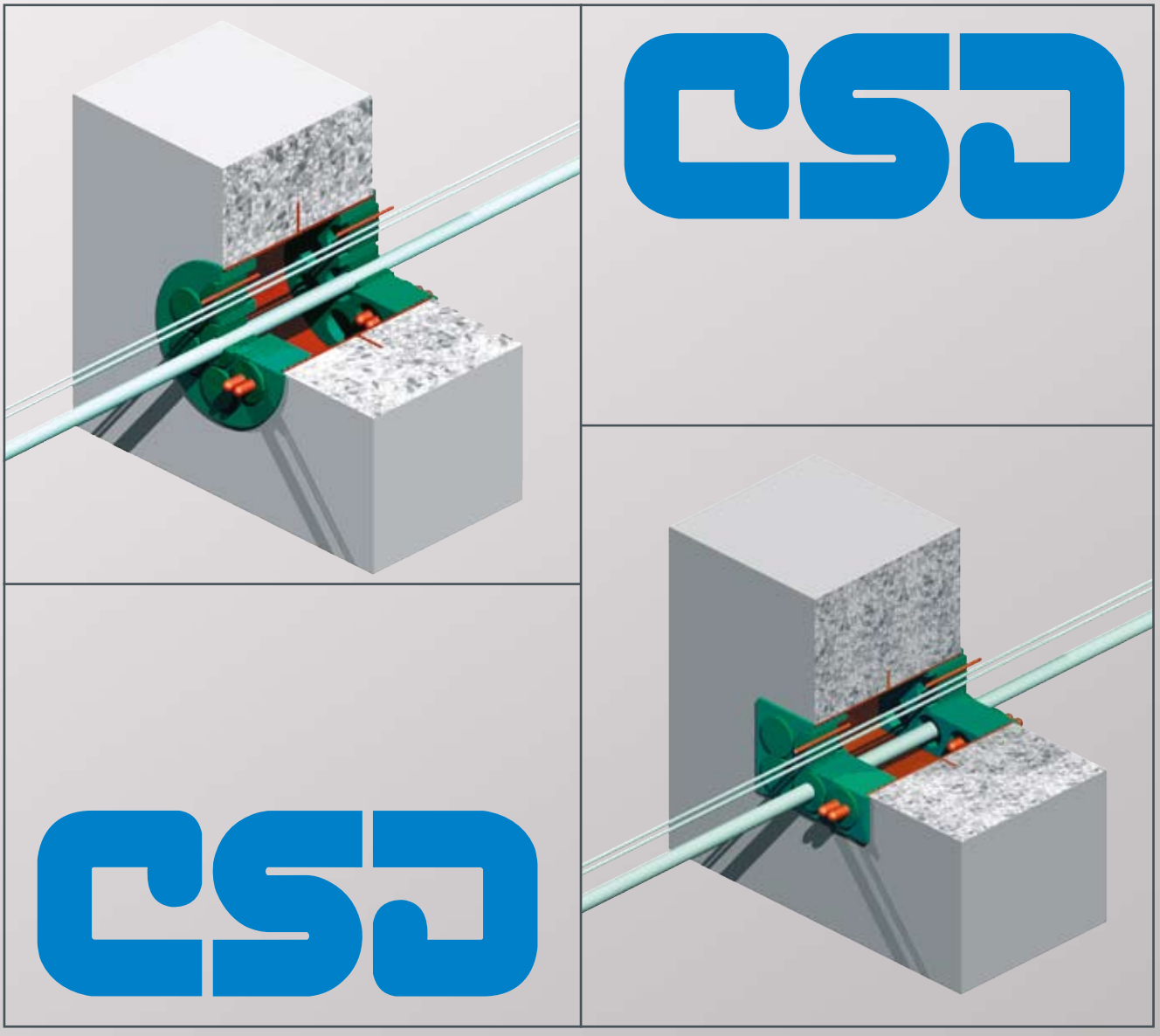
BEESEAL® MULTI-PASAGE PLUGS AND MODULES FOR CABLES WITH VARYING DIAMETERS



SUCCESSFULLY TESTED ACCORDING TO EN 1366-3:2004; FIRE RESISTANCE EI120/EI120 ACCORDING TO EN 13501-2:2003 CERTIFICATE 2008-EFECTIS-R0633

MAXIMUM SIMPLICITY OF USE
OPTIMUM FLEXIBILITY
OUTSTANDING PERFORMANCE

Websites: http://www.actifoam.com, www.beele.com, www.firsto.com, www.nofirno.com, www.rise-systems.com, www.rise-nofirno.com, www.riswat.com and www.slipsil.com

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Note	: The manufacturer reserves the right to make dimensional and design modifications without prior notification.
®	: **ACTIFIRE, ACTIFOAM, AQUASTOP, BEEBLOCK, BEELE, BEESEAL, CONDUCTON, CRUSHER, CSD, CSD THE SIMPLE SEAL SYSTEM, DRIFIL, DYNATITE, FIRSTO, FIRUB/NOHAL, FITEFIRE, FIWA, FRR, LEAXEAL, LUMIREFLEC, NOFIRNO, RAPID TRANSIT SYSTEM, RIACNOF, RISE, RISWAT, S, SLIPSIL, flanges SLIPSIL plugs, ULEPSI** and **YFESTOS** are registered trade marks of BEELE Engineering BV.
brochure code	: CSD-MPP/hb/en/con

BEELE ENGINEERING BV
CSD INTERNATIONAL BV

BEELE Engineering and CSD International have been working in the field of water and gas tight and fireproof sealing of conduits for pipes and cables for more than 35 years. In the field of passive fire prevention, we have invested substantial amounts of money in the development of systems which are capable withstanding fires for extended periods of time. Passive fire prevention is a very complicated matter due to the fact that cable and pipe penetrations have to be designed to the actual circumstances at site and not for a laboratory test. In case of a catastrophe penetrations are subject not only to flame erosion and very high temperatures, but also to mechanical loads due to collapsing cableways and possibly a jet of fire-fighting water. This means that the performance in actual situations can differ dramatically from that in a regular fire test. In fact, the systems could only be applied as tested to guarantee the required fire safety.

And this means discussions and limitations!

We have ensured that our systems will function under all circumstances, and the classification societies have awarded us signed and stamped installation drawings of our sealing systems. Approved for steel and aluminium partitions. Guaranteed safety in your installation will be the result.

The R&D department of BEELE Engineering is constantly working in the field of rubber and systems techniques to optimize the existing systems and to develop new concepts for cable and pipe conduits on board of vessels and offshore installations. Although installation of the CSD sealing systems is in fact an easy matter, a full training programme can be given in-house by our engineers. Because the advantages and possibilities of passive fire prevention and evacuation signposting can most effectively be discovered in an environment that matches the practical situation as closely as possible, we have constructed an unique research and development centre. As far is known, this R&D centre is the only institute world-wide where visitors can experience for themselves all the aspects of fire prevention and evacuation signposting systems.

Above an impression of the research and development centre with a training and schooling institute for passive fire prevention products and systems and for the improvement of evacuation signposting systems in buildings and on board ships. The centre consists of a presentation theatre seating up to 45 persons, and a mock-up covering about 500 square metres in which various evacuation signposting systems are installed to enable their effectiveness to be determined in the dark.

The behaviour of escaping persons inside the test facility is recorded from a separate technical area (with an associated showroom) by means of infra-red cameras and an audio-video system.

In addition the centre comprises three laboratories with a total surface area of about 300 square metres in which, respectively, large-scale fire tests, mechanical tests, and light emission investigations are performed.

BEESEAL®
MULTI-TRANSIT PLUGS

BEESEAL® multi-transit plugs in combination with CSD® sealing plugs have been used for many years in particular for underground cable and pipe entries in buildings. Their superior quality has been proved in the countless tests carried out by officially recognized institutes. The large numbers of plugs which are installed world-wide have also demonstrated their extreme simplicity of use.

Blind plug for transit openings not carrying cables.

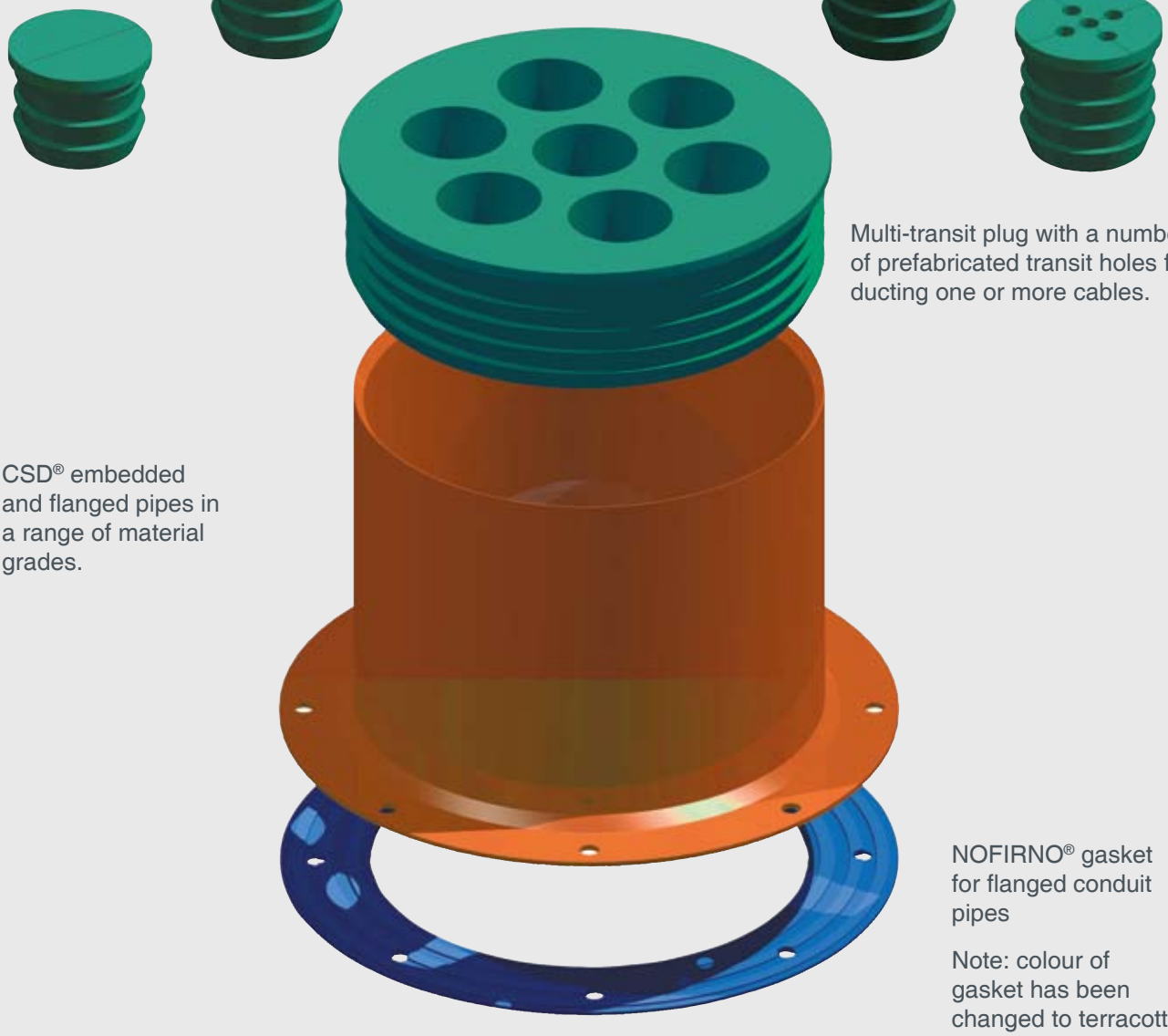
Plug for sealing transit openings with cables ducted separately.

Plug for sealing transit openings carrying two same-diameter cables.

Plug for sealing transit openings carrying three same-diameter cables.

Triangle plug for sealing transit openings carrying three same-diameter cables.

Plug for sealing transit openings carrying five same-diameter cables.



Multi-transit plug with a number of prefabricated transit holes for ducting one or more cables.

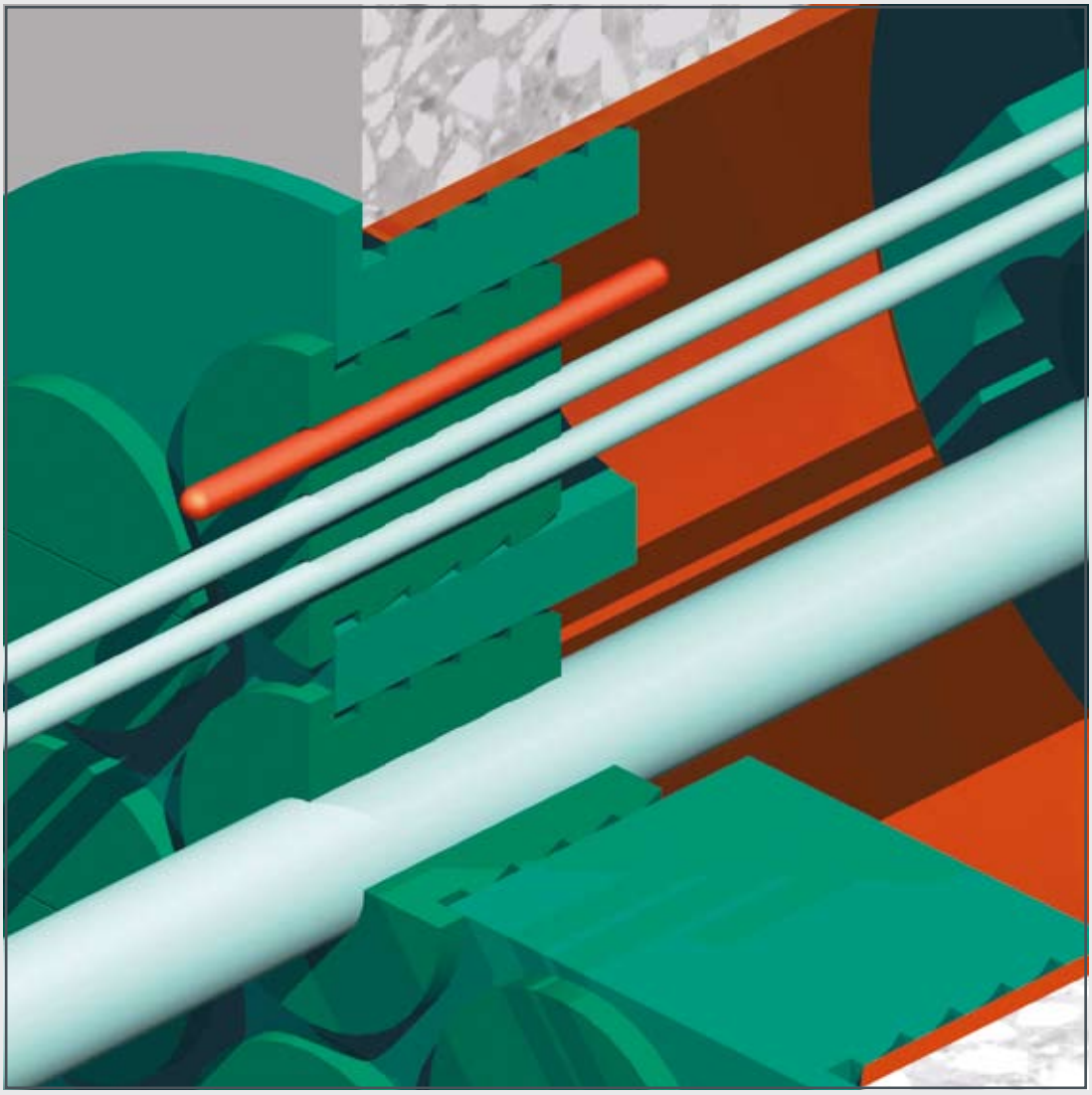
CSD® embedded and flanged pipes in a range of material grades.

NOFIRNO® gasket for flanged conduit pipes

Note: colour of gasket has been changed to terracotta

BEESEAL®
MULTI-TRANSIT PLUGS

The BEESEAL® system provides a fairly compact method of construction in that besides single transits it enables at the same time multiple same-diameter pipes or cables to be ducted through one transit opening and closed with CSD® multi-sealing plugs. Unused transit openings are closed with CSD® blind plugs.
Available in several rubber grades.



The highly effective sealing power of BEESEAL® multi-transit plugs is assured by the unique serrated profile, as is also applied in the design of the well-known CSD® sealing plugs.
Installation of BEESEAL® conduits is simplicity itself. By treating the outside of the multi-transit plug with lubricant, it can easily be pushed into the conduit opening.
In the same way, CSD® sealing plugs can be inserted into the openings of the multi-transit plugs after the cables/pipes have been ducted.

BEESEAL® AND CSD® OFFER BENEFITS!
PROVEN QUALITY WORLD-WIDE!

BEESEAL®
MULTI-TRANSIT PLUGS

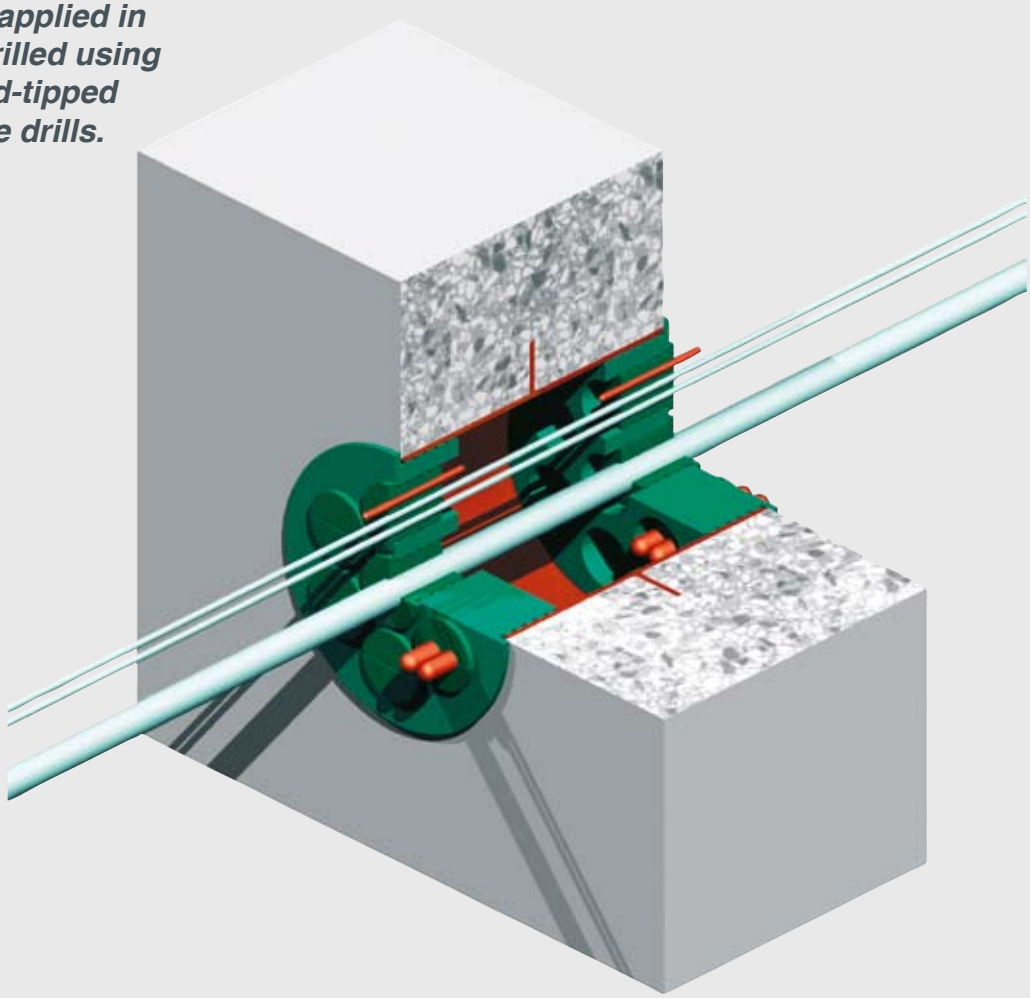
The advantages:

* lower material costs
* no maintenance costs
* reduced labour costs
* extremely simple installation and therefore cost-saving
* for installation in jacket pipes and in holes drilled with diamond-tipped concrete drills
* fair level of flexibility with regard to numbers and diameters of cables to be ducted
* extremely limited number of component parts
* no bolts no nuts, no compression unit
* available in eight different rubber grades to ensures uitability for a wide range of applications
* high level of gas- and water-tightness
* fire safe
* EMC protection
* vibration proof/sound damping
* for cables, steel, stainless steel, copper, GRP and plastic pipes
* use of blind plugs means that the transit need not be disassembled for future enlargements

BEESEAL®
MULTI-TRANSIT PLUGS

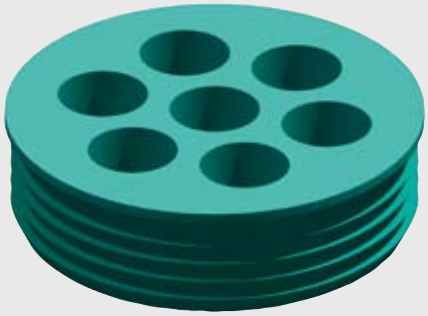
Optimized gas and water tightness is obtained by using the multi-transit plugs in CSD® plastic or steel embedded pipes.
Multi-transit plugs can also be applied in holes drilled using diamond-tipped concrete drills.

CSD® embedded pipes have a bonded-on or welded-on fixing collar (puddle flange) in the middle, serving to anchor the pipe in the concrete. The fixing collar also serves as a water barrier.



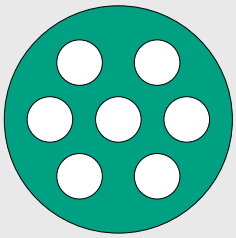
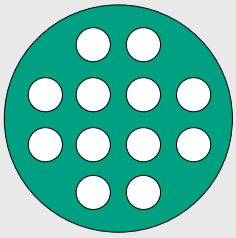
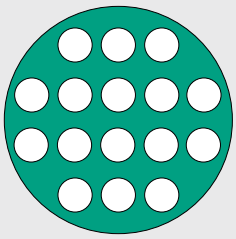
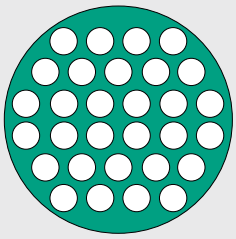
For fire-safe seals, the multi- transit plugs and sealing plugs must always be installed at each side of the conduit.
For conduits which are required to be gas- and water tight only, it is possible for a seal to be installed at just one side of the conduit. Care should be taken that the ducted cables/pipes are not passed through the penetration at an angle.
In the case of larger cables/pipes, plugs must always be installed at each side of the conduit.

BEESEAL®
MULTI-TRANSIT PLUGS



The BEESEAL® multi-transit plugs and CSD® sealing plugs are supplied in eight different rubber grades in order to cater for a wide variety of applications.
For ease of recognition, the plugs have a separate colour for each rubber grade. See pages 36.

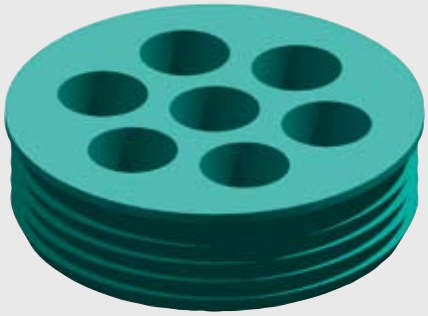
TYPES OF MULTI-TRANSIT AND SEALING PLUGS

number of transit openings	configuration	type of multi-transit plug type MPP	conduit pipe/ drilled hole	sealing plugs type (when ordering, state rubber type)
7		100/7x25 102/7x25 103/7x25 107/7x25	drilled hole ASTM pipe CSD pipe (pvc) CSD pipe (steel)	
12		150/12x25 152/12x25 154/12x25 159/12x25	drilled hole CSD pipe (pvc) ASTM pipe CSD pipe (steel)	25,6/0 25,6/5 25,6/6 25,6/7 25,6/8 25,6/9 25,6/10 25,6/11 25,6/12s 25,6/13s 25,6/14s 25,6/15s
16		190/16x25 200/16x25 202/16x25 207/16x25	CSD pipe (pvc) drilled hole ASTM pipe CSD pipe (steel)	
30		237/30x25 250/30x25 254/30x25 260/30x25	CSD pipe (pvc) drilled hole ASTM pipe CSD pipe (steel)	

see page 36

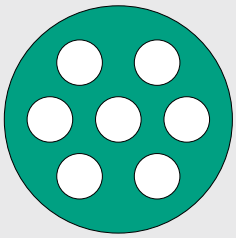
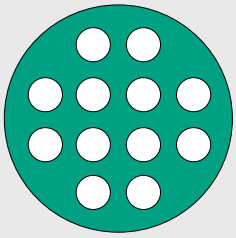
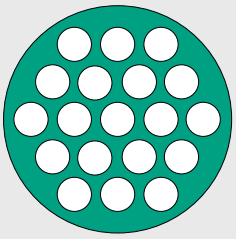
select if:
largest diameter to be ducted: between 5 and 15 mm

BEESEAL®
MULTI-TRANSIT PLUGS



The BEESEAL® multi-transit plugs and CSD® sealing plugs are supplied in eight different rubber grades in order to cater for a wide variety of applications.
For ease of recognition, the plugs have a separate colour for each rubber grade. See pages 36.

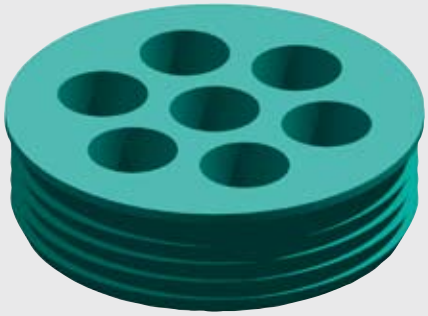
TYPES OF MULTI-TRANSIT AND SEALING PLUGS

number of transit openings	configuration	type of multi-transit plug type MPP	conduit pipe/ drilled hole	sealing plugs type (when ordering, state rubber type)
7		150/7x33 152/7x33 154/7x33 159/7x33	drilled hole CSD pipe (pvc) ASTM pipe CSD pipe (steel)	33,6/0 33,6/5 33,6/6 33,6/7 33,6/8
12		190/12x33 200/12x33 202/12x33 207/12x33	CSD pipe (pvc) drilled hole ASTM pipe CSD pipe (steel)	33,6/9 33,6/10 33,6/11 33,6/12 33,6/13 33,6/14 33,6/15 33,6/16
19		237/19x33 250/19x33 254/19x33 260/19x33	CSD pipe (pvc) drilled hole ASTM pipe CSD pipe (steel)	33,6/17 33,6/18 33,6/19 33,6/20

see page 36

select if:
largest diameter to be ducted: between 5 and 20 mm

BEESEAL®
MULTI-TRANSIT PLUGS



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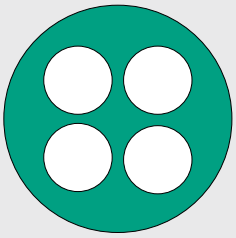
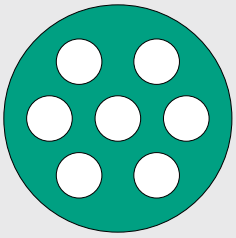
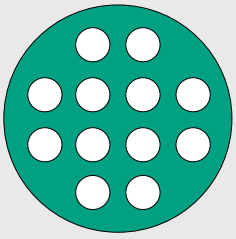
For ease of recognition, the plugs have a separate colour for each rubber grade. See pages 36.

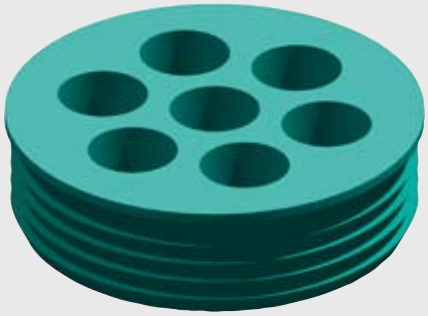
TYPES OF MULTI-TRANSIT AND SEALING PLUGS

number of transit openings	configuration	type of multi-transit plug type MPP	conduit pipe/ drilled hole	sealing plugs type (when ordering, state rubber type)
4		150/4x43 152/4x43 154/4x43 159/4x43	drilled hole CSD pipe (pvc) ASTM pipe CSD pipe (steel)	43,6/0 43,6/5 43,6/17 43,6/6 43,6/18 43,6/7 43,6/19 43,6/8 43,6/20 43,6/9 43,6/21 43,6/10 43,6/22 43,6/11 43,6/23 43,6/12 43,6/24 43,6/13 43,6/25 43,6/14 43,6/26 43,6/15 43,6/27 43,6/16 43,6/28
7		190/7x43 200/7x43 202/7x43 207/7x43	CSD pipe (pvc) drilled hole ASTM pipe CSD pipe (steel)	
12		237/12x43 250/12x43 254/12x43 260/12x43	CSD pipe (pvc) drilled hole ASTM pipe CSD pipe (steel)	43,6/2x5 43,6/2x6 43,6/2x7 43,6/2x8 43,6/2x9 43,6/2x10 43,6/2x11 43,6/2x12 43,6/3x5 43,6/3x6 43,6/3x7 43,6/5x5 43,6/5x6 43,6/5x7

see page 36

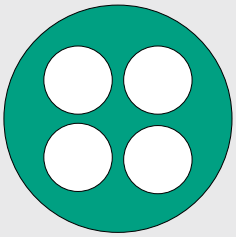
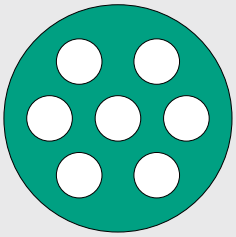
select if:
largest diameter to be ducted: between 5 and 20 mm

BEESEAL®
MULTI-TRANSIT PLUGS



The BEESEAL® multi-transit plugs and CSD® sealing plugs are supplied in eight different rubber grades in order to cater for a wide variety of applications.
For ease of recognition, the plugs have a separate colour for each rubber grade. See pages 36.

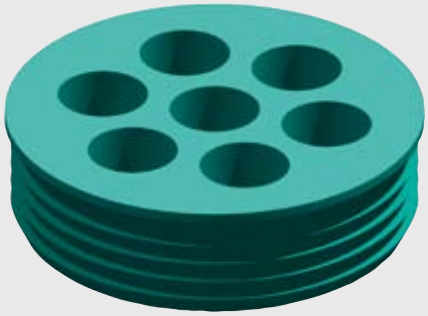
TYPES OF MULTI-TRANSIT AND SEALING PLUGS

number of transit openings	configuration	type of multi-transit plug type MPP	conduit pipe/ drilled hole	sealing plugs type (when ordering, state rubber type)	
4		190/4x54 200/4x54 202/4x54 207/4x54	CSD pipe (pvc) drilled hole ASTM pipe CSD pipe (steel)	54,5/0	
7		237/7x54 250/7x54 254/7x54 260/7x54	CSD pipe (pvc) drilled hole ASTM pipe CSD pipe (steel)	54,5/10 54,5/11 54,5/12 54,5/13 54,5/14 54,5/15 54,5/16 54,5/17 54,5/18 54,5/19 54,5/20 54,5/21	54,5/22 54,5/23 54,5/24 54,5/25 54,5/26 54,5/27 54,5/28 54,5/29 54,5/30 54,5/31 54,5/32 54,5/33 54,5/34
				54,5/2x5 54,5/2x6 54,5/2x7 54,5/2x8 54,5/2x9 54,5/2x15	54,5/2x10 54,5/2x11 54,5/2x12 54,5/2x13 54,5/2x14
				54,5/3x5 54,5/3x6 54,5/3x7 54,5/3x8 54,5/3x9 54,5/3x10	54,5/5x5 54,5/5x6 54,5/5x7 54,5/5x8 54,5/5x9 54,5/5x10

see page 36

select if:
largest diameter to be ducted: between 5 and 34 mm

BEESEAL®
MULTI-TRANSIT PLUGS



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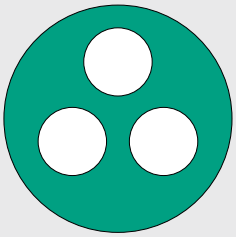
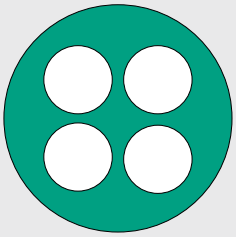
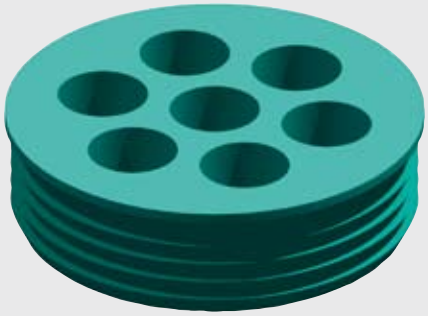
TYPES OF MULTI-TRANSIT AND SEALING PLUGS

number of transit openings	configuration	type of multi-transit plug type MPP	conduit pipe/ drilled hole	sealing plugs type (when ordering, state rubber type)	
3		190/3x68 200/3x68 202/3x68 207/3x68	CSD pipe (pvc) drilled hole ASTM pipe CSD pipe (steel)	68,6/0	
4		237/4x68 250/4x68 254/4x68 260/4x68	CSD pipe (pvc) drilled hole ASTM pipe CSD pipe (steel)	68,6/20 68,6/21 68,6/22 68,6/23 68,6/24 68,6/25 68,6/26 68,6/27 68,6/28 68,6/29 68,6/30 68,6/31 68,6/32	68,6/33 68,6/34 68,6/35 68,6/36 68,6/37 68,6/38 68,6/39 68,6/40 68,6/42 68,6/44 68,6/46 68,6/48 68,6/50
				68,6/2x11 68,6/2x12 68,6/2x13 68,6/2x14 68,6/2x15 68,6/2x16 68,6/2x17 68,6/2x18 68,6/2x19 68,6/2x20	68,6/3x5 68,6/3x6 68,6/3x7 68,6/3x8 68,6/3x9 68,6/3x10 68,6/3x13T 68,6/3x14T
				68,6/5x5 68,6/5x6 68,6/5x7 68,6/5x8 68,6/5x9 68,6/5x10	68,6/3x15T 68,6/3x16T 68,6/3x17T 68,6/3x18T 68,6/3x19T 68,6/3x20T

see page 36

select if:
largest diameter to be ducted: between 5 and 50 mm

BEESEAL®
MULTI-TRANSIT PLUGS



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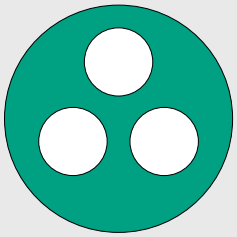
TYPES OF MULTI-TRANSIT AND SEALING PLUGS

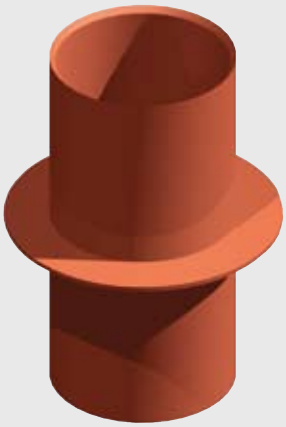
number of transit openings	configuration	type of multi-transit plug type MPP	conduit pipe/ drilled hole	sealing plugs type (when ordering, state rubber type)
3		250/3x103 254/3x103 260/3x103	drilled hole ASTM pipe CSD pipe (steel)	103,6/0 103,6/25 103,6/36 103,6/54 103,6/26 103,6/37 103,6/56 103,6/27 103,6/38 103,6/58 103,6/28 103,6/39 103,6/60 103,6/29 103,6/40 103,6/62 103,6/30 103,6/42 103,6/64 103,6/31 103,6/44 103,6/66 103,6/32 103,6/46 103,6/68 103,6/33 103,6/48 103,6/70 103,6/34 103,6/50 103,6/72 103,6/35 103,6/52 103,6/74 103,6/2x21 103,6/3x21T 103,6/2x22 103,6/3x22T 103,6/2x23 103,6/3x23T 103,6/2x24 103,6/3x24T 103,6/2x25 103,6/3x25T 103,6/2x26 103,6/3x26T 103,6/2x27 103,6/3x27T 103,6/2x28 103,6/3x28T 103,6/2x29 103,6/3x29T 103,6/2x30 103,6/3x30T 103,6/3x31T 103,6/3x13 103,6/5x13 103,6/3x32T 103,6/3x14 103,6/5x14 103,6/3x33T 103,6/3x15 103,6/5x15 103,6/3x34T 103,6/3x16 103,6/5x16 103,6/3x35T 103,6/3x17 103,6/5x17 103,6/3x18 103,6/5x18 103,6/3x19 103,6/5x19 103,6/3x20 103,6/5x20 see page 36

select if:
largest diameter to be ducted: between 13 and 75 mm

CSD EMBEDDED PIPES

CSD® embedded pipes are pipes with a bonded-on or welded-on fixing collar (puddle flange). The collar serves as a water barrier and also anchors the pipe in the concrete. The CSD® embedded pipes were specifically developed to overcome the problems frequently encountered with fixing pipes effectively in concrete.

PVC



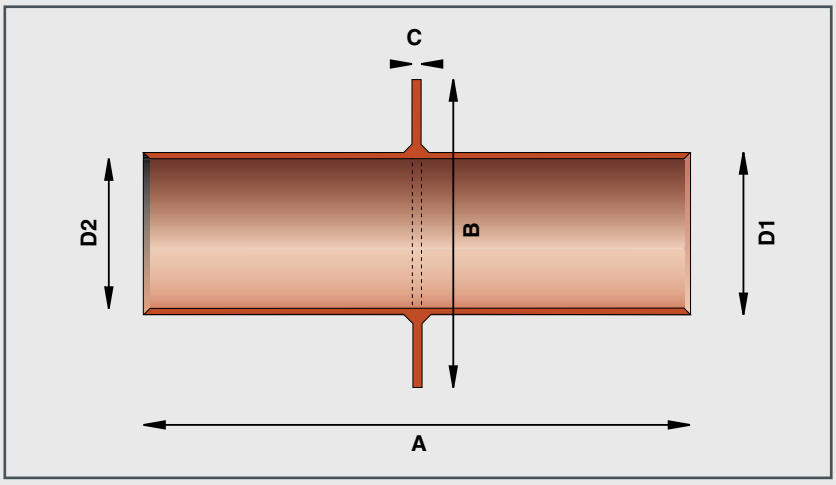
steel

surface treatment: red lead coated: ***type stm***

surface treatment: hot dip galvanized: ***type stg***

stainless steel 316: ***type ss***

CSD pipe	plug series	CSD pipe	plug series
EM103pvc	103	EM107stm(g)	107
EM152pvc	152	EM159stm(g)	159
EM190pvc	190	EM207stm(g)	207
EM237pvc	237	EM260stm(g)	260
EM100ss	100		
EM150ss	150		
EM200ss	200		
EM250ss	250		



type	A	B	C	D1	D2	wall thickness
EM103pvc	300-400-500	170	3	110	103,6	3,2
EM152pvc	300-400-500	230	3	160	152	4,0
EM190pvc	300-400-500	270	3	200	190,2	4,9
EM237pvc	300-400-500	340	5	250	237,6	6,2

type	A	B	C	D1	D2	wall thickness
EM107stg	200-300-400	194,3	5	114,3	107,1	3,6
EM159stg	200-300-400	248,3	5	168,3	159,3	4,5
EM207stg	200-300-400	299,1	5	219,1	207,1	5,9
EM260stg	200-300-400	353	5	273	260,4	6,3

type	A	B	C	D1	D2	wall thickness
EM107stm	200-300-400	194,3	5	114,3	107,1	3,6
EM159stm	200-300-400	248,3	5	168,3	159,3	4,5
EM207stm	200-300-400	299,1	5	219,1	207,1	5,9
EM260stm	200-300-400	353	5	273	260,4	6,3

type	A	B	C	D1	D2	wall thickness
EM100ss	200-300-400	180	5	106	100	3,0
EM150ss	200-300-400	230	5	156	150	3,0
EM200ss	200-300-400	280	5	206	200	3,0
EM250ss	200-300-400	330	5	256	250	3,0

All dimensions in mm. - When ordering, please state the length needed. Non-standard lengths can be supplied to order.

CSD FLANGED PIPES

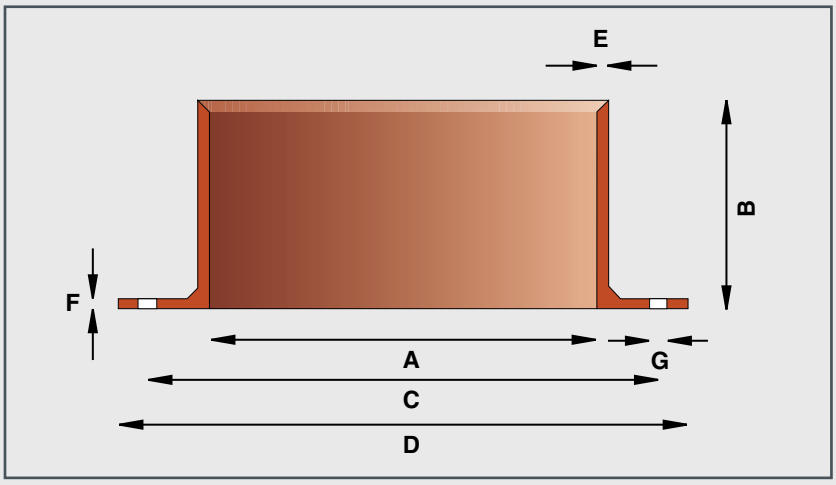
CSD® steel flanged pipes have a welded-on flange at the end. The flange has a number of attachment holes. The flanged pipes are secured against the wall or on the floor by means of steel anchoring bolts. Between the flanged pipe and the structure, a gasket made of NOFIRNO® fire resistant rubber is applied.

surface treatment: red lead coated: ***type stm***

surface treatment: hot dip galvanized: ***type stg***

stainless steel 316: ***type ss***

CSD pipe	plug serie s	CSD pipe	plug series
FB107stm(g)	107	FB100ss	100
FB159stm(g)	160	FB150ss	150
FB207stm(g)	207	FB200ss	200
FB260stm(g)	260	fb250SS	250



type	A	B	C	D	E	F	G	number G
FB107stg	107,1	75	157,1	187,1	3,6	5	9	8
FB159stg	159,3	75	209,3	239,3	4,5	5	9	8
FB207stg	207,1	100	257,1	287,1	5,9	5	9	8
FB260stg	260,4	100	310,4	340,4	6,3	5	9	12

type	A	B	C	D	E	F	G	number G
FB107stm	107,1	75	157,1	187,1	3,6	5	9	8
FB159stm	159,3	75	209,3	239,3	4,5	5	9	8
FB207stm	207,1	100	257,1	287,1	5,9	5	9	8
FB260stm	260,4	100	310,4	340,4	6,3	5	9	12

type	A	B	C	D	E	F	G	number G
FB100ss	100	75	150	180	3,0	5	9	8
FB150ss	150	75	200	230	3,0	5	9	8
FB200ss	200	100	2501	2801	3,0	5	9	8
FB250ss	250	100	300	330	3,0	5	9	12

stg/stm	ss
HFS107	HFS100
HFS159	HFS150
HFS207	HFS200
HFS260	HFS250

GASKETS

CSD® gaskets are used to obtain a seal between the wall or floor and the CSD® flanged pipe.
The gaskets are made from the fire resistant NOFIRNO® rubber compound that also is used for the SLIPSIL® sealing plugs.

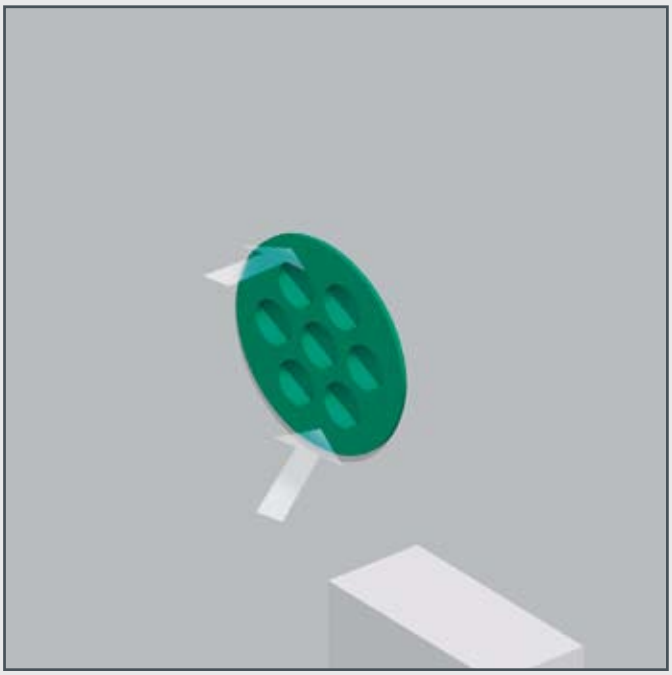
All dimensions in mm

INSTALLATION INSTRUCTIONS BEESEAL® SEALING SYSTEM

1) Before starting with the installation, any dirt or concrete residues should be removed from the conduit opening (PVC or steel embedded pipes or drilled hole).

2) The inside wall of the conduit is treated with CSD® lubricant along a distance which approximately corresponds with the length of the BEESEAL® multi-transit plug.

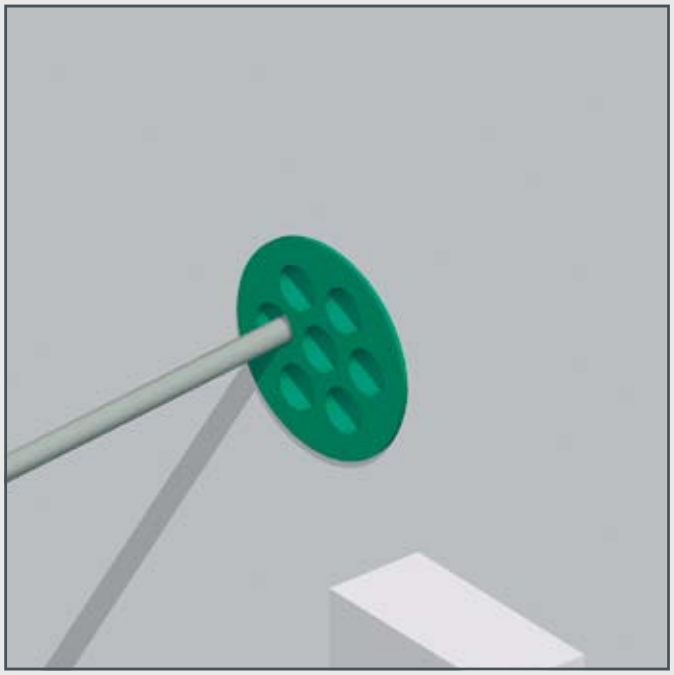
3) Then the outside of the serrated profile of the BEESEAL® multi-transit plug is also treated with CSD® lubricant.



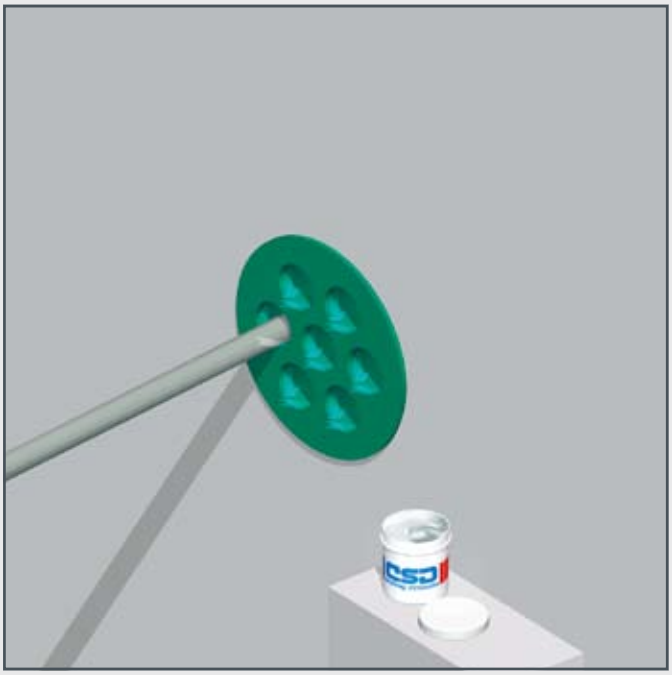
4) The multi-transit plug is pushed evenly, serration by serration, into the conduit opening. After installation, the flanged edge of the plug should lie flush against the wall.

Installation of sealing plugs is a very simple matter.
Grease and push: that's it.

INSTALLATION INSTRUCTIONS BEESEAL® SEALING SYSTEM

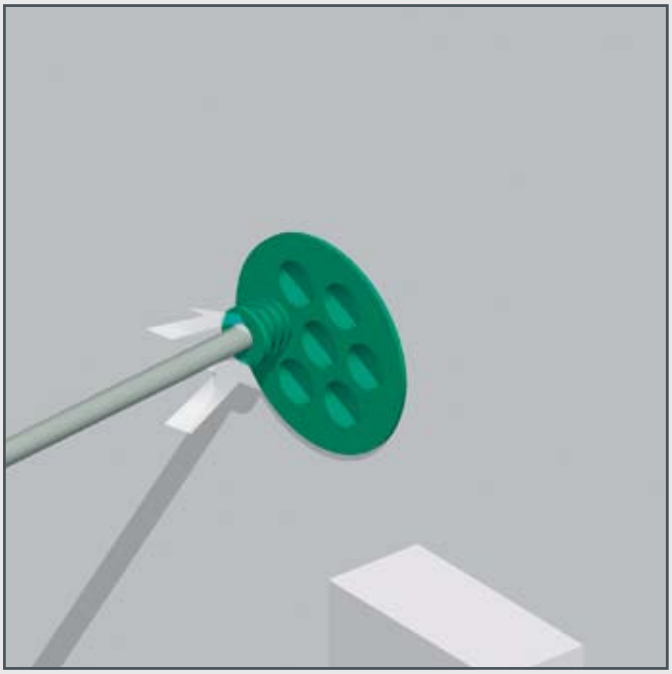


5) The cable(s) are pulled through the appropriate openings of the multi-transit plug.



6) Before the sealing plugs are installed, the inside of the openings of the multi-transit plug is treated with CSD® lubricant.

7) The segments of the sealing plug for individually ducted cables are treated both inside and outside with CSD® lubricant.

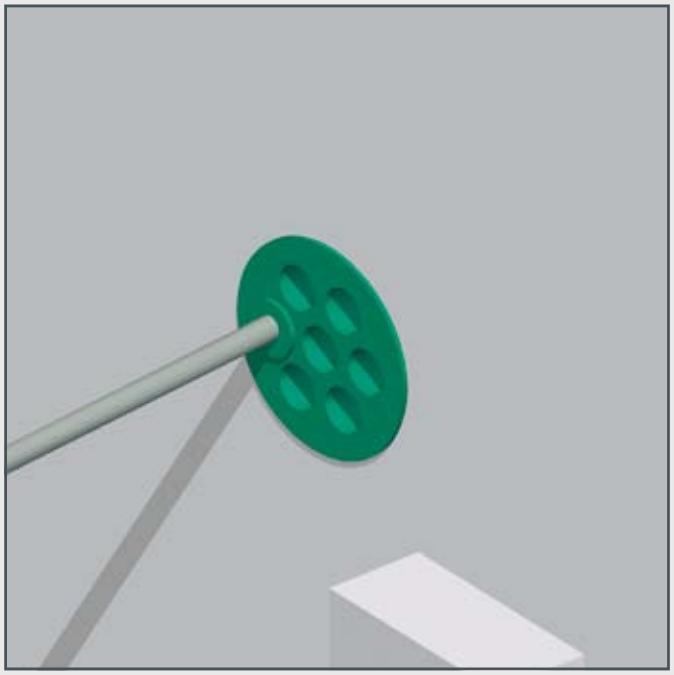


8) Both segments are placed around the cable and then pushed into the opening as far as the first serration.

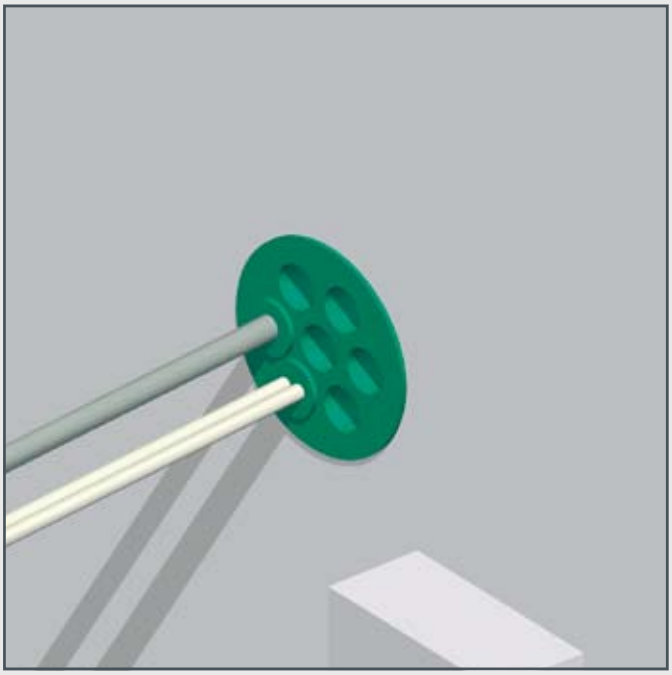
CSD® sealing systems

Installation of sealing plugs is a very simple matter.
Grease and push: that's it.

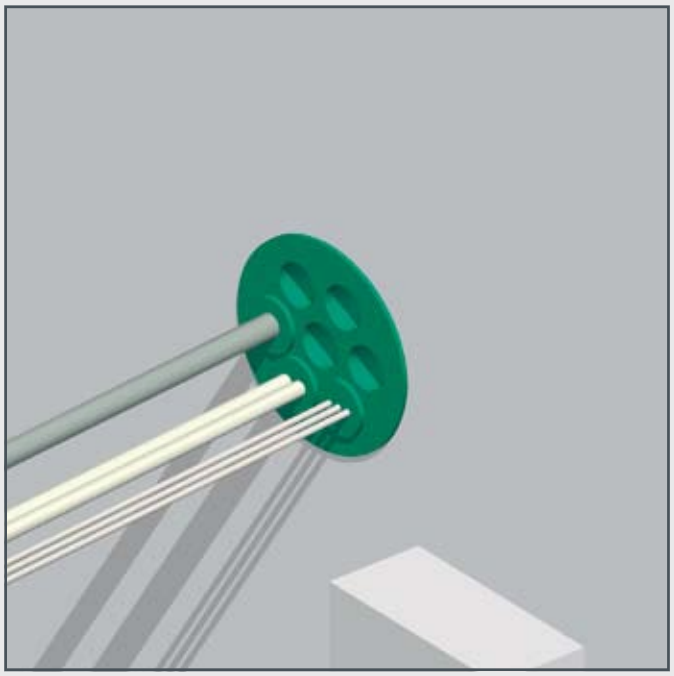
INSTALLATION INSTRUCTIONS BEESEAL® SEALING SYSTEM



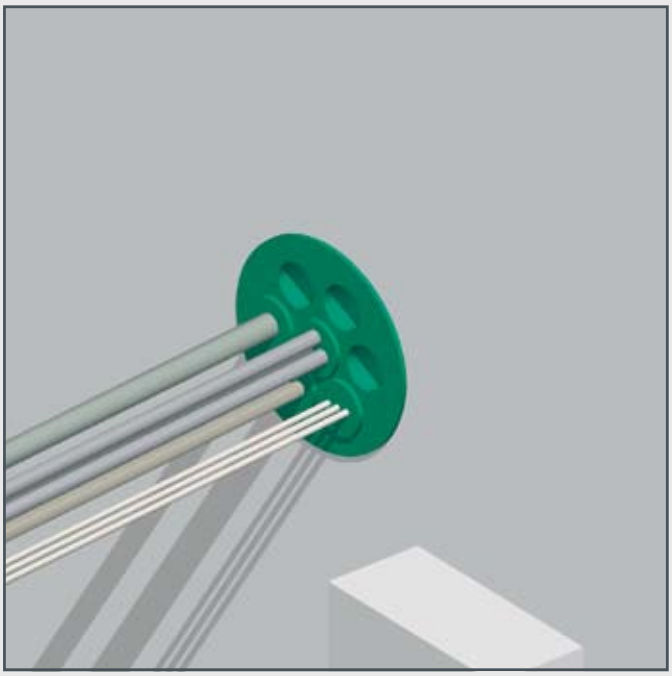
9) Then the two segments are pushed evenly, serration by serration, into the transit opening until the flange lies flush against the front of the BEESEAL® multi-transit plug.



10) The two parts of the multi-plugs for sealing conduit openings carrying two same-diameter cables are pushed into the opening after these parts have first been treated with CSD® lubricant.



11) The two parts of the multi-plugs for sealing conduit openings carrying three same-diameter cables are pushed into the opening after these parts have first been treated with CSD® lubricant.

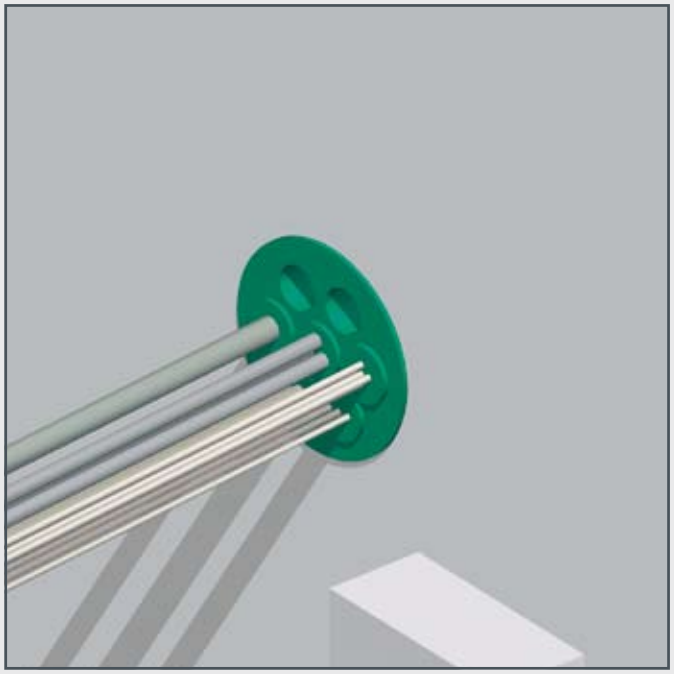


12) The three parts of the triangle multi-plug are pushed evenly into the transit opening until the flange lies flush against the front of the BEESEAL® multi-transit plug.

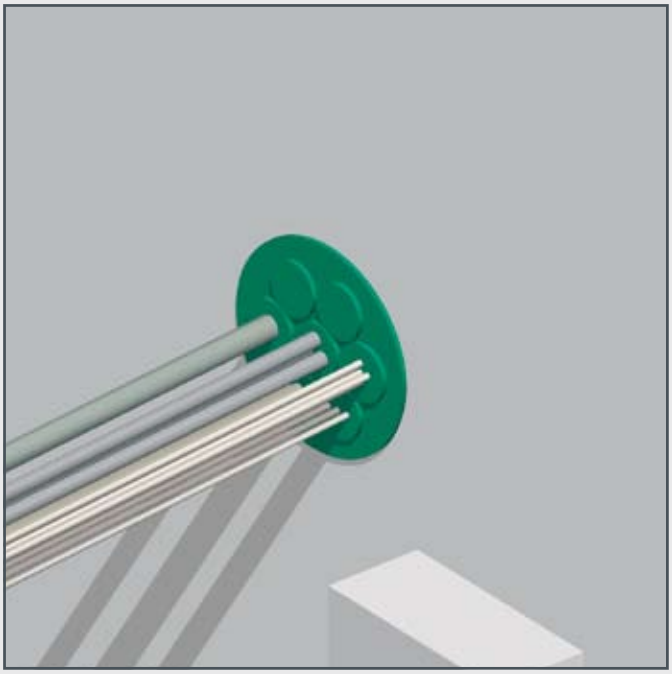
CSD® sealing systems

Installation of sealing plugs is a very simple matter.
Grease and push: that's it.

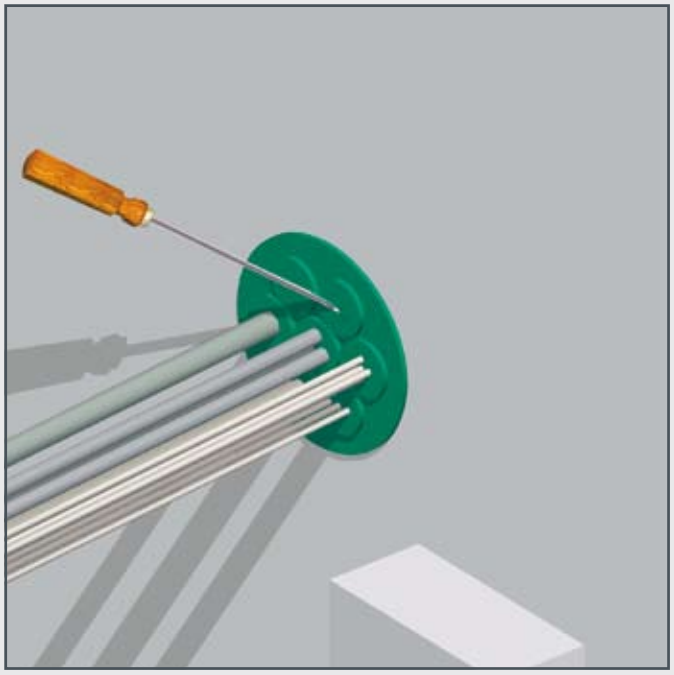
INSTALLATION INSTRUCTIONS
BEESEAL® SEALING SYSTEM



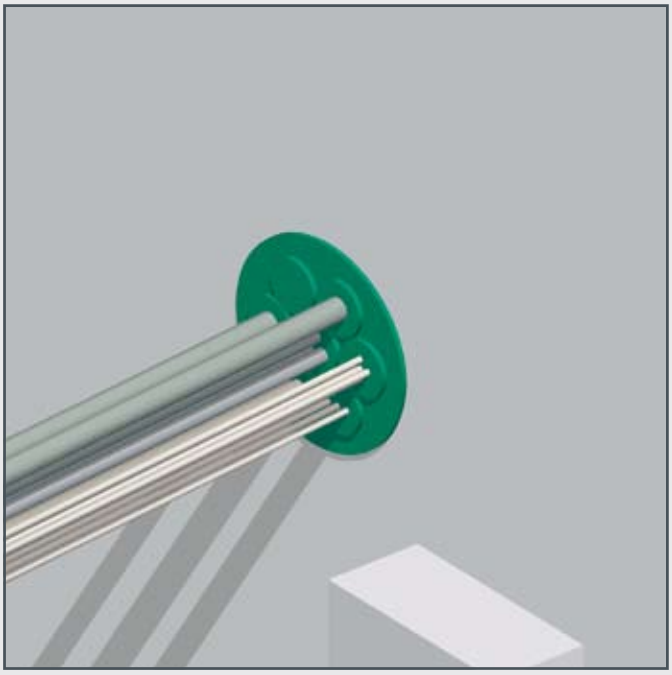
13) The four parts of the multi-plugs for sealing conduit openings carrying five same-diameter cables are pushed into the opening after these parts have first been treated with CSD® lubricant.



14) Niet gebruikte doorvoeropeningen worden afgedicht met blinde afdichtingspluggen.



15) If it is necessary to duct an extra cable at a later stage, it is a simple job to remove blind plugs from the opening.



16) After ducting the cable, the opening is closed using an appropriate sealing plug.

CSD® sealing systems

Installation of sealing plugs is a very simple matter.
Grease and push: that's it.

BEESEAL®
MULTI-DOORVOERMODULEN
BEESEAL®
MULTI-TRANSIT MODULES

Blind plug for transit openings not carrying cables.

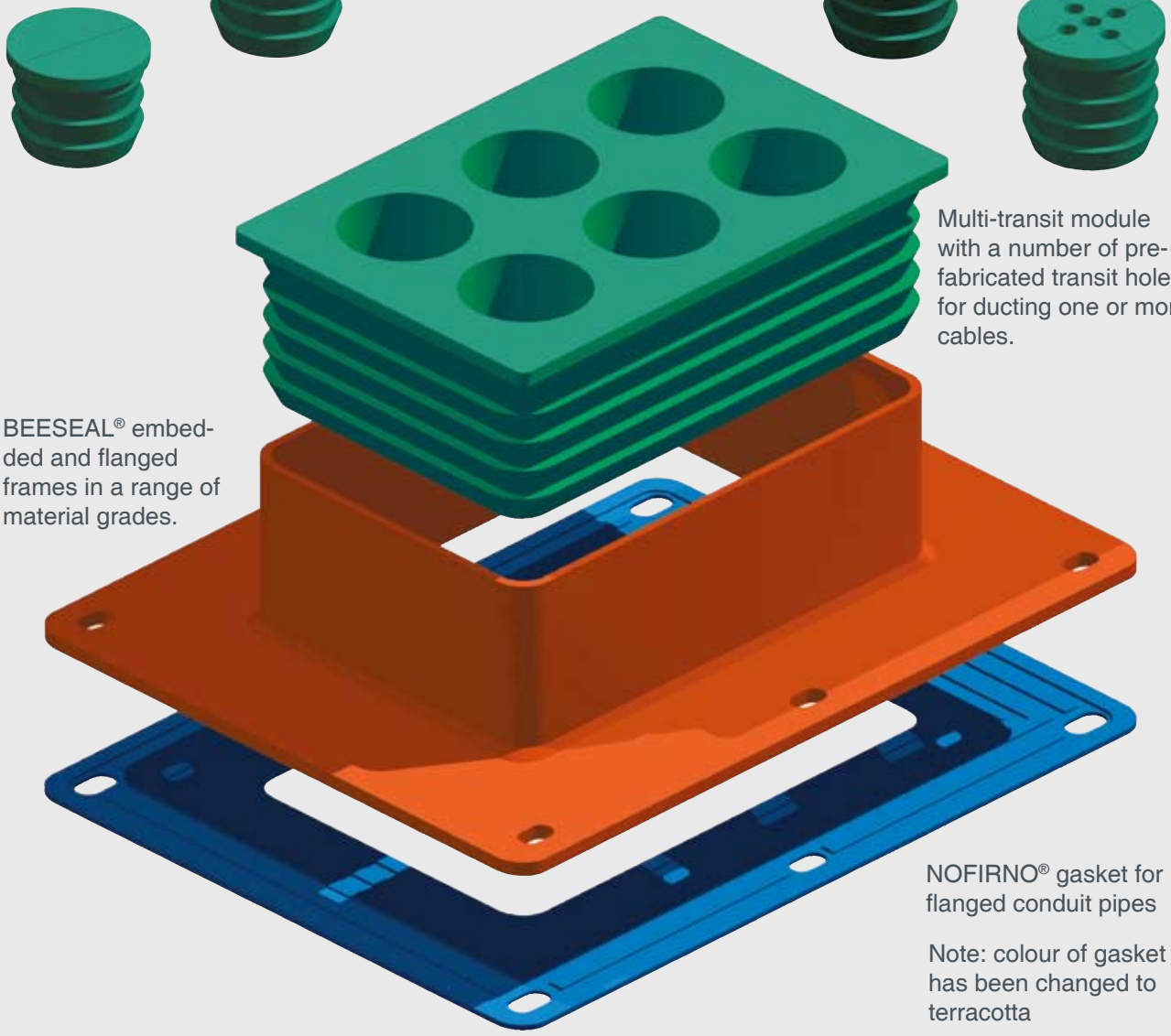
Plug for sealing transit openings with cables ducted separately.

Plug for sealing transit openings carrying two same-diameter cables.

Plug for sealing transit openings carrying three same-diameter cables.

Triangle plug for sealing transit openings carrying three same-diameter cables.

Plug for sealing transit openings carrying five same-diameter cables.



Multi-transit module with a number of prefabricated transit holes for ducting one or more cables.

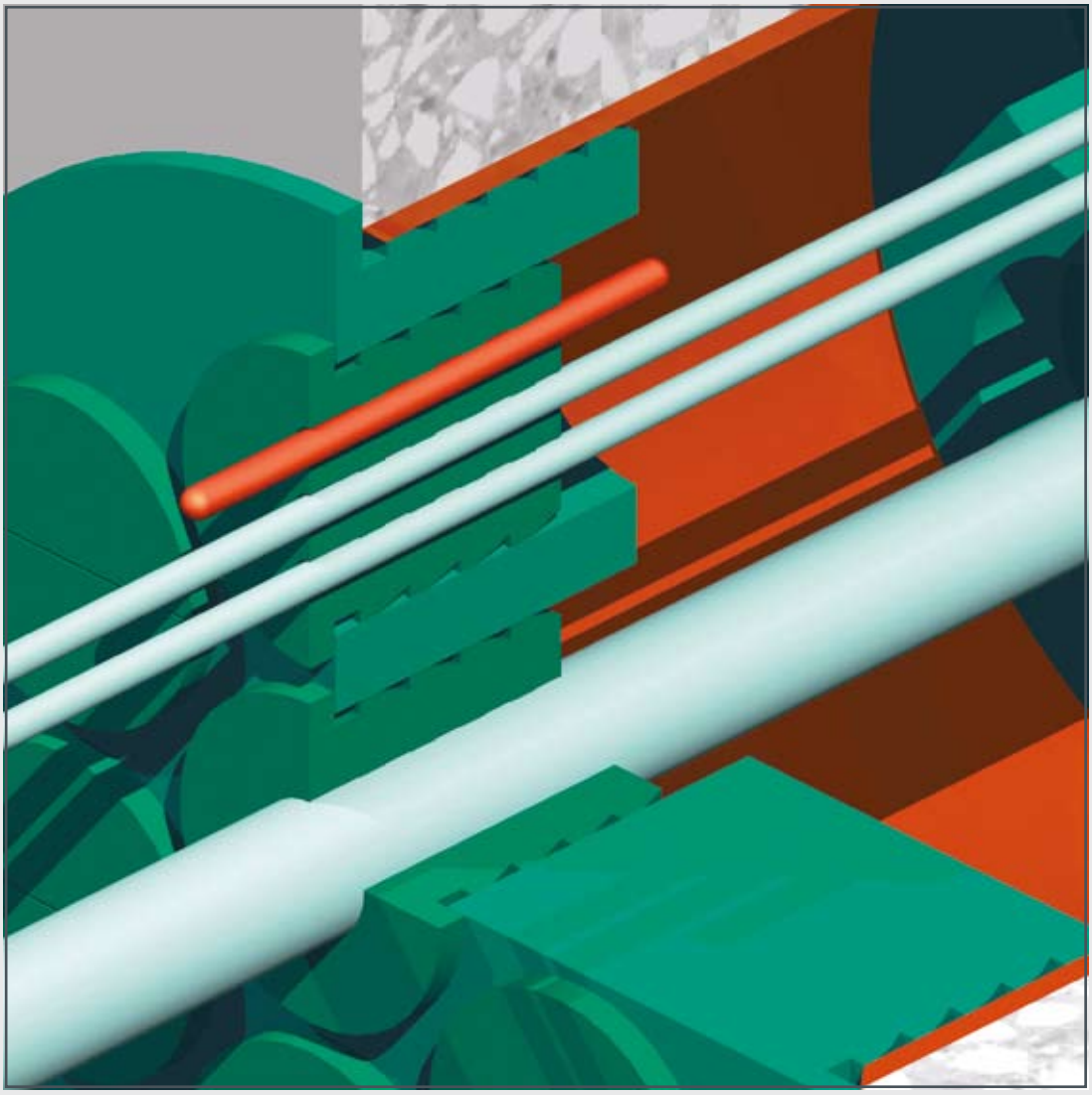
BEESEAL® embedded and flanged frames in a range of material grades.

NOFIRNO® gasket for flanged conduit pipes

Note: colour of gasket has been changed to terracotta

BEESEAL®
MULTI-TRANSIT MODULES

The BEESEAL® system provides a fairly compact method of construction in that besides single transits it enables at the same time multiple same-diameter pipes or cables to be ducted through one transit opening and closed with CSD® multi-sealing plugs. Unused transit openings are closed with CSD® blind plugs.
Available in several rubber grades.



The highly effective sealing power of BEESEAL® multi-transit modules is assured by the unique serrated profile, as is also applied in the design of the well-known CSD® sealing plugs.
Installation of BEESEAL® conduits is simplicity itself. By treating the outside of the multi-transit plug with lubricant, it can easily be pushed into the conduit opening.
In the same way, CSD® sealing plugs can be inserted into the openings of the multi-transit plugs after the cables/pipes have been ducted.

BEESEAL® AND CSD® OFFER BENEFITS!
PROVEN QUALITY WORLD-WIDE!

BEESEAL®
MULTI-TRANSIT MODULES

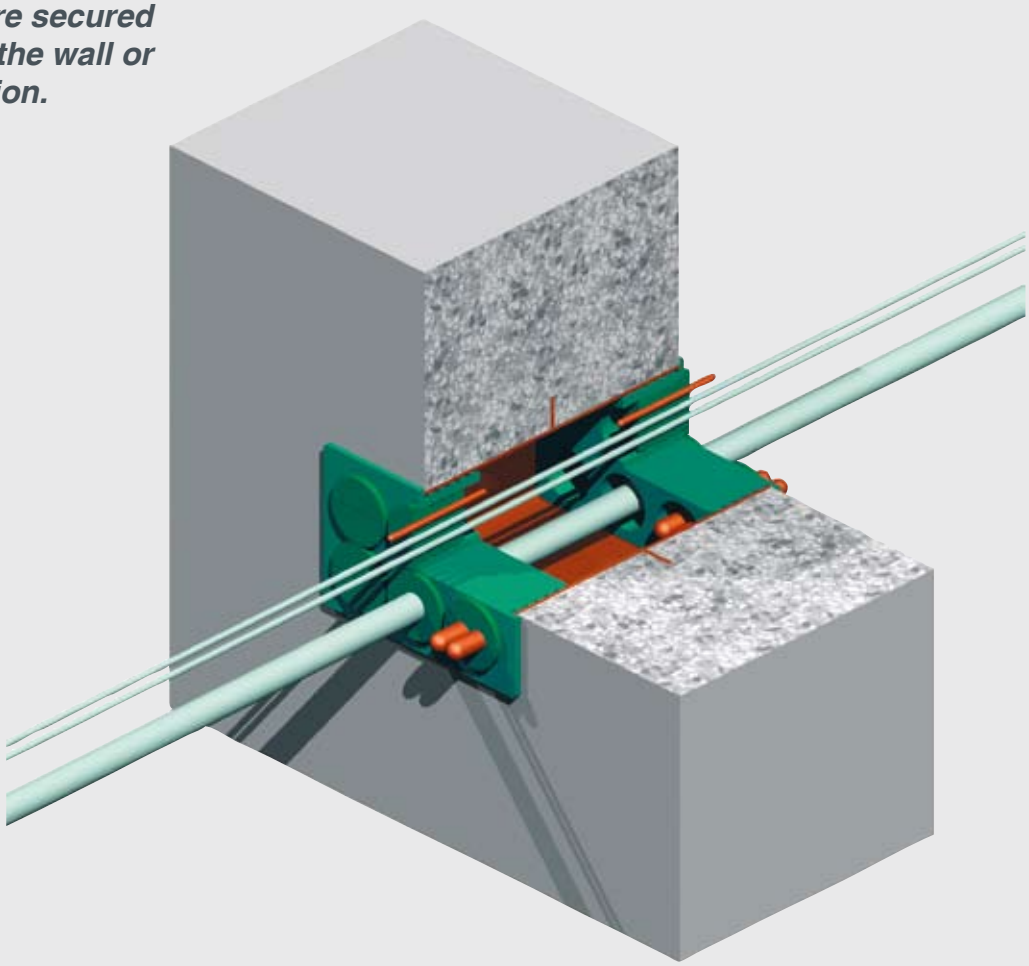
The advantages:

* lower material costs
* no maintenance costs
* reduced labour costs
* extremely simple installation and therefore cost-saving
* for installation in jacket pipes and in holes drilled with diamond-tipped concrete drills
* fair level of flexibility with regard to numbers and diameters of cables to be ducted
* extremely limited number of component parts
* no bolts no nuts, no compression unit
* available in eight different rubber grades to ensures uitability for a wide range of applications
* high level of gas- and water-tightness
* fire safe
* EMC protection
* vibration proof/sound damping
* for cables, steel, stainless steel, copper, GRP and plastic pipes
* use of blind plugs means that the transit need not be disassembled for future enlargements

BEESEAL®
MULTI-TRANSIT MODULES

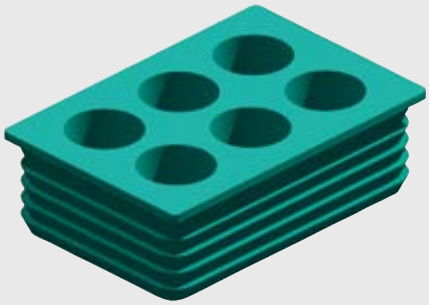
The multi-transit modules are installed in embedded module frames, type MCP. The multi-transit modules can also be installed in MCP/FB module frames which are secured against the wall or foundation.

The BEESEAL® embedded frames have a welded-on fixing flange in the middle to assure tight anchoring in the concrete. The fixing flange also acts as a water barrier.



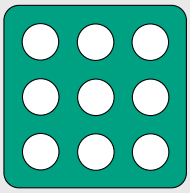
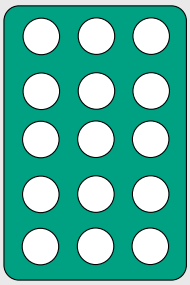
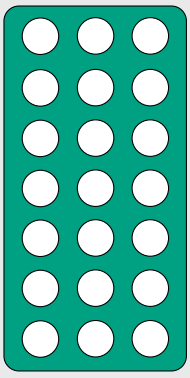
For fire-safe seals, the multi- transit modules and sealing plugs must always be installed at each side of the conduit.
For conduits which are required to be gas- and water tight only, it is possible for a seal to be installed at just one side of the conduit. Care should be taken that the ducted cables/pipes are not passed through the penetration at an angle.
In the case of larger cables/pipes, plugs must always be installed at each side of the conduit.

BEESEAL®
MULTI-TRANSIT MODULES



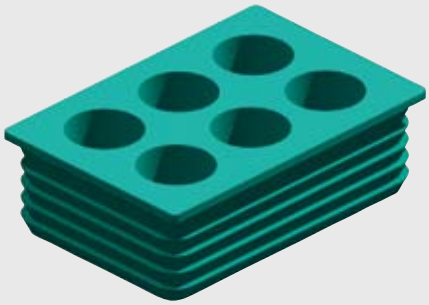
The BEESEAL® multi-transit modules and CSD® sealing plugs are supplied in eight different rubber grades in order to cater for a wide variety of applications.
For ease of recognition, the plugs have a separate colour for each rubber grade. See pages 36.

TYPES OF MULTI-TRANSIT AND SEALING PLUGS

number of transit openings	configuration	type of multi-transit module type MPM	frame size	sealing plugs type (when ordering, state rubber type)
9		120/9x25	120	
15		180/15x25	180	25,6/0 25,6/5 25,6/6 25,6/7 25,6/8 25,6/9 25,6/10 25,6/11 25,6/12s 25,6/13s 25,6/14s 25,6/15s
21		240/21x25	240	see page 36

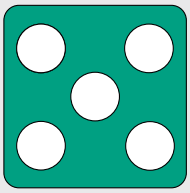
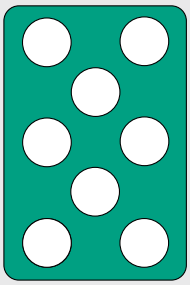
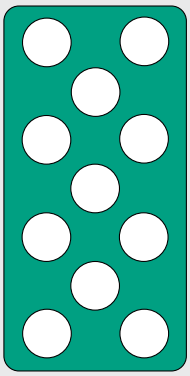
select if:
largest diameter to be ducted: between 5 and 15 mm

BEESEAL®
MULTI-TRANSIT MODULES



The BEESEAL® multi-transit modules and CSD® sealing plugs are supplied in eight different rubber grades in order to cater for a wide variety of applications.
For ease of recognition, the plugs have a separate colour for each rubber grade. See pages 36.

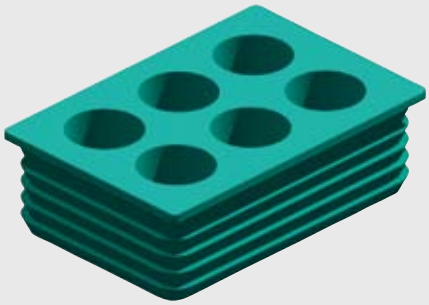
TYPES OF MULTI-TRANSIT AND SEALING PLUGS

number of transit openings	configuration	type of multi-transit module type MPM	frame size	sealing plugs type (when ordering, state rubber type)
5		120/5x33	120	33,6/0 33,6/5 33,6/6 33,6/7 33,6/8 33,6/9 33,6/10 33,6/11 33,6/12 33,6/13 33,6/14 33,6/15 33,6/16 33,6/17 33,6/18 33,6/19 33,6/20
8		180/8x33	180	
11		240/11x33	240	

see page 36

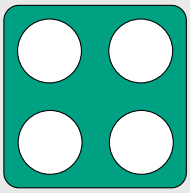
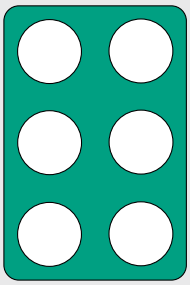
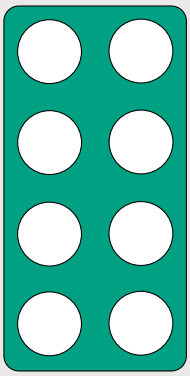
select if:
largest diameter to be ducted: between 5 and 20 mm

BEESEAL®
MULTI-TRANSIT MODULES



The BEESEAL® multi-transit modules and CSD® sealing plugs are supplied in eight different rubber grades in order to cater for a wide variety of applications.
For ease of recognition, the plugs have a separate colour for each rubber grade. *See pages 36.*

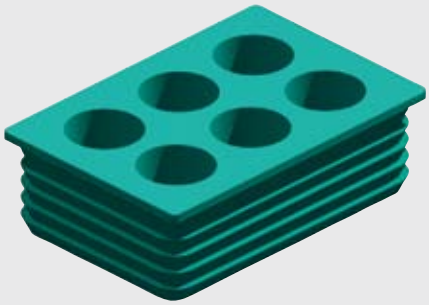
TYPES OF MULTI-TRANSIT AND SEALING PLUGS

number of transit openings	configuration	type of multi-transit module type MPM	frame size	sealing plugs type (when ordering, state rubber type)
4		120/4x43	120	43,6/0 43,6/5 43,6/6 43,6/7 43,6/8 43,6/9 43,6/10 43,6/11 43,6/12 43,6/13 43,6/14 43,6/15 43,6/16 43,6/17 43,6/18 43,6/19 43,6/20 43,6/21 43,6/22 43,6/23 43,6/24 43,6/25 43,6/26 43,6/27 43,6/28
6		180/6x43	180	43,6/2x5 43,6/2x6 43,6/2x7 43,6/2x8 43,6/2x9 43,6/2x10 43,6/2x11 43,6/2x12 43,6/3x5 43,6/3x6 43,6/3x7 43,6/5x5 43,6/5x6 43,6/5x7
8		240/8x43	240	

see page 36

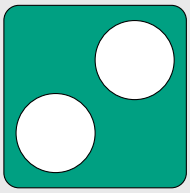
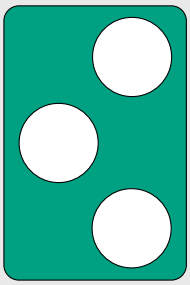
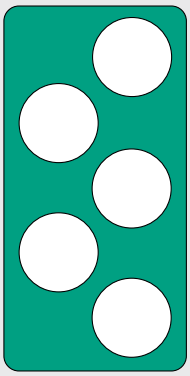
select if:
largest diameter to be ducted: between 5 and 28 mm

BEESEAL®
MULTI-TRANSIT MODULES



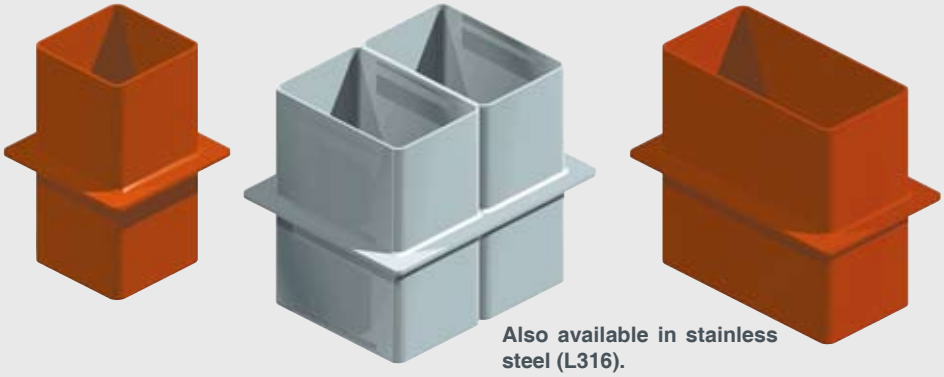
The BEESEAL® multi-transit modules and CSD® sealing plugs are supplied in eight different rubber grades in order to cater for a wide variety of applications.
For ease of recognition, the plugs have a separate colour for each rubber grade. See pages 36.

TYPES OF MULTI-TRANSIT AND SEALING PLUGS

number of transit openings	configuration	type of multi-transit module type MPM	frame size	sealing plugs type (when ordering, state rubber type)
2		120/2x54	120	54,5/0 54,5/10 54,5/22 54,5/11 54,5/23 54,5/12 54,5/24 54,5/13 54,5/25 54,5/14 54,5/26 54,5/15 54,5/27 54,5/16 54,5/28 54,5/17 54,5/29 54,5/18 54,5/30 54,5/19 54,5/31 54,5/20 54,5/32 54,5/21 54,5/33 54,5/34 54,5/2x5 54,5/2x10 54,5/2x6 54,5/2x11 54,5/2x7 54,5/2x12 54,5/2x8 54,5/2x13 54,5/2x9 54,5/2x14 54,5/2x15 54,5/3x5 54,5/5x5 54,5/3x6 54,5/5x6 54,5/3x7 54,5/5x7 54,5/3x8 54,5/5x8 54,5/3x9 54,5/5x9 54,5/3x10 54,5/5x10 see page 36
3		180/3x54	180	
5		240/5x54	240	

select if:
largest diameter to be ducted: between 5 and 34 mm

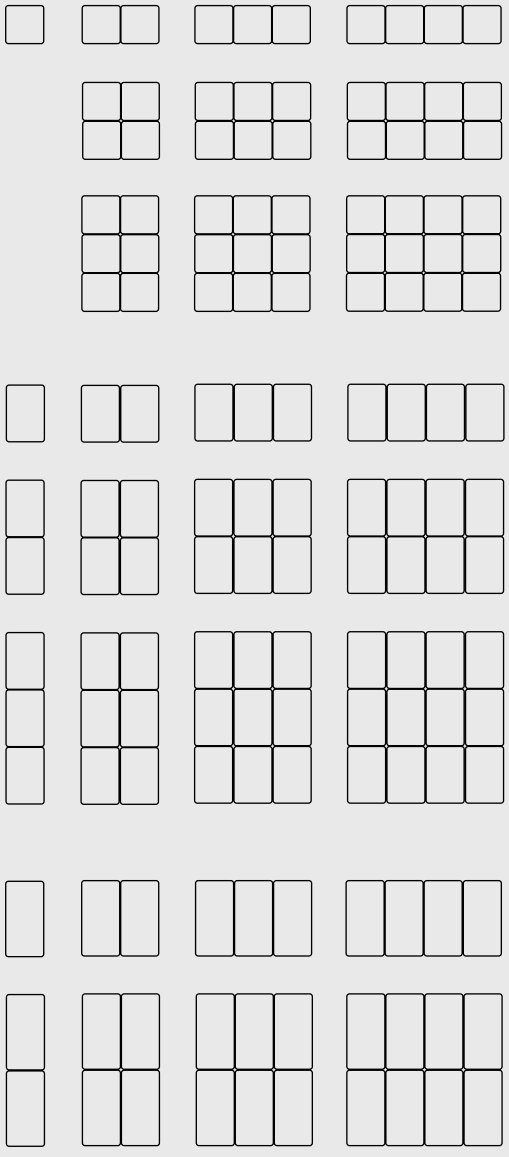
BEESEAL® EMBEDDED FRAMES TYPE MCP



Also available in stainless steel (L316).

BEESEAL® embedded steel frames are made from steel 37.2 and are supplied coated with red lead. Red lead coated frames have only limited resistance to corrosion. To exclude possible corrosion inside the frames, it is recommended that multi-transit modules and sealing plugs should be installed at each side of the frame.

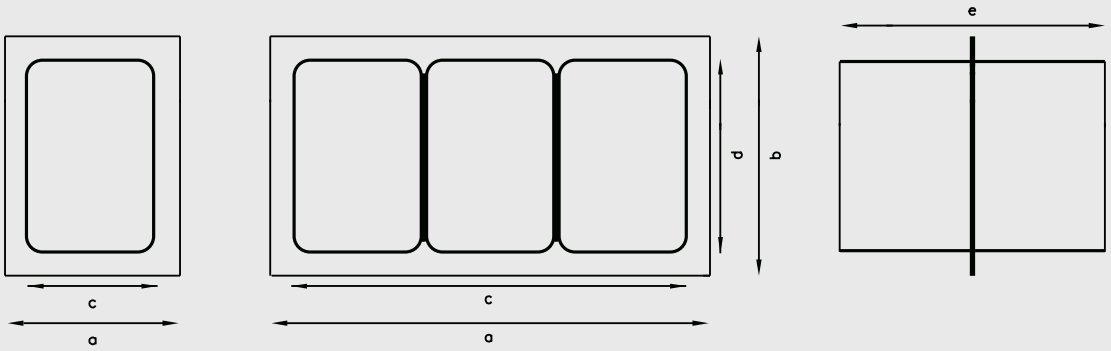
BEESEAL® embedded steel frames have a welded-on fixing flange in the middle. The flange serves as a water barrier and also anchors the frame in the concrete.
BEESEAL® frames are manufactured in three different basic sizes, namely 120 x 120 mm, 180 x 120 mm and 240 x 120 mm (inside dimensions). A large number of different combinations are available in each size.
BEESEAL® embedded steel frames are supplied as standard in a length of 250 mm. Non-standard lengths can be supplied to order.

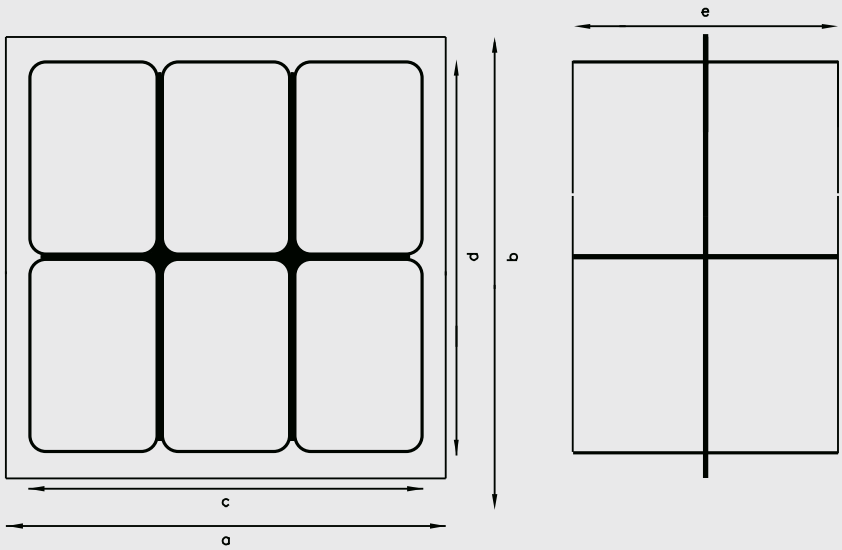


MCP 1x120	MCP 2x120	MCP 3x120	MCP 4x120
	MCP 2x120x2	MCP 3x120x2	MCP 4x120x2
	MCP 2x120x3	MCP 3x120x3	MCP 4x120x3
MCP 1x180	MCP 2x180	MCP 3x180	MCP 4x180
MCP 1x180x2	MCP 2x180x2	MCP 3x180x2	MCP 4x180x2
MCP 1x180x3	MCP 2x180x3	MCP 3x180x3	MCP 4x180x3
MCP 1x240	MCP 2x240	MCP 3x240	MCP 4x240
MCP 1x240x2	MCP 2x240x2	MCP 3x240x2	MCP 4x240x2

Combinations larger than those illustrated above are also possible. The type identification is then n x for each frame added horizontally and x n for each row of frames added vertically.

BEESEAL® EMBEDDED FRAMES TYPE MCP



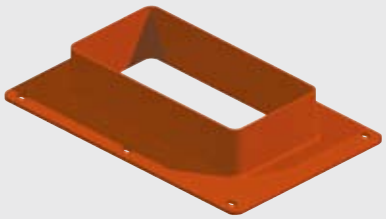


frame type	a	b	c	d	e
MCP 1x120	176	176	126	126	250
MCP 2x120	304	176	254	126	250
MCP 3x120	432	176	382	126	250
MCP 4x120	560	176	510	126	250
MCP 5x120	688	176	638	126	250
MCP 6x120	816	176	766	126	250
MCP 1x180	176	238	126	188	250
MCP 2x180	304	238	254	188	250
MCP 3x180	432	238	382	188	250
MCP 4x180	560	238	510	188	250
MCP 5x180	688	238	638	188	250
MCP 6x180	816	238	766	188	250
MCP 1x240	176	300	126	250	250
MCP 2x240	304	300	154	250	250
MCP 3x240	432	300	382	250	250
MCP 4x240	560	300	510	250	250
MCP 5x240	688	300	638	250	250
MCP 6x240	816	300	766	250	250

frame type	a	b	c	d	e
MCP 2x120x2	304	304	254	254	250
MCP 3x120x2	432	304	382	254	250
MCP 4x120x2	560	304	510	254	250
MCP 5x120x2	688	304	638	254	250
MCP 6x120x2	816	304	766	254	250
MCP 1x180x2	176	428	126	378	250
MCP 2x180x2	304	428	254	378	250
MCP 3x180x2	432	428	382	378	250
MCP 4x180x2	560	428	510	378	250
MCP 5x180x2	688	428	638	378	250
MCP 6x180x2	816	428	766	378	250
MCP 1x240x2	176	552	126	502	250
MCP 2x240x2	304	552	254	502	250
MCP 3x240x2	432	552	382	502	250
MCP 4x240x2	560	552	510	502	250
MCP 5x240x2	688	552	638	502	250
MCP 6x240x2	816	552	766	502	250

All dimensions in mm. For each frame section added horizontally, dimensions a and c are increased by 128 mm; for each frame added vertically, the dimensions b and d are increased by 128 mm.

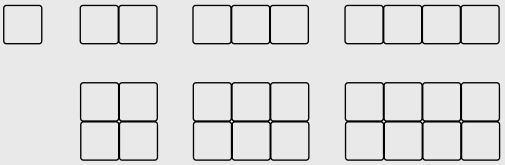
BEESEAL® FLANGED FRAMES TYPE MCP

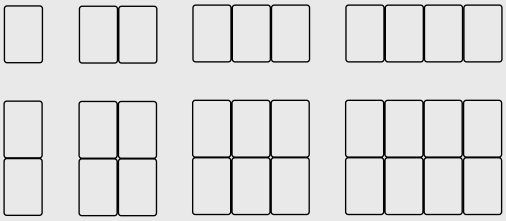


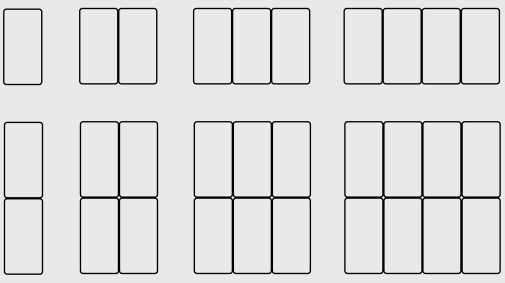
BEESEAL® flanged steel frames are made from steel 37.2 and are supplied coated with red lead. Red lead coated frames have only limited resistance to corrosion. To exclude possible corrosion it is recommended that these frames should be used for indoor facilities only.

Also available in stainless steel (L316).

BEESEAL® flanged frames are manufactured in three different basic sizes, namely 120 x 120 mm, 180 x 120 mm and 240 x 120 mm (inside dimensions). A large number of different combinations are available in each size.
The depth of the BEESEAL® steel flanged frames is 60 mm.



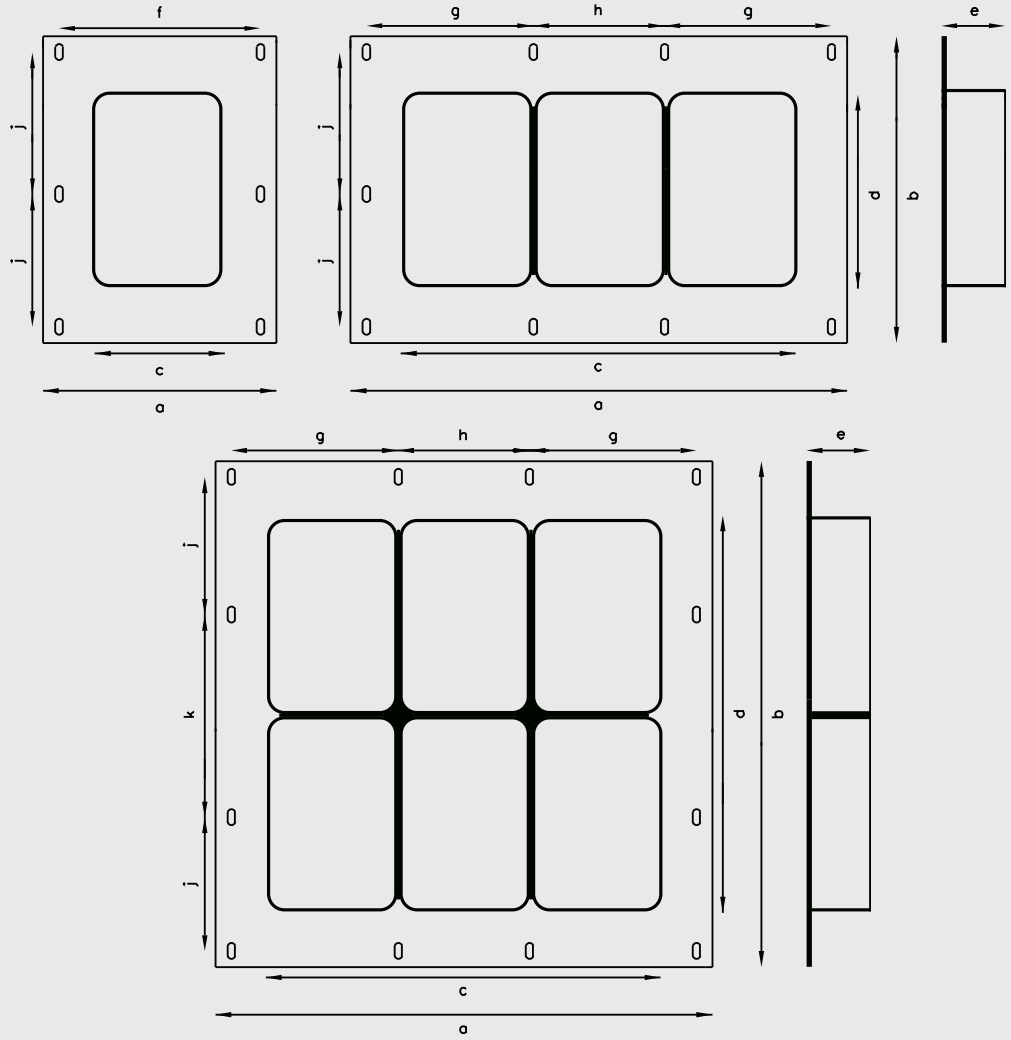




MCP 1x120FB	MCP 2x120FB MCP 2x120x2FB	MCP 3x120FB MCP 3x120x2FB	MCP 4x120FB MCP 4x120x2FB
MCP 1x180FB MCP 1x180x2FB	MCP 2x180FB MCP 2x180x2FB	MCP 3x180FB MCP 3x180x2FB	MCP 4x180FB MCP 4x180x2FB
MCP 1x240FB MCP 1x240x2FB	MCP 2x240FB MCP 2x240x2FB	MCP 3x240FB MCP 3x240x2FB	MCP 4x240FB MCP 4x240x2FB

Combinations larger than those illustrated above are also possible. The type identification is then n x for each frame added horizontally and x n for each row of frames added vertically.

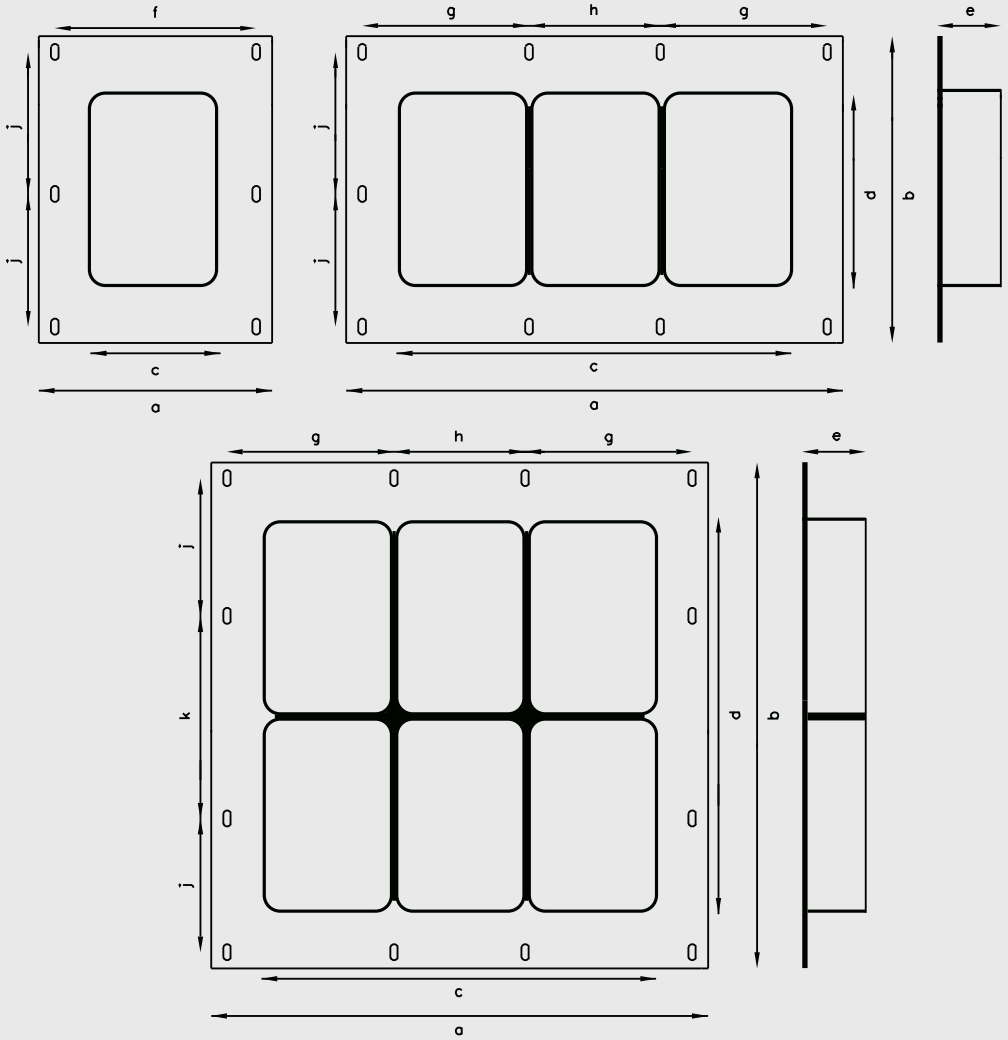
BEESEAL® FLANGED FRAMES



frame type	a	b	c	d	e	f	g	h	j	k
MCP 1x120FB	226	226	126	126	60	196	-	-	-	-
MCP 2x120FB	354	226	254	126	60	-	162	-	-	-
MCP 3x120FB	482	226	382	126	60	-	162	128 (1x)	-	-
MCP 4x120FB	610	226	510	126	60	-	162	128 (2x)	-	-
MCP 5x120FB	738	226	638	126	60	-	162	128 (3x)	-	-
MCP 6x120FB	866	226	766	126	60	-	162	128 (4x)	-	-
MCP 1x180FB	226	288	126	188	60	196	-	-	129	-
MCP 2x180FB	354	288	254	188	60	-	162	-	129	-
MCP 3x180FB	482	288	382	188	60	-	162	128 (1x)	129	-
MCP 4x180FB	610	288	510	188	60	-	162	128 (2x)	129	-
MCP 5x180FB	738	288	638	188	60	-	162	128 (3x)	129	-
MCP 6x180FB	866	288	766	188	60	-	162	128 (4x)	129	-
MCP 1x240FB	226	350	126	250	60	196	-	-	160	-
MCP 2x240FB	354	350	254	250	60	-	162	-	160	-
MCP 3x240FB	482	350	382	250	60	-	162	128 (1x)	160	-
MCP 4x240FB	610	350	510	250	60	-	162	128 (2x)	160	-
MCP 5x240FB	738	350	638	250	60	-	162	128 (3x)	160	-
MCP 6x240FB	866	350	766	250	60	-	162	128 (4x)	160	-

All dimensions in mm.
For each frame section added horizontally, dimensions a and c are increased by 128 mm; for each frame added vertically, the dimensions b and d are increased by 128 mm.

BEESEAL® FLANGED FRAMES



frame type	a	b	c	d	e	f	g	h	j	k
MCP 2x120x2FB	354	354	254	254	60	-	162	-	162	-
MCP 3x120x2FB	482	354	382	254	60	-	162	128 (1x)	162	-
MCP 4x120x2FB	610	354	510	254	60	-	162	128 (2x)	162	-
MCP 5x120x2FB	738	354	638	254	60	-	162	128 (3x)	162	-
MCP 6x120x2FB	866	354	766	254	60	-	162	128 (4x)	162	-
MCP 1x180x2FB	226	478	126	378	60	196	-	-	129	190 (1x)
MCP 2x180x2FB	354	478	254	378	60	-	162	-	129	190 (1x)
MCP 3x180x2FB	482	478	382	378	60	-	162	128 (1x)	129	190 (1x)
MCP 4x180x2FB	610	478	510	378	60	-	162	128 (2x)	129	190 (1x)
MCP 5x180x2FB	738	478	638	378	60	-	162	128 (3x)	129	190 (1x)
MCP 6x180x2FB	866	478	766	378	60	-	162	128 (4x)	129	190 (1x)
MCP 1x240x2FB	226	602	126	502	60	196	-	-	160	126 (2x)
MCP 2x240x2FB	354	602	254	502	60	-	162	-	160	126 (2x)
MCP 3x240x2FB (2x)	482	602	382	502	60	-	162	128 (1x)	160	126
MCP 4x240x2FB	610	602	510	502	60	-	162	128 (2x)	160	126 (2x)
MCP 5x240x2FB	738	602	638	502	60	-	162	128 (3x)	160	126 (2x)
MCP 6x240x2FB	866	602	766	502	60	-	162	128 (4x)	160	126 (2x)

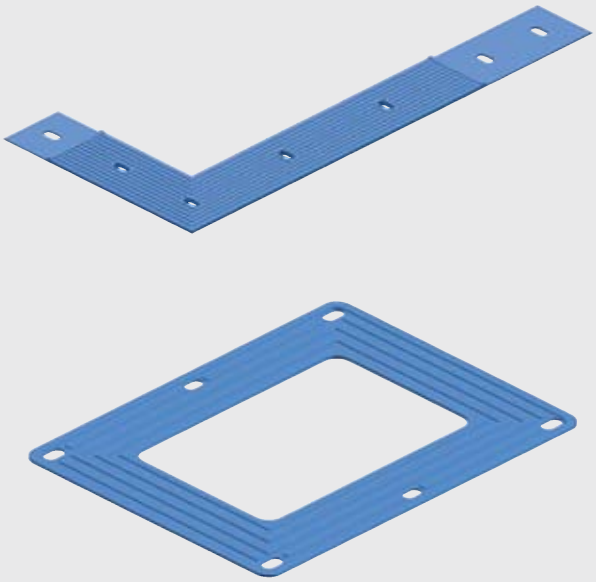
All dimensions in mm.
For each frame section added horizontally, dimensions a and c are increased by 128 mm; for each frame added vertically, the dimensions b and d are increased by 128 mm.

GASKETS FOR BEESEAL® FLANGED FRAMES

CSD® gaskets are used to obtain a seal between the wall or floor and the MCP flanged frame.
The gaskets are made from the NOFIRNO® fire resistant rubber compound which has been proved to possess not only very good fire engineering properties, but good mechanical properties as well.
The gasket is specially profiled at each side, in order to optimize sealing performance. If there are large local irregularities in the wall or floor, they should be smoothed with either mortar or NOFIRNO® sealant.

Note:
the colour of the gaskets has been changed into terracotta.

GASKETS FOR MCP FLANGED FRAMES



From the way of surface charring and the rubber residues inside the product, it can easily be determined whether or not NOFIRNO® has been used.

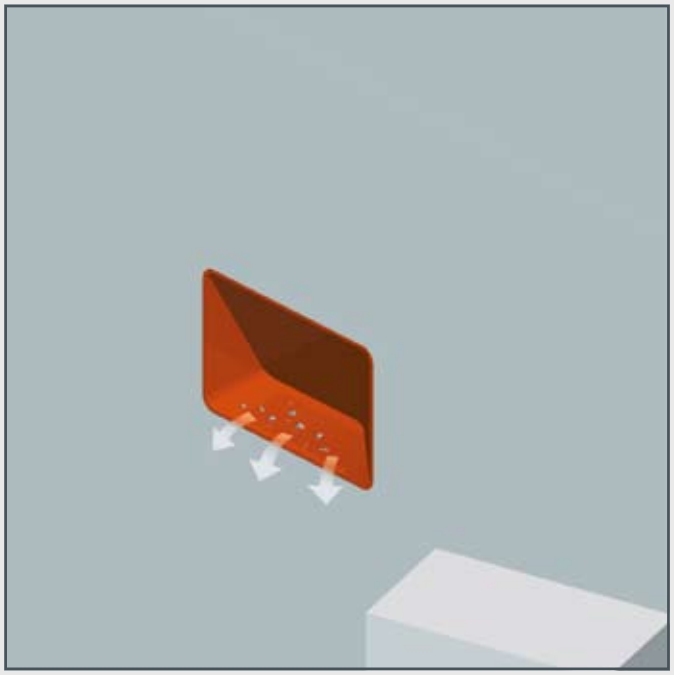
The NOFIRNO® rubber compound is characterized in that it is capable of withstanding the effects of heat and fire for an extended period without being consumed. The only process that occurs is a modification of its structure. The rubber gradually converts into a white surface structure with a hard char underneath.
We refer to the SLIPSIL® brochure for the properties of the NOFIRNO® rubber.
Because the rubber compound is completely free from halogens and also contains no formaldehyde, phenol or other harmful substances, no toxic fumes are produced during this process. The rubber compound also contains no asbestos or other fibres. In addition, the volume of fumes which are formed when exposed to fire is extremely limited. A secondary advantage is that the smoke formed is white in colour.

If specified in advance, gaskets can be manufactured in accordance with customers drawings. This process will of course need appropriate dies but because CSD has its own die-making shop these can be produced in-house.

NOFIRNO® rubber: highest quality with traceability

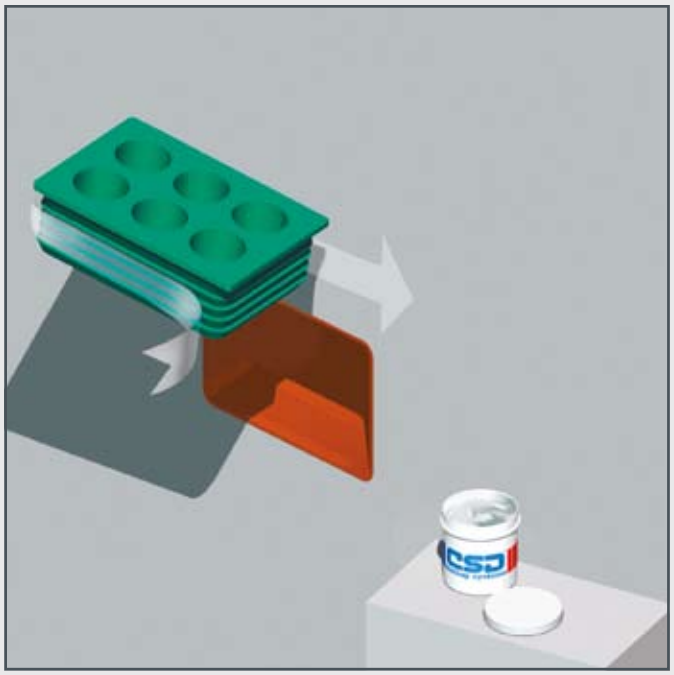
NOFIRNO® rubber is traceable to prevent counterfeiting and to guarantee users that they get the CSD quality they are paying for.

INSTALLATION INSTRUCTIONS BEESEAL® SEALING SYSTEM

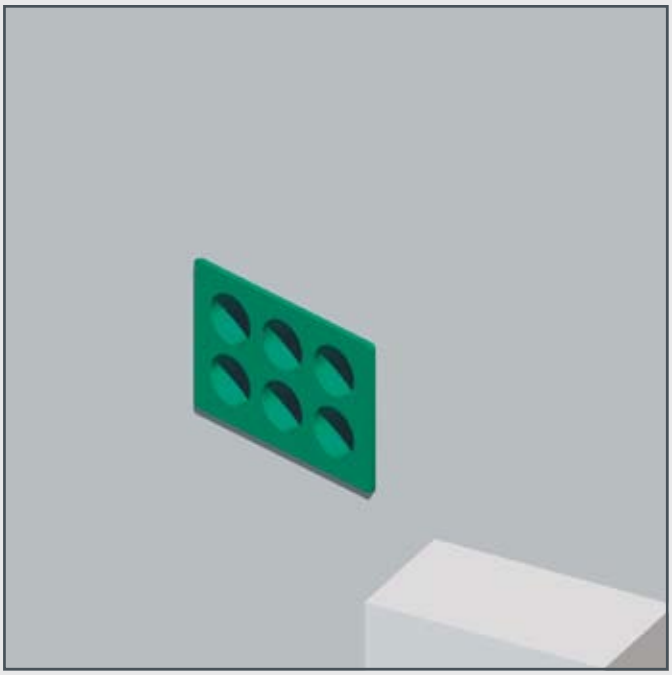


1) Before starting the installation procedure, any dirt or concrete residues should be removed from the openings of the transit frame.

2) The inside wall of the transit opening is treated with CSD® lubricant to a depth which approximately corresponds with the length of the BEESEAL® multi-transit module.



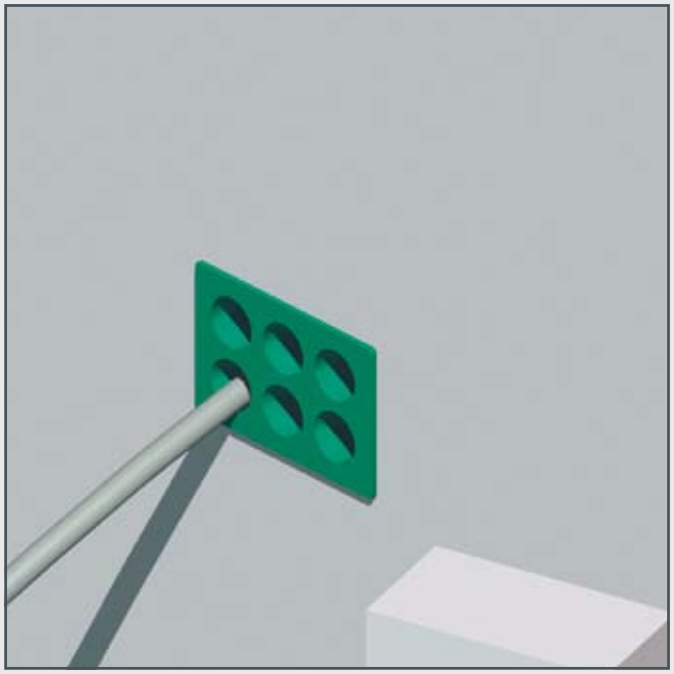
3) The outside of the serrated profile of the BEESEAL® multi-transit modules is treated with CSD® lubricant.



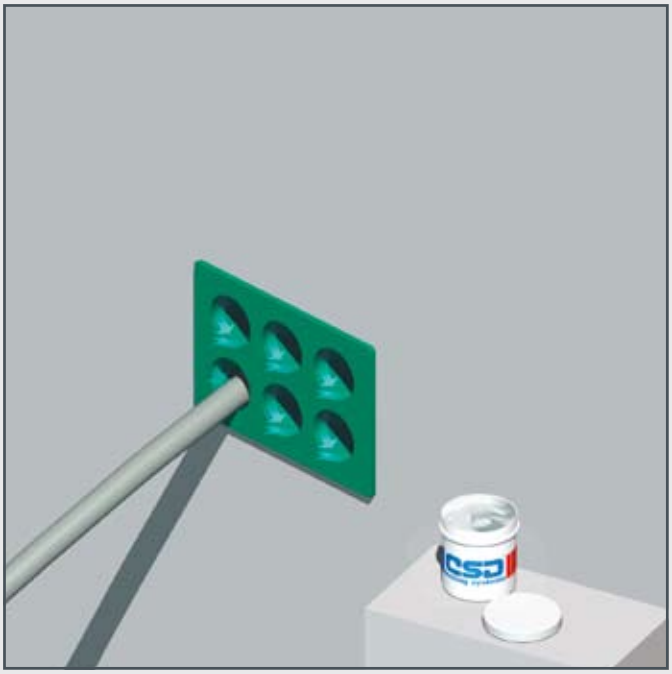
4) The multi-transit module is pushed evenly, serration by serration, into the conduit opening. After installation, the flanged edge of the module must be flush against the wall.

Installation of sealing plugs is a very simple matter.
Grease and push: that's it.

INSTALLATION INSTRUCTIONS BEESEAL® SEALING SYSTEM

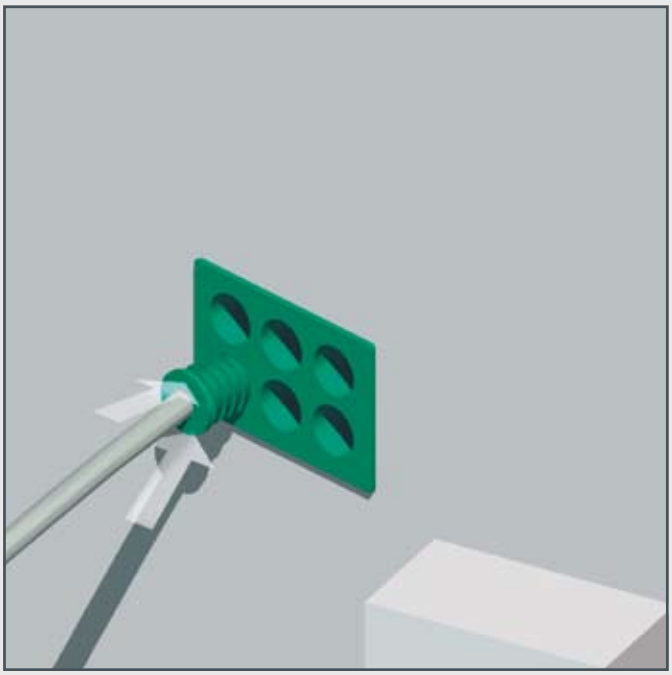


5) The cable(s) are ducted through the appropriate openings in the multi-transit module.



6) Before the sealing plugs are applied, the inside of the transit openings of the multi-transit modules is treated with CSD® lubricant.

7) The segments of the sealing plug for individually ducted cables are treated both inside and outside with CSD® lubricant.

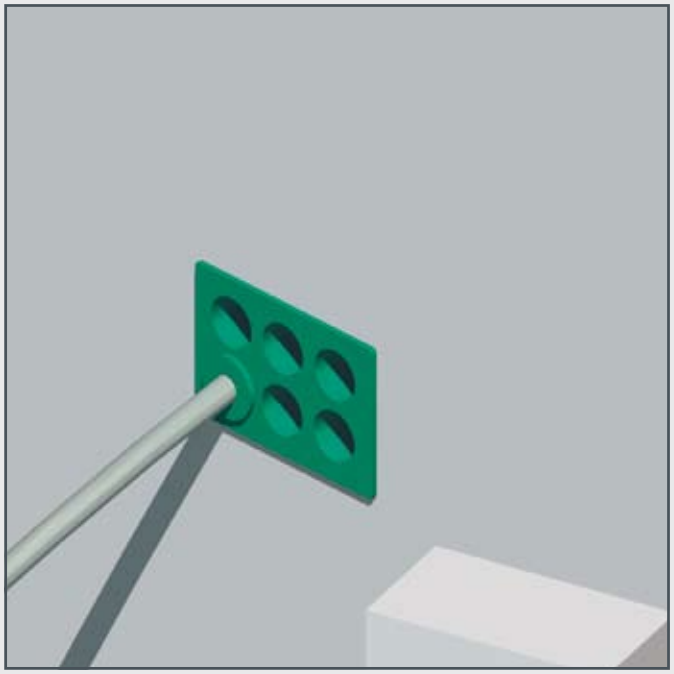


8) Both segments are placed around the cable and then pushed into the opening as far as the first serration.

CSD® sealing systems

Installation of sealing plugs is a very simple matter.
Grease and push: that's it.

INSTALLATION INSTRUCTIONS BEESEAL® SEALING SYSTEM



9) The two segments are pushed evenly, serration by serration, into the transit opening until the flanged edge is flush with the front of the multi-transit module.

10) In the same way, the multi-sealing plugs are installed to close transit openings for carrying two or three same diameter cables.

11) The three parts of the triangle multi-plug are pushed evenly into the transit opening until the flanged edge is flush with the front of the multi-transit module.

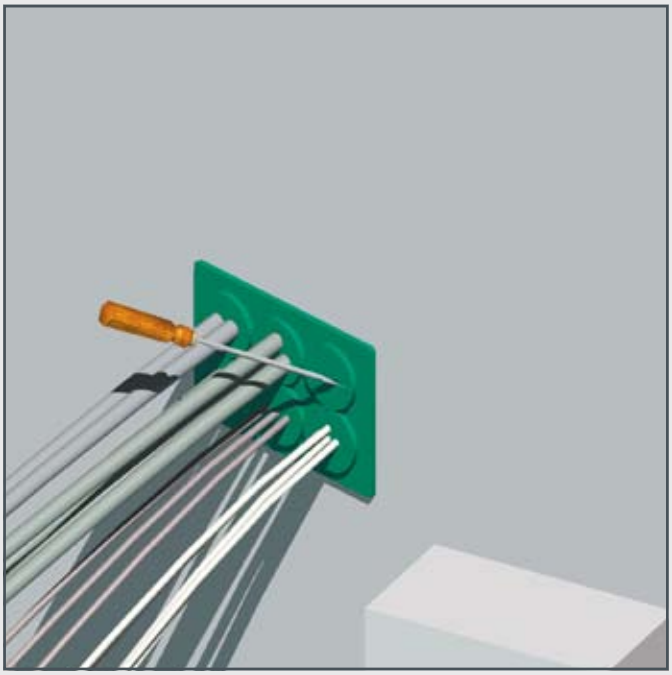
12) The four parts of the multi-plug to close transit openings for carrying five same diameter cables are pushed evenly, serration by serration, into the transit opening.

csd® sealing systems

Installation of sealing plugs is a very simple matter.
Grease and push: that's it.

INSTALLATION INSTRUCTIONS BEESEAL® SEALING SYSTEM

13) Unused transit openings are closed with blind sealing plugs.



14) If an extra cable has to be ducted at a later stage, it is a simple job to remove blind plugs from the transit openings.

15) After the cable has been ducted, the opening is closed with an appropriate sealing plug.

csd® sealing systems

Installation of sealing plugs is a very simple matter.
Grease and push: that's it.

BEESEAL® SEALING SYSTEEM
RUBBER GRADES

BEESEAL® multi-transits are manufactured from high-grade synthetic rubbers. In order to cater for the widest possible variety of requirements, the range includes three different rubber types. When ordering, it is necessary to state the desired rubber type to the type of the sealing parts.

A brief specification is given below of the area of application and the temperature range in which the sealing plugs can be applied. Because seal performance depends on an appropriate choice of rubber, in case of doubt it is advisable to consult our sales department.

rubber type	*area of application*	*pipe temperature*
EPDM *(ethylene propylene rubber)*	*Standard rubber for gas and water tight conduits. Good resistance to ozone and UV radiation. Used for outside/inside entries.*	*temperature range* *-50° - +110° C*

rubber type	*area of application*	*pipe temperature*
FRR *(fire resistant rubber)*	*Standard rubber for fire resistant, gas and water tight conduits. Used for cables and steel, stainless steel, copper and GRP pipes. Not to be used for plastic pipes.*	*temperature range* *-10° - +90° C*

rubber type	*area of application*	*pipe temperature*
FPM *(fluorocarbon rubber)*	*Rubber for gas and water tight conduits, requiring a high level of resistance to chemicals. Suitable for petrochemical installations.*	*temperature range* *-20° - +200° C*

MAXIMUM SIMPLICITY OF USE
OPTIMUM FLEXIBILITY
OUTSTANDING PERFORMANCE

Websites: http://www.actifoam.com, www.beele.com, www.firsto.com, www.nofirno.com, www.rise-systems.com, www.rise-nofirno.com, www.riswat.com and www.slipsil.com

ASK FOR THE SEPARATE BROCHURES ON OUR PRODUCT RANGES:

* RISE® MULTI-CABLE TRANSIT SYSTEM
* RISE® SEALING SYSTEM FOR SINGLE AND MULTI-PIPE PENETRATIONS
* RIACNOF® MULTI-CABLE TRANSIT SYSTEM
* RISE®/NOFIRNO® MULTI-ALL-MIX CABLE AND PIPE TRANSITS
* RISE®-ULTRA SINGLE PLASTIC PIPE PENETRATIONS
* RISWAT® GAS AND WATERTIGHT CABLE AND PIPE DUCTS
* SLIPSIL® SEALING PLUGS FOR PIPE ENTRIES
* SLIPSIL®-SQ MULTI-CABLE TRANSITS
* DYNATITE® DYNAMIC HIGH PRESSURE SEALS
* BEESEAL® MULTI-PIPE AND CABLE PENETRATIONS
* ACTIFOAM® TEMPORARY SEALS AND CAVITY SEALS
* FIRSTO® FIRESTOPS FOR CABLE TRAY PENETRATIONS
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sealing systems

CONDUIT SEALING DEVICES OF AN AMAZING SIMPLICITY WITH AN OUTSTANDING PERFORMANCE

BEELE Engineering and CSD International have been involved with fire, water and gas tight sealing for more than 30 years. We have developed and tested products proven to provide the utmost in sealing protection around the world. To receive our complete civil construction and/or marine products catalogues, please contact your distributor or local representative.

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