoam recess core on both sides | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASO® Type SML				
Diameter DN	110	125	160	200	250
Available standard wall thicknesses in cm	24 · 25 · 30				
KRASO® Type SML	84 €	100 €	126 €	227 €	332 €
Surcharge: per each additional 10 cm	12 €	13 €	16 €	38 €	44 €

Scope of supply: **KRASO® Type SML** incl. 2 styrofoam recess cores at the sides

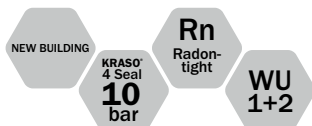
Further diameters and wall thicknesses available on request! Also available in TML and KML for an additional charge!



KRASO® Wall Penetration Type FR
Check the installation video
(just scan the QR code!)



cross section



KRASO® Wall Penetration Type FR

Always the right flow direction

- + One flow direction!
- + Flexible yet water tight connection to the pipe system: stresses caused by settling of KG pipes are minimised!
- + **KRASO® 4 Seal** – MPA-tested up to 10 bar!
- + IAF-tested: radon-tight!
- + Dimensionally and pressure resistant solid wall material: low abrasion, easy installation at low temperatures
- + In accordance with DIN EN 1401 (KG) or DIN EN 14758 (KG 2000)
- + Also available for KG 2000: polypropylene (PP), mineral-filled, smooth walls, long-lasting
- + DafStB waterproof concrete guideline: stress class 1 + 2



KRASO® Wall Penetration Type FR - flow direction **LG 1**

in accordance with DIN EN 1401, for installation in waterproof concrete walls, for connection to KG/HT pipes on both sides | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASO® Type FR		
Diameter DN	110	125	160
Available standard wall thicknesses in cm	20 ¹ · 24 · 25 · 30		
KRASO® Type FR	55 €	64 €	73 €

¹ 20 cm wall thickness: only DN 110 available

Scope of supply: KRASO® Type FR, 2 KRASO® Covers as an installation aid



KRASO® Wall Penetration Type FR for KG 2000 **LG 1**

in accordance with DIN EN 14758, for installation in waterproof concrete walls for connection to KG 2000 pipes on both sides, with water pressure tight surrounding, thermally welded **KRASO® 4 Seal**, formed plug-in sleeve on one side, one-sided spigot and 2 **KRASO® Covers** as an installation aid | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASO® Type FR for KG 2000		
Diameter DN	110	125	160
Available standard wall thicknesses in cm	24 · 25 · 30		
KRASO® Type FR for KG 2000	72 €	81 €	111 €

Scope of supply: KRASO® Type FR for KG 2000, 2 KRASO® Covers as an installation aid



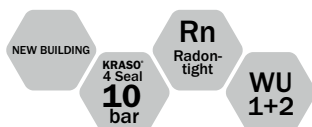
KRASO® Wall Penetration Type Universal **LG 1**

in accordance with DIN EN 1401, for installation in waterproof concrete walls, for connection to KG/HT pipes on both sides (Uni B) or for KG/HT pipes to be pushed through (Uni D), with water pressure tight surrounding **KRASO® 4 Seal**, with markings for a simple shortening on-site to standard wall thicknesses | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASO® Type Universal B • KRASO® Type Universal D		
Diameter DN	110	125	160
For wall thicknesses from ... to ... (in cm)	12 - 30	12 - 30	17.5 - 36.5
KRASO® Type Universal B KRASO® Type Universal D	52 €	62 €	69 €

Scope of supply: **KRASO® Type Universal B** with formed plug-in sleeve on both sides, 2 **KRASO® Covers** as an installation aid • **KRASO® Type Universal D** with integrated push-through sleeve, 2 **KRASO® Covers** as an installation aid

Further diameters and wall thicknesses available on request!



KRASO® Wall Penetration Type Universal for KG 2000 **LG 1**

in accordance with DIN EN 14758, for installation in waterproof concrete walls, for connection to KG 2000 pipes on both sides (Uni B for KG 2000) or for pipes to be pushed through (Uni D for KG 2000), with water pressure tight surrounding, thermally welded **KRASO® 4 Seal**, with markings for a simple shortening to standard wall thicknesses on-site | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASO® Type Universal B for KG 2000 • KRASO® Type Universal D for KG 2000		
Diameter DN	110	125	160
For wall thicknesses from ... to ... (in cm)	15 - 30	17.5 - 30	20 - 36.5
KRASO® Type Universal B for KG 2000 KRASO® Type Universal D for KG 2000	88 €	104 €	138 €

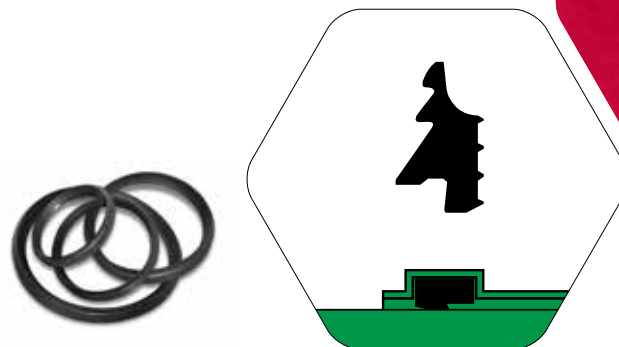
Scope of supply: **KRASO® Type Universal B for KG 2000** with formed plug-in sleeve on both sides, 2 **KRASO® Covers** as an installation aid • **KRASO® Type Universal D for KG 2000** with integrated push-through sleeve, 2 **KRASO® Covers** as an installation aid

Further diameters and wall thicknesses available on request!

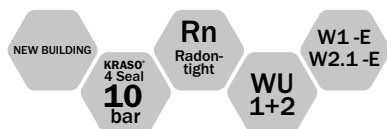
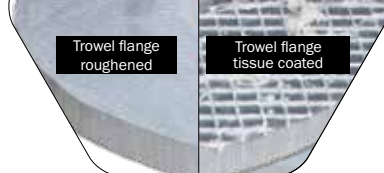


NBR seal **LG 1**

oil-resistant lip seal ring for system KG and KG 2000



Type / Item	NBR seal							
Diameter DN	110	125	160	200	250	315	400	500
NBR seal KG	1.85 €	2.50 €	3.20 €	5.10 €	12.10 €	16.70 €	31 €	79 €
NBR seal KG 2000	5.35 €	12 €	24 €	37 €	79 €	130 €	155 €	195 €



KRASO® Wall Penetration Type B/SF 5

Secure connection to bitumen and reactive sealings

- + Dimensionally stable and pressure-resistant solid wall material:
low abrasion, installation even at lower temperatures
- + Pipe and pipe material in accordance with DIN EN 1401 (KG) or DIN EN 14758 (KG 2000)
- + **KRASO® 4 Seal** – MPA-tested up to 10 bar!
- + IAF-tested: radon-tight!
- + Surrounding approx. 5 cm trowel flange on one side, for secure connection of bitumen thick coating such as KMB or reactive sealings: roughened or tissue coated
- + Also available: trowel flange made of PP with dovetail groove as **KRASO® Type B/SF 5 for KG 2000** for the secure gripping of bitumen thick coating
- + DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E

KRASO® Wall Penetration Type B/SF 5 **LG 1**

for installation in waterproof concrete walls for connection to KG/HT pipes on both sides, with trowel flange on one side, roughened (**KRASO® Type B/SF 5 - R**) or tissue coated (**KRASO® Type B/SF 5 - G**) for the secure connection of bitumen thick coating (e.g. KMB) and reactive sealings, surrounding approx. 5 cm, formed plug-in sleeve on both sides, 2 **KRASO® Covers** as an installation aid | DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E

Type / Item	KRASO® Type B/SF 5					
Diameter DN	110	125	160	200	250	315
Available standard wall thicknesses in cm	20 · 24 · 25 · 30 · 35 · 36.5 · 40 · 45 · 50					
KRASO® Type B/SF 5 - R	78 €	94 €	107 €	137 €	306 €	488 €
KRASO® Type B/SF 5 - G	86 €	98 €	111 €	143 €	311 €	497 €

Scope of supply: KRASO® Type B/SF 5 - R with trowel flange SF/5 on one side, roughened, 2 **KRASO® Covers** as an installation aid • KRASO® Type B/SF 5 - G with trowel flange SF/5 on one side, tissue coated, 2 **KRASO® Covers** as an installation aid

Further diameters and wall thicknesses available on request!

dovetail groove - for the secure gripping of bitumen thick coating and reactive sealings with **KRASO® Type B/SF 5 for KG 2000**



KRASO® Wall Penetration Type B/SF 5 for KG 2000 **LG 1**

for installation in waterproof concrete walls for the connection to KG 2000 pipes on both sides, with trowel flange on one side with dovetail groove for the secure connection of bitumen thick coating and reactive sealings, formed plug-in sleeve on both sides, 2 **KRASO® Covers** as an installation aid | DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E

Type / Item	KRASO® Type B/SF 5 for KG 2000					
Diameter DN	110	125	160	200	250	315
Available standard wall thicknesses in cm	20 · 24 · 25 · 30 · 35 · 36.5 · 40 · 45 · 50					
KRASO® Type B/SF 5 for KG 2000	146 €	162 €	186 €	246 €	499 €	747 €

Scope of supply: KRASO® Type B/SF 5 for KG 2000, 2 **KRASO® Covers** as an installation aid

Further diameters and wall thicknesses available on request!



KRASO® Wall Penetration Type DFW 6

KRASO® Wall Penetration Type DFW 8



KRASO® Wall Penetration Type DFW

Easy and secure sealing in precast walls

- + For the installation in triple wall elements: stop occurring water at the outer shell!
- + **KRASO® Type DFW 4:** KRASO® 2 Seal on both sides - MPA-tested up to 3.5 bar!
- + **KRASO® Type DFW 6:** KRASO® 2 Seal on one side, central KRASO® 4 Seal - MPA-tested up to 10 bar!
- + **KRASO® Type DFW 8:** KRASO® 2 Seal on both sides, central KRASO® 4 Seal - MPA-tested up to 10 bar!
- + IAF-tested: radon-tight!
- + Pipe and pipe-material in accordance with DIN EN 1401 (KG) or DIN EN 14758 (KG 2000)
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASO® Wall Penetration Type DFW - triple wall - especially for precast elements **LG 1**

in accordance with DIN EN 1401, for the installation in triple walls, for connection to KG/HT pipes on both sides, with formed plug-in sleeve on both sides, 2 KRASO® Covers as an installation aid | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Type DFW					
Diameter DN	110	125	160	200	250	315 ¹
Available standard wall thicknesses in cm	20 · 24 · 25 · 30 · 35 · 36.5 · 40 · 45 · 50					
KRASO® Type DFW 4	67 €	78 €	88 €	118 €	295 €	487 €
KRASO® Type DFW 6	73 €	82 €	93 €	130 €	327 €	539 €
KRASO® Type DFW 8	93 €	107 €	122 €	160 €	409 €	672 €
Surcharge: special dimensions up to 50 cm	21 €				34 €	

¹ Only usable as push-through sleeve, because the plug-in length is not suitable for double-sided usage according to EN 1401-1

Scope of supply: KRASO® Type DFW 4, KRASO® Type DFW 6 or KRASO® Type DFW 8, 2 KRASO® Covers as an installation aid

Further diameters and wall thicknesses available on request!



KRASO® Wall Penetration Type DFW for KG 2000 - triple wall - especially for precast elements **LG 1**

in accordance with DIN EN 14758, for the installation in triple walls, for the connection to KG 2000 pipes on both sides, with formed plug-in sleeve on both sides, 2 KRASO® Covers as an installation aid | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Type DFW for KG 2000					
Diameter DN	110	125	160	200	250	315 ^{1,2}
Available standard wall thicknesses in cm	20 · 24 · 25 · 30 · 35 · 36.5 · 40 · 45 · 50					
KRASO® Type DFW 4 for KG 2000	95 €	104 €	147 €	216 €	368 €	609 €
KRASO® Type DFW 6 for KG 2000	104 €	116 €	161 €	239 €	409 €	673 €
KRASO® Type DFW 8 for KG 2000	130 €	144 €	202 €	298 €	509 €	841 €
Surcharge: special dimensions up to 50 cm	21 €				34 €	

¹ Only usable as push-through sleeve because the plug-in length according to EN 1401-1 is not suitable for double-sided usage

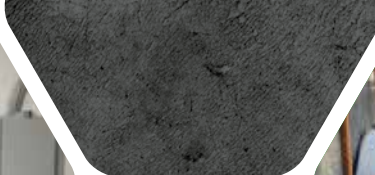
² For product-technical reasons wall thickness 20 cm with KRASO® 3 Seal

Scope of supply: KRASO® Type DFW 4 for KG 2000, KRASO® Type DFW 6 for KG 2000 or KRASO® Type DFW 8 for KG 2000, 2 KRASO® Covers as an installation aid

Further diameters and wall thicknesses available on request!



KRASO® Casing Type FE
Check the installation video
(just scan the QR code!)



KRASO® Casing Type FE

For all diameters!

- + Thick-walled true diameter plastic casing for concreting
- + **KRASO® 4 Seal** – MPA-tested up to 10 bar! Gas- and odour-tight – high-quality in terms of TA-Air!
- + IAF-tested: radon-tight!
- + Certified with the quality seal of the FHRK e. V.
- + Material and processing: weatherproof, impact-resistant plastic, **KRASO® 4 Seal** joined monolithically to the plastic pipe by vulcanization
- + Every diameter and every wall thickness available at short notice!
If necessary, the size can be adapted individually on the construction site!
- + Low weight: easy handling, simple installation, low transport costs!
- + Including installation covers! No pre-treatment required!
- + DafStB waterproof concrete guideline: stress class 1 + 2



KRASO® Casing Type FE/MI
with fixed claw

KRASO® Casing Type FE - true diameter casing •

KRASO® Casing Type FE/MI - true diameter casing with inner core **LG 1**

recess for retrofit installation of cables or pipes using a sealing insert (not included in the scope of supply) • plastic - true diameter casing with reinforced inner core, with eyelets, shear key and enclosed fixed claw as an installation aid, ID = InternalDiameter true diameter casing | **DafStB** waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Casing Type FE							KRASO® Casing Type FE/MI								
InternalDiameter in mm	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000
Available standard wall thicknesses in cm	20 · 24 · 25 · 30 · 35 · 36.5 · 40 · 45 · 50															
	40 €	41 €	43 €	47 €	69 €	80 €	86 €	231 €	253 €	272 €	288 €	445 €	589 €	694 €	877 €	927 €
Available standard wall thicknesses in cm	60 · 70 · 80 · 90 · 100															
	55 €	56 €	63 €	67 €	94 €	125 €	157 €	271 €	309 €	344 €	364 €	529 €	709 €	846 €	1,081 €	1,167 €

Scope of supply: KRASO® Casing Type FE, 2 KRASO® Covers as an installation aid • KRASO® Casing Type FE/MI, fixed claw as an installation aid

Further diameters and wall thicknesses available on request!



KRASO® Fibre Cement Casing

Water pressure tight penetration with homogeneous connection to the concrete

- + Casing made of fibre cement as a recess in waterproof concrete walls ("white tank")
- + For concreting: the surrounding external profile ensures a homogeneous and water pressure tight connection to the concrete
- + MPA-tested up to 5 bar!
- + Radon-tight – according to FHRK leaflet MB 101
- + Corresponds to the expansion range ("expansion coefficient") of waterproof concrete
- + Optionally available: **KRASO® Installation/Formwork Aid**
- + Fire protection class A1 according to DIN EN 13501-1
- + Certified with the quality seal of the FHRK e. V.
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASO® Installation/Formwork aid



for DN 80 to DN 200



for DN 250 to DN 800

KRASO® Fibre Cement Casing **LG 6**

fibre cement casing for the installation in waterproof concrete walls for installation of pipes or cables using sealing inserts (not included in the scope of supply) | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Fibre Cement Casing													
Internal Diameter in mm	80	100	125	150	200	250	300	350	400	450	500	600	700	800
Available standard wall thicknesses in cm														
20	37 €	39 €	45 €	50 €	60 €	78 €	82 €	100 €	138 €	157 €	187 €	213 €	284 €	327 €
24	43 €	45 €	52 €	56 €	69 €	91 €	97 €	117 €	162 €	185 €	219 €	250 €	337 €	388 €
25	44 €	46 €	54 €	58 €	71 €	93 €	99 €	122 €	168 €	192 €	227 €	259 €	350 €	403 €
30	50 €	52 €	58 €	63 €	76 €	97 €	117 €	144 €	199 €	227 €	269 €	306 €	416 €	480 €
35	57 €	59 €	66 €	71 €	86 €	106 €	130 €	166 €	229 €	262 €	310 €	352 €	482 €	556 €
36.5	62 €	65 €	76 €	82 €	93 €	112 €	140 €	173 €	238 €	272 €	322 €	366 €	502 €	579 €
40	64 €	67 €	79 €	86 €	95 €	117 €	145 €	189 €	259 €	296 €	350 €	398 €	548 €	633 €
50	74 €	78 €	93 €	104 €	104 €	121 €	160 €	233 €	320 €	366 €	433 €	491 €	649 €	786 €
60	83 €	86 €	102 €	112 €	121 €	143 €	177 €	277 €	381 €	436 €	515 €	584 €	811 €	939 €
80	103 €	108 €	131 €	147 €	151 €	173 €	199 €	352 €	484 €	549 €	654 €	742 €	1,075 €	1,245 €
100	124 €	130 €	172 €	194 €	203 €	246 €	311 €	440 €	605 €	692 €	817 €	927 €	1,338 €	1,551 €
120	149 €	156 €	206 €	233 €	244 €	295 €	373 €	528 €	726 €	830 €	980 €	1,112 €	1,606 €	1,861 €
optional: KRASO® Installation/Formwork aid	4.10 €	4.90 €	6.10 €	7.50 €	9.80 €	15.70 €	19.40 €	26.20 €	33.40 €	42.30 €	52.60 €	75.80 €	102.40 €	133.80 €

Further diameters and wall thicknesses available on request!



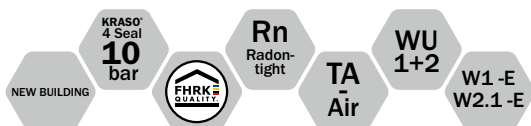
KRASO® Casing Type DFW/FE - triple wall - especially for precast elements **LG 1**

for the installation into triple walls, thick-walled plastic casing true diameter for concreting, as a recess for retrofit installation of cables or pipes using a sealing insert (not included in the scope of supply), with water pressure tight surrounding **KRASO® 2 Seal** on both sides (**KRASO® Type DFW/FE 4**), **KRASO® 2 Seal** on one side and water pressure tight surrounding **KRASO® 4 Seal** in the middle (**KRASO® Type DFW/FE 6**), **KRASO® 2 Seal** on both sides and central water pressure tight surrounding **KRASO® 4 Seal** (**KRASO® Type DFW/FE 8**), 2 **KRASO® Covers** as an installation aid, ID = InternalDiameter true diameter casing | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASO® Type DFW/FE					
InternalDiameter ID	100	125	150	200	250	300
Available standard wall thicknesses in cm	20 · 24 · 25 · 30 · 35 · 36.5 · 40 · 45 · 50					
KRASO® Type DFW/FE 4	44 €	48 €	53 €	79 €	89 €	95 €
KRASO® Type DFW/FE 6	49 €	53 €	60 €	86 €	101 €	107 €
KRASO® Type DFW/FE 8	62 €	66 €	73 €	109 €	125 €	130 €

Scope of supply: **KRASO® Type DFW/FE 4**, **KRASO® Type DFW/FE 6** or **KRASO® Type DFW/FE 8**, 2 **KRASO® Covers** as an installation aid

Further diameters and wall thicknesses available on request!



KRASO® Casing Type FE/SF 5

Thick-walled plastic casing - true diameter: secure connection of bitumen thick coating/reactive sealings

- + Thick-walled true diameter plastic casing for concreting
- + As a recess for retrofit installation of cables or pipes using a sealing insert
- + Approx. 5 cm surrounding trowel flange on one side for a secure connection of bitumen thick coating and reactive sealings: roughened or tissue coated
- + **KRASO® 4 Seal** – MPA-tested up to 10 bar! IAF tested: radon-tight! Gas- and odour-tight – high-quality in terms of TA-Air!
- + Certified with the quality seal of the FHRK e. V.
- + Also available: **KRASO® Casing Type FE/SF 5** made of KG 2000 with trowel flange made of PP with dovetail groove for the secure connection of bitumen thick coating and reactive sealings
- + **DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E**

KRASO® Casing Type FE/SF 5 **LG 1**

for concreting, with trowel flange on one side, roughened (**KRASO® Type FE/SF 5 - R**) or tissue coated (**KRASO® Type FE/SF 5 - G**), surrounding approx. 5 cm, 2 **KRASO® Covers** as an installation aid, ID = InternalDiameter true diameter casing | **DafStB waterproof concrete guideline: stress class 1 + 2, DIN 18533 W1 -E and W2.1 -E**

Type / Item	KRASO® Type FE/SF 5					
InternalDiameter ID	100	125	150	200	250	300
Available standard wall thicknesses in cm	20 · 24 · 25 · 30 · 35 · 36.5 · 40 · 45 · 50					
KRASO® Type FE/SF 5 - R - (roughened)	64 €	70 €	78 €	107 €	124 €	138 €
KRASO® Type FE/SF 5 - G- (tissue coated)	68 €	77 €	83 €	111 €	128 €	143 €

Scope of supply: **KRASO® Type FE/SF 5 - R** with trowel flange SF/5 on one side, roughened, 2 **KRASO® Covers** as an installation aid •

KRASO® Type FE/SF 5 - G with trowel flange SF/5 on one side, tissue coated, 2 **KRASO® Covers** as an installation aid

Further diameters and wall thicknesses available on request!



KRASO® Casings with bonding flange

Simple integration into the sealing of larger areas

- + True diameter casing with surrounding bonding flange according to DIN 18533 for a simple and fast integration into the sealing of larger areas ("black tank")
- + As a recess for the retrofit installation of cables or pipes using a sealing insert!
- + Available in non-corrosive stainless steel or with thick-walled true diameter plastic casing.
- + DIN 18533 W1 -E and W2.1 -E



KRASO® Casing E/FE/KF stainless steel/true diameter casing/bonding flange **LG 1**

stainless steel true diameter casing with stainless steel bonding flange, surrounding approx. 12 cm, according to DIN 18533, for concreting, made of non-corrosive stainless steel V2A, for the installation of cables or pipes using a sealing insert (not included in the scope of supply), with 2 **KRASO®** Covers as an installation aid. ID = InternalDiameter true diameter casing | **DIN 18533 W1 -E and W2.1 -E**

Type / Item	KRASO® Casing E/FE/KF						
InternalDiameter ID	80	100	125	150	200	250	300
Available standard wall thicknesses in cm	20 • 24 • 25 • 30						
Diameter bonding flange	surrounding 120 mm						
KRASO® Casing E/FE/KF	153 €	198 €	218 €	251 €	288 €	386 €	454 €
Surcharge: per each additional 10 cm	22 €	28 €	32 €	36 €	42 €	55 €	64 €

Scope of supply: KRASO® Casing E/FE/KF, 2 **KRASO®** Covers as an installation aid

Further diameters and wall thicknesses available on request! Also available in V4A at an additional charge!



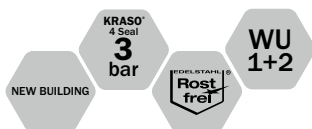
KRASO® Casing K/FE/KF - electrogalvanised - plastic/true diameter casing/bonding flange **LG 1**

thick-walled true diameter plastic casing with electrogalvanised bonding flange, surrounding approx. 12 cm, according to DIN 18533, for concreting, for the installation of cables or pipes using a sealing insert (not included in the scope of supply), 2 **KRASO®** Covers as an installation aid ID = InternalDiameter true diameter casing | **DIN 18533 W1 -E and W2.1 -E**

Type / Item	KRASO® Casing K/FE/KF - electrogalvanised -						
InternalDiameter ID	80	100	125	150	200	250	300
Available standard wall thicknesses in cm	20 • 24 • 25 • 30						
Diameter bonding flange	surrounding 120 mm						
KRASO® Casing K/FE/KF - electrogalvanised -	115 €	148 €	164 €	189 €	216 €	290 €	345 €
Surcharge: per each additional 10 cm	1.30 €	1.40 €	2.10 €	2.30 €	4.70 €	8.20 €	14.10 €

Scope of supply: KRASO® Casing K/FE/KF - electrogalvanised -, 2 **KRASO®** Covers as an installation aid

Further diameters and wall thicknesses available on request!



KRASO® Casing Type E/FE - stainless steel/true diameter casing **LG 1**

stainless steel casing for concreting, as a recess for retrofit installation of pipes and cables using a sealing insert (not included in the scope of supply), made of non-corrosive stainless steel V2A, with water pressure tight and gas- and odour-tight, surrounding **KRASO® 4 Seal** and 2 **KRASO® Covers** as an installation aid, ID = InternalDiameter true diameter casing | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASO® Type E/FE						
InternalDiameter ID	80	100	125	150	200	250	300
Available standard wall thicknesses in cm	20 • 24 • 25 • 30						
KRASO® Type E/FE	146 €	189 €	208 €	240 €	274 €	367 €	437 €
Surcharge: per each additional 10 cm	23 €	28 €	32 €	37 €	42 €	56 €	64 €

Scope of supply: KRASO® Casing Type E/FE, 2 KRASO® Covers as an installation aid

Further diameters and wall thicknesses available on request! Also available in V4A at an additional charge!



VA - tubular sleeve **LG 1**

stainless steel tubular sleeve for concreting, as non-water pressure tight recess for retrofit installation of pipes and cables using a sealing insert (not included in the scope of supply), made of non-corrosive stainless steel V2A, ID = InternalDiameter true diameter

Type / Item	VA - tubular sleeve						
InternalDiameter ID	80	100	125	150	200	250	300
Available standard wall thicknesses in cm	20 • 24 • 25 • 30						
VA - tubular sleeve	61 €	78 €	88 €	99 €	114 €	151 €	180 €
Surcharge: per each additional 10 cm	23 €	28 €	32 €	37 €	42 €	56 €	64 €

Scope of supply: VA - tubular sleeve made of non-corrosive stainless steel V2A with 2 KRASO® Covers as an installation aid

Further diameters and wall thicknesses available on request! Also available in V4A at an additional charge!



KRASO® Casing Type E/FE/M - stainless steel / true diameter casing / middle flange **LG 1**

stainless steel casing for concreting with middle flange, surrounding approx. 10 cm, as a recess for retrofit installation of pipes and cables using a sealing insert (not included in the scope of supply), made of non-corrosive stainless steel V2A, ID = InternalDiameter true diameter casing

Type / Item	KRASO® Type E/FE/M						
InternalDiameter ID	80	100	125	150	200	250	300
Available standard wall thicknesses in cm	20 • 24 • 25 • 30						
KRASO® Type E/FE/M	146 €	189 €	208 €	240 €	274 €	367 €	437 €
Surcharge: per each additional 10 cm	23 €	28 €	32 €	37 €	42 €	56 €	64 €

Scope of supply: KRASO® Casing Type E/FE/M, 2 KRASO® Covers as an installation aid

Further diameters and wall thicknesses available on request! Also available in V4A at an additional charge!

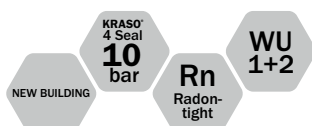


KRASO® Slip-on Sleeve **LG 1**

in accordance with DIN EN 1401, for installation in waterproof concrete walls for KG/HT pipes to be pushed through, with water pressure tight surrounding **KRASO® 4 Seal** | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Slip-on Sleeve							
Diameter DN	110	125	160	200	250	315	400	500
KRASO® Slip-on Sleeve	40 €	46 €	53 €	67 €	142 €	215 €	306 €	573 €

Also available as double sleeve with internal stop on request!

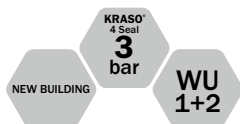


KRASO® Slip-on Sleeve for KG 2000 **LG 1**

in accordance with DIN EN 14758, for installation in waterproof concrete walls for KG 2000 pipes to be pushed through, with water pressure tight surrounding, thermally welded **KRASO® 4 Seal** | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Slip-on Sleeve for KG 2000							
Diameter DN	110	125	160	200	250	315	400	500
KRASO® Slip-on Sleeve for KG 2000	52 €	60 €	78 €	129 €	209 €	269 €	365 €	691 €

Also available as double sleeve with internal stop on request!



KRASO® 15° | 30° | 45° Bend **LG 1**

in accordance with DIN EN 1401, for installation in waterproof concrete walls for the connection to KG/HT pipes, with water pressure tight surrounding **KRASO® 4 Seal** and formed plug-in sleeve on one side | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® 15° 30° 45° Bend							
Diameter DN	110 ¹	125 ¹	160 ¹	200 ¹	250	315	400	500
KRASO® 15° 30° 45° Bend	29 €	34 €	39 €	73 €	124 €	192 €	330 €	721 €

¹ For technical production reasons partly **KRASO® 3 Seal**



KRASO® 15° | 30° | 45° Bend for KG 2000 **LG 1**

in accordance with DIN EN 14758, for installation in waterproof concrete walls for the connection to KG 2000 pipes, with water pressure tight surrounding, thermally welded **KRASO® 4 Seal** and formed plug-in sleeve on one side | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® 15° 30° 45° Bend for KG 2000							
Diameter DN	110 ¹	125 ¹	160 ¹	200 ¹	250	315 ²	400 ²	500
KRASO® 15° 30° 45° Bend for KG 2000	44 €	55 €	75 €	111 €	255 €	409 €	589 €	1,148 €

¹ For technical production reasons partly **KRASO® 3 Seal**

² Not available as 30° bend



KRASO® Tie Point DWS - System
Check the installation video
(just scan the QR code!)



KRASO® Tie Point DWS – System

Simple and quick use, water pressure tight up to 10 bar!

- + Water pressure tight tie point as spacer for the formwork of waterproof concrete walls
- + Delivery ready-to-use according to wall thickness - no assembly necessary on the construction site!
- + Simple installation - no time-consuming adhesion of blanking plugs and expensive reworking!
- + 10 bar water pressure tightness internally and externally due to vulcanised locking disc and sealing and blanking plugs for simple locking.
- + Fireproof according to F 180!
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASO® DWS - System - water pressure tight tie point **LG 1**

| DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® DWS - System											
Wall thicknesses in cm	15	17,5	20	24	25	30	35	36.5	40	45	50	60
KRASO® DWS - System	4.30 €	4.40 €	4.40 €	4.50 €	4.50 €	4.60 €	4.70 €	4.70 €	4.80 €	4.90 €	5.00 €	5.30 €

Packing unit:
50 pcs. - red KRASO® Distance Pipe 22/26 with KRASO® Locking Disc and assembled caps
50 pcs. - KRASO® Sealing Plugs
100 pcs. - blanking plugs

Any wall thickness available at short term! Also available for system tie point 26/30!

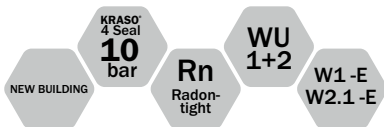
KRASO® DWS – Accessories **LG 1**



Type / Item	Insertion Tool	Blanking Plugs	KRASO® Sealing Plugs
Packing Unit	1 pc.	100 pcs.	50 pcs.
KRASO® DWS - Accessories	12 €	10 €	9 €



KRASO® Floor Drain
Check the installation video
(just scan the QR code!)



KRASO® Drains for interior and exterior use Inside and outside – tight and dry

- + For interior areas, basements, yards and parking levels:
KRASO® Drains for a reliable and water pressure tight drainage of pressing water!
- + IAF-tested: radon-tight!
- + Walkable and fit for traffic, frost proof and odour-tight, backwater safe and thermally insulated: various versions for different needs!
- + High-quality components for a secure installation and use: solid wall material with thermally welded **KRASO® 4 Seal**, plastic or stainless steel grates
- + Additional accessories available as completion for individual needs
- + DafStB waterproof concrete guideline: stress class 1 + 2, with foil flange DIN 18533 W1-E

KRASO® Drains - according to DIN EN 1253



KRASO® Floor Drain



KRASO® Floor Drain
with foil flange



KRASO® Floor Drain
for KG 2000



KRASO® Floor Drain
- thermally insulated -

KRASO® Floor Drains - frost proof/backwater safe



KRASO® Floor Drain
Type FS frost proof



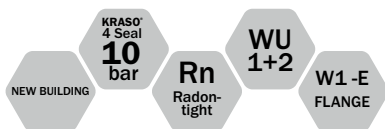
KRASO® Floor Drain
Type FS for KG 2000
with foil flange
frost proof



KRASO® Floor Drain
Type FS - RS
frost proof -
backwater safe



KRASO® Floor Drain
Type FS - RS with foil flange
frost proof -
backwater safe

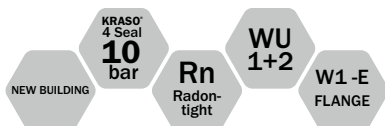


KRASO® Floor Drain **LG 1**

according to DIN EN 1253 – for the installation in interior areas without traffic, for the drainage of grey water, drainage capacity: 1.79 l/s, with water pressure tight surrounding **KRASO® 4 Seal**. Also available with **KRASO® Foil Flange**, oil- and bitumen resistant (d = approx. 50 cm). For the integration of the foil flange, we recommend our adhesive and sealant **KRASO® PU 50**. | DafStB waterproof concrete guideline: stress class 1 + 2, with foil flange DIN 18533 W1-E

Type / Item	KRASO® Floor Drain • KRASO® Floor Drain with foil flange
Drainage capacity	1.79 l/s
Height	drain approx. 110 mm
Insert frame	steplessly rotatable and height-adjustable from 30 - 70 mm
Plastic grate (standard)	class K3 (withstands loads up to 300 kg), 15 x 15 cm
Connection	KG/HT - pipes either DN 50 or DN 110 vertical
KRASO® Floor Drain	89 €
KRASO® Floor Drain with foil flange	130 €
KRASO® PU 50	22 €

Scope of supply: **KRASO® Floor Drain**, plastic grate class K3, odour stopper, sludge trap filter, building period protective cover • **KRASO® Floor Drain with foil flange**, plastic grate class K3, odour stopper, sludge trap filter, building period protective cover



KRASO® Floor Drain for KG 2000 **LG 1**

according to DIN EN 1253 – for the installation in interior areas without traffic, for the drainage of grey water, drainage capacity: 1.79 l/s, with water pressure tight surrounding, thermally welded **KRASO® 4 Seal**. Also available with **KRASO® Foil Flange**, oil- and bitumen resistant (d = approx. 50 cm). For the integration of the foil flange, we recommend our adhesive and sealant **KRASO® PU 50**. | DafStB waterproof concrete guideline: stress class 1 + 2, with foil flange DIN 18533 W1-E

Type / Item	KRASO® Floor Drain for KG 2000 • KRASO® Floor Drain for KG 2000 with foil flange
Drainage capacity	1.79 l/s
Height	drain approx. 110 mm
Insert frame	steplessly rotatable and height-adjustable from 30 - 70 mm
Plastic grate	class K3 (withstands loads up to 300 kg), 15 x 15 cm
Connection	KG 2000/HT pipes either DN 50 or DN 110 vertical
KRASO® Floor Drain for KG 2000	113 €
KRASO® Floor Drain for KG 2000 with foil flange	152 €
KRASO® PU 50	22 €

Scope of supply: **KRASO® Floor Drain for KG 2000**, plastic grate class K3, odour stopper, sludge trap filter, building period protective cover • **KRASO® Floor Drain for KG 2000 with foil flange**, plastic grate class K3, odour stopper, sludge trap filter, building period protective cover

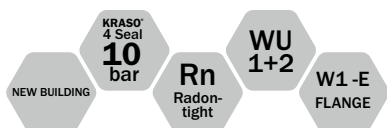


KRASO® Floor Drain - thermally insulated - **LG 1**

according to DIN EN 1253 – for the installation in interior areas without traffic, for the drainage of grey water, drainage capacity: 1.79 l/s, with water pressure tight surrounding thermally welded **KRASO® 4 Seal** | DafStB waterproof concrete guideline: stress class **1 + 2**

Type / Item	KRASO® Floor Drain - thermally insulated -
Drainage capacity	1.79 l/s
Height	drain approx. 110 mm
Insert frame	steplessly rotatable and height-adjustable from 30 - 70 mm
Stainless steel grate	class K3 (withstands loads up to 300 kg), 15 x 15 cm
Connection	either KG/HT - pipes or KG 2000 pipes DN 50 or DN 110 vertical
KRASO® Floor Drain - thermally insulated -	315 €

Scope of supply: KRASO® Floor Drain - thermally insulated -, plastic grate class K3, with odour stopper and sludge trap filter, building period protective cover

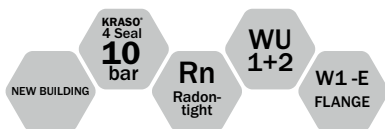


KRASO® Floor Drain Type FS - frost proof **LG 1**

for the installation in exterior areas without traffic, for the drainage of grey water, drainage capacity: 1.67 l/s, with water pressure tight surrounding **KRASO® 4 Seal**. Also available with **KRASO® Foil Flange**, oil- and bitumen resistant (d = approx. 50 cm). For the integration of the foil flange, we recommend our adhesive and sealant **KRASO® PU 50**. | DafStB waterproof concrete guideline: stress class **1 + 2**, with foil flange DIN 18533 W1-E

Type / Item	KRASO® Type FS • KRASO® Type FS with foil flange
Drainage capacity	1.67 l/s
Height	drain approx. 110 mm
Insert frame	steplessly rotatable and height-adjustable from 30 - 70 mm
Stainless steel grate	class K3 (withstands loads up to 300 kg), 15 x 15 cm
Connection	KG/HT - pipes DN 110 vertical
KRASO® Type FS	186 €
KRASO® Type FS with foil flange	228 €
KRASO® PU 50	22 €

Scope of supply: KRASO® Floor Drain Type FS, screwable stainless steel grate class K3, frost proof odour barrier, sludge trap filter and building period protective cover • **KRASO® Floor Drain Type FS with foil flange**, screwable stainless steel grate class K3, frost proof odour barrier, sludge trap filter and building period protective cover



KRASO® Floor Drain Type FS for KG 2000 - frost proof **LG 1**

for the installation in exterior areas without traffic, for the drainage of grey water, drainage capacity: 1.67 l/s, with water pressure tight surrounding **KRASO® 4 Seal**. Also available with **KRASO® Foil Flange**, oil- and bitumen resistant (d = approx. 50 cm). For the integration of the foil flange, we recommend our adhesive and sealant **KRASO® PU 50**. | DafStB waterproof concrete guideline: stress class **1 + 2**, with foil flange **DIN 18533 W1-E**

Type / Item	KRASO® Type FS for KG 2000 • KRASO® Type FS for KG 2000 with foil flange
Drainage capacity	1.67 l/s
Height	drain approx. 110 mm
Insert frame	steplessly rotatable and height-adjustable from 30 - 70 mm
Stainless steel grate	class K3 (withstands loads up to 300 kg), 15 x 15 cm
Connection	KG 2000/HT pipes DN 110 vertical
KRASO® Type FS for KG 2000	208 €
KRASO® Type FS for KG 2000 with foil flange	251 €
KRASO® PU 50	22 €

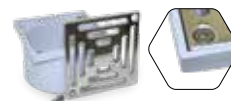
Scope of supply: **KRASO® Floor Drain Type FS for KG 2000**, screwable stainless steel grate class K3, frost proof odour barrier, sludge trap filter and building period protective cover • **KRASO® Floor Drain Type FS for KG 2000 with foil flange**, screwable stainless steel grate class K3, frost proof odour barrier, sludge trap filter and building period protective cover



KRASO® Floor Drains – Accessories **LG 1**



Type / Item	Insert frame extension	Insert frame extension with foil flange	Insert frame extension - fit for traffic up to 1.5 t
Item description	height ≤ 140 mm	height ≤ 140 mm foil flange (d = approx. 50 cm)	steplessly height-adjustable from 15 - 120 mm, all visible parts made of stainless steel, stainless steel grate massive, screwed, 150 x 150 mm, fit for traffic up to 1.5 t, L 15
KRASO® Floor Drain - Accessories	21 €	61 €	180 €



Type / Item	Insert frame	Stainless steel grate	Stainless steel grate - screwable -
Item description	all visible parts made of stainless steel incl. stainless steel grate	class K3	incl. insert frame with threaded sleeves
KRASO® Floor Drain - Accessories	158 €	36 €	63 €



Type / Item	Raising element for thin-bed mortar	Spare parts kit	Floor Drain Insert frame with building period protective cover
Item description	screed structure height from 25 - 130 mm	including: backflow seal, odour stopper, sludge trap filter, insert frame and plastic grate	for industry floors treated with a power trowel
KRASO® Floor Drain - Accessories	114 €	49 €	107 €

KRASO® Floor Drain Type FS - RS

Frost proof - backwater safe

- + For installation in outdoor areas for areas without traffic, for the drainage of grey water, drainage capacity: 0.4 l/s.
- + Winterproof due to frost proof backwater double stopper
- + PP MD pipe (DIN 14758): high impact strength and durability
- + Screwable stainless steel grate: class K3 up to max. 300 kg
- + DafStB waterproof concrete guideline: stress class 1 + 2, with foil flange DIN 18533 W1-E



KRASO® Floor Drain Type FS - RS
with screwable stainless steel grate class K3,
frost proof backwater double stopper, 2 auto-
matically closing caps, one of them as emergency
valve - closable by one hand, sludge trap filter and
building period protective cover



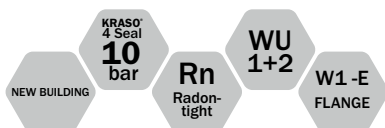
KRASO® Floor Drain Type FS - RS
with foil flange

KRASO® Floor Drain Type FS - RS - frost proof - backwater safe **LG1**

for the installation in exterior areas without traffic. Also available with **KRASO® Foil Flange**, oil- and bitumen resistant (d = approx. 50 cm). For the integration of the foil flange, we recommend our adhesive and sealant **KRASO® PU 50**. | DafStB waterproof concrete guideline: stress class 1 + 2, with foil flange DIN 18533 W1-E

Type / Item	KRASO® Type FS - RS • KRASO® Type FS - RS with foil flange
Drainage capacity	0.4 l/s
Height	drain approx. 195 mm
Insert frame	steplessly rotatable and height-adjustable from 30 - 70 mm
Stainless steel grate	class K3 (withstands loads up to 300 kg), 15 x 15 cm
Connection	KG/HT - pipes either DN 50 or DN 110 vertical
KRASO® Type FS - RS	338 €
KRASO® Type FS - RS with foil flange	374 €
KRASO® PU 50	22 €

Scope of supply: **KRASO® Floor Drain Type FS - RS**, screwable stainless steel grate class K3, frost proof backwater double stopper, with 2 automatically closing caps, one of them as emergency valve - closable by one hand, sludge trap filter and building period protective cover • **KRASO® Floor Drain Type FS - RS with foil flange**, screwable stainless steel grate class K3, frost proof backwater double stopper, with 2 automatically closing caps, one of them as emergency valve - closable by one hand, sludge trap filter and building period protective cover



KRASO® Basement Drain

For a dry basement

- + **KRASO® Basement Drain** with integrated, removable backwater and odour stopper!
- + For the connection of up to 3 intake pipes
- + Drainage capacity: 1.8 l per second!
- + With height-adjustable and rotatable insert frame from 30 to 60 mm
- + Either with plastic or stainless steel grate
- + With water pressure tight surrounding, thermally welded **KRASO® 4 Seal**: water pressure tight up to 10 bar!
- + Also available for KG 2000: made of polypropylene (PP), mineral-filled, smooth walls, long-lasting
- + DafStB waterproof concrete guideline: stress class 1 + 2, with foil flange DIN 18533 W1-E

KRASO® Basement Drain **LG1**

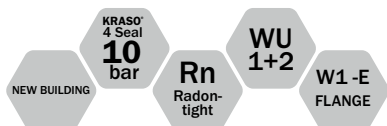
for the installation in areas without traffic and for the connection of up to 3 intake pipes. Also available with **KRASO® Foil Flange**, oil- and bitumen resistant (d = approx. 50 cm). For the integration of the foil flange, we recommend our adhesive and sealant **KRASO® PU 50**. | DafStB waterproof concrete guideline: stress class 1 + 2, with foil flange DIN 18533 W1-E

Type / Item	KRASO® Basement Drain with plastic grate	KRASO® Basement Drain with stainless steel grate
Drainage capacity	1.8 l/s	
Height	drain approx. 250 mm	
Insert frame	steplessly rotatable and height-adjustable from 30 - 60 mm	
Slot grate	class K3, 20 x 20 cm, plastic (black)	class K3, 20 x 20 cm, stainless steel
Connection	3 intake pipes: 2 x DN 50, 1 x DN 70, either for KG, HT or KG 2000 pipes	
KRASO® Basement Drain	431 €	545 €
KRASO® Basement Drain with foil flange	560 €	673 €
KRASO® PU 50	22 €	

Scope of supply: **KRASO® Basement Drain** with removable backwater stopper, integrated odour stopper, sludge trap filter and insert frame (telescopically height-adjustable from 30 to 60 mm and rotatable), two intakes DN 50, one intake DN 70, all intakes and drains either for KG, HT or KG 2000 pipes, with slot grate 20 x 20 cm made of black plastic or stainless steel, class K3 • **KRASO® Basement Drain with foil flange**, with removable backwater stopper, integrated odour stopper, sludge trap filter and insert frame (telescopically height-adjustable from 30 to 60 mm and rotatable), two intakes DN 50, one intake DN 70, all intakes and drains either for KG, HT or KG 2000 pipes, with slot grate 20 x 20 cm made of black plastic or stainless steel, class K3 300 kg



KRASO® Basement Drain
with foil flange



KRASO® Basement Drain for KG 2000 **LG 1**

for the installation in areas without traffic and for the connection of up to 3 intake pipes, for the drainage of grey water, drainage capacity: 1.8 l/s, with water pressure tight surrounding, thermally welded **KRASO® 4 Seal**, lateral **KRASO® Drainage Bows DN 110** with **KRASO® 3 Seal**. Also available with **KRASO® Foil Flange**, oil- and bitumen resistant (d = approx. 50 cm). For the integration of the foil flange, we recommend our adhesive and sealant **KRASO® PU 50**. | DafStB waterproof concrete guideline: stress class 1 + 2, with foil flange DIN 18533 W1-E

Type / Item	KRASO® Basement Drain for KG 2000 with plastic grate	KRASO® Basement Drain for KG 2000 with stainless steel grate
Drainage capacity	1.8 l/s	
Height	drain approx. 250 mm	
Insert frame	steplessly rotatable and height-adjustable from 30 - 60 mm	
Slot grate	class K3, 20 x 20 cm, plastic (black)	class K3, 20 x 20 cm, stainless steel
Connection	3 intake pipes: 2 x DN 50, 1 x DN 70, either for KG, HT or KG 2000 pipes	
KRASO® Basement Drain for KG 2000	539 €	682 €
KRASO® Basement Drain for KG 2000 with foil flange	668 €	781 €
KRASO® PU 50	22 €	

Scope of supply: KRASO® Basement Drain for KG 2000 with removable backwater stopper, integrated odour stopper, sludge trap filter and insert frame (telescopically height-adjustable from 30 to 60 mm and rotatable), two intakes DN 50, one intake DN 70, all intakes and drains either for KG, HT or KG 2000 pipes, with slot grate 20 x 20 cm made of black plastic or stainless steel, class K3 • **KRASO® Basement Drain for KG 2000 with foil flange** with removable backwater stopper, integrated odour stopper, sludge trap filter and insert frame (telescopically height-adjustable from 30 to 60 mm and rotatable), two intakes DN 50, one intake DN 70, all intakes and drains either for KG, HT or KG 2000 pipes, with slot grate 20 x 20 cm made of black plastic or stainless steel, class K3 300 kg



KRASO® Drains - Accessories **LG 1**

Type / Item	Insert frame extension	Insert frame extension
Item description	for KRASO® Basement Drain, KRASO® Yard Drain Type 12.5, height-adjustable from 46 - 130 mm, also suitable for KRASO® Yard/Parking Level Drain Type 1.5 with stainless steel grate	for KRASO® Yard/Parking Level Drain Type 1.5 ¹ , height-adjustable from min. 25 - 130 mm
KRASO® Drains - Accessories	30 €	99 €

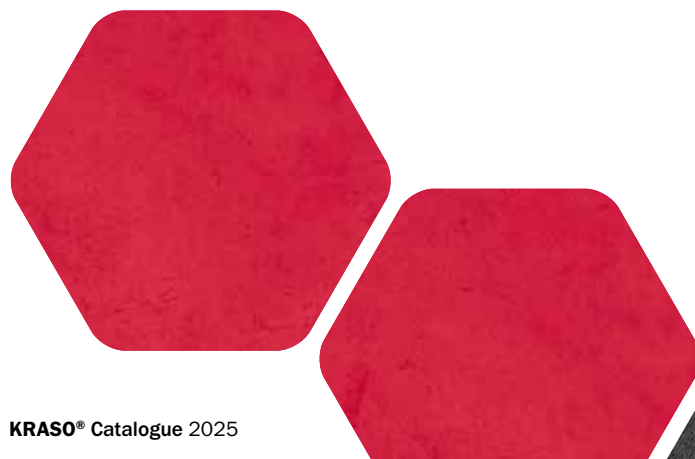
¹ Not suitable for KRASO® Yard/Parking Level Drain Type 1.5 with stainless steel grate

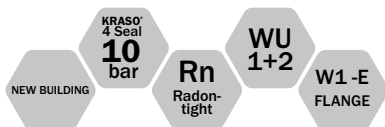


KRASO® PU 50 **LG 1**

high-quality, permanently elastic and strong PU-sealant, also usable on moist surfaces, recommended for all products with **KRASO® Foil Flange**, colour black, 290 ml - cartridge for cartridge press

Type / Item	PU sealant
KRASO® PU 50	22 €





KRASO® Yard/Parking Level Drain

The high-performance drain
for e.g. underground car parks

- + **KRASO® Yard/Parking Level Drain** with 4.3 l/s drainage capacity according to DIN EN 1253
- + With frost proof odour barrier and removable sand trap basket
- + Load class A to 1.5 t or load class B up to 12.5 t
- + Connection either for KG, HT or KG 2000 pipes DN 110
- + With water pressure tight surrounding, thermally welded **KRASO® 4 Seal**: water pressure tight up to 10 bar!
- + DafStB waterproof concrete guideline: stress class 1 + 2, with flange DIN 18533 W1-E



KRASO® Yard/Parking Level Drain Type 1.5



KRASO® Yard/Parking Level Drain Type 1.5
with trowel flange with dovetail groove
(only for welding sheets, not for resin coating)



KRASO® Yard/Parking Level Drain Type 1.5
with stainless steel grate



KRASO® Yard/Parking Level Drain Type 1.5
with stainless steel grate with foil flange



KRASO® Yard/Parking Level Drain Type 12.5



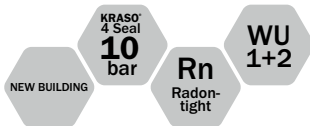
KRASO® Yard/Parking Level Drain Type 12.5
with stainless steel grate

KRASO® Yard/Parking Level Drain **LG 1**

for the installation in areas with traffic

Type / Item	KRASO® Yard/Parking Level Drain Type 1.5	KRASO® Yard/Parking Level Drain Type 12.5
Drainage capacity	4.3 l/s	
Load class	load class A 15	load class B to 12.5 t
Base plate thickness	min. 20 cm	min. 15 or 20 cm
Connection	either for KG, HT or KG 2000 pipes DN 110	
KRASO® Yard/Parking Level Drain	282 €	511 €
KRASO® Yard/Parking Level Drain with trowel flange with dovetail groove	471 €	-
KRASO® Yard/Parking Level Drain with stainless steel grate	444 €	-
KRASO® Yard/Parking Level Drain with stainless steel grate with foil flange	632 €	-
KRASO® Yard/Parking Level Drain with stainless steel slot grate	-	708 €

Scope of supply: **KRASO® Yard/Parking Level Drain Type 1.5** with frost proof odour barrier, removable sand trap basket, with slot grate approx. 24 x 24 cm, cast iron, load class A to 1.5 t, vertical discharge • **KRASO® Yard/Parking Level Drain Type 12.5** with frost proof odour barrier, removable sand trap basket, with support frame made of eco-cast, 26 x 26 cm, with slot grate, load class B up to 12.5 t, vertical discharge



KRASO® Type LES

Light shaft drainage system for concrete shafts

- + Flexible drainage system - for precast elements and in-situ concrete
- + Various components for individual demands
- + Also available for retrofit installation
- + DafStB waterproof concrete guideline: stress class 1 + 2



KRASO® Type LES DN 160 - Basis for precast elements
with water pressure tight surrounding, thermally welded **KRASO® 2 Seal**. For later installation of LES - Vario - connection, LES - leaf sieve and LES - odour barrier



KRASO® Type LES DN 160 - Basis for in-situ concrete
with water pressure tight surrounding, thermally welded **KRASO® 4 Seal**. For later installation of LES - vario - connection, LES - leaf sieve and LES - odour barrier



KRASO® Type LES DN 160 - Vario connection
either to drainage DN 50 / DN 110 or to drainage DN 110. Connection possible to LES - backwater double stopper



LES DN 160 - odour barrier
removable, frost proof



LES DN 160 - backwater double stopper
with 2 automatically sealing caps, one of them as emergency valve/closable by one hand, easily accessible and easy to maintain. Can be retrofitted by LES - vario - connection. Drainage capacity: 0.4 l/s backwater tight up to 5 m water column



LES DN 110 - backwater stopper



LES DN 110 and DN 160 - leaf sieve

KRASO® Type LES - light shaft drainage system **LG1**

for concrete shafts | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Type LES - 110	KRASO® Type LES - 160
KRASO® Type LES - Basis for precast elements	47 €	53 €
KRASO® Type LES - Basis for in-situ concrete	66 €	78 €
KRASO® Type LES - Vario - connection	45 €	53 €
LES - odour barrier	36 €	36 €
LES - backwater stopper	125 €	-
LES - backwater double stopper	-	181 €
LES - leaf sieve	36 €	38 €

Also available for retrofit installation!

The
alternative to a
fixed-loose flange!

NEW BUILDING
REHABILITATION

1.5
bar

W1 -E
W2.1 -E

KRASO® Flange Pipes

Simple and effective integration into bituminous sealing

- + For new buildings and rehabilitation - according to DIN 18533 W1 -E and W2.1 -E
- + Simple and effective integration into bituminous sealing ("black tank"): bitumen thick coating and reactive sealing, sheeting, concrete and brick walls
- + Water pressure tight up to 1.5 bar – MPA-tested!
- + Made of dimensionally and pressure stable solid wall material with low abrasion! Installation even at lower temperatures
- + Pipe and pipe material in accordance with DIN EN 1401 (KG) or DIN EN 14758 (KG 2000)



KRASO® PU 50:
high-quality, permanently
elastic and strong PU-sealant!
(290 ml - cartridge).
Our recommendation for
all products with
KRASO® Foil Flange!



KRASO® Flange Pipe KG



KRASO® Flange Pipe for KG 2000



KRASO® Flange Pipe FE



KRASO® Type KMB



KRASO® Type KMB for KG 2000



KRASO® Type ÜSF



KRASO® Flange Pipe KG **LG 1**

for retrofit installation, for the connection to KG/HT pipes, made of high-quality, dimensionally and pressure stable solid wall material, with formed plug-in sleeve on one side and **KRASO® Foil Flange**, oil- and bitumen resistant, surrounding approx. 15 cm. For the integration of the foil flange, we recommend our adhesive and sealant **KRASO® PU 50**. | DIN 18533 W1 -E and W2.1 -E

Type / Item	KRASO® Flange Pipe Type KG							
Diameter DN	110	125	160	200	250	315	400	500
Delivery length in cm	50							
KRASO® Flange Pipe Type KG	47 €	49 €	62 €	78 €	154 €	230 €	293 €	450 €
KRASO® PU 50	22 €							

Further diameters and lengths from 50 cm available on request!



KRASO® Flange Pipe for KG 2000 **LG 1**

for retrofit installation, for the connection to KG 2000 pipes, made of high-quality, dimensionally and pressure stable solid wall material, with formed plug-in sleeve on one side and **KRASO® Foil Flange**, oil- and bitumen resistant, surrounding approx. 15 cm. For the integration of the foil flange, we recommend our adhesive and sealant **KRASO® PU 50**. | DIN 18533 W1 -E and W2.1 -E

Type / Item	KRASO® Flange Pipe for KG 2000							
Diameter DN	110	125	160	200	250	315	400	500
Delivery length in cm	50							
KRASO® Flange Pipe for KG 2000	62 €	79 €	87 €	122 €	279 €	389 €	499 €	652 €
KRASO® PU 50	22 €							

Further diameters and lengths from 50 cm available on request!



KRASO® Flange Pipe FE **LG 1**

thick-walled true diameter plastic casing for retrofit installation of pipes and cables using a sealing insert (not included in the scope of supply), with **KRASO® Foil Flange**, oil- and bitumen resistant, surrounding approx. 15 cm. For the integration of the foil flange, we recommend our adhesive and sealant **KRASO® PU 50**. ID = InternalDiameter flange pipe FE | DIN 18533 W1 -E and W2.1 -E

Type / Item	KRASO® Flange Pipe Type FE					
InternalDiameter ID	100	125	150	200	250	300
External diameter in mm	110	140	160	210	263	314
Delivery length in cm	50					
KRASO® Flange Pipe Type FE	45 €	49 €	56 €	80 €	113 €	134 €
KRASO® PU 50	22 €					

Further diameters and lengths from 50 cm available on request!



KRASO® Type KMB **LG 1**

plug-in flange, for retrofit sealing of KG/HT pipes using **KRASO® Foil Flange** with bitumen thick coating and reactive sealings, with formed plug-in sleeve on one side and **KRASO® Foil Flange**, oil- and bitumen resistant, surrounding approx. 6 cm. For the integration of the foil flange, we recommend our adhesive and sealant **KRASO® PU 50**. | DIN 18533 W1 -E and W2.1 -E

Type / Item	KRASO® Type KMB			
Diameter DN	110	125	160	200
Plug-in length in cm	7	7.5	8	9
KRASO® Type KMB	49 €	52 €	63 €	80 €
KRASO® PU 50	22 €			

Further diameters available on request!



KRASO® Type KMB for KG 2000 **LG 1**

plug-in flange, for retrofit sealing of KG 2000 pipes using **KRASO® Foil Flange** with bitumen thick coating and reactive sealings, with formed plug-in sleeve on one side and **KRASO® Foil Flange**, oil- and bitumen resistant, surrounding approx. 6 cm. For the integration of the foil flange, we recommend our adhesive and sealant **KRASO® PU 50**. | DIN 18533 W1 -E and W2.1 -E

Type / Item	KRASO® Type KMB for KG 2000			
Diameter DN	110	125	160	200
Plug-in length in cm	7	7.5	8	9
KRASO® Type KMB for KG 2000	60 €	70 €	85 €	122 €
KRASO® PU 50	22 €			

Further diameters available on request!



KRASO® Type ÜSF - slip-on flange **LG 1**

for retrofit sealing of installed KG, HT or KG 2000 pipes, using **KRASO® Foil Flange** with bitumen sealing (e.g. KMB), with foil flange, oil- and bitumen resistant, surrounding approx. 15 cm. For the integration of the foil flange, we recommend our adhesive and sealant **KRASO® PU 50**. | DIN 18533 W1 -E and W2.1 -E

Type / Item	KRASO® Type ÜSF					
Diameter DN	110	125	160	200	250	315
KRASO® Type ÜSF	87 €	95 €	113 €	208 €	307 €	411 €
KRASO® PU 50	22 €					

Further diameters available on request!



Solutions for Fresh Concrete Composite Films (FBV)



Floor

Floor Penetration Type FBV-BDF p. 120

Wall

Wall Penetration Type FBV-FR p. 121 + Casing Type FBV-FE p. 122 +
Cable Penetration FBV-KDS p. 123 + Sealing Insert Type FBV/GF p. 124

Concrete

Fresh concrete composite (FBV) solutions made of concrete – pump sumps, lift pits, cable ducts p. 124



KRASO® Floor Penetration Type FBV-BDF

The effective sealing system

- + Floor penetration for an integration into fresh concrete composite sealing in compliance with the system
- + Independent of the manufacturer: fresh concrete composite films (FBV) from any manufacturer can be integrated into the system at the factory
- + **KRASO® FBV Sealing Flange** made of non-corrosive stainless steel V2A with 20 cm surrounding, square fresh concrete composite film
- + **Torque Control Nut KRASO® DKM**: integrated torque limiter - no torque wrench required!
- + **KRASO® Floor Penetration Type BDF**: the proven floor penetration with **KRASO® 4 Seal** – MPA-tested up to 10 bar!
- + IAF-tested: radon-tight!
- + Made of dimensionally and pressure stable solid wall material with low abrasion! Installation even at lower temperatures!
- + Formed plug-in sleeve on one side for the connection of KG, HT or KG 2000 pipes
- + Including **KRASO® Cover** as building period protective cover
- + DafStB waterproof concrete guideline: stress class 1 + 2



KRASO® Floor Penetration Type FBV-BDF **LG 1**

floor penetration for a compliant integration of fresh concrete composite films (FBV) | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Type FBV-BDF • KRASO® Type FBV-BDF for KG 2000							
Diameter DN	110	125	160	200	250	315	400	500
Delivery length (in cm)	50							
KRASO® Type FBV-BDF	246 €	302 €	309 €	418 €	605 €	724 €	937 €	1,150 €
KRASO® Type FBV-BDF for KG 2000	253 €	312 €	325 €	447 €	702 €	822 €	1,071 €	1,302 €

Scope of supply: KRASO® Type FBV-BDF or KRASO® Type FBV-BDF for KG 2000, KRASO® Cover as building period protective cover, KRASO® FBV Sealing Flange with 20 cm surrounding, square fresh concrete composite film



KRASO® Wall Penetration Type FBV-FR

Always the right flow direction using FBV system

- + Wall penetration for a compliant integration of fresh concrete composite films
- + Independent of the manufacturer: fresh concrete composite films (FBV) from any manufacturer can be integrated into the system at our factory
- + **KRASO® FBV Sealing Flange** made of non-corrosive stainless steel V2A with 20 cm surrounding, square fresh concrete composite film
- + **Torque Control Nut KRASO® DKM**: integrated torque limiter - no torque wrench required!
- + Thanks to the **KRASO® Wall Penetration Type FR**, waste water always maintains the correct flow direction! Unnecessary edges are prevented. Blocked pipes: impossible!
- + Due to the flexible yet water pressure tight connection to the pipe system, stresses occurring caused by the setting of the KG pipes are minimised!
- + The basement remains dry and is protected against radon thanks to the up to 10 bar water pressure tight surrounding **KRASO® 4 Seal**!
- + Made of solid wall material! Also available for KG 2000 made of polypropylene (PP), mineral-filled, smooth walls, long-lasting
- + DafStB waterproof concrete guideline: stress class 1 + 2



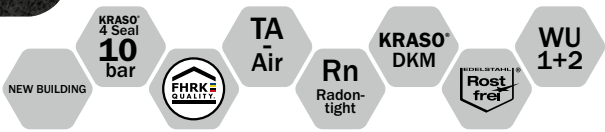
KRASO® Wall Penetration Type FBV-FR - flow direction **LG 1**

wall penetration for a compliant integration of fresh concrete composite films | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Type FBV-FR • KRASO® Type FBV-FR for KG 2000		
Diameter DN	110	125	160
Available standard wall thicknesses in cm	20 ¹ · 24 · 25 · 30		
KRASO® Type FBV-FR	309 €	315 €	420 €
KRASO® Type FBV-FR for KG 2000	324 €	330 €	449 €

¹ Wall thickness 20 cm only available in DN 110, not available in KG 2000

Scope of supply: KRASO® Type FBV-FR or KRASO® Type FBV-FR for KG 2000, 2 KRASO® Covers as an installation aid, KRASO® FBV Sealing Flange with 20 cm surrounding, square fresh concrete composite film



KRASO® Casing Type FBV-FE

The casing for FBV integration

- + Casing for a compliant integration of fresh concrete composite films
- + Independent from the manufacturer: fresh concrete composite films (FBV) of all manufacturers can be integrated at the factory
- + **KRASO® FBV Sealing Flange** made of non-corrosive stainless steel V2A with 20 cm surrounding, square fresh concrete composite film
- + **Torque Control Nut KRASO® DKM**: integrated torque limiter - no torque wrench required!
- + The thick-walled true diameter plastic casing for concreting: as a recess for retrofit installation of cables or pipes using a sealing insert!
- + With water pressure tight surrounding **KRASO® 4 Seal** – certified and approved: due to the special geometry, the 4 Seal produces a water pressure, gas- and odour-tight grip with the concrete
- + Material and processing: **KRASO® Casings** are made of weatherproof and impact resistant plastic. The water pressure tight surrounding **KRASO® 4 Seal** is joined monolithically to the plastic pipe by vulcanization.
- + IAF-tested: radon-tight!
- + Certified with the quality seal of the FHRK e. V.
- + DafStB waterproof concrete guideline: stress class 1 + 2

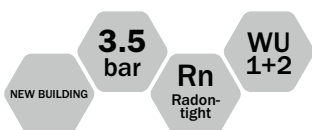
KRASO® Casing Type FBV-FE - true diameter casing **LG 1**

thick-walled plastic casing for a compliant integration of FBV films | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Type FBV-FE					
InternalDiameter ID	100	125	150	200	250	300
Available standard wall thicknesses in cm	20 · 24 · 25 · 30 · 35 · 36.5 · 40 · 45 · 50					
KRASO® Type FBV-FE	245 €	302 €	304 €	418 €	564 €	638 €

Scope of supply: KRASO® Casing Type FBV-FE, 2 KRASO® Covers as an installation aid, KRASO® FBV Sealing Flange with 20 cm surrounding, square fresh concrete composite film

Further diameters and wall thicknesses available on request!



KRASO® Cable Penetration FBV-KDS Double wall penetration as FBV system

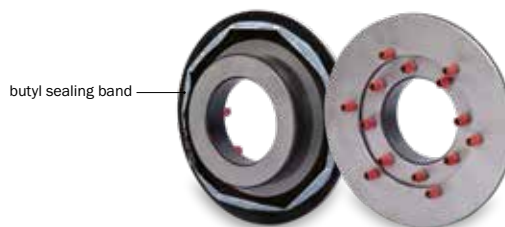
- + Cable penetration for the compliant integration of fresh concrete composite films
- + Independent from the manufacturer: fresh concrete composite films (FBV) of all manufacturers can be integrated at the factory.
- + **KRASO® FBV Sealing Flange** made of non-corrosive stainless steel V2A with 20 cm surrounding, square fresh concrete composite film
- + Compatible with all other current systems! Tight due to the water pressure tight surrounding **KRASO® 4 Seal!** Secure due to break-resistant solid wall material!
- + The intelligent, all-purpose and flexible cable penetration system for complex construction projects: public buildings, hospitals, technical-scientific institutions or industrial and commercial sectors
- + With plug-in system on both sides for forming packages!
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASO® Cable Penetration FBV-KDS double wall penetration **LG 1**

cable penetration system for concreting | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASO® Cable Penetration FBV-KDS double wall penetration										
Available standard wall thicknesses in cm	15	17.5	20	24	25	30	35	36.5	40	45	50
KRASO® Cable Penetration FBV-KDS 90 double wall penetration	343 €										
KRASO® Cable Penetration FBV-KDS 150 double wall penetration	491 €										

Scope of supply: KRASO® FBV-KDS 90 or KRASO® FBV-KDS 150 double wall penetration, 2 KDS closure covers, KRASO® FBV Sealing Flange with 20 cm surrounding, square fresh concrete composite film



KRASO® Sealing Insert Type FBV/GF **LG 1**

for installation of pipes or cables, for casing or core drilling, with large flange and additional sealing flange incl. butyl sealing band for the integration of FBV films, **Torque Control Nut KRASO® DKM***, non-corrosive stainless steel V2A, against pressing water up to 2.5 bar | **DafStB waterproof concrete guideline: stress class 1 + 2**

Core drilling / casing in mm (from - to)	80 (79 - 83)	100 (99 - 103)	125 (124 - 128)	150 (149 - 153)	200 (198 - 203)	250 (248 - 253)	300 (298 - 303)	350 (348 - 353)	400 (398 - 403)	450 (448 - 453)	500 (497 - 503)
max. external diameter pipe or cable											
from	0	0	0	0	0	0	0	0	0	0	0
to	55	75	100	125	175	225	275	325	375	425	475
KRASO® Type FBV/GF											
KRASO® Type FBV/GF	384 €	448 €	499 €	585 €	730 €	907 €	1,143 €	1,333 €	1,578 €	1,789 €	1,987 €
Surcharge: additional drilling	up to 5 drillings each additional drilling 17 €, each further additional drilling 11 €										

* In some cases, allen screws must be used due to the design.

All sizes and diameters available on request!



**Precast
concrete elements
with FBV film:
ready for the
integration into the
FBV system**



KRASO® FBV solutions made of concrete

Pump sumps, lift pits, inspections shafts

- + Precast concrete elements as special designs for a compliant integration of fresh concrete composite films: pump sumps, lift pits, cable ducts, inspection shafts
- + Complete foil cover for integration into the base plate! Manufacturer-independent: fresh concrete composite films (FBV) of all manufacturers can be integrated
- + Weather-independent production, completely custom-made exactly according to your instructions!
- + The surrounding water pressure tight construction joint tape **KRASOflex® Duo-Fix 150 "plus"** ensures a water pressure tight passage to the base plate
- + Simple and fast placement on-site thanks to crane lifting lugs!



Pump Sumps

Concrete

Pump Sump - concrete - **p. 126** + Inspection Shaft - concrete - **p. 131**

Plastic

Pump Sump Type Q - square - **p. 127** + Backwater Shaft Type Q - sewage - **p. 131** +
Pump Sump Type Q - thermally insulated - **p. 131** + Pump Sump Type Q - sewage - **p. 133** +
Pump Sump Poly 400 - complete - **p. 134** + Pump Sump Poly 400 **p. 135** +
Pump Sump Poly 400 - LR **p. 135** + Pump Sump Poly 400 - NE - retrofit installation **p. 136** +
Poly - Inspection Shaft **p. 136** + Pressure Shaft 400 **p. 136** + Water Shaft **p. 138** +
Pump Sump Poly 400 - Accessories **p. 138**

Covers

Pump Sump Cover - walkable **p. 128** + Pump Sump Cover - walkable -, water and odour tight screwable **p. 129** +
Pump Sump Covers - fit for traffic up to 5 t, wheel pressure up to 1.25 t **p. 129** + Pump Sump Covers - fit for traffic
up to 15 t, wheel pressure up to 3.75 t **p. 130** + Pump Sump Cover - fillable - **p. 130** +
Grating Cover - walkable **p. 130** + Pump Sump Poly 400 - Covers **p. 137**



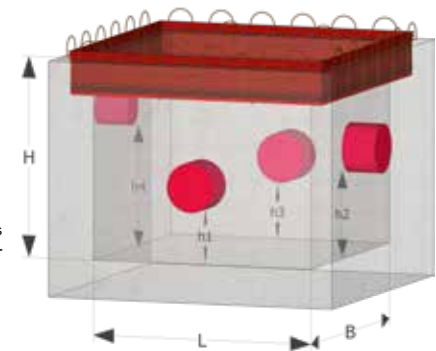
KRASO® Pump Sump - concrete -
Check the installation video
(just scan the QR code!)



KRASO® Pump Sump - concrete - Saves time and money in one piece cast

- + Avoid formworks on-site - and save time and money - with the **KRASO® Pump Sump** as ready-made concrete element!
- + Made of waterproof concrete (C35/45) in one piece cast - without additional joints!
- + 12 cm thick, reinforced walls as well as the surrounding water pressure tight, MPA-tested construction joint tape **KRASOflex® Duo-Fix 150 "plus"** grant a water pressure tight passage to the base plate.
- + Simple and fast placement on-site thanks to crane lifting lugs!
- + DafStB waterproof concrete guideline: stress class 1 + 2

arrangement of connections ref. standard sizes
KRASO® Pump Sump - concrete -



KRASO® Pump Sump - concrete - **LG 3**

for collecting waste water | DafStB waterproof concrete guideline: stress class 1 + 2

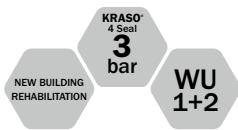
KRASO® Pump Sump - concrete -							
Internal dimensions (l x w x h, in cm)	Weight approx. in kg	Design	Position and diameter of the connection				KRASO® Pump Sump - concrete -
			h1 (in cm)	h2 (in cm)	h3 (in cm)	h4 (in cm)	
60 x 60 x 40	600	standard	15 - DN 110				596 €
		closed					
60 x 60 x 60	700	standard	40 - DN 110	20 - DN 110			656 €
		with one connection	40 - DN 110				
		closed					
80 x 80 x 70	1,100	standard	20 - DN 160	30 - DN 160	20 - DN 160	40 - DN 110	896 €
		with one connection				40 - DN 110	
		closed					
100 x 100 x 80	1,500	standard	50 - DN 160	40 - DN 160	20 - DN 160	40 - DN 110	994 €
		with one connection				40 - DN 110	
		closed					
100 x 100 x 100	1,750	standard				40 - DN 110	1,355 €
		closed					
120 x 120 x 80	1,800	standard	50 - DN 160	20 - DN 160	40 - DN 160	40 - DN 110	1,505 €
		with one connection				40 - DN 110	
		closed					
				Surcharge special design with standard internal dimensions*			
connection DN 110				71 €			
connection DN 125				80 €			
connection DN 160				88 €			

* Calculation basis = closed pump sump

Further sizes and connections available as special design on request!



KRASO® Pump Sump Type Q - square -
Check the installation video
(just scan the QR code!)



KRASO® Pump Sump Type Q - square -

Low weight - quick delivery: the simple and tight plastic solution

- + Low weight = low transport costs and easy handling without crane on-site
- + Saves time, labour, money and additional drainage: no cost-intensive works, no concreting sections for several days and no shuttering!
- + No risk occurring due to leaking concrete joints and/or pipe connections
- + Resistant against many acids and lyes!
- + Made of high-quality, impact resistant, almost indestructible plastic. Special dimensions are available within a few days!
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASO® Pump Sump Type Q - square - **LG 2**

for collecting waste water, suitable for KG, HT and KG 2000 pipes | DafStB waterproof concrete guideline: stress class 1 + 2

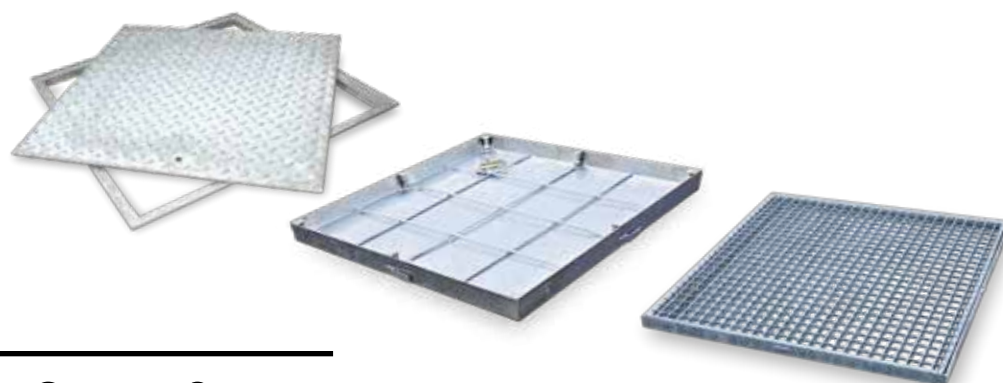
Type / Item	600/60	600/80	800/100	1000/100
Internal dimensions in cm	60 x 60	60 x 60	80 x 80	100 x 100
Internal height in cm	60	80	100	100
1x connection DN 110 (height bottom edge in cm)	20	20	30	30
Weight approx. in kg	25	28	53	66
KRASO® Pump Sump Type Q - square -	761 €	893 €	1,284 €	1,548 €
Surcharge: additional connection DN 110	56 €			
Surcharge: additional connection DN 160	85 €			

Further sizes and designs available on request! Modification of the pipe connection height possible!





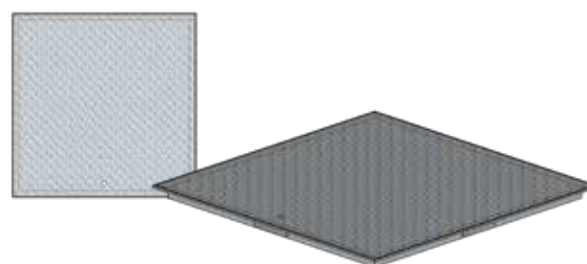
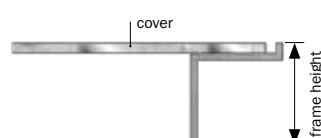
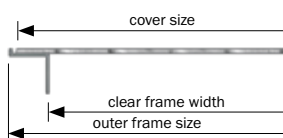
- + **KRASO® Pump Sumps** – whether made of concrete or plastic – save time and money!!
- + Precise planning of your construction process is possible with a delivery directly to your construction site. Thanks to pre-installed crane lifting lugs, **KRASO® Pump Sumps** made of concrete can be unloaded and installed easily on the construction site!



NEW BUILDING

KRASO® Pump Sump Covers

For **KRASO® Pump Sump - concrete -** and **Type Q - square -**

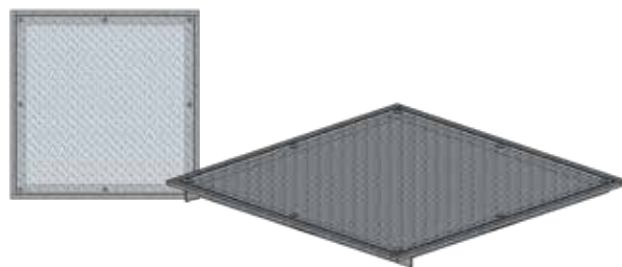
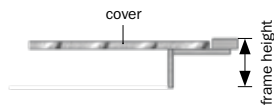
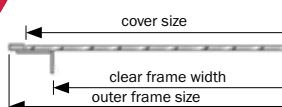


KRASO® Pump Sump Cover - walkable **LG 6**

for **KRASO® Pump Sump - concrete -** and **KRASO® Pump Sump Type Q - square -**, bulb plate galvanised, walkable

Type/Item	KRASO® Pump Sump Cover - walkable			
Pump sump dimension in cm	60 x 60	80 x 80	100 x 100	120 x 120
Cover size in mm	700 x 700	900 x 900	1100 x 1100	1275 x 1275
Cover in mm	3/5			
Frame height in mm	32	32	32	36
Outer frame size in mm	708 x 708	908 x 908	1108 x 1108	1320 x 1320
Clear frame width in mm	654 x 654	854 x 854	1054 x 1054	1210 x 1210
Concrete anchors / pcs.	4	4	8	8
KRASO® Pump Sump Cover - walkable	167 €	293 €	505 €	905 €

Special designs available on request!

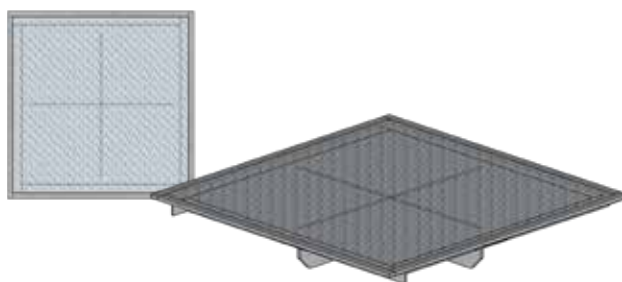
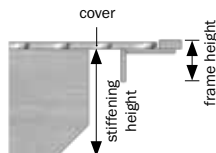
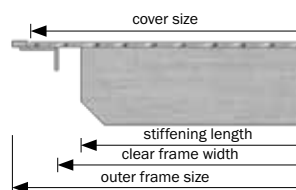


KRASO® Pump Sump Cover - walkable -, water and odour-tight screwable **LG 6**

for KRASO® Pump Sump - concrete - and KRASO® Pump Sump Type Q - square -, bulb plate galvanised, walkable, water and odour-tight screwable

Type/Item	KRASO® Pump Sump Cover - walkable -, water and odour-tight			
Pump sump dimension in cm	60 x 60	80 x 80	100 x 100	120 x 120
Cover size in mm	700 x 700	900 x 900	1100 x 1100	1275 x 1275
Cover in mm	3/5			
Frame height in mm	36			
Outer frame size in mm	745 x 745	945 x 945	1145 x 1145	1320 x 1320
Clear frame width in mm	635 x 635	835 x 835	1035 x 1035	1210 x 1210
Concrete anchors / pcs.	4	4	8	8
KRASO® Pump Sump Cover - walkable -, water and odour-tight	457 €	576 €	905 €	1,497 €

Special designs available on request!

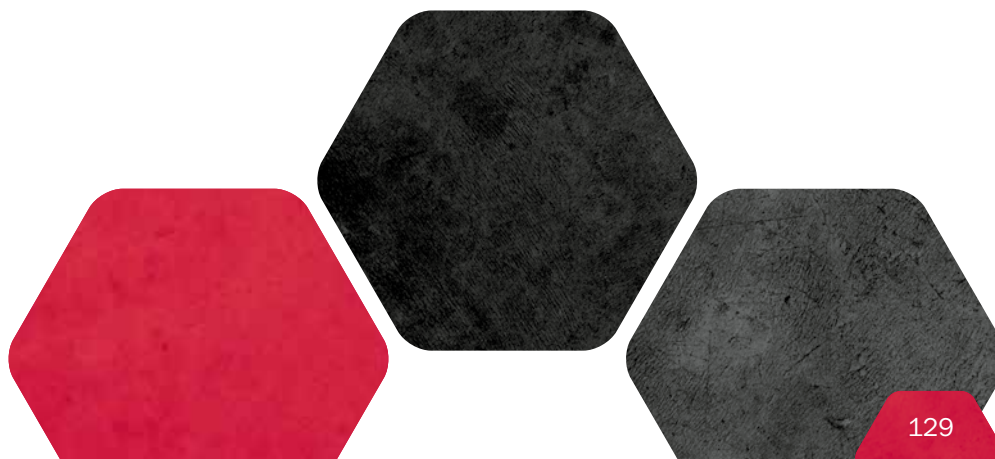


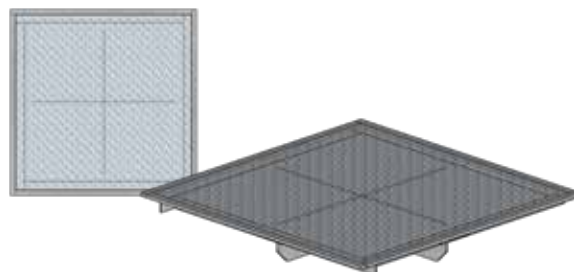
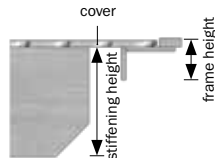
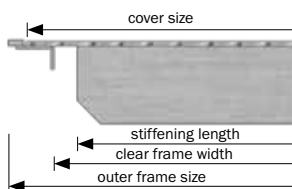
KRASO® Pump Sump Cover - fit for traffic up to 5 t, wheel pressure up to 1.25 t **LG 6**

for KRASO® Pump Sump - concrete - and KRASO® Pump Sump Type Q - square -, bulb plate galvanised, fit for traffic up to 5 t, wheel pressure up to 1.25 t

Type/Item	KRASO® Pump Sump Cover - fit for traffic up to 5 t, wheel pressure up to 1.25 t			
Pump sump dimension in cm	60 x 60	80 x 80	100 x 100	120 x 120
Cover size in mm	700 x 700	900 x 900	1100 x 1100	1275 x 1275
Cover in mm	5/7			
Frame height in mm	38			
Outer frame size in mm	745 x 745	945 x 945	1145 x 1145	1320 x 1320
Clear frame width in mm	635 x 635	835 x 835	1035 x 1035	1210 x 1210
Stiffening in mm	7			
Stiffening height in mm	80			
Stiffening quantity	1	2	2	3
Concrete anchors / pcs.	4	4	8	8
KRASO® Pump Sump Cover - fit for traffic up to 5 t, wheel pressure up to 1.25 t	414 €	684 €	1,191 €	1,758 €

Special designs available on request!



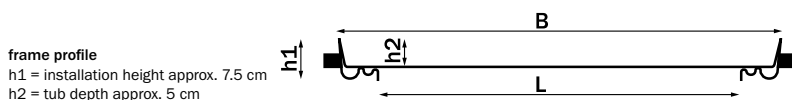


KRASO® Pump Sump Cover - fit for traffic up to 15 t, wheel pressure up to 3.75 t **LG 6**

for **KRASO® Pump Sump** - concrete - and **KRASO® Pump Sump Type Q** - square -, bulb plate galvanised, fit for traffic up to 15 t, wheel pressure up to 3.75 t

Type / Item	KRASO® Pump Sump Cover - fit for traffic up to 15 t, wheel pressure up to 3.75 t			
Pump sump dimension in cm	60 x 60	80 x 80	100 x 100	120 x 120
Cover size in mm	700 x 700	900 x 900	1100 x 1100	1275 x 1275
Cover in mm	6/8			
Frame height in mm	38			
Outer frame size in mm	745 x 745	945 x 945	1145 x 1145	1320 x 1320
Clear frame width in mm	635 x 635	835 x 835	1035 x 1035	1210 x 1210
Stiffening in mm	8			
Stiffening height in mm	100			
Stiffening quantity	1	2	2	3
Concrete anchors / pcs.	4	8	8	8
KRASO® Pump Sump Cover - fit for traffic up to 15 t, wheel pressure up to 3.75 t	735 €	1,047 €	1,919 €	2,597 €

Special designs available on request!

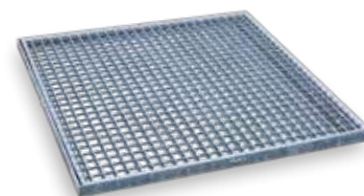
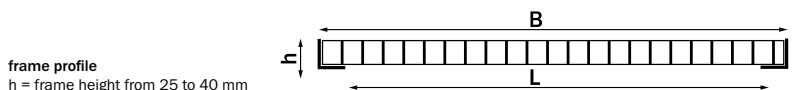


KRASO® Pump Sump Cover - fillable - **LG 6**

fillable galvanised tub, water and odour-tight, loading after filling with concrete C 35/45: approx. 125 kN

Type / Item	KRASO® Pump Sump Cover - fillable -			
Pump sump dimension in cm	60 x 60	80 x 80	100 x 100	120 x 120
Outer frame size in mm	W	735 x 735	935 x 935	1135 x 1135
Clear frame width in mm	L	600 x 600	800 x 800	1000 x 1000
KRASO® Pump Sump Cover - fillable -	667 €	952 €	1,212 €	on request

Special designs available on request!



KRASO® Grating Cover - walkable - **LG 6**

galvanised

Type / Item	KRASO® Grating Cover - walkable -			
Pump sump dimension in cm	60 x 60	80 x 80	100 x 100	120 x 120
Outer frame size in mm	W	685 x 685	885 x 885	1095 x 1095
Clear frame width in mm	L	600 x 600	800 x 800	1000 x 1000
Bearing bar in mm	25/1.7	25/2	30/2	40/1.7
Mesh size in mm	30/30	30/30	30/30	30/30
Concentrated load approx. in kg	150	150	150	150
KRASO® Grating Cover - walkable -	251 €	441 €	633 €	1,041 €

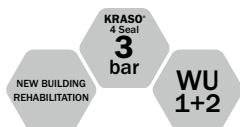
Special designs available on request!



KRASO® Inspection Shaft - concrete - **LG 3**

as maintenance opening, made of waterproof concrete (C35/45) with 12 cm strong, reinforced walls in one piece cast, with surrounding water pressure tight, MPA-tested construction joint tape **KRASOflex® Duo-Fix 150 "plus"**, rebar connection 8/15 and crane lifting lugs for easy placement on-site, incl. 2 opposite **KRASO® Pipe Connections DN 160** bottom edge approx. 20 cm, suitable for KG, HT and KG 2000 pipes | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	80 x 80 x 70	80 x 80 x 70	80 x 80 x 70	80 x 80 x 70
Internal dimensions in cm	80 x 80	80 x 80	80 x 80	80 x 80
Internal height in cm	70	70	70	70
	without cleaning opening	with cleaning opening, fully assembled DN 160, for sewage free of faeces	with cleaning opening, fully assembled DN 160 incl. simple backwater stopper without emergency valve, for sewage free of faeces, according to DIN EN 13564 Type 0	with cleaning opening, fully assembled DN 160 incl. backwater double stopper with emergency valve, for sewage free of faeces, according to DIN 13564 Type 2
Weight approx. in t	1.1	1.1	1.1	1.1
KRASO® Inspection Shaft - concrete -	896 €	1,125 €	1,348 €	1,492 €

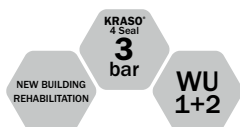


KRASO® Backwater Shaft Type Q - sewage - **LG 2**

for backwater protection according to DIN EN 13564 Type F3, made of plastic, with water pressure tight surrounding, thermally welded **KRASO® 4 Seal**, concrete anchors, reinforcing ribs and 2 water pressure tight pipe connections, suitable for KG, HT and KG 2000 pipes, 1 electric pressure flap (with emergency power function), 1 manual return valve, for sewage containing faeces | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	600/60	800/100
Internal dimensions in cm	60 x 60	80 x 80
Internal height in cm	60	100
Pipe connection height in cm h1/h2	6/5	7/6
Backwater diameter	DN 110	DN 160
Weight approx. in kg	28	56
KRASO® Backwater Shaft Type Q - sewage -	3,451 €	4,025 €

Special sizes and designs available on request!



KRASO® Pump Sump Type Q - thermally insulated - **LG 2**

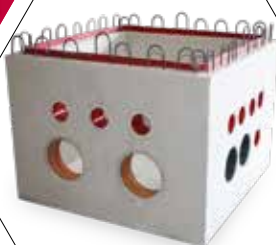
for collecting waste water, with water pressure tight surrounding, thermally welded **KRASO® 4 Seal**, concrete anchors, reinforcing ribs, 1 water pressure tight KG pipe connection DN 110, surrounding approx. 10 cm thick thermal insulation | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	600/60	600/80	800/100	1000/100
Internal dimensions in cm	60 x 60	60 x 60	80 x 80	100 x 100
Internal height in cm	60	80	100	100
DN 110	20	20	30	30
Weight approx. in kg	49	60	113	143
KRASO® Pump Sump Type Q - thermally insulated -	Prices on request !			

Special sizes and designs available on request! Modification of pipe connection height possible!



Example 140 x 70 x 65 cm
total weight: approx. 1.0 t



Example 100 x 100 x 80 cm
total weight: approx. 1.5 t



Example 60 x 60 x 33 cm
total weight: approx. 0.5 t



Example 200 x 200 x 170 cm
total weight: approx. 18.2 t



The production
is carried out
according to your
specifications!



KRASO®
Pump Sump - concrete - special
internal dimensions approx.:

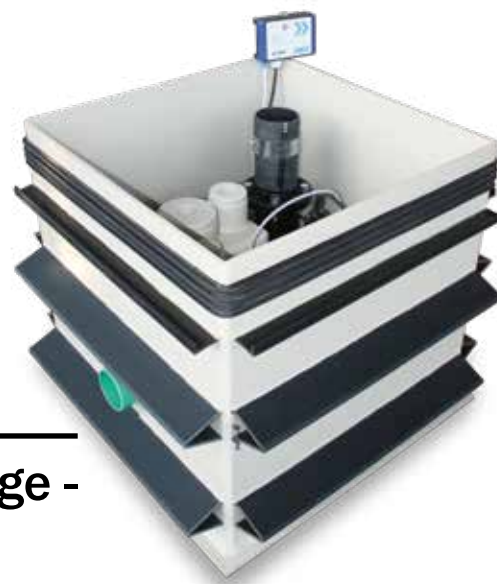
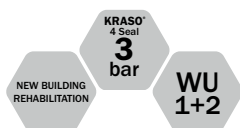
310 x 75 x 235 cm, made of waterproof concrete,
with 20 cm thick, reinforced wall and base plates
(20 kg per cbm). Rebar connection approx. 8/15
double-row, water pressure tight surrounding,
MPA-tested construction joint tape **KRASOflex®**
Duo-Fix 150 „plus“,
total weight: approx. 11.7 t



KRASO® Special Designs made of concrete

Pumps sumps, cable ducts, lift pits

- + Made of waterproof concrete, produced exactly according to your specifications!
All dimensions (width, length, height, wall thickness) are variable.
- + Installation parts such as pipe penetrations, casings or anchor rails (for lift pits) are installed accurately.
- + Weather-independent production of concrete shafts up to a total weight of 20 tons!
- + Saves time, working hours, money and additional drainage!
We are happy to advise you individually!

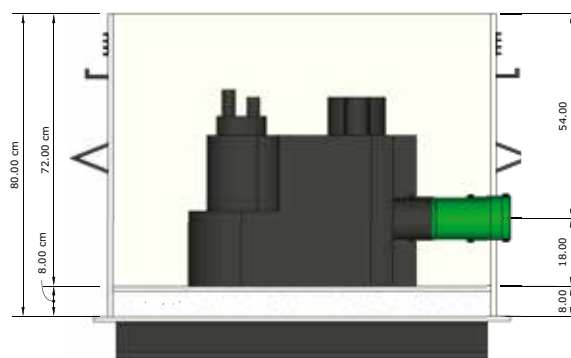


KRASO® Pump Sump Type Q - sewage - Low weight, high performance

- + The high-performance solution for sewage containing faeces:
the combination of **KRASO® Pump Sump Type Q** and closed pumping system according to DIN 12050-1
- + Suitable for single-family homes, basement flats, sanitation in private basements!
- + Pumping medium: clear water / wastewater containing solids and fibres / sewage
- + Low weight = low transport costs and easy handling without crane on-site!
- + Saves time, working hours, money and additional drainage! No cost-intensive works, no concreting sections for several days and no shuttering!
- + No higher risks occurring by leaking concrete joints and/or pipe connections
- + Made of high-quality, impact resistant, almost indestructible plastic. Special dimensions are available within a few days!
- + Double floor: fixation of the pumping system only necessary in the upper base plate
- + Installation and connection of the pumping system must be done by a plumbing or heating contractor
- + Optionally available:
 - Wedge gate valve (on the water pressure side requested according to DIN)
 - **KRASO® Pump Sump Cover 100/100**
- + DafStB waterproof concrete guideline: stress class 1 + 2



wedge gate valve for
KRASO® Pump Sump Type Q - sewage -



schematic illustration

KRASO® Pump Sump Type Q - sewage - **LG 2**

for pumping out of sewage containing faeces, suitable for KG, HT and KG 2000 pipes, pumping system (excl. maintenance contract) | DafStB waterproof concrete guideline: stress class 1 + 2

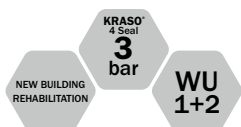
Type / Item	KRASO® Pump Sump Type Q - sewage -
Internal dimensions in cm	100 x 100
Internal height in cm	72
DN 110 h internal (axis)	18 (modification of pipe connection height possible)
Weight approx. in kg	105
KRASO® Pump Sump Type Q - sewage -	4,698 €
Optionally available: wedge gate valve	627 €

Scope of supply: KRASO® Pump Sump Type Q - sewage -, pumping system • Optionally available: wedge gate valve

Special sizes and designs available on request! Modification of pipe connection height possible!



KRASO® Pump Sump Poly 400
- complete -
Check the installation video
(just scan the QR code!)



KRASO® Pump Sump Poly 400 - complete - pump



KRASO® Pump Sump Poly 400 - complete

Light, tight, complete

- + Light and water pressure tight complete solution for sewage free of faeces - for new buildings or rehabilitation!
- + Saves time and money: simple installation due to light weight - no additional formwork or concreting sections for several days required!
- + No higher risks occurring by leaking concrete joints and/or pipe connections!
- + DafStB waterproof concrete guideline: stress class 1 + 2



KRASO® Pump Sump Poly 400 - complete **LG 2**

for collecting and pumping out of sewage free of faeces, with shear key and pipe connection DN 110 suitable for KG, HT and KG 2000 pipes, **KRASO® Poly 400 - Pump** - (for sewage, excl. maintenance contract), empty pipe insert for the adjustment to subsequent floor construction
| DafStB waterproof concrete guideline: stress class 1 + 2

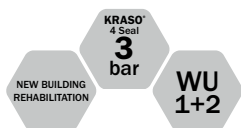
Type / Item	KRASO® Poly 400 / 80 - complete	KRASO® Poly 400 / 100 - complete
Internal diameter in cm	38.2	38.2
Internal height in cm	80	100
Intake DN 110 h1	30	30
Empty pipe DN 110 h2	34	54
Installation weight approx. in kg	21	23
KRASO® Pump Sump Poly 400 - complete - Cover: walkable	1,489 €	1,530 €
KRASO® Pump Sump Poly 400 - complete - Cover: water and odour-tight	1,682 €	1,717 €

We recommend the installation of an alarm system. The rubber seal is only used to secure the cover and not as a backflow seal!

Scope of supply: 1. Building shell element: **KRASO® Pump Sump Poly 400 - complete** with protective cover, pump sump protective cover for building shell, universal pump fastener

2. Installation set: **KRASO® Poly 400 - Pump** -, drain hose 1.25 m, internal diameter: 38 mm, universal hose connector 20 cm, empty pipe insert, **KRASO® Sealing Insert Poly** - complete -, **KRASO® Poly 400 Cover** - walkable -

Special sizes and designs available on request!

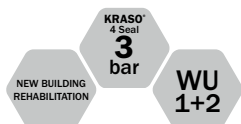


KRASO® Pump Sump Poly 400 **LG2**

for collecting waste water, with water pressure tight surrounding, thermally welded **KRASO® 4 Seal**, shear key and pipe connection DN 110, suitable for KG, HT and KG 2000 pipes | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item		KRASO® Poly 400 / 60	KRASO® Poly 400 / 80
Internal diameter in cm		38.2	38.2
Internal height in cm		60	80
DN 110	h1	20	20
DN 110	h2		41
Weight approx. in kg		17	21
KRASO® Pump Sump Poly 400		524 €	614 €
Surcharge: per each 10 cm additional height		47 €	
Surcharge: for change of the height of the connection		23 €	

Special sizes and designs available on request!



KRASO® Pump Sump Poly 400 - LR **LG2**

for collecting waste water, with water pressure tight surrounding, thermally welded **KRASO® 4 Seal**, shear key and pipe connection DN 110 suitable for KG, HT and KG 2000 pipes, water pressure tight empty pipe system with protective cover, pump sump protective cover for the shell construction phase | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item		KRASO® Poly 400 / 80 - LR	KRASO® Poly 400 / 100 - LR
Internal diameter in cm		38.2	38.2
Internal height in cm		80	100
Intake DN 110	h1	30	30
Empty pipe DN 110	h2	34	54
Installation weight approx. in kg		21	23
KRASO® Pump Sump Poly 400 - LR		841 €	866 €

Scope of supply: **KRASO® Pump Sump Poly 400 - LR** with protective cover, pump sump protective cover for the shell construction phase

Special sizes and designs available on request!

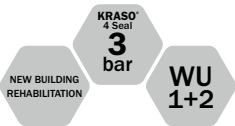


KRASO® Pump Sump Poly 400 - NE - retrofit installation **LG 2**

for retrofit installation into existing base plate with **KRASO® Sealing Insert Type DD 500/400** (see page 19), made of high-quality, dimensionally and pressure stable solid wall material, with surrounding shear key and base for **KRASO® Sealing Insert** (not included in the scope of supply)

Type / Item	KRASO® Poly 400 / 60 - NE	KRASO® Poly 400 / 80 - NE
Internal diameter in cm	38.2	38.2
Internal height in cm	60	80
Weight approx. in kg	17	21
KRASO® Poly 400/60 - NE (excl. accessories)	569 €	607 €
Surcharge: per each 10 cm additional height	47 €	
KRASO® Sealing Insert Type DD 500/400	374 €	

Special sizes and designs available on request!

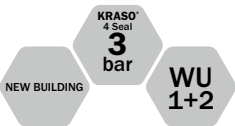


KRASO® Poly - Inspection Shaft **LG 2**

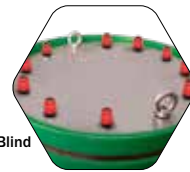
for checking, maintaining and cleaning pipelines, with water pressure tight surrounding, thermally welded **KRASO® 4 Seal** and pre-installed shear key with cleaning opening, for sewage free of faeces, pipe connections DN 110/160 suitable for KG, HT and KG 2000 pipes | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASO® Poly - Inspection Shaft 400 / 80	KRASO® Poly - Inspection Shaft 500 / 80
Internal diameter in cm	38.2	46.9
Internal height in cm	80	80
Intake in cm h1	76	77
Drain in cm h2	78	78
Cleaning access pipe	DN 110	DN 160
Weight approx. in kg	18	30
KRASO® Poly - Inspection Shaft	702 €	1,054 €

Special sizes and designs available on request! Modification of pipe connection height possible!



after the building period:
water pressure tight closure cover with
KRASO® Sealing Insert Type Poly 400 - Blind
with lifting lugs



KRASO® Pressure Shaft 400 **LG 2**

for water drainage during the building period, with water pressure tight surrounding, thermally welded **KRASO® 4 Seal**, surrounding shear key, surrounding perforated plate encasement and filter fleece, with base for **KRASO® Sealing Insert Type Poly 400 - Blind** (not included in the scope of supply) water entry in non-installed state: with fleece 60 l/s, without fleece 90 l/s | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASO® Pressure Shaft 400 / 60	KRASO® Pressure Shaft 400 / 80
Internal diameter in cm	38.2	38.2
Internal height in cm	60	80
Perforated plate encasement in cm	20	20
Weight approx. in kg	15	17
KRASO® Pressure Shaft 400 (excl. accessories)	681 €	763 €
KRASO® Sealing Insert Type Poly 400 - Blind	568 €	

Special sizes and designs available on request!

KRASO® Pump Sump Poly 400

Covers and accessories



Poly 400 Cover plastic - walkable -

frame and cover made of plastic, insert frame height-adjustable and rotatable from 2 - 20 cm, edge length 46 cm

Poly 400 Cover plastic - water and odour-tight - walkable -

frame and cover made of plastic, screwable, insert frame height-adjustable and screwable from 2 - 20 cm, edge length 46 cm

Poly 400 Cover plastic - fit for traffic - A15

frame and cover made of plastic, insert frame height-adjustable and rotatable from 8 - 25 cm, edge length 45 cm

Poly 400 Cover plastic - water and odour-tight - fit for traffic - A15

frame and cover made of plastic, insert frame height-adjustable and rotatable from 8 - 25 cm, edge length 45 cm



Poly 400 Slot Grate Cover plastic - walkable -

frame and cover made of plastic, drainage capacity approx. 3.9 l/sec., insert frame height-adjustable and rotatable from 2 - 20 cm, edge length 46 cm

Poly 400 Slot Grate Cover plastic - fit for traffic - A15

frame and cover made of plastic, drainage capacity approx. 4.1 l/sec., insert frame height-adjustable and rotatable from 8 - 25 cm, edge length 45 cm

Poly 400 Cover - fillable - water and odour-tight - fit for traffic - approx. 125 kN

edge length 53 cm, galvanised, loading after filling with concrete C 35/45: approx. 125 kN, height-adjustable and rotatable from 7 - 29 cm

KRASO® Pump Sump Poly 400 - Covers **LG 4**

Type / Item	
Cover plastic - walkable - frame and cover made of plastic, insert frame height-adjustable and rotatable from 2 - 20 cm, edge length 46 cm	195 €
Poly 400 Cover plastic - water and odour-tight - walkable - frame and cover made of plastic, screwable, insert frame height-adjustable and rotatable from 2 - 20 cm, edge length 46 cm	332 €
Poly 400 Cover plastic - fit for traffic - A15 frame and cover made of plastic, screwable, insert frame height-adjustable and rotatable from 8 - 25 cm, edge length 45 cm	340 €
Poly 400 Cover plastic - water and odour-tight - fit for traffic - A15 frame and cover made of plastic, screwable, insert frame height-adjustable and rotatable from 8 - 25 cm, edge length 45 cm	537 €
Poly 400 Slot Grate Cover plastic - walkable - frame and cover made of plastic, drainage capacity approx. 3.9 l/sec., insert frame height-adjustable and rotatable from 2 - 20 cm, edge length 46 cm	215 €
Poly 400 Slot Grate Cover plastic - fit for traffic - A15 frame and cover made of plastic, drainage capacity approx. 4.1 l/sec., insert frame height-adjustable and rotatable from 8 - 25 cm, edge length 45 cm	469 €
Poly 400 Cover - fillable - water and odour-tight - fit for traffic - approx. 125 kN edge length 53 cm, galvanised, loading after filling with concrete C 35/45: approx. 125 kN, height-adjustable and rotatable from 7 - 29 cm	518 €

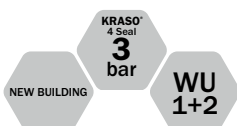
additional intake for
KRASO® Pump Sump
Poly 400

NEW BUILDING
REHABILITATION



KRASO® Pump Sump Poly 400 - Accessories **LG 1**

Type / Item	
Poly 400 - Pump - sludge water pump, motor, rotor shaft and screws made of non-corrosive stainless steel, suitable for permanent operation (without maintenance)	322 €
Sealing Insert Poly - complete - split version, non-corrosive stainless steel V2A, 40 mm seal, media line: 1 x 6 mm, 1 x 8 mm, 1 x 47 mm, Torque Control Nut KRASO® DKM	131 €
Connection Piece flexible, kink-resistant connection piece, 0.25 m, quick connector, stainless steel clamps	13 €
Drain Hose flexible, kink-resistant drain hose per metre, quick connector, stainless steel clamps	23 €
Protective Cover for KRASO® Pump Sump Poly 400	24 €
Additional Intake DN 110 arrangement and height according to customer's specifications	42 €
Additional Intake DN 125 arrangement and height according to customer's specifications	47 €
Additional Intake DN 160 arrangement and height according to customer's specifications	54 €



KRASO® Water Shaft **LG 1**

simple and quick "dry out" of construction sites, with water pressure tight surrounding **KRASO® 4 Seal** and shear key | **DafStB waterproof concrete**
guideline: stress class 1 + 2

Type / Item	KRASO® Water Shaft 300/30
Internal diameter in cm	30
Internal height in cm	30
Weight approx. in kg	5
KRASO® Water Shaft	132 €

Special sizes and designs available on request!



KRASOflex® Construction Joint Tapes

KRASOflex® 155 p. 140 + Duo-Fix 150 "plus" p. 141 + Construction Joint-Wall Element AFW 150 p. 144 + Joint Tape A p. 153 + Joint Tape ASI p. 153 + Joint Tape AA p. 154

KRASOflex® Expansion Joint Tapes

Joint Tape D p. 155 + Joint Tape DA p. 155

KRASOflex® Star Tubes

Star Tube p. 142 + Star Tube installation set p. 143 + Star Tube System p. 143

KRASOflex® Joint Plate ZVB

Joint Plate ZVB p. 145 + Joint Plate ZVB - Desired Crack Elements p. 146 + Formwork Elements p. 148 + Swelling Rubber p. 149 + Bentonit Expansion Joint Tape p. 149

KRASOflex® Moulded Parts

Moulded Parts p. 156 + Building Expansion Joint T1 p. 158 + Building Expansion Joint T2 p. 158 + Construction Joint T3 p. 159 + Wall Expansion Joint T4 p. 159 + Building Expansion Joint T5 p. 159 + Construction Joint T6 p. 159

KRASOflex® Clamp Constructions

Clamp Constructions p. 160 + Clamp Constructions - Accessories p. 160

KRASOflex® Accessories

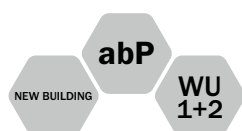
Mounting Clamps p. 141 + Sealing Strips p. 141



Joints can easily be created on-site with our **KRASOflex® Joint Connectors**

The visual check helps to avoid installation errors

KRASOflex® 155 can easily be adapted and bent due to the inner core



KRASOflex® 155

The joint plate made of plastic



- + As stable as a joint plate – flexible like a joint tape! Thanks to the inner plastic core, the **KRASOflex® 155** can easily be bent and adjusted.
- + For installation on the upper reinforcement layer – only 3 cm of integration into the concrete required during the first concreting step. Optimal visual check due to visual control strip in different colour.
- + Including joint connector set for a quick and easy connection of joints.
- + Easy fixation due to punched eyelets.
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASOflex® 155 **LG 4**

Type / Item	KRASOflex® 155
Roll length / width	25 m / 150 mm
Weight per roll	approx. 20 kg
KRASOflex® 155	7.70 € per metre

Scope of supply: **KRASOflex® 155**, joint connector set with joint connector and plastic adhesive, 2 joint clips

KRASOflex® 155 – Joint Connector Set



KRASOflex® 155 – Joint Connector Set **LG 4**

for **KRASOflex® 155**, for the creation of further joint connections

Type / Item	KRASOflex® 155 - Joint Connector Set
KRASOflex® 155 - Joint Connector Set	9.90 €

Scope of supply: **KRASOflex® 155 - Joint Connector Set** including joint connectors, plastic adhesive and 2 joint clips



KRASOflex® Joint Tape Duo-Fix 150 "plus"
Check the installation video
(just scan the QR code!)

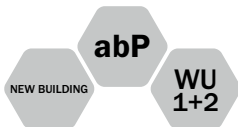
**Stable like
a joint plate –
flexible like
a joint tape!**

KRASOflex® Mounting Clamp
for securing the impact joint



Splicing can be created
easily on-site with
KRASOflex® Sealing Strips

KRASOflex® Duo-Fix 150 "plus"
can easily be adapted and
bent due to the inner core



KRASOflex® Joint Tape Duo-Fix 150 "plus"

The technically high-quality construction joint tape

- + Stable like a joint plate – flexible like a joint tape! **KRASOflex® Duo-Fix 150 "plus"** can easily be adapted and bent due to the inner core reinforced with steel.
- + For installation on the upper reinforcement layer – only 3 cm of integration into the concrete required during the first concreting step. Optimal visual control due to visual control strip in different colour.
- + Splicing can be created easily with **KRASOflex® Sealing Strips** on the construction site.
- + Easy fixation due to punched eyelets
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASOflex® Duo-Fix 150 "plus" LG 4

Type / Item	KRASOflex® Duo-Fix 150 "plus"
Roll length / width	25 m / 150 mm
Weight per roll	approx. 35 kg
KRASOflex® Duo-Fix 150 "plus"	10.95 € per metre

KRASOflex® Mounting Clamps LG 4

for joint tapes and joint plates up to 20 cm height



Type / Item	KRASOflex® Mounting Clamps	KRASOflex® Mounting Clamps for precast walls
Packaging unit	100 pcs. / bag	100 pcs. / bag
KRASOflex® Mounting Clamps	1.20 €	1.20 €

KRASOflex® Sealing Strips LG 4

for splicing, self-adhesive

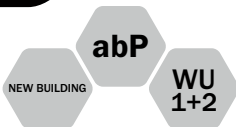
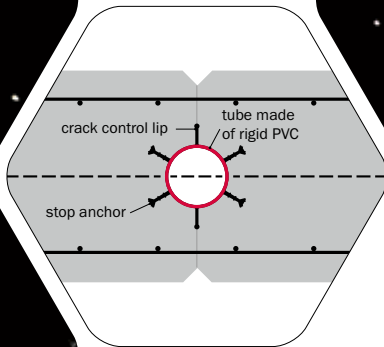


Type / Item	KRASOflex® Sealing Strips
Roll (2.50 mtr.)	4.60 € per metre

THE STAR TUBE OF THE FUTURE

Tight, stable,
sustainable

WITHOUT
INNER TUBE!



KRASOflex® Star Tube

The star tube of the future: tight, stable, sustainable

- + The **KRASOflex® Star Tube** revolutionises the use of desired crack elements in precast and in-situ concrete walls
- + Simple installation without inner tube:
 - Low weight
 - No more slipping of the inner tube and no more cavities that cannot be filled
 - Sustainable: up to 35 % less resource consumption
- + Tight and stable:
 - Rigid and soft in one
 - More stable due to ribbing
 - Stronger anchorage due to fixation of the crack control lip
- + With general building authority test certificate (abP) P-MPA-BS-240049 (water pressure up to 2 bar)
- + MPA-tested up to 5 bar
- + Factory punched every 20 cm: slotted hole for optionally available mounting system
- + Factory slotted: 15 x 50 mm. For installation on joint tape or joint plate
- + DafStB waterproof concrete guideline: stress class 1 + 2

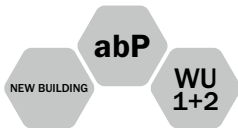
factory punched: every 20 cm
factory slotted: 15 x 50 mm



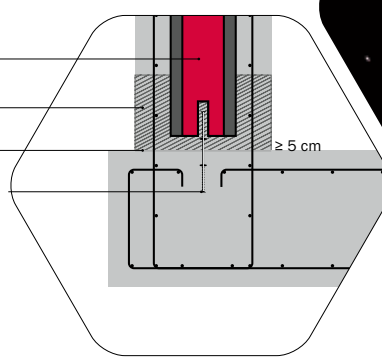
M-1.4-PK-EN-v1.0-WeS.DK



KRASOflex® Star Tube System
Check the installation video
(just scan the QR code!)



KRASOflex® Star Tube
- slot 15 x 50 mm
next concreting step
construction joint
KRASOflex® Joint Tape ASI
or on-site joint plate



KRASOflex® Star Tube **LG 4**

for placement on joint tape or joint plate, universally usable for joint or corner areas of wall elements
| DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASOflex® Star Tube					
Length	2.50 m	2.75 m	3.00 m	3.50 m*	4.00 m*	5.00 m*
KRASOflex® Star Tube K6 (wall thickness ≤ 240 mm)	41.75 €	45.90 €	50.10 €	58.45 €	66.80 €	83.50 €
KRASOflex® Star Tube K9 (wall thickness ≤ 350 mm)	48 €	52,80 €	57.60 €	67.20 €	76.80 €	96 €
KRASOflex® Star Tube K18 (wall thickness > 350 - 500 mm)	120 €	132 €	144 €	168 €	192 €	240 €

* Freight costs on request!

Further lengths available on request!

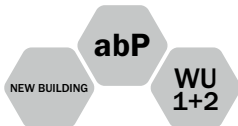
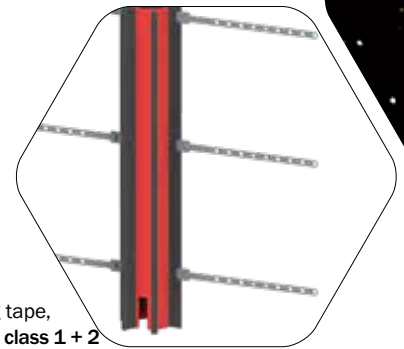


KRASOflex® Star Tube – installation set **LG 4**

for a simple installation of **KRASOflex® Star Tubes** in precast and in-situ concrete walls, with mounting tape, anchor nails 6 x 40 mm, round head screw, 6 mm SDS drill | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASOflex® Star Tube – installation set
KRASOflex® Star Tube – installation set	89 €

Scope of supply: **KRASOflex® Star Tube – installation set**, including 100 pcs. **KRASOflex® Mounting Tape**, 100 pcs. anchor nails 6 x 40 mm, round head screw, 1 pc. 6 mm SDS drill



KRASOflex® Star Tube System **LG 4**

universally usable for joint or corner areas of wall elements | DafStB waterproof concrete guideline: stress class 1 + 2

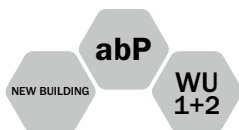
Type / Item	KRASOflex® Star Tube System					
Length	2.50 m	2.75 m	3.00 m	3.50 m*	4.00 m*	5.00 m*
KRASOflex® Star Tube System K6 (precast walls)	86 €	92 €	95 €	107 €	120 €	146 €
KRASOflex® Star Tube System K9 (in-situ concrete walls)	108 €	116 €	121 €	135 €	148 €	179 €

* Freight costs on request!

Scope of supply: **KRASOflex® Star Tube System** incl. 50 cm fixing bracket and 2 pcs. **KRASOflex® Mounting Clamps** for easy fixation

Further lengths available on request!





KRASOflex® AFW **LG 4**

construction joint wall element for vertical construction joints in the wall/wall joint area | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASOflex® AFW						
Length	2.50 m	2.75 m	3.00 m	3.50 m	4.00 m	4.50 m	5.00 m
KRASOflex® AFW 150	70 €	74 €	78 €	83 €	89 €	96 €	102 €
KRASOflex® AFW 155	63 €	67 €	70 €	75 €	80 €	86 €	92 €

Scope of supply: KRASOflex® AFW incl. 50 cm fixing bracket and 2 pcs. **KRASOflex® Mounting Clamps** for easy fixation

Further lengths available on request!

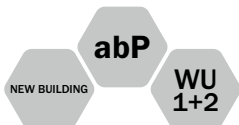


Creating and ensuring quality KRASO® is a member of DBV e. V.

- + In the **German Concrete and Construction Technology Association (DBV e. V.)**, together with more than 500 members from the German construction industry, we actively engage in further development, scientific research and overall issues relating to construction technology and concrete construction.
- + We are thus part of a platform that is committed to sustainable and resource-conserving construction in its core competence concrete construction.



Cement-composite joint plate with mineral special coating



KRASOflex® Joint Plate ZVB

Cement-composite joint plate with mineral special coating



Also available for industrial and agricultural systems!

- + For the sealing of construction joints and controlled crack joints
- + Active-mineral special coating: active and composite sealing combined in one joint plate!
- + System solutions for in-situ concrete and precast walls
- + No sticking, no protection foil and therefore less waste on the construction site!
- + Drinking water approval – tested according to DVGW working sheet W 347 and 270
- + Installation independent of weather and season!
- + Integration into the concrete: 3 cm
- + With general building authority test certificate (abP, water pressure up to 2 bar)
- + MPA-tested up to 5 bar
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASOflex® Joint Plate ZVB **LG 4**

for the sealing of construction joints and controlled crack joints, incl. **KRASOflex® ZVB – Joint Clips** for securing overlapping joints | DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASOflex® Joint Plate ZVB 100	KRASOflex® Joint Plate ZVB 150
Height	100 mm	150 mm
Length	2,000 mm	2,000 mm
Packing Unit	100 metres / box	100 metres / box
KRASOflex® Joint Plate ZVB	7.30 € per metre	7.80 € per metre
KRASOflex® Joint Plate ZVB for agricultural systems	-	12.80 € per metre

Scope of supply: KRASOflex® Joint Plate ZVB, KRASOflex® ZVB – Joint Clips (100 pcs./box), KRASOflex® ZVB for industrial and agricultural systems (100 pcs./box)



KRASOflex® ZVB
- Joint Clip



KRASOflex® ZVB
- Mounting Clamp 100



KRASOflex®
- Mounting Clamp



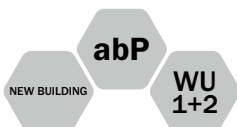
KRASOflex® ZVB
- Corner 150



KRASOflex® ZVB
- Clamping plate 150

KRASOflex® Joint Plate ZVB - Accessories **LG 4**

Type / Item	KRASOflex® ZVB - Joint Clip	KRASOflex® ZVB - Mounting Clamp 100	KRASOflex® Mounting Clamp	KRASOflex® ZVB - Corner 150	KRASOflex® ZVB - Clamping plate 150
Feature	Fixing clip for overlapping joints of KRASOflex® Joint Plates ZVB	For the safe fixation of KRASOflex® Joint Plate ZVB 100 as connection of wall/ceiling area	For the safe fixation of KRASOflex® Joint Plate ZVB 150 on the reinforcement	For the professional connection of KRASOflex® Joint Plate ZVB 150 - desired crack elements FTW corner joints in the sole area	For the connection of KRASOflex® Joint Plate ZVB 150 to expansion and construction joint tapes
Packing unit	50 pcs. / bag	100 pcs. / bag	100 pcs. / bag	1 piece incl. 2 pcs. KRASOflex® ZVB - Joint Clips	1 piece incl. 2 pcs. KRASOflex® ZVB - Joint Clips
KRASOflex® ZVB - Accessories	19 € per bag	1.20 € per piece	1.20 € per piece	18.50 € per piece	24.80 € per piece



KRASOflex® Joint Plate ZVB - Desired Crack Elements

Cement-composite joint plate for precast walls and in-situ concrete walls

- + For the controlled production and simultaneous sealing of desired crack elements
- + With general building authority test certificate (abP, water pressure up to 2 bar)
- + MPA-tested up to 5 bar
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASOflex® ZVB - Desired Crack Elements FTW (precast walls) - butt joint **LG 4**

with mineral coating on both sides, for the controlled production and simultaneous sealing of desired crack elements in precast walls, against pressing and non pressing water as well as soil moisture | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASOflex® - Desired Crack Elements FTW - butt joint					
Wall thickness	240 - 280 mm	240 - 280 mm	290 - 340 mm	290 - 340 mm	350 - 400 mm	350 - 400 mm
Length of element	2,500 mm	3,000 mm	2,500 mm	3,000 mm	2,500 mm	3,000 mm
Joint plate width	150 mm	150 mm	150 mm	150 mm	150 mm	150 mm
Number of knock-in anchors	3 pieces	4 pieces	3 pieces	4 pieces	3 pieces	4 pieces
KRASOflex® ZVB - Desired Crack Elements FTW - butt joint	79.80 €	95.80 €	83.80 €	100.60 €	91.40 €	109.70 €

Scope of supply: KRASOflex® Joint Plate ZVB - Desired Crack Elements FTW – butt joint, knock-in anchors, 2 pieces **KRASOflex® ZVB - Joint Clips**
Further dimensions and designs available on request!

KRASOflex® ZVB - Desired Crack Elements FTW (precast walls) – corner joint **LG 4**

with mineral coating on both sides, for the controlled production and simultaneous sealing of desired crack elements in precast walls, against pressing and non pressing water as well as soil moisture | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASOflex® ZVB - Desired Crack Elements FTW – corner joint					
Wall thickness	240 - 280 mm	240 - 280	290 - 340 mm	290 - 340	350 - 400 mm	350 - 400 mm
Length of element	2,500 mm	3,000 mm	2,500 mm	3,000 mm	2,500 mm	3,000 mm
Joint plate width	150 mm	150 mm	150 mm	150 mm	150 mm	150 mm
Number of impact dowels	3 pieces	4 pieces	3 pieces	4 pieces	3 pieces	4 pieces
KRASOflex® ZVB - Desired Crack Elements FTW - corner joint	83.90 €	100.70 €	88.10 €	105.80 €	95.25 €	114.30 €

Scope of supply: KRASOflex® Joint Plate ZVB - Desired Crack Elements FTW – corner joint, knock-in anchors, 2 pieces **KRASOflex® ZVB - Joint Clips**

Further dimensions and designs available on request!



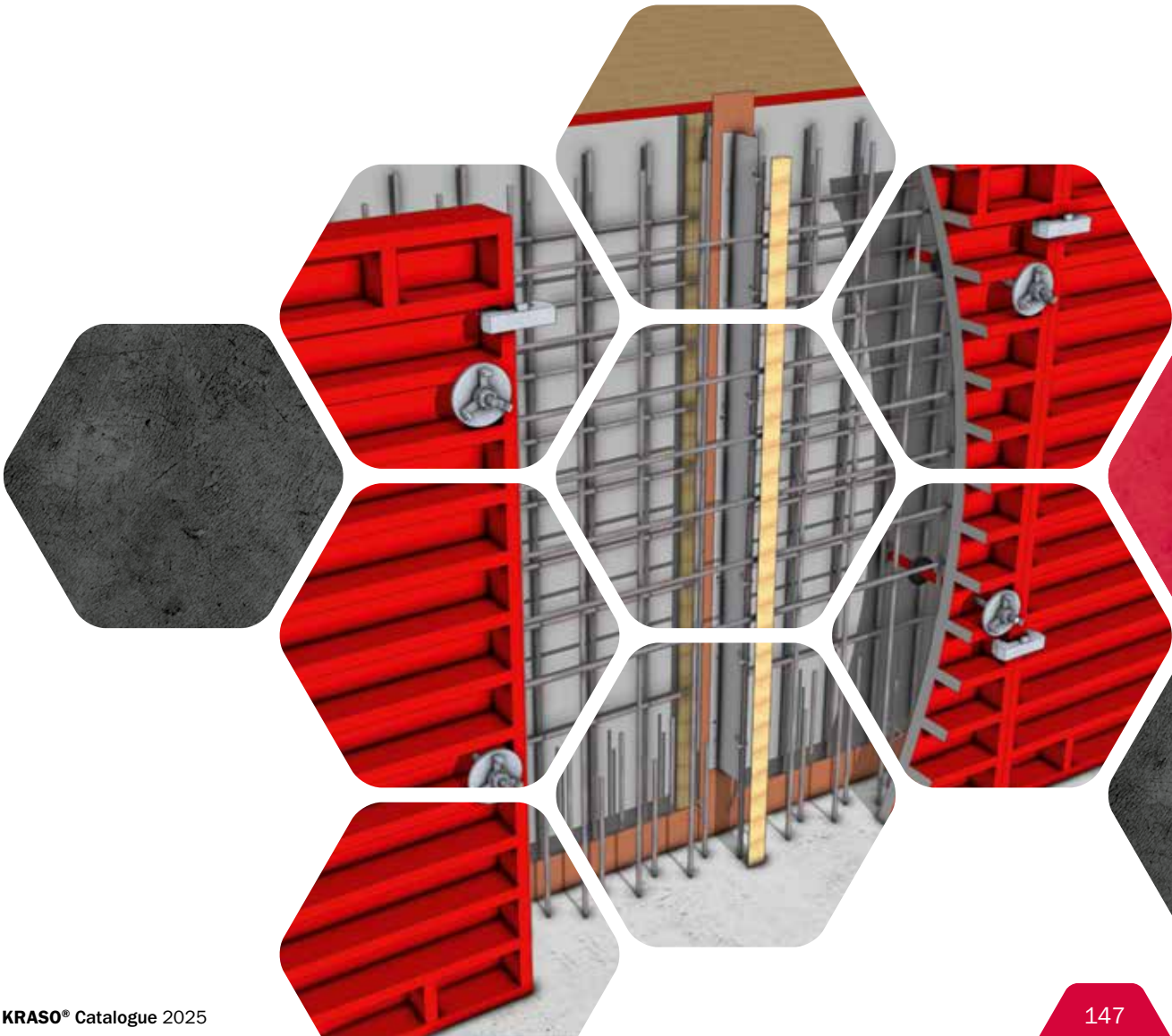
KRASOflex® ZVB - Desired Crack Elements OBW (in-situ concrete walls) LG 4

with mineral coating on both sides, for the controlled production and simultaneous sealing of desired crack elements in in-situ concrete walls, against pressing and non pressing water as well as soil moisture | **DafStB waterproof concrete guideline: stress class 1 + 2**

Type / Item	KRASOflex® ZVB - Desired Crack Elements OBW			
Installation dimension	140 mm	140 mm	180 mm	180 mm
Length of element	2,500 mm	3,000 mm	2,500 mm	3,000 mm
Joint plate width	150 mm	150 mm	150 mm	150 mm
KRASOflex® ZVB - Desired Crack Elements OBW	91.20 €	109.50 €	104.20 €	125.00 €

Scope of supply: KRASOflex® Joint Plate ZVB - Desired Crack Elements OBW, 2 pieces KRASOflex® ZVB - Joint Clips

Further dimensions and designs available on request!



KRASOflex® Formwork Elements

Sealing and formwork in the base, wall and roof area

- + Simultaneously shutter horizontal and vertical construction joints and make them watertight by installing the **KRASOflex® Joint Plate ZVB**.

KRASOflex® Formwork Element ABS-R (rough)

Joint type: rough

KRASOflex® Formwork Element ABS-R-V (rough, reinforced)

Joint type: rough

Design: reinforced

KRASOflex® Formwork Element ABS-V (interlocked)

Joint type: interlocked according to EC2

KRASOflex® Formwork Element ABS-V-V (interlocked, reinforced)

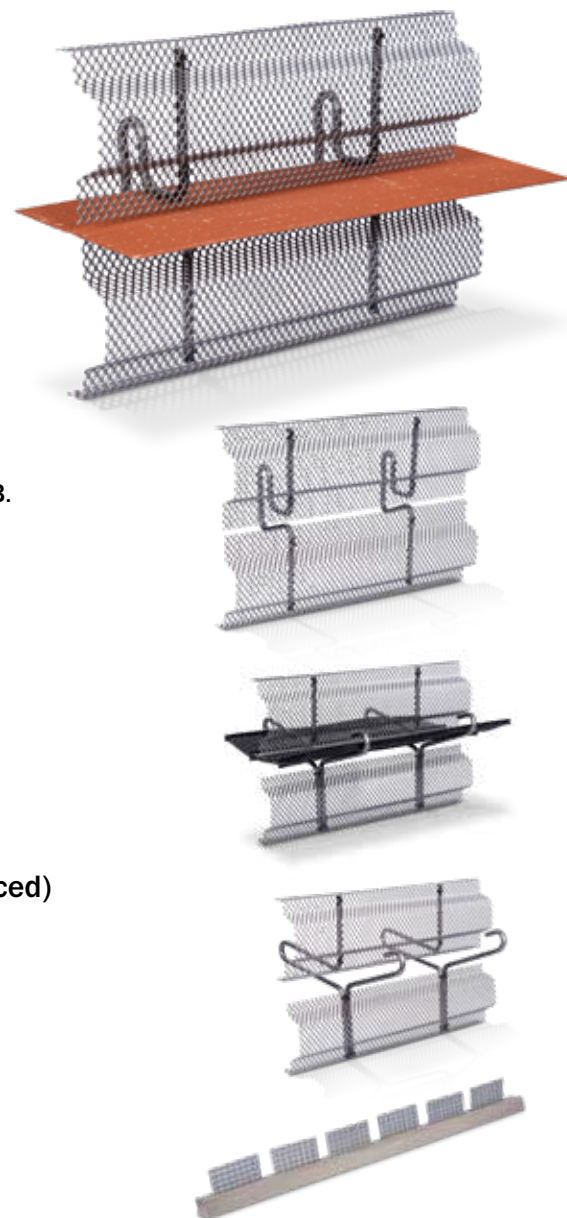
Joint type: interlocked according to EC2

Design: reinforced

Available in all standard sizes and in special designs! Prices on request!

KRASOflex® Upstand Elements and moulds for the formwork on request!

Also available for KRASOflex® Construction and Expansion Joint Tapes on request!



KRASOflex® Expansion Joint Tapes

For the sealing of internal construction joints

KRASOflex® Swelling Rubber

- + For the sealing of construction joints in concrete elements: segment construction, element construction and pipe jacking!
- + Joint sealing profile, "dimensionally stable" swelling when in contact with water!
- + With general building authority test certificate (abP) P-MPA-BS-240022
- + DafStB waterproof concrete guideline: stress class 1 + 2

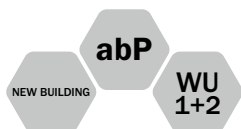
KRASOflex® Bentonit Expansion Joint Tape

- + For the sealing of internal construction joints in in-situ concrete elements: against permanent or temporary exposure by ground, slope and surface water
- + Strong, quick and reliable swelling reaction in contact with water. Suitable for water exchange zones!
- + With general building authority test certificate (abP) P-MPA-BS-240020
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASOflex® Bentonit Expansion Joint Tape RS

- + With rain protection coating: prevents early and uncontrolled swelling due to rain
- + With general building authority test certificate (abP) P-MPA-BS-240021
- + DafStB waterproof concrete guideline: stress class 1 + 2

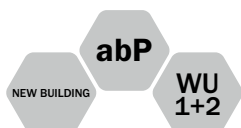
Further dimensions and designs on request!



KRASOflex® Swelling Rubber **LG 4**

for the internal sealing of construction joints in concrete elements | DafStB waterproof concrete guideline: stress class 1 + 2

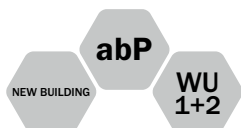
Type / Item	KRASOflex® Swelling Rubber
Dimension	20 x 5 mm
Packing unit	12 metres per roll
KRASOflex® Swelling Rubber	8.10 € per metre



KRASOflex® Bentonit Expansion Joint Tape **LG 4**

for the sealing of internal construction joints in in-situ concrete elements | DafStB waterproof concrete guideline: stress class 1 + 2

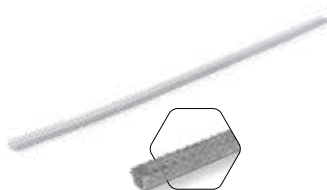
Type / Item	KRASOflex® Bentonit Expansion Joint Tape
Dimension	20 x 25 mm
Concrete cover	min. 80 mm
Packing unit	6 rolls with 5 metres each
KRASOflex® Bentonit Expansion Joint Tape	7.20 € per metre



KRASOflex® Bentonit Expansion Joint Tape RS **LG 4**

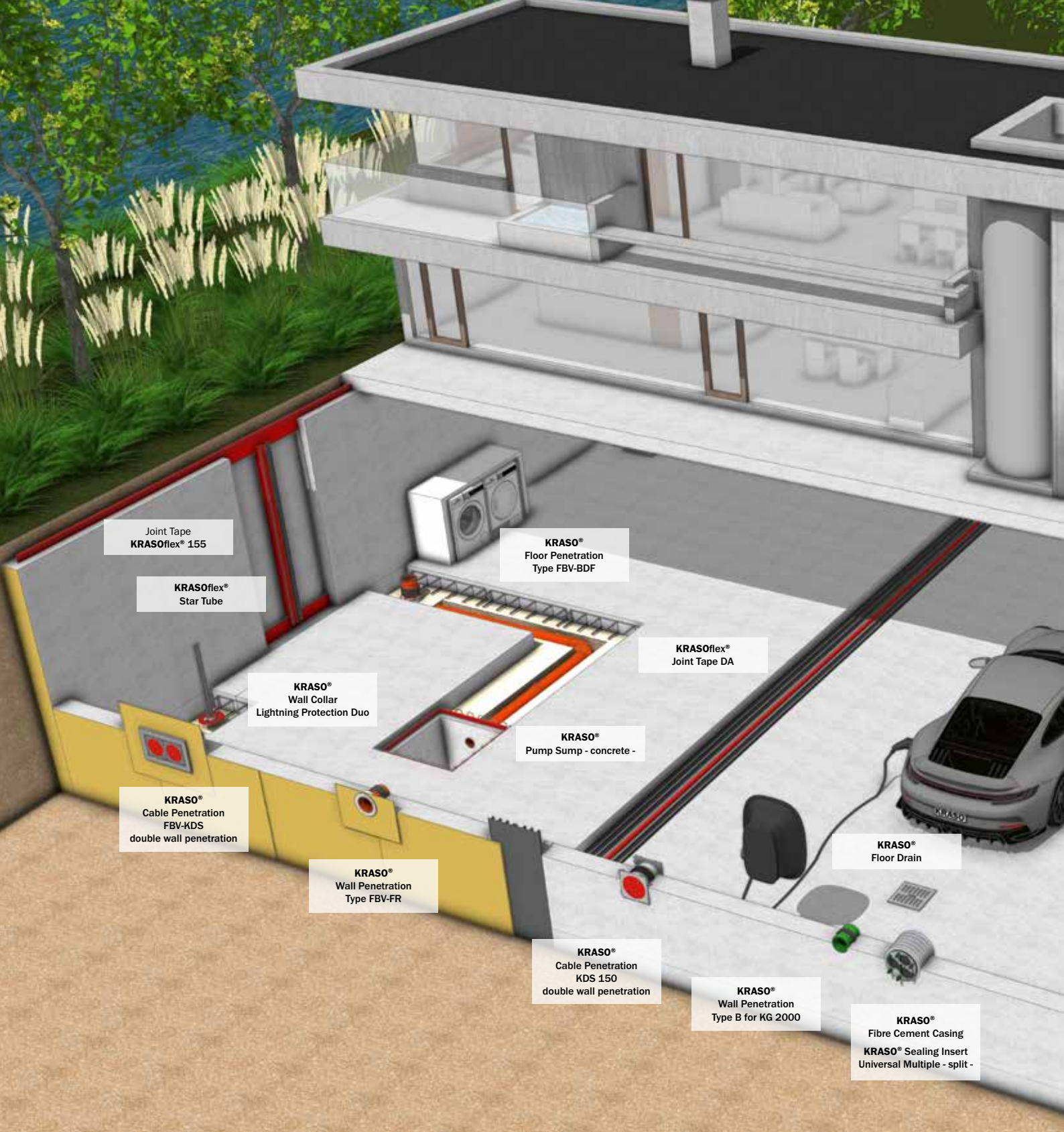
for the sealing of internal construction joints in in-situ concrete elements, with rain protection coating
| DafStB waterproof concrete guideline: stress class 1 + 2

Type / Item	KRASOflex® Bentonit Expansion Joint Tape RS
Dimension	18 x 24 mm
Concrete cover	min. 80 mm
Packing unit	6 rolls with 5 metres each
KRASOflex® Bentonit Expansion Joint Tape RS	8.50 € per metre



KRASOflex® Expansion Joint Tape - Accessories **LG 4**

Type / Item	KRASOflex® Expansion Joint Tape Mounting grid 20 x 25	KRASOflex® Mounting adhesive
Length / quantity	1 m	Cartridge à 290 ml
KRASOflex® Expansion Joint Tape - Accessories	2.10 €	18.50 €



KRASO® Sealing Solutions

Safe planning and execution of sealings

- + **KRASO®** offers the perfect solution for all critical points in waterproof constructions: from pump sumps and lift pits as precast concrete parts to extensive joint sealing systems, water pressure tight and gas-tight utility entries and utility outlets up to the retrofit sealing of various cables and pipes.
- + Consulting + Planning + Production - **KRASO®** supports you in the realisation of your construction project with state-of-the-art sealing technology system solutions, compliant with the DafStB waterproof concrete guideline. From consulting and planning to on-time delivery of our sealing systems.



KRASO®
Swan Neck


KRASO®
WP-DUO

KRASOflex®
Joint Plate ZVB

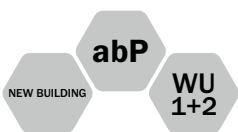
KRASO®
Builder's Convenience Box
- floor - **SEI**

KRASO®
Sealing Insert
Type IN-GR

We look forward to your enquiry

- + +49(0)28 72 - 95 35-0
- + WhatsApp +49(0)28 72 - 95 35-888 
- + export@kraso.de





KRASOflex® Joint Tapes

According to factory standard, DIN 18541 or DIN 18541 BV

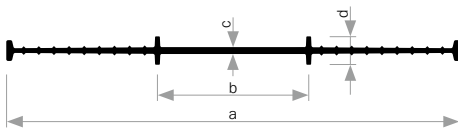
- + **Factory standard with general building authority test certificate (abP):**
Joint tapes in factory standard quality are made on the basis of PVC-P ("soft PVC"). They are perfectly suited for use in waterproof concrete structures with normal exposure. Characterised by their excellent workability, weldability and durability, they offer a great price-performance-ratio.
- + **DIN 18541:**
Joint tapes of this quality level meet the requirements of the German Industry Standard for thermoplastic joint tapes for sealing joints in concrete. Based on the material PVC-P, a special composition achieves a particular high quality in terms of elasticity, breaking extension and tensile strength. Joint tapes of this quality level are required for construction projects with very high loads.
- + **DIN 18541 BV:**
Joint tapes of DIN 18541 quality are also optionally available in a bitumen-compatible (BV) version.

KRASOflex® Construction Joint Tape A and AA

material properties according to DIN 18541-2

Characteristic values	Requirements	Specification
Tensile strength	≥ 10 MPa	DIN EN ISO 527
Elongation at break	≥ 350 %	DIN EN ISO 527
Cold behaviour: elongation at break at -20 °C	≥ 200 %	DIN EN ISO 527
Shore A hardness	67 ± 5	DIN EN ISO 868
Tear propagation resistance	≥ 12 kN/m	DIN ISO 34-1
Behaviour of the joint during the tensile test Short-term joining factor fz	≥ 0,6	DIN EN ISO 527
Fire behaviour	class E	DIN EN 13501-1
Behaviour after storage in bitumen ¹ - Tensile strength - elongation at break · Tensile strength · Elongation at break	< 20 % < 20 %	DIN EN 13304 DIN EN ISO 527-2 DIN EN ISO 291

¹ Joint tapes compatible with bitumen (BV)



Type	a (mm)	b (mm)	c (mm)	d (mm)
A 240	240	80	3.5	15
A 320	320	120	4.5	15

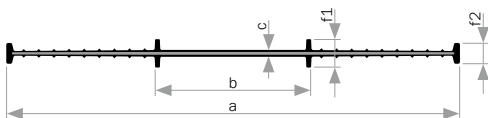
Profile geometries according to DIN 18541 - 1

KRASOflex® Joint Tape A **LG 4**

internal construction joint tape

Type / Item	KRASOflex® A 120	KRASOflex® A 150	KRASOflex® A 200	KRASOflex® A 240	KRASOflex® A 320
Profile width	120 mm	150 mm	200 mm	240 mm	320 mm
Roll length	25 m	25 m	25 m	25 m	25 m
KRASOflex® Joint Tape A (factory standard with abP)	4.00 € per metre	5.00 € per metre	5.40 € per metre	7.00 € per metre	10.90 € per metre
KRASOflex® Joint Tape A (according to DIN 18541)	5.20 € per metre *	6.30 € per metre *	8.60 € per metre *	10.10 € per metre	15.00 € per metre
KRASOflex® Joint Tape A (according to DIN 18541 BV)	7.30 € per metre	8.30 € per metre	11.50 € per metre	13.20 € per metre	19.00 € per metre

* According to DIN 18541, part 2



Type	a (mm)	b (mm)	c (mm)	f1 (mm)	f2 (mm)
ASI 120	120	50	3.5	15	11
ASI 150	150	50	3.5	15	11
ASI 200	200	80	3.5	15	11
ASI 240	240	80	3.5	15	11
ASI 320	320	120	4.5	15	11

Profile geometries

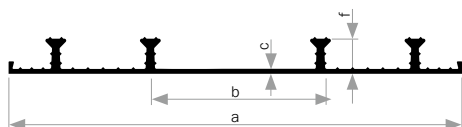
KRASOflex® Joint Tape ASI **LG 4**

internal construction joint tape, inside stabilised (factory standard)

Type / Item	KRASOflex® ASI 120	KRASOflex® ASI 150	KRASOflex® ASI 200	KRASOflex® ASI 240	KRASOflex® ASI 320
Profile width	120 mm	150 mm	200 mm	240 mm	320 mm
Roll length	25 m	25 m	25 m	25 m	25 m
KRASOflex® Joint Tape ASI	5.70 € per metre	6 € per metre	8 € per metre	10 € per metre	12.10 € per metre

BV (bitumen-compatible) available at an additional charge!





Type	a (mm)	b (mm)	c (mm)	f (mm)	Number of locking anchors
AA 240/20	240	90	4	20	4
AA 240/35	240	90	4	35	4
AA 320/25	320	100	4	25	6
AA 320/35	320	100	4	35	6
AA 500/35	500	120	4	35	8

Profile geometries according to **KRASO®** factory standard

KRASOflex® Joint Tape AA **LG 4**

external construction joint tape, available in factory standard with abP, DIN 18541 and DIN 18541 BV

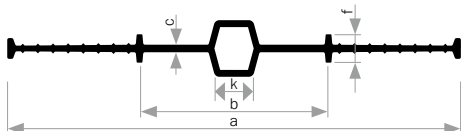
Type / Item	KRASOflex® Joint Tape AA 240	KRASOflex® Joint Tape AA 320	KRASOflex® Joint Tape AA 500
Profile width	240 mm	320 mm	500 mm
Standard anchor height	20 mm	25 mm	35 mm
Roll length	25 m	25 m	20 m
KRASOflex® Joint Tape AA (factory standard with abP)	10.80 € per metre	14.20 € per metre	-
KRASOflex® Joint Tape AA (factory standard with abP, 35 mm anchor)	14.40 € per metre	20.60 € per metre	31.30 € per metre
KRASOflex® Joint Tape AA (according to DIN 18541)	14.40 € per metre	19.40 € per metre	-
KRASOflex® Joint Tape AA (35 mm anchor, according to DIN 18541)	21.20 € per metre	28.10 € per metre	-
KRASOflex® Joint Tape AA (according to DIN 18541 BV)	18.40 € per metre	28.60 € per metre	-
KRASOflex® Joint Tape AA (35 mm anchor, according to DIN 18541 BV)	25.20 € per metre	35.00 € per metre	67.50 € per metre

KRASOflex® Expansion Joint Tapes D and DA

material properties according to DIN 18541-2

Material properties according to DIN 18541-2		
Characteristic values	Requirements	Specification
Tensile strength	≥ 10 MPa	DIN EN ISO 527
Elongation at break	≥ 350 %	DIN EN ISO 527
Cold behaviour: elongation at break at -20 °C	≥ 200 %	DIN EN ISO 527
Shore A hardness	67 ± 5	DIN EN ISO 868
Tear propagation resistance	≥ 12 kN/m	DIN ISO 34-1
Behaviour of the joint during the tensile test Short-term joining factor fz	≥ 0.6	DIN EN ISO 527
Fire behaviour	class E	DIN EN 13501-1
Behaviour after storage in bitumen ¹ - Tensile strength - elongation at break · Tensile strength · Elongation at break	< 20 % < 20 %	DIN EN 13304 DIN EN ISO 527-2 DIN EN ISO 291

¹ Joint tapes compatible with bitumen (BV)



Type	a (mm)	b (mm)	c (mm)	k (mm)	f (mm)
D 240	240	90	4	20	15
D 320	320	110	5	20	15
D 500	500	150	6	20	20

Profile geometries according to DIN 18541 - 1

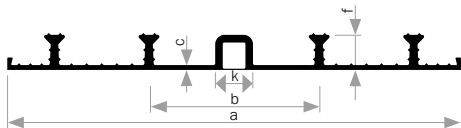
KRASOflex® Joint Tape D **LG 4**

internal expansion joint tape, available in factory standard with abP, DIN 18541 and DIN 18541 BV

Type / Item	KRASOflex® Joint Tape D 240	KRASOflex® Joint Tape D 320	KRASOflex® Joint Tape D 500
Profile width	240 mm	320 mm	500 mm
Roll length	25 m	25 m	20 m
KRASOflex® Joint Tape D (factory standard abP)	10.40 € per metre	16.10 € per metre	34.00 € per metre
KRASOflex® Joint Tape D (acc. to DIN 18541)	13.80 € per metre	19.90 € per metre	44.30 € per metre
KRASOflex® Joint Tape D (acc. to DIN 18541 BV)	17.30 € per metre	25.20 € per metre	66.30 € per metre



KRASOflex®
Expansion Joint Tape D



Type	a (mm)	b (mm)	c (mm)	f (mm)	k (mm)	Number of locking anchors
DA 240/20	240	90	4	20	20	4
DA 240/35	240	90	4	35	20	4
DA 320/25	320	100	4	25	20	6
DA 320/35	320	100	4	35	20	6
DA 500/35	500	120	4	35	20	8

Profile geometries according to DIN 18541 - 1

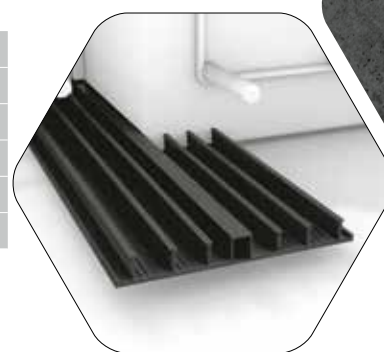
KRASOflex® Joint Tape DA **LG 4**

external expansion joint tape, available in factory standard with abP, DIN 18541 and DIN 18541 BV

Type / Item	KRASOflex® Joint Tape DA 240	KRASOflex® Joint Tape DA 320	KRASOflex® Joint Tape DA 500
Profile width	240 mm	320 mm	500 mm
Standard anchor height	20 mm	25 mm	25 mm
Roll length	25 m	25 m	20 m
KRASOflex® Joint Tape DA (factory standard with abP)	13.40 € per metre	18.60 € per metre	-
KRASOflex® Joint Tape DA (factory standard with abP, 35 mm anchor)	19.20 € per metre	23.20 € per metre	34.90 € per metre
KRASOflex® Joint Tape DA (according to DIN 18541)	17.00 € per metre	24.60 € per metre	-
KRASOflex® Joint Tape DA (35 mm anchor, according to DIN 18541)	24.30 € per metre	29.00 € per metre	45.80 € per metre
KRASOflex® Joint Tape DA (according to DIN 18541 BV)	21.50 € per metre	29.50 € per metre	-
KRASOflex® Joint Tape DA (35 mm anchor, acc. to DIN 18541 BV)	29.20 € per metre	34.90 € per metre	67.80 € per metre



KRASOflex®
Expansion Joint Tape DA



KRASOflex® Moulded Parts

According to factory standard and DIN 18541

KRASOflex®

Construction Joint Tape A

internal construction joint tape



Moulded part 1
Crossing flat



Moulded part 2
T-joint flat



Moulded part 3
Flat corner

KRASOflex®

Construction Joint Tape ASI

internal construction joint tape,
inside stabilised (factory standard)



Moulded part 1
Crossing flat



Moulded part 2
T-joint flat



Moulded part 3
Flat corner

KRASOflex®

Construction Joint Tape AA 240

external construction joint tape



Moulded part 1
Crossing flat



Moulded part 2
T-joint flat



Moulded part 3
Flat corner

KRASOflex®

Construction Joint Tape AA 320

external construction joint tape



Moulded part 1
Crossing flat



Moulded part 2
T-joint flat



Moulded part 3
Flat corner

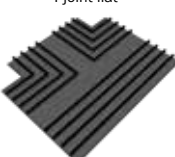
KRASOflex®

Construction Joint Tape AA 500

external construction joint tape



Moulded part 1
Crossing flat



Moulded part 2
T-joint flat



Moulded part 3
Flat corner

KRASOflex®

Expansion Joint Tape D

internal expansion joint tape



Moulded part 1
Crossing flat



Moulded part 2
T-joint flat



Moulded part 3
Flat corner

KRASOflex®

Expansion Joint Tape DA 240

internal expansion joint tape



Moulded part 1
Crossing flat



Moulded part 2
T-joint flat



Moulded part 3
Flat corner

KRASOflex®

Expansion Joint Tape DA 320

external expansion joint tape



Moulded part 1
Crossing flat



Moulded part 2
T-joint flat



Moulded part 3
Flat corner

KRASOflex®

Expansion Joint Tape DA 500

external expansion joint tape



Moulded part 1
Crossing flat



Moulded part 2
T-joint flat



Moulded part 3
Flat corner



Moulded part 4
Vertical crossing



Moulded part 4
Vertical crossing



Moulded part 5
T-joint vertical



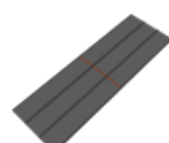
Moulded part 5
T-joint vertical



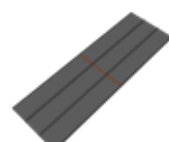
Moulded part 6
Vertical corner



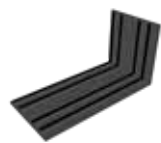
Moulded part 6
Vertical corner



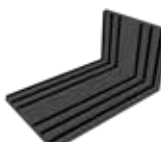
Moulded part 7
Butt joint



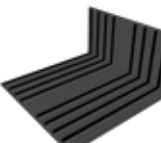
Moulded part 7
Butt joint



Moulded part 6i
Vertical corner, anchor inside



Moulded part 6i
Vertical corner, anchor inside



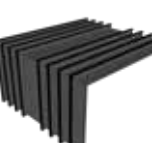
Moulded part 6i
Vertical corner, anchor inside



Moulded part 6a
Vertical corner, anchor outside



Moulded part 6a
Vertical corner, anchor outside



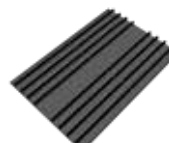
Moulded part 6a
Vertical corner, anchor outside



Moulded part 7
Butt joint



Moulded part 7
Butt joint



Moulded part 7
Butt joint



Moulded part 4
Vertical crossing



Moulded part 5
T-joint vertical



Moulded part 6
Vertical corner



Moulded part 7
Butt joint



Moulded part 6i
Vertical corner, anchor inside



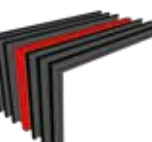
Moulded part 6a
Vertical corner, anchor outside



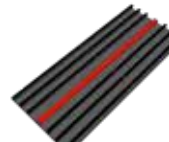
Moulded part 7
Butt joint



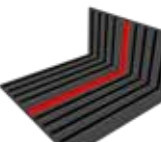
Moulded part 6i
Vertical corner, anchor inside



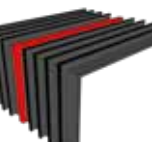
Moulded part 6a
Vertical corner, anchor outside



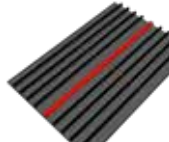
Moulded part 7
Butt joint



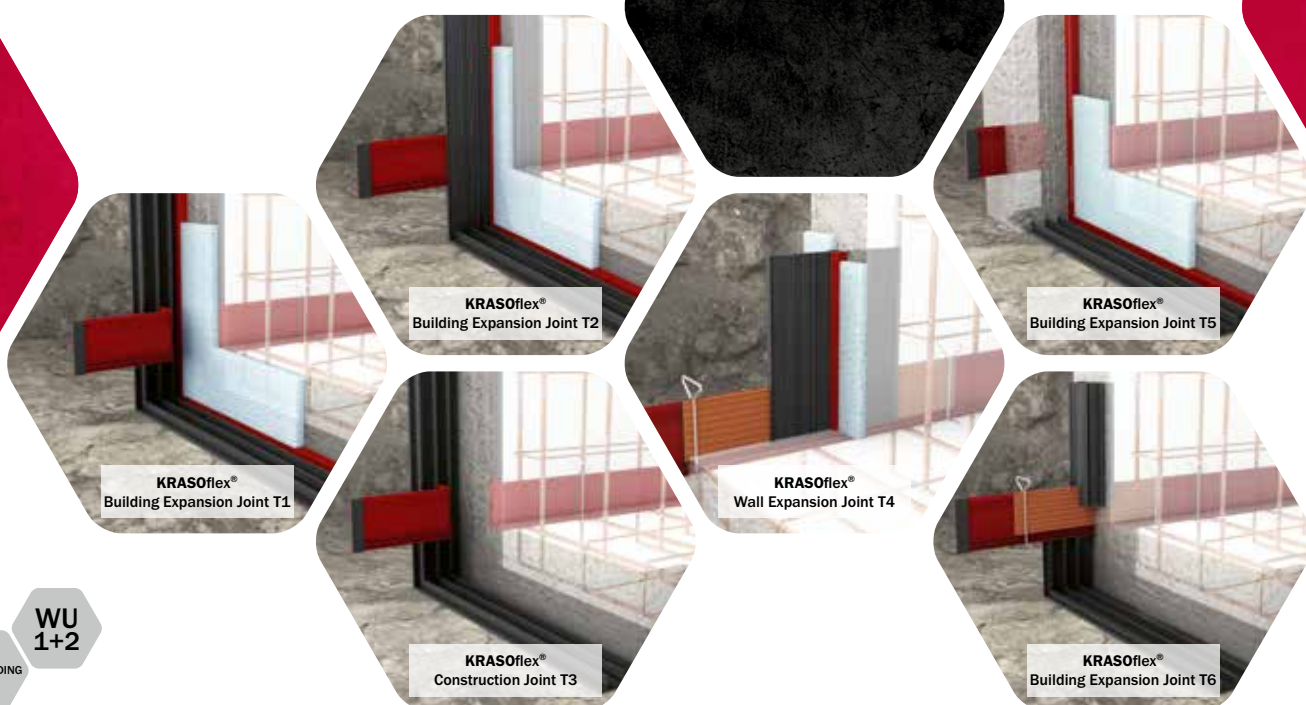
Moulded part 6i
Vertical corner, anchor inside



Moulded part 6a
Vertical corner, anchor outside

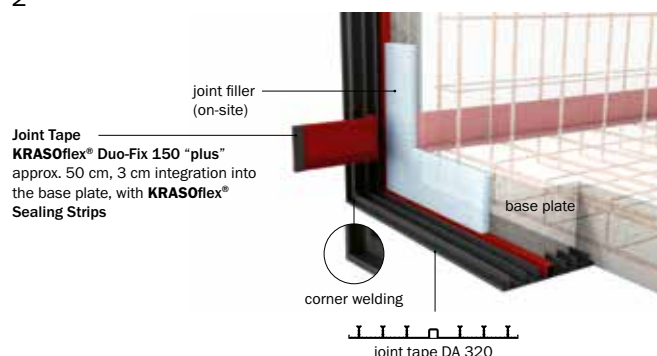


Moulded part 7
Butt joint



KRASOflex® Joint Tapes for building expansion joints and construction joints

+ DafStB waterproof concrete guideline: stress class 1 + 2



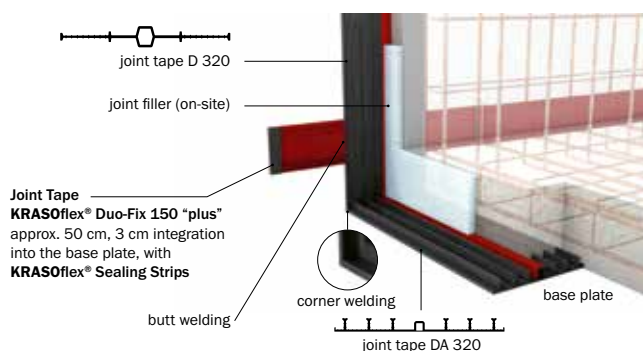
KRASOflex® Building Expansion Joint T1 **LG 4**

base plate and wall separate

corner moulding: external expansion joint tape type DA 320 (under the base plate) on external expansion joint tape type DA 320 (wall) and on **KRASOflex® Duo-Fix 150 "plus"** as connection piece for surrounding **KRASOflex® Duo-Fix 150 "plus"**, anchor lengths 50 cm each (expansion joint tapes according to factory standard, DIN 18541 and DIN 18541 BV)

Type / Item	KRASOflex® Building Expansion Joint T1
KRASOflex® Building Expansion Joint T1	Prices on request

Scope of supply: KRASOflex® Building Expansion Joint T1 incl. 2 KRASOflex® Mounting Clamps



KRASOflex® Building Expansion Joint T2 **LG 4**

base plate and wall separate

corner moulding: external expansion joint tape type DA 320 (under the base plate), on internal expansion joint tape type D 320 (wall), and on **KRASOflex® Duo-Fix 150 "plus"** as connection pieces, for surrounding **KRASOflex® Duo-Fix 150 "plus"**, anchor length 50 cm each (expansion joint tapes according to factory standard and DIN 18541)

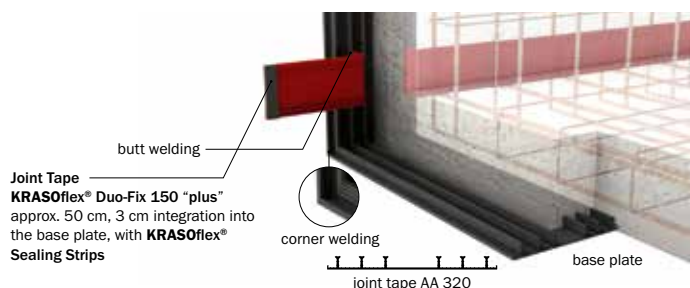
Type / Item	KRASOflex® Building Expansion Joint Tape T2
KRASOflex® Building Expansion Joint T2	Prices on request

Scope of supply: KRASOflex® Building Expansion Joint T2 incl. 2 KRASOflex® Mounting Clamps

KRASOflex® Construction Joint T3 LG 4

base plate and wall continuous

corner moulding: external construction joint tape type AA 320 (under the base plate) on external construction joint tape type AA 320 (wall), and on **KRASOflex® Duo-Fix 150 "plus"** as connection pieces for surrounding **KRASOflex® Duo-Fix 150 "plus"**, anchor length 50 cm each (construction joint tapes according to factory standard, DIN 18541 and DIN 18541 BV)



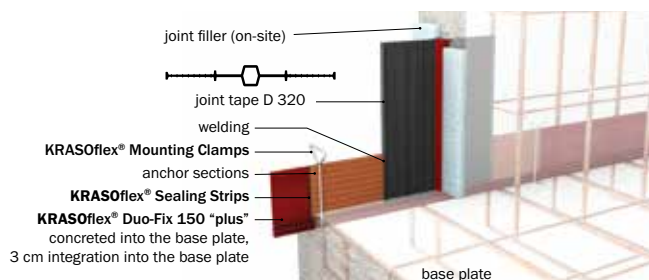
Type / Item	KRASOflex® Construction Joint T3
KRASOflex® Construction Joint T3	Prices on request

Scope of supply: KRASOflex® Construction Joint T3 incl. 2 KRASOflex® Mounting Clamps

KRASOflex® Wall Expansion Joint T4 LG 4

base plate continuous and separate wall

moulding: internal expansion joint tape type D 320 (wall) with anchor section to attach to the surrounding **KRASOflex® Duo-Fix 150 "plus"** (expansion joint tapes according to factory standard and DIN 18541)



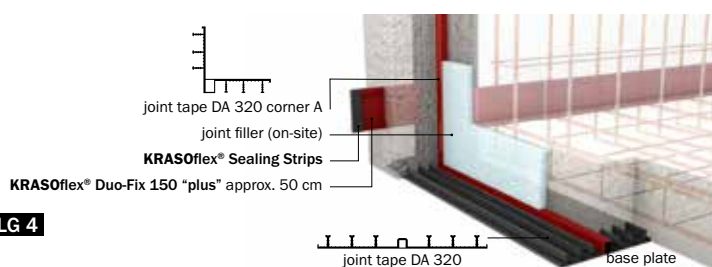
Type / Item	KRASOflex® Wall Expansion Joint T4
KRASOflex® Wall Expansion Joint T4	Prices on request

Scope of supply: KRASOflex® Wall Expansion Joint T4 incl. 2 KRASOflex® Mounting Clamps

KRASOflex® Building Expansion Joint T5 LG 4

base plate and separate wall

corner moulding: external expansion joint tape type DA 320 (under the base plate) on external expansion joint tape type DA 320 corner A (wall), and on **KRASOflex® Duo-Fix 150 "plus"** as connection pieces, for surrounding **KRASOflex® Duo-Fix 150 "plus"**, anchor lengths 50 cm each (expansion joint tapes according to factory standard, DIN 18541 and DIN 18541 BV)



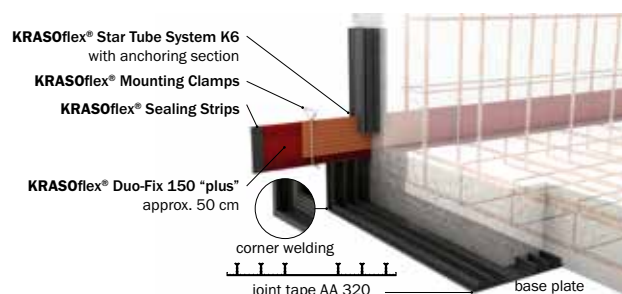
Type / Item	KRASOflex® Building Expansion Joint T5
KRASOflex® Building Expansion Joint T5	Prices on request

Scope of supply: KRASOflex® Building Expansion Joint T5 incl. 2 KRASOflex® Mounting Clamps

KRASOflex® Construction Joint T6 LG 4

base plate continuous, joint area of triple wall (desired crack)

moulding: external construction joint tape type AA 320 (under the base plate), on external construction joint tape type AA 320 (wall) and on **KRASOflex® Duo-Fix 150 "plus"** as connection pieces for surrounding **KRASOflex® Duo-Fix 150 "plus"** and for adding **KRASOflex® Star Tube System K6** (must be ordered separately), anchor lengths 50 cm each (construction joint tapes according to factory standard, DIN 18541 and DIN 18541 BV)



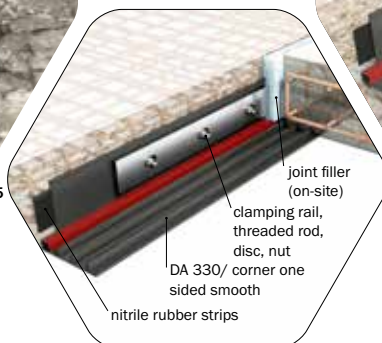
Type / Item	KRASOflex® Construction Joint T6
KRASOflex® Construction Joint T6	Prices on request

Scope of supply: KRASOflex® Construction Joint T6 incl. 2 KRASOflex® Mounting Clamps



KRASOflex® Clamp Construction - external

external expansion joint tape DA 330/35 according to DIN 18541 new element to existing element



KRASOflex® Clamp Construction - internal

joint filler (on-site)
clamping rail, threaded rod, disc, nut
DA 330/ corner one sided smooth
nitrile rubber strips



KRASOflex® Clamp Constructions

For the connection of new elements to existing elements

- + Clamp Constructions in stainless steel or galvanised. Internal and external
- + DafStB waterproof concrete guideline: stress class 1 + 2

KRASOflex® Clamp Constructions **LG 4**

Type / Item	KRASOflex® Clamp Construction			
Clamping bar flat steel (non-corrosive stainless steel V2A or galvanised, length approx. 1.20 m with slotted hole every 15 cm)	80 x 8 mm			
Raw rubber strips	80 x 4 mm			
Shear connector cartridges	M12			
Threaded rods (galvanised or non-corrosive stainless steel V2A)	M12 x 160 mm			
Design joint tape / clamping bar flat steel	D 330 / galvanised	DA 330 / galvanised	D 330 / V2A	DA 330 / V2A
KRASOflex® Clamp Construction	165 € per metre	168 € per metre	195 € per metre	198 € per metre



KRASOflex® Clamp Constructions - Accessories **LG 4**

Type / Item	KRASOflex® Clamp Constructions - Accessories				
	Flat steel clamp rail galvanised length approx. 1.20 m with slotted hole every 15 cm	Flat steel clamp rail V2A length approx. 1.20 m with slotted hole every 15 cm	Flat steel clamp rail V4A length approx. 1.20 m with slotted hole every 15 cm	Internal corner	External corner
	80 x 8 mm	80 x 8 mm	80 x 8 mm		
KRASOflex® Clamp Constructions - Accessories	Prices on request				
Type / Item	KRASOflex® Clamp Constructions - Accessories				
	Raw rubber strips	Shear connector cartridges	Threaded rods non-corrosive stainless steel V2A or galvanised	Clamp protection profile	
	80 x 4 mm	M12	M12 x 160 mm		
KRASOflex® Clamp Constructions - Accessories	Prices on request				



Special Designs



Stainless steel

Special designs made of stainless steel **p. 162**

Plastic

Special designs made of plastic **p. 164**

Concrete

Special designs made of concrete **p. 166**



Stainless steel –
competence and
precision

KRASO® Special Designs made of


Non-corrosive stainless steel: simple and tight

- + Sealing inserts, casings, flange plates ... We use exclusively non-corrosive stainless steel with the quality seal V2A or V4A for our special designs made of stainless steel. Solutions made of electrogalvanised steel are of course also possible!
- + The production takes place on e.g. the latest laser and waterjet cutting machines!
- + Special designs made of stainless steel are generally ready for dispatch within 24 hours!
Direct delivery to the construction site is possible.
- + Special Designs made of stainless steel are real problem solvers, particularly for rehabilitation projects!

“Thanks to our manufacturing expertise in stainless steel, we find a suitable solution for every project - even at short notice and fully assembled by our employees.”

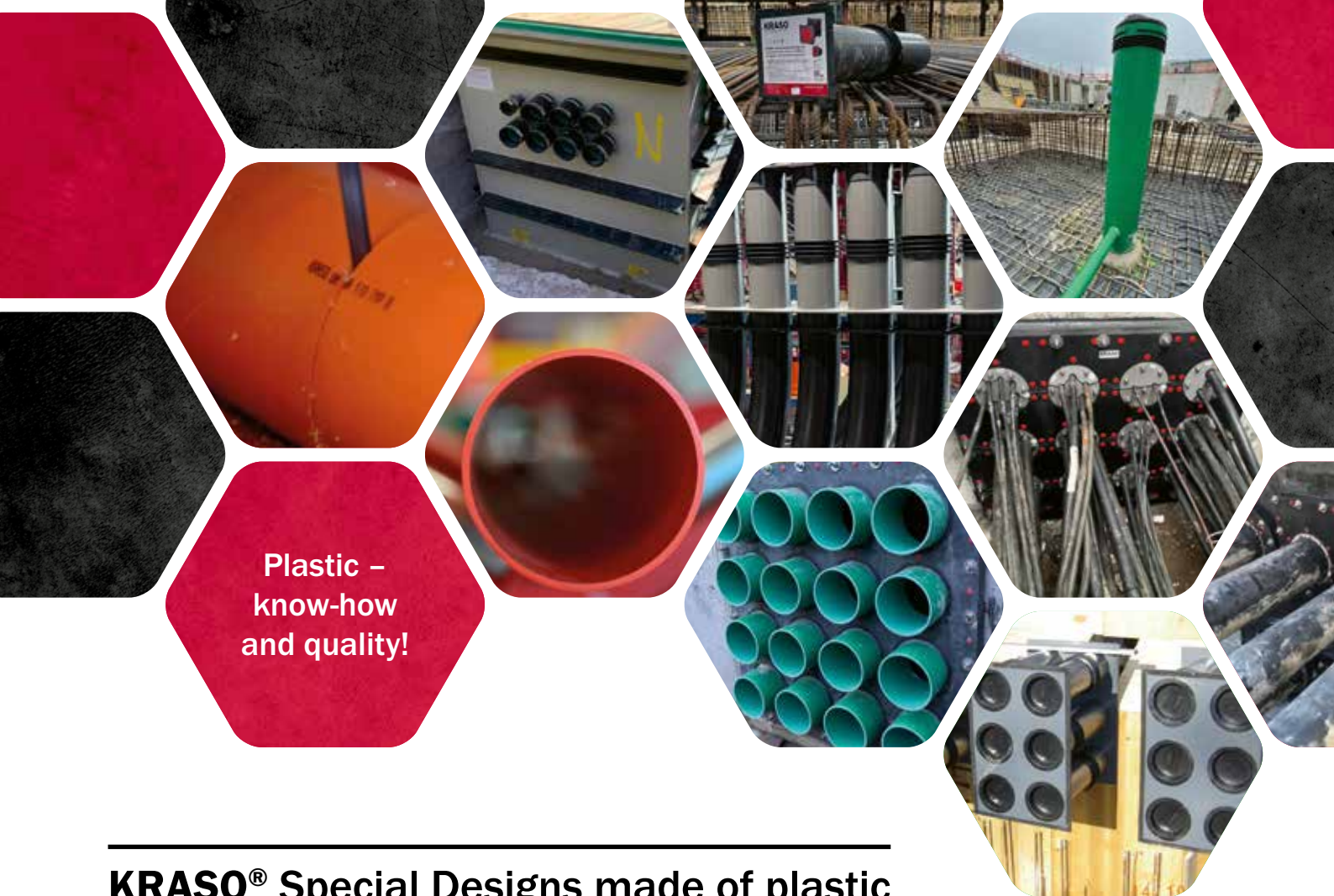
Jens Wenzlaff, application engineer

We look forward to your enquiry

- + +49(0)28 72 -95 35-0
+ WhatsApp +49(0)28 72 - 95 35-888 
+ export@kraso.de







Plastic –
know-how
and quality!


KRASO® Special Designs made of plastic Resistant and low weight

- + Whether drain, floor or wall penetration, pump sump or backwater shaft – **KRASO® Special Designs** made of plastic consist of high-quality components, for example our solid wall, break-resistant and impact resistant KG pipes.
- + Whether new building or rehabilitation: **KRASO® Special Designs** made of plastic offer a lot of advantages compared to other solutions – e.g. low weight and an easy installation!
- + A lot of our numerous special designs include our water pressure tight surrounding **KRASO® 4 Seal**. This is joined monolithically (force-fit) to the solid wall pipe and thus prevents any creep or slippage by pressing water.

*“Plastic is a very versatile material on the construction site.
We therefore offer individual solutions for new buildings and
rehabilitation - produced and delivered at short notice.”*

Carsten Demming, application engineer

We look forward to your enquiry

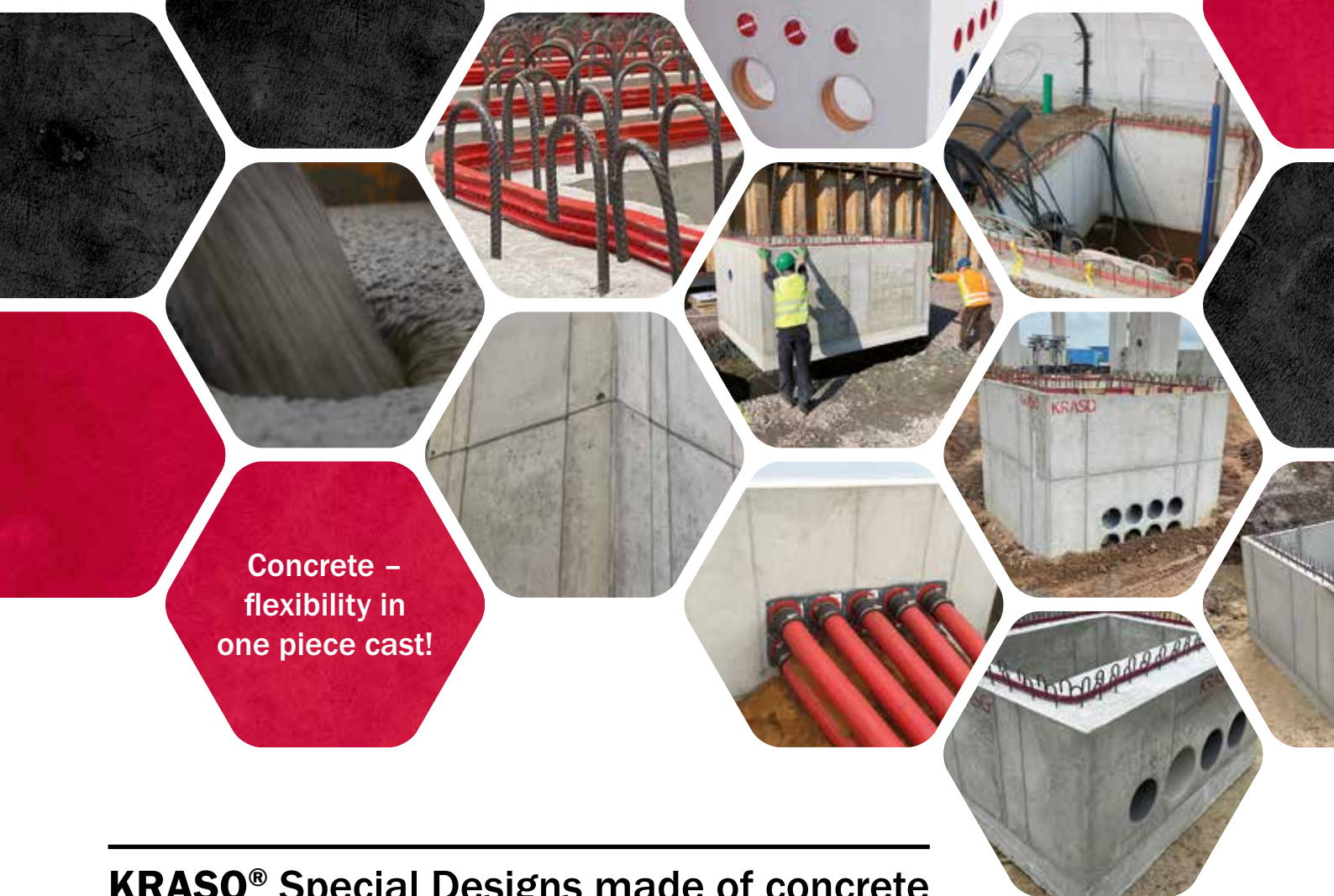
- + +49(0)28 72 - 95 35-0
- + WhatsApp +49(0)28 72 - 95 35-888 
- + export@kraso.de





SPECIAL DESIGNS

M-1.4-PK-EN-v1.0-WeS.DK



**Concrete –
flexibility in
one piece cast!**

KRASO® Special Designs made of concrete


Precast concrete elements save time and money

- + Pump sumps, cable ducts, lift pits – made of waterproof concrete, produced exactly as per your specifications! All dimensions (width, length, height, wall thickness) are variable.
- + Mounting parts like pipe penetrations, casings or anchor rails (for lift pits) are installed accurately
- + Weather-independent production of concrete shafts up to a total gross weight of 20 tons - but also pump sumps and lift pits with significantly higher weights can be produced.
- + Saves working time, money and additional drainage! We are happy to advise you personally!

“We produce precast concrete elements exactly according to the customer’s specifications, regardless of the weather and season. This makes it much easier to plan construction projects - both in regard to deadlines and costs.”

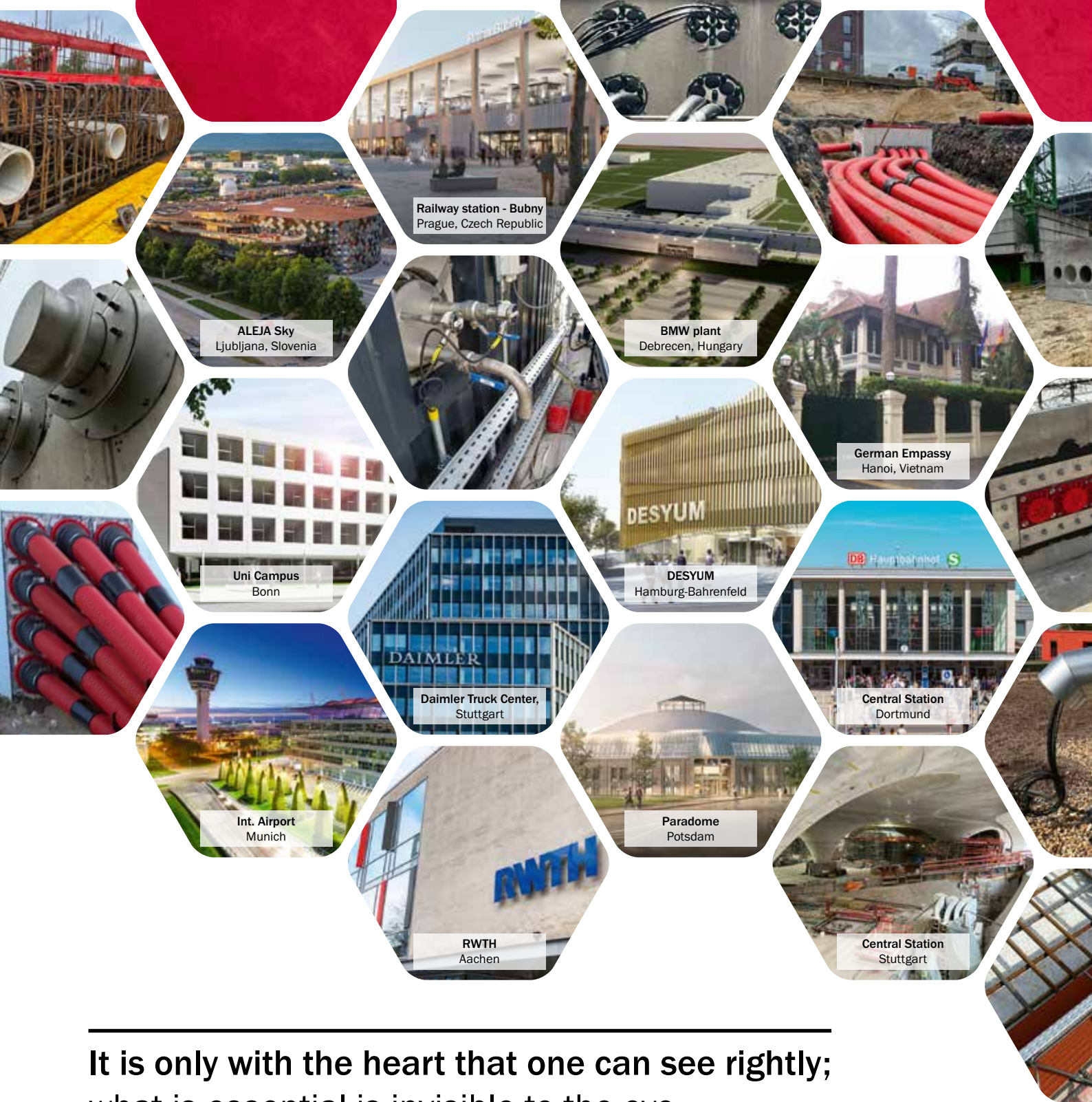
Michael Schwarz, application engineer

We look forward to your enquiry

- + +49(0)28 72 - 95 35-0
- + WhatsApp +49(0)28 72 - 95 35-888 
- + export@kraso.de

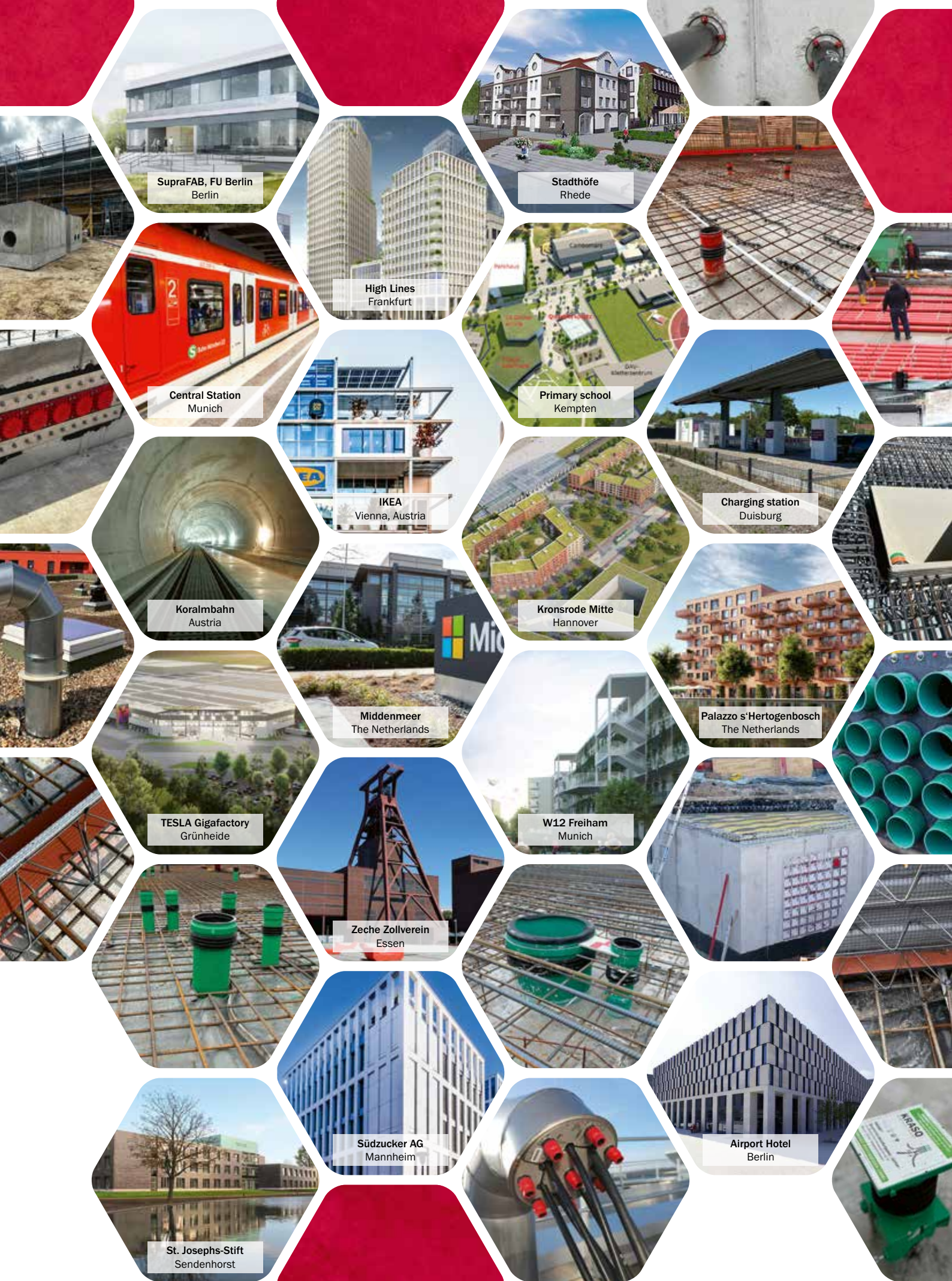






**It is only with the heart that one can see rightly;
what is essential is invisible to the eye.** Antoine de Saint-Exupéry

- + We have been developing, producing and distributing water pressure tight installation parts for concrete engineering and sealing solutions for cables and pipes with heart and soul since 1981. Though our products are invisible to the eye, they are essential for the inside.
- + As a specialist for pump sumps, joint tapes, pipe and cable penetrations, utility connection entries and outlets, sealing inserts and special designs for customised proposals, the **KRASO®** brand stands for a wide range of solutions for waterproofing buildings. From foundation to flat roof, **KRASO® Products** can be found anywhere. Tested in the laboratory, proven on the construction site – this sets our sealing solutions apart: simple to install, tight against pressing water.
- + Our medium-sized family-run business only has production facilities in Germany and is proud to live up to the quality recognised worldwide from products “Made in Germany”.
- + We put the emphasis on quality materials, innovative and accurate production processes, comprehensive advice - even on-site - and provide full service.
- + We enjoy long-standing and trusting partnerships with our customers.



SupraFAB, FU Berlin
Berlin

Stadthöfe
Rheide

High Lines
Frankfurt

Central Station
Munich

Primary school
Kempten

IKEA
Vienna, Austria

Charging station
Duisburg

Koralmbahn
Austria

Kronsode Mitte
Hannover

Middenmeer
The Netherlands

Palazzo s'Hertogenbosch
The Netherlands

TESLA Gigafactory
Grünheide

W12 Freiam
Munich

Zeche Zollverein
Essen

Südzucker AG
Mannheim

Airport Hotel
Berlin

St. Josephs-Stift
Sendenhorst

Your KRASO® contacts for daily business

Export

International Sales



Lamiae El Mouhdati
Int. Sales Manager
MENA
M +971(0)52- 2983293
lamiae@kraso.de



Nicole Bauer
Technical drawings/
Application engineer
T +49(0)28 72 - 95 35 - 180
nicole.bauer@kraso.de



Philipp Münsch
Sales representative
South Germany, Switzerland
M +49(0)17 61 - 39 53 547
philipp.muensch@kraso.de



Nino Bertolini
Sales representative
Austria
M +43(0)66 4 - 18 68 329
nino.bertolini@kraso.de



Carsten Demming
Technical engineer
T +49(0)28 72 - 95 35 - 570
carsten.demming@kraso.de



Jens Wenzlaff
Technical engineer
T +49(0)28 72 - 95 35 - 380
M +49(0)15 11 - 95 35 107
jens.wenzlaff@kraso.de



Simon Böing
Technical drawings/
Order processing
T +49(0)28 72 - 95 35 - 394
simon.boeing@kraso.de



Patrick Oberkönig
Export Manager
KRASO
T +49(0)28 72 - 95 35 - 388
patrick.oberkoenig@kraso.de



Tanja Schwering
Export Manager
KRASO
T +49(0)28 72 - 95 35 - 398
tanja.schwering@kraso.de



Jasper Stondzik
Sales representative
The Netherlands
M +49(0)17 61 - 39 53 544
jasper.stondzik@kraso.de



Adrian Beckmann
Technical drawings/
Order processing
T +49(0)28 72 - 95 35 - 393
adrian.beckmann@kraso.de



Michael Schwarz
Technical engineer
T +49(0)28 72 - 95 35 - 420
M +49(0)15 11 - 95 35 105
michael.schwarz@kraso.de

Technical engineers

Get in touch
with us!

Orders
bestellung@kraso.de
Enquiries
projekte@kraso.de
General
export@kraso.de

KRASO GMBH & CO. KG
Baumannweg 1
D-46414 Rhede
Phone
+49(0)28 72 - 95 35 - 0
WhatsApp
+49(0)28 72 - 95 35 - 888

Our working hours:
Mon. - Thu. 7.00 am - 5.00 pm
Friday 7.00 am - 3.30 pm

KRASO[®]

SIMPLE + TIGHT



Sealing Inserts



Utility Connection -
Outlets



Pump Sumps



Cable Penetrations



Solutions for Fresh
Concrete Composite
Films (FBV)



Utility Connection -
Entries



Special Designs



Heat Pumps



KRASOflex[®]
Joint Tapes



Pipe Penetrations

TERMS AND CONDITIONS

+ Freight conditions and delivery terms as well as payment terms and discounts are subject to agreement.

WATER PRESSURE TIGHT INSTALLATION PARTS FOR CONCRETE ENGINEERING SEALING SOLUTIONS FOR CABLES + PIPES



Sealing Inserts



Utility Connection -
Outlets



Pump Sumps



Cable Penetrations



Utility Connection -
Entries



Solutions for Fresh
Concrete Composite
Films (FBV)



Pipe Penetrations



Special Designs



KRASOflex®
Joint Tapes