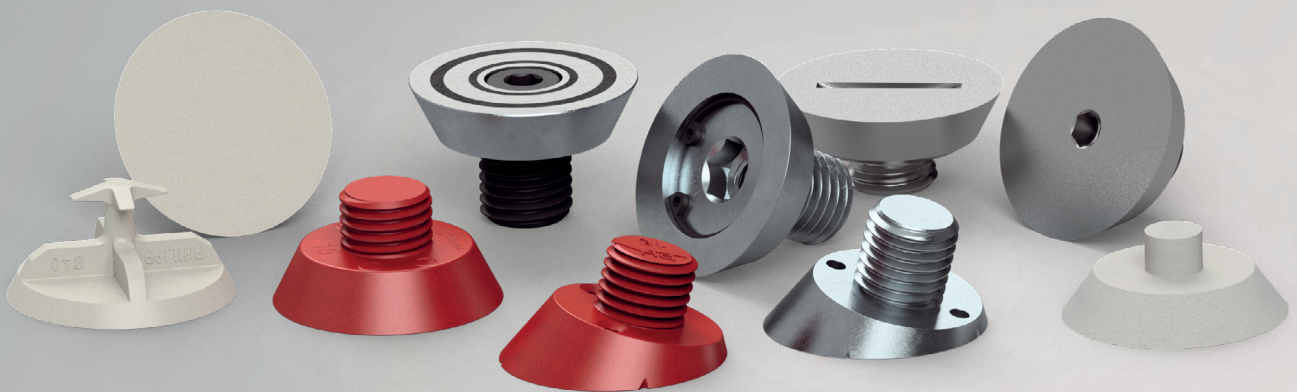


KHN system for Lifty / Lifty DS / Lifty TEX



Application Instruction

Our products from the division BUILDING SOLUTIONS

SERVICES

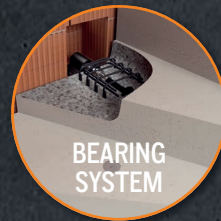
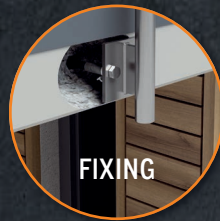
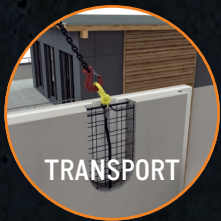
- » On-site tests -> we ensure that your requirements are properly covered by our planning.
- » Test reports -> for your safety and documentation.
- » Trainings -> the knowledge of your employees from planning and production is enhanced by our experts on site, online or via webinar.
- » Planning support -> latest design software, planning documents, CAD data and much more can be downloaded any time from www.philipp-group.de.

HIGH DEMANDS ON PRODUCT SAFETY AND PRACTICALITY

- » Close cooperation with notified bodies and - if necessary - approval of our solutions.

TECHNICAL DEPARTMENT

- » Our expert-team will support you at any time during your planning phase with detailed advice.



CONTENT

THE KHN SYSTEM	Page	4
RECESS FORMER	Page	5
Plastic recess former KHN	Page	5
Plastic recess former KHN SZ15	Page	6
Key for Plastic recess former KHN	Page	7
Steel recess former KHN	Page	8
Steel recess former KHN SZ15	Page	9
Magnetic recess former KHN	Page	11
SEALING CAPS	Page	12
Sealing cap KHN (plastic)	Page	12
Sealing cap KHN (concrete)	Page	13
Sealing cap KHN (stainless steel with slot)	Page	14
Sealing cap KHN (stainless steel with hexagon socket)	Page	14

THE PHILIPP KHN SYSTEM

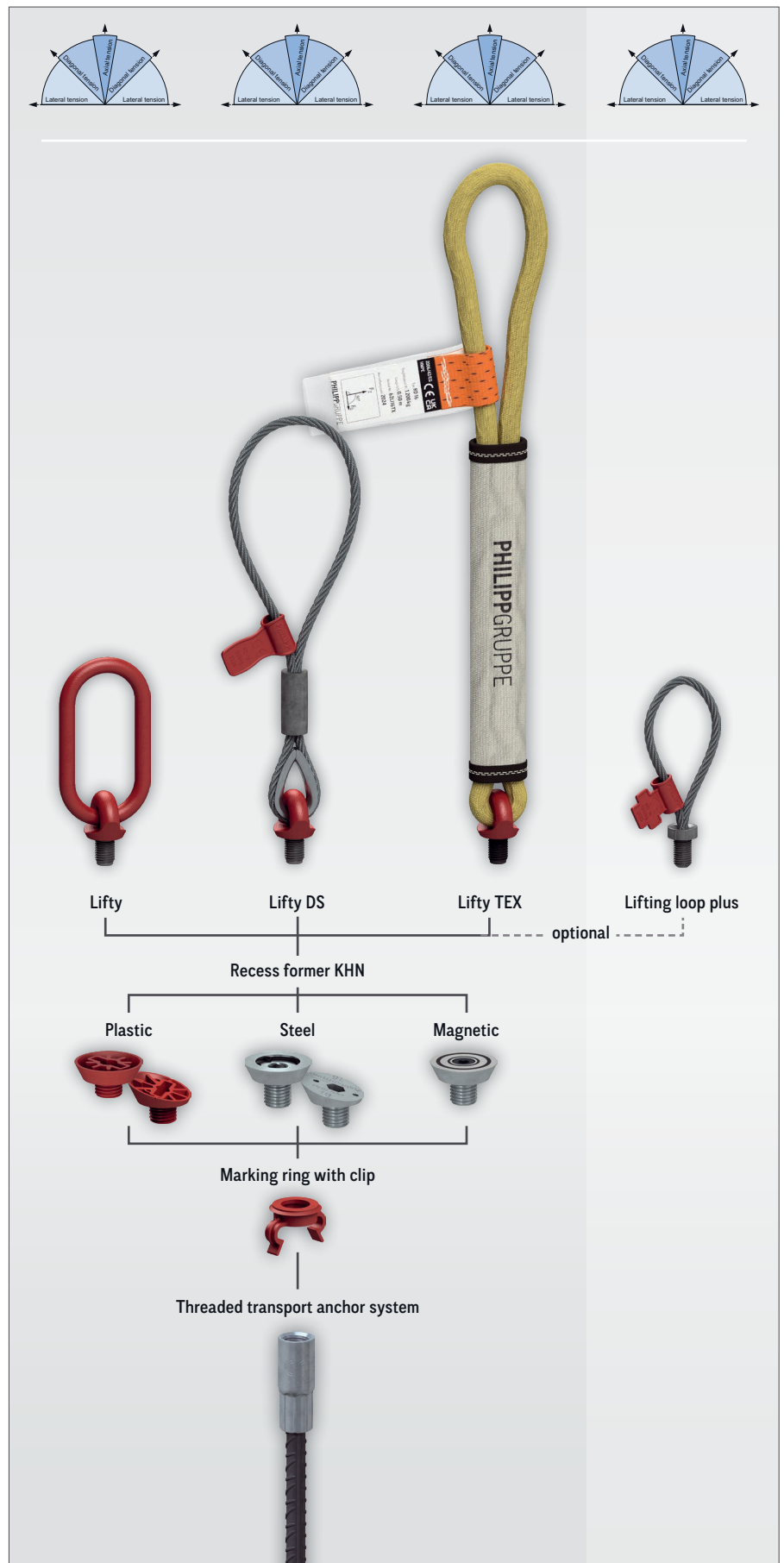
The KHN System is a well-coordinated combination of the PHILIPP lifting device Lifty, Lifty DS or Lifty TEX and the corresponding recess formers resp. sealing caps.

Combinations:

- » Lifting devices
 - › Lifty
 - › Lifty DS
 - › Lifty TEX
 - › Lifting loop plus
- » Recess formers KHN
 - › Plastic recess former KHN
 - › Steel recess former KHN
 - › Magnetic recess former KHN
- » Sealing caps KHN
 - › Sealing cap KHN (plastic)
 - › Sealing cap KHN (concrete)
 - › Sealing cap KHN (stainless steel)
- » Transport anchor
 - › Can be combined with all PHILIPP Threaded transport anchors type RD

FUTHER INFORMATION

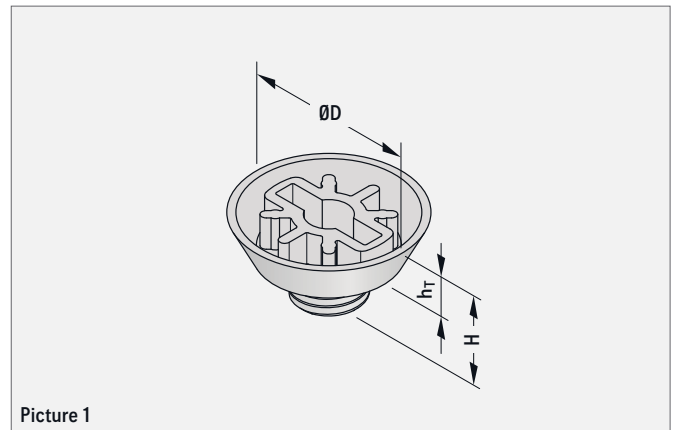
For further information about possible combinations of lifting devices, recess formers and sealing caps please refer to the document [Threaded transport anchors system-combinations](#).



RECESS FORMER

PLASTIC RECESS FORMER KHN

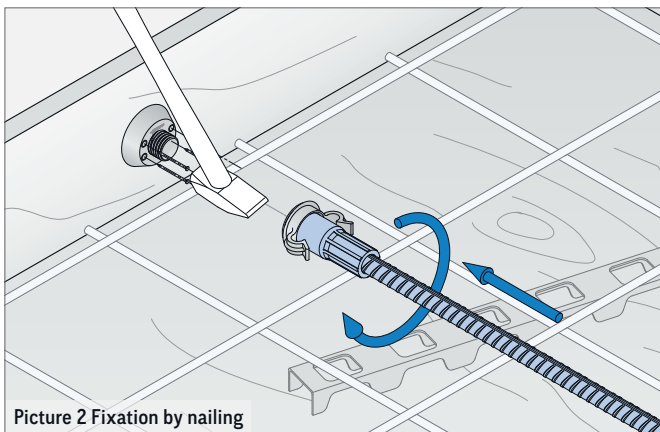
Firstly, the Plastic nailing plates KHN are fixed to the formwork by nailing or hot bonding. Now the Threaded transport anchor can be screwed onto the fixed recess former. In order to avoid a change of position of the transport anchor during concreting, it may be necessary, depending on the length of the transport anchor, to fix it additionally to the reinforcement of the concrete element. After the demoulding, the Plastic nailing plate can be quickly and easily removed e.g. with the PHILIPP tool 72KHNS (page 7).



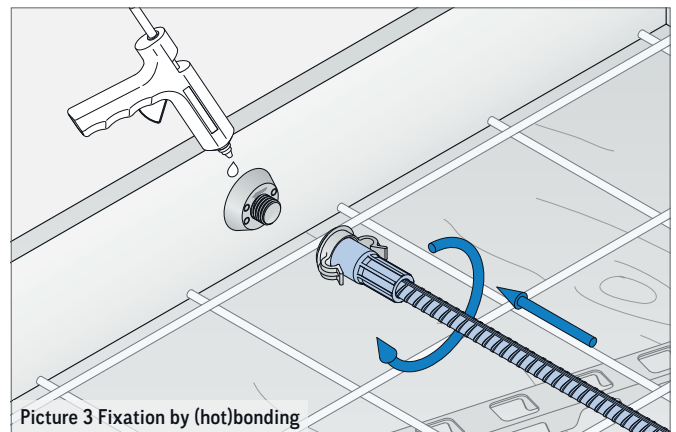
Picture 1

TABLE 1: PLASTIC RECESS FORMER KHN

Ref. no.	Type RD / M	Thread	ØD (mm)	H (mm)	h _T (mm)
72KHN12	12	M12	40	20	10
72KHN16	16	M16	40	20	10
72KHN20	20	M20	55	25	10
72KHN24	24	M24	55	25	10
72KHN30	30	M30	70	30	10
72KHN36	36	M36	70	30	10
72KHN42	42	M42	96	35	12
72KHN52	52	M52	96	35	12



Picture 2 Fixation by nailing



Picture 3 Fixation by (hot)bonding

RECESS FORMER

PLASTIC RECESS FORMER KHN SZ15

By using the Plastic recess former SZ15 Threaded transport anchors can be fixed with an angle of 15° to the formwork. Then, the Threaded transport anchor is screwed onto the recess former attached to the formwork. Depending on the length of the Threaded

transport anchor, it may be necessary to fix it additionally to the reinforcement of the concrete element. After the demoulding, the Plastic recess former SZ15 can be quickly and easily removed e.g. with the PHILIPP tool 72KHNS (page 7).

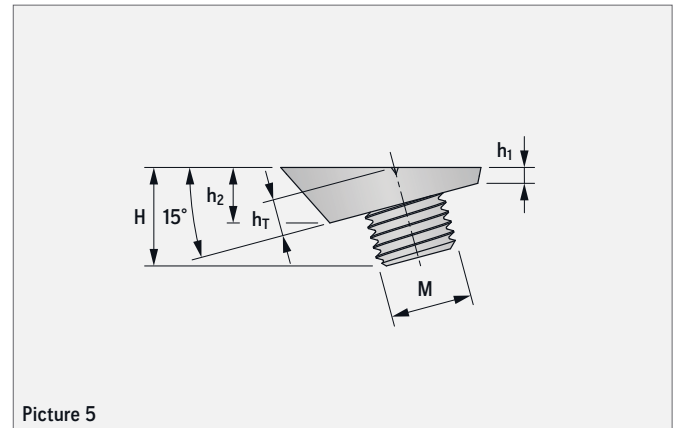
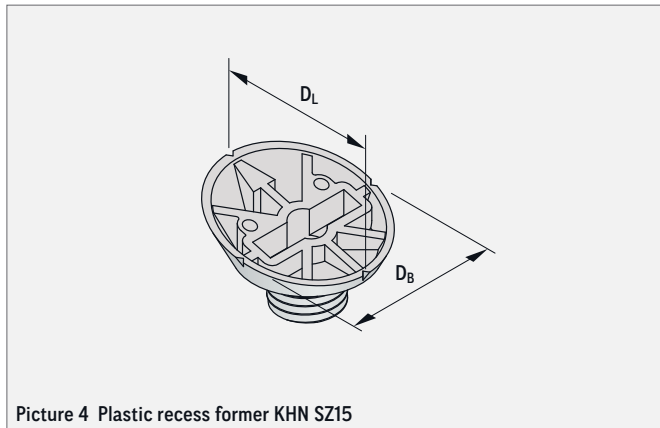


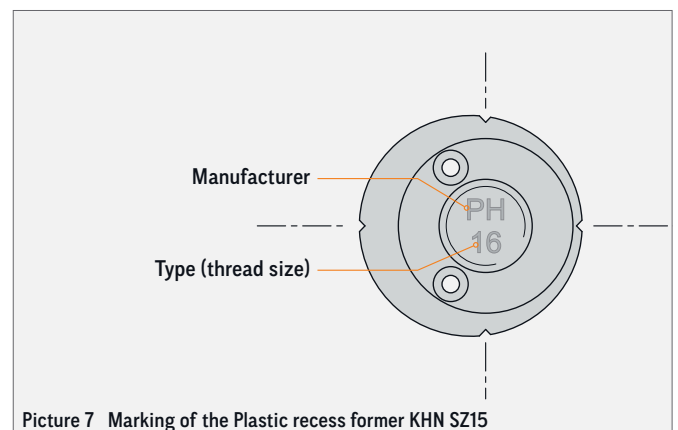
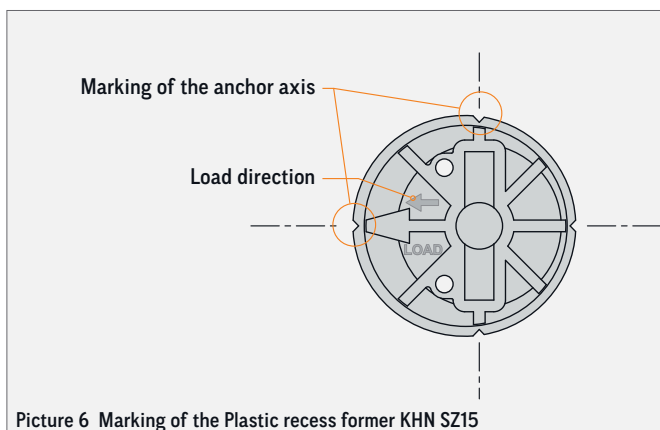
TABLE 2: PLASTIC RECESS FORMER KHN SZ15

Ref. no.	Type RD / M	M	D _L (mm)	D _B (mm)	H (mm)	h ₁ (mm)	h ₂ (mm)	h _T (mm)	Colour code
72KHN16-SZ15	16	M 16	38.5	38.0	20.5	3.5	11.2	7.5	Flame red
72KHN20-SZ15	20	M 20	55.5	55.0	30.5	3.3	15.0	9.5	Pastel green
72KHN24-SZ15	24	M 24	55.5	55.0	31.0	3.3	15.0	9.5	Jet black
72KHN30-SZ15	30	M 30	72.5	72.0	38.5	3.2	18.7	11.5	Emerald green
72KHN36-SZ15	36	M 36	72.5	72.0	39.0	3.2	18.7	11.5	Light blue
72KHN42-SZ15	42	M 42	99.5	99.0	48.0	3.3	25.5	15.0	Silk grey
72KHN52-SZ15	52	M 52	99.5	99.0	49.5	3.3	25.5	15.0	Sulphur yellow

MARKING

Due to its colour code as well as the marking with the load class (thread size), an easy matching of the recess formers to the Threaded transport anchors to be fixed and the required lifting devices is ensured.

For a fast mounting of the recess former to the formwork small notches on the edge are given to mark the anchor axis. In addition, a marking indicates the installation direction (later load direction of the transport anchors).



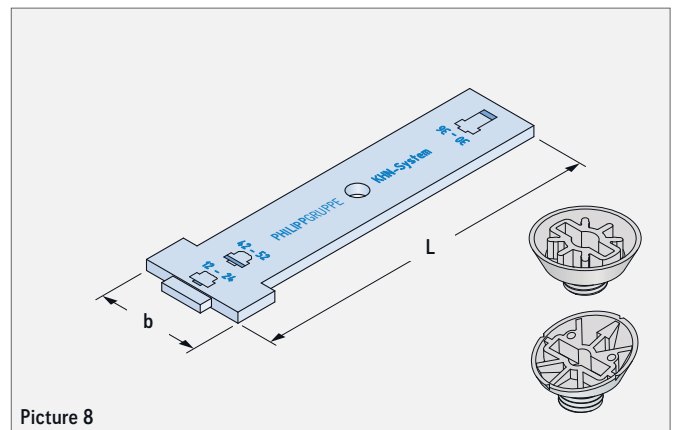
RECESS FORMER

KEY FOR PLASTIC RECESS FORMER

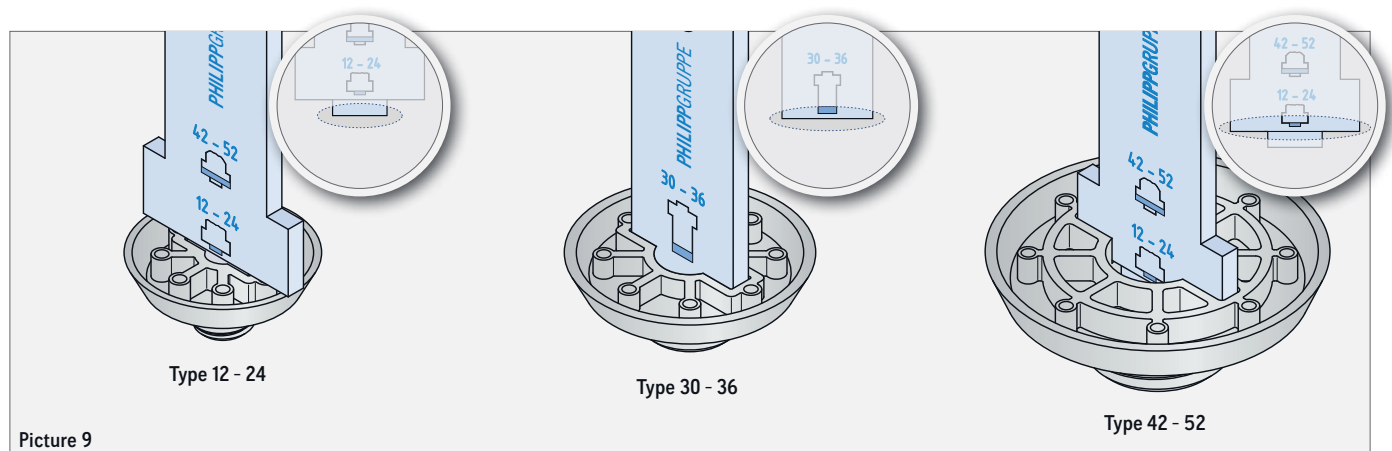
The tool/key is used for an easy unscrewing of the Plastic nailing plate (72KHN_) from the transport anchor set in concrete. Due to its special geometry, the tool/key can be used for all nailing plate sizes (type 12 - 52) of the KHN system.

TABLE 3: KEY

Ref. no.	Type RD / M	L (mm)	b (mm)
72KHNS	12 - 52	200	57



Picture 8



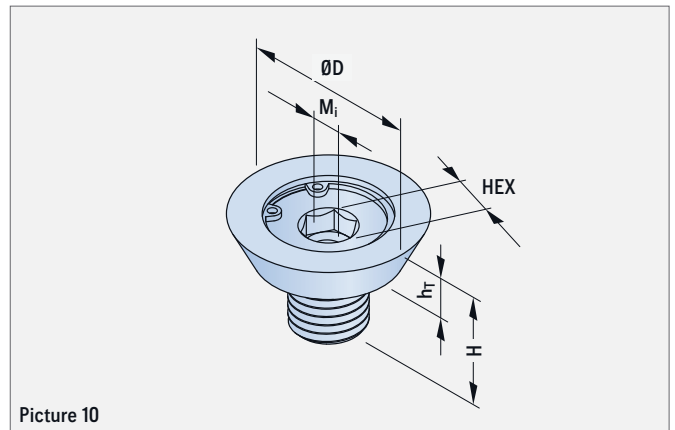
Picture 9

RECESS FORMER

STEEL RECESS FORMER KHN

With Steel recess formers KHN threaded transport anchors can be fixed with screws (with metric thread) or nails to the formwork. Depending on the length of the Threaded transport anchors, it may be necessary to fix the anchor to the reinforcement of the concrete element additionally.

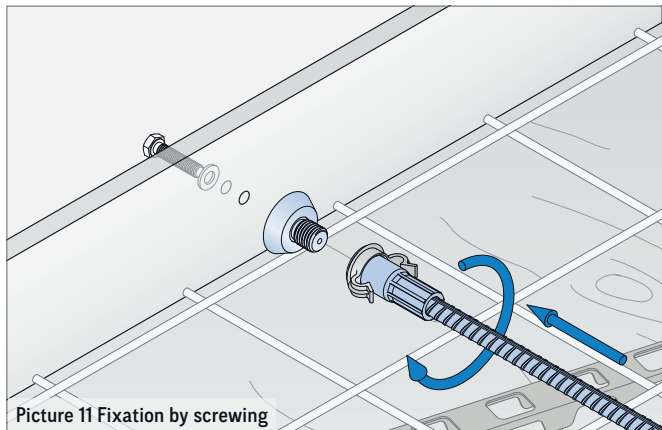
After demoulding, the Steel recess former (see table 4) can be quickly and easily removed with an Allen key (see Note!).



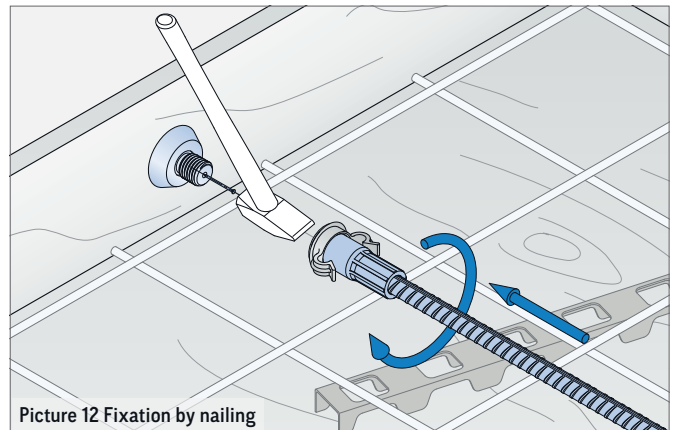
Picture 10

TABLE 4: STEEL RECESS FORMER KHN

Ref. no.	Type RD / M	Thread	ØD (mm)	H (mm)	h _T (mm)	M _i (mm)	HEX (mm)
72KHN12STK	12	M 12	40	23	10	M 6	8
72KHN16STK	16	M 16	40	27	10	M 8	10
72KHN20STK	20	M 20	55	31	10	M 8	10
72KHN24STK	24	M 24	55	35	10	M 10	14
72KHN30STK	30	M 30	70	43	10	M 10	14
72KHN36STK	36	M 36	70	48	10	M 10	14
72KHN42STK	42	M 42	96	59	12	M 16	17
72KHN52STK	52	M 52	96	69	12	M 16	17



Picture 11 Fixation by screwing



Picture 12 Fixation by nailing



NOTE!

If nails are used to fasten the steel recess former, ensure that they are not too large resp. too long, as they may interfere with the unscrewing of the recess former. In this case, Allen keys with a hole can be used. Alternatively, the nails sticking out can be pressed into the insert of the threaded transport anchor (if they are too long - they need to be shortened!) so that a removal with standard Allen keys is possible.

RECESS FORMER

STEEL RECESS FORMER KHN SZ15

By using the Steel recess former SZ15 Threaded transport anchors can be fixed with screws (with metric thread) or nails with an angle of 15° to the formwork. Then, the Threaded transport anchor is screwed onto the recess former attached to the formwork. Depen-

ding on the length of the Threaded transport anchor, it may be necessary to fix it additionally to the reinforcement of the concrete element. After the demoulding, the Steel recess former SZ15 can be quickly and easily removed with an Allen key (see table 5).

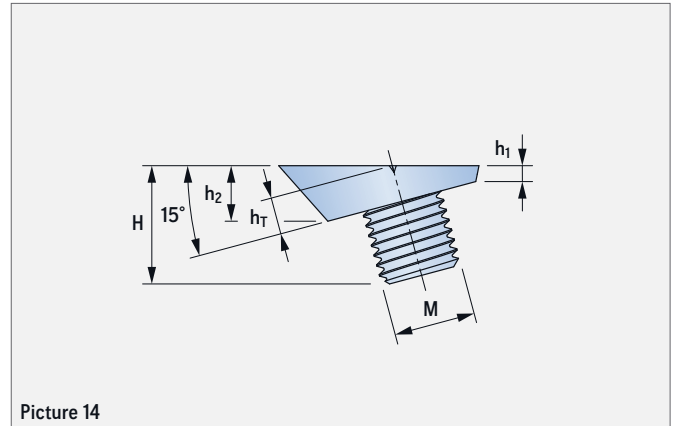
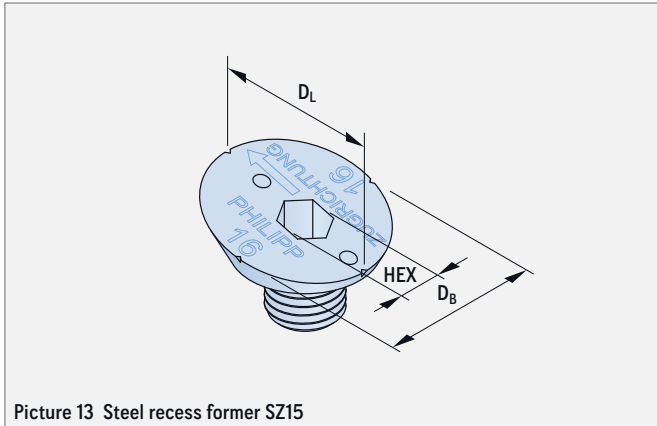


TABLE 5: STEEL RECESS FORMER KHN SZ15

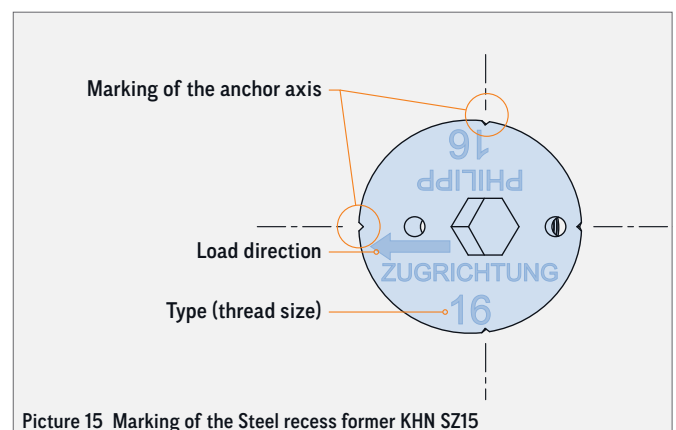
Ref. no.	Type RD / M	M	DL (mm)	DB (mm)	H (mm)	h ₁ (mm)	h ₂ (mm)	h _T (mm)	HEX (mm)
72KHN16-SZ15ST	16	M 16	38.5	38.0	23.5	3.5	11.2	7.5	8
72KHN20-SZ15ST	20	M 20	55.5	55.0	30.5	3.3	15.0	9.5	10
72KHN24-SZ15ST	24	M 24	55.5	55.0	31.0	3.3	15.0	9.5	10
72KHN30-SZ15ST	30	M 30	72.5	72.0	38.0	3.2	18.7	11.5	10
72KHN36-SZ15ST	36	M 36	72.5	72.0	39.0	3.2	18.7	11.5	10
72KHN42-SZ15ST	42	M 42	99.5	99.0	48.0	3.3	25.5	15.0	10
72KHN52-SZ15ST	52	M 52	99.5	99.0	50.0	3.3	25.5	15.0	10

MARKING

Additionally, a marking is provided which ensures an easy assignment of the recess formers to the corresponding threaded anchors to be fixed, these are marked with the load class (thread size).

In order to position the recess formers quickly on the formwork, there are special notches on the edge of the plate which mark the anchor axis.

Additionally, a marking is provided which identifies the installation direction (later load direction of the transport anchors).



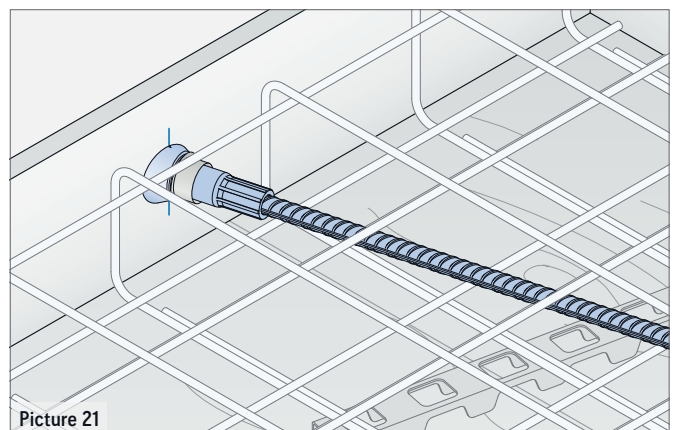
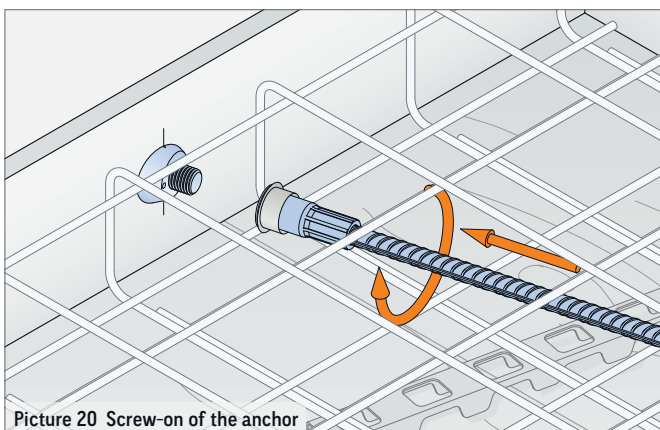
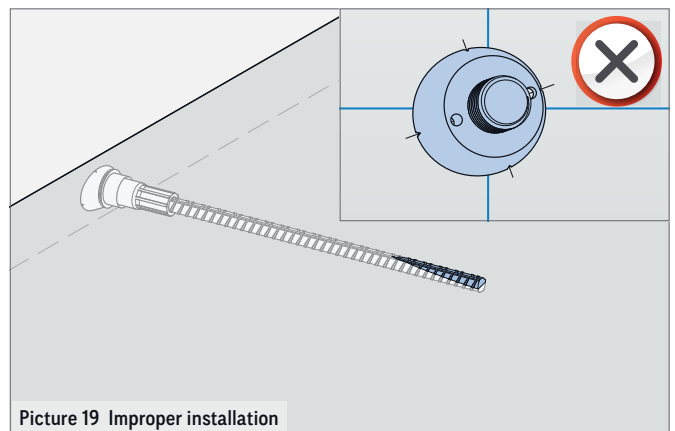
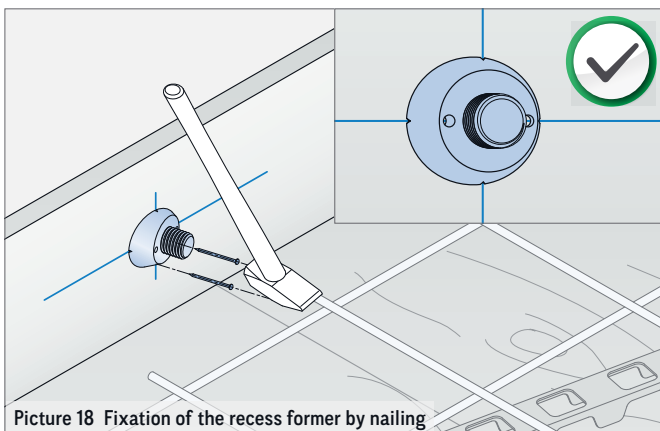
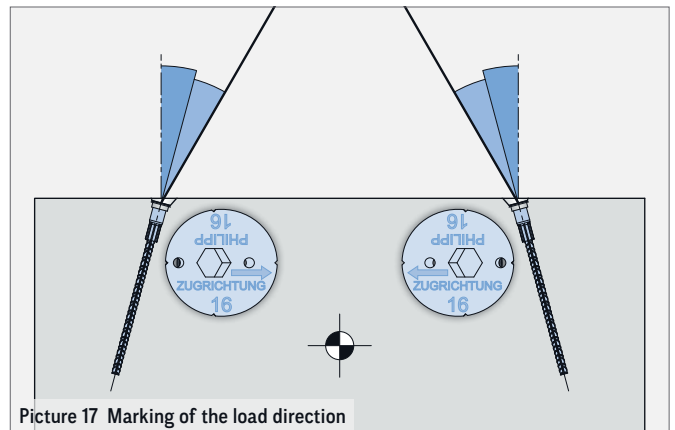
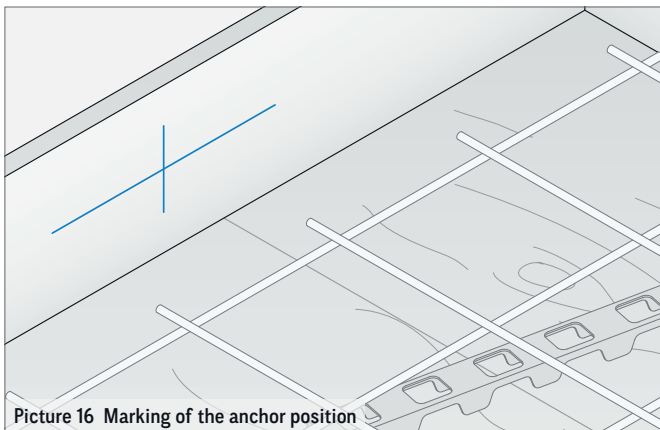
RECESS FORMER - INSTALLATION OF THE SYSTEM

The recess former KHN SZ15 is fixed to the formwork at the intended position with nails, screws or glue. Here, the marking of the tensile direction (later load direction of the anchors) has to be followed. This must point in the direction of the wall centre (centre of gravity, picture 17). For an exact positioning, the notches at the edge of the recess former are used (picture 18). A precise positioning on the formwork is necessary, as otherwise e.g. a twisting of the recess former will lead to a misalignment of the anchor and thus the full load-bearing capacity is not given anymore (picture 19). Now the Threaded transport anchor can be screwed onto the fixed recess former.

Depending on the length of the Threaded transport anchor, it may be necessary to fix it additionally to the reinforcement of the concrete element. After the demoulding, the recess former can be quickly and easily removed with a tool/key (see also table 5, page 9).

i DIRT ON THE HEXAGON SOCKET

In order to avoid dirt insight of the hexagon socket (e.g. caused by cement slurry), it can be protected with adhesive tape.

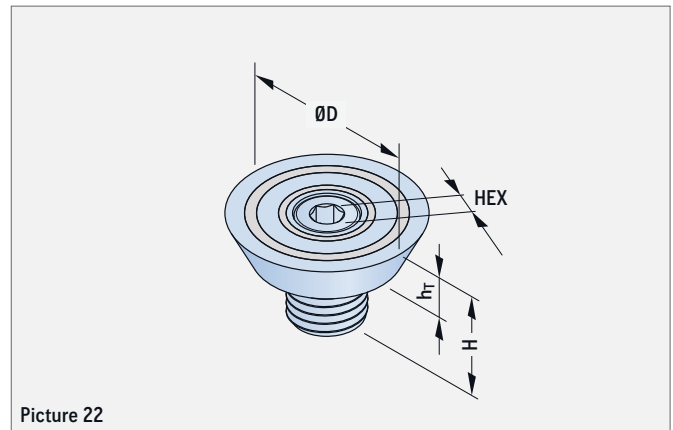


RECESS FORMER

MAGNETIC RECESS FORMER KHN

The Magnetic recess formers KHN are fixed to the steel formwork with a screwed-on transport anchor. Here, a correction of the position on the formwork is possible at any time. In order to avoid a change of position of the transport anchor during concreting, it may be necessary, depending on the length of the transport anchor, to fix it additionally to the reinforcement of the concrete element.

After the demoulding, the Magnetic recess former can be quickly and easily removed with an Allen key (see table 6). In order to achieve the optimum adhesive force of the Magnetic recess former the adhesive surface of the recess former and the steel formwork shall be cleaned after use.



Picture 22

TABLE 6: MAGNETIC RECESS FORMER KHN

Ref. no.	Type RD / M	Thread	ØD (mm)	H (mm)	h _T (mm)	Adhesion (kg)	HEX (mm)
72MAXKHN12	12	M 12	40	25	10	60	6
72MAXKHN16	16	M 16	40	25	10	60	6
72MAXKHN20	20	M 20	55	30	10	100	8
72MAXKHN24	24	M 24	55	30	10	100	8
72MAXKHN30	30	M 30	70	30	10	180	8
72MAXKHN36	36	M 36	70	30	10	180	8
72MAXKHN42	42	M 42	96	35	12	180	8
72MAXKHN52	52	M 52	96	35	12	180	8



FURTHER INFORMATION

HANDLING!

Improper handling may result in skin bruises and haematomas. Due to the high impact speeds, parts of the magnet can splinter and cause injuries. Magnets do not belong in children's hands. Also swallowing of the magnets can cause serious medical problems. Persons with pacemakers are advised to keep a certain safety distance to strong magnets. Also direct contact with magnetic materials can lead to allergic reactions (e.g. against ceramic and metallic materials as well as zinc, nickel or plastics).

TEMPERATURE!

Please note that the magnets have a maximum operating temperature of 80 °C. At temperatures above 80 °C, they may permanently lose some of their adhesive force.

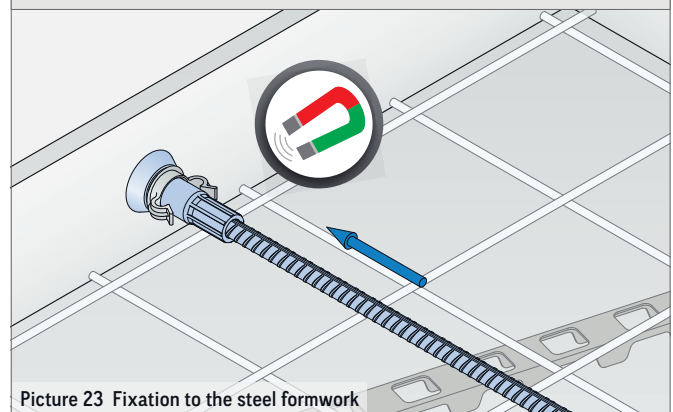
EFFECT!

Please note that magnetic fields can delete data media such as hard disks, cards with magnetic stripes etc. Electronic and mechanic components such as pacemaker, watches, counters, compasses, displays can be influenced or destroyed. Therefore, keep a distance of at least one metre to these objects.



NOTE ON CONCRETING

If concrete is poured over the magnetically fixed transport anchor, the magnetic recess former on the formwork may be displaced. To avoid this, the area of the anchor must be skipped during concreting



Picture 23 Fixation to the steel formwork

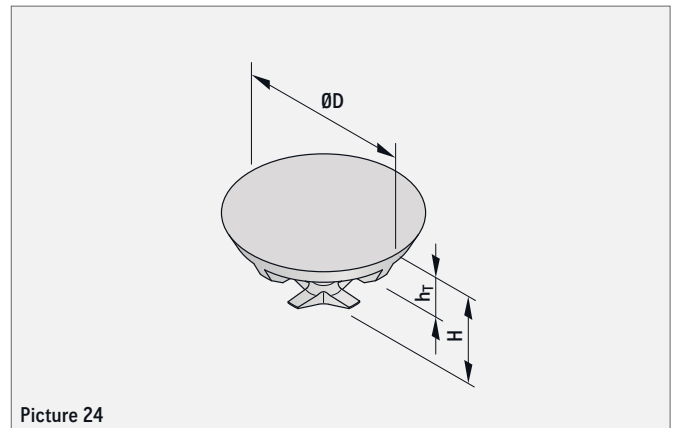
RESPONSIBILITY!

The Magnets are coated to protect them. This coat can be removed during normal use. Splintering of the coating is possible when magnets collide. But this does not affect the performance of the magnets and is no reason for complaint. Mechanical influences such as welding or grinding must be avoided in all cases.

SEALING CAPS

SEALING CAP KHN (PLASTIC)

The Sealing cap KHN (plastic) covers the complete range of thread sizes from 12 to 52 (table 7) with only four types. As the Plastic sealing cap is only pressed into the Threaded transport anchor, it has no disturbing recesses on the visible surface for screwing in and out (slot, hexagon socket). Hence, the Sealing cap in plastic offers an visual attractive solution to close recesses surface-flush.



Picture 24

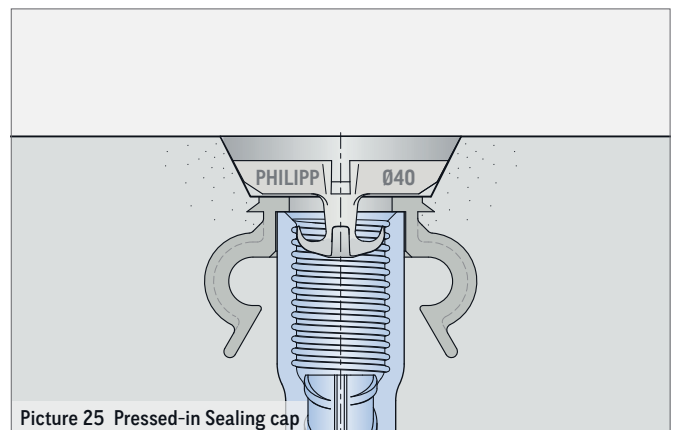


NOTE!

Sealing caps are used exclusively as visual attractive closing of the recesses. In order to avoid damage to the concrete element (e.g. spalling due to frost), the user shall ensure that the Sealing caps are protected against moisture penetration.

TABLE 7: SEALING CAP KHN (PLASTIC)

Ref. no.	Type RD / M	ØD (mm)	H (mm)	h _T (mm)
72ASKHN040	12	40	20	10
	16			
72ASKHN055	20	55	28	10
	24			
72ASKHN070	30	70	40	10
	36			
72ASKHN096	42	96	60	12
	52			

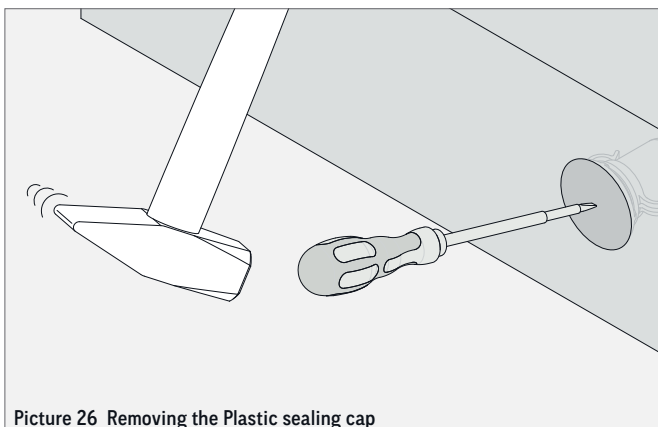


Picture 25 Pressed-in Sealing cap

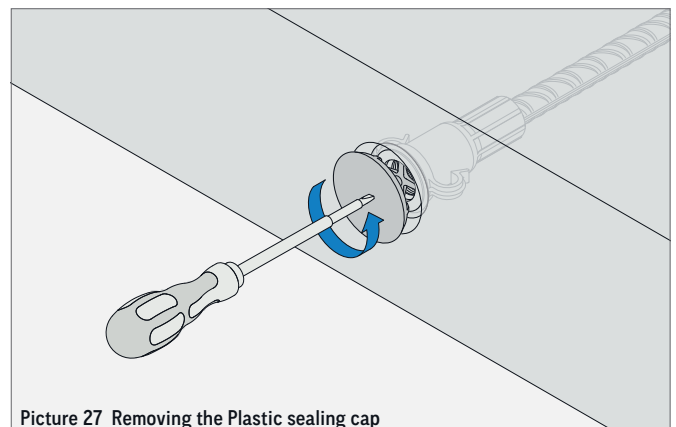
REMOVING THE PLASTIC SEALING CAP

In order to remove the Plastic sealing cap, punch a big screwdriver centrally into it.

Then it can be simply removed resp. unscrewed.



Picture 26 Removing the Plastic sealing cap



Picture 27 Removing the Plastic sealing cap

SEALING CAPS

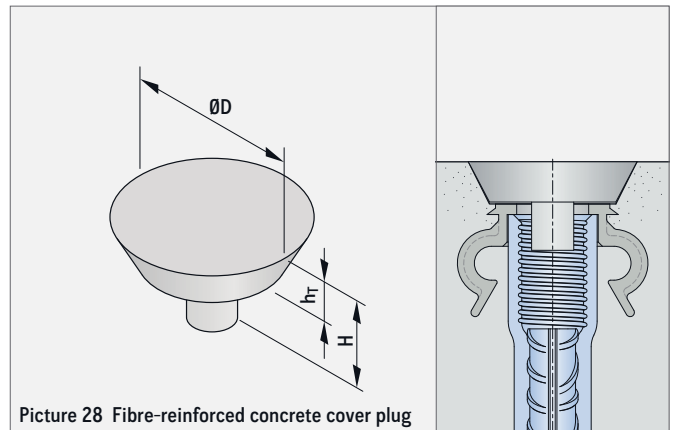
SEALING CAP KHN (CONCRETE)

The Sealing cap KHN made of concrete is a visually attractive and high-quality solution to close the recesses entirely.



NOTE!

Sealing caps are used exclusively as visual closing of the recesses. In order to avoid damage to the concrete element (e.g. spalling due to frost), the user shall ensure that the Sealing caps are protected against moisture penetration.



Picture 28 Fibre-reinforced concrete cover plug

TABLE 8: SEALING CAP KHN (CONCRETE)

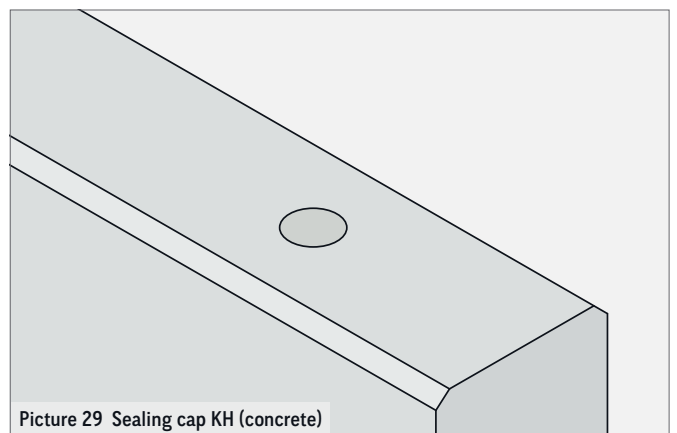
Ref. no.	Type RD / M	ØD (mm)	h _T (mm)	H (mm)
72ASKHN040FB	● 12 - 16	40	10	15
72ASKHN055FB	● 20 - 24	55	10	22
72ASKHN070FB	● 30 - 36	70	10	22
72ASKHN096FB	● 42 - 52	96	12	30

Other colours are available on request.



COLOUR VARIATION

This product may vary in colour (within the delivery and to the finished part).



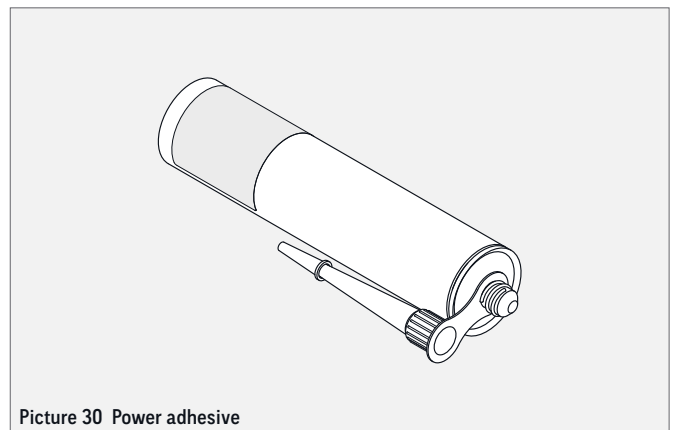
Picture 29 Sealing cap KH (concrete)

POWER ADHESIVE

The power adhesive is used to glue in the concrete Sealing cap KHN. A complete bonding of the caps significantly reduces the risk of damage e.g. caused by frost.

TABLE 9: POWER ADHESIVE

Ref. no.	Colour	Content (ml)
72FB-KRAFTKLEBER	● grey	310



Picture 30 Power adhesive



PRODUCT TIP!

As a direct force to the Sealing caps (e.g. in stairs) can lead to damage, we recommend to use a stainless steel version instead (see page 14).

SEALING CAPS

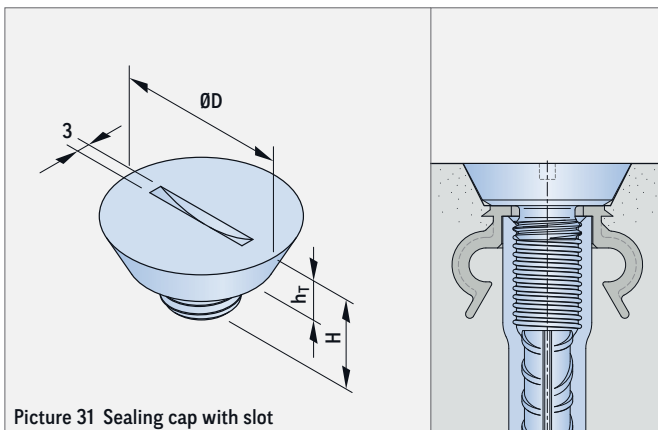
SEALING CAP KHN (STAINLESS STEEL)

The Sealing cap KHN made of stainless steel is a visually attractive and high-quality solution to close the recesses entirely. It is available with a slot or hexagon socket in the visible surface when installed.

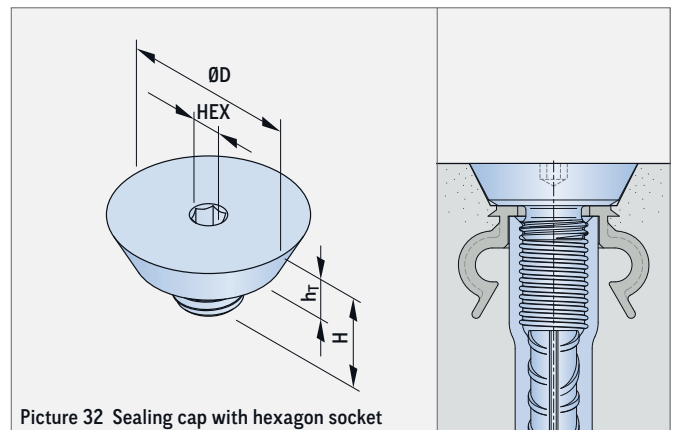


NOTE!

Sealing caps are used exclusively as visual attractive closing of the recesses. In order to avoid damage to the concrete element (e.g. spalling due to frost), the user shall ensure that the Sealing caps are protected against moisture penetration.



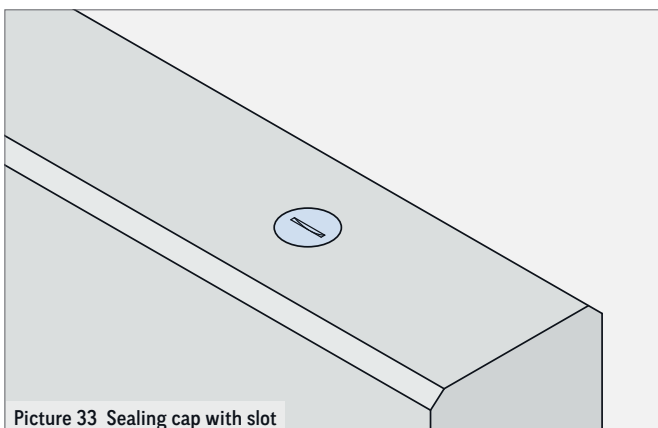
Picture 31 Sealing cap with slot



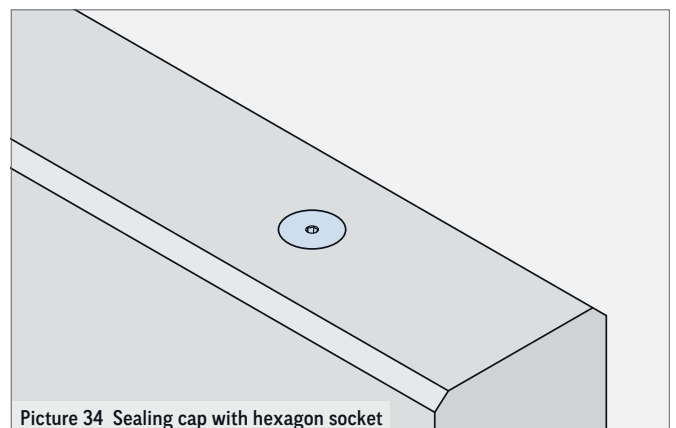
Picture 32 Sealing cap with hexagon socket

TABLE 8: SEALING CAP KHN (STAINLESS STEEL)

Ref. no.		Type RD / M	Thread	ØD (mm)	H (mm)	h _T (mm)	HEX (mm)
with slot	with hexagon socket						
72ASKHN12VA-S	72ASKHN12VA-ISK	12	M 12	40	18	10	6
72ASKHN16VA-S	72ASKHN16VA-ISK	16	M 16	40	18	10	6
72ASKHN20VA-S	72ASKHN20VA-ISK	20	M 20	55	22	10	6
72ASKHN24VA-S	72ASKHN24VA-ISK	24	M 24	55	22	10	6
72ASKHN30VA-S	72ASKHN30VA-ISK	30	M 30	70	25	10	6
72ASKHN36VA-S	72ASKHN36VA-ISK	36	M 36	70	25	10	6
72ASKHN42VA-S	72ASKHN42VA-ISK	42	M 42	96	30	12	6
72ASKHN52VA-S	72ASKHN52VA-ISK	52	M 52	96	35	12	6

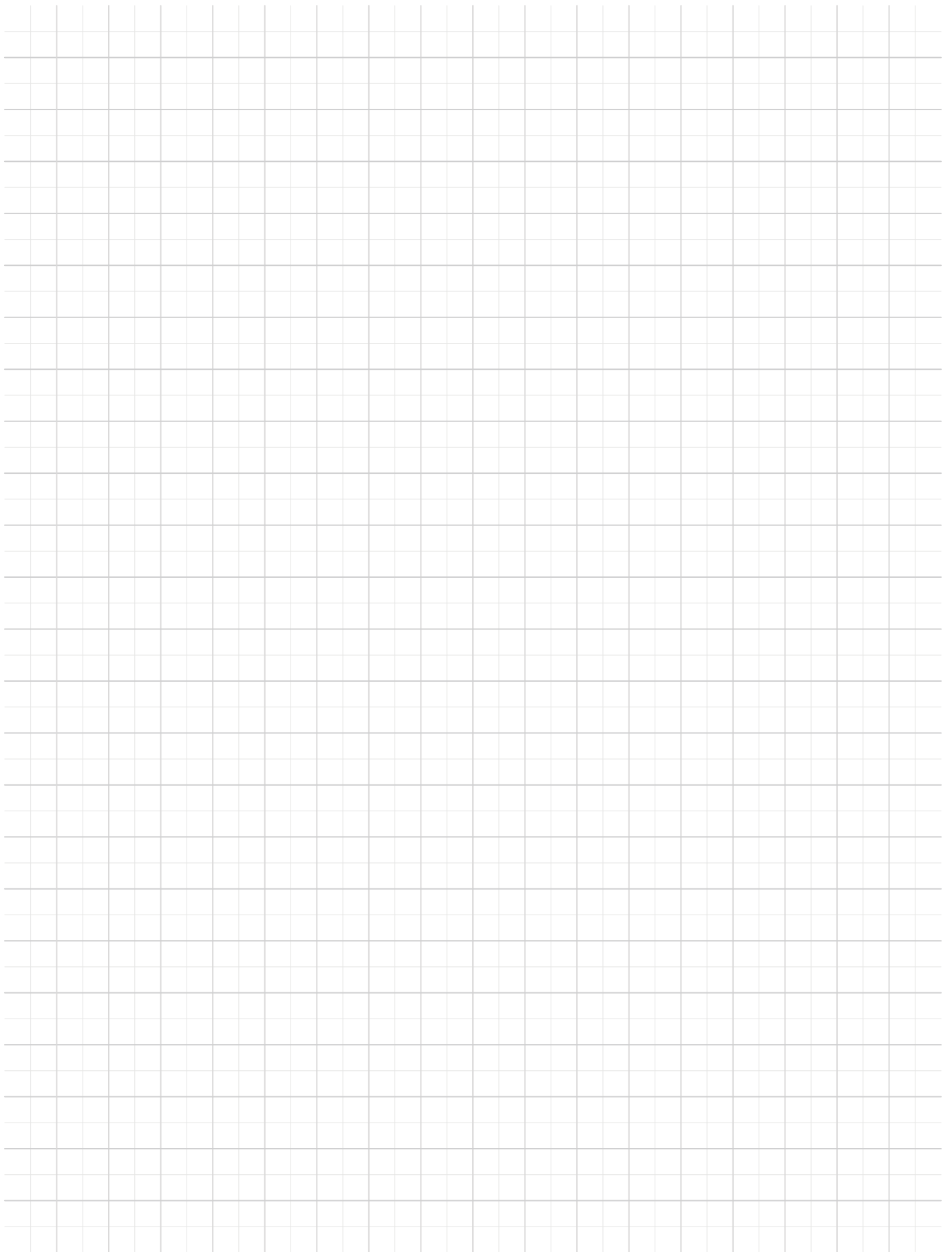


Picture 33 Sealing cap with slot



Picture 34 Sealing cap with hexagon socket

NOTES



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