

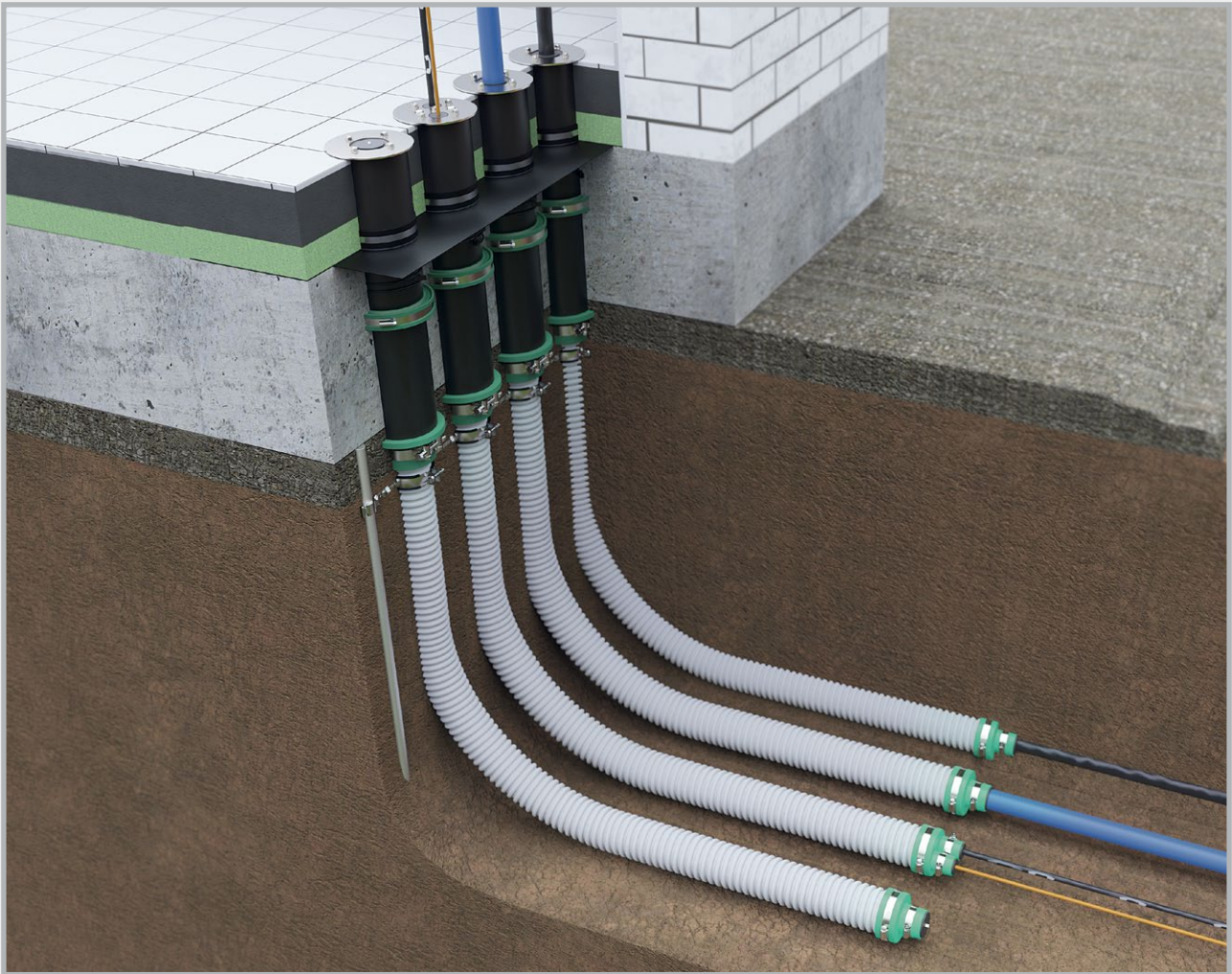


# MASTERTEC

SPECIAL ARTICLES FOR REINFORCED CONCRETE CONSTRUCTION

## Master-Home-Connect (MHC)

Service duct system for house connections  
for electricity, water and telecommunications



Certified service duct system according to DVGW VP 601

03/2007 chapter 4.5

Impermeability to gas and water of the installed service duct



Each individual component has been tested additionally for  
pressure water-tightness



Test for impermeability to radon when installed

# Master-Home-Connect single-utility Solo

for on-site cable conduit, for floor slab installation

Art.Gr.  
410

Art. no.	Description	PU	Weight per set
<b>080034</b>	<p><b>MHC single-utility Solo</b></p> <p>The <b>MHC single-utility Solo</b> set comprises:</p> <ul style="list-style-type: none"> <li>– 0.6 m lining pipe (with protective cover for the duration of construction) incl. sealing collar, with factory-installed Connector and installation scale</li> <li>– MHC Solo gasket insert</li> <li>– Solid ground stake Ø 20 mm</li> <li>– Dual-thread clamp and connecting clamp</li> <li>– 1 set each of MHC Solo and Duo spacers</li> <li>– Solo cable conduit end cap with Multi insert</li> </ul>	1 set	7.42 kg



# Master-Home-Connect single-utility

incl. cable conduit Ø 75 mm, for floor slab installation

Art.Gr.  
410


Art. no.	Description	PU	Weight per set
	<p>The basic equipment of <b>MHC single-utility</b> comprises:</p> <ul style="list-style-type: none"> <li>– 0.6 m lining pipe (with protective cover for the duration of construction) incl. sealing collar, with factory-installed Connector and installation scale</li> <li>– MHC Solo gasket insert</li> <li>– Solid ground stake Ø 20 mm</li> <li>– Dual-thread clamp and connecting clamp</li> <li>– 1 set each of MHC Solo and Duo spacers</li> <li>– Solo cable conduit end cap with Multi insert</li> </ul>		
<b>080035</b>	<p><b>MHC single-utility 3 m</b></p> <p>The <b>MHC single-utility 3 m</b> set contains the above basic equipment and in addition</p> <ul style="list-style-type: none"> <li>– 3.0 m cable conduit Ø 75 mm (external)</li> </ul>	1 set	9.14 kg
<b>NEW!</b> <b>080036</b>	<p><b>MHC single-utility 6 m</b></p> <p>The <b>MHC single-utility 6 m</b> set contains the above basic equipment and in addition</p> <ul style="list-style-type: none"> <li>– 6.0 m cable conduit Ø 75 mm (external)</li> </ul>	1 set	10.61 kg
<b>080037</b>	<p><b>MHC single-utility 10 m</b></p> <p>The <b>MHC single-utility 10 m</b> set contains the above basic equipment and in addition</p> <ul style="list-style-type: none"> <li>– 10.0 m cable conduit Ø 75 mm (external)</li> </ul>	1 set	13.13 kg
<b>NEW!</b> <b>080014</b>	<p><b>MHC single-utility 15 m</b></p> <p>The <b>MHC single-utility 15 m</b> set contains the above basic equipment and in addition</p> <ul style="list-style-type: none"> <li>– 15.0 m cable conduit Ø 75 mm (external)</li> </ul>	1 set	16.44 kg



# MHC multi-utility triple sets

for floor slab installation


Art.Gr.  
410

Art. no.	Description	PU	Weight per set
	<p>The basic equipment of <b>MHC multi-utility triple set</b> comprises:</p> <ul style="list-style-type: none"> <li>– 3 x 0.6 m lining pipes (with protective cover for the duration of construction) incl. sealing collar, with factory-installed Connector and installation scale</li> <li>– 2 x MHC Solo gasket inserts</li> <li>– 1 x MHC Multi gasket insert for telecommunications line</li> <li>– 2 x solid ground stakes Ø 20 mm and connection clamps</li> <li>– 3 x dual-thread clamps</li> <li>– 2 sets MHC Duo spacers</li> <li>– 2 x Solo cable conduit end caps with Multi insert</li> <li>– 1 x Duo cable conduit end cap with Multi insert</li> </ul>		
<b>080038</b>	<p><b>MHC multi-utility triple/3 metre</b></p> <p>The <b>MHC multi-utility triple/3 metre</b> set contains the above basic equipment and in addition:</p> <ul style="list-style-type: none"> <li>– 3 x 3.0 m cable conduits outside Ø 75 mm</li> </ul>	1 set	25.34 kg
<b>NEW!</b> <b>080039</b>	<p><b>MHC multi-utility triple/6 metre</b></p> <p>The <b>MHC multi-utility triple/6 metre</b> set contains the above basic equipment and in addition:</p> <ul style="list-style-type: none"> <li>– 3 x 6.0 m cable conduits outside Ø 75 mm</li> </ul>	1 set	29.75 kg
<b>080040</b>	<p><b>MHC multi-utility triple/10 metre</b></p> <p>The <b>MHC multi-utility triple/10 metre</b> set contains the above basic equipment and in addition:</p> <ul style="list-style-type: none"> <li>– 3 x 10.0 m cable conduits outside Ø 75 mm</li> </ul>	1 set	37.31 kg
<b>NEW!</b> <b>080015</b>	<p><b>MHC multi-utility triple/15 metre</b></p> <p>The <b>MHC multi-utility triple/15 metre</b> set contains the above basic equipment and in addition:</p> <ul style="list-style-type: none"> <li>– 3 x 15.0 m cable conduits outside Ø 75 mm</li> </ul>	1 set	44.06 kg

# MHC multi-utility quadruple sets

for floor slab installation

Art.Gr.  
410

Art. no.	Description	PU	Weight per set
	<p>The basic equipment of <b>MHC multi-utility quadruple set</b> comprises:</p> <ul style="list-style-type: none"> <li>– 4 x 0.6 m lining pipes (with protective cover for the duration of construction) incl. sealing collar, with factory-installed Connector and installation scale</li> <li>– 3 x MHC Solo gasket inserts</li> <li>– 1 x MHC Multi gasket insert for telecommunications line</li> <li>– 2 x solid ground stakes Ø 20 mm and connection clamps</li> <li>– 4 x dual-thread clamps</li> <li>– 3 sets MHC Duo spacers</li> <li>– 3 x Solo cable conduit end caps with Multi insert</li> <li>– 1 x Duo cable conduit end cap with Multi insert</li> </ul>		
<b>080041</b>	<p><b>MHC multi-utility quadruple/3 metre</b></p> <p>The <b>MHC multi-utility quadruple/3 metre</b> set contains the above basic equipment and in addition:</p> <ul style="list-style-type: none"> <li>– 4 x 3.0 m cable conduits outside Ø 75 mm</li> </ul>	1 set	30.48 kg
<b>NEW!</b> <b>080042</b>	<p><b>MHC multi-utility quadruple/6 metre</b></p> <p>The <b>MHC multi-utility quadruple/6 metre</b> set contains the above basic equipment and in addition:</p> <ul style="list-style-type: none"> <li>– 4 x 6.0 m cable conduits outside Ø 75 mm</li> </ul>	1 set	36.36 kg
<b>080043</b>	<p><b>MHC multi-utility quadruple/10 metre</b></p> <p>The <b>MHC multi-utility quadruple/10 metre</b> set contains the above basic equipment and in addition:</p> <ul style="list-style-type: none"> <li>– 4 x 10.0 m cable conduits outside Ø 75 mm</li> </ul>	1 set	46.44 kg
<b>NEW!</b> <b>080016</b>	<p><b>MHC multi-utility quadruple/15 metre</b></p> <p>The <b>MHC multi-utility quadruple/15 metre</b> set contains the above basic equipment and in addition:</p> <ul style="list-style-type: none"> <li>– 4 x 15.0 m cable conduits outside Ø 75 mm</li> </ul>	1 set	55.44 kg

# MHC single-utility – wall









for wall installation

Art.Gr.  
**410**

Art. no.	Description	PU	Weight per set
<b>080044</b>	<p><b>MHC single-utility – wall – Solo</b></p> <p>The <b>MHC single-utility – wall – Solo</b> set comprises:</p> <ul style="list-style-type: none"> <li>– 0.365 m lining pipe (with protective cover for the duration of construction) incl. sealing collar and length scale</li> <li>– Connector for connecting the cable conduit</li> <li>– MHC Solo gasket insert</li> <li>– 1 set each of MHC Solo and Duo spacers</li> <li>– Solo cable conduit end cap with Multi insert</li> </ul>	1 set	3.78 kg
<b>080045</b>	<p><b>MHC single-utility – wall – Multi</b></p> <p>The <b>MHC single-utility – wall – Multi</b> set comprises:</p> <ul style="list-style-type: none"> <li>– 0.365 m lining pipe (with protective cover for the duration of construction) incl. sealing collar and length scale</li> <li>– Connector for connecting the cable conduit</li> <li>– MHC Multi gasket insert for telecommunications line</li> <li>– 1 set each of MHC Solo and Duo spacers</li> <li>– Duo cable conduit end cap with Multi insert</li> </ul>	1 set	3.80 kg

# Master-Home-Connect accessories

Art.Gr.  
**410**

Art. no.	Description	PU	Weight per pc.	
<b>080052</b>	<p><b>MHC Solo end cap (Set)</b></p> <p>1 media line: 4-40 mm</p>	1 set	0.25 kg per set	
<b>080053</b>	<p><b>MHC Duo end cap (Set)</b></p> <p>up to 2 media lines: each 4-25 mm</p>	1 set	0.25 kg per set	
<b>080047</b>	<p><b>MHC Multi gasket insert</b></p> <p>up to 4 media lines: 2 x 4-25 mm + 2 x 10 mm</p>	1 pc.	0.81 kg	
<b>080046</b>	<p><b>MHC Solo gasket insert</b></p> <p>1 media line: 4-40 mm</p>	1 pc.	0.79 kg	
<b>080050</b>	<p><b>MHC Solo spacer</b></p>	1 set	0.02 kg per set	
<b>080051</b>	<p><b>MHC Duo spacer</b></p>	1 set	0.04 kg per set	
<b>080012</b>	<p><b>Cable conduit Ø 75 mm</b></p>	1 m	0,53 kg per m	
<b>080033</b>	<p><b>Foil flange for MHC,</b> quadruple, size: 800 x 250 mm, suitable for on-site adjustment</p>	1 pc.	0.47 kg	



# Master-Home-Connect (MHC)

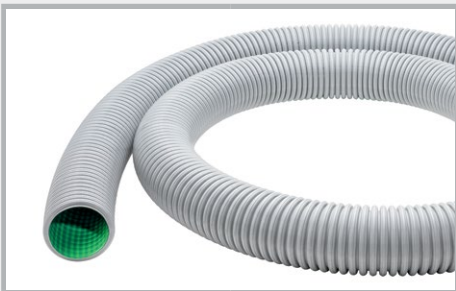
## Individual components



### Lining pipe

Plastic lining pipe with length of 0.6 m and pre-installed RONDO Base sealing collar, Connector connection seal and length scale. The sealing collar seals off the transition between the concrete and lining pipe so that it is impermeable to pressurised water and gas.

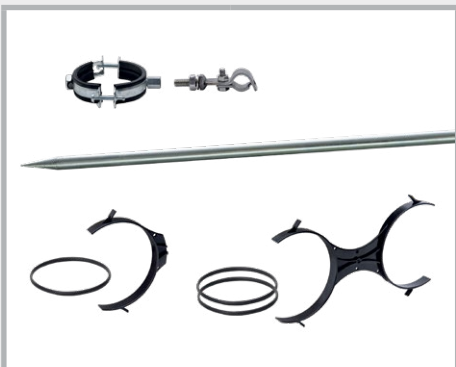
The Connector connection seals connect the cable conduits DN 75 mm so that they are pressure water-tight.



### Cable conduit

Pressure-resistant protective conduit DN 75 mm for electrical, water and telecommunications lines laid in the soil.

Alongside its excellent pressure resistance, the protective conduit which is classified as N750 according to DIN EN 61386-24, provides perfect insertion properties thanks to the sliding, green inner layer.



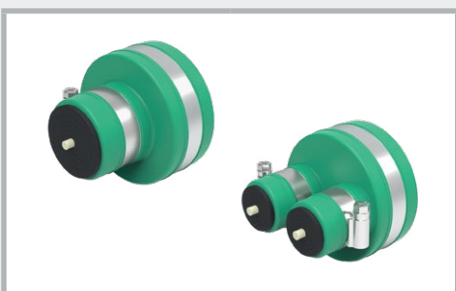
### Fastening material

**Dual-thread clamps** for positioning multiple cable conduits with defined spacing in a row or as a package.

**Connection clamp** for connection of the dual-thread clamps to the ground stake.

**Solid ground stake** for positioning the dual-thread clamps in the ground.

**MHC Solo and Duo spacers** for connection and plumb alignment of the lining pipes.



### MHC end caps

Rubber end seal for waterproofing the ends of the cable conduit at the transition point.

The Multi insert allows adaptation to the media line being inserted.

**MHC Solo end cap (set):** 1 media line 4-40 mm

**MHC Duo end cap (set):** up to 2 media lines, each 4-25 mm



### MHC gasket inserts

Gasket insert for waterproofing the transition of the lining pipe to the inserted media line.

The gasket insert can be adapted to all common medium pipes thanks to the Multi inserts which can be adjusted to the medium pipe.

**MHC Solo gasket insert:**

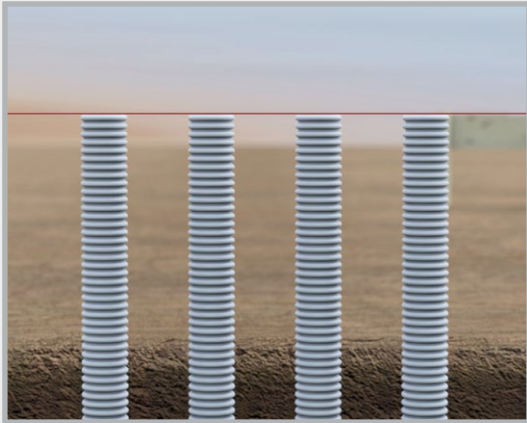
1 media line 4-40 mm

**MHC Multi gasket insert:**

up to 4 media lines 2 x 4-25 mm + 2 x 10 mm

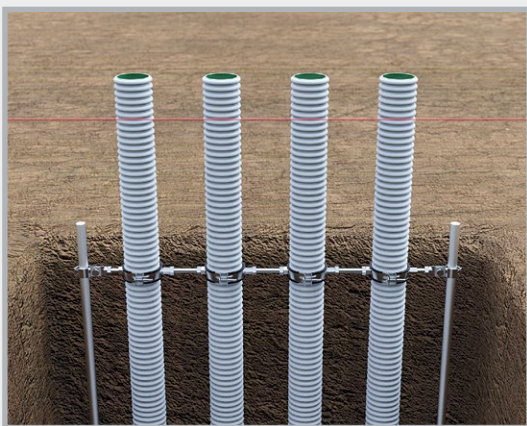
The 130 mm pressure plate covers the transition area between the lining pipe and floor covering with its projection.

# Master-Home-Connect (MHC) Installation



## Laying the cable conduit

The cable conduits are directed from the transition point up to the desired insertion point under the floor slab, and up to at least the height of the top edge of the floor slab with a bending radius  $> 350$  mm.



## Fastening the cable conduit

The cable conduits are connected with the spacing in a row defined for the installation using the dual-thread clamps. The connection clamp is used to establish a connection between the dual-thread clamps and the ground stake on both sides, which is driven into the soil beforehand. The height position of the connection clamp is positioned at least 400 mm underneath the top edge of the floor slab, and secured with screws.



## Sealing the cable conduit/backfilling

The ends of the cable conduit are sealed with the supplied construction protective covers. The trench for the cable conduits can then be filled with suitable filling material and waterproofed in layers.



## Installation of the MHC lining pipe

The cable conduits are then cut 360 mm underneath the top edge of the floor slab. The end of the MHC lining pipe, which is equipped with the Connector, is pushed over the end of the cable conduit, and secured by tightening the metal clamp.

The plumb position of the lining pipe is not yet relevant at this point.

# Master-Home-Connect (MHC) Installation



## Connection of the MHC lining pipes

The MHC lining pipes are connected to each other using Duo spacers. For this purpose, the pipes are clipped into the spacers and secured using the supplied rubber fastening straps.

The spacers are positioned at the height of the upper layer of reinforcement.



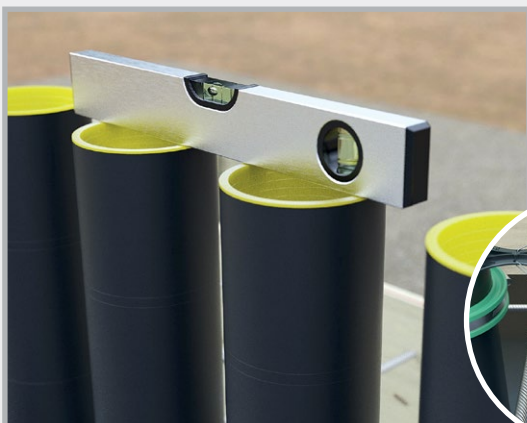
## Floor slab substrate

The substrate for the floor slab can subsequently be prepared in the form of gravel or grit bedding. When concreting a blinding layer, the MHC service duct must be shuttered. As a result, the elastic bearing remains in place for subsequent plumb alignment.



## Preparation of the floor slab

The formwork of the floor slab is put in place. The reinforcement of the floor slab is inserted.



## Plumb alignment/concreting

After inserting the upper layer of reinforcement, the MHC lining pipes are aligned plumb.

The securing holes of the spacers can be used to secure the plumb position to the upper layer of reinforcement using tie wire.

After alignment and securing, the floor slab can be concreted.



# Master-Home-Connect (MHC) Installation



## Connection of the floor slab vapour barrier

A foil flange seal made of PVC foil with a thickness of 1.5 mm, suitable for the MHC service duct system, for the integration of the surface-wide vapour barrier on the floor slab, is available. It is designed in the factory for the quadruple row arrangement. The foil flange is pushed over the lining pipes from the inside of the structure and clamped to the pipe body with fastening straps. The surface waterproofing is processed on the flange. When using fewer than 4 lining pipes, the foil flange can be cut off on site.



## Floor construction

The planned floor construction, generally comprising thermal insulation, impact sound insulation, underfloor heating as applicable, screed and covering layer, can then be applied.

The length of the lining pipes is designed for a floor construction with a slab-to-floor height of up to 250 mm. For a visually appealing result, for a floor construction < 250 mm, cutting off the projecting lining pipes to the level of the top edge of the finished floor is recommended. This can be done before or after preparing the floor construction.



## Installation of end caps/ insertion of media lines

The end caps are pushed onto the cable conduits at the transition point and the media lines are inserted.

**Solo end cap:** 1 media line 4-40 mm

**Duo end cap:** 2 media lines each 4-25 mm

The end caps are secured both to the cable conduit and the media line using the supplied clamps.



## Installation of the MHC gasket insert

Finally, the MHC gasket inserts are installed from the inside of the structure:

**MHC Solo gasket insert:** 1 media line 4-40 mm

**MHC Multi gasket insert:**

up to 2 media lines 2 x 4-25 mm + 2 x 10 mm

You will find detailed installation instructions for adapting to the media line on page 134, and for installation of the gasket insert on page 136 in our complete catalogue.

**MASTERTEC GmbH & Co. KG** Special articles for reinforced concrete construction

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