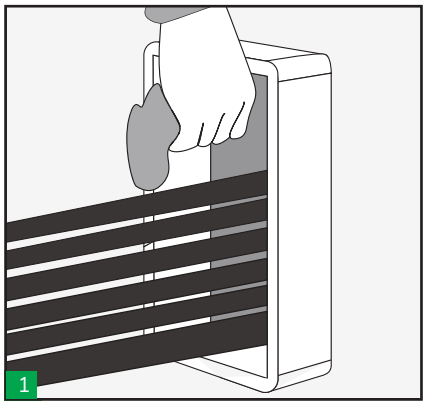
INSTALLATION
GUIDES

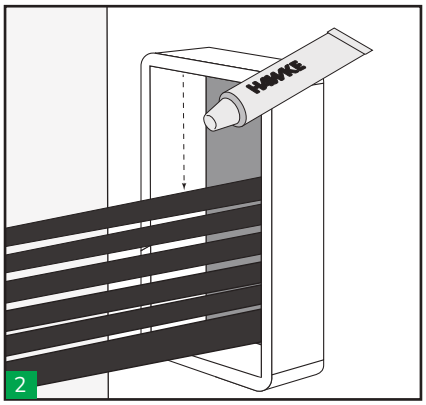
HTS
SAFETY SEALING SOLUTIONS

HTS

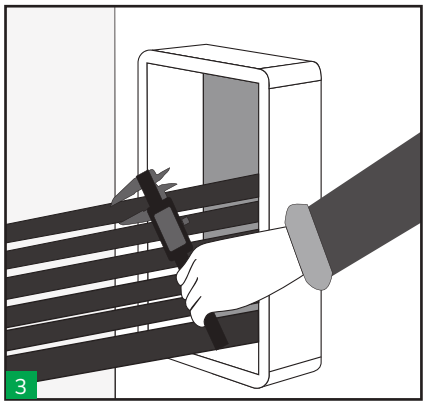
RECTANGULAR SYSTEM Standard installation guide:



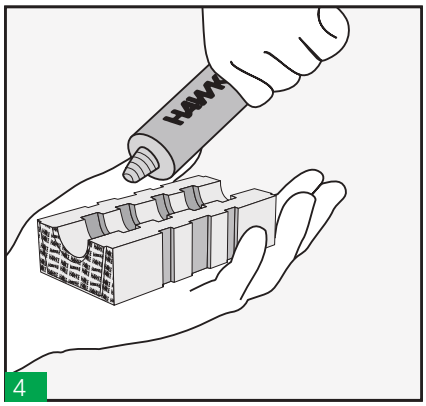
Make sure the frame is clean, then pull cables or pipes through, placing the largest at the bottom. (Note: Use open ended frame to fit around existing cables/pipes)



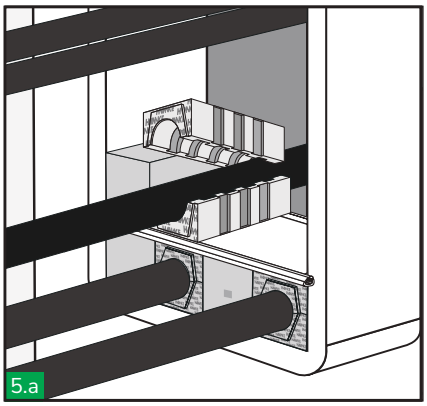
Lubricate the inside of the frame. Ensure the corners are well lubricated.

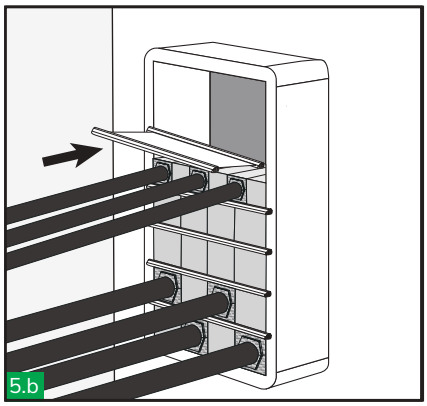


Take measures of the cables diameters and select the appropriate HTS Tolerant blocks. Colour code will help you to select the correct ones.

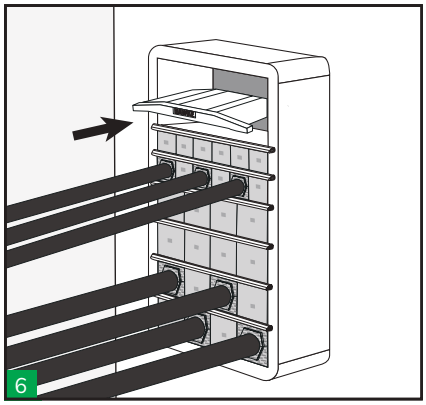


Lubricate all the insert and blank blocks using HTS lubricant.

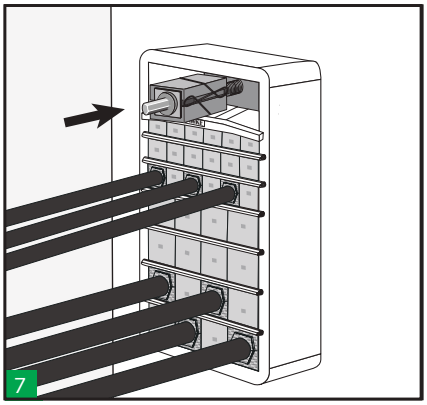




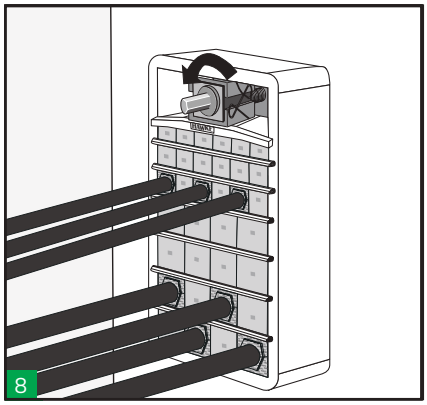
Begin packing the frame. Colour code will help you to install the blocks correctly. A stayplate is always inserted between each layer of blocks. Blocks should not protrude out of the stayplates retaining lips.



Insert the last stayplate and the compression plate before the last row of blocks (or earlier if required).Check frame packing space. Verify that the complete sealing area of this frame size (see table) will be filled with blocks.



Pack the last row between the last stayplate and the compression plate. Insert the compression tool on the top, in the centre of the compression plate.



Tighten the compression tool until there is sufficient room to fit the outer blocks of the endpacker.

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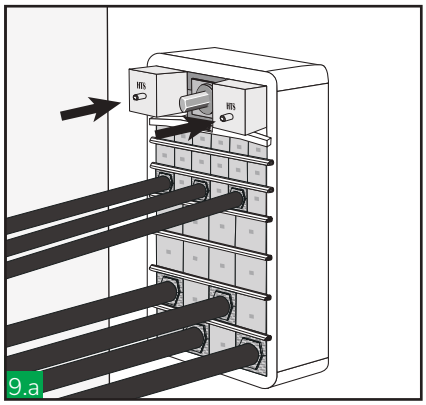
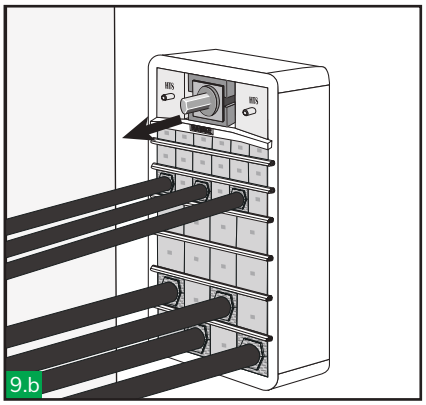
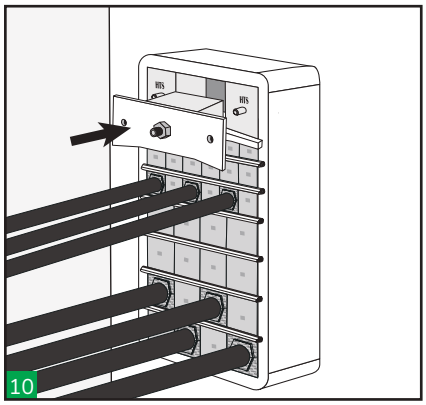
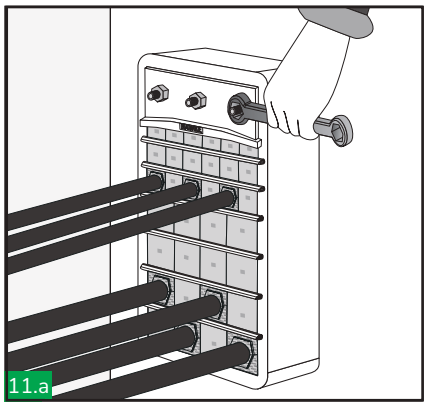


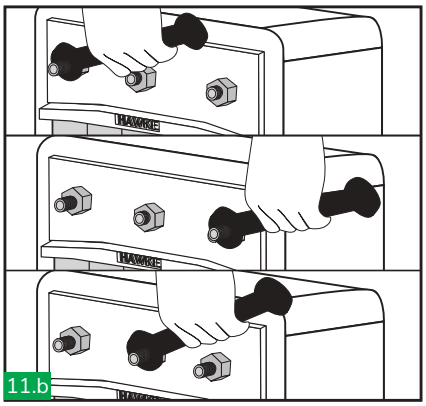
Insert the outer blocks of the endpacker.
Then, untighten the compression tool and remove it.



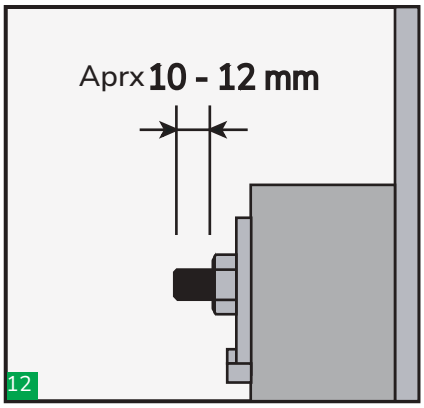


Insert the centre piece
of the endpacker along
with the front plate.

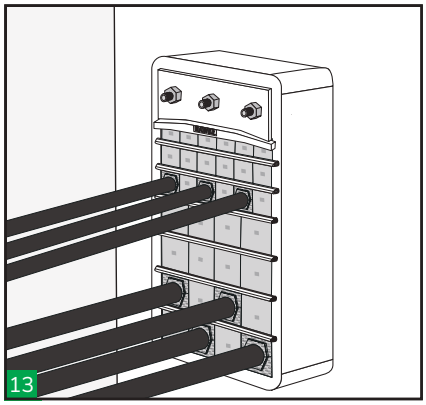




Tighten the nuts on the endpacking alternately following
the above sequence to compress and complete the seal.
Use a ratchet spanner for an easier installation.



Approximately 10-12 mm of thread
should protrude on each
bolt to ensure the
sealing.

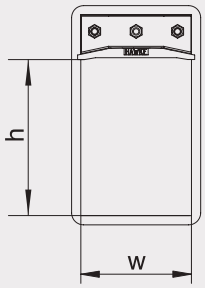


Make a visual inspection of the
transit. HTS´s unique colour coding
system enables the installation
to be visually inspected after
completion and ensures correct
matching of the block halves.

Notes

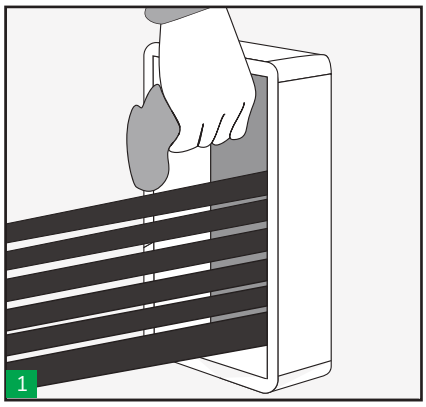
Leave the system at least 24 hours before applying
pressure. For disassembly see disassembly instructions.

Sealing Area

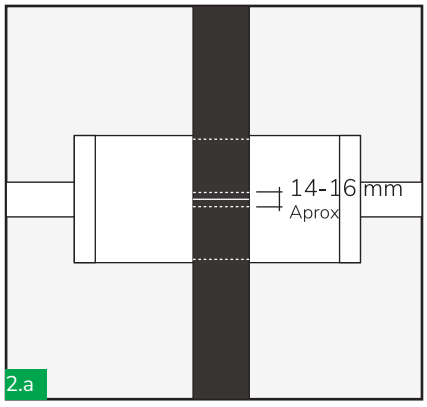


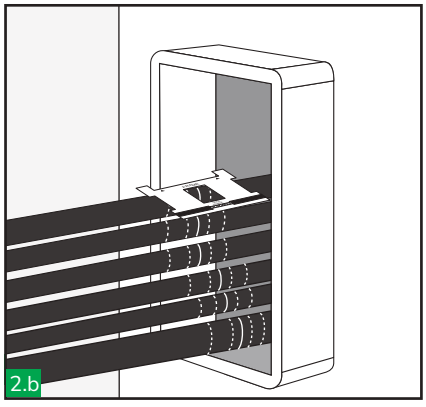
APERTURE SIZE	SEALING AREA (w x h)
1	60 x 60
2	120 x 60
3	60 x 120
4	120 x 120
5	60 x 180
6	120 x 180
7	60 x 240
8	120 x 240

RECTANGULAR EMC SYSTEM Installation guide:

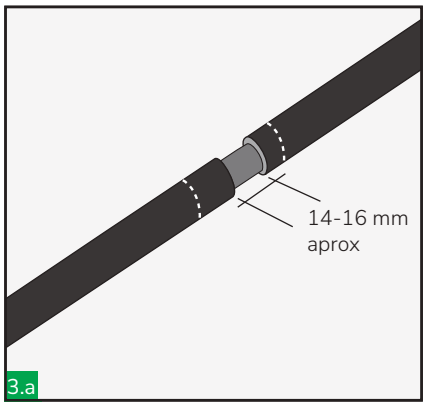


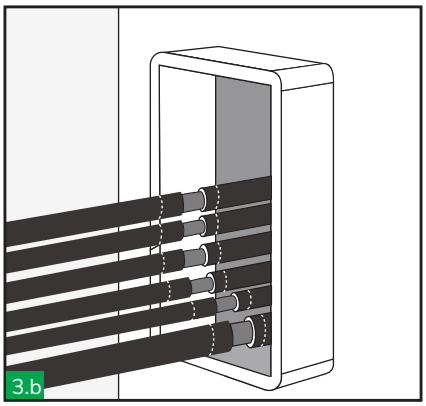
Make sure the frame is clean, then pull cables or pipes through, placing the largest at the bottom. (Note: Use open ended frame to fit around existing cables/pipes)



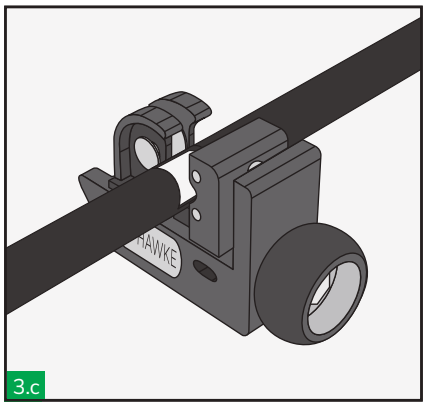


Mark each cable in the centre of the frame and 7-8mm either side of this point. Also, recommendable to mark the cable in both ends of the frame. EMC marking tool could help you to reduce time and ensure a correct marking.

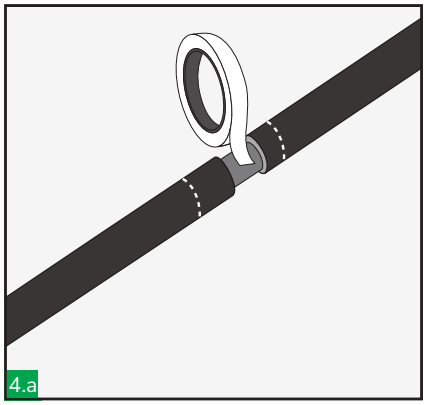


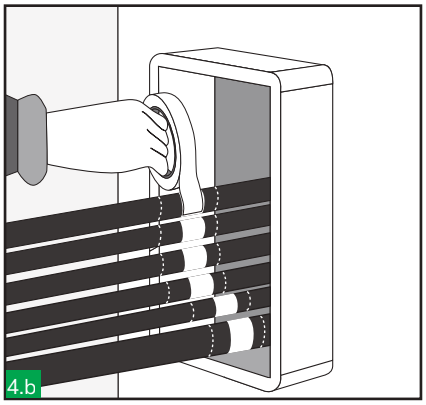


Cut and remove cable sheath between two central marks, to expose the cables conductive screen.

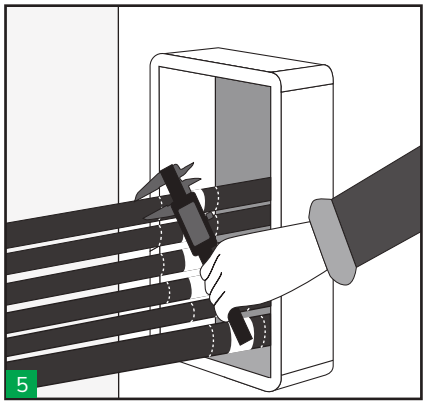


EMC cable sheath remove tool could help you to reduce time and ensure a correct cutting.

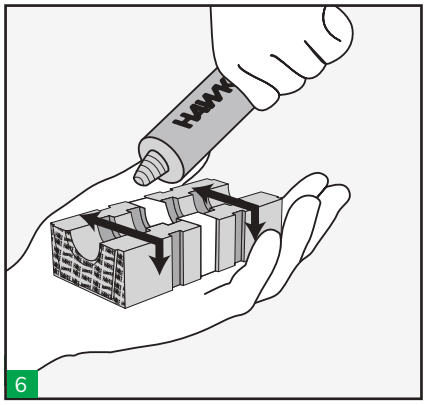




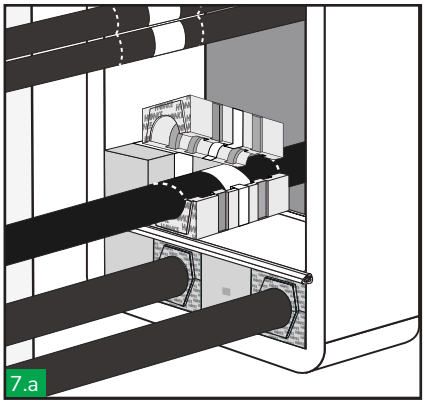
Using copper tape provided tightly wrap around the exposed screen until the cable outer diameter is regained. Repeat these steps for all cables.

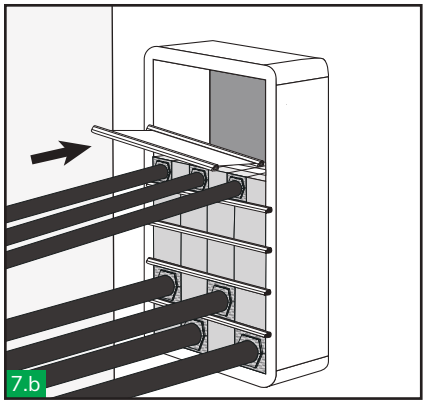


Take measures of cables diameters and select the appropriate HTS tolerant blocks.

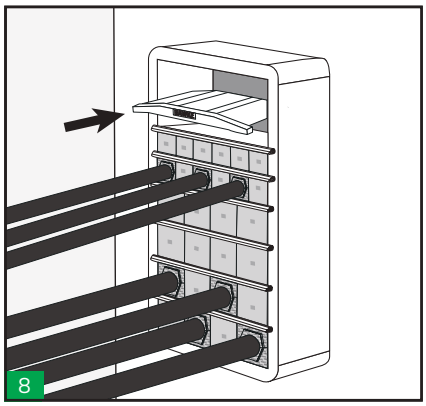


Very slightly lubricate all the insert and blank blocks using HTS lubricant taking care not contaminate the copper on blocks and cables.

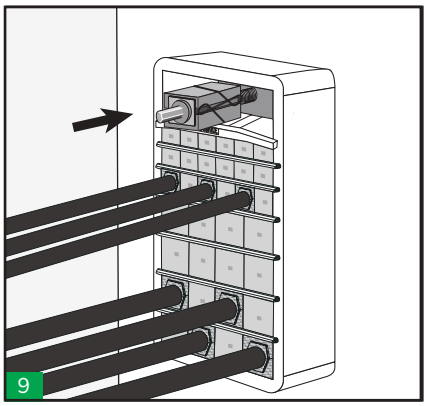




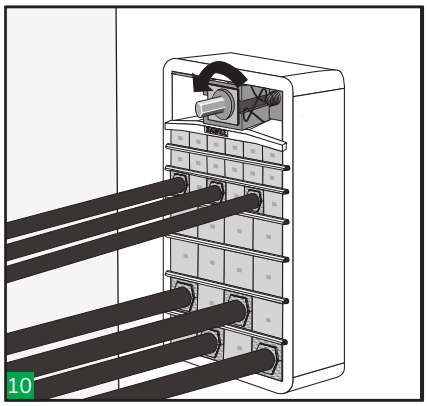
Begin packing the frame from the bottom to the top. A stayplate is always inserted between each layer of blocks. Blocks should not protrude out of the stayplates retaining lips. Ensure when fitting cables into blocks that copper tape on blocks and cable align. Marks in the cable will help to guarantee it.



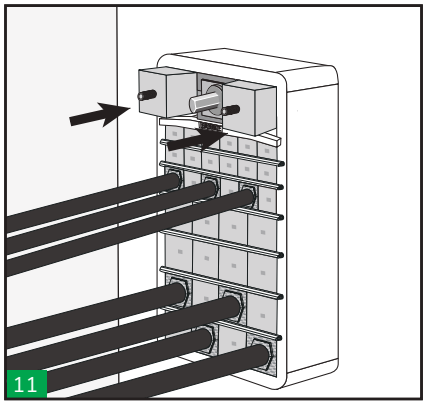
Insert the last stayplate and the compression plate before the last row of blocks (or earlier if required).Check frame packing space. Verify that the complete sealing area of this frame size (see table) will be filled with blocks.



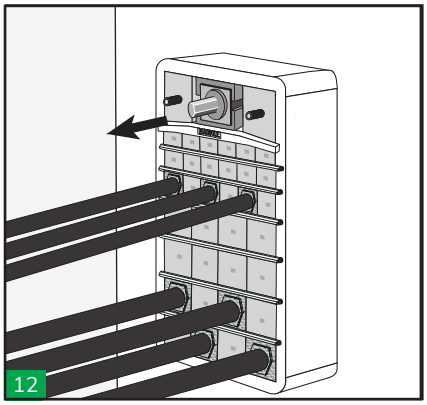
Pack the last row between the last stayplate and the compression plate.
Insert the compression tool on the top, in the centre of the compression plate.

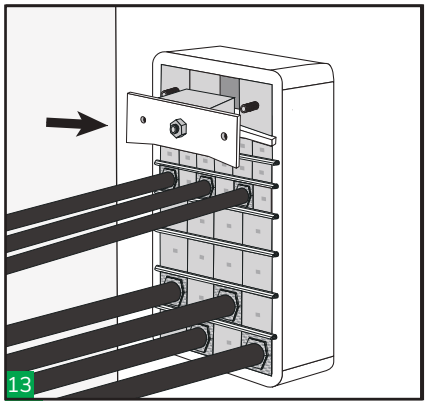


Tighten the compression tool until there is sufficient room to fit the outer blocks of the endpacker.



Insert the outer blocks of the endpacker. Then, untighten the compression tool and remove it.





Insert the centre piece of the endpacker along with the front plate.

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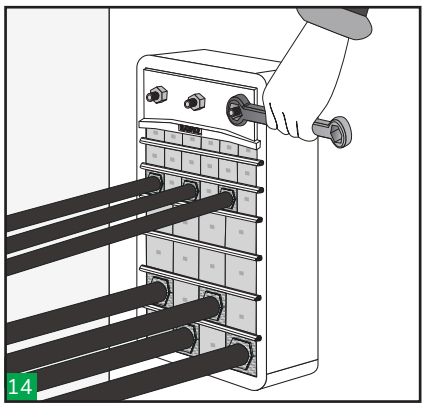
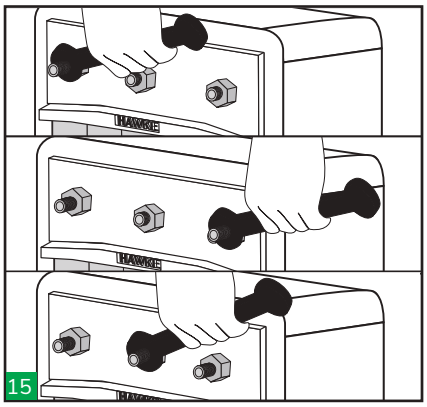
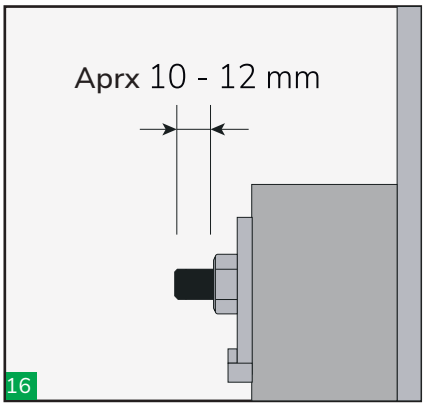
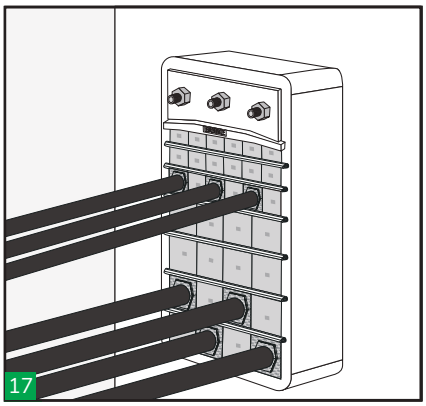




Tighten the nuts on the endpacking alternately following the above sequence to compress and complete the seal. Use a ratchet spanner for an easier installation.



Approximately 10-12 mm of thread should protrude on each bolt to ensure the sealing.

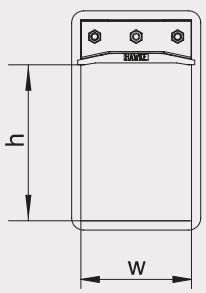


Make a visual inspection of the transit. Check that marks in all the cables are visible to be guarantee blocks and cable copper tapes are aligned.

Notes

Leave the system at least 24 hours before applying pressure.
For disassembly see disassembly installation instructions.

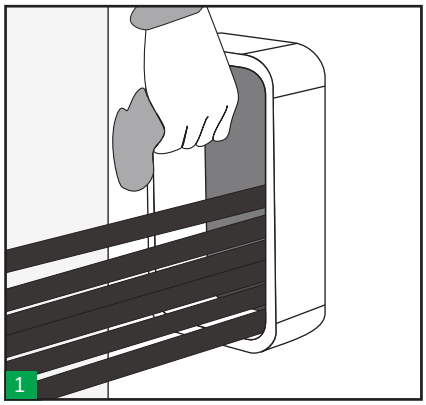
Sealing Area



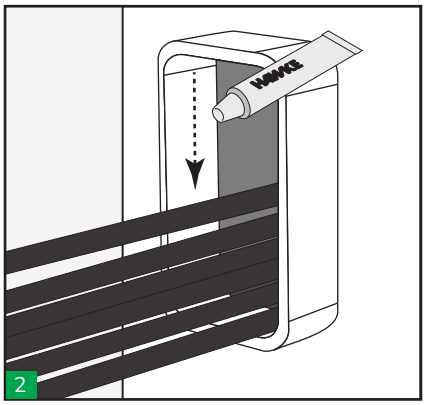
APERTURE SIZE	SEALING AREA (w x h)
1	60 x 60
2	120 x 60
3	60 x 120
4	120 x 120
5	60 x 180
6	120 x 180
7	60 x 240
8	120 x 240

HTS

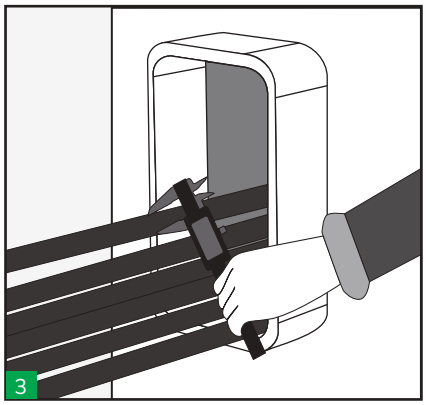
HMCX SYSTEM Standard installation guide:



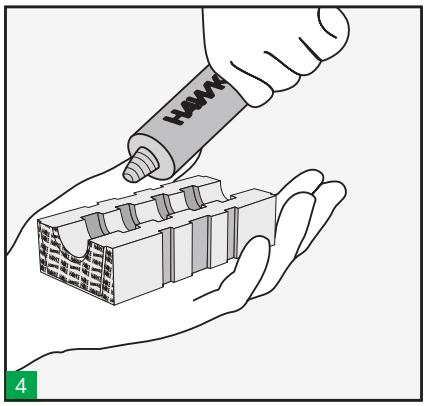
Make sure the frame is clean, then pull cables or pipes through, placing the largest at the bottom.
(Note: Use open ended frame to fit around existing cables/pipes)



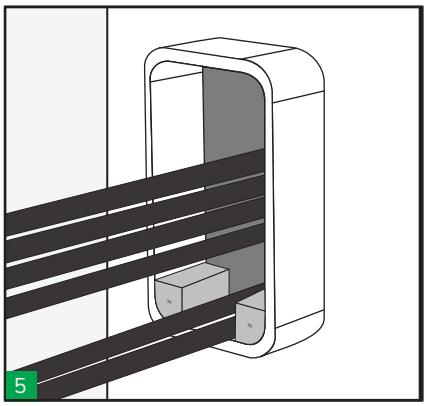
Lubricate the inside of the frame. Ensure the corners are well lubricated.



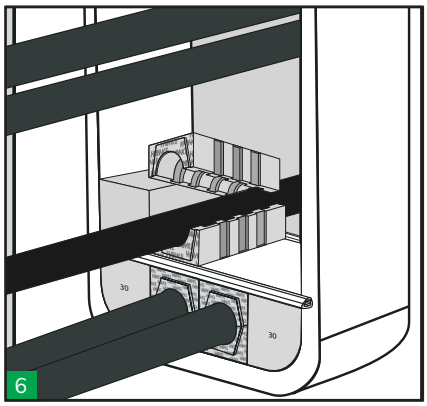
Take measures of the cables diameters and select the appropriate HTS Tolerant blocks. Colour code will help you to select the correct ones.



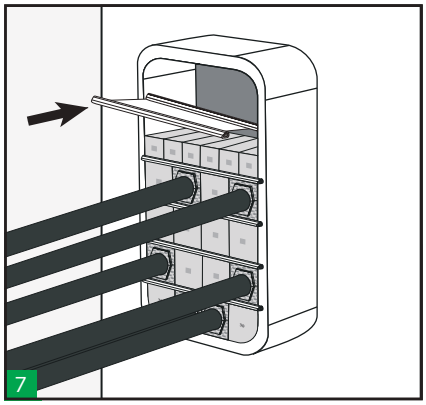
Lubricate all the insert and blank blocks using HTS lubricant.



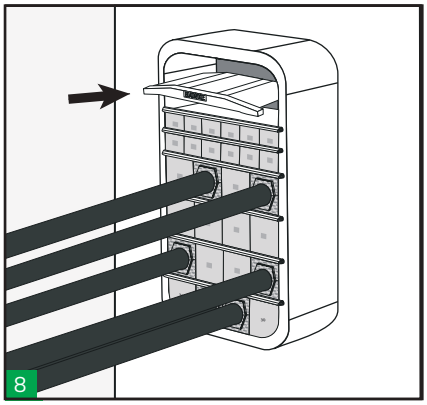
Insert HF200/R20 or HF300/ R20 round corner blocks in the bottom corners of the frame.



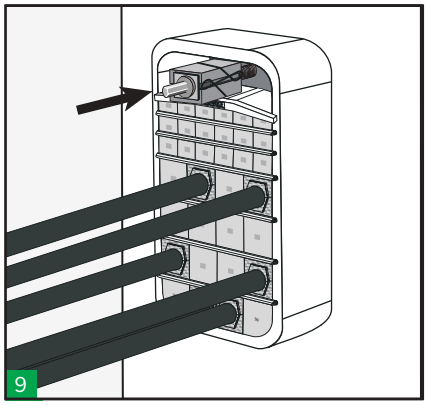
Begin packing the frame. Colour code will help you to install the blocks correctly.



A stayplate is always inserted between each layer of blocks. Blocks should not protrude out of the stayplates retaining lips.



Insert the last stayplate and the compression plate before the last row of blocks (or earlier if required). Check frame packing space. Verify that the complete sealing area of this frame size (see table) will be filled with blocks.



Pack the last row between the last stayplate and the compression plate. Insert the compression tool on the top, in the centre of the compression plate.

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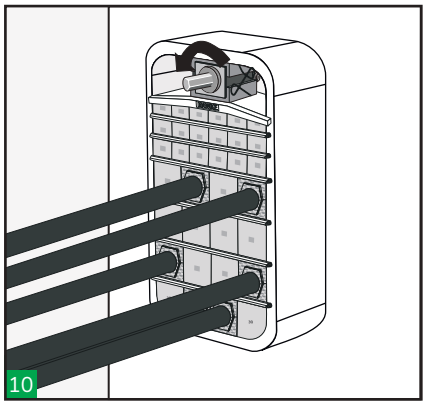
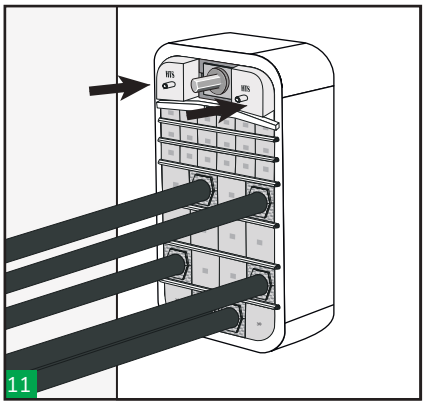
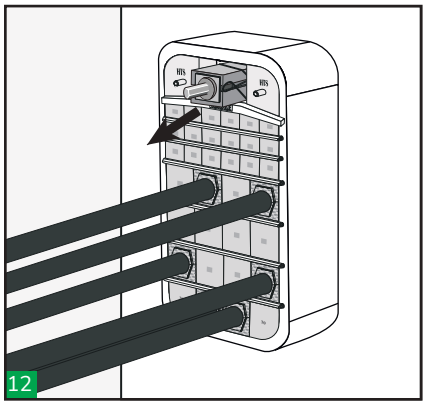
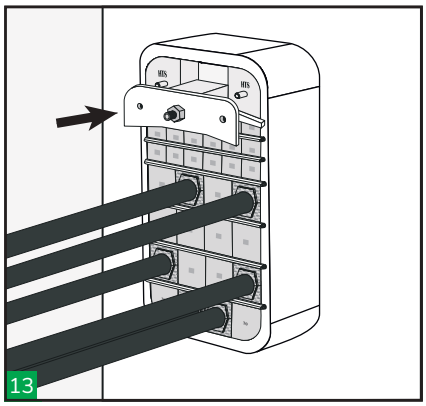


Tighten the compression tool until there is sufficient room to fit the outer blocks of the endpacker.

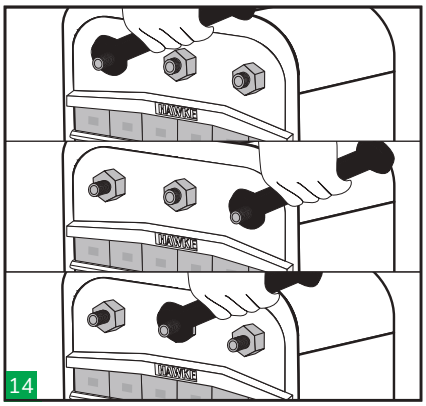




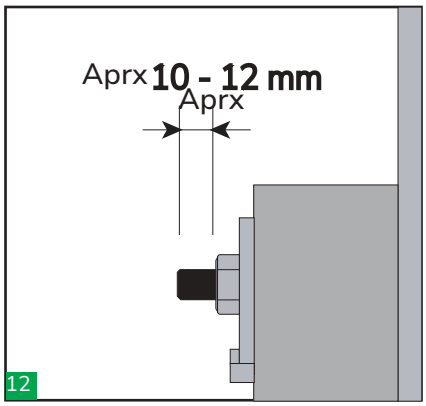
Insert the outer blocks of the endpacker.
Then, untighten the compression tool and remove it.



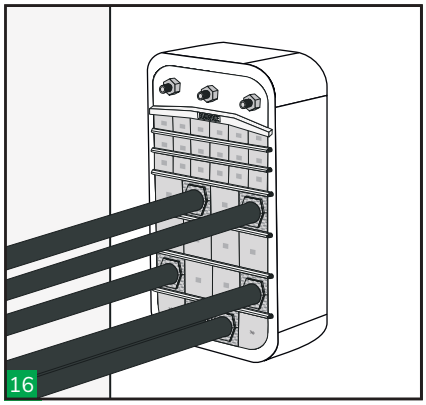
Insert the centre piece of the endpacker along with the front plate.



Tighten the nuts on the endpacking alternately following the above sequence to compress and complete the seal. Use a ratchet spanner for an easier installation.



Approximately 10-12 mm of thread should protrude on each bolt to ensure the sealing.

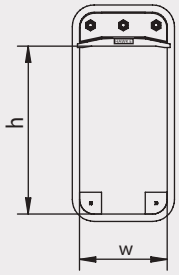


Make a visual inspection of the transit. HTS´s unique colour coding system enables the installation to be visually inspected after completion and ensures correct matching of the block halves.

Notes

Leave the system at least 24 hours before applying pressure. For disassembly see disassembly instructions.

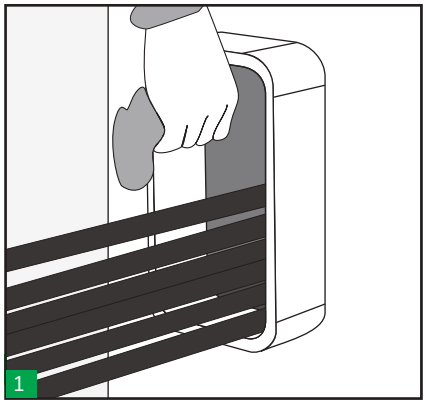
Sealing Area



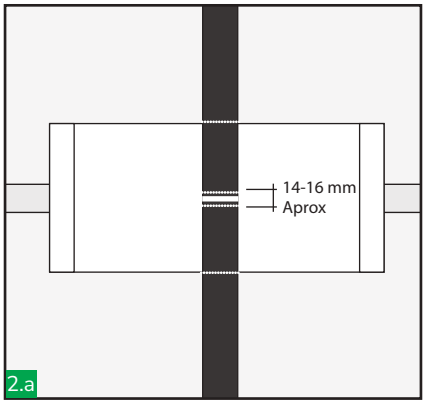
SIZE	SEALING AREA (w x h)
2	120x60
4	120x120
6	120x180
8	120x240

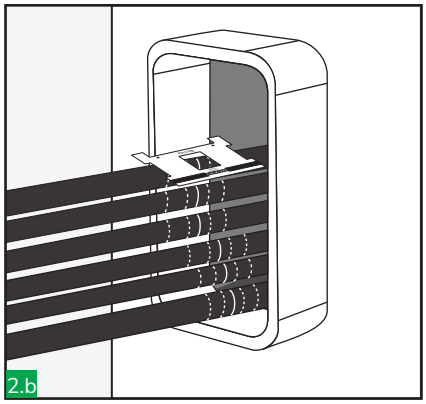
HTS

HMCX EMC SYSTEM Installation guide:

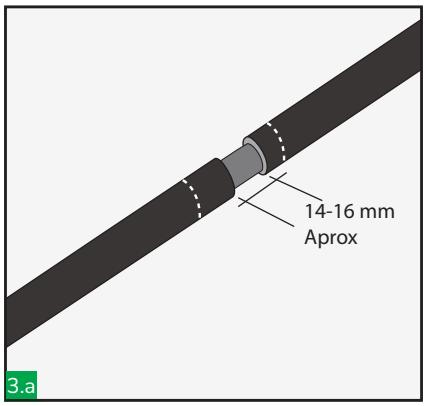


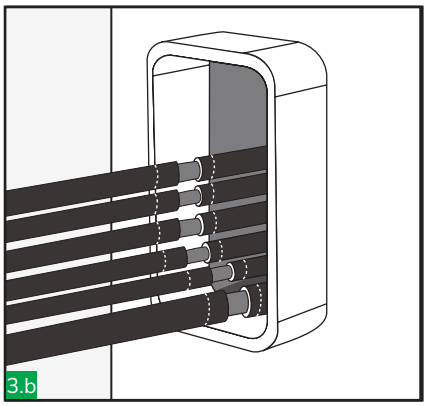
Make sure the frame is clean, then pull cables or pipes through, placing the largest at the bottom. (Note: Use open ended frame to fit around existing cables/pipes)



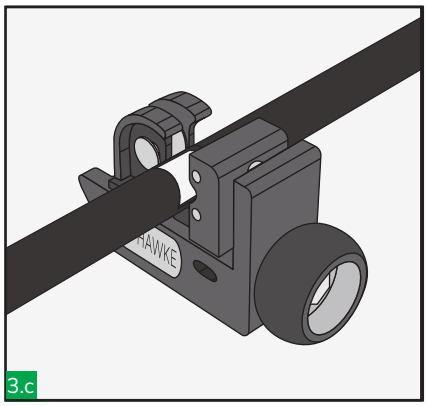


Mark each cable in the centre of the frame and 7-8mm either side of this point. Also, recommendable to mark the cable in both ends of the frame. EMC marking tool could help you to reduce time and ensure a correct marking.

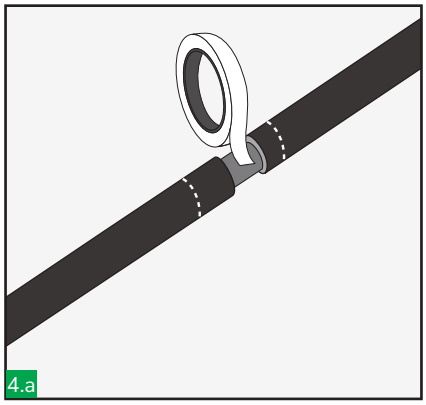


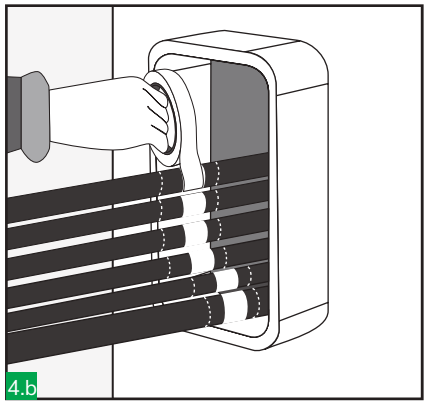


Cut and remove cable sheath between two central marks, to expose the cables conductive screen.

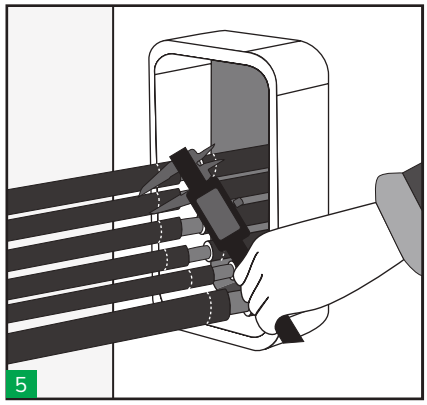


EMC cable sheath remove tool could help you to reduce time and ensure a correct cutting.





Using copper tape provided tightly wrap around the exposed screen until the cable outer diameter is regained. Repeat these steps for all cables.



Take measures of cables diameters and select the appropriate HTS tolerant blocks.

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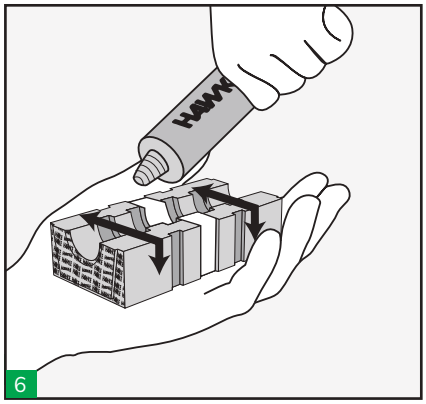
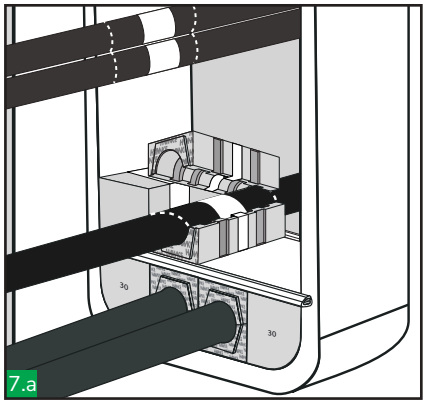
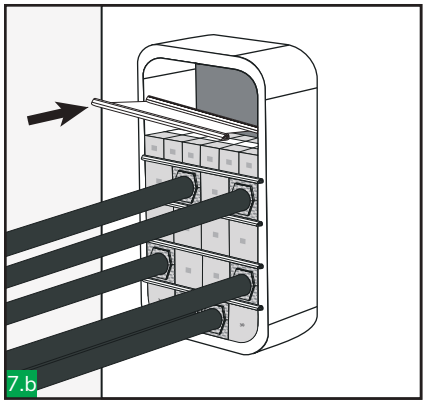
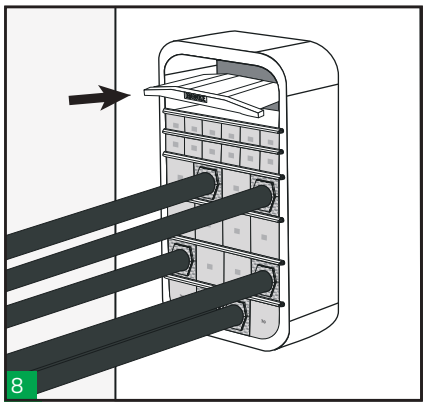


Very slightly lubricate all the insert and blank blocks using HTS lubricant taking care not contaminate the copper on blocks and cables.

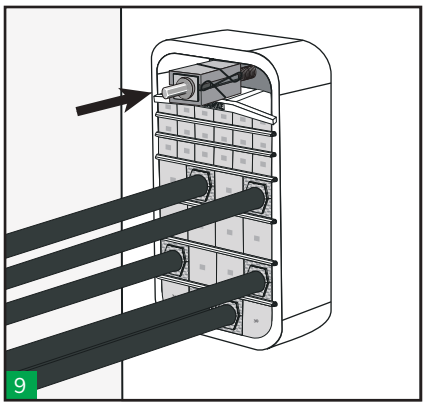




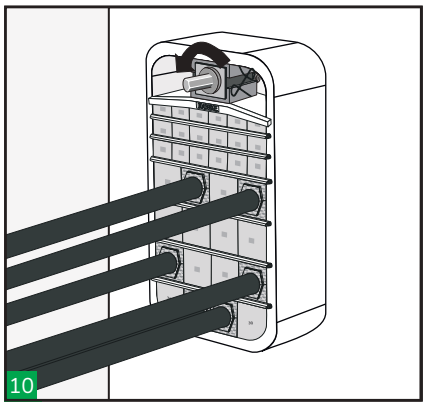
Begin packing the frame from the bottom to the top. A stayplate is always inserted between each layer of blocks. Blocks should not protrude out of the stayplates retaining lips. Ensure when fitting cables into blocks that copper tape on blocks and cable align. Marks in the cable will help to guarantee it.



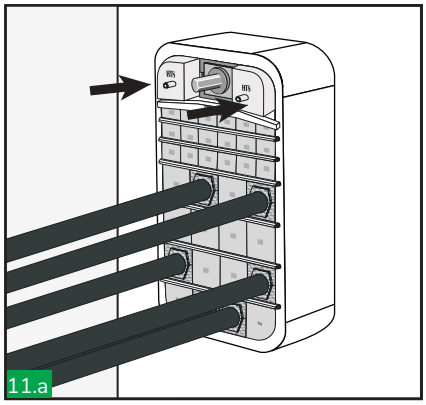
Insert the last stayplate and the compression plate before the last row of blocks (or earlier if required).Check frame packing space. Verify that the complete sealing area of this frame size (see table) will be filled with blocks.



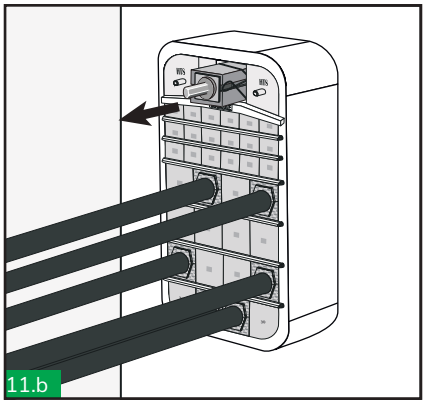
Pack the last row between the last stayplate and the compression plate. Insert the compression tool on the top, in the centre of the compression plate.

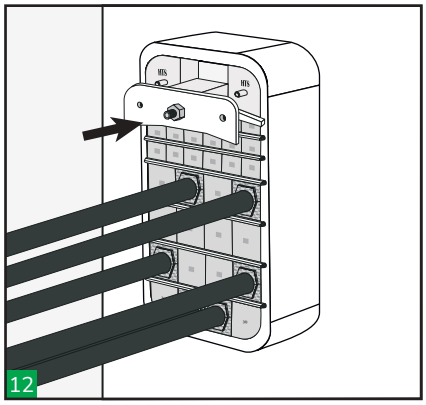


Tighten the compression tool until there is sufficient room to fit the outer blocks of the endpacker.

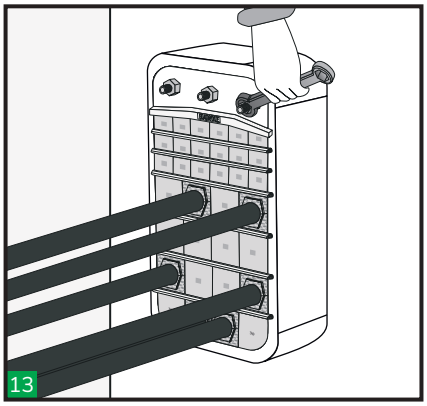


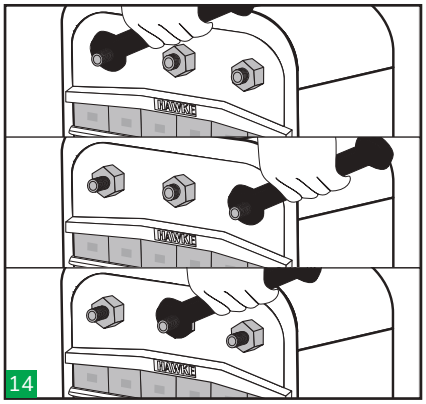
Insert the outer blocks of the endpacker.
Then, untighten the compression tool and remove it.



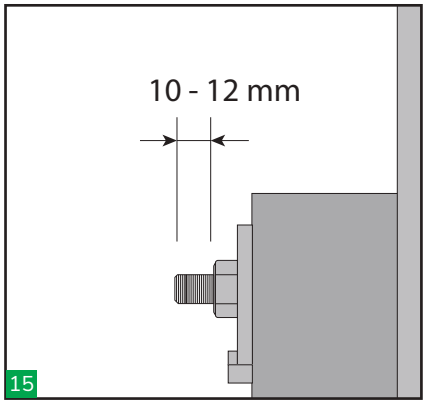


Insert the centre piece of the endpacker along with the front plate.

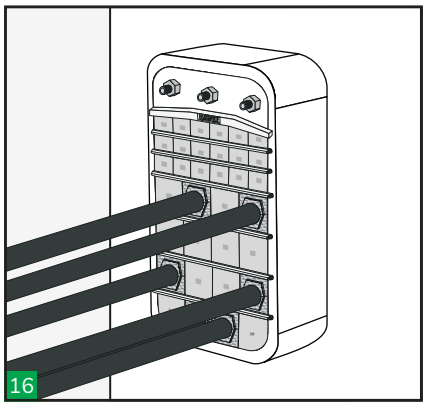




Tighten the nuts on the endpacking alternately following the above sequence to compress and complete the seal. Use a ratchet spanner for an easier installation.



Approximately 10-12 mm of thread should protrude on each bolt to ensure the sealing.

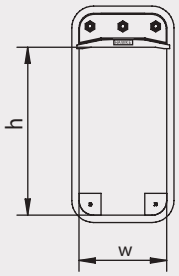


Make a visual inspection of the transit. Check that marks in all the cables are visible to be guarantee blocks and cable copper tapes are aligned.

Notes

Leave the system at least 24 hours before applying pressure.

Sealing Area



SIZE	SEALING AREA (w x h)
2	120x60
4	120x120
6	120x180
8	120x240

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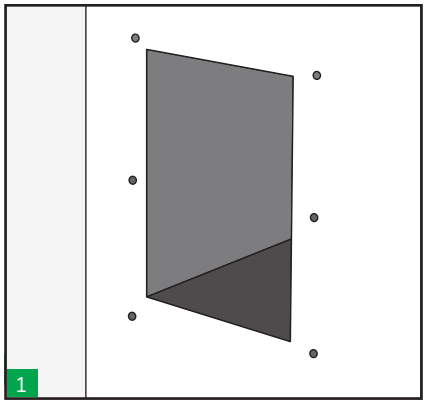
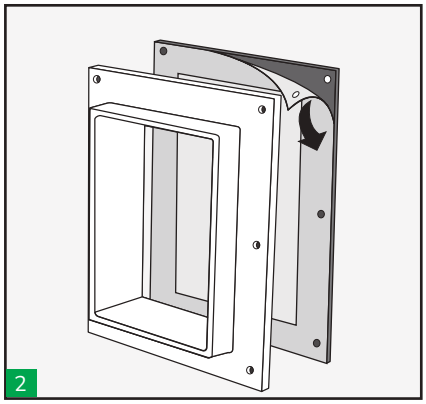
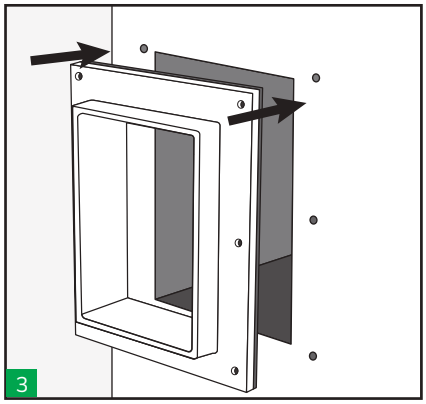
H-DM CABINET SEAL SYSTEM Standard installation.



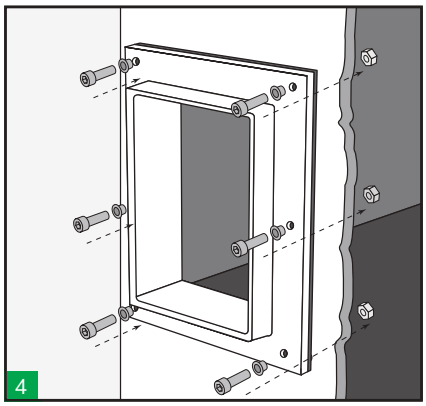
Cut a rectangular opening for the frame according to H-DH frame size to be used.(See table).



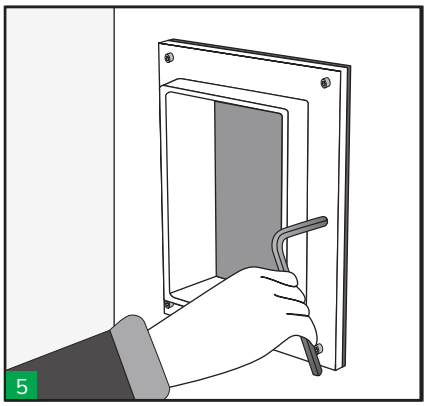
Remove the protection and stick the gasket on the aluminium frame.



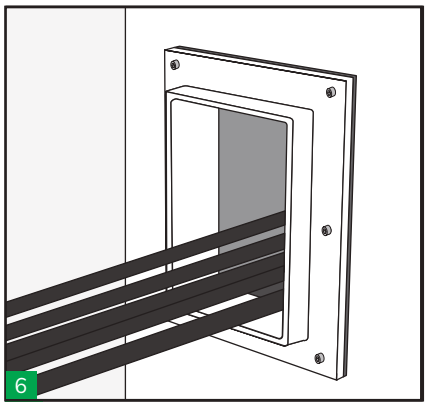
Install the frame in the opening with the gasket side towards the enclosure.



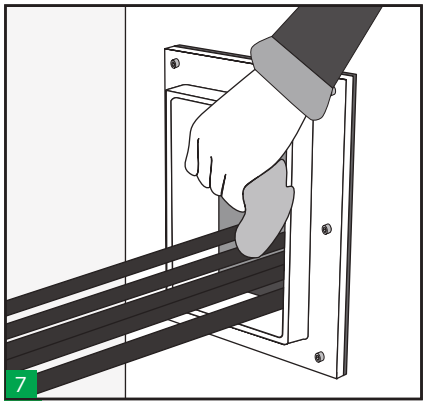
Insert bolts washers and nuts to the frame/ enclosure.



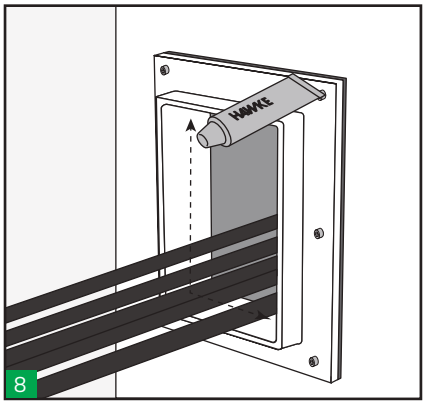
Screw the frame to the cabinet.



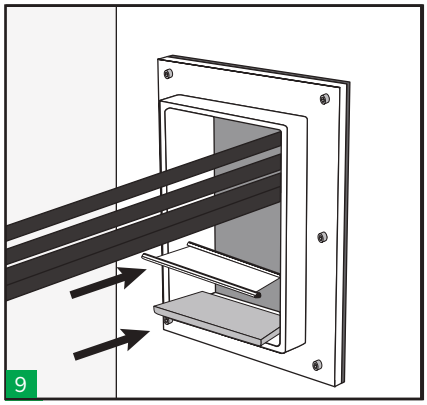
Pull cables or pipes through, placing the largest at the bottom.



Make sure the frame is clean.



Lubricate the inside of the frame. Make sure the corners are well lubricated.



Before starting the sealing, place a 5mm strip with a stayplate at the bottom of the frame. These are included with compression system.

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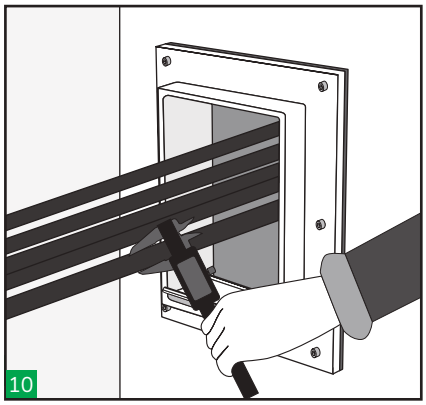
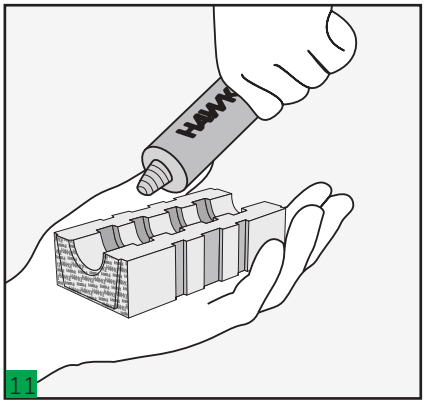
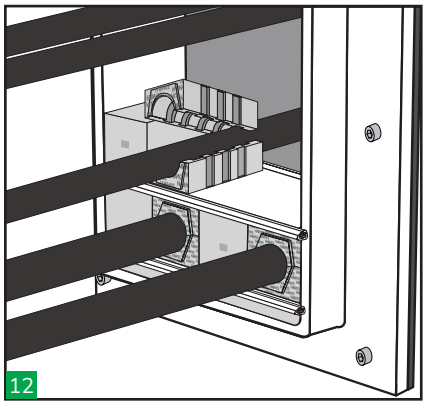


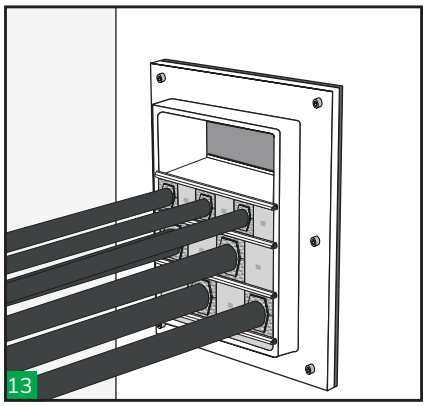
Take measures of the cables diameter with a calibre and select the appropriate HTS tolerant blocks. Colour code will help you to select the correct ones.



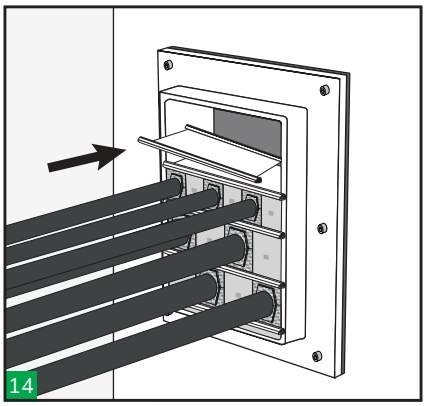
Lubricate all the insert and blank blocks, using HTS lubricant.



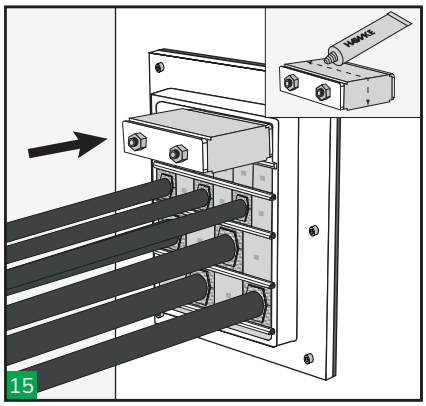
Keep sealing the transit from the bottom to the top using insert and blank blocks, as required.



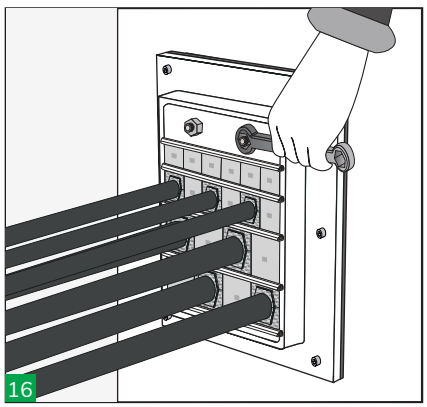
A stayplate is always inserted between each layer of blocks.



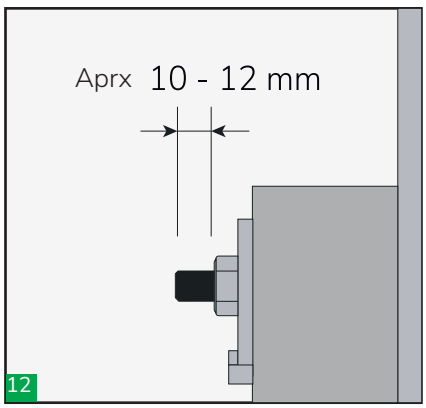
Insert the last stayplate before the last row of blocks (or earlier if required). Verify that the complete sealing area of this frame size (see table) will be filled with blocks. Note: 5mm strip supplied with the



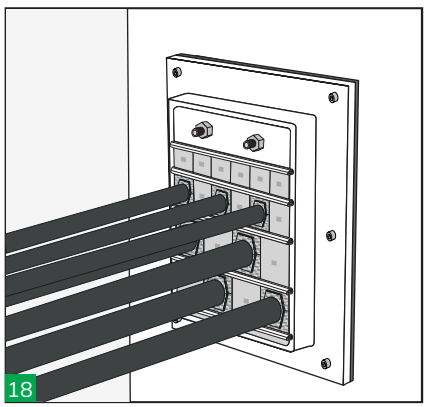
Pack the last row between the two last stayplates. Lubricate and insert H-DM endpacker at the top of the frame.



Tighten the nuts on the endpacker in alternate order to compress and complete the seal.

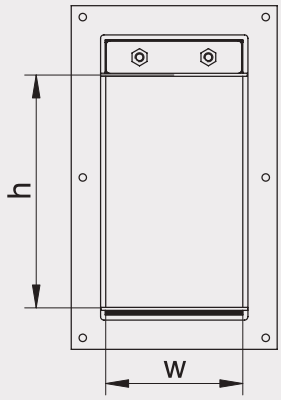


Approximately 10-12 mm of thread should protrude on each bolt.



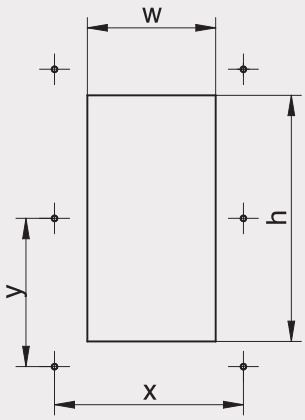
Make a visual inspection of the transit. HTS's colour coding enables the installation to be visually inspected after completion and ensures correct matching of the blocks halves.

Sealing Area



DESCRIPTION	SEALING AREA (mm)
H-DM 1	60x60
H-DM 4	120x120
H-DM 5	60x180
H-DM 6.3	120x200
H-DM 6+6	2x (120x180)

Hole dimension



DESCRIPTION	HOLE DIMENSIONS		BOLTS POSITION		
	L (mm)	H (mm)	Φ (mm)	y (mm)	x (mm)
H-DM 1	77	117	6	100	140
H-DM 4	137	177	6	160	100
H-DM 5	77	235	6	100	129
H-DM 6.3	137	257	6	160	140
H-DM 6+6	137	458	6	160	120

*All dimensions are nominal values

Notes

Leave the system at least 24 hours before applying pressure.

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RECTANGULAR CIVIL FRAMES INSTALLATION GUIDES

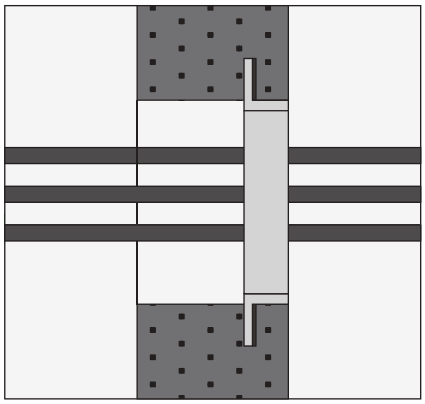

Figure 1

The frame can be casted directly into a wall or floor.

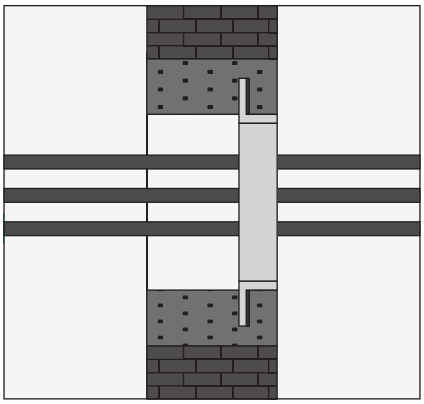

Figure 2

The frame may be cast into a concrete jacket. This method being normally used for brick and blockwork walls which in turn is fixed into the wall or floor.

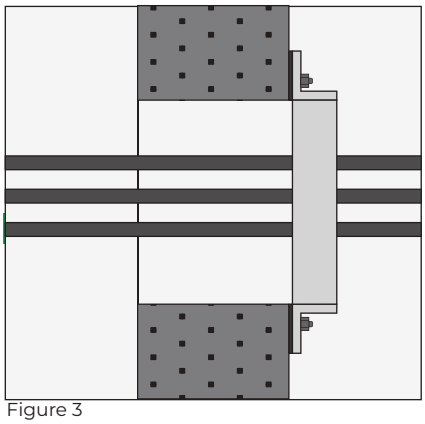

Figure 3

The frame can be bolted to wall and floors.

CASTED

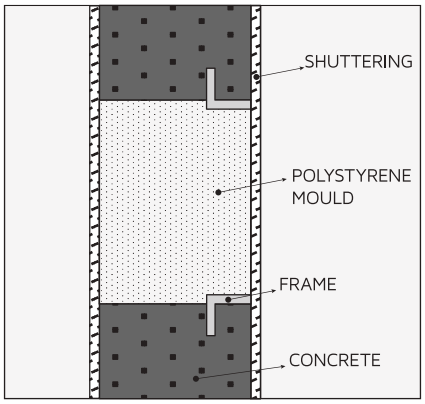

Figure 1

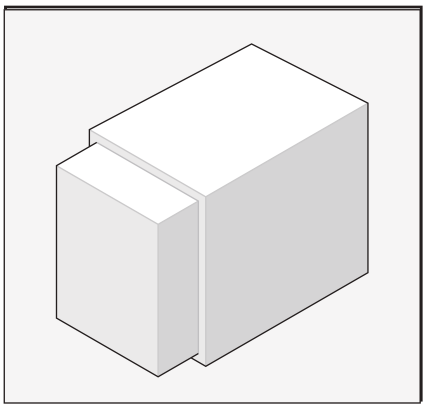

Figure 2

For HTS frames which are cast into a wall or floor it is recommended that a HTS Polystyrene Mould is used. HTS moulds are available to suit sizes 2, 4, 6 and 8 with 300mm lengths and may be cut to suit the deep of the wall or floor as required.

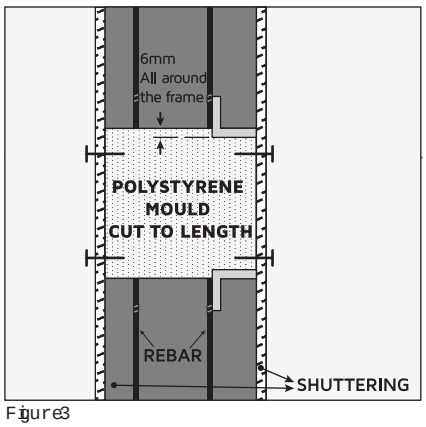

Figure 3

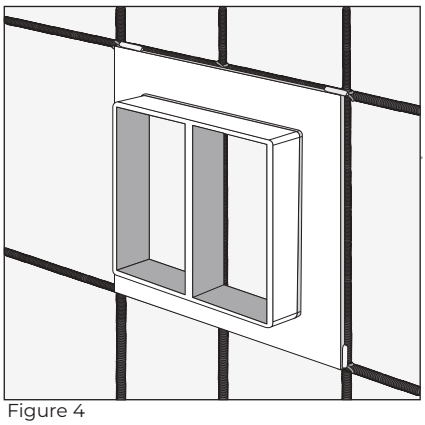

Figure 4

Frames and moulds require support to ensure that the correct position is maintained whilst the concrete is being poured. This may be achieved by nailing though the shuttering into the mould (if used) and fixing the frame to the rebar.

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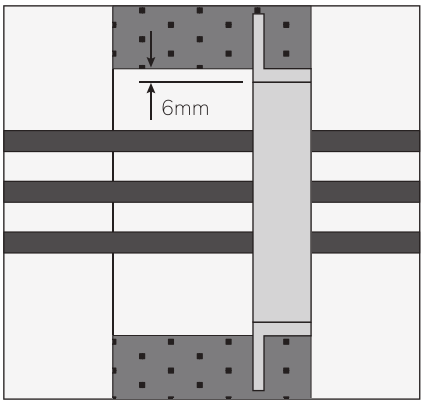

Figure 5

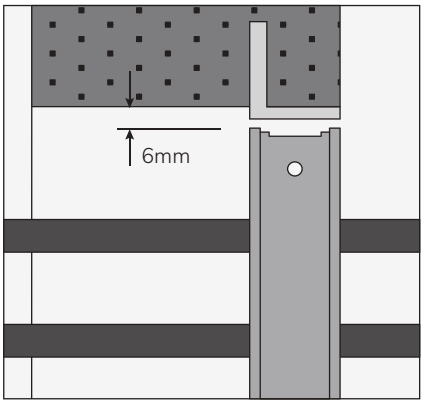

Figure 6

Stayplates and compression plates have retaining lugs. Clearance for these must be allowed when a frames are cast into a structure. This allowance is 12mm and should be added to the total internal width of the frame to obtain the correct dimensions. HTS Moulds have this allowance built in.

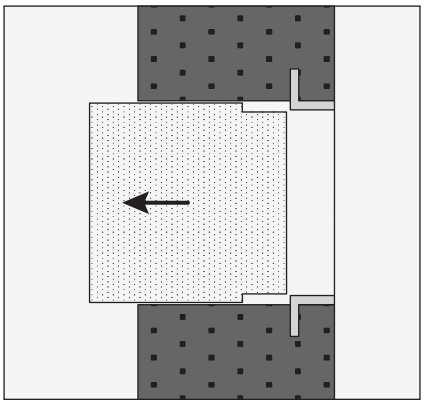
Figure 7

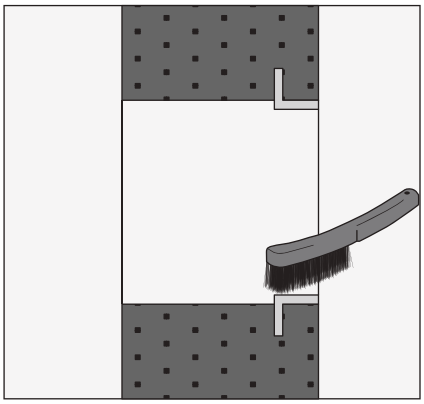
Figure 8

When all shuttering and other formwork has been removed, the polystyrene mould must be removed prior to electrical installation.

The transit aperture should be cleaned to remove any concrete or other debris that may have contaminated the apertures internal faces.

BOLTED

Frames can be bolted to floors and walls in either of the options showed below (HCOX frames, open version, can not be reverse fixed).

Stayplates and compression plates have retaining lugs, 6mm clearance is required to all sizes. When frames are reverse fixed then 9mm clearance is required to all size frames.

For minimum aperture dimensions see table pag...152.

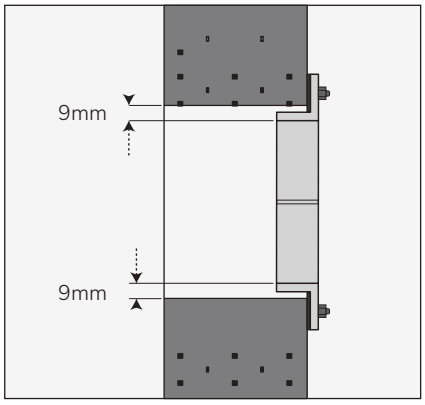

Figure 1.a

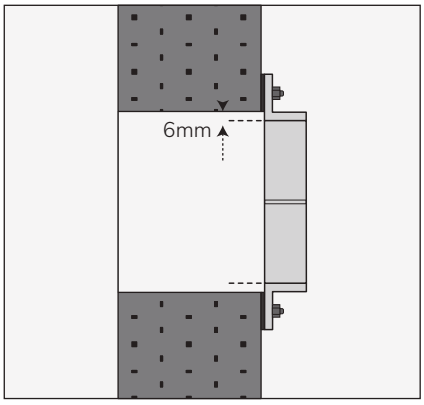

Figure 1.b

Size to fixing holes and type of fastener is to be established by the civil contractor dependent on size of frame weight and structure to which it is to be fixed. When fixing frames to concrete/brick type structure care should be taken if using expanding type fixings as they could burst into the aperture.

HTS

BOLTED

For bolted installations Intumescent Mastic or HTS Fireproof Silicone should be inserted between the frames flange and the structure.

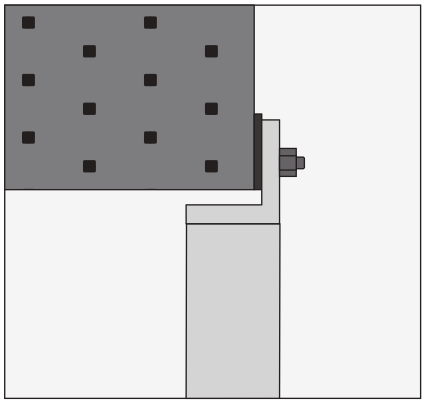

Figure 2.a

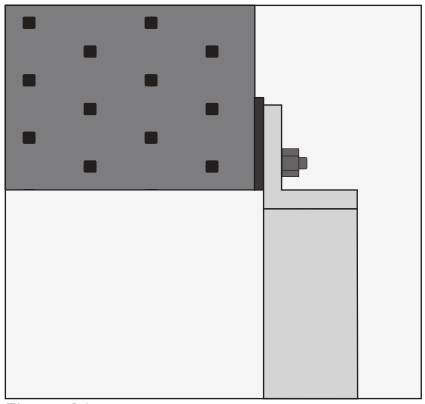

Figure 2.b

Each 300ml tube of Mastic/ Silicone should be sufficient to mount and seal 3 individual frames or a multiple frame of up to 4 apertures.

Prior to application of sealant ensure that faces to be sealed are dry and free from grease and any loose material, ensure that transit frame mates up with any fixings/holes already present checking especially the apertures over which the frame is to be mounted. (See minimum aperture dimensions table).

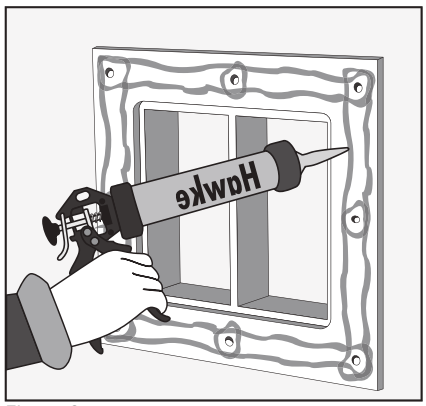

Figure 3.a

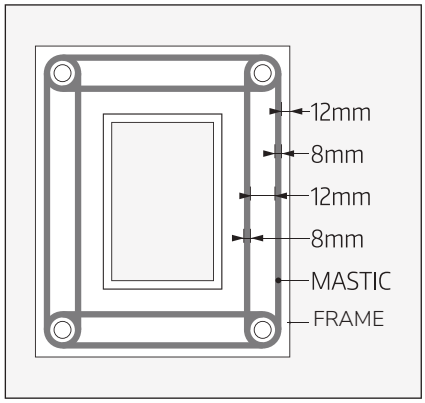

Figure 3.b

Cut nozzle on Mastic/ Silicone tube to produce a bead diameter of approximately 8mm.

Apply two parallel rows of mastic and run a bead of mastic around each hole, as show below.

The Mastic/Silicone can be applied to front or rear of the frame dependant on the installation. See Fig.1 and Fig.2.

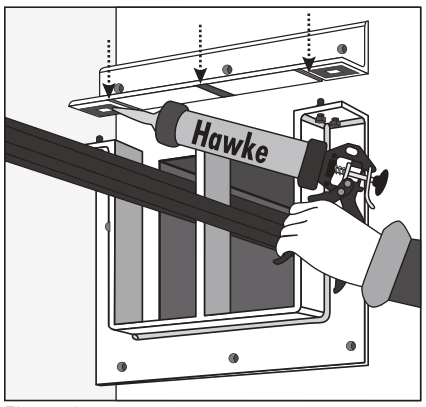

Figure 4.a

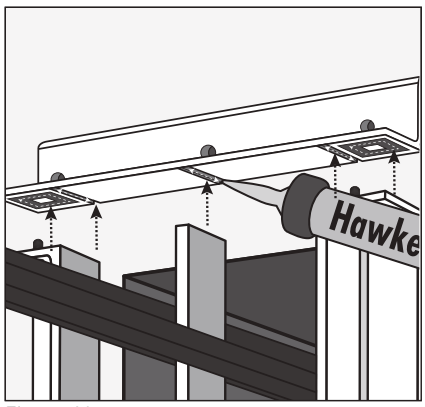

Figure 4.b

If HCOX open frame is used, Mastic/Silicone should be applied also in all bolting areas of the removable end as showed below.

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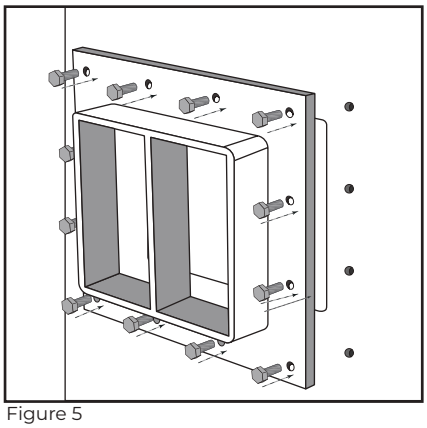

Figure 5

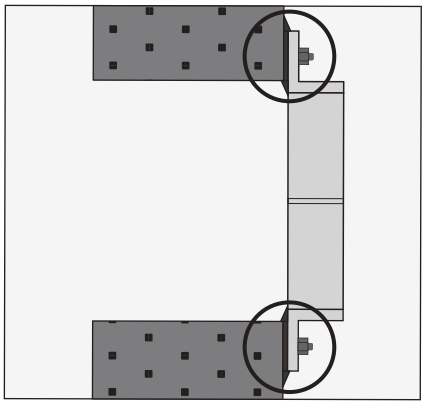

Figure 6

The frame can now be placed over its fixings and fasteners tightened to clamp the frame to the wall/floor

When tightened up to the required amount, the Mastic/ Silicone should be faced off to the frame leaving a fillet of Mastic/Silicone around external edges of the frame.

BACKING PLATES

Lightweight sheet steel backing plates are available to be used in conjunction with HTS Civil Frames. Backing plates are produced in standard lengths for wall thickness of 60mm to 200mm for sixes 2,4,6 and 8, frames plus multiples there of, but specials can be made. Please state thickness of wall when ordering.

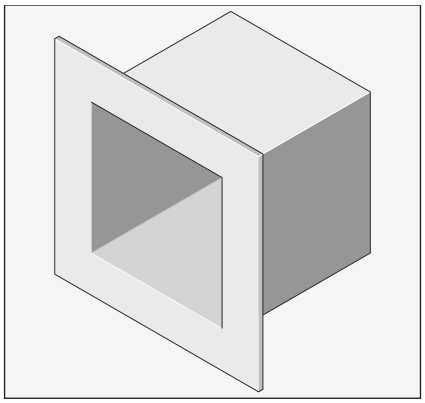

Figure 1.a

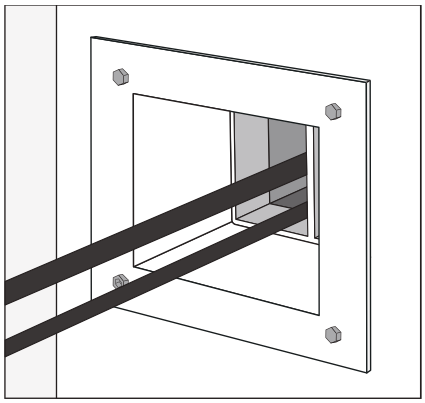

Figure 1.b

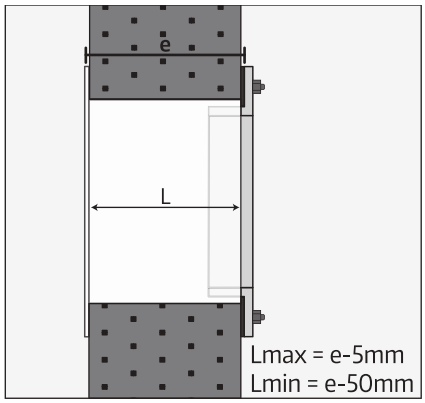

Figure 1.c

These maintain the openings through the wall and floors and add the finished appearance of the installation. It should be noted that the backing plates do not add to the fire resistance of a transit and should be not used to stop fire spread in cavity walls.

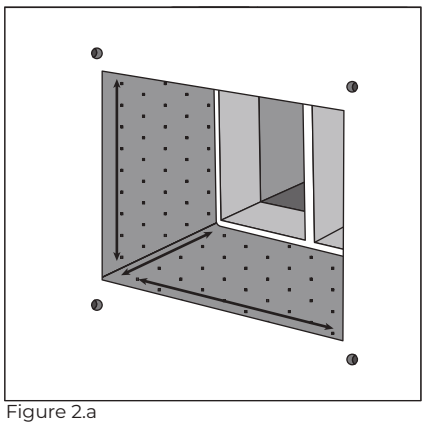

Figure 2.a

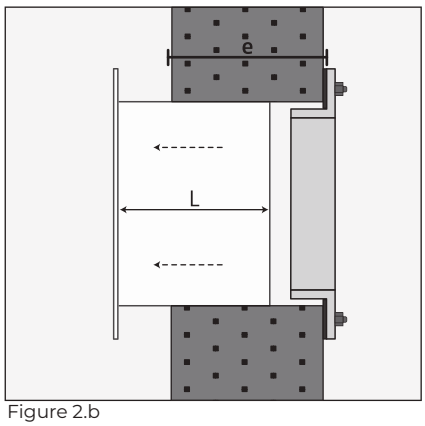

Figure 2.b

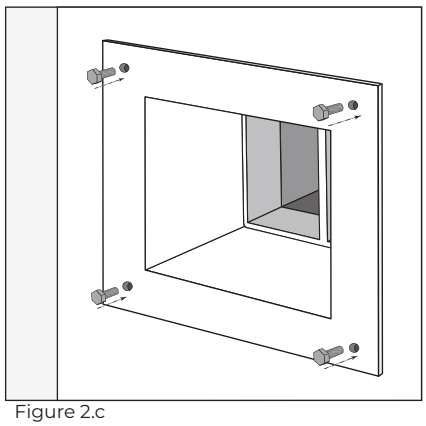

Figure 2.c

MINIMUM APERTURE DIMENSIONS WHEN FRAMES ARE CAST INTO OR BOLTED ONTO A WALL											
Frame Type	H (mm)	W (mm)									
		x 1	x 2	x 3	x 4	x 5	x 6	x 7	x 8	x 9	x 10
HCX 2 HCOX 2	119	138	268	398	528	658	788	918	1048	1178	1308
HCX 2+2 HCOX 2+2	230										
HCX 2+4 HCOX 2+4	288,5										
HCX 2+6 HCOX 2+6	347										
HCX 2+8 HCOX 2+8	405,5										
HCX 4 HCOX 4	177,5										
HCX 4+4 HCOX 4+4	347										
HCX 4+6 HCOX 4+6	405,5										
HCX 4+8 HCOX 4+8	464										
HCX 6 HCOX 6	236										
HCX 6+6 HCOX 6+6	464										
HCX 6+8 HCOX 6+8	522,5										
HCX 8 HCOX 8	294,5										
HCX 8+8 HCOX 8+8	581										

MINIMUM APERTURE DIMENSIONS WHEN FRAMES ARE CAST INTO OR BOLTED ONTO A WALL							
Frame Type	x 1		x N				For other HCLX frame styles and sizes please contact Hawke technical dept.
	H (mm)	W (mm)	W (mm)				
			x 2	x 3	x 4	x 5	x 6
HCLX 180	236	198	388	578	768	958	1148
HCLX 240	298	258	508	758	1008	1258	1508
HCLX 360	458	378	748	1118	1488	1858	2228

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CIVIL SLEEVES INSTALLATION GUIDE

There are several methods which can be used to install HTS Civil Sleeves, each method giving an inspectable professional finish to any cable/pipe penetration.

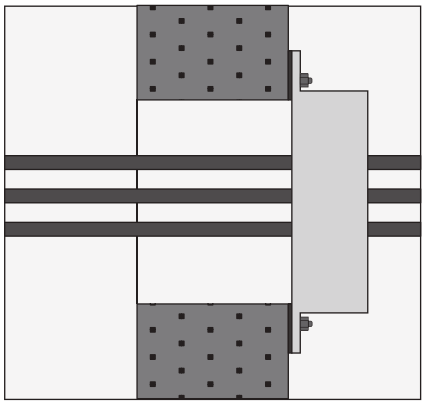


Figure 1

The sleeve can be bolted to wall and floors.

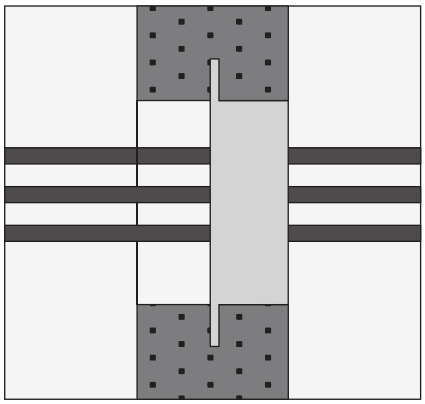


Figure 2.a

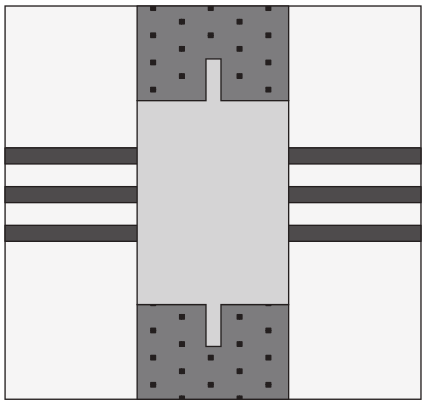


Figure 2.b

The sleeve can be casted directly into a wall or floor.

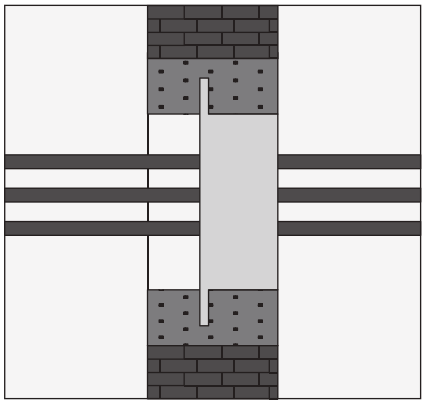


Figure 3.a

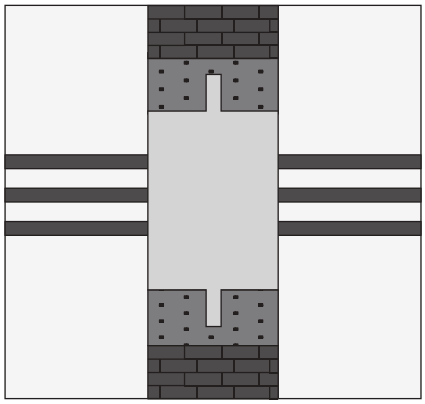


Figure 3.b

The sleeve may be cast into a concrete jacket. This method being normally used for brick and blockwork walls which in turn is fixed into the wall or floor.

HTS

CASTED

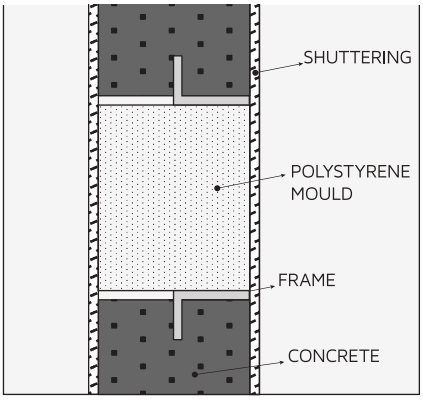


Figure 1.a

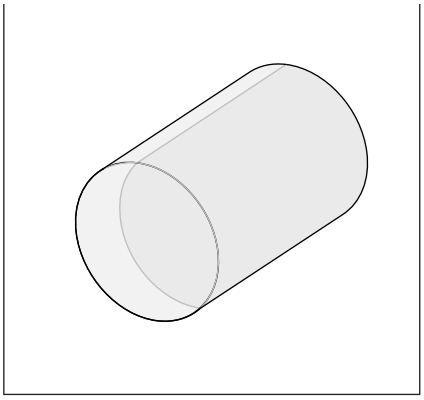


Figure 1.b

For HTS sleeves which are cast into a wall or floor it is recommended that a HTS Round Moulds is used. HTS moulds are available to suit sizes 30, 40, 50, 70, 100, 125, 150 175 and 200 with 300mm lengths and may be cut to suit the deep of the wall or floor as required.

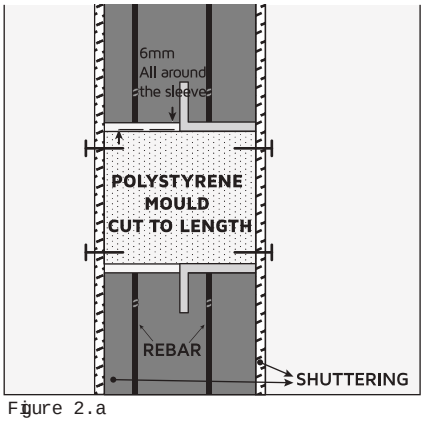


Figure 2.a

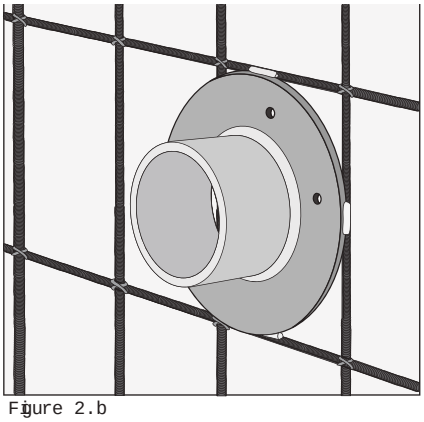


Figure 2.b

Sleeves and moulds require support to ensure that the correct position is maintained whilst the concrete is being poured. This may be achieved by nailing though the shuttering into the mould (if used) and fixing the frame to the rebar.

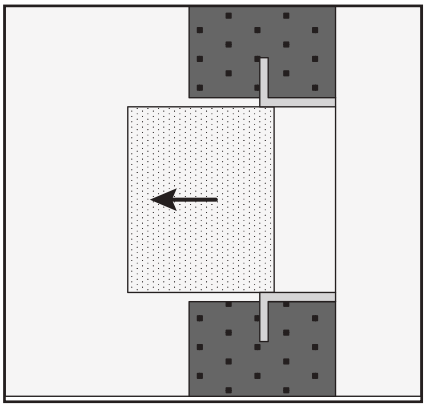


Figure 3

When all shuttering and other formwork has been removed, the polystyrene mould must be removed prior to electrical installation.

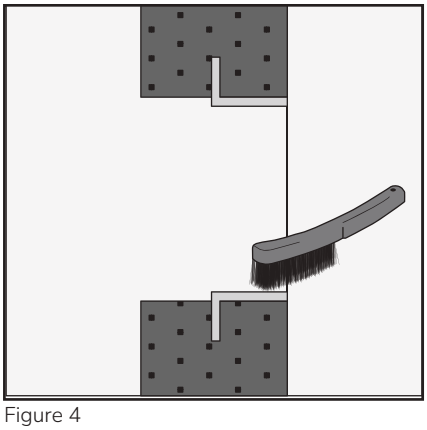


Figure 4

The transit aperture should be cleaned to remove any concrete or other debris that may have contaminated the apertures internal faces.

BOLTED

Sleeves can be bolted to floors and walls in either of the options showed below (CBO Sleeves, open version, can not be reverse fixed).

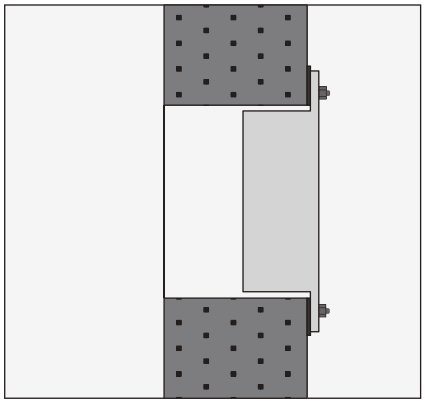


Figure 1.a

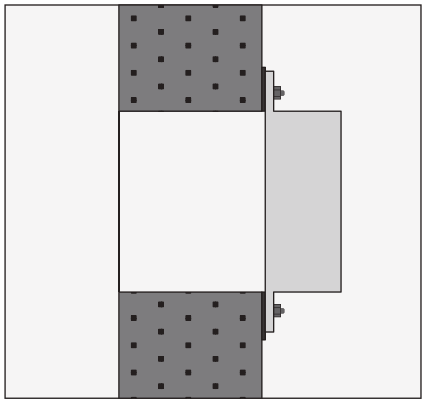


Figure 1.b

Size to fixing holes and type of fastener is to be established by the civil contractor dependent on size of sleeve weight and structure to which it is to be fixed. When fixing sleeves to concrete/brick type structure care should be taken if using expanding type fixings as they could burst into the aperture.

For bolted installations Intumescent Mastic or HTS Fireproof Silicone should be inserted between the sleeves flange and the structure.

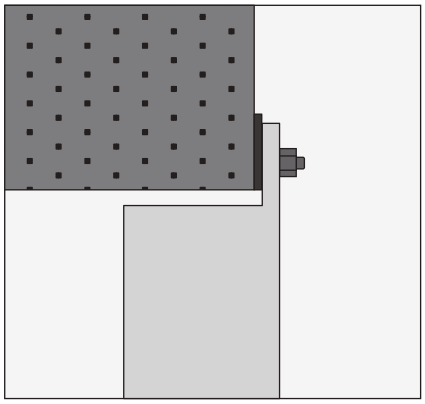


Figure 2.a

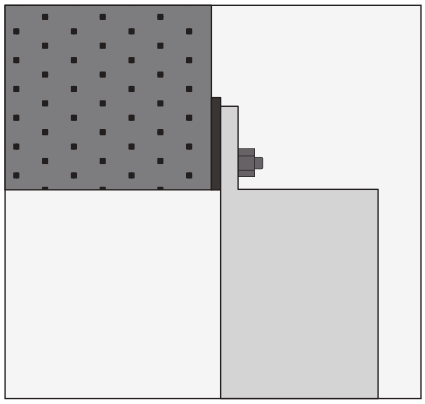


Figure 2.b

Prior to application of sealant ensure that faces to be sealed are dry and free from grease and any loose material, ensure that transit sleeve mates up with any fixings/holes already present checking especially the apertures over which the sleeve is to be mounted. (See minimum aperture dimensions table).

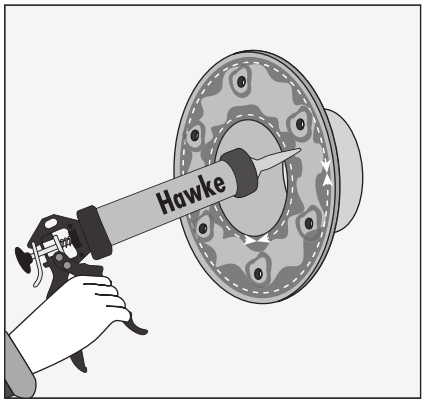


Figure 3.a

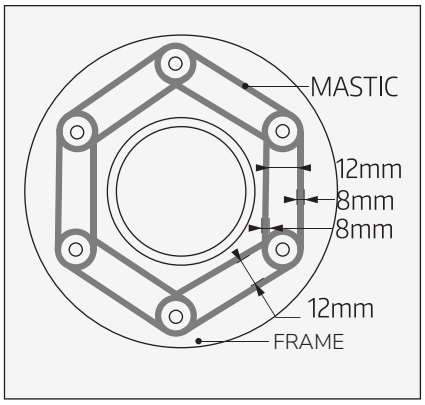


Figure 3.b

Cut nozzle on Mastic/ Silicone tube to produce a bead diameter of approximately 8mm.

Apply two parallel rows of mastic and run a bead of mastic around each hole, as show below.

The Mastic/Silicone can be applied to front or rear of the frame dependant on the installation.
See Fig.1 and Fig.2.

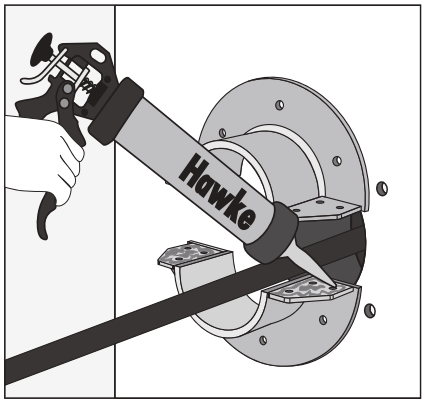


Figure 4.a

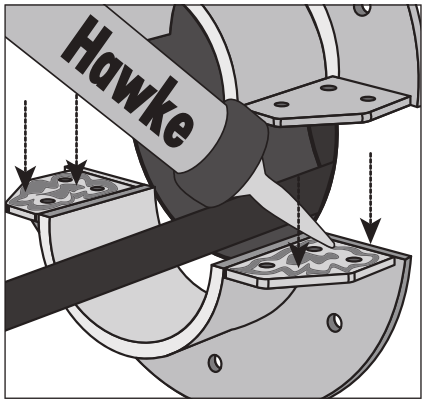


Figure 4.b

If CBO open sleeve is used, Mastic/Silicone should be applied also in all bolting areas of the removable end as showed below.

The sleeve can now be placed over its fixings and fasteners tightened to clamp the sleeve to the wall/floor.

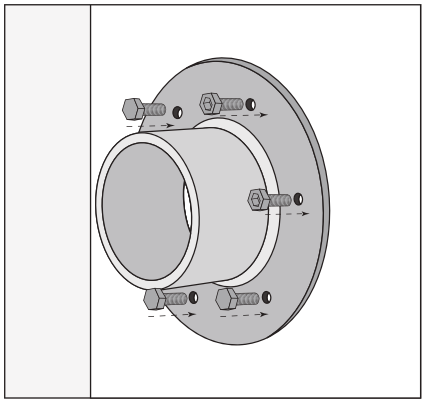


Figure 5

When tightened up to the required amount, the Mastic/Silicone should be faced off to the frame leaving a fillet of Mastic/Silicone around external edges of the frame.

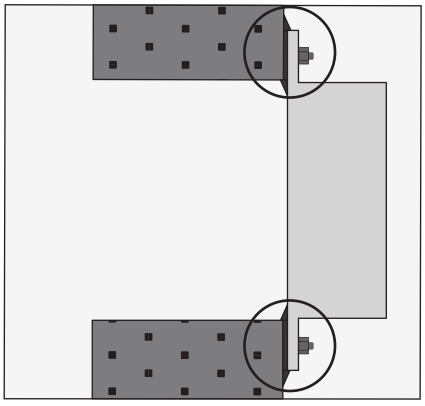
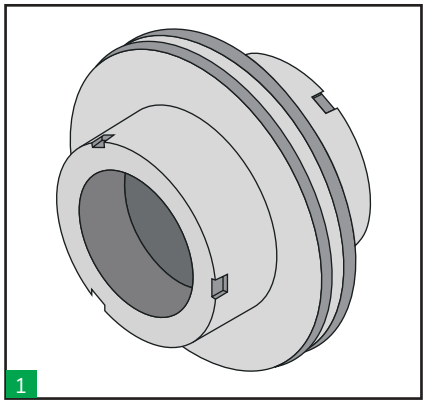
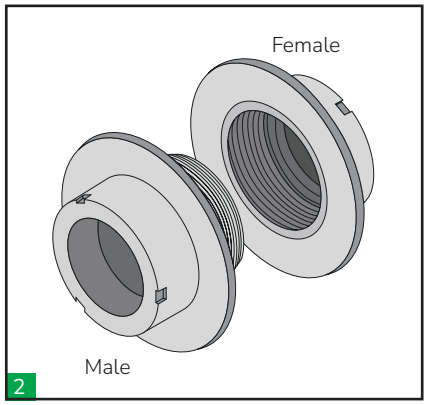


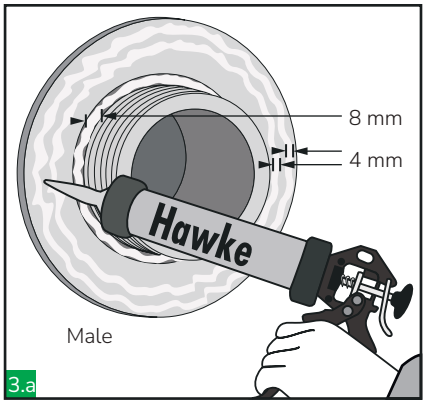
Figure 6

CBT Installation guide:

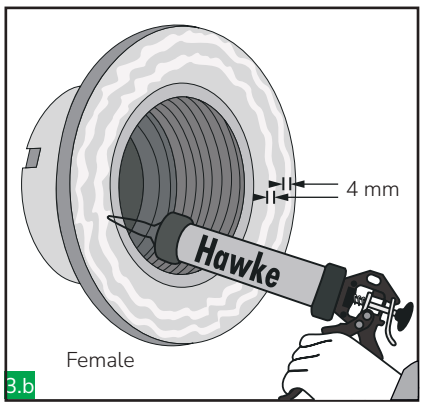


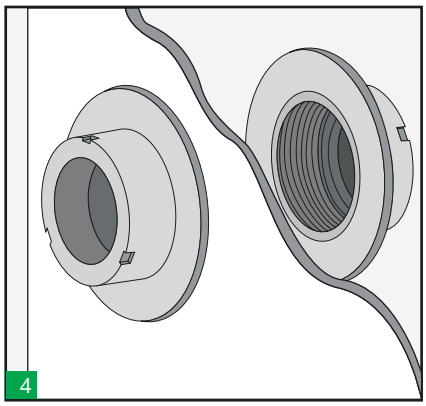


Open the threaded sleeve.

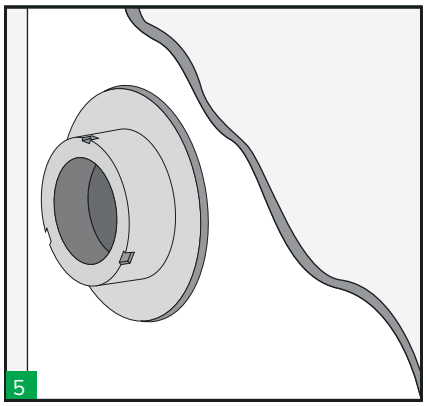


Apply HTS Fire Resistant Silicone on both flanges to be in contact with the bulkhead/deck following above instructions.



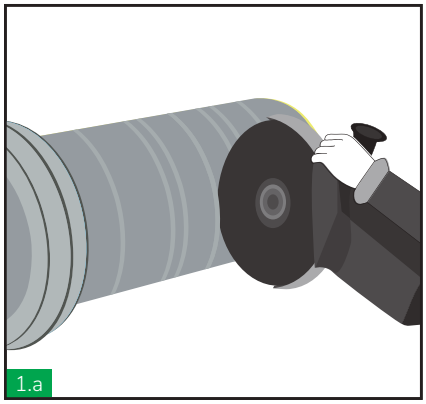


Insert the sleeve int othe precut hole in the bulkhead and begin tightening both pieces.

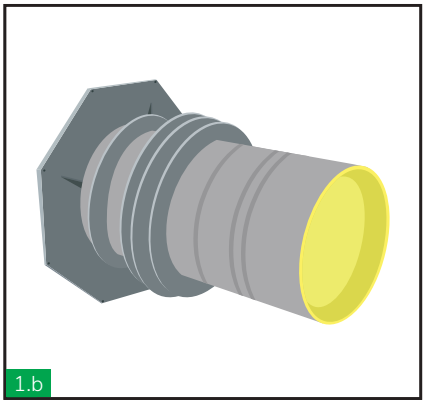


Tighten both pieces firmly. Use a hook wrench if necessary. Once tightened remnove excess of silicone.

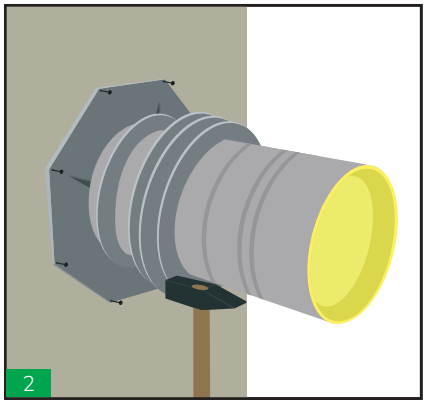
CBP Installation guide:



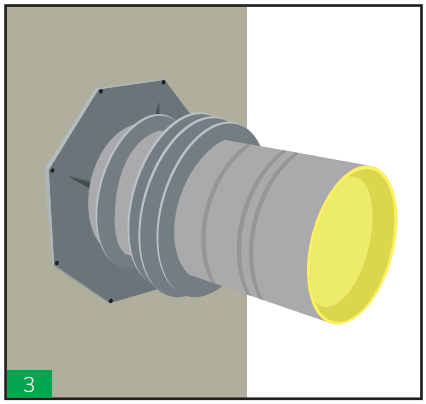
Cut the CBP wall sleeve in stock length (= 500mm) to the required component thickness using a suitable cutting tool.



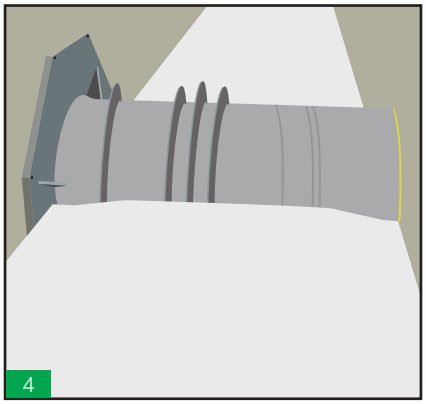
The wall sleeve can also be ordered with the desired wall thickness ex factory.



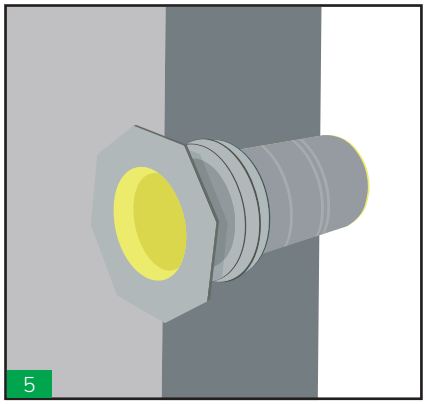
Nail the adjusted wall sleeve to the formwork through the corresponding nail holes on the flange. The supplied closure plugs remain in the wall sleeve. If used in a foundation, attach the wall sleeve to the reinforcement using binding wire and align it (again, used the provided nail holes.)



The wall sleeve is now installed and the wall formwork can be closed.



The wall is concreted. The monolithic triple seal provides reliable protection against water ingress.



The CBP wall sleeve is now cast into the wall. Further sealing can now be carried out, e.g. using a thick bitumen coating or HTS Blind Plugs/HRST/HBRT Sealing Systems.

CBP wall sleeve

Scope of delivery

- CBP wall sleeve
- 2 closure plugs per wall sleeve

General installation information

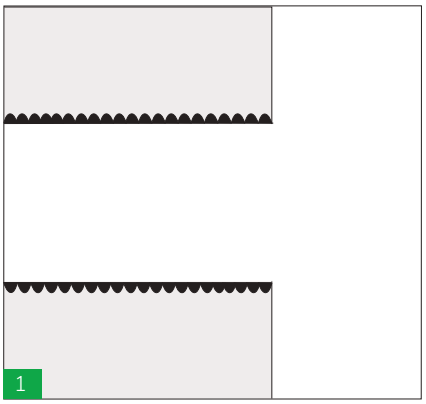
- The adhesive flange must be clean and free of dust and grease to ensure the proper application of surface seals such as thick bitumen coatings, sealing slurries, etc.
- The length of the wall sleeves can be adjusted on site.

Tools required for the correct installation of a CBP wall sleeve

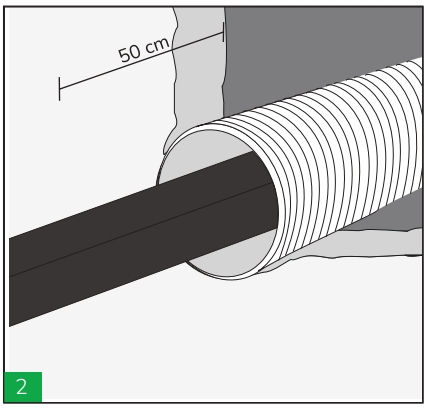
- Measuring tool
- Cutting tool, e.g. angle grinder or saw
- Hammer with appropriate nails
- Binding wire for installation in the foundation

HTS

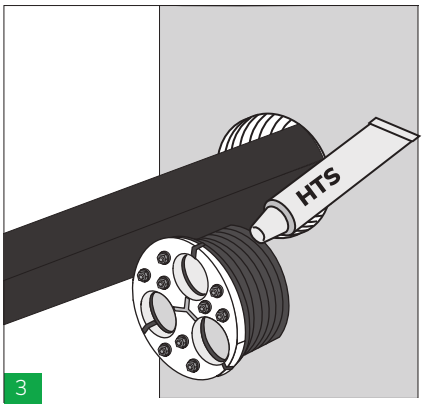
HBRST Installation guide:



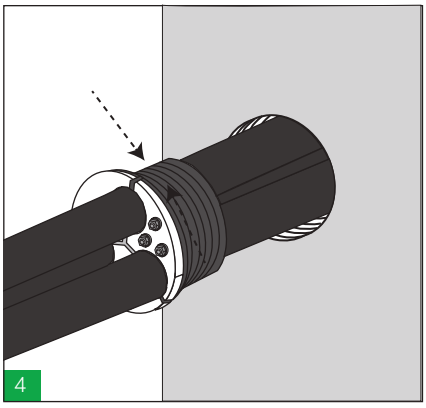
Ensure the tube is securely fitted and free of any looseness or gaps with the wall.



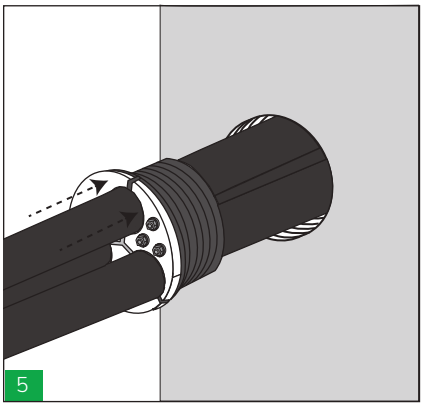
Confirm that cables enter the wall perpendicularly for at least 50 cm before reaching the tube.



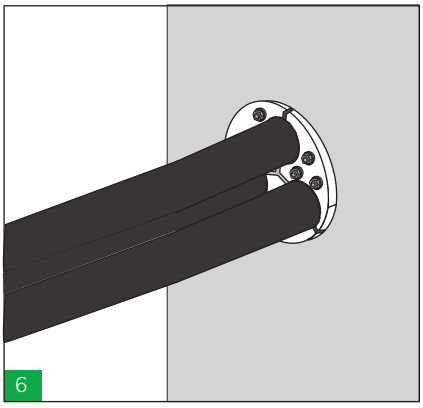
Lubricate the inside of the HBRST where it contacts the cable, and lightly lubricate the outside where it contacts the tube.

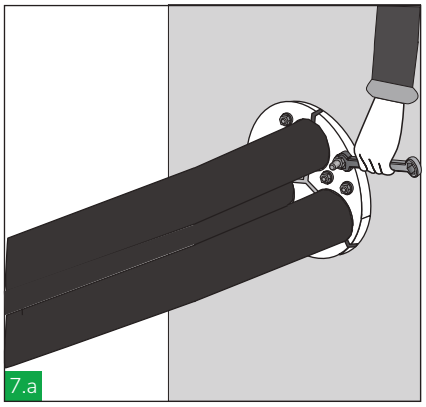


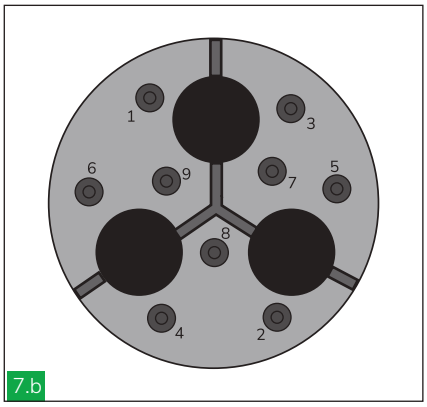
Open the HBRST and install it around the cable(s).



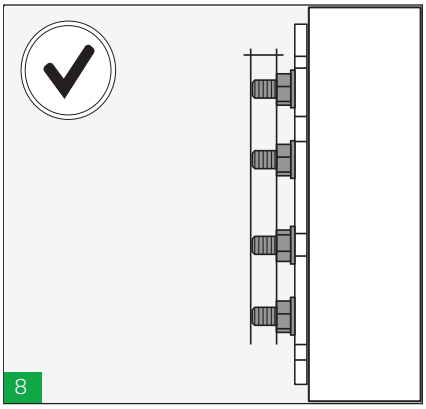
Carefully insert the HBRST into the tube.Ensure the HBRST is fully inserted so that the front plates are in direct contact with the tube.







Tighten the screws incrementally, approximately 2 mm at a time, following the sequence shown in the pictured. Continue tightening until the system is fully compressed to seal the cable/pipe effectively.



Conduct a final visual inspection of the installation, ensuring the following: The tightening has been uniform. The rubber seal fully embraces the cable and protrudes slightly through the front plate.

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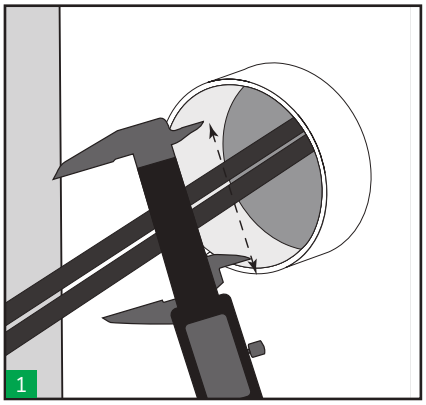
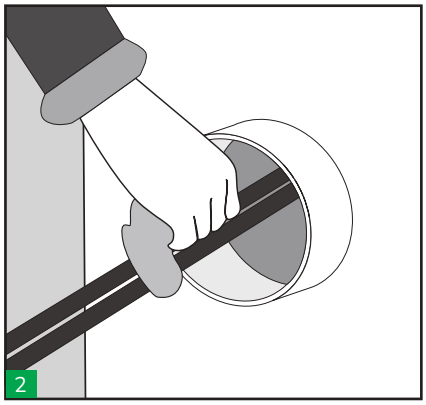
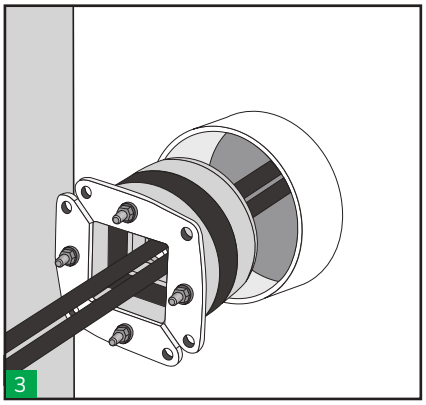
HTS

HRTO / HRT ROUND SYSTEM Standard installation guide:

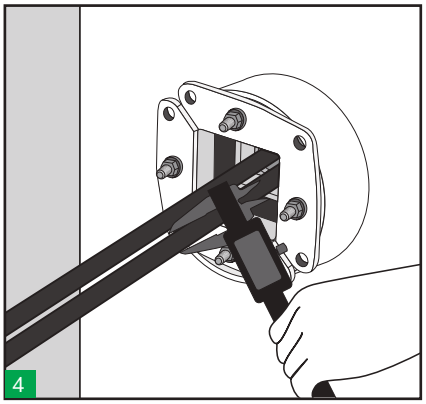




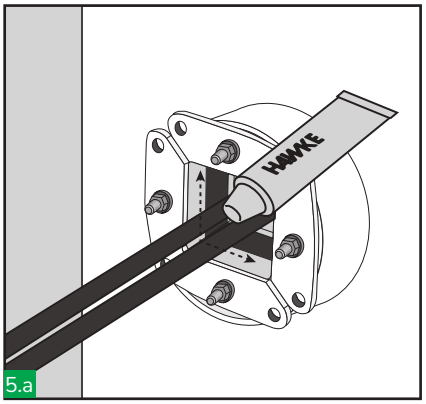
Make sure the frame is clean

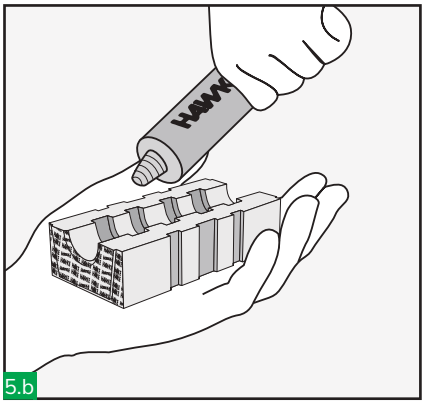


Insert the round transit frame completely in the sleeve/aperture around the cables. No lubricant should be applied to the aperture or outside of the frame. If close version of the Round Transit(HRT) is used, it should be installed previously to pull the cables/ pipes through the sleeve or aperture.

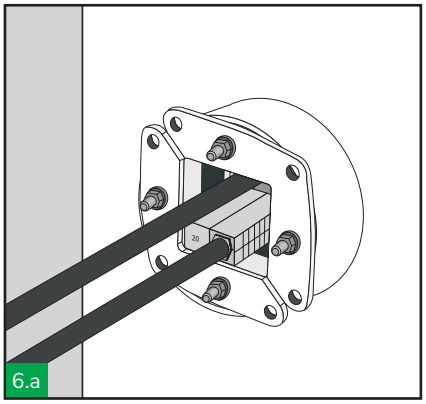


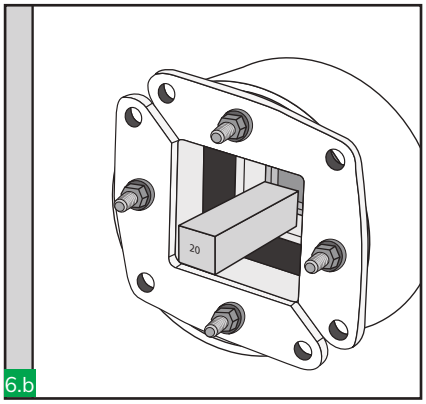
Take measures of the cables diameters and select the appropriate HTS Tolerant blocks. Colour code will help you to select the correct ones.

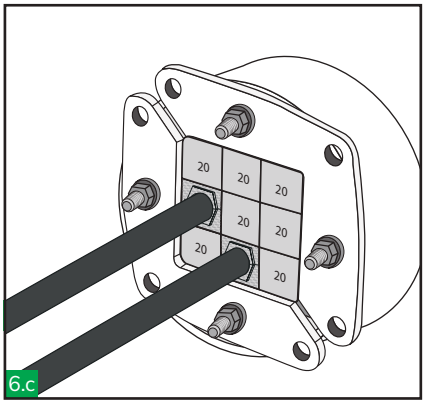




Lubricate the inside of the HRTO and all the insert and blank blocks using HTS lubricant. Open the two front plates. (HRTO30, HRTO40 & HRTO50 front plates are fixed)







Begin packing the transit frame starting at the bottom and finishing at the top. Ensure that the blocks are pushed firmly against the rear retaining lip. Verify that the complete sealing area of this frame size (see table) is filled with blocks.

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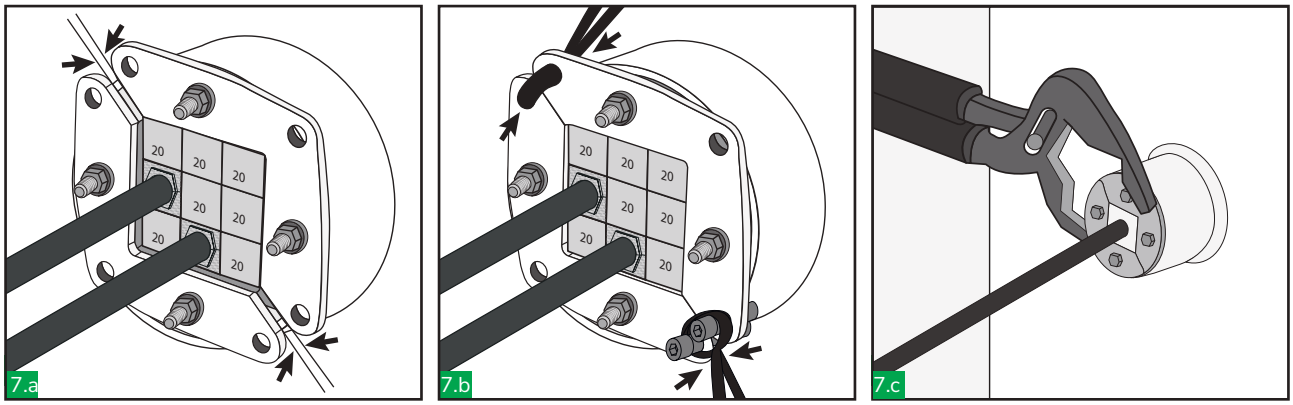
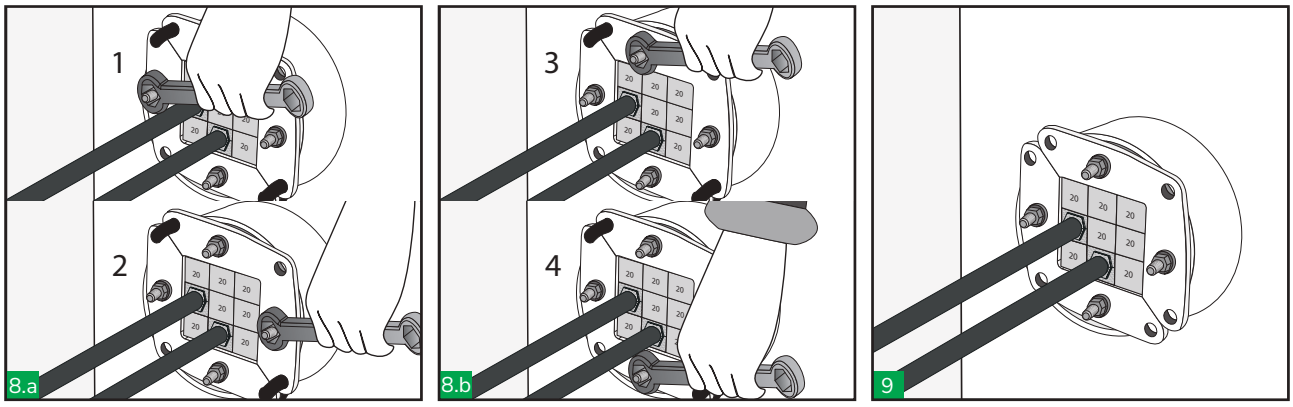
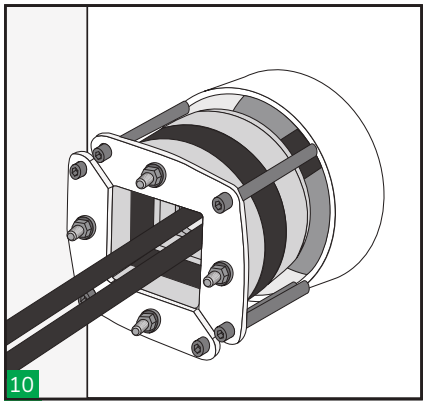


Slide the two front plates together and keep it fixed. Ensure all the blocks are located inside the front retaining lip.
For an easier installation, cable ties , bolts or adjustable pliers can be used to close this plates.



Tighten the nuts approximately 2mm each time following alternate tightening sequence, applying equal pressure to both plates. A minimum of 10 mm of thread should protrude on each bolt. Use a ratchet spanner for an easier installation.

Make a visual inspection of the transit. HTS´s unique colour coding system enables the installation to be visually inspected after completion and ensures correct matching of the block halves.

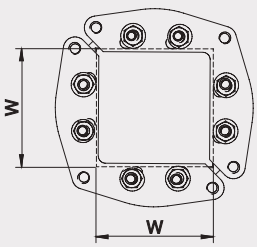


Extraction is achieved by releasing the compression, i.e. by reversing steps 7 and 8 and screwing M8 bolts (not supplied) into the threaded holes at each corner of the front plates. These releases the assembly from the aperture and allows the system to be disassembled.

Notes

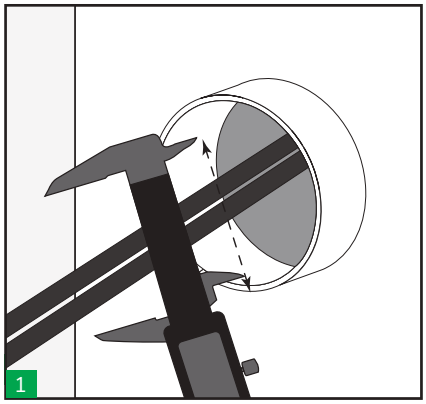
Leave the system at least 24 hours before applying pressure. For disassembly see disassembly instructions.

Sealing Area

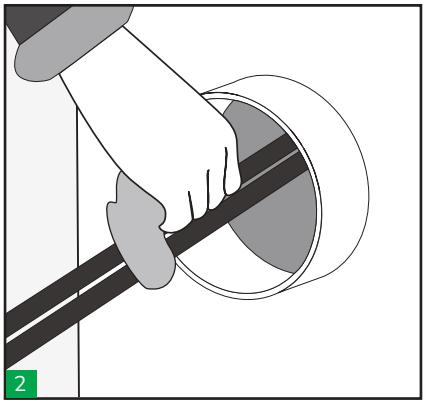


TYPE	SEALING AREA (mm)
HRTO-30	15x15
HRTO-40	20x20
HRTO-50	30x30
HRTO-70	40x40
HRTO-100	60x60
HRTO-125	80x80
HRTO-150	90x90
HRTO-200	120x120

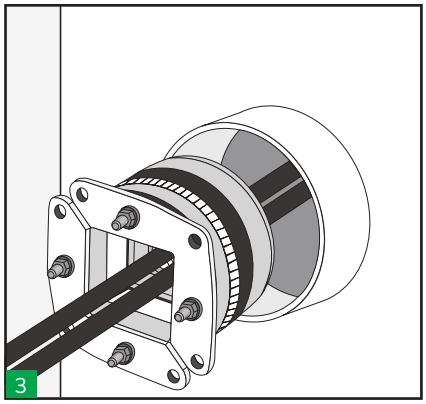
HRTO / HRT EMC ROUND SYSTEM Installation guide:



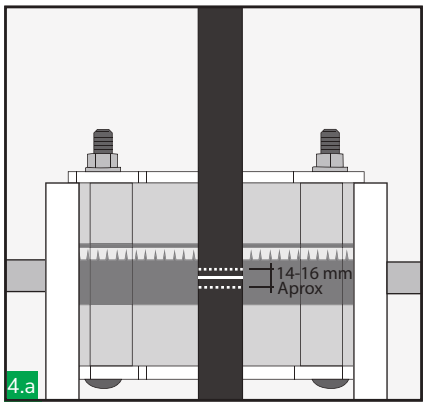
Measure the inside of pipe aperture to ensure that it is within the tolerance of the round transit frame to be used.

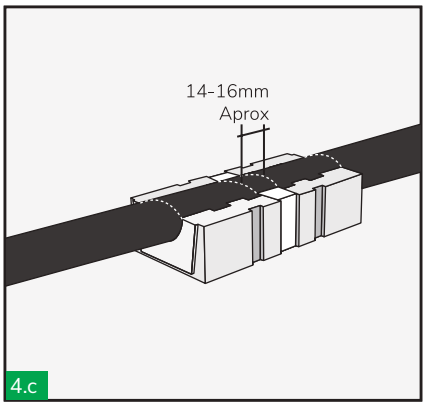


Make sure the frame is clean and there are not rust.

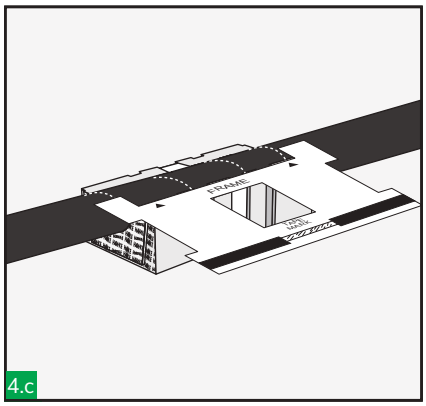


Insert the round transit frame completely in the sleeve around the cables and open the two front plates. (HRTO30,HRTO40&HRTO50 front plates are fixed). No lubricant should be applied to the aperture or outside of the frame.

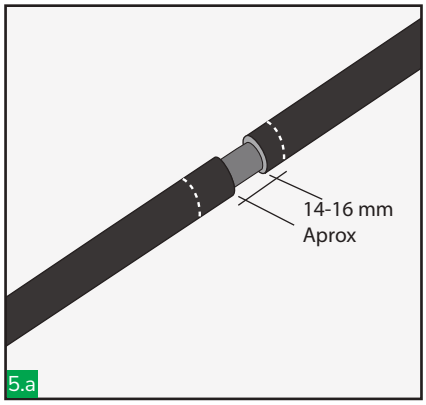


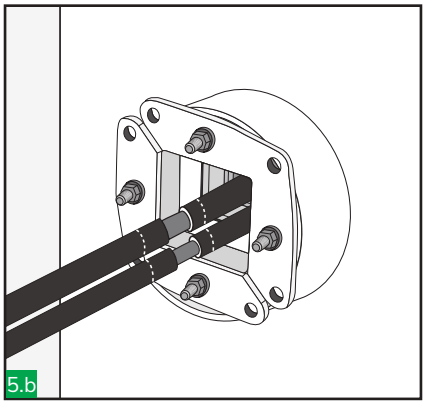


Mark each cable in the centre of the frame and 7-8mm either side of this point.
Also, recommendable to mark the cable in both ends of the frame.

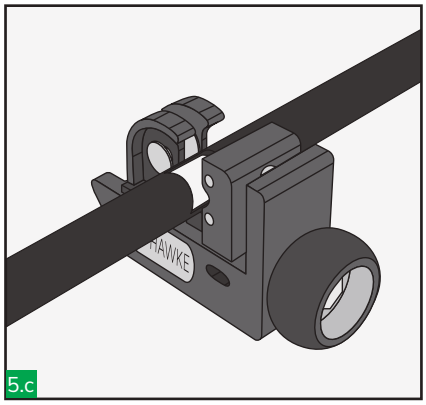


EMC marking tool could help you to reduce time and ensure a correct marking.

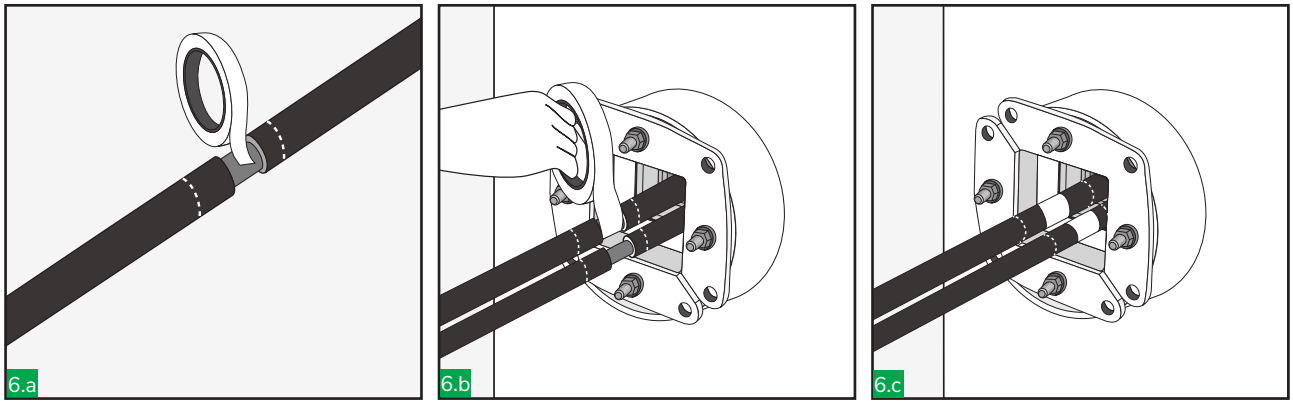




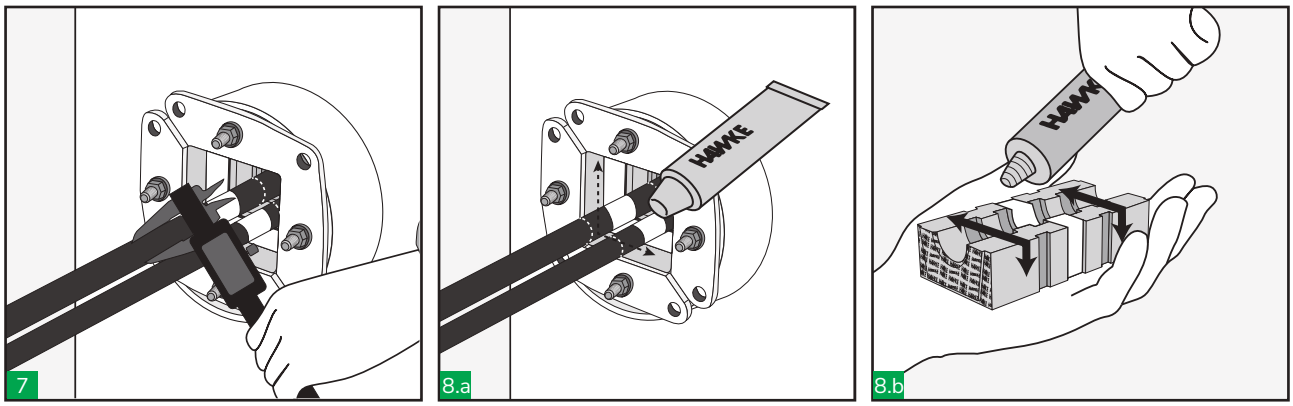
Cut and remove cable sheath between two central marks, to expose the cables conductive screen.



EMC cable sheath remove tool could help you to reduce time and ensure a correct cutting.

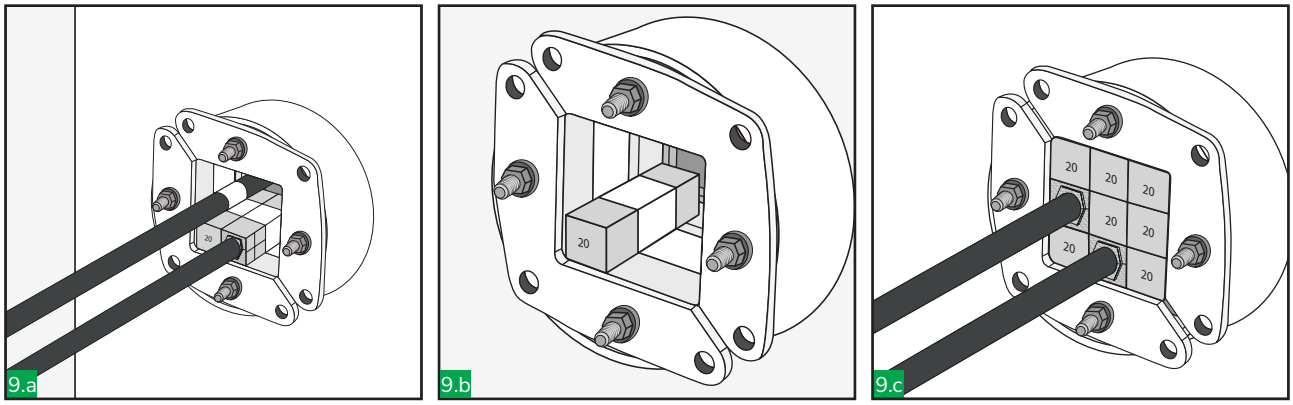


Using copper tape provided tightly wrap around the exposed screen until the cable outer diameter is regained.
Repeat these steps for all cables.

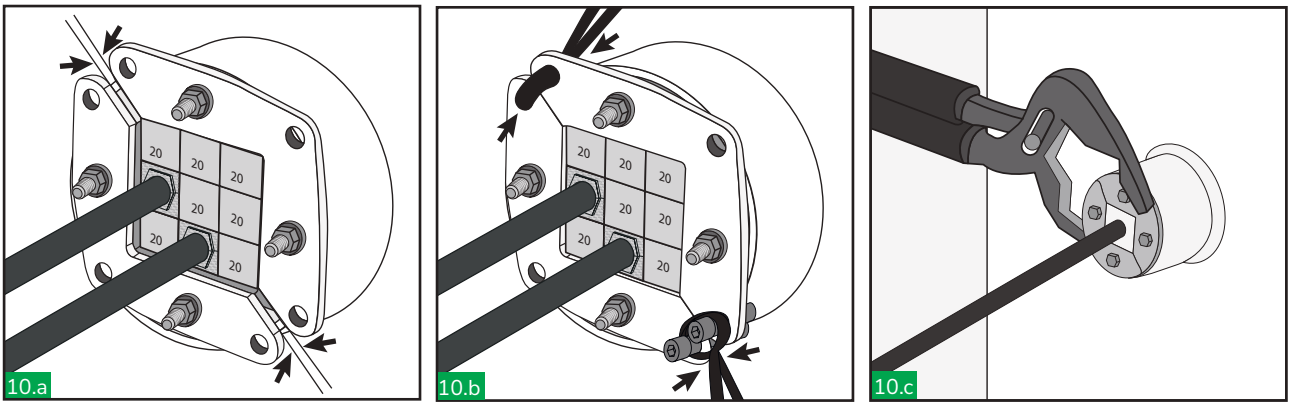


Take measures of the cables diameters and select the appropriate HTS Tolerant Blocks.

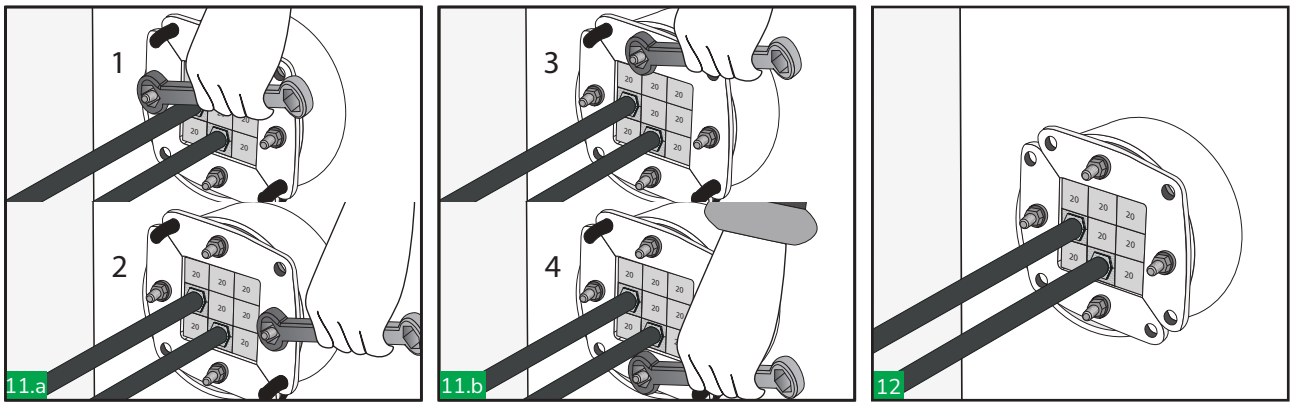
Lubricate the inside of the HRTO and all the insert and blank blocks using HTS lubricant.
Be careful don't contaminate the copper tape.



Begin packing the transit frame starting at the bottom and finishing at the top.
Ensure that the blocks are pushed firmly against the rear retaining lip. Verify that the complete sealing area of this frame size (see table) is filled with blocks.

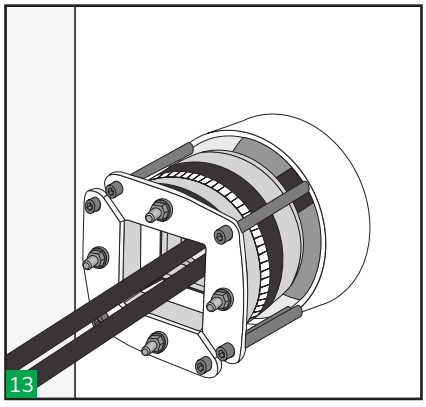


Slide the two front plates together and keep it fixed. Ensure all the blocks are located inside the front retaining lip.
For an easier installation, cable ties , bolts or adjustable pliers can be used to close this plates.



Tighten the nuts approximately 2mm each time following alternate tightening sequence, applying equal pressure to both plates.
A minimum of 10 mm of thread should protrude on each bolt.
Use a ratchet spanner for an easier installation.

Make a visual inspection of the transit. Check that marks in all cables are visible to be guarantee blocks and cable copper tapes are aligned.

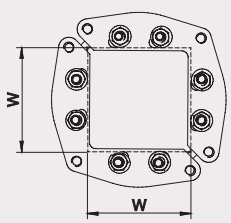


Extraction is achieved by releasing the compression, i.e. by reversing steps 10 and 11 and screwing M8 bolts (not supplied) into the threaded holes at each corner of the front plates. These releases the assembly from the aperture and allows the system to be disassembled.

Notes

Leave the system at least 24 hours before applying pressure.
For disassembly see disassembly installation instructions.

Sealing Area



TYPE	SEALING AREA (mm)
HRTO-30	15x15
HRTO-40	20x20
HRTO-50	30x30
HRTO-70	40x40
HRTO-100	60x60
HRTO-125	80x80
HRTO-150	90x90
HRTO-200	120x120

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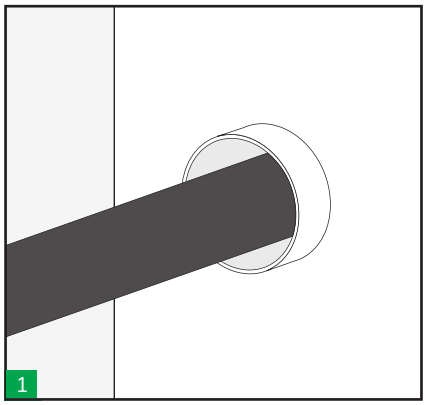
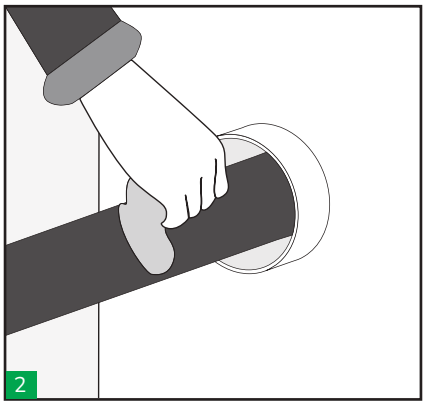
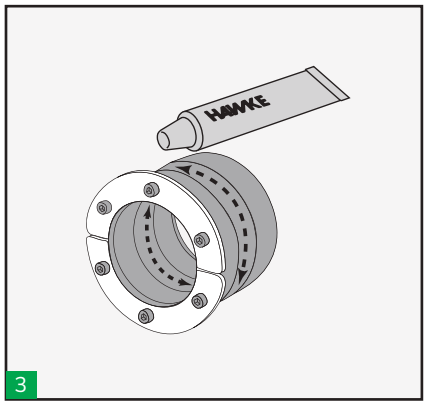
HRST ROUND SYSTEM Standard installation guide:



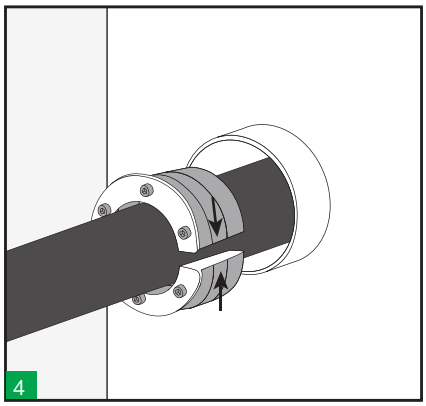
Check the inside diameter of the sleeve and the outside diameter of the cable/pipe to verify that it is within the range of selected HRST. HTS HRST colour code will help for a correct selection.



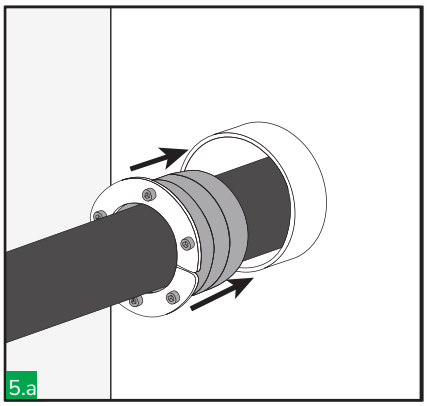
Make sure the pipe is properly centred in the sleeve. Make sure the sleeve and the cable/pipe are clean.

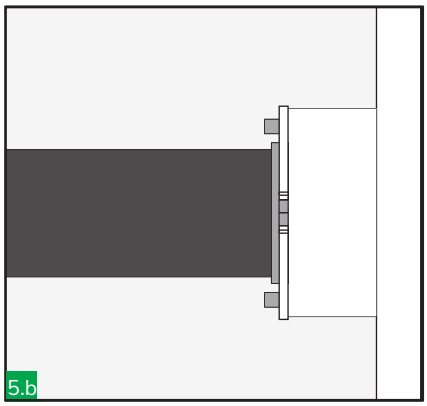


Lubricate the inside of the HRST to be in contact with the cable/ pipe and lightly lubricate the outside in contact with the sleeve.

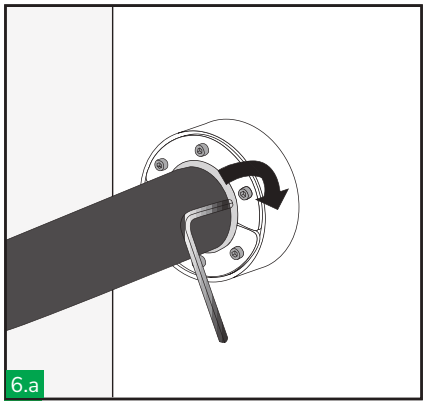


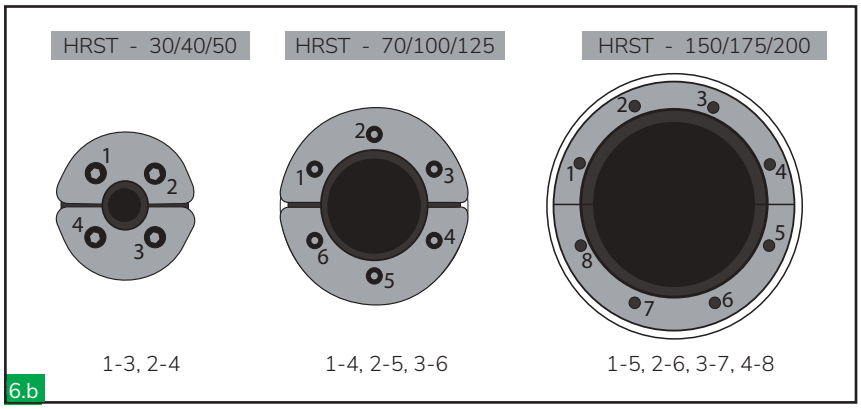
Open the HRST and install around the cable/pipe.





Insert the HRST into the sleeve. Check the HRST is completely inserted into the sleeve, front plates should be in contact with the sleeve.





Tighten the bolts. Tightening must be done in one revolution step for each bolt following next sequence until the system is enough compressed to seal the cable/pipe.

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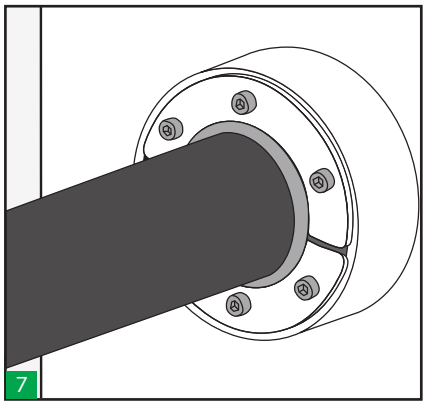

Make a visual inspection of the transit. HRST (colour code) selected match the pipe and sleeve installed, HRST is completely inserted into the sleeve, does not exist gaps between HRST and the cable/pipe.

DESCRIPTION	SLEEVE SIZE NEEDED	SEALING FROM(MM)	SEALING TO(MM)	COLOUR
HRST-30/4	30	4	10	White
HRST-30/7	30	7	14	Red
HRST-30/10	30	10	17	Blue
HRST-40/4	40	4	10	Purple
HRST-40/7	40	7	14	Yellow
HRST-40/10	40	10	17	Green
HRST-40/17	40	17	24	Pink
HRST-50/4	50	4	10	Red
HRST-50/10	50	10	17	White
HRST-50/17	50	17	24	Blue
HRST-50/24	50	24	30	Orange
HRST-70/26	70	26	33	Purple
HRST-70/33	70	33	39	Yellow
HRST-70/39	70	39	45	Green
HRST-70/45	70	45	50	Pink
HRST-100/48	100	48	55	Red
HRST-100/55	100	55	61	White
HRST-100/61	100	61	66	Blue
HRST-100/66	100	66	71	Orange
HRST-125/64	125	64	71	Purple
HRST-125/71	125	71	79	Yellow
HRST-125/79	125	79	86	Green
HRST-125/86	125	86	93	Pink
HRST-125/93	125	93	98	Orange
HRST-150/93	150	93	102	Red
HRST-150/102	150	102	108	White
HRST-150/108	150	108	115	Blue
HRST-150/115	150	115	120	Orange
HRST-175/118	175	118	125	Purple
HRST-175/125	175	125	132	Yellow
HRST-175/132	175	132	138	Green
HRST-175/138	175	138	145	Pink
HRST-200/136	200	136	143	Red
HRST-200/143	200	143	150	White
HRST-200/150	200	150	157	Blue
HRST-200/157	200	157	164	Orange
HRST-200/164	200	164	170	Yellow

Notes

Leave the system at least 24 hours before applying pressure.

Sealing Range

Check cable/pipe sealing range in HRST catalogue page 53.

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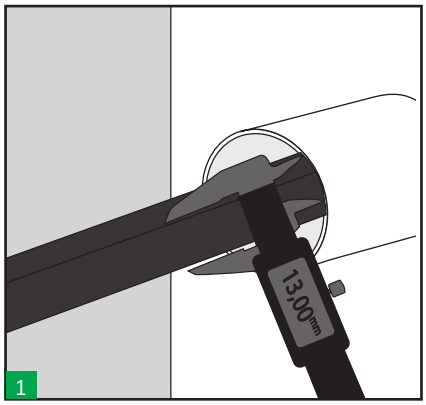
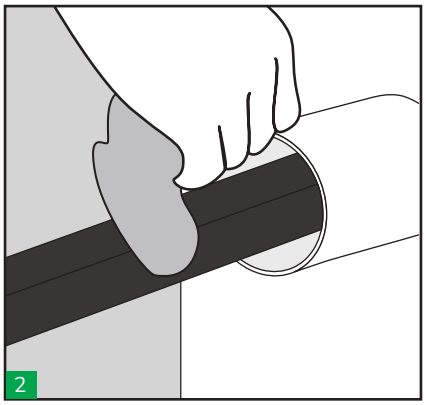
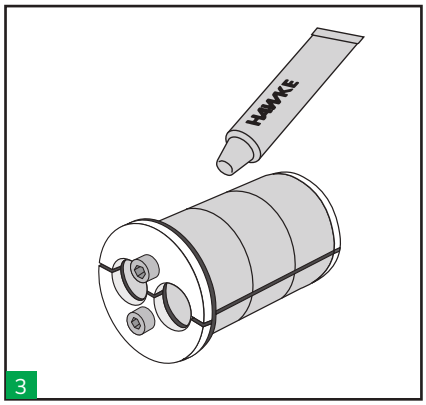
HRST MULTIHOLE ROUND SYSTEM Standard installation guide:



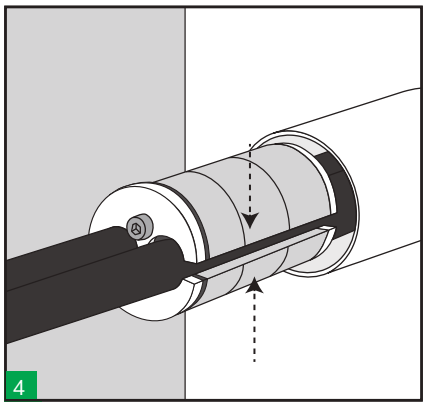
Check the inside diameter of the sleeve and the outside diameter of the cables to verify that it is within the range of selected HRST.



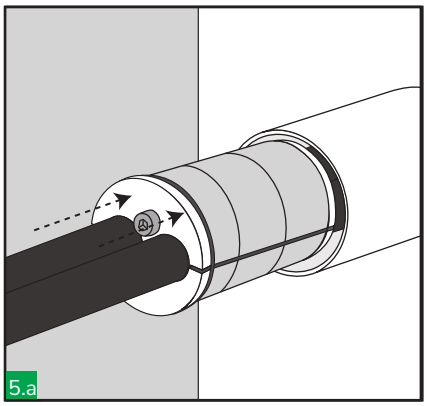
Make sure the sleeve and the cables are clean.

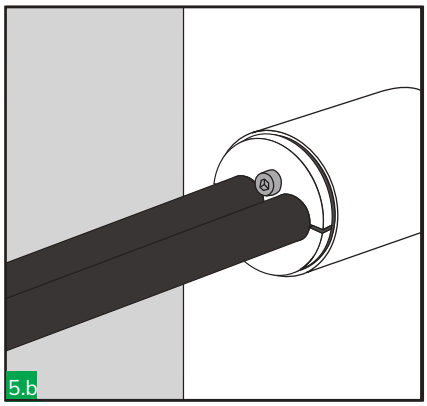


Lubricate the inside of the HRST to be in contact with the cables and lightly lubricate the outside in contact with the sleeve.

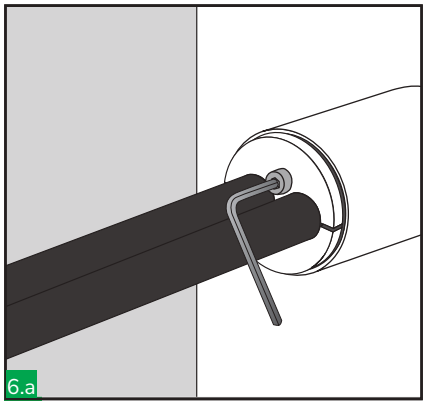


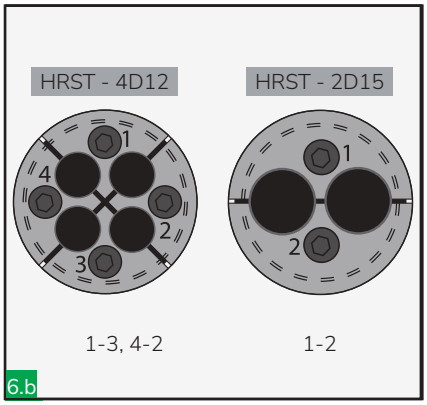
Open the HRST and install around the cables.



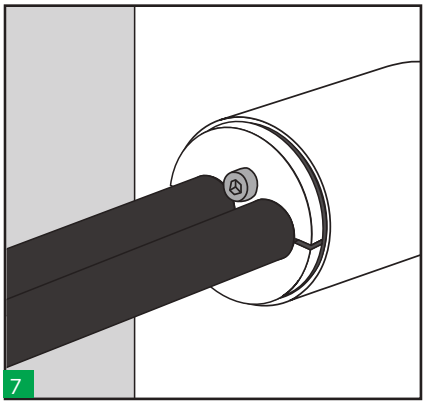


Insert the HRST into the sleeve.
Check the HRST is completely inserted into the sleeve, front plates should be in contact with the sleeve.





Tighten the bolts. Tightening must be done in one revolution step for each bolt following next sequence until the system is enough compressed to seal the cables.



Make a visual inspection of the transit.HRST selected match the cables and sleeve installed, HRST is completely inserted into the sleeve, does not exist gaps between HRST and the cable/pipe.

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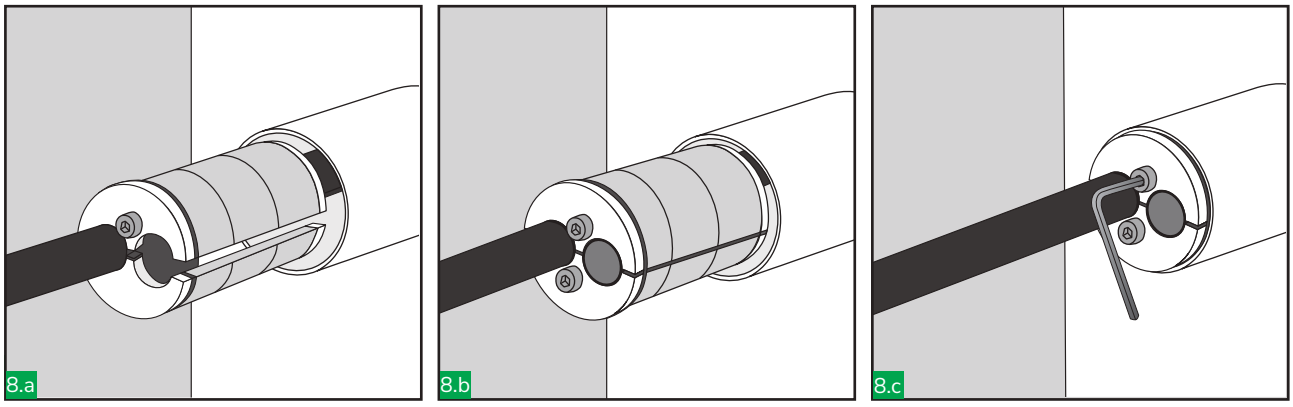

In case of any HRST hole are not occupied by cables always complete with HTS HRST plugs.

DESCRIPTION	SLEEVE SIZE NEEDED	NUMBER OF CABLES	SEALING FROM (mm)	SEALING TO (mm)	A (mm)	B (mm)	NUMBER OF BOLT	BOLT SIZE	WEIGHT (kg)
HRST 40 2D15	40	2	10	15	40	46	2	M5	0,17
HRST 40 4D12	40	4	8	12	40	46	4	M5	0,16

→ Notes

Leave the system at least 24 hours before applying pressure.

→ Sealing Area

Check cable/pipe sealing range in HRST catalogue page 54.