

#### **IMPORTANT!** Read this instruction carefully before installing the product



# TRANBERG® IMT CIRCLE & H

ILED Aquarius Circle & H 2.0 Helideck Lighting System

#### **INSTALLATION MANUAL**

**R. STAHL TRANBERG AS** 

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#### **General Information**

#### Manufacturer

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#### About these operating instructions:

- Read these operating instructions, especially the safety notes, carefully before use.
- Observe all other applicable documents (See also further documents section).
- Keep the operating instructions throughout the service life of the device.
- Make the operating instructions accessible to operating and maintenance personnell at all times.
- Pass the operating instructions on to each subsequent owner or user of the device.

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R. Stahl Tranberg Revision: 0

#### Further documents for this product:

- User Manual, TUM6676
- Datasheet, TPS6671
- ATEX Certificate, DEKRA 13 ATEX0173
- IECEx Certificate, IECEx DEK 13.0059
- HCC Certification IMT ILED Circle-H Lighting System MK2, Malaysia, TDC6667
- CAAi Statement of Compliance for the IMT ILED C&H, TDC6689
- CAA Internaltional Statement IMT ILED C&H MK1, TDC6706
- CAA Internaltional Statement IMT ILED C&H MK2, TDC6707

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#### Introduction

This manual contains a step by step description of the assembly of the TRANBERG® IMT ILED CIRCLE-H 2.0. Following this manual will ensure a correct installation of the CIRCLE-H system.

#### Title and sub-title:

- Title: For example "Step A placing the mounting plates of the H", you will need the contents of the boxes labelled with an A for Step A.
- Sub-title: For example "Starting tool", this explains the action on the current page.

#### **Contents (top left corner):**

The parts needed for the specific page. Described with a picture, its item number and the amount needed for the current action..

#### Map (top right corner):

- The action on the page visualized in a big simplified map that shows the complete construction of the specific step.
- The used colours: Red: The section you are contructing on this page.

Grey: The previously constructed sections.

White: The sections that will still be constructed further in the manual.

#### **Overview (middle of the page):**

A 3D-view of the current action.

#### Tables (not on every page):

• The tables usually explain the difference in parts needed for every different helideck size.

#### **Detail (bottom left corner):**

A more detailed view of an action on the page.

#### Text:

Every page has text to explain the • current action step-by-step and what to pay attention to.

Because the CIRCLE-H 2.0 is a standardized system useable for many different sizes, shapes and compositions of helidecks there are 2 versions for working the cables from the H to the CIRCLE:

- In an angle from the side of the H.
- Straight up from the middle of the H • towards the CIRCLE.

These are described in this manual as a and b (for example StepA1a and StepA1b) and are called cable exits. On the bottom of some of the pages text might tell you to skip pages to make sure you are on the pages following the correct cable exit. Check the drawings to see which cable exit applies to you.

To explain the commonly used terms on the pages a small vocabulary has been added at the end of the manual in appendix A.

In this manual you will find tables with the description of both the IMT part numbers and the R. Stahl Tranberg part numbers. Please note that all the mounting plates, cable trays etc. is marked with the IMT part number for your reference at installation site. The shortage BW stands for Black/ White, example of part number:

#### 902.917 / 902.917BW



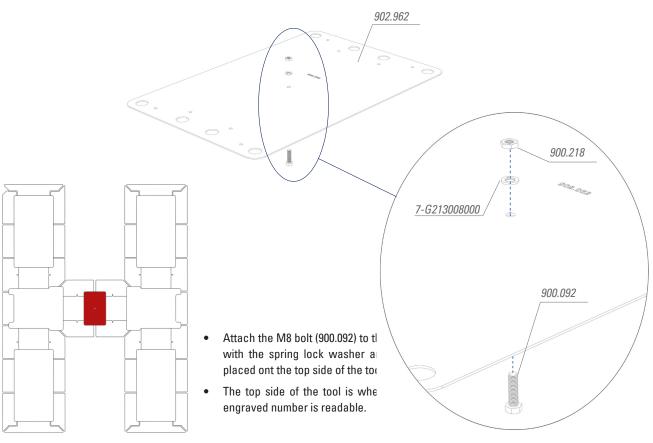
Black-white

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### **STEP A** Placing the mounting plates of the H

#### STEP A, Placing the mounting plates of the H, 1 starting tool

1. Starting tool	IMT Part no.	R. Stahl Tranberg Part no.	Quantity
	900.092.	99520014	1 pc.
	901.218	99520216	1 pc.
	7-G213008000	99520291	1 pc.
	902.962	99520119	1 pc.

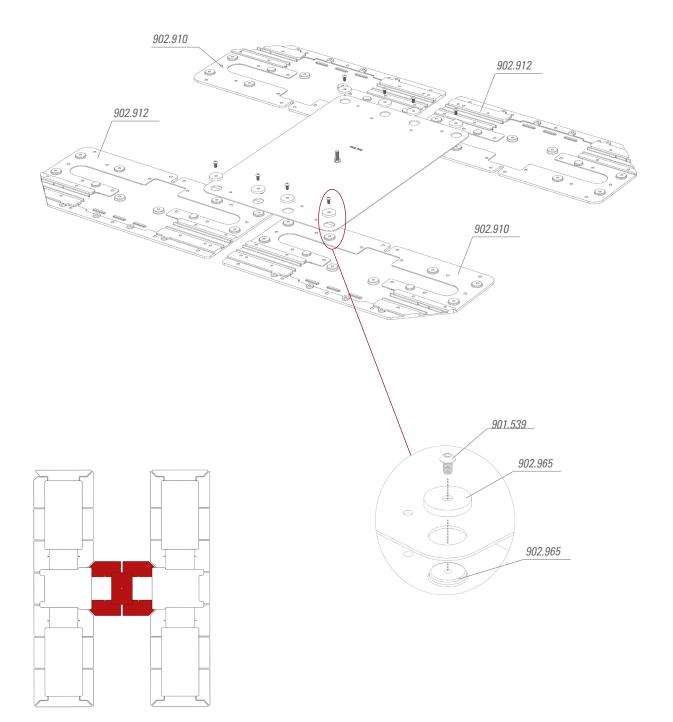


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#### STEP A, Placing the mounting plates of the H, 1 middle plates of the H

2. Middle Plates of the H	IMT Part no.	R. Stahl Tranberg Part no.	Quantity
	901.539	99520186	8 pcs.
	902.965	99520300	8 pcs.
	902.910 / 902.910BW	99520204 / BW: 99520205	2 pcs.
	902.912 / 902.912BW	99520208 / BW: 99520209	2 pcs.

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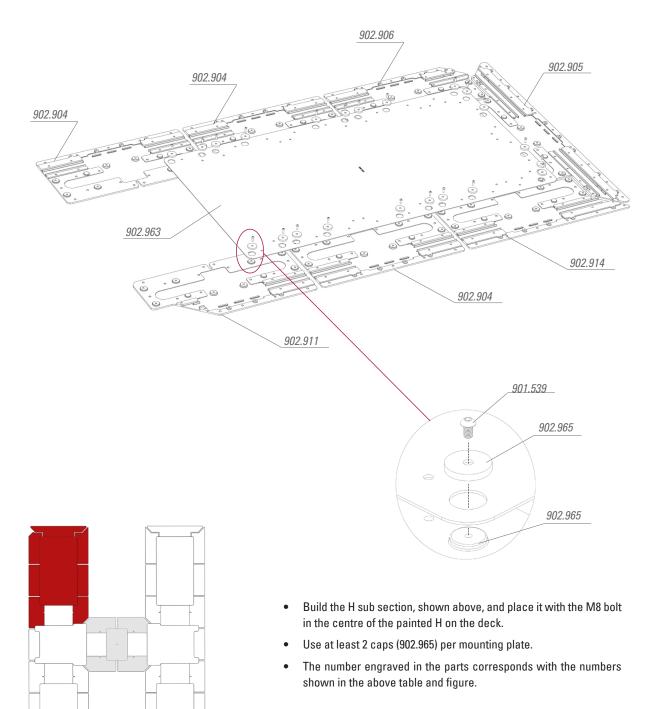


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## **STEP A, Placing the mounting plates of the H, 3a Leg of H** <u>w/ angled circle connection</u> (Depending on the cable exit chosen (see page 1). Continue with step A3a (page 7) or A3b (page 10).

3a. Leg of the H w/ angled circle Connection	IMT Part no.	R. Stahl Tranberg Part no.	Quantity
	901.539	99520186	22 pcs.
	902.965	99520300	22 pcs.
	902.963	99520325	1 pc.
	902.904 / 902.904BW	99520194 / BW: 99520195	3 pcs.
	902.905 / 902.905BW	99520200 / BW: 99520201	1 pc.
	902.911 / 902.911BW	99520206 / BW: 9950207	1 pc.
	902.906 / 902.906BW	99520202 / BW: 99520203	1 pc.
	902.914 / 902.914BW	99520196 / BW: 9952197	1 pc.

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When moving this construction take care not to bend the tool.

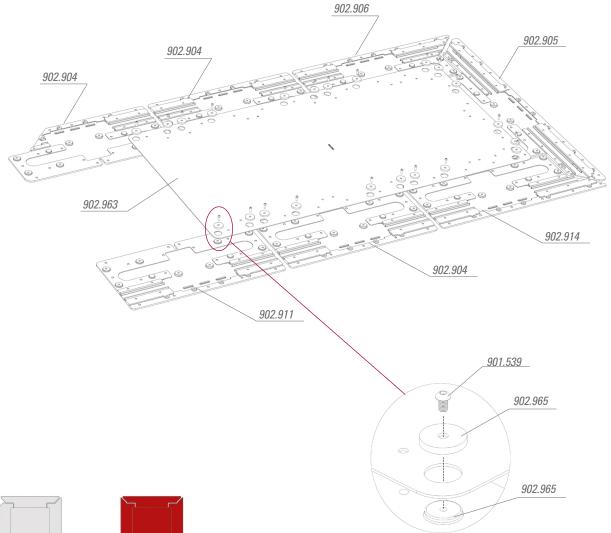
Make sure the bolts are tightened with a torque of no more than 10Nm to avoid damage.

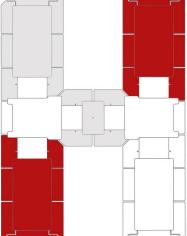
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#### STEP A, Placing the mounting plates of the H, 4a Leg of the H

4a. Leg of the H	IMT Part no.	R. Stahl Tranberg Part no.	Quantity
	901.539	99520186	44 pcs.
	902.965	99520300	44 pcs.
	902.963	99520235	2 pcs.
	902.904 / 902.904BW	99520194 / BW: 99520195	6 pcs.
	902.905 / 902.905BW	99520200 / BW: 99520201	2 pc.
	902.913 / 902.913BW	99520210 / BW: 99520211	2 pcs.
	902.915 / 902.915BW	99520198 / BW: 99520199	2 pcs.
	902.914 / 902.914BW	99520196 / BW: 99520197	2 pcs.

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- Build the H sub section, shown above, and place it with the M8 bolt in the centre of the painted H on the deck.
- Use at least 2 caps (902.965) per mounting plate.
- The number engraved in the parts corresponds with the numbers shown in the above table and figure.



When moving this construction take care not to bend the tool.

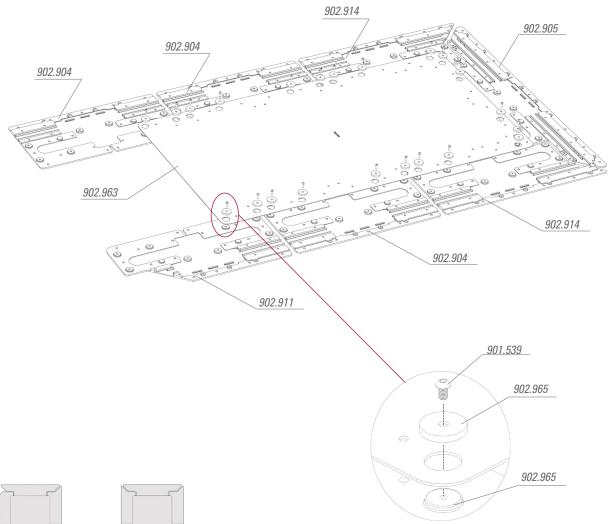
Make sure the bolts are tightened with a torque of no more than 10Nm to avoid damage.

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#### STEP A, Placing the mounting plates of the H, 5a Leg of the H

5a. Leg of the H	IMT Part no.	R. Stahl Tranberg Part no.	Quantity
	901.539	99520186	22 pcs.
	902.965	99520300	22 pcs.
	902.963	99520235	1 pcs.
	902.904 / 902.904BW	99520194 / BW: 99520195	3 pcs.
	902.905 / 902.905BW	99520200 / BW: 99520201	1 pc.
	902.911 / 902.911BW	99520206 / BW: 99520207	1 pcs.
	902.915 / 902.915BW	99520198 / BW: 99520199	1 pcs.
	902.914 / 902.914BW	99520196 / BW: 99500197	1 pcs.

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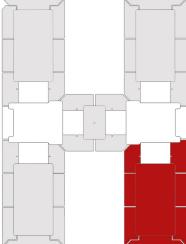


- Build the H sub section, shown above, and place it with the M8 bolt in the centre of the painted H on the deck.
- Use at least 2 caps (902.965) per mounting plate.
- The number engraved in the parts corresponds with the numbers shown in the above table and figure.

When moving this construction take care not to bend the tool.

Make sure the bolts are tightened with a torque of no more than 10Nm to avoid damage.

Continue with step A6

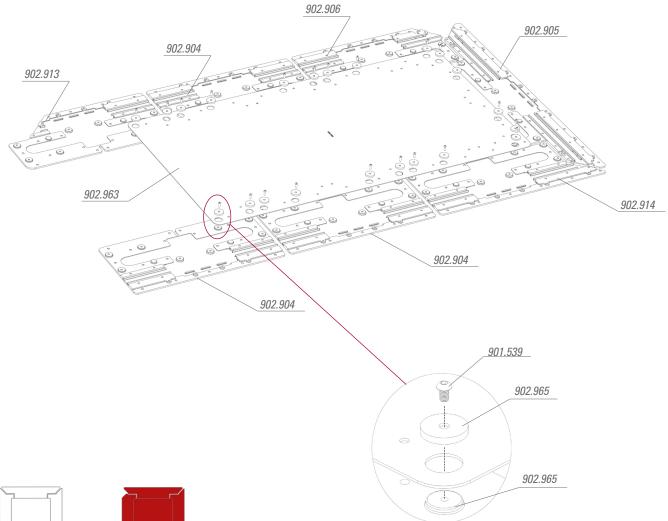


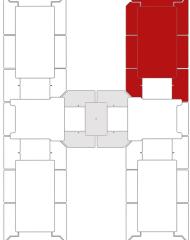
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#### STEP A, Placing the mounting plates of the H, 3b Leg of the H w/ straight circle connection

3b. Leg of the H w/ straight circle connection	IMT Part no.	R. Stahl Tranberg Part no.	Quantity
	901.539	99520186	22 pcs.
	902.965	99520300	22 pcs.
	902.963	99520235	1 pcs.
	902.904 / 902.904BW	99520194 / BW: 99500195	3 pcs.
	902.905 / 902.905BW	99520200 / BW: 99500201	1 pc.
	902.913 / 902.913BW	99520210 / BW: 99520211	1 pcs.
	902.906 / 902.906BW	99520202 / BW; 99520203	1 pcs.
	902.914 / 902.914BW	99520196 / BW:9952197	1 pcs.

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- Build the H sub section, shown above, and place it with the M8 bolt in the centre of the painted H on the deck.
- Use at least 2 caps (902.965) per mounting plate.
- The number engraved in the parts corresponds with the numbers shown in the above table and figure.

When moving this construction take care not to bend the tool.

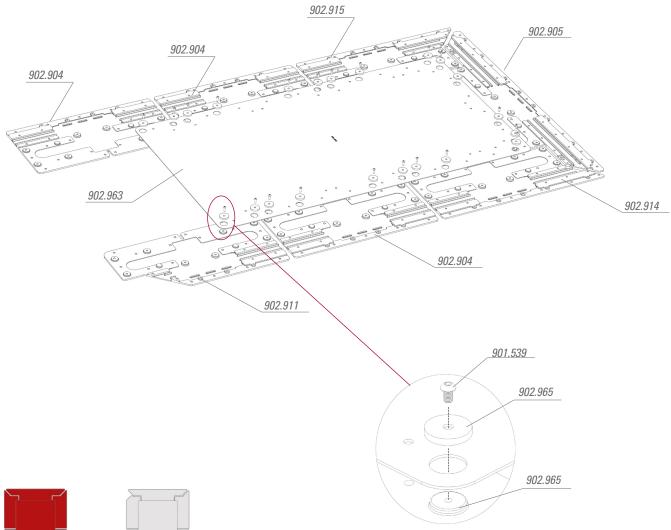
Make sure the bolts are tightened with a torque of no more than 10Nm to avoid damage.

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#### STEP A, Placing the mounting plates of the H, 4b Leg of the H

4b. Leg of the H	IMT Part no.	R. Stahl Tranberg Part no.	Quantity
	901.539	99520186	44 pcs.
	902.965	99520300	44 pcs.
	902.963	99520235	2 pcs.
	902.904 / 902.904BW	99520194 / BW: 99520195	6 pcs.
	902.905 / 902.905BW	99520200 / BW: 99520201	2 pc.
	902.911 / 902.911BW	99520206 / BW: 99520207	2 pcs.
	902.915 / 902.915BW	99520198 / BW: 99520199	2 pcs.
	902.914 / 902.914BW	99520196 / BW: 99520197	2 pcs.

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- Build the H sub section, shown above, and place it with the M8 bolt in the centre of the painted H on the deck.
- Use at least 2 caps (902.965) per mounting plate.
- The number engraved in the parts corresponds with the numbers shown in the above table and figure.

When moving this construction take care not to bend the tool.

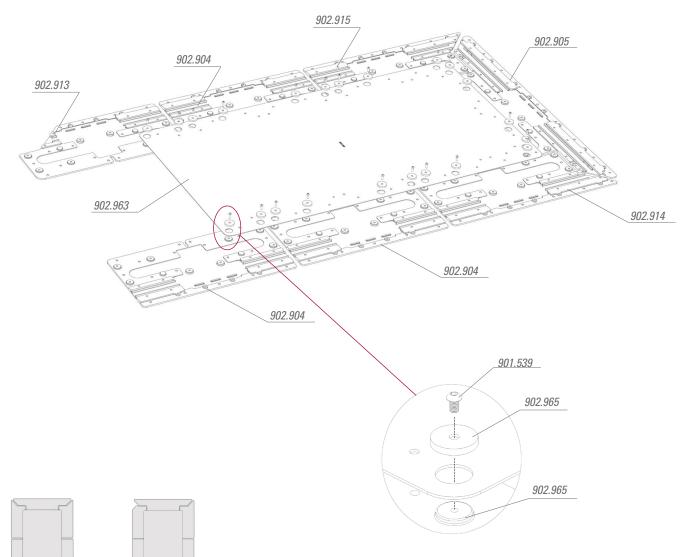
Make sure the bolts are tightened with a torque of no more than 10Nm to avoid damage.

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#### STEP A, Placing the mounting plates of the H, 5b Leg of the H

5b. Leg of the H	IMT Part no.	R. Stahl Tranberg Part no.	Quantity
	901.539	99520186	22 pcs.
	902.965	99520300	22 pcs.
	902.963	99520235	1 pcs.
	902.904 / 902.904BW	99520194 / BW: 99500195	3 pcs.
	902.905 / 902.905BW	99520200 / BW: 99520201	1 pc.
	902.913 / 902.913BW	99520210 / BW: 99520211	1 pcs.
	902.915 / 902.915BW	99520198 / BW: 99520199	1 pcs.
	902.914 / 902.9014BW	99520196 / BW: 99520197	1 pcs.

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- Build the H sub section, shown above, and place it with the M8 bolt in the centre of the painted H on the deck.
- Use at least 2 caps (902.965) per mounting plate.
- The number engraved in the parts corresponds with the numbers shown in the above table and figure.

When moving this construction take care not to bend the tool.

Make sure the bolts are tightened with a torque of no more than 10Nm to avoid damage.

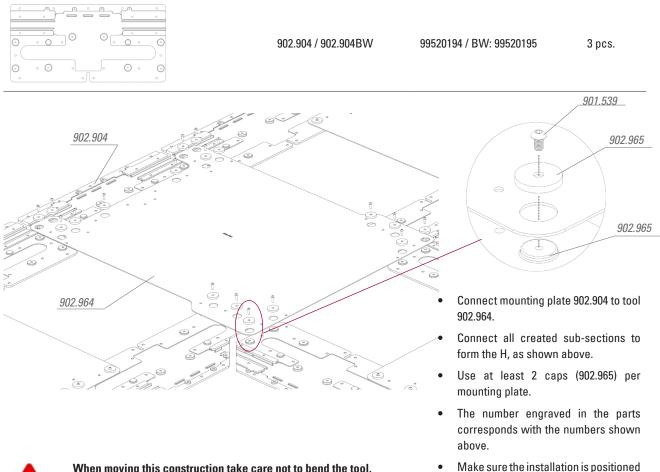
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# 6. Connecting the sections of the H IMT Part no. R. Stahl Tranberg Part no. 901.539 99520186 902.965 99520300

902.964

99520236

#### STEP A, Connecting the sections of the H, 6



Quantity

22 pcs.

22 pcs.

1 pcs.

correctly on the painted H on the deck.

The created H can still be moved to

achieve this.

When moving this construction take care not to bend the tool. Make sure the bolts are tightened with a torque of no more than 10Nm to avoid damage.

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# **STEP B**

Placing the mounting plates of the circle and the cable trays.

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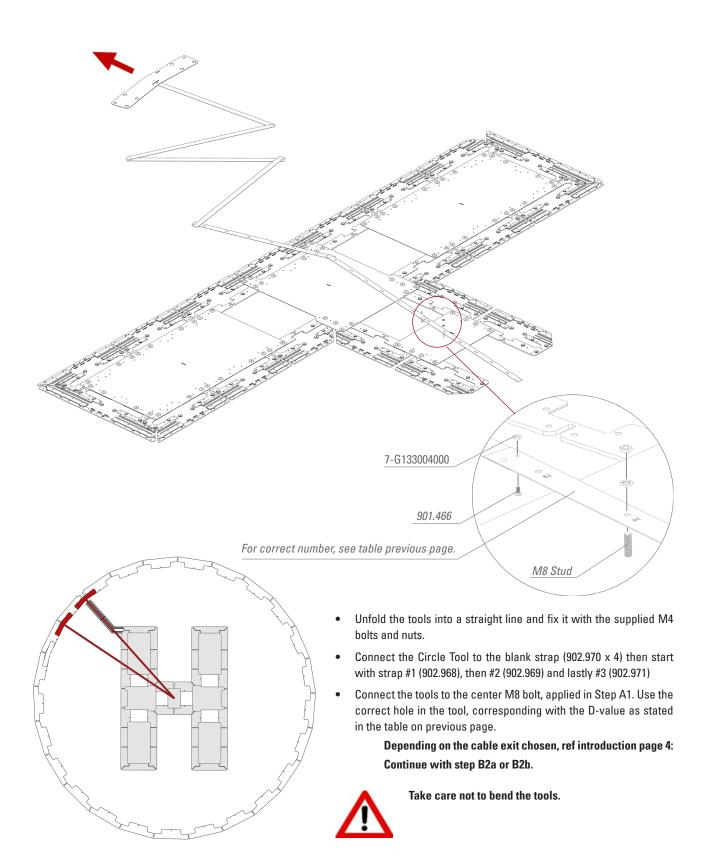
#### **STEP B, Preparing the tools**

Step B	IMT Part no.	R. Stahl Tranberg Part no.	Quantity
	901.466	99520183	12 pcs.
	7-G133004000	99520290	12 pcs.
	D-value dependent	D-value dependent	3 pcs.
+         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +	902.968	99520295	2 pcs.
+         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +         +	902.969	99520296	2 pcs.
$\begin{array}{c} \bullet \\ \bullet \end{array} \\ \hline \bullet \bullet \\ \bullet \end{array} \\ \hline \bullet \bullet \bullet \\ \hline \bullet \bullet \\ \bullet \end{array} \\ \hline \bullet \bullet \bullet \\ \hline \bullet \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet \\ \bullet \\$	902.971	99520297	2 pcs.
	902.970	99520299	8 pcs.

D-value	Number
13,88m – 14,54m	1
14,55m – 15,21m	2
15,22m – 15,88m	3
15,89m – 16,55m	4
16,56m – 17,22m	5
17,23m – 17,89m	6
17,90m – 18,56m	7
18,57m – 19,23m	8
19,24m – 19,90m	9
19,91m – 20,57m	10
20,58m – 21,24m	11
21,25m – 21,91m	12

D-value	Number
21,92m – 22,58m	13
22,59m – 23,25m	14
23,26m – 23,91m	15
23,92m – 24,58m	16
24,59m – 25,25m	17
25,26m – 25,92m	18
25,93m – 26,59m	19
26,60m – 27,26m	20
27,27m – 27,92m	21
27,93m – 28,59m	22
28,60m – 29,26m	23
29,27m – 29,93m	24

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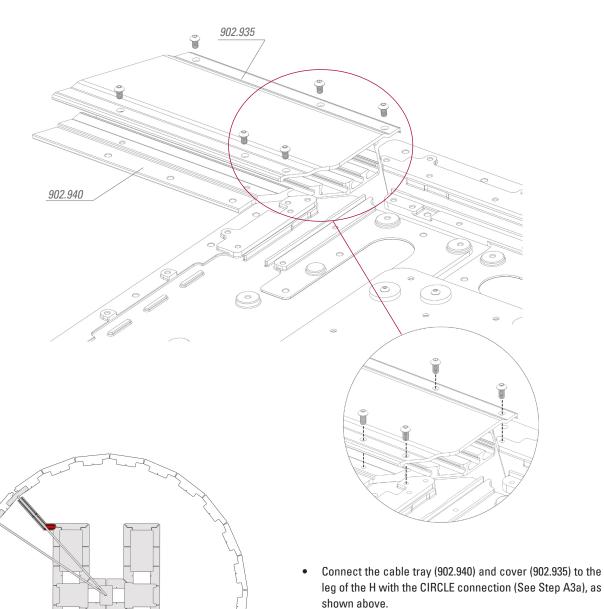


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#### STEP B, 2a, Angled tray connection to the H.

2a. Angled tray connection to the H	IMT Part no.	R. Stahl Tranberg Part no.	Quantity
	901.539	99520186	6 pcs.
	902.940 / 902.940BW	99520046 / BW: 99520047	1 pc.
	902.935 / 902.935BW	99520143 / BW: 99520375	1 pc.

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• The number engraved in the parts corresponds with the numbers shown above.

The cover (902.935) is used as an alignment tool in Step-B and will be removed and reassembled further in the installation to ensure cable connection.

Make sure the bolts are tightened with a torque of no more than 10Nm to avoid damage.

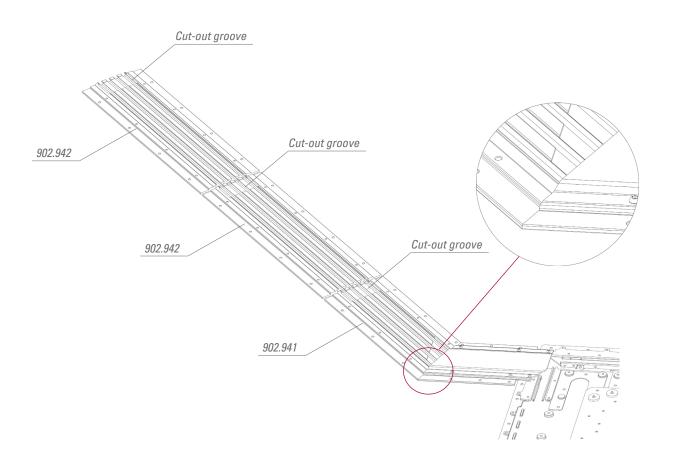
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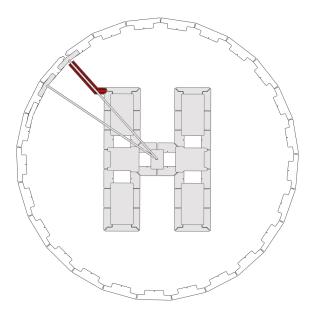
#### STEP B, 3a, Cable trays to circle

3a. Cable	trays to o	circle		IMT Part no.	R. Stahl Tranberg Part no.	Quantity
	0 0 0 0	0 0 0 0		902.941 / 902.941BW	99520050 / BW: 99520051	1 pc.
	0 0 0	0 0 0	0 0 0 0 0 0	902.942 / 902.942BW	99520054 / BW: 99520055	Ref. table

D-value	902.942
10,39m – 13.20m	0
13,21m – 15,88m	1
15,89m – 18,56m	2
18,57m – 21,24m	3
21,25m – 23,91m	4
23,92m – 26,59m	5
26,60m – 29,26m	6
20,0011 23,2011	0

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- Place the cable tray (902.941) in such a way that it aligns with the cable tray assembled in the previous step (See detail view).
- Place the cable trays (902.942) in straight line, as shown above with the cut-out grooves on the far side of the H.
- The amount of straight cable trays (902.942) used depends on the D-Value of the deck. Check the table shown on the previous page to determine the amount needed.



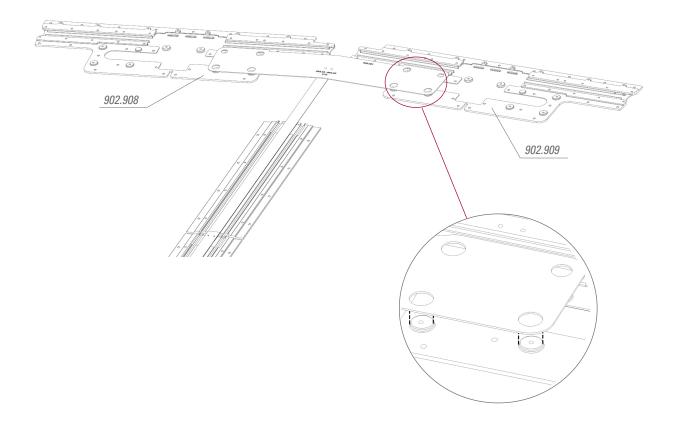
In the complete installation there is some distance between the straight covers (902.942). This distance will be applied in Step B8 before the cable trays are fixed to the deck.

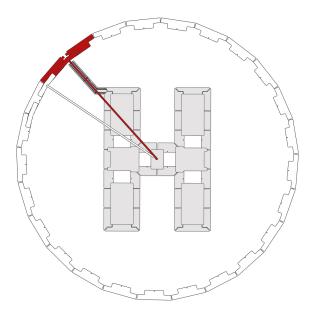
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4a. First mounting plates circle	IMT Part no.	R. Stahl Tranberg Part no.	Quantity
	902.908	99520190	1 pc.
	902.909	99520191	1 pc.

#### STEP B, 4a, First mounting plates circle

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- Stretch the tool to the start of the circle. The strap should align with the center of the straight cable trays (902.942), as shown above.
- Slide the holes in the tool over the holes of the mounting plates (902.908 and 902.909), as shown in the detail to the left.
- The number engraved in the parts corresponds with the numbers shown above.
- Pull the mounting plates back to make sure the strap is straight and place the first mounting plates.

Keep the mounting plates from shifting out of position when removing and placing the tools.

The tail of the tool, on the other side of the stud in the center, can be removed to ensure an easier placing of the circle.

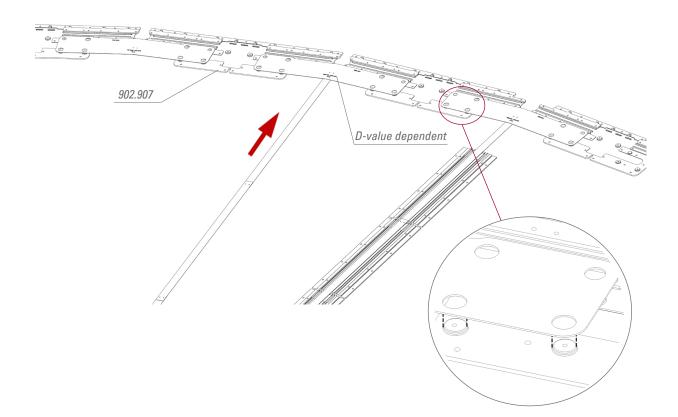
ILED Aquarius Circle & H 2.0 Helideck Lighting System

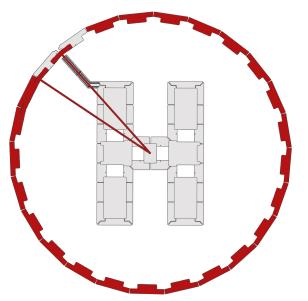
5a. Mounting plates circle	IMT Part no.	R. Stahl Tranberg Part no.	Quantity
	D-value dependent	D-value dependent	1 pc.
	902.907	99520189	Ref. table

#### STEP B, 5a, Mounting plates circle

D-value	902.907
13,88m – 14,54m	23
14,55m – 15,21m	24
15,22m – 15,88m	25
15,89m – 16,55m	26
16,56m – 17,22m	27
17,23m – 17,89m	28
17,90m – 18,56m	29
18,57m – 19,23m	30
19,24m – 19,90m	31
19,91m – 20,57m	32
20,58m – 21,24m	33
21,25m – 21,91m	34
21,92m – 22,58m	35
22,59m – 23,25m	36
23,26m – 23,91m	37
23,92m – 24,58m	38
24,59m – 25,25m	39
25,26m – 25,92m	40
25,93m – 26,59m	41
26,60m – 27,26m	42
27,27m – 27,92m	43
27,93m – 28,59m	44
28,60m – 29,26m	45
29,27m – 29,93m	46

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- Slide the holes in the second circle tool over the holes of the mounting plates (902.908 and 902.909), as shown in the detail to the left. Keep the first tool connected to the mounting plates.
- When both tools are connected pull all 3 mounting plates back to straighten both straps. This by applying pressure to the middle plate (see red arrow above).
- Repeat these steps with both tools adding just 1 mounting plate (902.907) each repeat, until the circle is complete.
- Use the extra supplied tool without the strap as an extra check to make sure no mounting plates have shifted out of position.
- When placed correctly the last mounting plate should connect with the first plate placed. The tool can be used check this. Deviations up to 10mm are acceptable.



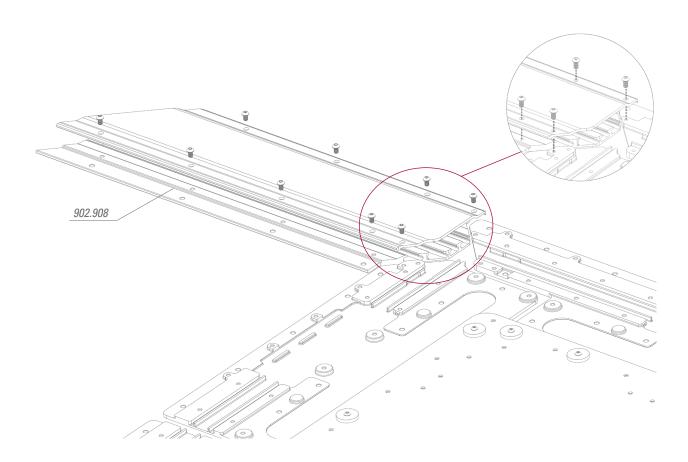
Keep the mounting plates from shifting out of position when removing and placing the tools.

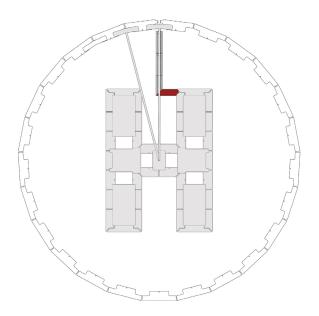
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#### STEP B, 2b, Straight cable tray connection to H

2b. Straight cable tray connection to H	IMT Part no.	R. Stahl Tranberg Part no.	Quantity
	901.539	99520186	6 pcs.
	902.974 / 902.974BW	99520048 / BW: 99520049	1 pc.
	902.972 / 902.972BW	99520144 / BW: 99520145	1 pc.

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- Connect the cable tray (902.974) and cover (902.972) to the leg of the H with the CIRCLE connection (See Step A3b), as shown above.
- The number engraved in the parts corresponds with the numbers shown above.

The cover (902.972) is used as an alignment tool in Step-B and will be removed and reassembled in further in the installation to ensure cable connection.

Make sure the bolts are tightened with a torque of no more than 10Nm to avoid damage.

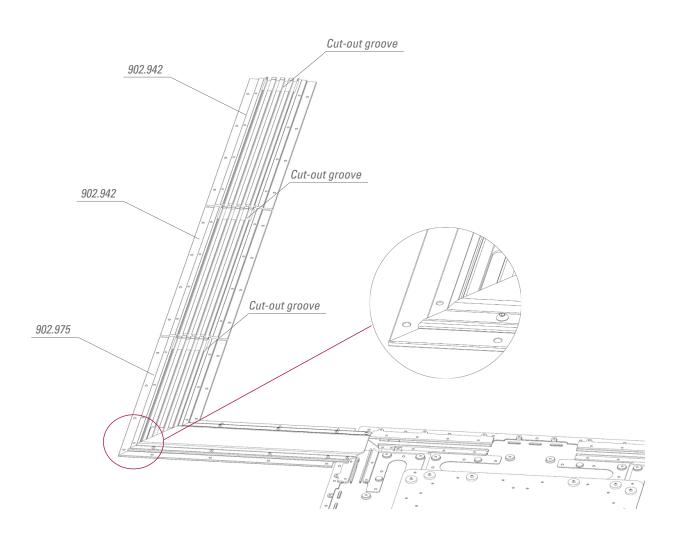
ILED Aquarius Circle & H 2.0 Helideck Lighting System

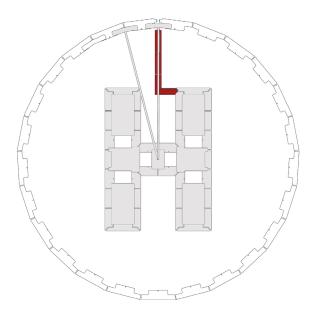
#### STEP B, 3b, Cable trays to circle

3b. cable trays to circle				IMT Part no.	R. Stahl Tranberg Part no.	Quantity
	0 0 0	0 0 0	0	902.975 / 902.975BW	99520052 / BW: 99520053	1 pc.
	0 0 0		0 0 0 0 0 0	902.942 / 902.942BW	99520054 / BW: 99500055	Ref. table

D-value	902.942
10,39m – 13.20m	1
13,21m – 15,88m	2
15,89m – 18,56m	3
18,57m – 21,24m	4
21,25m – 23,91m	5
23,92m – 26,59m	6
26,60m – 29,26m	7

#### ILED Aquarius Circle & H 2.0 Helideck Lighting System





- Place the cable tray (902.975) in such a way that it aligns with the cable tray assembled in the previous step (See detail view).
- Place the cable trays (902.942) in straight line, as shown above with the cut-out grooves on the far side of the H.
- The amount of straight cable trays (902.942) used depends on the D-Value of the deck. Check the table shown on previous page to determine the amount needed.



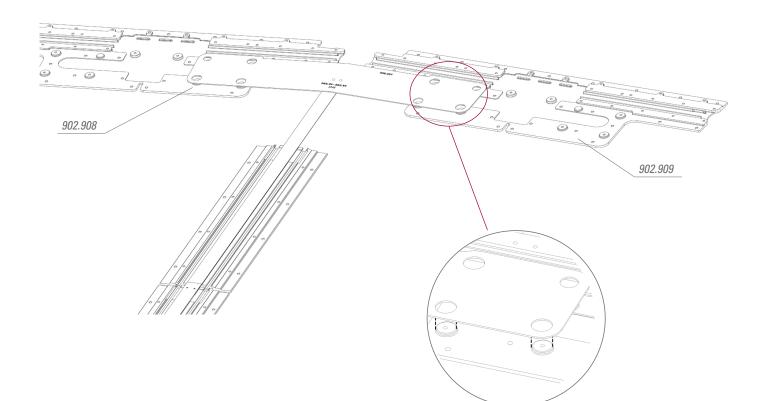
In the complete installation there is some distance between the straight covers (902.942). This distance will be applied in Step B8 before the cable trays are fixed to the deck.

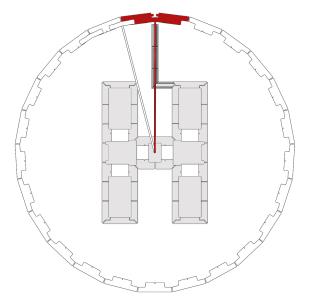
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4b. First mounting plates circle	IMT Part no.	R. Stahl Tranberg Part no.	Quantity
	902.908	99520190	1 pc.
	902.909	99520191	1 pc.

#### STEP B, 4b, First mounting plates circle

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- Stretch the tool to the start of the circle. The strap should align with the center of the straight cable trays (902.942), as shown above.
- Slide the holes in the tool over the holes of the mounting plates (902.908 and 902.909), as shown in the detail to the left.
- The number engraved in the parts corresponds with the numbers shown above.
- Pull the mounting plates back to make sure the steel band is straight and place the first mounting plates.

Keep the mounting plates from shifting out of position when removing and placing the tools.



The tail of the tool, on the other side of the stud in the center, can be removed to ensure an easier placing of the circle.

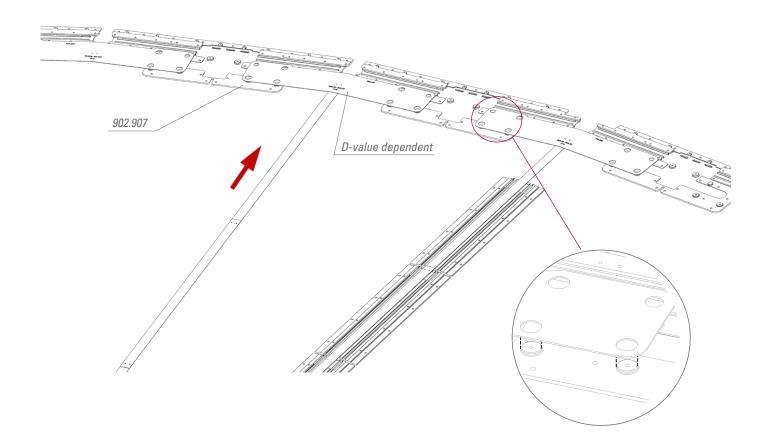
ILED Aquarius Circle & H 2.0 Helideck Lighting System

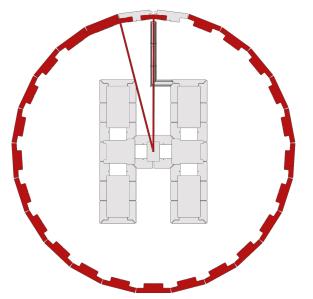
5b. Mounting plates circle	IMT Part no.	R. Stahl Tranberg Part no.	Quantity
	D-value dependent	D-value dependent	Ref. table
	902.907	99520189	1 pc.

#### STEP B, 5b, Mounting plates circle

D-value	902.907
13,88m – 14,54m	23
14,55m – 15,21m	24
15,22m – 15,88m	25
15,89m – 16,55m	26
16,56m – 17,22m	27
17,23m – 17,89m	28
17,90m – 18,56m	29
18,57m – 19,23m	30
19,24m – 19,90m	31
19,91m – 20,57m	32
20,58m – 21,24m	33
21,25m – 21,91m	34
21,92m – 22,58m	35
22,59m – 23,25m	36
23,26m – 23,91m	37
23,92m – 24,58m	38
24,59m – 25,25m	39
25,26m – 25,92m	40
25,93m – 26,59m	41
26,60m – 27,26m	42
27,27m – 27,92m	43
27,93m – 28,59m	44
28,60m – 29,26m	45
29,27m – 29,93m	46

ILED Aquarius Circle & H 2.0 Helideck Lighting System





- Slide the holes in the second circle tool over the holes of the mounting plates (902.908 and 902.909), as shown in the detail view. Keep the first tool connected to the mounting plates.
- When both tools are connected pull all 3 mounting plates back to stretch both straps. This by applying pressure to the middle plate (see red arrow above).
- Repeat these steps with both tools adding just 1 mounting plate (902.907) each repeat, until the circle is complete.
- Use the extra supplied tool without the strap as an extra check to make sure no mounting plates have shifted out of position.
- When placed correctly the last mounting plate should connect with the first plate placed. The tool can be used check this. Deviations up to 10mm are acceptable.

Keep the mounting plates from shifting out of position when removing and placing the tools.

If needed, loosen the nut in the center for an easier rotation of the tools.

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#### STEP B, 6, Cable tray connections circle

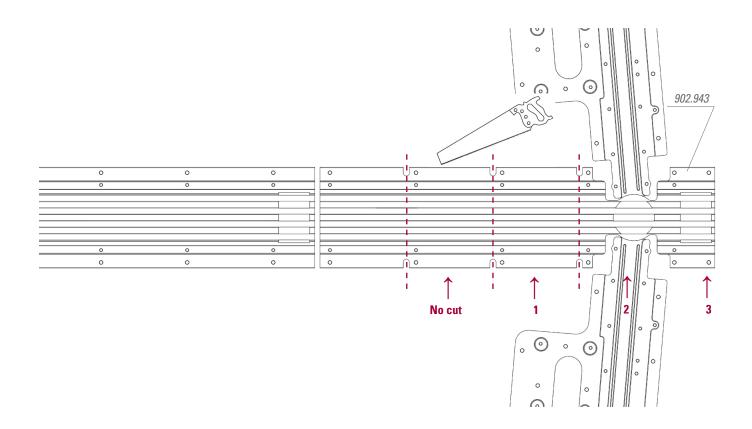
6. Cable tray connections circle	IMT Part no.	R. Stahl Tranberg Part no.	Quantity
	902.943	99520045	1 pc.

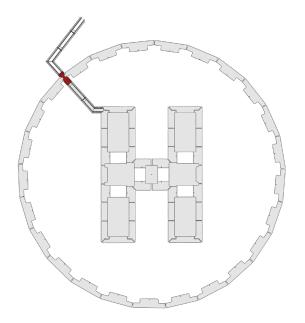


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| D-value         | 902.943 |
|-----------------|---------|
| 13,88m — 14,54m | 2       |
| 14,55m – 15,21m | 1       |
| 15,22m – 15,88m | No cut  |
| 15,89m – 16,55m | 3       |
| 16,56m – 17,22m | 2       |
| 17,23m – 17,89m | 1       |
| 17,90m – 18,56m | No cut  |
| 18,57m – 19,23m | 3       |
| 19,24m – 19,90m | 2       |
| 19,91m – 20,57m | 1       |
| 20,58m – 21,24m | No cut  |
| 21,25m – 21,91m | 3       |
| 21,92m – 22,58m | 2       |
| 22,59m – 23,25m | 1       |
| 23,26m – 23,91m | No cut  |
| 23,92m – 24,58m | 3       |
| 24,59m – 25,25m | 2       |
| 25,26m – 25,92m | 1       |
| 25,93m – 26,59m | No cut  |
| 26,60m – 27,26m | 3       |
| 27,27m – 27,92m | 2       |
| 27,93m – 28,59m | 1       |
| 28,60m – 29,26m | No cut  |
| 29,27m – 29,93m | 3       |
|                 |         |

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- Remove the tools used for laying out the circle.
- Cut the connection tray (902.943) to the correct length (see table to the left). From cut out to cut out as shown in the picture above.
- Use the part of the tray that connects with the CIRCLE mounting plates as shown in the picture above.
- Place the connection tray (902.943) as shown in the picture above.

Not every D-Value needs the tray to be cut ("No" in table and picture).

Always make sure the construction stays clean after a cutting process. No grinding particles should be present on the construction.

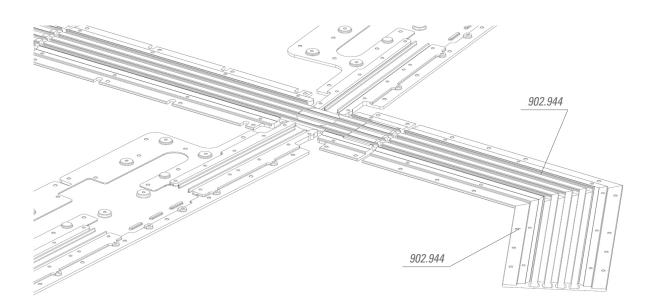
The cuts should be freed of burrs to avoid damaging the cable.

Keep the mounting plates from shifting out of position.

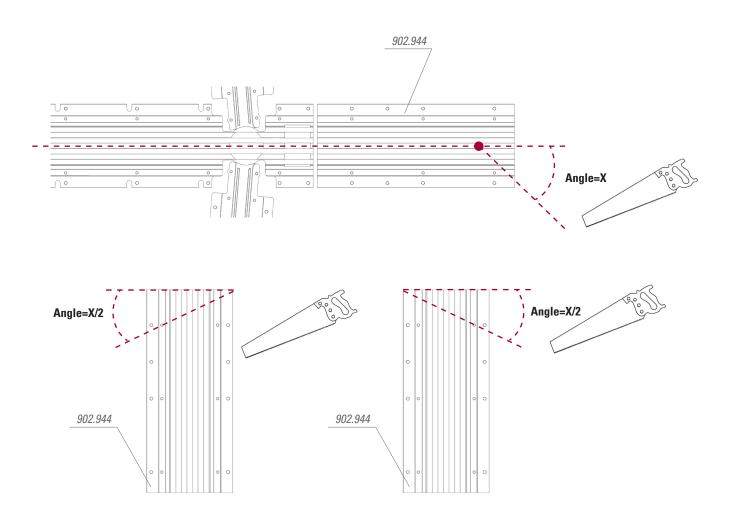
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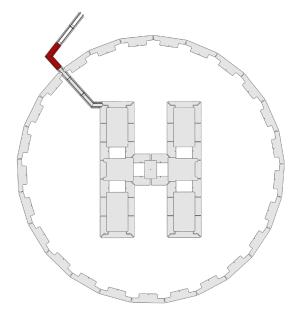
#### 

#### STEP B, 7, Cable tray connections circle



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- Place one of the cable trays (902.944) as shown above.
- Define the position of the junction box and draw a straight line between that position and the dot showed in the picture above.
- Define Angle X and cut the 2 cable trays, starting at the outer corner, in an angle that's half of X. As shown in the picture to the left. X can be max 90°.
- Place the cut cable trays against each other as shown in the picture above.

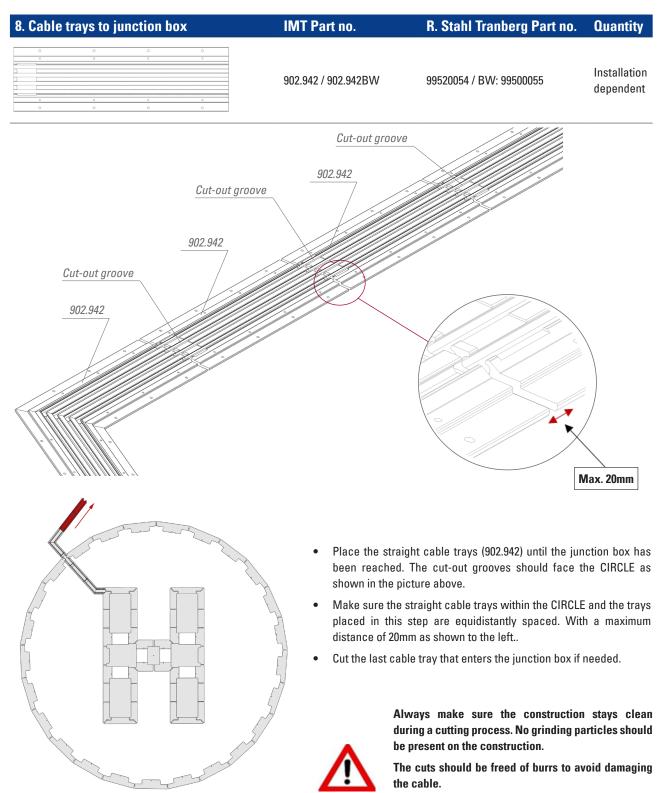
Make sure there are no obstacles in the way of the path towards the junction box.

The cuts should be freed of burrs to avoid damaging the cable.



Make sure the cavities in the cable trays (used for cabling) are aligned.

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#### STEP B, 8, Cable trays to junction box

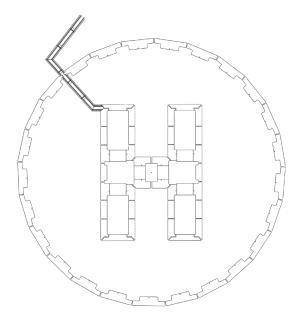
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### STEP C

Fixing the mounting plates and cable trays to the deck

#### STEP C, 1, Checking the installation

| Imp | Important checks:                                                                                                               |  |  |  |
|-----|---------------------------------------------------------------------------------------------------------------------------------|--|--|--|
|     | Does the H construction follow the shape of the painted H?                                                                      |  |  |  |
|     | Are the circle mounting plates still in position, are there none that have shifted out of position?                             |  |  |  |
|     | Do the angled cable trays connect with each other and are the straight cable trays equidistantly spaced with a maximum of 20mm? |  |  |  |
|     | Are the cut-out grooves of all cable trays correctly positioned, as described in Step B3 and Step B8?                           |  |  |  |
|     | Are there no obstacles in or on the deck in the way of the construction?                                                        |  |  |  |

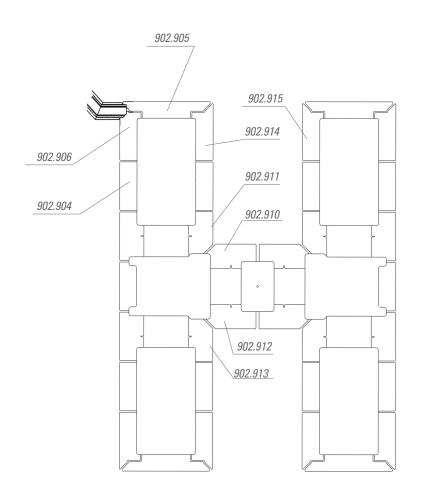


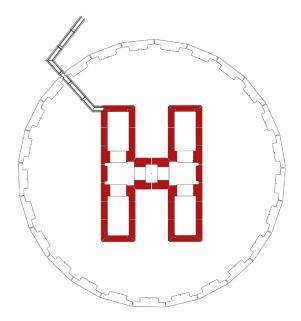
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#### STEP C, 2, Drilling holes for the H

| 2. Drilling holes for the H | IMT Part no.        | R. Stahl Tranberg Part no. | X Holes       |
|-----------------------------|---------------------|----------------------------|---------------|
|                             | 902.904 / 902.904BW | 99520194 / BW: 99520195    | Min. 7 holes  |
|                             | 902.906 / 902.906BW | 99520202 / BW: 99520203    | Min. 7 holes  |
|                             | 902.910 / 902.910BW | 99520204 / BW: 99520205    | Min. 7 holes  |
|                             | 902.912 / 902.912BW | 99520208 / BW: 99520209    | Min. 7 holes  |
|                             | 902.905 / 902.905BW | 99520200 / BW: 99520201    | Min. 11 holes |
|                             | 902.911 / 902911BW  | 99520206 / BW: 99520207    | Min. 7 holes  |
|                             | 902.913 / 902.913BW | 99520210 / BW: 99520211    | Min. 7 holes  |
|                             | 902.914 / 902.914BW | 99520196 / BW:99520197     | Min. 8 holes  |
|                             | 902.915 / 902.915BW | 99520198 / BW: 99520199    | Min. 8 holes  |

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- Drill a minimum of X holes where X is the amount described in the table to the left.
- The holes without thread are meant for the fixation to the deck.
- The small holes in the tools can be used to reach the holes in the mounting plates that are covered by the tool.

The minimum amount of holes needed is based on using stainless steel M6 bolts (A4) or Avdel stainless steel monobolts (A4).

Keep the mounting plates from shifting out of position.

Spread the holes used as much as possible, this will divide forces equally.



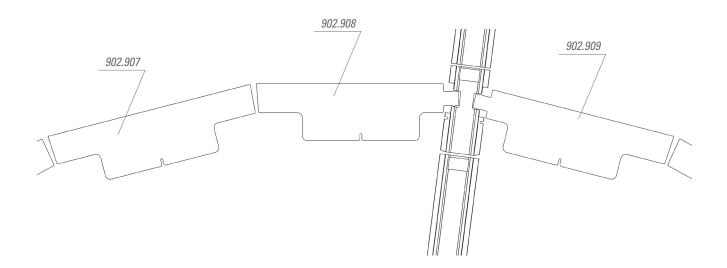
Clean the mounting plates after the drilling process to avoid corrosion and oxidation.

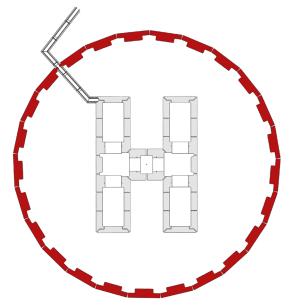
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| 3. Drilling holes for the circle | IMT Part no. | R. Stahl Tranberg Part no. | X Holes       |
|----------------------------------|--------------|----------------------------|---------------|
|                                  | 902.907      | 99520189                   | Min. 11 holes |
|                                  | 902.908      | 99520190                   | Min. 11 holes |
|                                  | 902.909      | 99520191                   | Min. 11 holes |

#### STEP C, 3, Drilling holes for the circle

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- Drill a minimum of X holes where X is the amount described in the table.
- The holes without thread are meant for the fixation to the deck.

The minimum amount of holes needed is based on using stainless steel M6 bolts (A4) or Avdel stainless steel monobolts (A4).

Keep the mounting plates from shifting out of position.

Spread the holes used as much as possible, this will divide forces equally.

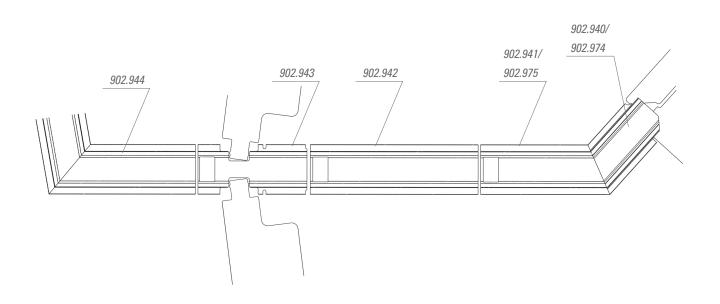
Clean the mounting plates after the drilling process to avoid corrosion and oxidation.

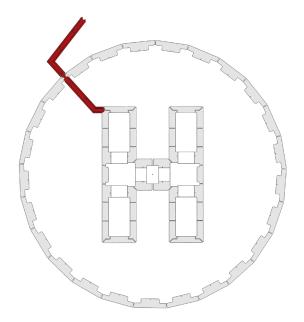
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| 4. Drilling holes for the cable trays | IMT Part no.        | R. Stahl Tranberg Part no. | X Holes      |
|---------------------------------------|---------------------|----------------------------|--------------|
|                                       | 902.940 / 902.940BW | 99520046 / BW: 99520047    | Min. 6 holes |
|                                       | 902.941 / 902.941BW | 99520050 / BW: 99520051    | Min. 6 holes |
|                                       | 902.942 / 902.942BW | 99520054 / BW: 99520055    | Min. 6 holes |
|                                       | 902.943             | 99520045                   | Min. 8 holes |
|                                       | 902.944 / 902.944BW | 99520056 / BW: 99520057    | Min. 8 holes |
|                                       | 902.974 / 902.974BW | 99520048 / BW: 99520049    | Min. 6 holes |
|                                       | 902.975 / 902.975BW | 99520052 / BW: 99520053    | Min. 6 holes |

#### STEP C, 4, Drilling holes for the cable trays

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- Drill a minimum of X holes where X is the amount described in the table.
- The holes without thread are meant for the fixation to the deck.
- Remove cable cover (902.935/902.972) this cover will be used again in a later stage.
- Remove all other tools from the installation.

The minimum amount of holes needed is based on using stainless steel M6 bolts (A4) or Avdel stainless steel monobolts (A4).

Keep the mounting plates from shifting out of position.

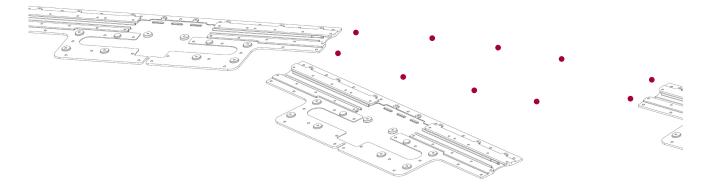
Spread the holes used as much as possible, this will divide forces equally.

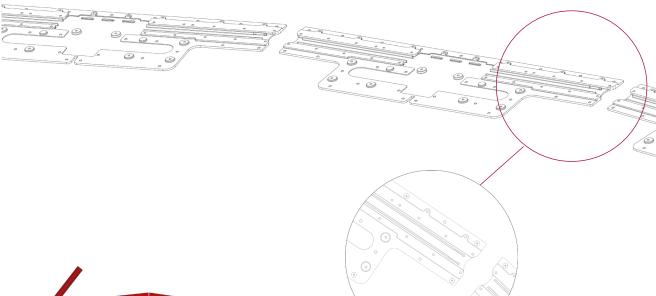


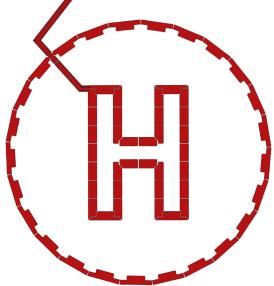
Clean the mounting plates after the drilling process to avoid corrosion and oxidation.

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#### **STEP C, Fixing construction**







- Treat the drilled holes according to the mechanical demands of the helideck.
- Fasten the mounting plates and cable trays to the deck.



Make sure the holes chosen for fixing are spread. This will divide forces equally.

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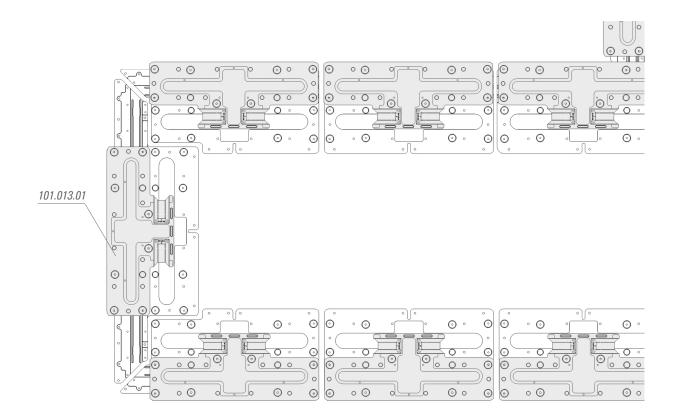
### **STEP D** Installing the fixtures and cables of the H.

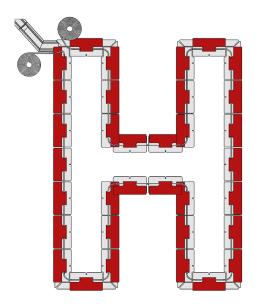
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#### **STEP D**, **1**, **Placing the fixtures of the H**.

| 1. Placing the fixtures of the H | IMT Part no. | R. Stahl Tranberg Part no. | Quantity |
|----------------------------------|--------------|----------------------------|----------|
|                                  | 101.013.01   | 99520176                   | 34 pcs.  |

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• Place the white-green fixtures (101.013.01) bottom up on the mounting plates of the H with the cable entry point facing inward as shown in the picture above.



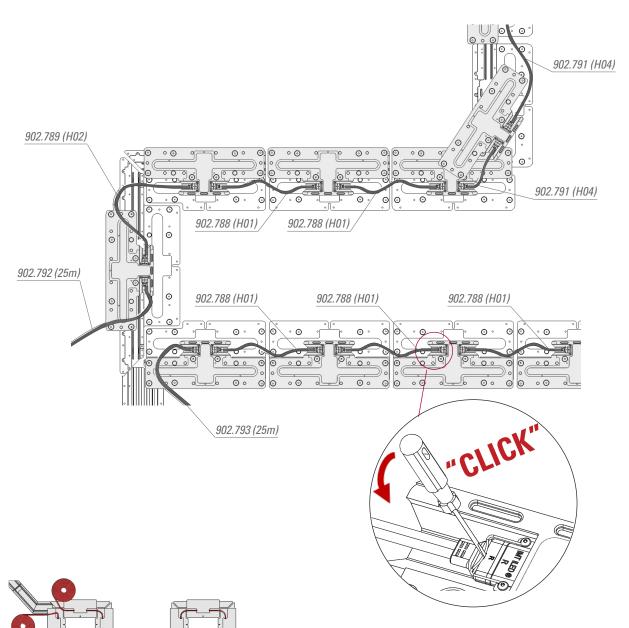
Take care not to damage the optic when positioning and handling the fixtures while in bottom up position.

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#### STEP D, 2, Connecting the cables of the H.

| 2. Connecting the cables of the H | IMT Part no.        | R. Stahl Tranberg Part no. | Quantity |
|-----------------------------------|---------------------|----------------------------|----------|
|                                   | 902.790 (H03)       | 99520040                   | 4 pcs.   |
|                                   | 902.788 (H01)       | 99500038                   | 20 pcs.  |
|                                   | 902.791 (H04)       | 99500041                   | 2 pcs.   |
|                                   | 902.789 (H02)       | 99520039                   | 7 pcs.   |
|                                   | 902.792 (25m, JB L) | 99520042                   | 1 pc.    |
|                                   | 902.793 (25m, JB R) | 99520043                   | 1 pc.    |

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- Connect all cables of the H. All lengths at their designated positions as shown above. Use the supplied Loctite 8104 on the O-rings on the plugs before connecting them.
  - The cables are not labelled with their item number but with a shorter code as shown above.
  - Use a flat headed screwdriver, chrome-vanadium or brass, to fasten the clip as shown in the detail view.



Make sure all clips are correctly fastened and lubricated. Bad connections will result in water and moisture ingress, which will result in a failing system.

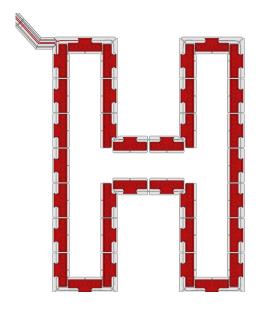
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#### STEP D, 3, Complete the connection of the H.

 3. Complete the connection of the H
 IMT Part no.
 R. Stahl Tranberg Part no.
 Quantity

 901.539
 99520186
 272 pcs.

 901.025
 99520184
 272 pcs.



- Flip all fixtures and position them on the mounting plates.
- Fasten the fixtures with the supplied spring lock washers and M6 bolts. Use the supplied Duralac on all M6 bolts.
- Guide the cables from the H to the junction box through the inner 2 channels in the cable trays, as shown above.



It's not necessary to put the cables that lay between fixtures in their designated position as this will be easier during the assembly of the covers in Step F.

ILED Aquarius Circle & H 2.0 Helideck Lighting System

### **STEP E** Installing the fixtures and cables of the Circle.

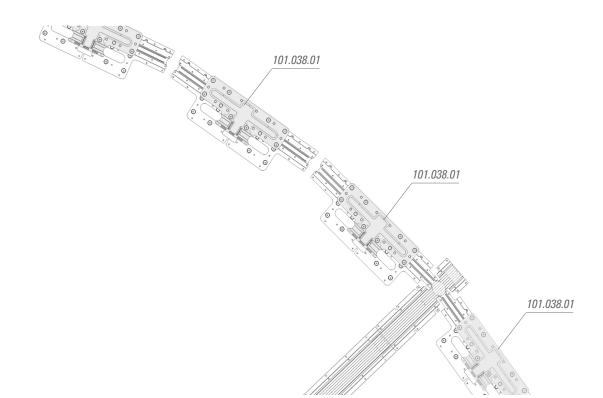
ILED Aquarius Circle & H 2.0 Helideck Lighting System

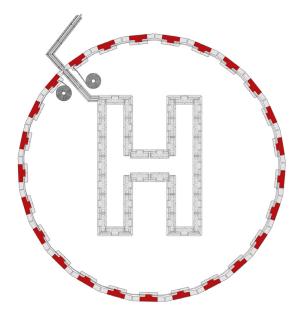
#### STEP E, 1, Placing the fixtures of the circle

| 1. Placing the fixtures of the circle | IMT Part no. | R. Stahl Tranberg Part no. | Quantity   |
|---------------------------------------|--------------|----------------------------|------------|
|                                       | 101.038.01   | 99520175                   | Ref. table |

| D-value         | 101.038.01 |
|-----------------|------------|
| 13,88m – 14,54m | 25         |
| 14,55m – 15,21m | 26         |
| 15,22m – 15,88m | 27         |
| 15,89m – 16,55m | 28         |
| 16,56m – 17,22m | 29         |
| 17,23m – 17,89m | 30         |
| 17,90m – 18,56m | 31         |
| 18,57m – 19,23m | 32         |
| 19,24m – 19,90m | 33         |
| 19,91m – 20,57m | 34         |
| 20,58m – 21,24m | 35         |
| 21,25m – 21,91m | 36         |
| 21,92m – 22,58m | 37         |
| 22,59m – 23,25m | 38         |
| 23,26m – 23,91m | 39         |
| 23,92m – 24,58m | 40         |
| 24,59m – 25,25m | 41         |
| 25,26m – 25,92m | 42         |
| 25,93m – 26,59m | 43         |
| 26,60m – 27,26m | 44         |
| 27,27m – 27,92m | 45         |
| 27,93m – 28,59m | 46         |
| 28,60m – 29,26m | 47         |
| 29,27m – 29,93m | 48         |

ILED Aquarius Circle & H 2.0 Helideck Lighting System





 Place the yellow fixtures (101.038.01) bottom up on the mounting plates of the circle with the cable entry point facing inward as shown in the picture above.



Take care not to damage the optic when positioning and handling the fixtures while in bottom up position.

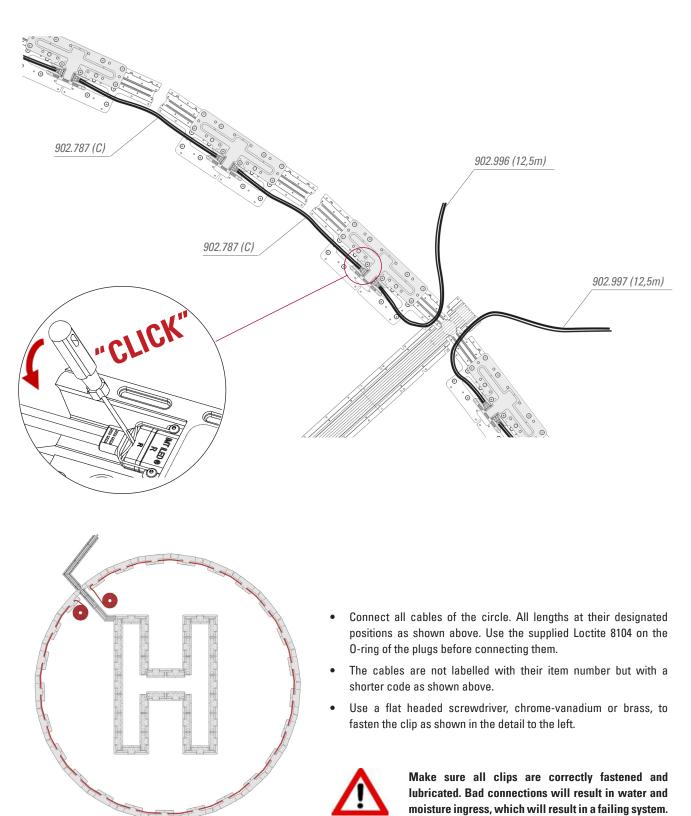
ILED Aquarius Circle & H 2.0 Helideck Lighting System

| 2. Connecting the cables of the circle | IMT Part no.          | R. Stahl Tranberg Part no. | Quantity   |
|----------------------------------------|-----------------------|----------------------------|------------|
|                                        | 902.787 (C)           | 99520017                   | Ref. table |
|                                        | 902.996 (12,5m, JB L) | 99520015                   | 1 pc.      |
|                                        | 902.997 (12,5m, JB R) | 99520016                   | 1 pc.      |

#### **STEP E, 2, Connecting the cables of the circle.**

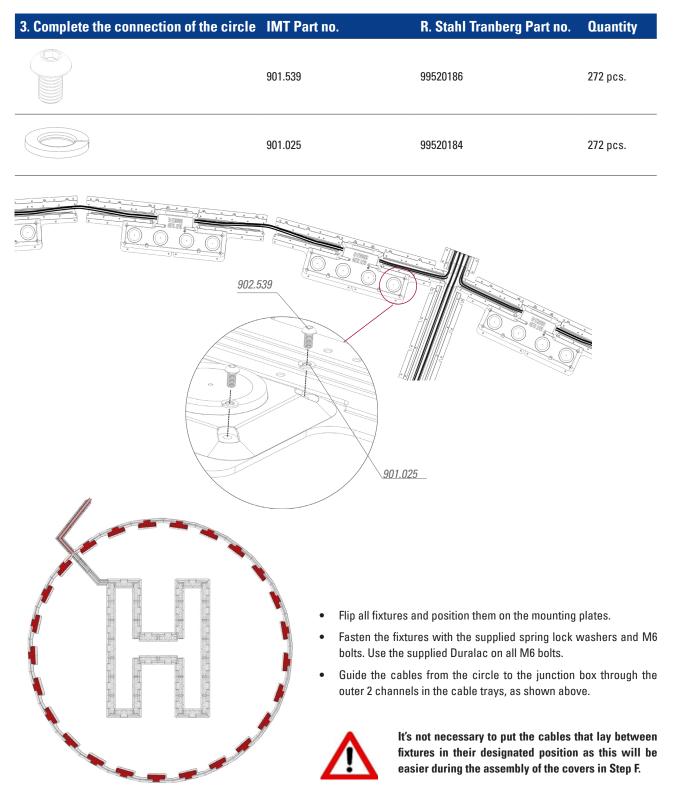
| D-value         | 902.787 |
|-----------------|---------|
| 13,88m – 14,54m | 24      |
| 14,55m – 15,21m | 25      |
| 15,22m – 15,88m | 26      |
| 15,89m – 16,55m | 27      |
| 16,56m – 17,22m | 28      |
| 17,23m – 17,89m | 29      |
| 17,90m – 18,56m | 30      |
| 18,57m – 19,23m | 31      |
| 19,24m – 19,90m | 32      |
| 19,91m – 20,57m | 33      |
| 20,58m – 21,24m | 34      |
| 21,25m – 21,91m | 35      |
| 21,92m – 22,58m | 36      |
| 22,59m – 23,25m | 37      |
| 23,26m – 23,91m | 38      |
| 23,92m – 24,58m | 39      |
| 24,59m – 25,25m | 40      |
| 25,26m – 25,92m | 41      |
| 25,93m – 26,59m | 42      |
| 26,60m – 27,26m | 43      |
| 27,27m – 27,92m | 44      |
| 27,93m – 28,59m | 45      |
| 28,60m – 29,26m | 46      |
| 29,27m – 29,93m | 47      |

ILED Aquarius Circle & H 2.0 Helideck Lighting System



ILED Aquarius Circle & H 2.0 Helideck Lighting System

#### STEP E, 3, Complete the connection of the circle.



ILED Aquarius Circle & H 2.0 Helideck Lighting System

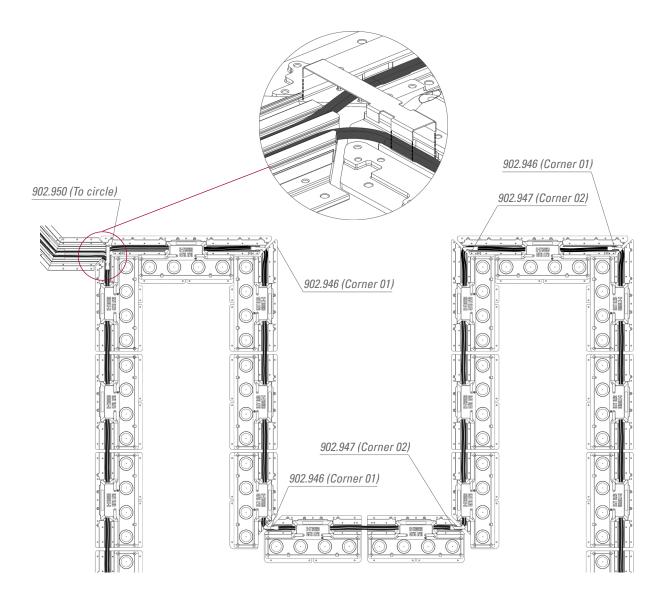
### **STEP F** Installing the covers of the H.

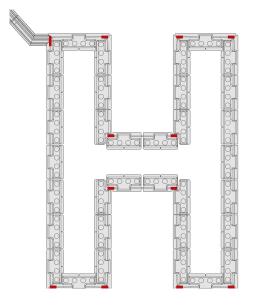
ILED Aquarius Circle & H 2.0 Helideck Lighting System

| 1. Placing the cable caps | IMT Part no. | R. Stahl Tranberg Part no. | Quantity |
|---------------------------|--------------|----------------------------|----------|
|                           | 902.946      | 99520105                   | 6 pcs.   |
|                           | 902.947      | 99520106                   | 5 pcs.   |
|                           | 902.950      | 99520107                   | 1 pc.    |

#### **STEP F, 1, Placing the cable caps.**

#### ILED Aquarius Circle & H 2.0 Helideck Lighting System





- Place the cable caps over the cables on the positions shown above. Place 902.950 at the cable tray, depending on your exit at the side of the H or in the middle.
- The position of the cable caps is predetermined by a socket in the mounting plates as shown in the detail to the left.



Take care not to damage the cables with the caps.

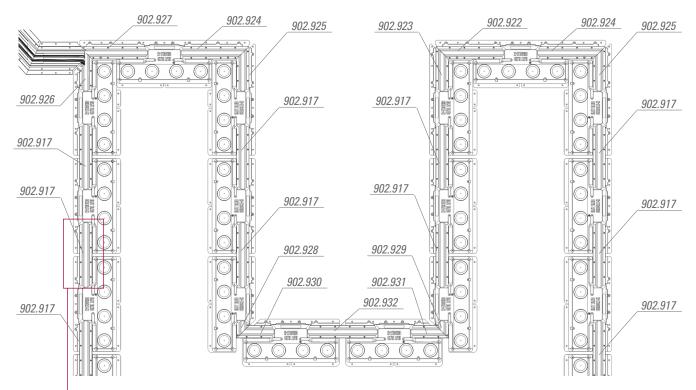
ILED Aquarius Circle & H 2.0 Helideck Lighting System

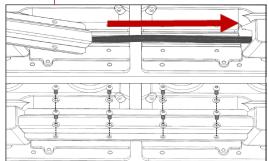
#### **STEP F, 2, Placing the covers.**

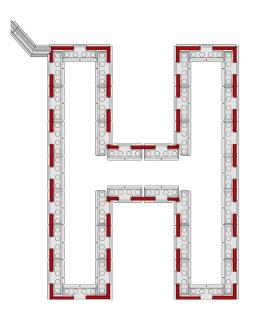
| 2. Placing the covers | IMT Part no.        | R. Stahl Tranberg Part no. | Quantity |
|-----------------------|---------------------|----------------------------|----------|
|                       | 902.917 / 902.917BW | 99520133 / BW: 99520134    | 20 pcs.  |
|                       | 902.922 / 902.922BW | 99520135 / BW: 99520136    | 3 pcs.   |
|                       | 902.923 / 902.923BW | 99520137 / BW: 99520130    | 3 pcs.   |
|                       | 902.924 / 902.924BW | 99520139 / BW: 99520140    | 4 pcs.   |
|                       | 902.925 / 902.924BW | 99520141 / BW: 99520142    | 4 pcs.   |
|                       | 902.926 / 902.926BW | 99520119 / BW: 99520120    | 1 pc.    |
|                       | 902.927 / 902.927BW | 99520121 / BW: 99520122    | 1 pc.    |
|                       | 902.928 / 902.128BW | 99520123 / BW: 99520124    | 2 pcs.   |
|                       | 902.929 / 902.929BW | 99520125 / BW: 99520126    | 2 pcs.   |
|                       | 902.930 / 902.930BW | 99520127 / BW: 99520128    | 2 pcs.   |
|                       | 902.931 / 902.931BW | 99520129 / BW: 99520130    | 2 pcs.   |
|                       | 902.932 / 902.932BW | 99520131 / BW: 99520132    | 2 pcs.   |

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ILED Aquarius Circle & H 2.0 Helideck Lighting System







- Place the covers on their designated positions. See above.
- To easily place the cover over the cable slide it into position as shown on the left.
- Fasten the covers with washers and M6 bolts. Use at least 4 holes, spread evenly. Use the supplied Duralac on all M6 bolts.



Take care not to damage the cables.

ILED Aquarius Circle & H 2.0 Helideck Lighting System

ILED Aquarius Circle & H 2.0 Helideck Lighting System

### **STEP G** Installing the covers of the circle.

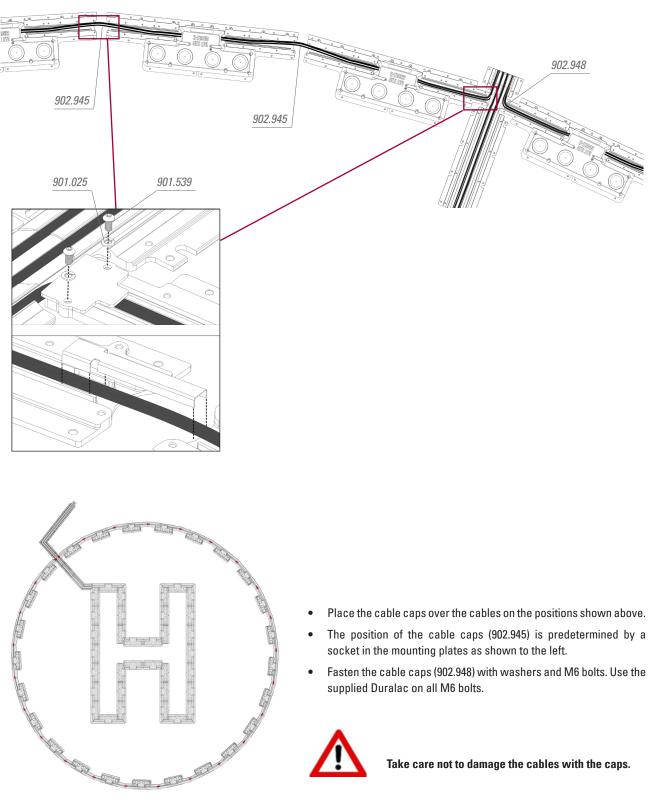
ILED Aquarius Circle & H 2.0 Helideck Lighting System

#### STEP G, 1. Placing the cable caps.

| 1. Placing the cable caps | IMT Part no. | R. Stahl Tranberg Part no. | Quantity   |
|---------------------------|--------------|----------------------------|------------|
|                           | 901.539      | 99520186                   | 4 pcs.     |
|                           | 901.025      | 99520184                   | 4 pcs.     |
|                           | 902.948      | 99520104                   | 2 pcs.     |
|                           | 902.945      | 99520103                   | Ref. table |

| D-value         | 902.945 |
|-----------------|---------|
| 13,88m – 14,54m | 24      |
| 14,55m – 15,21m | 25      |
| 15,22m – 15,88m | 26      |
| 15,89m – 16,55m | 27      |
| 16,56m – 17,22m | 28      |
| 17,23m – 17,89m | 29      |
| 17,90m – 18,56m | 30      |
| 18,57m – 19,23m | 31      |
| 19,24m – 19,90m | 32      |
| 19,91m – 20,57m | 33      |
| 20,58m – 21,24m | 34      |
| 21,25m – 21,91m | 35      |
| 21,92m – 22,58m | 36      |
| 22,59m – 23,25m | 37      |
| 23,26m – 23,91m | 38      |
| 23,92m – 24,58m | 39      |
| 24,59m – 25,25m | 40      |
| 25,26m – 25,92m | 41      |
| 25,93m – 26,59m | 42      |
| 26,60m – 27,26m | 43      |
| 27,27m – 27,92m | 44      |
| 27,93m – 28,59m | 45      |
| 28,60m – 29,26m | 46      |
| 29,27m – 29,93m | 47      |

ILED Aquarius Circle & H 2.0 Helideck Lighting System





Take care not to damage the cables with the caps.

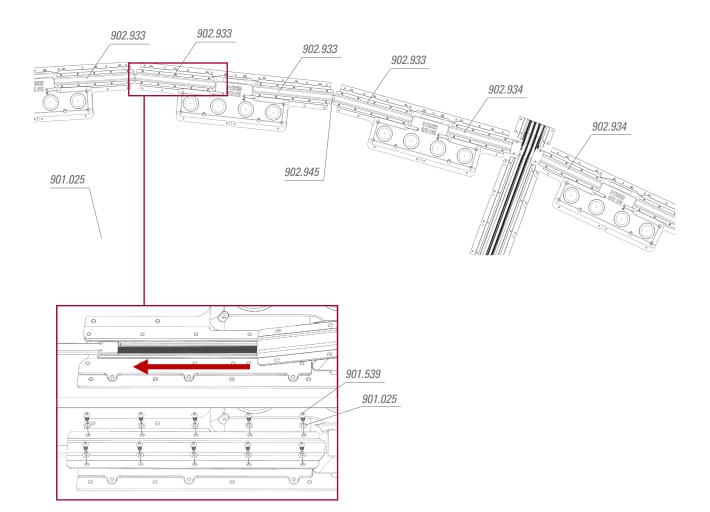
ILED Aquarius Circle & H 2.0 Helideck Lighting System

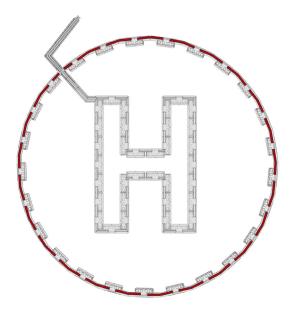
#### STEP G, 2. Placing the covers.

| 2. Placing the covers | IMT Part no. | R. Stahl Tranberg Part no. | Quantity   |
|-----------------------|--------------|----------------------------|------------|
|                       | 902.933      | 99520117                   | Ref. table |
|                       | 902.934      | 99520116                   | 2 pcs.     |

| D-value         | 902.933 |
|-----------------|---------|
| 13,88m – 14,54m | 48      |
| 14,55m – 15,21m | 50      |
| 15,22m – 15,88m | 52      |
| 15,89m – 16,55m | 54      |
| 16,56m – 17,22m | 56      |
| 17,23m – 17,89m | 58      |
| 17,90m – 18,56m | 60      |
| 18,57m – 19,23m | 62      |
| 19,24m – 19,90m | 64      |
| 19,91m – 20,57m | 66      |
| 20,58m – 21,24m | 68      |
| 21,25m – 21,91m | 70      |
| 21,92m – 22,58m | 72      |
| 22,59m – 23,25m | 74      |
| 23,26m – 23,91m | 76      |
| 23,92m – 24,58m | 78      |
| 24,59m – 25,25m | 80      |
| 25,26m – 25,92m | 82      |
| 25,93m – 26,59m | 84      |
| 26,60m – 27,26m | 86      |
| 27,27m – 27,92m | 88      |
| 27,93m – 28,59m | 90      |
| 28,60m – 29,26m | 92      |
| 29,27m – 29,93m | 94      |

ILED Aquarius Circle & H 2.0 Helideck Lighting System





- Place the covers on their designated positions. See above.
- To easily place the cover over the cable slide it into position as shown on the detail view.
- Fasten the covers with washers and M6 bolts. Use at least 6 holes, spread evenly. Use the supplied Duralac on all M6 bolts.



Take care not to damage the cables.

ILED Aquarius Circle & H 2.0 Helideck Lighting System

ILED Aquarius Circle & H 2.0 Helideck Lighting System

#### **STEP H** Installing the covers of the cable trays.

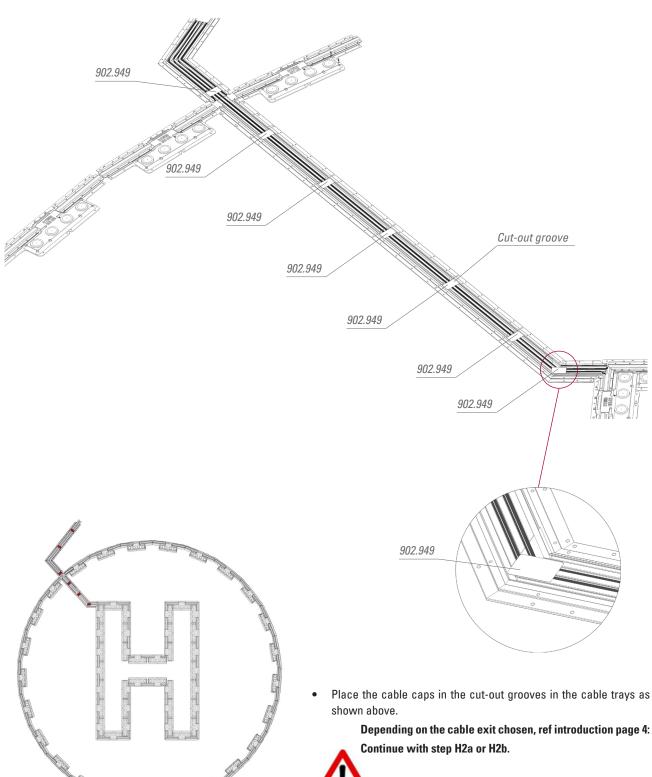
ILED Aquarius Circle & H 2.0 Helideck Lighting System

#### **STEP H, 1. Placing the cable caps.**

| 1. Placing the cable caps | IMT Part no. | R. Stahl Tranberg Part no. | Quantity                  |
|---------------------------|--------------|----------------------------|---------------------------|
|                           | 902.949      | 99520102                   | Installation<br>dependent |

ILED Aquarius Circle & H 2.0 Helideck Lighting System

Real Providence





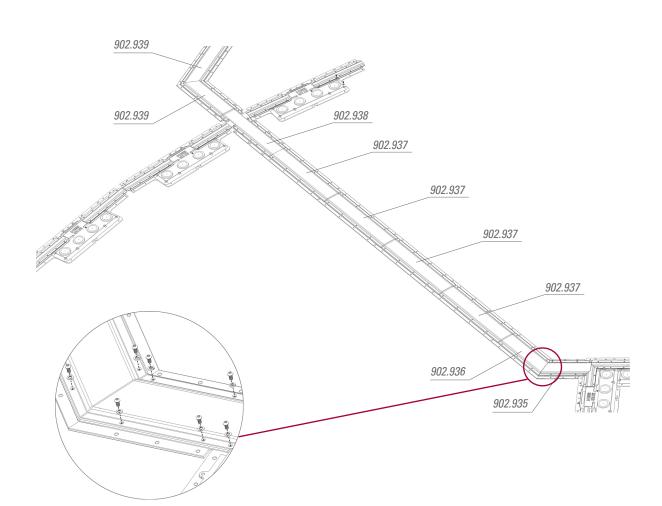
Take care not to damage the cables with the caps.

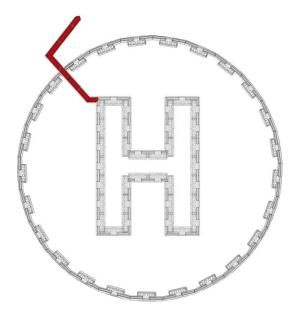
ILED Aquarius Circle & H 2.0 Helideck Lighting System

#### STEP H, 2a. Placing the covers, angled exit.

| 2a. Placing the covers, angled.                                                     | IMT Part no.        | R. Stahl Tranberg Part no. | Quantity                  |
|-------------------------------------------------------------------------------------|---------------------|----------------------------|---------------------------|
|                                                                                     | 902.935 / 902.935BW | 99520143 / BW: 99520375    | 1 pc.                     |
|                                                                                     | 902.936             | 99520146                   | 1 pc.                     |
| 0         0         0         0           0         0         0         0         0 | 902.937 / 902.937BW | 99520149 / BW: 99520150    | Installation<br>dependent |
|                                                                                     | 902.938             | 99520118                   | 1 pc.                     |
| 0         0         0           0         0         0                               | 902.939 / 902.939BW | 99520151 / BW: 99520152    | 2 pcs.                    |

ILED Aquarius Circle & H 2.0 Helideck Lighting System





- Place the covers on their designated positions. See above.
- If needed cut cover 902.938 at the corresponding cut-outs. Corresponding to the cable tray (902.943).
- If needed cut covers 902.939 (2x) at the same angle as their designated cable trays (902.944)
- Fasten the covers with washers and M6 bolts. Use the supplied Duralac on all M6 bolts.

Take care not to damage the cables.

Always make sure the construction stays clean after a cutting process. No grinding particles should be present on the construction.



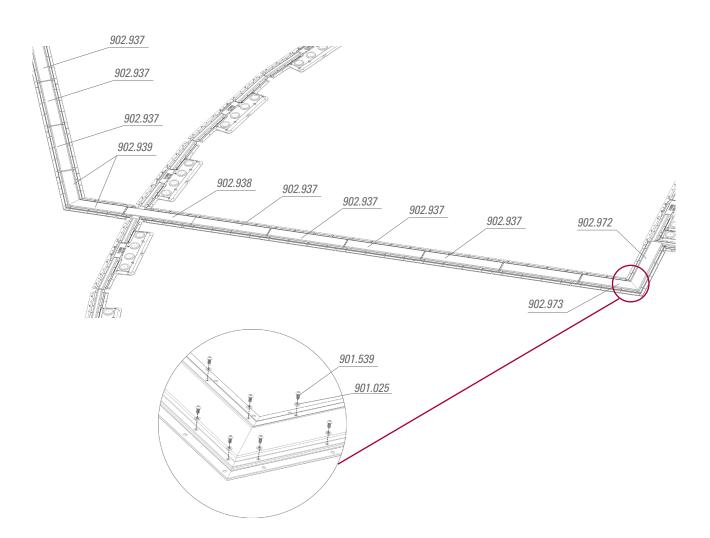
The cuts should be freed of burrs to avoid damaging the cable.

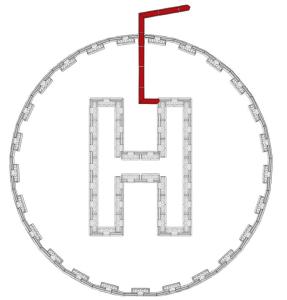
ILED Aquarius Circle & H 2.0 Helideck Lighting System

#### STEP H, 2b. Placing the covers, straight exit.

| 2b. Placing the covers, straight. | IMT Part no.        | R. Stahl Tranberg Part no. | Quantity                  |
|-----------------------------------|---------------------|----------------------------|---------------------------|
|                                   | 902.972 / 902.972BW | 99520144 / BW: 99520145    | 1 pc.                     |
|                                   | 902.973 / 902.973BW | 99520147 / BW: 99520148    | 1 pc.                     |
| <u>    0    0    0    0    0</u>  | 902.937 / 902.937BW | 99520149 / BW: 99520150    | Installation<br>dependent |
|                                   | 902.938             | 99520118                   | 1 pc.                     |
| 0 0 0<br>0 0                      | 902.939             | 99520151                   | 2 pcs.                    |

#### ILED Aquarius Circle & H 2.0 Helideck Lighting System





- Place the covers on their designated positions. See above.
- If needed cut cover 902.938 at the corresponding cut-outs. Corresponding to the cable tray (902.943).
- If needed cut covers 902.939 (2x) at the same angle as their designated cable trays (902.944)
- Fasten the covers with washers and M6 bolts. Use the supplied Duralac on all M6 bolts.

Take care not to damage the cables.

Always make sure the construction stays clean after a cutting process. No grinding particles should be present on the construction.



The cuts should be freed of burrs to avoid damaging the cable.

ILED Aquarius Circle & H 2.0 Helideck Lighting System

#### **APPENDIX A**, vocabulary

| Vocabulary     |                                                                                                                                                                                                                                                                       |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mounting plate |                                                                                                                                                                                                                                                                       |
| Cable tray     | 0         0         0         0           0         0         0         0           0         0         0         0           1         1         1         1           0         0         0         0         0           0         0         0         0         0 |
| Cover          |                                                                                                                                                                                                                                                                       |
| Tools          |                                                                                                                                                                                                                                                                       |
| Сар            |                                                                                                                                                                                                                                                                       |
| Cable cap      |                                                                                                                                                                                                                                                                       |
| Fixture        |                                                                                                                                                                                                                                                                       |
| Cable          |                                                                                                                                                                                                                                                                       |

ILED Aquarius Circle & H 2.0 Helideck Lighting System

#### **APPENDIX B**, part no list

| IMT Part No  | R. Stahl Tranberg Part No | <b>Description</b> (BW=Black/White, GW=Green/White)           |
|--------------|---------------------------|---------------------------------------------------------------|
| 101.013.01   | 99520176                  | IMT ILED ILED Circle-H fixture, white/green, LED green, short |
| 101.038.01   | 99520175                  | IMT ILED Circle-H 2.0 fixture, yellow, LED amber              |
| 7-G133004000 | 99520290                  | IMT ILED Self-locking nut M4 A2-70 DIN985                     |
| 7-G213008000 | 99520291                  | IMT ILED Spring washer M8 A2 DIN127B                          |
| 900.092      | 99520014                  | IMT ILED Bolt M8x25 (DIN 933-A4)                              |
| 900.277      | 99520044                  | IMT ILED Cable protection cover                               |
| 900.824      | 99520182                  | Loctite 8104 Silicon Grease                                   |
| 901.025      | 99520184                  | IMT ILED M6 lock washer (DIN 7980-A4)                         |
| 901.218      | 99520216                  | IMT ILED Nut M8 (DIN 934-A4)                                  |
| 901.223      | 99520218                  | 0-ring 17x1                                                   |
| 901.430      | 99520232                  | Pop rivet 4x8 (ISO 15977)                                     |
| 901.466      | 99520183                  | M4x8 bolt (DIN 7985-A4)                                       |
| 901.539      | 99520186                  | IMT ILED M6x12 bolt (ISO 7380-1-A4)                           |
| 901.567.01   | 99520292                  | Sticker, 2xA5                                                 |
| 901.741      | 99520185                  | M6 Tooth lock washer (DIN 6798A-A4)                           |
| 901.950      | 99520187                  | Molykote 7439 Copper Grease                                   |
| 902.327      | 99520158                  | Duralac                                                       |
| 902.787      | 99520017                  | IMT ILED Cable circle                                         |
| 902.788      | 99520038                  | IMT ILED Cable H 01                                           |
| 902.789      | 99520039                  | IMT ILED Cable H 02                                           |
| 902.790      | 99520040                  | IMT ILED Cable H 03                                           |
| 902.791      | 99520041                  | IMT ILED Cable H 04                                           |
| 902.792      | 99520042                  | IMT ILED Cable H to JB L (25 m)                               |
| 902.793      | 99520043                  | IMT ILED Cable H to JB R (25 m)                               |
| 902.904      | 99520194                  | IMT ILED Mounting plate H normal GW                           |
| 902.904BW    | 99520195                  | IMT ILED Mounting plate H normal BW                           |
| 902.905      | 99520200                  | IMT ILED Mounting plate H top GW                              |
| 902.905BW    | 99520201                  | IMT ILED Mounting plate H top BW                              |
| 902.906      | 99520202                  | IMT ILED Mounting plate H-C GW                                |
| 902.906BW    | 99520203                  | IMT ILED Mounting plate H-C BW                                |
| 902.907      | 99520189                  | IMT ILED Mounting plate circle                                |
|              |                           |                                                               |

ILED Aquarius Circle & H 2.0 Helideck Lighting System

| IMT Part No | R. Stahl Tranberg Part No | <b>Description</b> (BW=Black/White, GW=Green/White) |
|-------------|---------------------------|-----------------------------------------------------|
| 902.908     | 99520190                  | IMT ILED Mounting plate connection 01               |
| 902.909     | 99520191                  | IMT ILED Mounting plate connection 02               |
| 902.910     | 99520204                  | IMT ILED Mounting plate inner corner 01 GW          |
| 902.910BW   | 99520205                  | IMT ILED Mounting plate inner corner 01 BW          |
| 902.911     | 99520206                  | IMT ILED Mounting plate inner corner 02 GW          |
| 902.911BW   | 99520207                  | IMT ILED Mounting plate inner corner 02 BW          |
| 902.912     | 99520208                  | IMT ILED Mounting plate inner corner 03 GW          |
| 902.912BW   | 99520209                  | IMT ILED Mounting plate inner corner 03 BW          |
| 902.913     | 99520210                  | IMT ILED Mounting plate inner corner 04 GW          |
| 902.913BW   | 99520211                  | IMT ILED Mounting plate inner corner 04 BW          |
| 902.914     | 99520196                  | IMT ILED Mounting plate H outer corner 01 GW        |
| 902.914BW   | 99520197                  | IMT ILED Mounting plate H outer corner 01 BW        |
| 902.915     | 99520198                  | IMT ILED Mounting plate H outer corner 02 GW        |
| 902.915BW   | 99520199                  | IMT ILED Mounting plate H outer corner 02 BW        |
| 902.917     | 99520133                  | IMT ILED Cover H normal GW                          |
| 902.917BW   | 99520134                  | IMT ILED Cover H normal BW                          |
| 902.922     | 99520135                  | IMT ILED Cover H outer corner 01 GW                 |
| 902.922BW   | 99520136                  | IMT ILED Cover H outer corner 01 BW                 |
| 902.923     | 99520137                  | IMT ILED Cover H outer corner 02 GW                 |
| 902.923BW   | 99520138                  | IMT ILED Cover H outer corner 02 BW                 |
| 902.924     | 99520139                  | IMT ILED Cover H outer corner 03 GW                 |
| 902.924BW   | 99520140                  | IMT ILED Cover H outer corner 03 BW                 |
| 902.925     | 99520141                  | IMT ILED Cover H outer corner 04 GW                 |
| 902.925BW   | 99520142                  | IMT ILED Cover H outer corner 04 BW                 |
| 902.926     | 99520119                  | IMT ILED Cover H H-C 01 GW                          |
| 902.926BW   | 99520120                  | IMT ILED Cover H H-C 01 BW                          |
| 902.927     | 99520121                  | IMT ILED Cover H H-C 02 GW                          |
| 902.927BW   | 99520122                  | IMT ILED Cover H H-C 02 BW                          |
| 902.928     | 99520123                  | IMT ILED Cover H inner corner 01 GW                 |
| 902.928BW   | 99520124                  | IMT ILED Cover H inner corner 01 BW                 |
| 902.929     | 99520125                  | IMT ILED Cover H inner corner 02 GW                 |
|             |                           |                                                     |

ILED Aquarius Circle & H 2.0 Helideck Lighting System

| IMT Part No | R. Stahl Tranberg Part No | <b>Description</b> (BW=Black/White, GW=Green/White) |
|-------------|---------------------------|-----------------------------------------------------|
| 902.929BW   | 99520126                  | IMT ILED Cover H inner corner 02 BW                 |
| 902.930     | 99520127                  | IMT ILED Cover H inner corner 03 GW                 |
| 902.930BW   | 99520128                  | IMT ILED Cover H inner corner 03 BW                 |
| 902.931     | 99520129                  | IMT ILED Cover H inner corner 04 GW                 |
| 902.931BW   | 99520130                  | IMT ILED Cover H inner corner 04 BW                 |
| 902.932     | 99520131                  | IMT ILED Cover H middle GW                          |
| 902.932BW   | 99520132                  | IMT ILED Cover H middle BW                          |
| 902.933     | 99520117                  | IMT ILED Cover circle normal                        |
| 902.934     | 99520116                  | IMT ILED Cover circle connection                    |
| 902.935     | 99520143                  | IMT ILED Cover H-JB 01 GW Angled                    |
| 902.935BW   | 99520375                  | IMT ILED Cover H-JB 01 BW Angled                    |
| 902.936     | 99520146                  | IMT ILED Cover H-JB 02                              |
| 902.937     | 99520149                  | IMT ILED Cover H-JB 03 GW                           |
| 902.937BW   | 99520150                  | IMT ILED Cover H-JB 03 BW                           |
| 902.938     | 99520118                  | IMT ILED Cover connection                           |
| 902.939     | 99520151                  | IMT ILED Cover H-JB 04 GW                           |
| 902.939BW   | 99520152                  | IMT ILED Cover H-JB 04 BW                           |
| 902.940     | 99520046                  | IMT ILED Cable tray H-JB 01 GW Angled               |
| 902.940BW   | 99520047                  | IMT ILED Cable tray H-JB 01 BW Angled               |
| 902.941     | 99520050                  | IMT ILED Cable tray H-JB 02 GW Angled               |
| 902.941BW   | 99520051                  | IMT ILED Cable tray H-JB 02 BW Angled               |
| 902.942     | 99520054                  | IMT ILED Cable tray H-JB 03 GW                      |
| 902.942BW   | 99520055                  | IMT ILED Cable tray H-JB 03 BW                      |
| 902.943     | 99520045                  | IMT ILED Cable tray connection                      |
| 902.944     | 99520056                  | IMT ILED Cable tray H-JB 04 GW                      |
| 902.944BW   | 99520057                  | IMT ILED Cable tray H-JB 04 BW                      |
| 902.945     | 99520103                  | IMT ILED Connection cap circle                      |
| 902.946     | 99520105                  | IMT ILED Connection cap H corner 01                 |
| 902.947     | 99520106                  | IMT ILED Connection cap H corner 02                 |
| 902.948     | 99520104                  | IMT ILED Connection cap circle-JB                   |
| 902.949     | 99520102                  | Connection cap cable tray                           |
|             |                           |                                                     |

ILED Aquarius Circle & H 2.0 Helideck Lighting System

| IMT Part No | R. Stahl Tranberg Part No | <b>Description</b> (BW=Black/White, GW=Green/White) |
|-------------|---------------------------|-----------------------------------------------------|
| 902.950     | 99520107                  | IMT ILED Connection cap H-JB                        |
| 902.962     | 99520324                  | IMT ILED Tool H01                                   |
| 902.963     | 99520325                  | IMT ILED Tool H02                                   |
| 902.964     | 99520326                  | IMT ILED Tool H03                                   |
| 902.965     | 99520300                  | IMT ILED Tool Cap                                   |
| 902.968     | 99520295                  | Strap center 01                                     |
| 902.969     | 99520296                  | Strap center 02                                     |
| 902.970     | 99520299                  | Strap straight                                      |
| 902.971     | 99520297                  | Strap center 03                                     |
| 902.972     | 99520144                  | IMT ILED Cover H-JB 01b GW Perpendicular            |
| 902.972BW   | 99520145                  | IMT ILED Cover H-JB 01b BW Perpendicular            |
| 902.973     | 99520147                  | IMT ILED Cover H-JB 02b GW                          |
| 902.973BW   | 99520148                  | IMT ILED Cover H-JB 02b BW                          |
| 902.974     | 99520048                  | IMT ILED Cable tray H-JB 01b GW Perpendicular       |
| 902.974BW   | 99520049                  | IMT ILED Cable tray H-JB 01b BW Perpendicular       |
| 902.975     | 99520052                  | IMT ILED Cable tray H-JB 02b GW Perpendicular       |
| 902.975BW   | 99520053                  | IMT ILED Cable tray H-JB 02b BW Perpendicular       |
| 902.996     | 99520015                  | IMT ILED Cable C to JB L (12,5 m)                   |
| 902.997     | 99520016                  | IMT ILED Cable C to JB R (12,5 m)                   |
| 903.005     | 99520217                  | 0-ring 1,5x15 (SI 714177)                           |
| 903.027     | 99520179                  | ILED installation Manual                            |
| 903.028     | 99520327                  | User Manual                                         |
| 903.029     | 99520070                  | Chassis Springs                                     |
| 903.045     | 99520301                  | Tool Circle D13.88 – 14.54                          |
| 903.046     | 99520302                  | Tool Circle D14.55 – 15.21                          |
| 903.047     | 99520303                  | Tool Circle D15.22 – 15.88                          |
| 903.048     | 99520304                  | Tool Circle D15.89 – 16.55                          |
| 903.049     | 99520305                  | Tool Circle D16.56 – 17.22                          |
| 903.050     | 99520306                  | Tool Circle D17.23 – 17.89                          |
| 903.051     | 99520307                  | Tool Circle D17.90 – 18.56                          |
| 903.052     | 99520308                  | Tool Circle D18.57 – 19.23                          |
|             |                           |                                                     |

ILED Aquarius Circle & H 2.0 Helideck Lighting System

| IMT Part No | R. Stahl Tranberg Part No | <b>Description</b> (BW=Black/White, GW=Green/White) |
|-------------|---------------------------|-----------------------------------------------------|
| 902.998     | 99520309                  | Tool Circle D19.24 - 19.90                          |
| 903.053     | 99520310                  | Tool Circle D19.91 – 20.57                          |
| 903.001     | 99520311                  | Tool Circle D20.58 - 21.24                          |
| 903.054     | 99520312                  | Tool Circle D21.25 – 21.91                          |
| 902.966     | 99520313                  | Tool Circle D21.92 - 22.58                          |
| 902.967     | 99520314                  | Tool Circle D22.59 - 23.25                          |
| 903.055     | 99520315                  | Tool Circle D23.26 – 23.91                          |
| 903.056     | 99520316                  | Tool Circle D23.92 – 24.58                          |
| 903.057     | 99520317                  | Tool Circle D24.59 – 25.25                          |
| 903.058     | 99520318                  | Tool Circle D25.26 – 25.92                          |
| 903.059     | 99520319                  | Tool Circle D25.93 – 26.59                          |
| 903.060     | 99520320                  | Tool Circle D26.60 - 27.26                          |
| 903.061     | 99520321                  | Tool Circle D27.27 - 27.92                          |
| 903.062     | 99520322                  | Tool Circle D27.93 - 28.59                          |



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