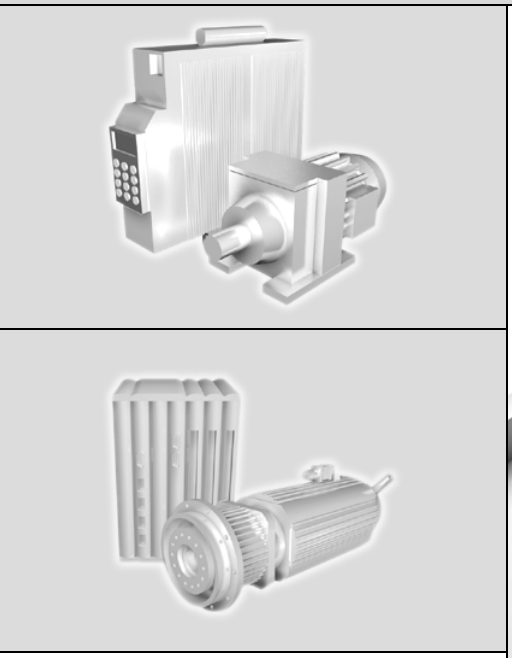
SEW EURODRIVE



MOVITRANS® Installation of Transmission Lines with Casting Resin for THM10E Pick-Ups

Edition 09/2007

11673826 / EN

Manual

SEW EURODRIVE

Contents

1 Important Notes

1.1 Safety and warning instructions

Always observe the safety and warning information in this documentation.

Electrical hazard
Possible consequences: Severe or fatal injuries.

Hazard
Possible consequences: Severe or fatal injuries.

Hazardous situation
Possible consequences: Slight or minor injuries.

Harmful situation
Possible consequences: Damage to the unit and the environment.

Tips and useful information.

1.2 Rights to claim under limited warranty

A requirement of fault-free operation and fulfillment of any rights to claim under limited warranty is that you adhere to the information in the operating instructions. Consequently, read the operating instructions before you start working with MOVITRANS® units!

Make sure that the operating instructions are available to persons responsible for the plant and its operation, as well as to person who work independently on the units. You must also ensure that the documentation is legible.

1.3 Exclusion of liability

You must comply with the information contained in these operating instructions to ensure safe operation of the MOVITRANS® units and to achieve the specified product characteristics and performance requirements. SEW-EURODRIVE assumes no liability for injury to persons or damage to equipment or property resulting from non-observance of the operating instructions. In such cases, any liability for defects is excluded.

2 Safety Notes

2.1 Designated use

In longer transmission lines, the MOVITRANS® TCS compensation boxes are connected in series to the TLS line cables.

The TVS connection distributors are used as connection points for the line cable in the field.

The MOVITRANS® TSL line cables are intended for use in industrial and commercial installations for the operation of contactless power transmission systems. The TSL line cables are suitable for the connection to the TAS transformer module on the output side. The TLS lines cables are laid along the transmission line.

The MOVITRANS® TIS10A025... installation components may only be used with the flat THM10E pick-ups.

Observe all information on the technical data and the permitted conditions where the unit is operated.

Do not operate the unit until you have established that the machine complies with the EMC Directive 89/336/EEC and that the conformity of the end product has been determined in accordance with the Machinery Directive 98/37/EEC (with reference to EN 60204).

The Professional Association (Berufsgenossenschaft, BG) BG regulation B11 "Electromagnetic fields" must be observed during installation, startup and operation of systems with contactless energy transmission by induction for use in industrial workplaces.

2.2 Operational environment

The following uses are prohibited unless the units are expressly designed for the purpose:

- Use in potentially explosive areas.
- Use in areas exposed to harmful oils, acids, gases, vapors, dust, radiation, etc.
- Use in non-stationary applications that are subject to mechanical vibration and shock loads in excess of the requirement in EN 50178.

2.3 Waste disposal

Please follow the current national regulations. Dispose of materials separately in accordance with the regulations in force, for example:

- Electronics scrap (circuit boards)
- Plastic (housing)
- Sheet metal
- Copper
- Aluminum

2.4 Installation and startup

- Never install damaged products or take them into operation. Submit a complaint to the shipping company immediately in the event of damage.
- Only specialists with the appropriate accident prevention training are allowed to perform installation, startup and service work on the unit. These specialists must also comply with the regulations in force (e.g. EN 60204, VBG 4, DIN-VDE 0100/0113/0160) when performing this work.
- Follow the specific instructions during installation and startup of the other components!

- Preventive measures and protection devices must correspond to the regulations in force (e.g. EN 60204 or EN 50178).

  Required preventive measures: Ground the unit
- Take suitable steps to ensure that the preventive measures and protection devices described in the operating instructions for the individual MOVITRANS® components have been implemented correctly.
- Take appropriate measures (for example, connect binary input DI00"/CONTROLLER INHIBIT" to DGND on the TPS10A stationary converter) to ensure that the system does not start up unintentionally when power is switched on.
- Please wear appropriate protective clothing during assembly, especially when soldering the TLS line cables. Take appropriate security measures to prevent burns by the soldering iron or by hot solder. Take appropriate measures to prevent hot solder from leaking.

2.5 Operation and service

- Disconnect the TPS10A stationary converter and the TAS10A transformer module from the supply system before removing the protective cover. Dangerous voltages may still be present for up to 10 minutes after disconnection from the power supply source.

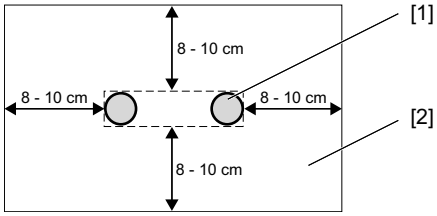
- With the protective cover removed, the MOVITRANS® units have enclosure IP00. This also applies to the TCS compensation box and the TVS connection distributor. Dangerous voltages are present at all components. All units must be closed during operation.
- When the unit switch is in the ON position, dangerous voltages are present at the output terminals as well as any connected cables and terminals. This is also the case when the TPS10A stationary converter is inhibited.
- The fact that the V1 operation LED and other display elements are no longer illuminated on the TPS10A stationary converter does not indicate that the TPS10A stationary converter and the TAS10A transformer module have been disconnected from the power supply and do not carry any voltage.

- Safety functions within the unit may cause system standstill. Removing the cause of the problem or performing a reset can result in the system re-starting on its own. If this action is not permissible due to reasons of safety, disconnect the TPS10A stationary converter and the TAS10A transformer module from the power supply before correcting the fault.

3 Routing Guidelines

When routing the TLS line cables, the following guidelines must be observed for all routing types:

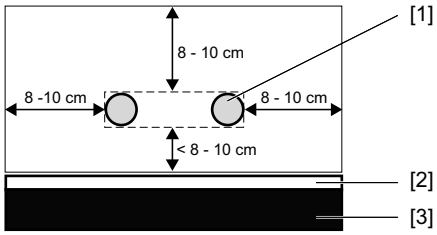
- Make sure that no ferromagnetic or electrically conductive material is present within a radius of 8 to 10 cm around the TLS line cables, e.g. reinforcing iron in the floor:



140137483

[1] Cross-section of the MOVITRANS® TLS line cable
[2] Space that must be kept free of ferromagnetic or electrically conductive material

- If the TLS line cable is routed above the floor and the minimum distance to ferromagnetic material cannot be kept, you must install a shield made of aluminum sheeting to prevent heating of the ferromagnetic material:



212478987

[1] Cross-section of the MOVITRANS® TLS line cable
[2] Aluminum sheeting (at least 3 mm)
[3] Ferromagnetic material

The aluminum sheeting must be at least 3 mm thick and should lie flush against the ferromagnetic material.

Since the aluminum sheeting also reduces the transmittable power, it should be installed as far away from the line cable as possible. The closer the aluminum sheeting is to the TLS line cable, the more is the transmitted power in this area reduced. Longer shielded areas can also reduce the transmittable power to a minimum.

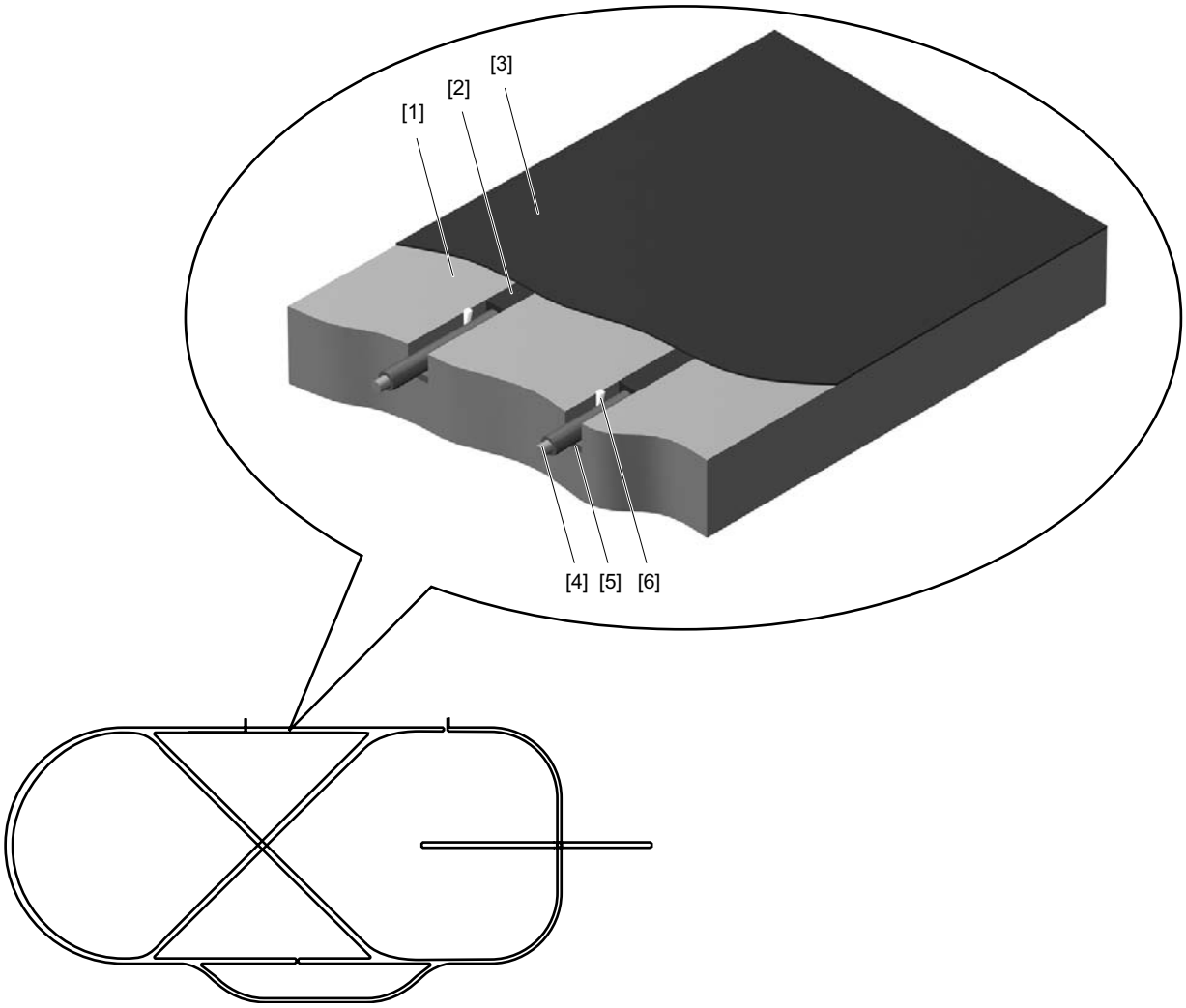
For determining the transmittable power, please send your construction data to SEW-EURODRIVE.

- Never route the TLS line cable in a metal cable duct.
- Ensure that the TLS line cables in the control cabinet are laid 3 to 5 cm away from the sheet metal.
- Make sure that only one feed through is used for the supply and return lines at the control cabinet.
- Route the TLS line cables closely together in parallel outside the coupling area to keep inductance and the system's interaction with metals to a minimum. As the distance between the line cable increases, the inductance and therefore the reactive power that needs to be compensated also increase.

4 Short Description

4.1 Basic structure

The following figure shows the basic structure of the transmission line with casting resin:



635588107

[1] Floor or grouting mortar
[2] Casting resin
[3] Floor coating (optional)
[4] MOVITRANS® TLS line cable
[5] Quartz sand
[6] Wedge

4.2 Routing principle

There are two different routing variants for transmission lines with casting resin.

4.2.1 Variant A

For variant A of the transmission line with casting resin, grooves are milled into the floor according to the required track elements, such as switches and crossings. The TLS line cable is placed into the grooves, which are then filled with casting resin.

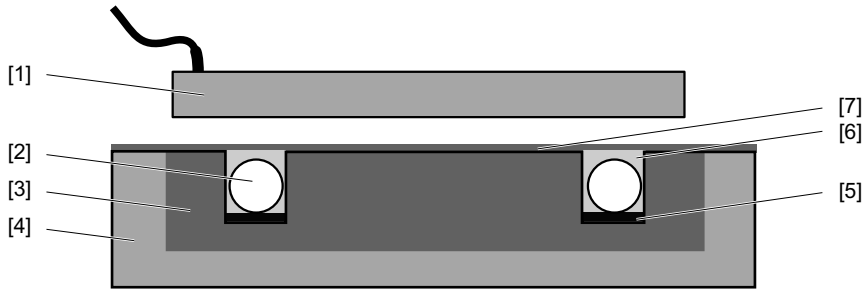
605765515

[1] MOVITRANS® THM pick-up
[2] MOVITRANS® TLS line cable
[3] Floor
[4] Quartz sand
[5] Casting resin
[6] Floor coating (optional)

4.2.2 Variant B

For variant B of the transmission line with casting resin, a large recess is first milled in the floor and filled with non-warping mortar. Grooves are then milled into the grouting mortar according to the required track elements, such as switches and crossings. The TLS line cable is placed into the grooves, which are then filled with casting resin.

.



605780491

[1] MOVITRANS® THM pick-up
[2] MOVITRANS® TLS line cable
[3] Floor
[4] Grouting mortar
[5] Quartz sand
[6] Casting resin
[7] Floor coating (optional)

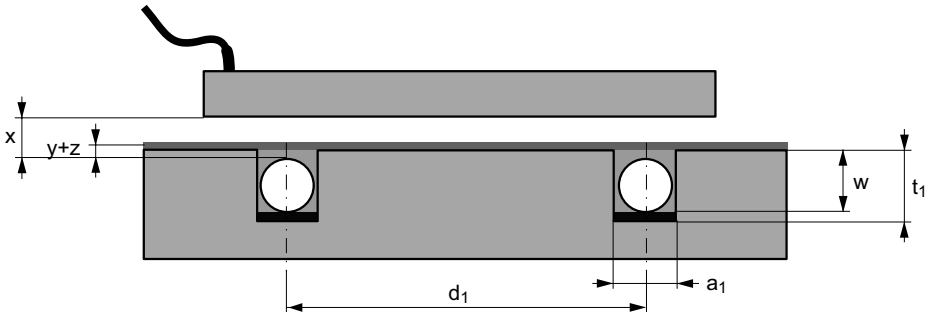
4.2.3 Comparison of variants

Variant A is the simpler solution. A prerequisite for this, however, is that the correct minimum distance is adhered to between ferromagnetic or electrically conductive material in the floor, e.g. rebars, and the TLS line cable.

Variant B is more complex. Its advantage is that the correct minimum distance between ferromagnetic or electrically conductive material in the floor and the TLS line cable is always adhered to. Additional grooves for mechanical track guidance of vehicles can be integrated in the recess, if required.

4.2.4 Dimensions

The following figure shows the dimensions of the transmission line with casting resin:



605775499

[a_1] Groove width for MOVITRANS® TLS line cable
[t_1] Groove depth for MOVITRANS® TLS line cable
[d_1] Distance between the MOVITRANS® TLS line cables
[w] Remaining groove depth after filling in the quartz sand
[x] Distance between MOVITRANS® TLS line cable and MOVITRANS® THM pick-up
[y] Distance between floor surface (without floor coating) and MOVITRANS® TLS line cable
[z] Thickness of floor coating (optional)

Dimensions			TLS line cable	
			TLS10E025-01-1	TLS10E041-01-1
Width	**a_1**	**[mm]**	14 + 2	16 + 2
Depth	**t_1**	**[mm]**	20 ± 1	23 ± 1
Distance	**d_1**	**[mm]**	140 ± 2.5	
Depth	**w**	**[mm]**	17 ± 1	20 ± 1
Distance	**x**	**[mm]**	20	20
Distance	**y**	**[mm]**	5 ± 1	5 ± 1
Strength	**z**	**[mm]**	Additional floor coating (z) reduces the effective air gap (x-y)	

4.3 Application

This transmission line with casting resin is mainly used for applications such as floor conveyor systems and automated guided vehicle systems.

4.4 Features

The transmission line with casting resin produces a very smooth floor surface, which is easy to clean. However, once the grooves are filled, rework is not possible without damage, e.g. corrections, repairs or replacement of TLS line cables.

4.5 Load capacity

When installing the transmission line with casting resin, the floor surface is sealed and able to withstand stress very well due to the narrow casting grooves. Forklifts, for example, can travel on the floor surface without any problems.

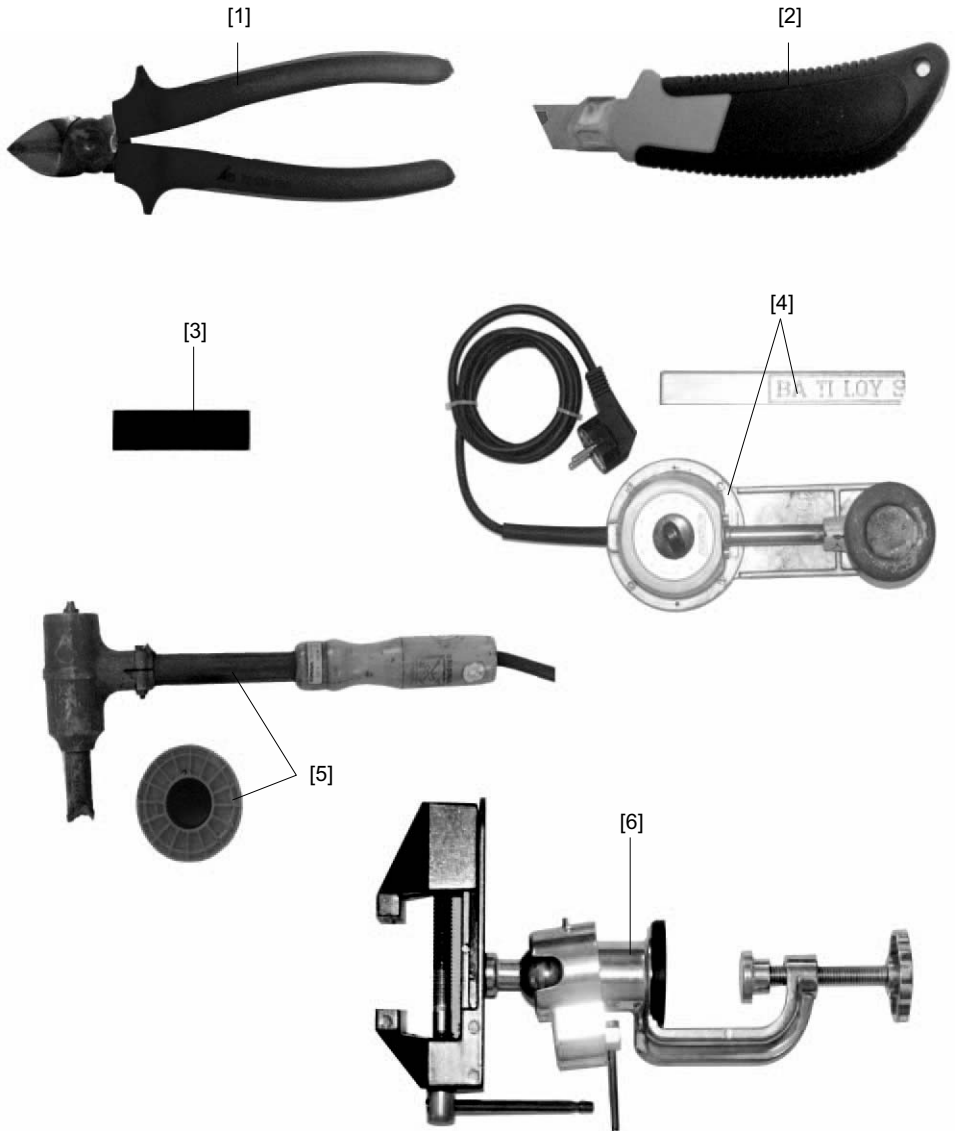
4.6 Maintenance

If the transmission line is installed with casting resin, metal dirt, e.g. swarf, must be removed regularly.

5 Prefabricating the TLS Line Cable

5.1 Tools

The following figure shows suitable tools for the prefabrication of the TLS line cables:



170535051

[1] Diagonal cutter
[2] Knife
[3] Shrink tubing
[4] Soldering pot with solder
[5] Hatchet-type soldering iron with solder
[6] Vise

5.2 Cable type

The TLS line cables are medium-frequency cables. The core of the medium-frequency cable consists of numerous thin wires that are insulated from each other by a coating.

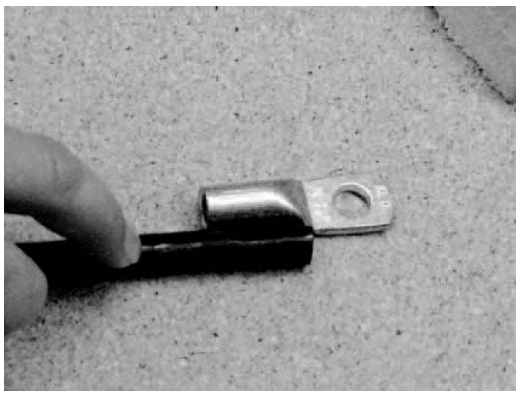
5.3 Procedure

The TLS line cable ends are soldered to a cable lug during prefabrication. **Do not press the cable lugs.**

We recommend a soldering pot and a hatchet-type soldering iron for soldering the cable lugs.

To prefabricate the TLS line cables proceed as follows:

1. Push the shrinking tube over the cable end.
2. Mark the length to be stripped.



170085387

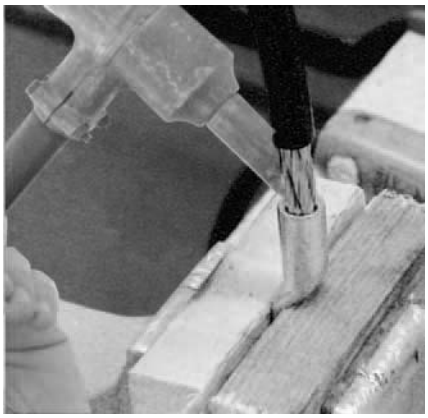
3. Remove the insulation at the end of the cable.

170087563

4. Remove the insulation (coating) of the individual wires and solder the cable lug. Here, you have the following options:

A **With hatched-type soldering iron:**

- Pour the solder into the cable lug to halfway.
- Insert the stripped cable end in the cable lug.
- Heat the cable lug with the hatchet-type soldering iron until the insulation of the individual wires melts and leaks out of the cable lug as brown waste.



170530699

B **With soldering pot and hatchet-type soldering iron:**

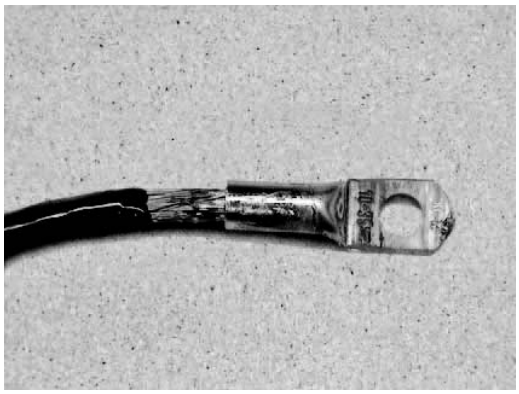
- Hold the stripped cable end in the soldering pot until the insulation of the individual wires melts and floats to the top of the soldering cup.
- Pour the solder into the cable lug to halfway.
- Insert the cable end in the cable lug.
- Heat the cable lug with the hatchet-type soldering iron again.

532537227

C **With gas flame:**

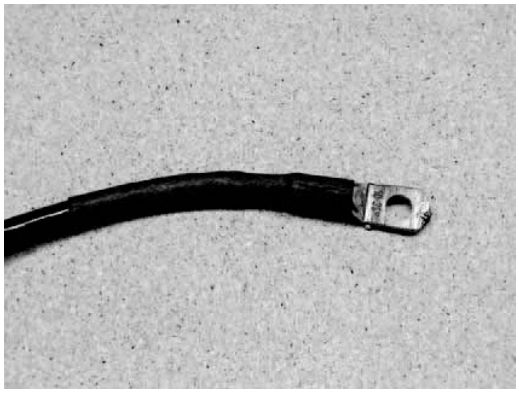
- Pour the solder into the cable lug to halfway.
- Insert the stripped cable end in the cable lug.
- Heat the cable lug with the gas flame until the insulation of the individual wires melts and leaks out of the cable lug as brown waste.

Make sure that the insulation (coating) of the individual wires melts and leaks out of the cable lug during soldering! This is essential for a good connection with low contact resistance.



170091915

5. Push the shrinking tube over the soldering point.
6. Heat the shrink tubing until it closes tightly around the soldering point.



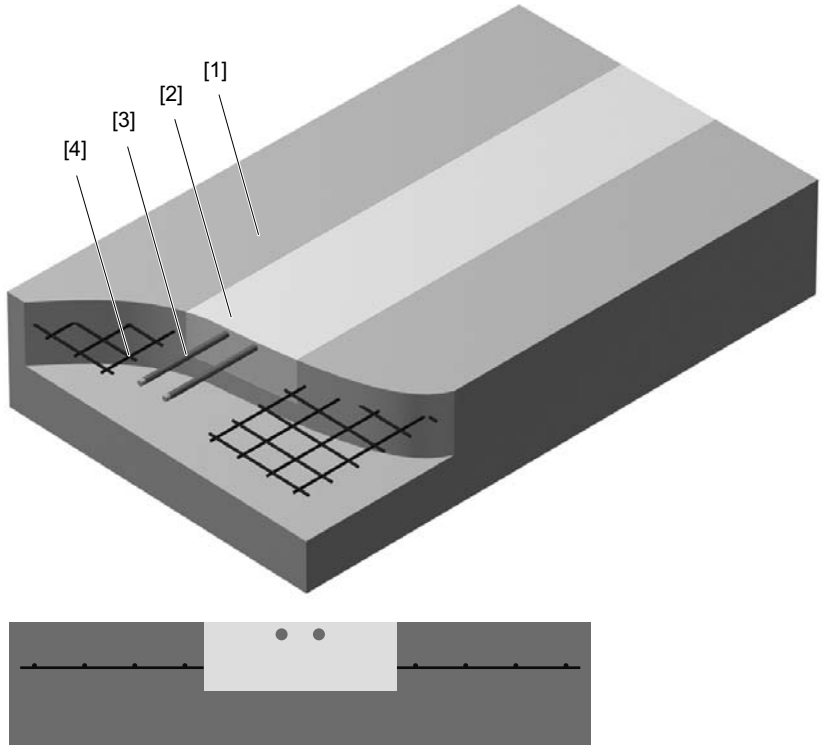
170089739

6 Installation

6.1 General information

Note the following points when installing the transmission line with casting resin:

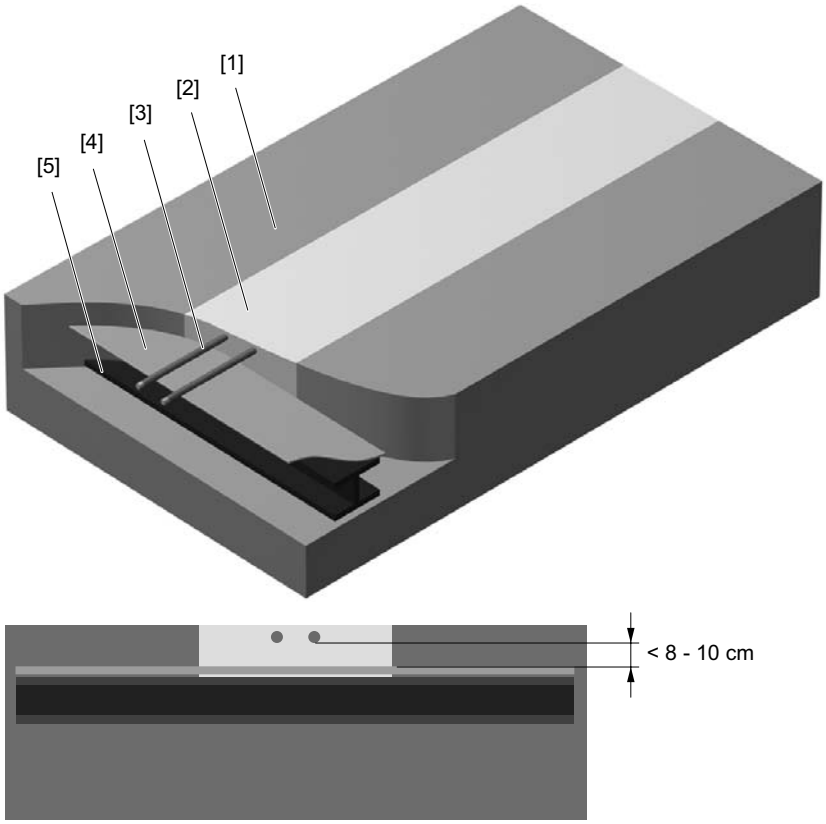
- The minimum distance between ferromagnetic or electrically conductive material and the TLS line cable (8 to 10 cm) must always be kept. If you cannot comply with this minimum distance, contact SEW-EURODRIVE.
- If the required minimum distance to ferromagnetic or electrically conductive material in the floor cannot be kept, e.g. due to rebars, only the routing principle with recess (variant B) can be used.



635427979

[1] Floor
[2] Grouting mortar
[3] MOVITRANS® TLS line cable
[4] Rebars

- If the required minimum distance to ferromagnetic or electrically conductive material in the floor cannot be kept at individual points, e.g. an iron girder, you must install a shield made of aluminum sheeting to prevent heating of the ferromagnetic material.



[1] Floor
[2] Grouting mortar
[3] MOVITRANS® TLS line cable
[4] Aluminum sheeting
[5] Iron girder

The aluminum sheeting must be at least 3 mm thick and should lie flush against the ferromagnetic material.

Since the aluminum sheeting also reduces the transmittable power, it should be installed as far away from the line cable as possible. The closer the aluminum sheeting is to the TLS line cable, the more is the transmitted power in this area reduced. Longer shielded areas can also reduce the transmittable power to a minimum.

For determining the transmittable power, please send your construction data to SEW-EURODRIVE.

- For a constant coupling (energy transfer), the distance between TLS line cable and THM pick-up must remain constant.
- It is essential to observe the specified distances and tolerances.
- Please also refer to the information in Sec. "Routing guidelines" (page 7).

6.2 Procedure

The following describes the installation of the transmission line with casting resin in several steps.

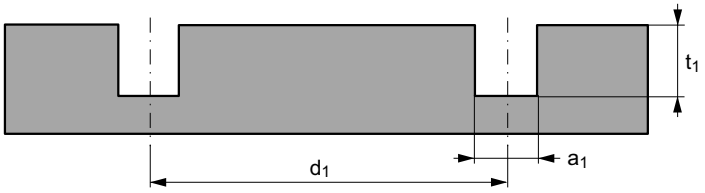
6.2.1 Floor preparation for variant A

To prepare the floor for version A, proceed as follows:

1. Use a joint cutter to cut the grooves into the floor according to the required track elements. Observe dimensions a_1, t_1 and d_1 for the grooves.

   See section "Track elements" (page 27) for additional information.

   Ideally, the joint cutter refers to the same level as the wheels of the vehicle will later. This is especially important for rails routed in parallel.

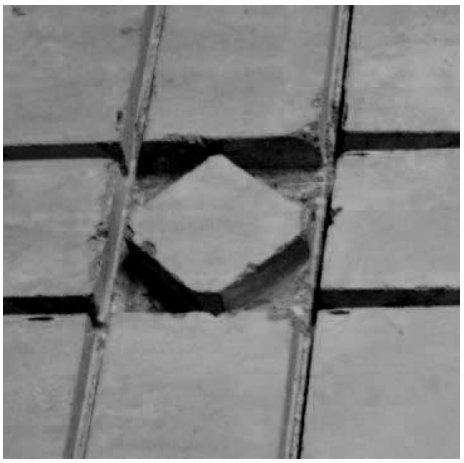


605763851

Dimensions			TLS line cable	
			TLS10E025-01-1	TLS10E041-01-1
Width	**a_1**	**[mm]**	14 + 2	16 + 2
Depth	**t_1**	**[mm]**	20 ± 1	23 ± 1
Distance	**d_1**	**[mm]**	140 ± 2.5	

2. Chisel off corners and edges according to the required track elements.

   See section "Track elements" (page 27) for additional information.

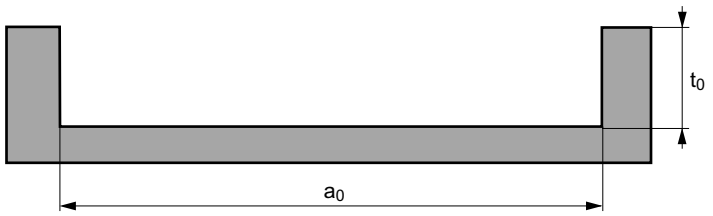


620899595

6.2.2 Floor preparation for variant B

To prepare the floor for version B, proceed as follows:

1. Mill the recess in the floor. Observe dimensions a_0 and t_0 for the recess.



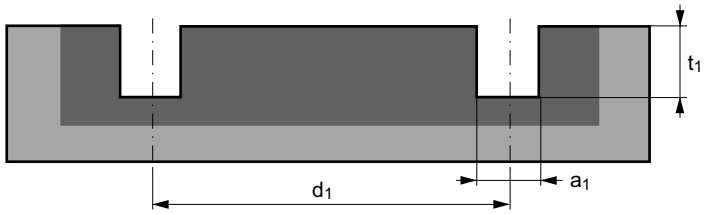
613172875

Dimensions			TLS line cable	
			TLS10E025-01-1	TLS10E041-01-1
Width	**a_0**	**[mm]**	360	
Depth	**t_0**	**[mm]**	120	

2. Fill the recess with warp-free grouting mortar.
3. Wait until the grouting mortar has hardened.
4. Use a joint cutter to cut the grooves into the grouting mortar according to the required track elements. Observe dimensions a_1, t_1 and d_1 for the grooves.

   See section "Track elements" (page 27) for additional information.

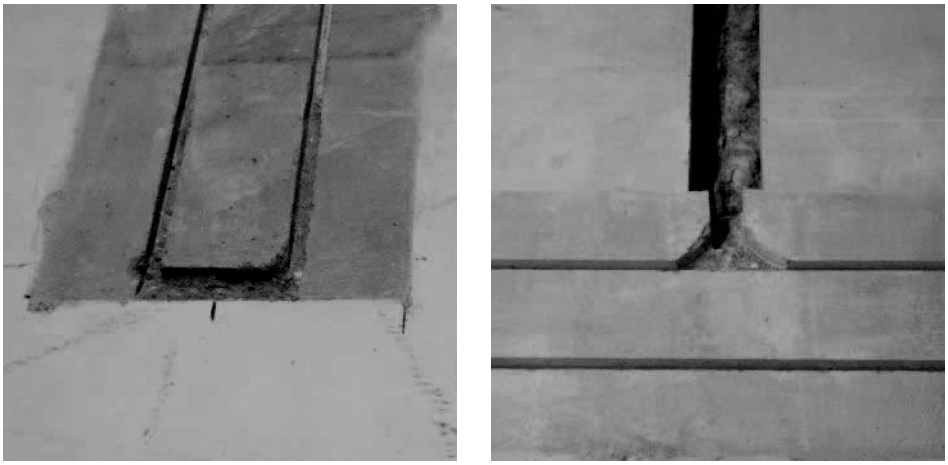
   Ideally, the joint cutter refers to the same level as the wheels of the vehicle will later. This is especially important for rails routed in parallel.



605778827

Dimensions			TLS line cable	
			TLS10E025-01-1	TLS10E041-01-1
Width	**a_1**	**[mm]**	14 + 2	16 + 2
Depth	**t_1**	**[mm]**	20 ± 1	23 ± 1
Distance	**d_1**	**[mm]**	140 ± 2.5	

5. Chisel off corners and edges according to the required track elements.
   See section "Track elements" (page 27) for additional information.



620894603

6.2.3 Cable installation

For installing the TLS line cable (version A and B), proceed as follows:

1. Cover the bottom of the groove with a little sand.

620897931

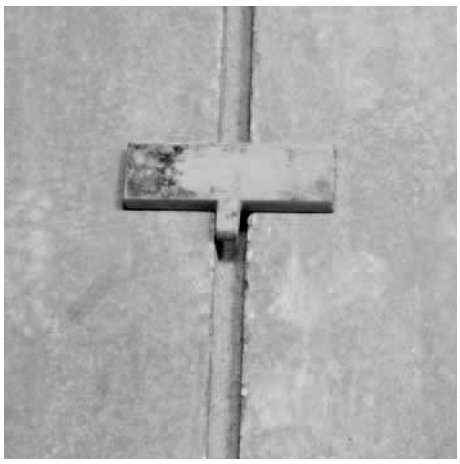
2. Distribute the sand evenly. Observe the minimum dimension w for the remaining depth of the groove.

605773835

[1] Floor or grouting mortar [2] Quartz sand

Dimensions			TLS line cable	
			TLS10E025-01-1	TLS10E041-01-1
Depth	**w**	**[mm]**	17 ± 1	20 ± 1

Distributing the sand and leveling the groove (depth w) is made easier by using a strickle.



620896267

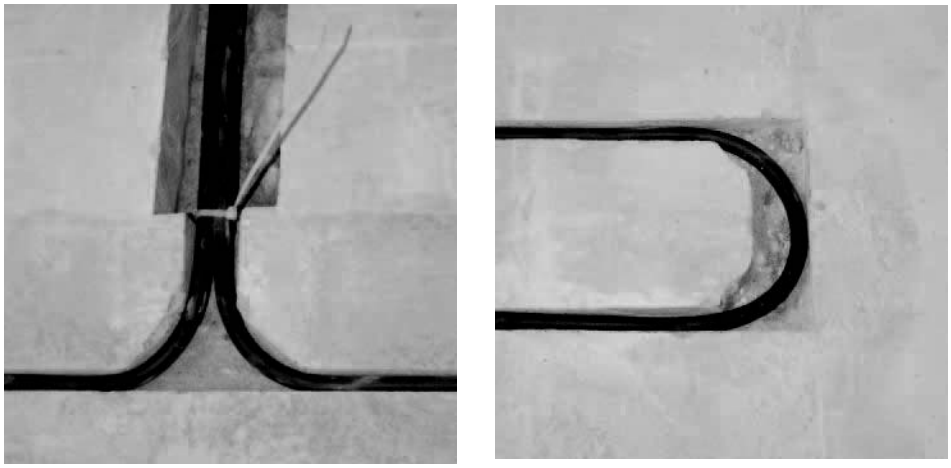
3. Place the line cable in the grooves according to the required track elements. Observe the required dimension y for the distance between TLS line cable and floor surface.

   See section "Track elements" (page 27) for additional information.

605770507

[1] Floor or grouting mortar
[2] Quartz sand
[3] MOVITRANS® TLS line cable

Dimensions			TLS line cable	
			TLS10E025-01-1	TLS10E041-01-1
Distance	**y**	**[mm]**	5 ± 1	5 ± 1



620892939

4. Secure the line cable in places in which it is not flat against the sand at the bottom of the groove by driving in a wedge.

605768843

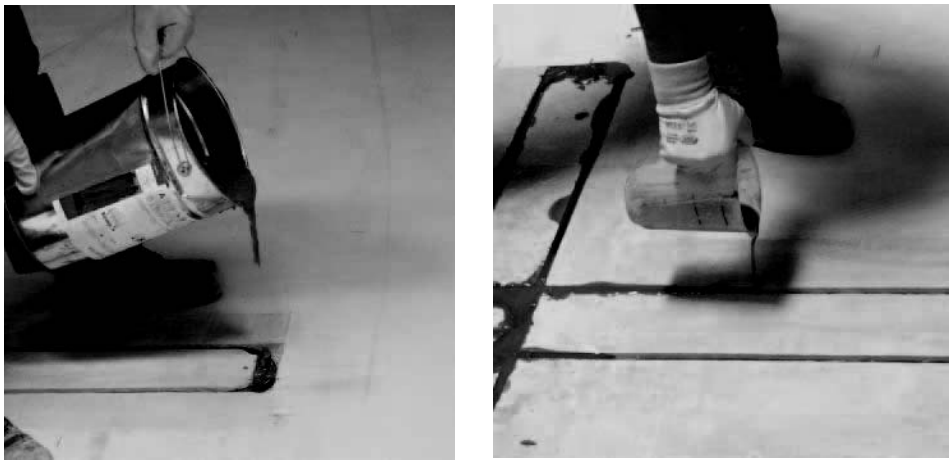
[1] Floor or grouting mortar
[2] Quartz sand
[3] MOVITRANS® TLS line cable
[4] Wedge

615284875

5. Fill in the remaining space in the grooves to the upper edge with casting resin on epoxy resin base.

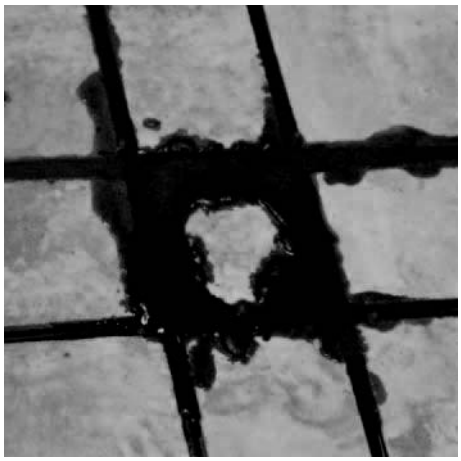
605772171

[1] Floor or grouting mortar
[2] Quartz sand
[3] MOVITRANS® TLS line cable
[4] Wedge
[5] Casting resin



615281547

6. Wait until the casting resin has hardened.



615283211

6.2.4 Floor finishing

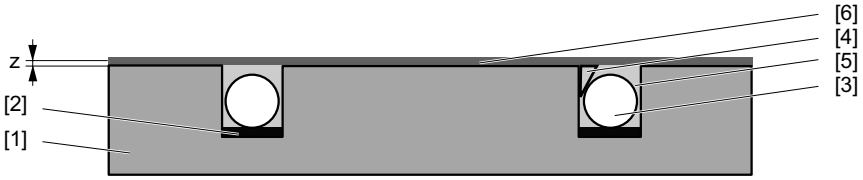
To finish the floor for version A and B, proceed as follows:

1. Grind down the floor surface until it is level.

605767179

[1] Floor or grouting mortar
[2] Quartz sand
[3] MOVITRANS® TLS line cable
[4] Wedge
[5] Casting resin

In addition, you can apply a protective layer to the floor surface. The floor coating may not contain metal granulate. Please note that the thickness of the floor coating z reduces the effective air gap (x-y).



605777163

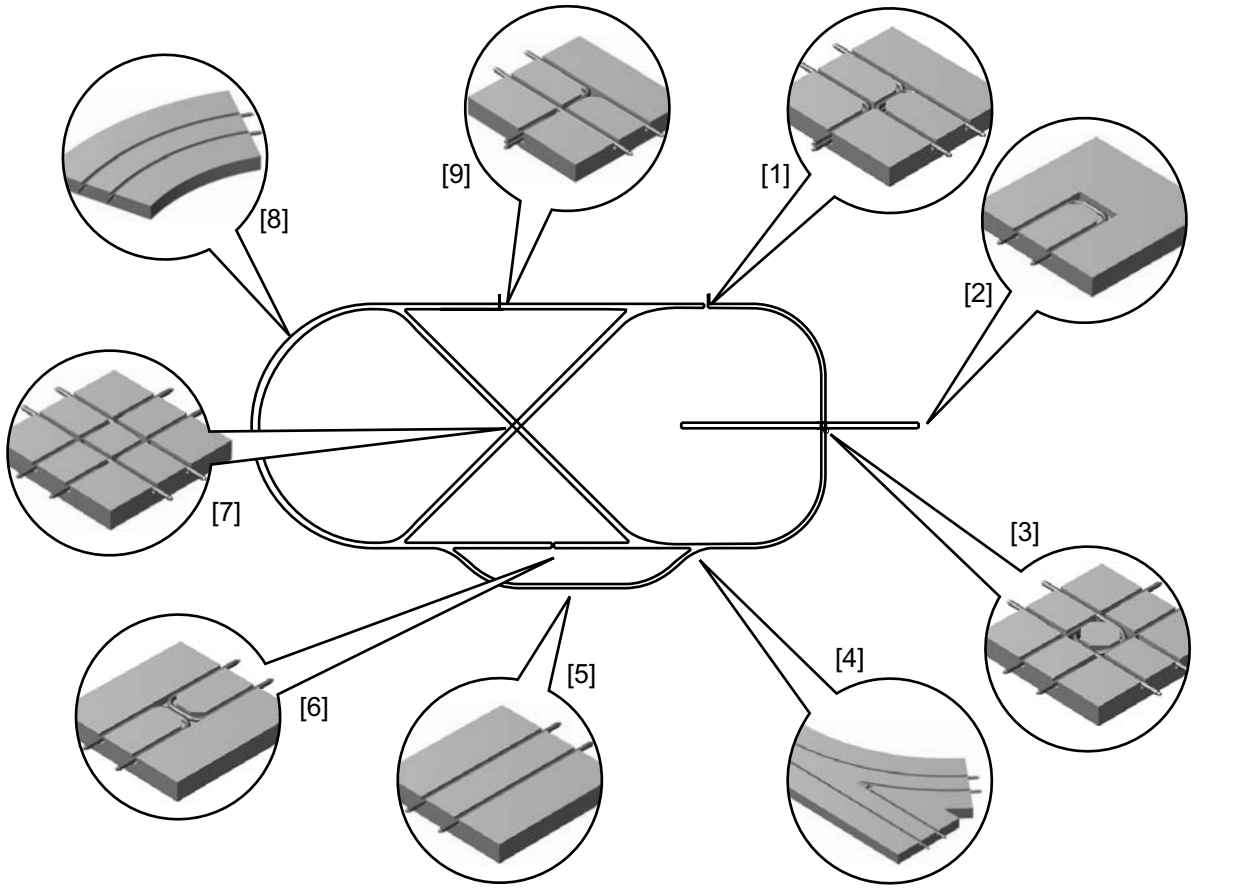
[1] Floor or grouting mortar
[2] Quartz sand
[3] MOVITRANS® TLS line cable
[4] Wedge
[5] Casting resin
[6] Floor coating (optional)

6.3 Track elements

The following shows the track elements of the transmission line with casting resin.

6.3.1 Overview

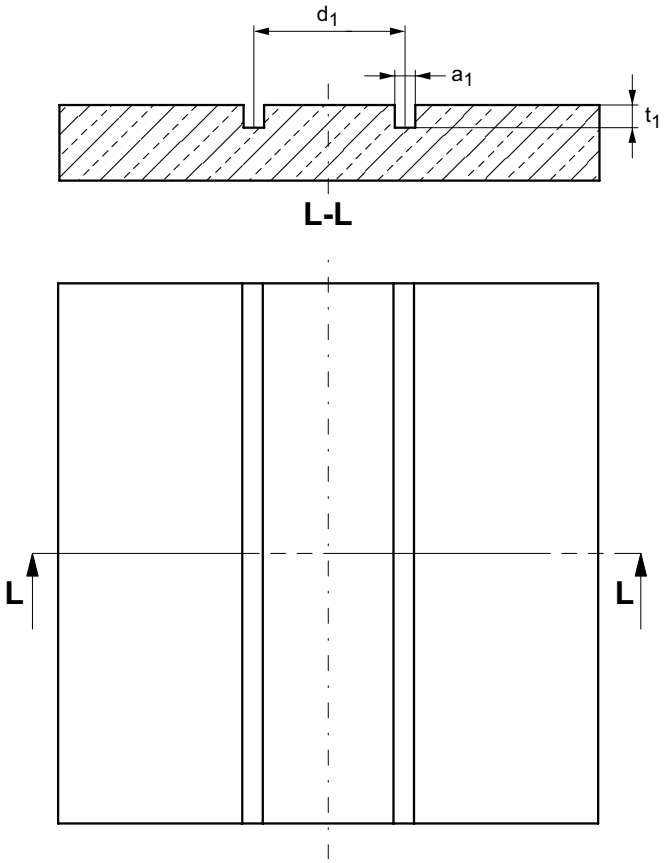
The following figure shows an overview of the track elements described below:



[1] Supply connection (one-way)
[2] Track end
[3] Crossing II (turning point)
[4] Switch
[5] Straight section
[6] Inversion point
[7] Crossing I (crossing tracks)
[8] Curve
[9] Supply connection (two-way, outside)

6.3.2 Straight section / curve

The following figure shows the dimension drawing of the floor milling for a straight track section:

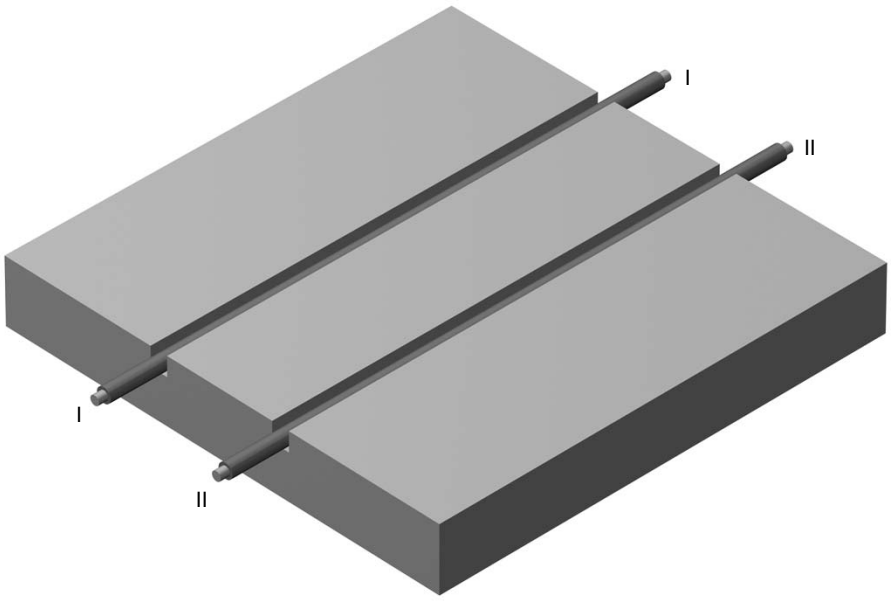


635328395

For a curve, the same dimensions as for a straight track section apply – but the curve radius r must also be taken into account.

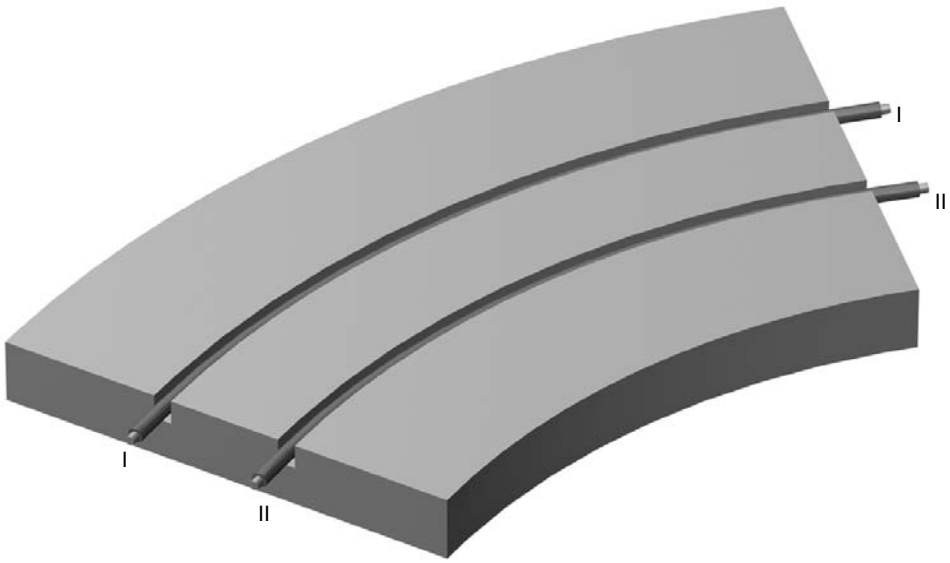
Dimensions			TLS line cable	
			TLS10E025-01-1	TLS10E041-01-1
Width	**a_1**	**[mm]**	14 + 2	16 + 2
Depth	**t_1**	**[mm]**	20 ± 1	23 ± 1
Distance	**d_1**	**[mm]**	140 ± 2.5	
Curve radius	**r_0**	**[mm]**	min. 1000	

The following figure shows the routing of the TLS line cable for a straight track section:



635326219

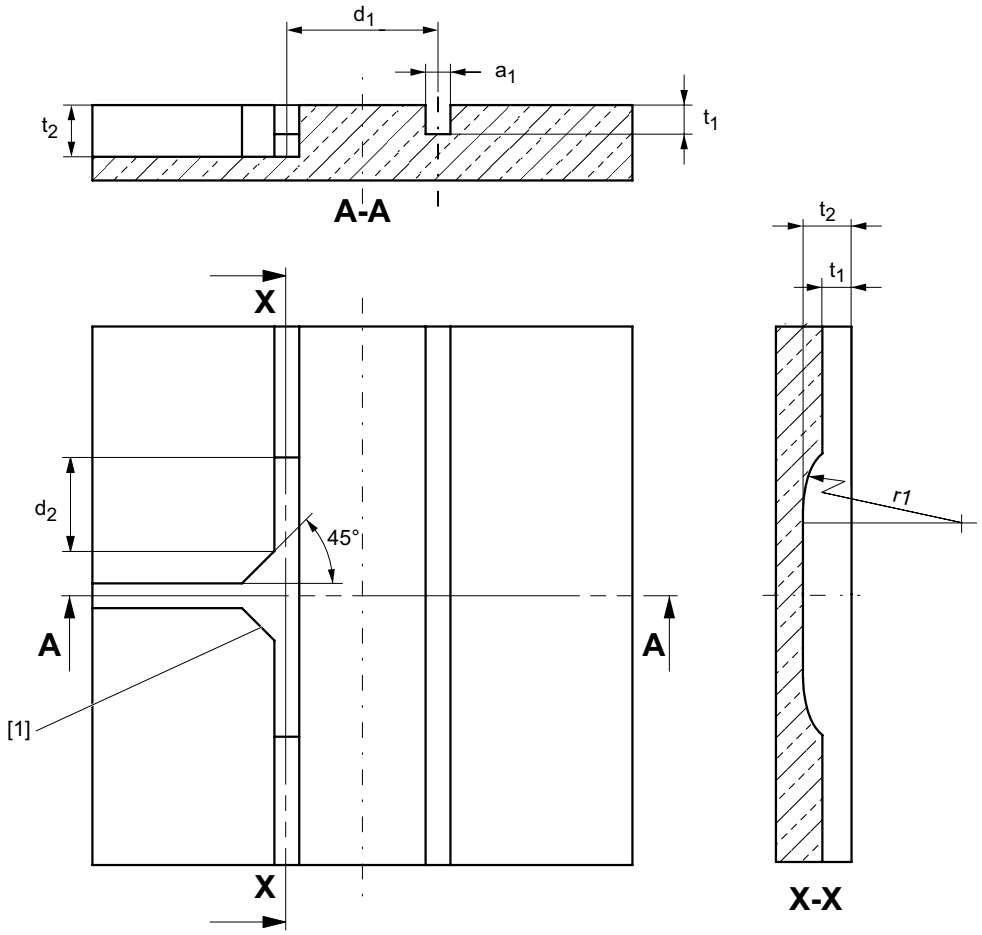
The following figure shows the routing of the TLS line cable for a curve:



635358347

6.3.3 Supply connection I (two-way, inside)

The following figure shows the dimension drawing of the floor milling for a two-way supply connection on the inside, e.g. for supply and compensation box:

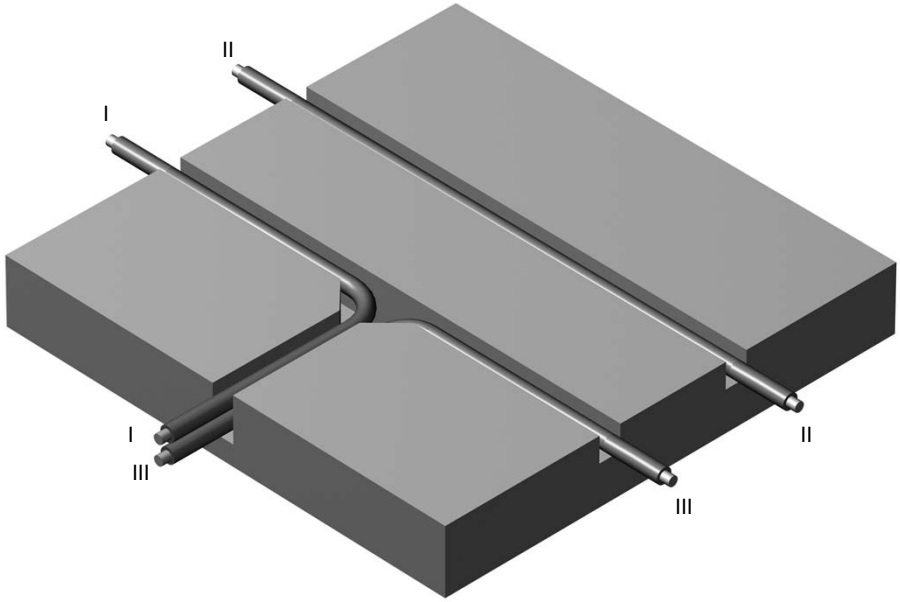


635319691

[1] Chisel off the corners

Dimensions			TLS line cable	
			TLS10E025-01-1	TLS10E041-01-1
Width	**a_1**	**[mm]**	14 + 2	16 + 2
Depth	**t_1**	**[mm]**	20 ± 1	23 ± 1
Depth	**t_2**	**[mm]**	32 ± 1	38 ± 1
Distance	**d_1**	**[mm]**	140 ± 2.5	
Distance	**d_2**	**[mm]**	80	
Radius of joint cutter	**r_1**	**[mm]**	min. 170	

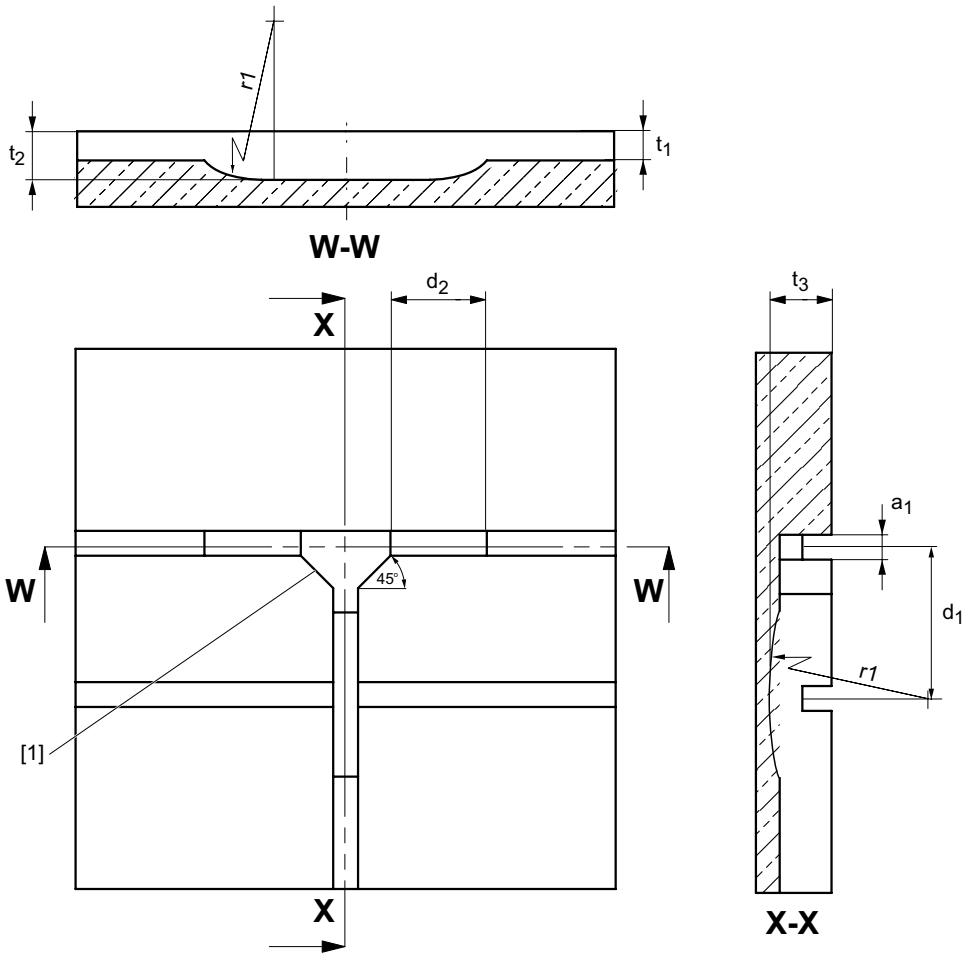
The following figure shows the routing of the TLS line cable for a two-way supply connection on the inside:



635317515

6.3.4 Supply connection II (two-way, outside)

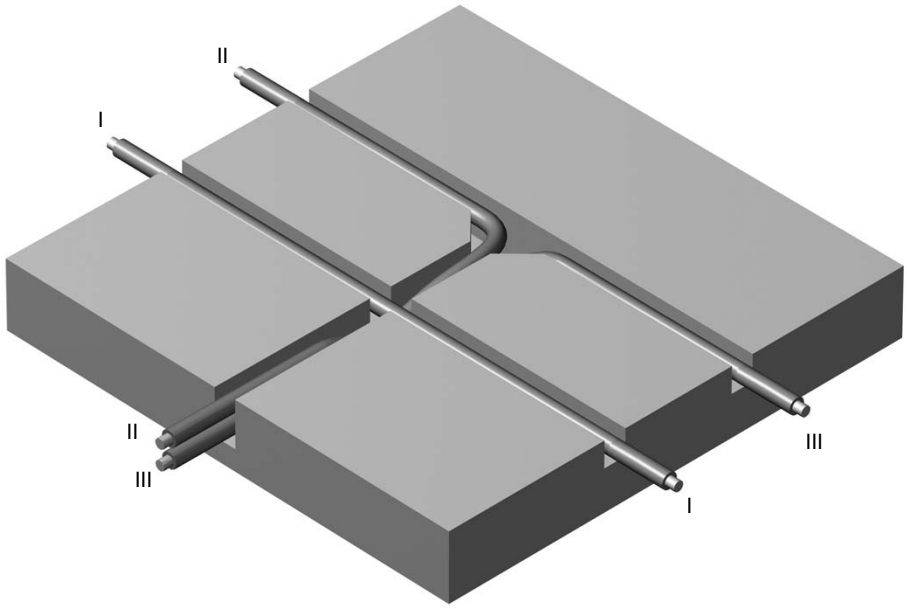
The following figure shows the dimension drawing of the floor milling for a two-way supply connection on the outside, e.g. for supply and compensation box:



[1] Chisel off the corners

Dimensions			TLS line cable	
			TLS10E025-01-1	TLS10E041-01-1
Width	**a_1**	**[mm]**	14 + 2	16 + 2
Depth	**t_1**	**[mm]**	20 ± 1	23 ± 1
Depth	**t_2**	**[mm]**	32 ± 1	38 ± 1
Depth	**t_3**	**[mm]**	44 ± 1	53 ± 1
Distance	**d_1**	**[mm]**	140 ± 2.5	
Distance	**d_2**	**[mm]**	80	
Radius of joint cutter	**r_1**	**[mm]**	min. 170	

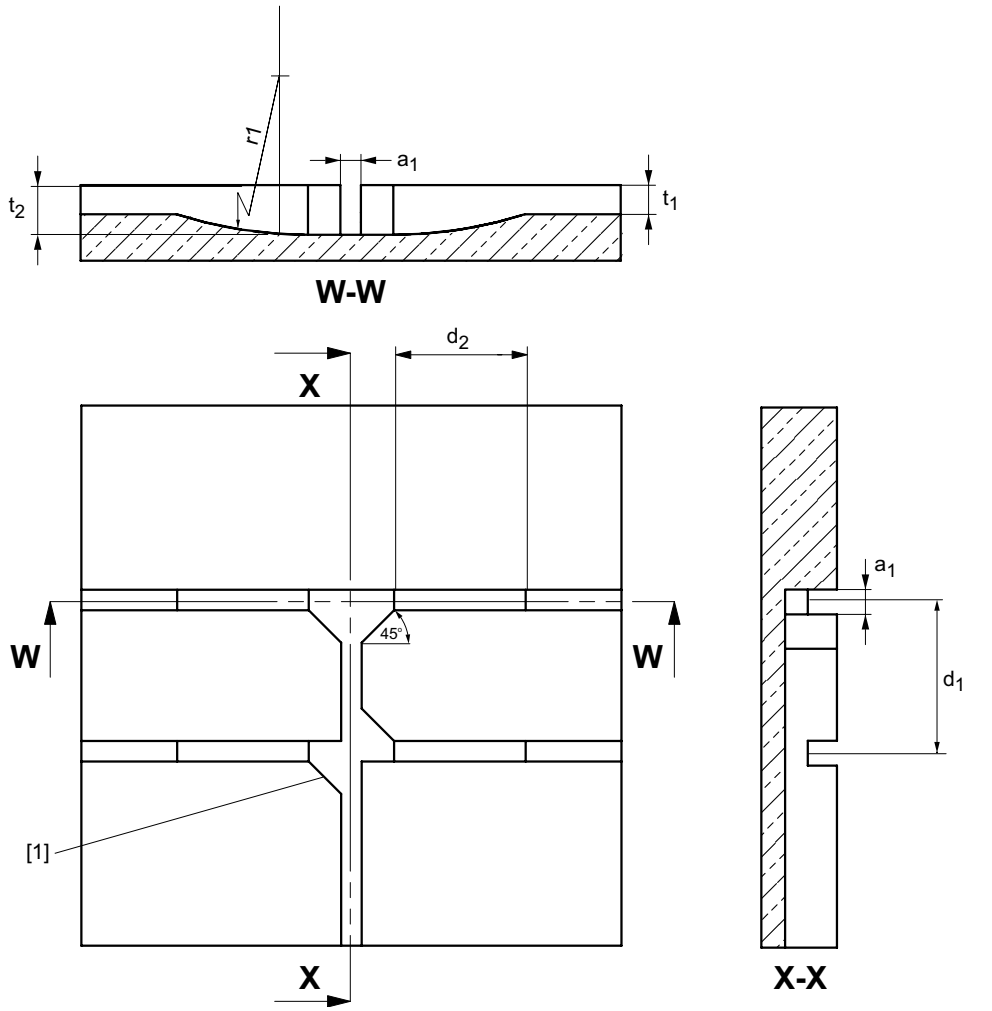
The following figure shows the routing of the TLS line cable for a two-way supply connection on the outside:



635310987

6.3.5 Supply connection III (one-way)

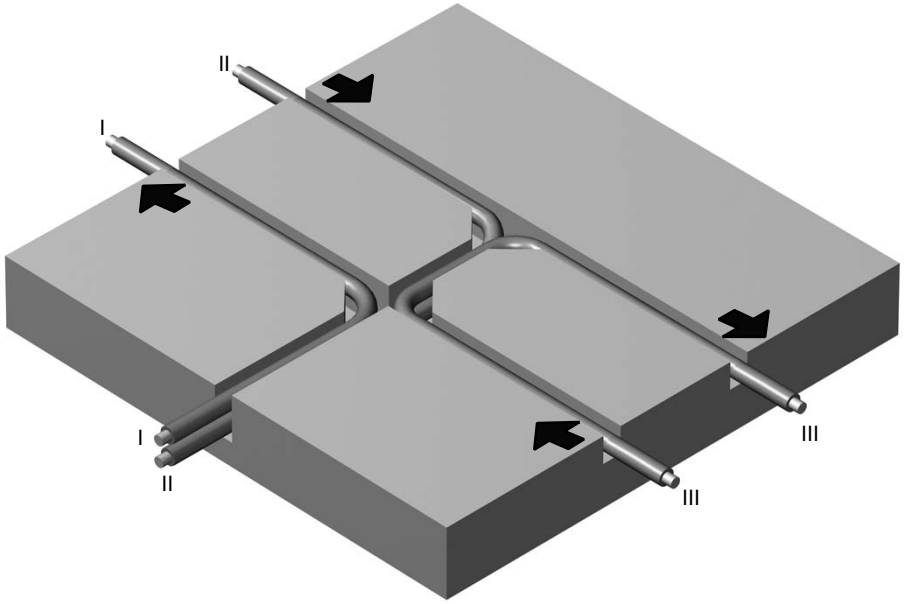
The following figure shows the dimension drawing of the floor milling for a one-way supply connection, e.g. for supply and compensation box:



[1] Chisel off the corners

Dimensions			TLS line cable	
			TLS10E025-01-1	TLS10E041-01-1
Width	**a_1**	**[mm]**	14 + 2	16 + 2
Depth	**t_1**	**[mm]**	20 ± 1	23 ± 1
Depth	**t_2**	**[mm]**	32 ± 1	38 ± 1
Distance	**d_1**	**[mm]**	140 ± 2.5	
Distance	**d_2**	**[mm]**	80	
Radius of joint cutter	**r_1**	**[mm]**	min. 170	

The following figure shows the routing of the TLS line cable for a one-way supply connection:

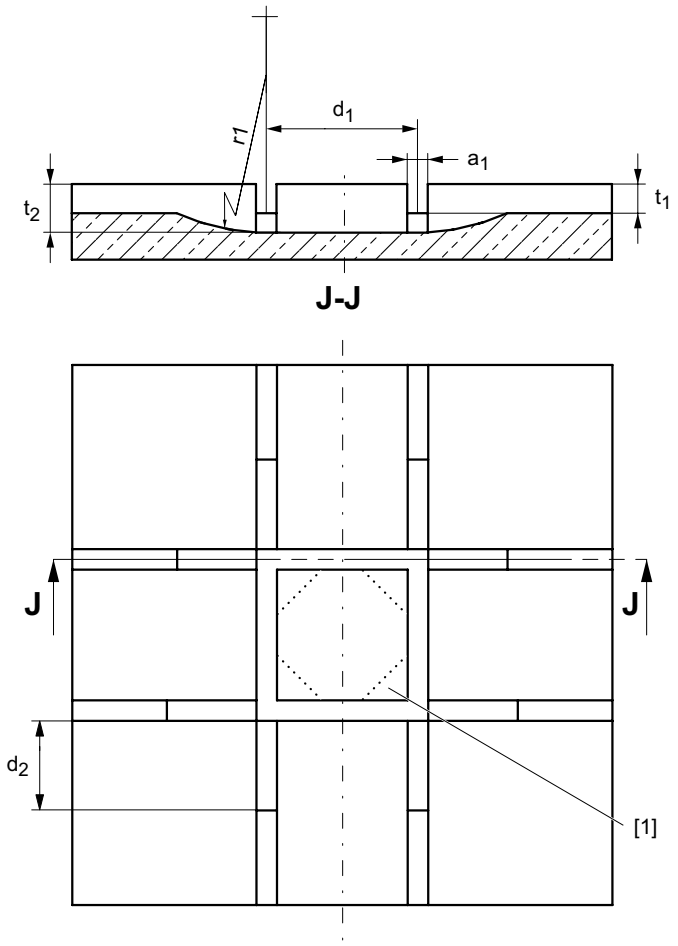


635304459

The arrows show the direction of routing (current flow) of the TLS line cables. The direction of routing must be the same for the entire transmission track in order to prevent field cancellations. At such points, no energy would be transferred.

6.3.6 Crossing I (crossing tracks) / II (turning point)

The following figure shows the dimension drawing of the floor milling for a crossing I (crossing tracks) and a crossing II (turning point):

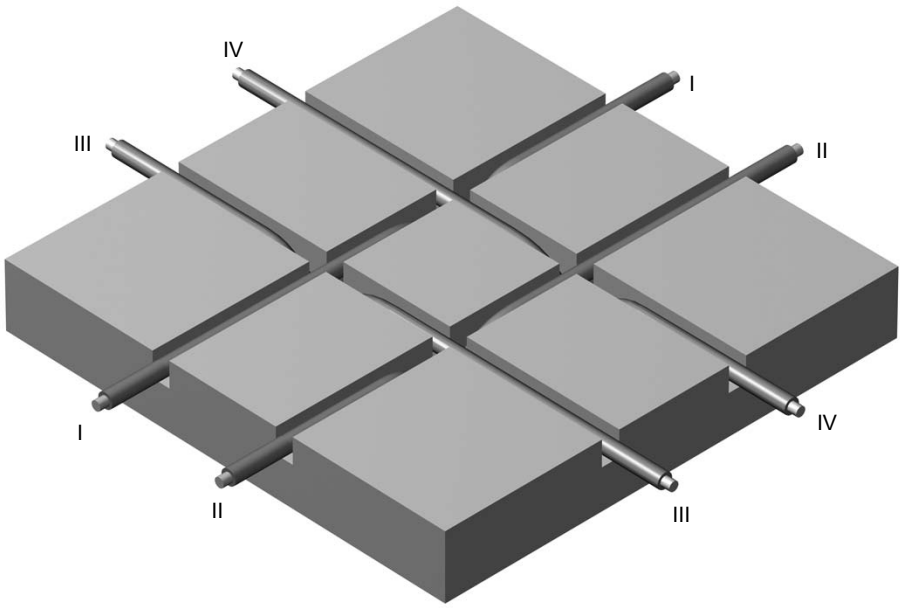


635189259

[1] For a turning point: Chisel off the corners

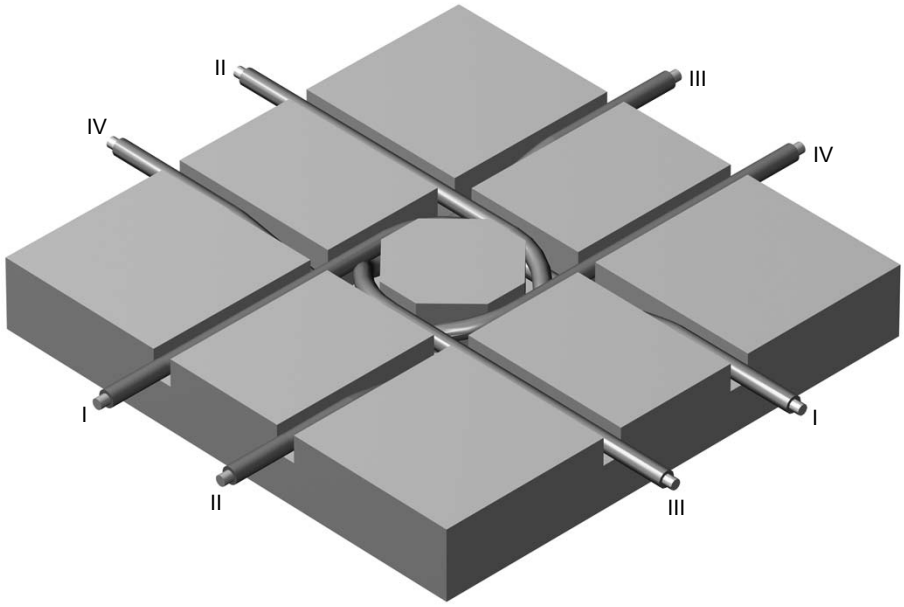
Dimensions			TLS line cable	
			TLS10E025-01-1	TLS10E041-01-1
Width	**a_1**	**[mm]**	14 + 2	16 + 2
Depth	**t_1**	**[mm]**	20 ± 1	23 ± 1
Depth	**t_2**	**[mm]**	32 ± 1	38 ± 1
Distance	**d_1**	**[mm]**	140 ± 2.5	
Distance	**d_2**	**[mm]**	80	
Radius of joint cutter	**r_1**	**[mm]**	min. 170	

The following figure shows the routing of the TLS line cable for a crossing I (crossing tracks):



676125195

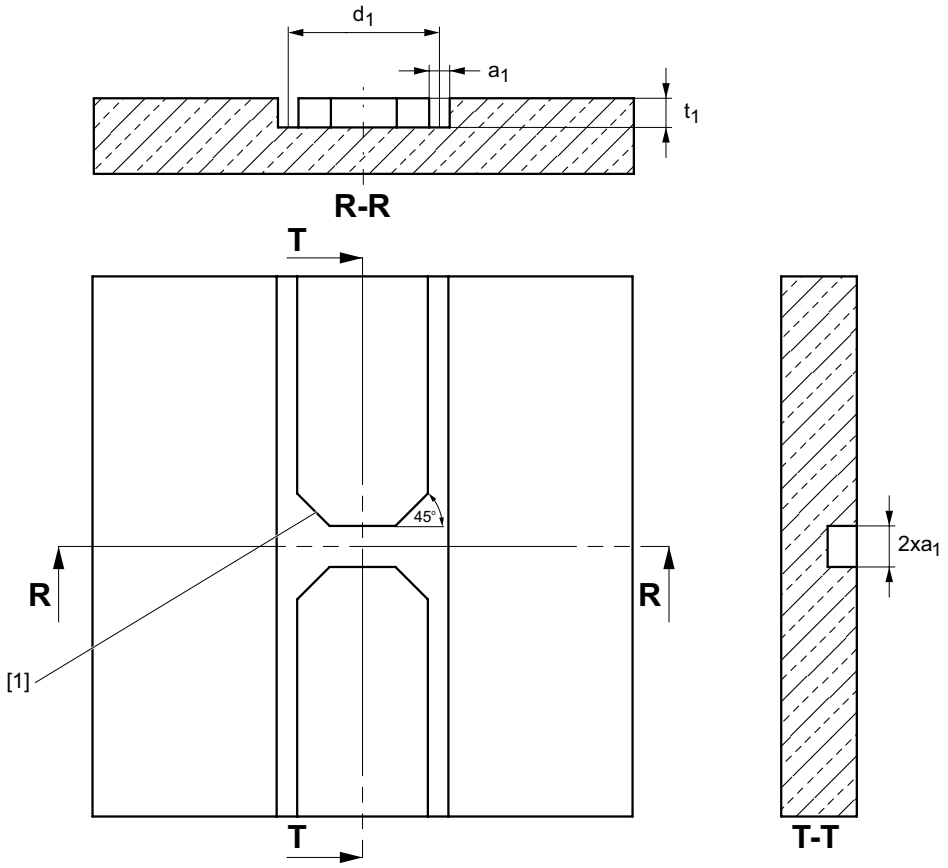
The following figure shows the routing of the TLS line cable for a crossing II (turning point):



635184907

6.3.7 Inversion point

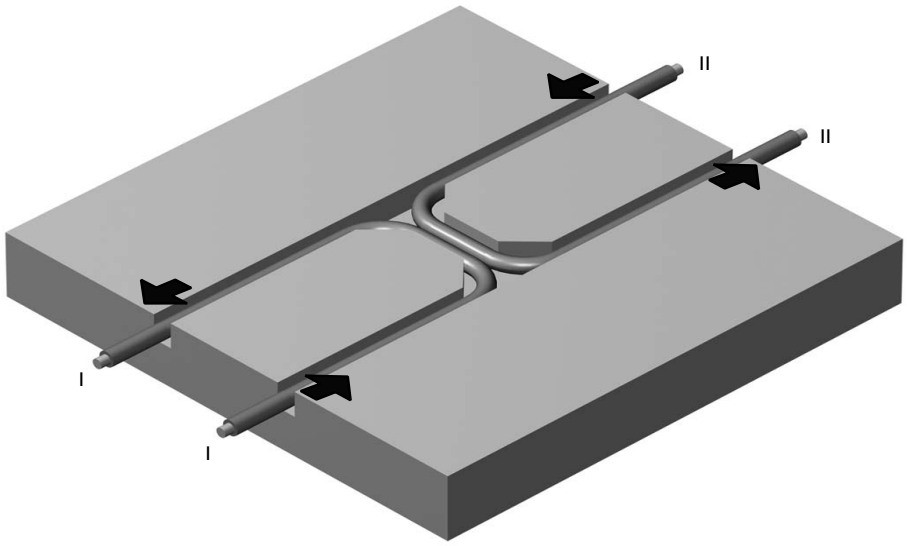
The following figure shows the dimension drawing of the floor milling for an inversion point:



[1] Chisel off the corners

Dimensions			TLS line cable	
			TLS10E025-01-1	TLS10E041-01-1
Width	**a_1**	**[mm]**	14 + 2	16 + 2
Depth	**t_1**	**[mm]**	20 ± 1	23 ± 1
Distance	**d_1**	**[mm]**	140 ± 2.5	

The following figure shows the routing of the TLS line cable for an inversion point:

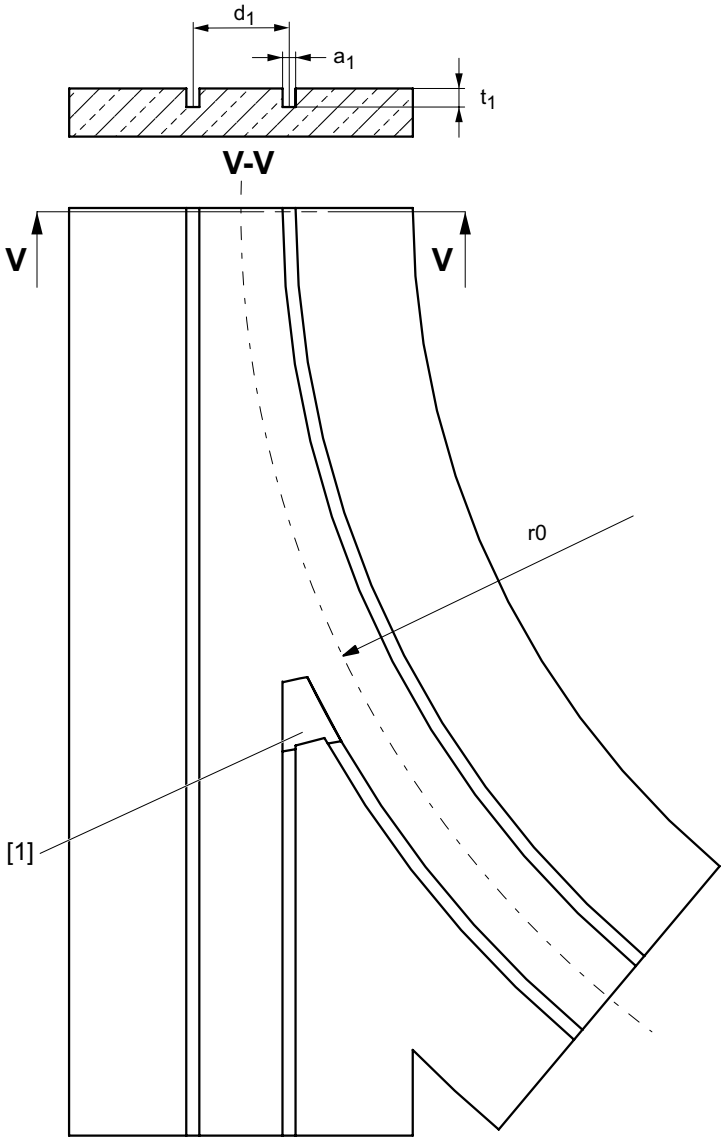


635291915

The arrows show the direction of routing (current flow) of the TLS line cables. The direction of routing must be the same for the entire transmission track in order to prevent field cancellations. At such points, no energy would be transferred.

6.3.8 Switch

The following figure shows the dimension drawing of the floor milling for a switch:

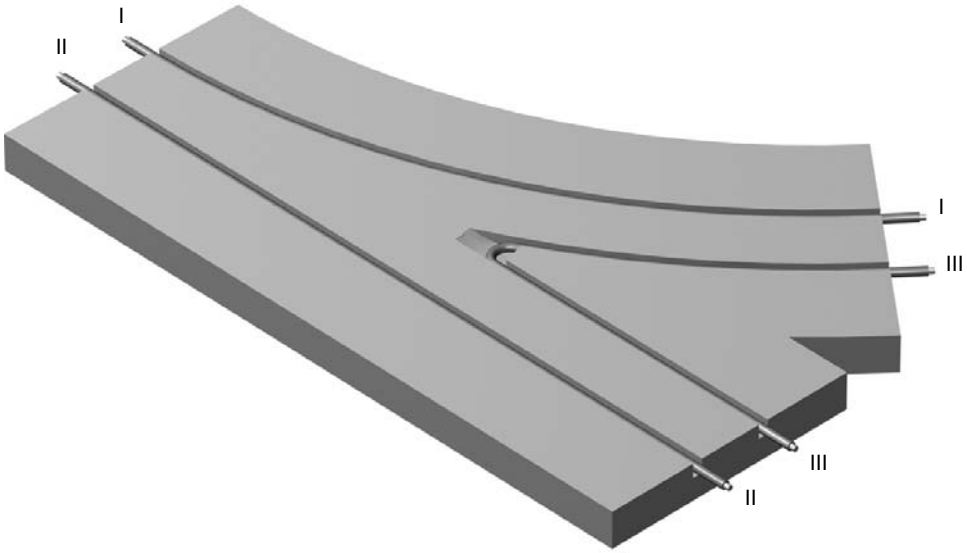


635300619

[1] Chisel off the corner

Dimensions			TLS line cable	
			TLS10E025-01-1	TLS10E041-01-1
Width	a_1	[mm]	14 + 2	16 + 2
Depth	t_1	[mm]	20 ± 1	23 ± 1
Distance	d_1	[mm]	140 ± 2.5	
Curve radius	r_0	[mm]	min. 1000	

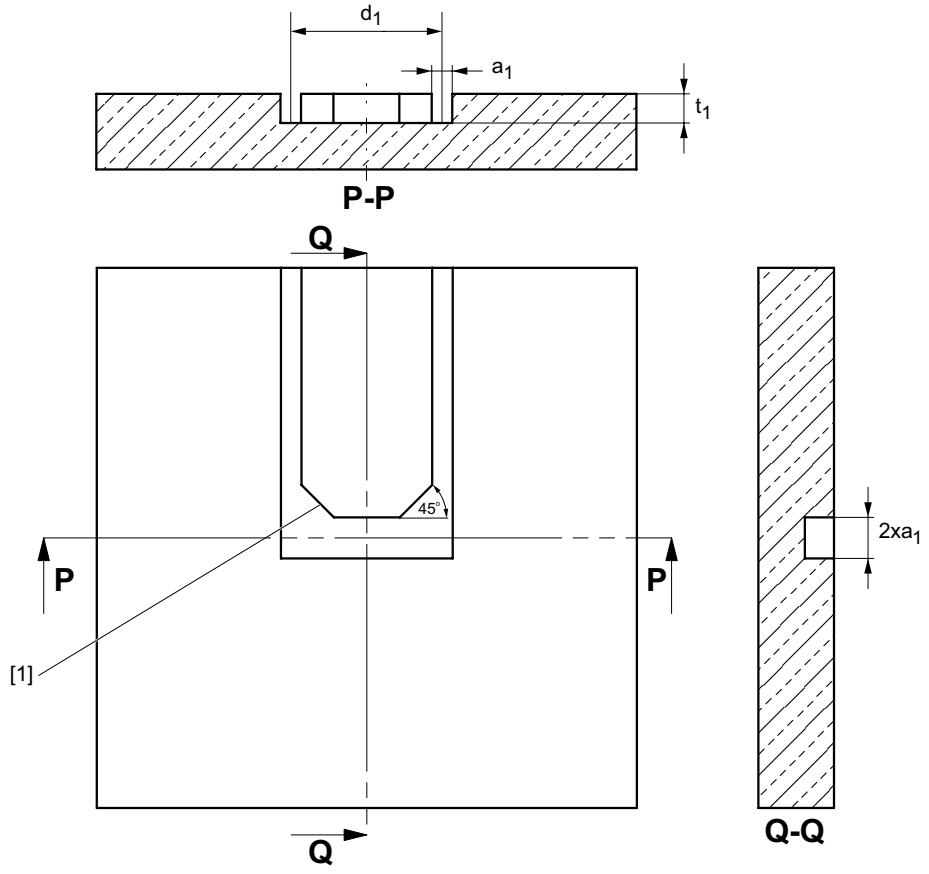
The following figure shows the routing of the TLS line cable for a switch:



635298443

6.3.9 Track end

The following figure shows the dimension drawing of the floor milling for a track end:

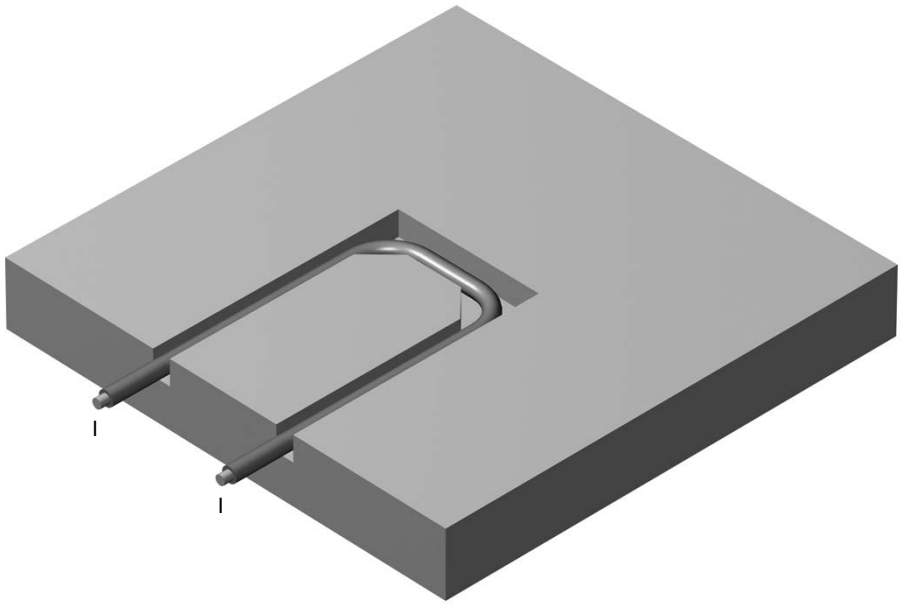


635287563

[1] Chisel off the corners

Dimensions			TLS line cable	
			TLS10E025-01-1	TLS10E041-01-1
Width	**a_1**	**[mm]**	14 + 2	16 + 2
Depth	**t_1**	**[mm]**	20 ± 1	23 ± 1
Distance	**d_1**	**[mm]**	140 ± 2.5	

The following figure shows the routing of the TLS line cable for a track end:



635285387

7 Documentation

7.1 Available documentation

The following publications are available for contactless energy transfer with MOVITRANS®:

Publications	Number	
	German	English
System Description MOVITRANS®	11626208 Edition 06/2007	11626216 Edition 06/2007
Operating Instructions MOVITRANS® TPS10A stationary converter	11491418 Edition 08/2007	11491426 Edition 08/2007
Operating Instructions MOVITRANS® TAS10A transformer module	11306904 Edition 09/2004	11306912 Edition 09/2004
Operating Instructions MOVITRANS® THM10C / THM10E pick-ups	11445009 Edition 07/2006	11445017 Edition 072006
Operating Instructions MOVITRANS® TPM12B mobile converter	11445408 Edition 07/2006	11445416 Edition 072006
Operating Instructions MOVITRANS® TCS, TVS, TLS, TIS installation equipment	11516208 Edition 06/2007	11516216 Edition 06/2007
Manual MOVITRANS® Project Planning	11493801 Edition 06/2007	11493828 Edition 06/2007
Manual MOVITRANS® Installation of Transmission Lines with Casting Resin for THM10E Pick-Ups	11673818 Edition 09/2007	11673826 Edition 09/2007
Manual MOVITRANS® Installation of Transmission Lines with TIS Installation Plate for THM10E Pick-Ups	11673400 Edition 09/2007	11673419 Edition 09/2007
Manual Engineering software module MotionStudio MOVITRANS® parameter tree	11532203 Edition 08/2007	11532211 Edition 08/2007

A folder containing all the publications above is available on request:

Compilation of publications	Number	
	German	English
System manual MOVITRANS®	11637803 Edition 09/2007	11637811 Edition 09/2007

7.2 Additional documentation

In addition to the instructions listed above, SEW-EURODRIVE offers extensive documentation covering the entire topic of electrical drive engineering. These are mainly the publications of the "Drive Engineering - Practical Implementation" series as well as the manuals and catalogs for electronically controlled drives.

A wide selection of our documentation is available in many languages for download on our website (**www.sew-eurodrive.de**). If required, you can also order printed and bound copies of the documentation from SEW-EURODRIVE.

8 Address List

Germany			
Headquarters **Production** **Sales**	**Bruchsal**	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 42 D-76646 Bruchsal P.O. Box Postfach 3023 • D-76642 Bruchsal	Tel. +49 7251 75-0 Fax +49 7251 75-1970 http://www.sew-eurodrive.de sew@sew-eurodrive.de
Service Competence Center	**Central**	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 1 D-76676 Graben-Neudorf	Tel. +49 7251 75-1710 Fax +49 7251 75-1711 sc-mitte@sew-eurodrive.de
	North	SEW-EURODRIVE GmbH & Co KG Alte Ricklinger Straße 40-42 D-30823 Garbsen (near Hannover)	Tel. +49 5137 8798-30 Fax +49 5137 8798-55 sc-nord@sew-eurodrive.de
	East	SEW-EURODRIVE GmbH & Co KG Dänkritzer Weg 1 D-08393 Meerane (near Zwickau)	Tel. +49 3764 7606-0 Fax +49 3764 7606-30 sc-ost@sew-eurodrive.de
	South	SEW-EURODRIVE GmbH & Co KG Domagkstraße 5 D-85551 Kirchheim (near München)	Tel. +49 89 909552-10 Fax +49 89 909552-50 sc-sued@sew-eurodrive.de
	West	SEW-EURODRIVE GmbH & Co KG Siemensstraße 1 D-40764 Langenfeld (near Düsseldorf)	Tel. +49 2173 8507-30 Fax +49 2173 8507-55 sc-west@sew-eurodrive.de
	Electronics	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 42 D-76646 Bruchsal	Tel. +49 7251 75-1780 Fax +49 7251 75-1769 sc-elektronik@sew-eurodrive.de
	Drive Service Hotline / 24 Hour Service		+49 180 5 SEWHELP +49 180 5 7394357
	Additional addresses for service in Germany provided on request!		

France			
Production **Sales** **Service**	**Haguenau**	SEW-USOCOME 48-54, route de Soufflenheim B. P. 20185 F-67506 Haguenau Cedex	Tel. +33 3 88 73 67 00 Fax +33 3 88 73 66 00 http://www.usocome.com sew@usocome.com
Production	**Forbach**	SEW-EUROCOME Zone Industrielle Technopôle Forbach Sud B. P. 30269 F-57604 Forbach Cedex	Tel. +33 3 87 29 38 00
Assembly **Sales** **Service**	**Bordeaux**	SEW-USOCOME Parc d'activités de Magellan 62, avenue de Magellan - B. P. 182 F-33607 Pessac Cedex	Tel. +33 5 57 26 39 00 Fax +33 5 57 26 39 09
	Lyon	SEW-USOCOME Parc d'Affaires Roosevelt Rue Jacques Tati F-69120 Vaulx en Velin	Tel. +33 4 72 15 37 00 Fax +33 4 72 15 37 15
	Paris	SEW-USOCOME Zone industrielle 2, rue Denis Papin F-77390 Verneuil l'Etang	Tel. +33 1 64 42 40 80 Fax +33 1 64 42 40 88
	Additional addresses for service in France provided on request!		

Algeria			
Sales	**Alger**	Réducom 16, rue des Frères Zaghnoun Bellevue El-Harrach 16200 Alger	Tel. +213 21 8222-84 Fax +213 21 8222-84 reducom_sew@yahoo.fr

Argentina			
Assembly **Sales** **Service**	**Buenos Aires**	SEW EURODRIVE ARGENTINA S.A. Centro Industrial Garin, Lote 35 Ruta Panamericana Km 37,5 1619 Garin	Tel. +54 3327 4572-84 Fax +54 3327 4572-21 sewar@sew-eurodrive.com.ar

Australia			
Assembly **Sales** **Service**	**Melbourne**	SEW-EURODRIVE PTY. LTD. 27 Beverage Drive Tullamarine, Victoria 3043	Tel. +61 3 9933-1000 Fax +61 3 9933-1003 http://www.sew-eurodrive.com.au enquires@sew-eurodrive.com.au
	Sydney	SEW-EURODRIVE PTY. LTD. 9, Sleigh Place, Wetherill Park New South Wales, 2164	Tel. +61 2 9725-9900 Fax +61 2 9725-9905 enquires@sew-eurodrive.com.au
	Townsville	SEW-EURODRIVE PTY. LTD. 12 Leyland Street Garbutt, QLD 4814	Tel. +61 7 4779 4333 Fax +61 7 4779 5333 enquires@sew-eurodrive.com.au

Austria			
Assembly **Sales** **Service**	**Wien**	SEW-EURODRIVE Ges.m.b.H. Richard-Strauss-Strasse 24 A-1230 Wien	Tel. +43 1 617 55 00-0 Fax +43 1 617 55 00-30 http://sew-eurodrive.at sew@sew-eurodrive.at

Belarus			
Sales	**Minsk**	SEW-EURODRIVE BY RybalkoStr. 26 BY-220033 Minsk	Tel.+375 (17) 298 38 50 Fax +375 (17) 29838 50 sales@sew.by

Belgium			
Assembly **Sales** **Service**	**Brüssel**	SEW Caron-Vector S.A. Avenue Eiffel 5 B-1300 Wavre	Tel. +32 10 231-311 Fax +32 10 231-336 http://www.sew-eurodrive.be info@caron-vector.be

Brazil			
Production **Sales** **Service**	**Sao Paulo**	SEW-EURODRIVE Brasil Ltda. Avenida Amâncio Gaiolli, 50 Caixa Postal: 201-07111-970 Guarulhos/SP - Cep.: 07251-250	Tel. +55 11 6489-9133 Fax +55 11 6480-3328 http://www.sew.com.br sew@sew.com.br
	Additional addresses for service in Brazil provided on request!		

Bulgaria			
Sales	**Sofia**	BEVER-DRIVE GmbH Bogdanovetz Str.1 BG-1606 Sofia	Tel. +359 2 9151160 Fax +359 2 9151166 bever@fastbg.net

Cameroon			
Sales	**Douala**	Electro-Services Rue Drouot Akwa B.P. 2024 Douala	Tel. +237 33 431137 Fax +237 33 431137

Canada			
Assembly **Sales** **Service**	**Toronto**	SEW-EURODRIVE CO. OF CANADA LTD. 210 Walker Drive Bramalea, Ontario L6T3W1	Tel. +1 905 791-1553 Fax +1 905 791-2999 http://www.sew-eurodrive.ca marketing@sew-eurodrive.ca
	Vancouver	SEW-EURODRIVE CO. OF CANADA LTD. 7188 Honeyman Street Delta. B.C. V4G 1 E2	Tel. +1 604 946-5535 Fax +1 604 946-2513 marketing@sew-eurodrive.ca
	Montreal	SEW-EURODRIVE CO. OF CANADA LTD. 2555 Rue Leger LaSalle, Quebec H8N 2V9	Tel. +1 514 367-1124 Fax +1 514 367-3677 marketing@sew-eurodrive.ca
	Additional addresses for service in Canada provided on request!		

Chile			
Assembly **Sales** **Service**	**Santiago de Chile**	SEW-EURODRIVE CHILE LTDA. Las Encinas 1295 Parque Industrial Valle Grande LAMPA RCH-Santiago de Chile P.O. Box Casilla 23 Correo Quilicura - Santiago - Chile	Tel. +56 2 75770-00 Fax +56 2 75770-01 http://www.sew-eurodrive.cl ventas@sew-eurodrive.cl

China			
Production **Assembly** **Sales** **Service**	**Tianjin**	SEW-EURODRIVE (Tianjin) Co., Ltd. No. 46, 7th Avenue, TEDA Tianjin 300457	Tel. +86 22 25322612 Fax +86 22 25322611 info@sew-eurodrive.cn http://www.sew-eurodrive.cn
Assembly **Sales** **Service**	**Suzhou**	SEW-EURODRIVE (Suzhou) Co., Ltd. 333, Suhong Middle Road Suzhou Industrial Park Jiangsu Province, 215021 P. R. China	Tel. +86 512 62581781 Fax +86 512 62581783 suzhou@sew-eurodrive.cn
	Guangzhou	SEW-EURODRIVE (Guangzhou) Co., Ltd. No. 9, JunDa Road East Section of GETDD Guangzhou 510530 P. R. China	Tel. +86 20 82267890 Fax +86 20 82267891 guangzhou@sew-eurodrive.cn
	Shenyang	SEW-EURODRIVE (Shenyang) Co., Ltd. 10A-2, 6th Road Shenyang Economic Technological Development Area Shenyang, 110141 P. R. China	Tel. +86 24 25382538 Fax +86 24 25382580 shenyang@sew-eurodrive.cn
	Additional addresses for service in China provided on request!		

Colombia			
Assembly **Sales** **Service**	**Bogotá**	SEW-EURODRIVE COLOMBIA LTDA. Calle 22 No. 132-60 Bodega 6, Manzana B Santafé de Bogotá	Tel. +57 1 54750-50 Fax +57 1 54750-44 http://www.sew-eurodrive.com.co sewcol@sew-eurodrive.com.co

Croatia			
Sales **Service**	**Zagreb**	KOMPEKS d. o. o. PIT Erdödy 4 II HR 10 000 Zagreb	Tel. +385 1 4613-158 Fax +385 1 4613-158 kompeks@net.hr

Czech Republic			
Sales	**Praha**	SEW-EURODRIVE CZ S.R.O. Business Centrum Praha Lužná 591 CZ-16000 Praha 6 - Vokovice	Tel. +420 220121234 Fax +420 220121237 http://www.sew-eurodrive.cz sew@sew-eurodrive.cz

Denmark			
Assembly **Sales** **Service**	**Kopenhagen**	SEW-EURODRIVEA/S Geminivej 28-30 DK-2670 Greve	Tel. +45 43 9585-00 Fax +45 43 9585-09 http://www.sew-eurodrive.dk sew@sew-eurodrive.dk

Egypt			
Sales **Service**	**Cairo**	Copam Egypt for Engineering & Agencies 33 El Hegaz ST, Heliopolis, Cairo	Tel. +20 2 22566-299 + 1 23143088 Fax +20 2 22594-757 http://www.copam-egypt.com/ copam@datum.com.eg

Estonia			
Sales	**Tallin**	ALAS-KUUL AS Reti tee 4 EE-75301 Peetri küla, Rae vald, Harjumaa	Tel. +372 6593230 Fax +372 6593231 veiko.soots@alas-kuul.ee

Finland			
Assembly **Sales** **Service**	**Lahti**	SEW-EURODRIVE OY Vesimäentie 4 FIN-15860 Hollola 2	Tel. +358 201 589-300 Fax +358 3 780-6211 sew@sew.fi http://www.sew-eurodrive.fi
Production **Assembly** **Service**	**Karkkila**	SEW Industrial Gears OY Valurinkatu 6 FIN-03600 Karkkila	Tel. +358 201 589-300 Fax +358 201 589-310 sew@sew.fi http://www.sew-eurodrive.fi

Gabon			
Sales	**Libreville**	Electro-Services B.P. 1889 Libreville	Tel. +241 7340-11 Fax +241 7340-12

Great Britain			
Assembly **Sales** **Service**	**Normanton**	SEW-EURODRIVE Ltd. Beckbridge Industrial Estate P.O. Box No.1 GB-Normanton, West- Yorkshire WF6 1QR	Tel. +44 1924 893-855 Fax +44 1924 893-702 http://www.sew-eurodrive.co.uk info@sew-eurodrive.co.uk

Greece			
Sales **Service**	**Athen**	Christ. Boznos & Son S.A. 12, Mavromichali Street P.O. Box 80136, GR-18545 Piraeus	Tel. +30 2 1042 251-34 Fax +30 2 1042 251-59 http://www.boznos.gr info@boznos.gr

Hong Kong			
Assembly **Sales** **Service**	**Hong Kong**	SEW-EURODRIVE LTD. Unit No. 801-806, 8th Floor Hong Leong Industrial Complex No. 4, Wang Kwong Road Kowloon, Hong Kong	Tel. +852 2 7960477 + 79604654 Fax +852 2 7959129 contact@sew-eurodrive.hk

Hungary			
Sales **Service**	**Budapest**	SEW-EURODRIVE Kft. H-1037 Budapest Kunigunda u. 18	Tel. +36 1 437 06-58 Fax +36 1 437 06-50 office@sew-eurodrive.hu

India			
Assembly **Sales** **Service**	**Baroda**	SEW-EURODRIVE India Pvt. Ltd. Plot No. 4, Gidc Por Ramangamdi • Baroda - 391 243 Gujarat	Tel. +91 265 2831086 Fax +91 265 2831087 http://www.seweurodriveindia.com mdoffice@seweurodriveindia.com

Ireland			
Sales **Service**	**Dublin**	Alperton Engineering Ltd. 48 Moyle Road Dublin Industrial Estate Glasnevin, Dublin 11	Tel. +353 1 830-6277 Fax +353 1 830-6458 info@alperton.ie

Israel			
Sales	**Tel-Aviv**	Liraz Handasa Ltd. Ahofer Str 34B / 228 58858 Holon	Tel. +972 3 5599511 Fax +972 3 5599512 office@liraz-handasa.co.il

Italy			
Assembly **Sales** **Service**	**Milano**	SEW-EURODRIVE di R. Blickle & Co.s.a.s. Via Bernini,14 I-20020 Solaro (Milano)	Tel. +39 02 96 9801 Fax +39 02 96 799781 http://www.sew-eurodrive.it sewit@sew-eurodrive.it

Ivory Coast			
Sales	**Abidjan**	SICA Ste industrielle et commerciale pour l'Afrique 165, Bld de Marseille B.P. 2323, Abidjan 08	Tel. +225 2579-44 Fax +225 2584-36

Japan			
Assembly **Sales** **Service**	**Iwata**	SEW-EURODRIVE JAPAN CO., LTD 250-1, Shimoman-no, Iwata Shizuoka 438-0818	Tel. +81 538 373811 Fax +81 538 373814 http://www.sew-eurodrive.co.jp sewjapan@sew-eurodrive.co.jp

Korea			
Assembly **Sales** **Service**	**Ansan-City**	SEW-EURODRIVE KOREA CO., LTD. B 601-4, Banweol Industrial Estate 1048-4, Shingil-Dong Ansan 425-120	Tel. +82 31 492-8051 Fax +82 31 492-8056 http://www.sew-korea.co.kr master@sew-korea.co.kr
	Busan	SEW-EURODRIVE KOREA Co., Ltd. No. 1720 - 11, Songjeong - dong Gangseo-ku Busan 618-270	Tel. +82 51 832-0204 Fax +82 51 832-0230 master@sew-korea.co.kr

Latvia			
Sales	**Riga**	SIA Alas-Kuul Katlakalna 11C LV-1073 Riga	Tel. +371 7139253 Fax +371 7139386 http://www.alas-kuul.com info@alas-kuul.com

Lebanon			
Sales	**Beirut**	Gabriel Acar & Fils sarl B. P. 80484 Bourj Hammoud, Beirut	Tel. +961 1 4947-86 +961 1 4982-72 +961 3 2745-39 Fax +961 1 4949-71 gacar@beirut.com

Lithuania			
Sales	**Alytus**	UAB Irseva Naujoji 19 LT-62175 Alytus	Tel. +370 315 79204 Fax +370 315 56175 info@irseva.lt http://www.sew-eurodrive.lt

Luxembourg			
Assembly **Sales** **Service**	**Brüssel**	CARON-VECTOR S.A. Avenue Eiffel 5 B-1300 Wavre	Tel. +32 10 231-311 Fax +32 10 231-336 http://www.sew-eurodrive.lu info@caron-vector.be

Malaysia			
Assembly **Sales** **Service**	**Johore**	SEW-EURODRIVE SDN BHD No. 95, Jalan Seroja 39, Taman Johor Jaya 81000 Johor Bahru, Johor West Malaysia	Tel. +60 7 3549409 Fax +60 7 3541404 sales@sew-eurodrive.com.my

Mexico			
Assembly **Sales** **Service**	**Queretaro**	SEW-EURODRIVE MEXIKO SA DE CV SEM-981118-M93 Tequisquiapan No. 102 Parque Industrial Queretaro C.P. 76220 Queretaro, Mexico	Tel. +52 442 1030-300 Fax +52 442 1030-301 http://www.sew-eurodrive.com.mx scmexico@seweurodrive.com.mx

Morocco			
Sales	**Casablanca**	Afit 5, rue Emir Abdelkader MA 20300 Casablanca	Tel. +212 22618372 Fax +212 22618351 ali.alami@premium.net.ma

Netherlands			
Assembly **Sales** **Service**	**Rotterdam**	VECTOR Aandrijftechniek B.V. Industrieweg 175 NL-3044 AS Rotterdam Postbus 10085 NL-3004 AB Rotterdam	Tel. +31 10 4463-700 Fax +31 10 4155-552 http://www.vector.nu info@vector.nu

New Zealand			
Assembly **Sales** **Service**	**Auckland**	SEW-EURODRIVE NEW ZEALAND LTD. P.O. Box 58-428 82 Greenmount drive East Tamaki Auckland	Tel. +64 9 2745627 Fax +64 9 2740165 http://www.sew-eurodrive.co.nz sales@sew-eurodrive.co.nz
	Christchurch	SEW-EURODRIVE NEW ZEALAND LTD. 10 Settlers Crescent, Ferrymead Christchurch	Tel. +64 3 384-6251 Fax +64 3 384-6455 sales@sew-eurodrive.co.nz

Norway			
Assembly **Sales** **Service**	**Moss**	SEW-EURODRIVE A/S Solgaard skog 71 N-1599 Moss	Tel. +47 69 241-020 Fax +47 69 241-040 http://www.sew-eurodrive.no sew@sew-eurodrive.no

Peru			
Assembly **Sales** **Service**	**Lima**	SEW DEL PERU MOTORES REDUCTORES S.A.C. Los Calderos, 120-124 Urbanizacion Industrial Vulcano, ATE, Lima	Tel. +51 1 3495280 Fax +51 1 3493002 http://www.sew-eurodrive.com.pe sewperu@sew-eurodrive.com.pe

Poland			
Assembly **Sales** **Service**	**Lodz**	SEW-EURODRIVE Polska Sp.z.o.o. ul. Techniczna 5 PL-92-518 Łódź	Tel. +48 42 67710-90 Fax +48 42 67710-99 http://www.sew-eurodrive.pl sew@sew-eurodrive.pl

Portugal			
Assembly **Sales** **Service**	**Coimbra**	SEW-EURODRIVE, LDA. Apartado 15 P-3050-901 Mealhada	Tel. +351 231 20 9670 Fax +351 231 20 3685 http://www.sew-eurodrive.pt infosew@sew-eurodrive.pt

Romania			
Sales **Service**	**Bucureşti**	Sialco Trading SRL str. Madrid nr.4 011785 Bucuresti	Tel. +40 21 230-1328 Fax +40 21 230-7170 sialco@sialco.ro

Russia			
Assembly **Sales** **Service**	**St. Petersburg**	ZAO SEW-EURODRIVE P.O. Box 36 195220 St. Petersburg Russia	Tel. +7 812 3332522 +7 812 5357142 Fax +7 812 3332523 http://www.sew-eurodrive.ru sew@sew-eurodrive.ru

Senegal			
Sales	**Dakar**	SENEMECA Mécanique Générale Km 8, Route de Rufisque B.P. 3251, Dakar	Tel. +221 849 47-70 Fax +221 849 47-71 senemeca@sentoo.sn

Serbia			
Sales	**Beograd**	DIPAR d.o.o. Ustanicka 128a PC Košum, IV floor SCG-11000 Beograd	Tel. +381 11 347 3244 / +381 11 288 0393 Fax +381 11 347 1337 dipar@yubc.net

Singapore			
Assembly **Sales** **Service**	**Singapore**	SEW-EURODRIVE PTE. LTD. No 9, Tuas Drive 2 Jurong Industrial Estate Singapore 638644	Tel. +65 68621701 Fax +65 68612827 http://www.sew-eurodrive.com.sg sewsingapore@sew-eurodrive.com

Slovakia			
Sales	**Bratislava**	SEW-Eurodrive SK s.r.o. Rybničná 40 SK-83554 Bratislava	Tel. +421 2 49595201 Fax +421 2 49595200 sew@sew-eurodrive.sk http://www.sew-eurodrive.sk
	Žilina	SEW-Eurodrive SK s.r.o. ul. Vojtecha Spanyola 33 SK-010 01 Žilina	Tel. +421 41 700 2513 Fax +421 41 700 2514 sew@sew-eurodrive.sk
	Banská Bystrica	SEW-Eurodrive SK s.r.o. Rudlovská cesta 85 SK-97411 Banská Bystrica	Tel. +421 48 414 6564 Fax +421 48 414 6566 sew@sew-eurodrive.sk

Slovenia			
Sales **Service**	**Celje**	Pakman - Pogonska Tehnika d.o.o. UI. XIV. divizije 14 SLO - 3000 Celje	Tel. +386 3 490 83-20 Fax +386 3 490 83-21 pakman@siol.net

South Africa			
Assembly **Sales** **Service**	**Johannesburg**	SEW-EURODRIVE (PROPRIETARY) LIMITED Eurodrive House Cnr. Adcock Ingram and Aerodrome Roads Aeroton Ext. 2 Johannesburg 2013 P.O.Box 90004 Bertsham 2013	Tel. +27 11 248-7000 Fax +27 11 494-3104 http://www.sew.co.za dross@sew.co.za
	Capetown	SEW-EURODRIVE (PROPRIETARY) LIMITED Rainbow Park Cnr. Racecourse & Omuramba Road Montague Gardens Cape Town P.O.Box 36556 Chempet 7442 Cape Town	Tel. +27 21 552-9820 Fax +27 21 552-9830 Telex 576 062 dswanepoel@sew.co.za
	Durban	SEW-EURODRIVE (PROPRIETARY) LIMITED 2 Monaceo Place Pinetown Durban P.O. Box 10433, Ashwood 3605	Tel. +27 31 700-3451 Fax +27 31 700-3847 dtait@sew.co.za

Spain			
Assembly **Sales** **Service**	**Bilbao**	SEW-EURODRIVE ESPAÑA, S.L. Parque Tecnológico, Edificio, 302 E-48170 Zamudio (Vizcaya)	Tel. +34 94 43184-70 Fax +34 94 43184-71 http://www.sew-eurodrive.es sew.spain@sew-eurodrive.es

Sweden			
Assembly **Sales** **Service**	**Jönköping**	SEW-EURODRIVE AB Gnejsvägen 6-8 S-55303 Jönköping Box 3100 S-55003 Jönköping	Tel. +46 36 3442-00 Fax +46 36 3442-80 http://www.sew-eurodrive.se info@sew-eurodrive.se

Switzerland			
Assembly **Sales** **Service**	**Basel**	Alfred Imhof A.G. Jurastrasse 10 CH-4142 Münchenstein bei Basel	Tel. +41 61 417 1717 Fax +41 61 417 1700 http://www.imhof-sew.ch info@imhof-sew.ch

Thailand			
Assembly **Sales** **Service**	**Chonburi**	SEW-EURODRIVE (Thailand) Ltd. 700/456, Moo.7, Donhuaroh Muang Chonburi 20000	Tel. +66 38 454281 Fax +66 38 454288 sewthailand@sew-eurodrive.com

Tunisia			
Sales	**Tunis**	T. M.S. Technic Marketing Service 5, Rue El Houdaibiah 1000 Tunis	Tel. +216 71 4340-64 + 71 4320-29 Fax +216 71 4329-76 tms@tms.com.tn

Turkey			
Assembly **Sales** **Service**	**Istanbul**	SEW-EURODRIVE Hareket Sistemleri San. ve Tic. Ltd. Sti. Bagdat Cad. Koruma Cikmazi No. 3 TR-34846 Maltepe ISTANBUL	Tel. +90 216 4419163 / 164 3838014/15 Fax +90 216 3055867 http://www.sew-eurodrive.com.tr sew@sew-eurodrive.com.tr

Ukraine			
Sales **Service**	**Dnepropetrovsk**	SEW-EURODRIVE Str. Rabochaja 23-B, Office 409 49008 Dnepropetrovsk	Tel. +380 56 370 3211 Fax +380 56 372 2078 http://www.sew-eurodrive.ua sew@sew-eurodrive.ua

USA			
Production **Assembly** **Sales** **Service**	**Greenville**	SEW-EURODRIVE INC. 1295 Old Spartanburg Highway P.O. Box 518 Lyman, S.C. 29365	Tel. +1 864 439-7537 Fax Sales +1 864 439-7830 Fax Manuf. +1 864 439-9948 Fax Ass. +1 864 439-0566 Telex 805 550 http://www.seweurodrive.com cslyman@seweurodrive.com
Assembly **Sales** **Service**	**San Francisco**	SEW-EURODRIVE INC. 30599 San Antonio St. Hayward, California 94544-7101	Tel. +1 510 487-3560 Fax +1 510 487-6381 cshayward@seweurodrive.com
	Philadelphia/PA	SEW-EURODRIVE INC. Pureland Ind. Complex 2107 High Hill Road, P.O. Box 481 Bridgeport, New Jersey 08014	Tel. +1 856 467-2277 Fax +1 856 845-3179 csbridgeport@seweurodrive.com
	Dayton	SEW-EURODRIVE INC. 2001 West Main Street Troy, Ohio 45373	Tel. +1 937 335-0036 Fax +1 937 440-3799 cstroy@seweurodrive.com
	Dallas	SEW-EURODRIVE INC. 3950 Platinum Way Dallas, Texas 75237	Tel. +1 214 330-4824 Fax +1 214 330-4724 csdallas@seweurodrive.com
	Additional addresses for service in the USA provided on request!		

Venezuela			
Assembly **Sales** **Service**	**Valencia**	SEW-EURODRIVE Venezuela S.A. Av. Norte Sur No. 3, Galpon 84-319 Zona Industrial Municipal Norte Valencia, Estado Carabobo	Tel. +58 241 832-9804 Fax +58 241 838-6275 http://www.sew-eurodrive.com.ve ventas@sew-eurodrive.com.ve sewfinanzas@cantv.net

Index

W

How we're driving the world

With people who think fast and develop the future with you.

With a worldwide service network that is always close at hand.

With drives and controls that automatically improve your productivity.

With comprehensive knowledge in virtually every branch of industry today.

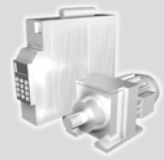
With uncompromising quality that reduces the cost and complexity of daily operations.

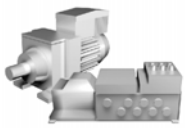
SEW-EURODRIVE
Driving the world

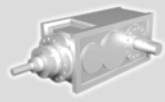
With a global presence that offers responsive and reliable solutions. Anywhere.

With innovative technology that solves tomorrow's problems today.

With online information and software updates, via the Internet, available around the clock.







SEW-EURODRIVE GmbH & Co KG
P.O. Box 3023 · D-76642 Bruchsal / Germany
Phone +49 7251 75-0 · Fax +49 7251 75-1970
sew@sew-eurodrive.com

→ **www.sew-eurodrive.com**