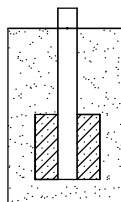
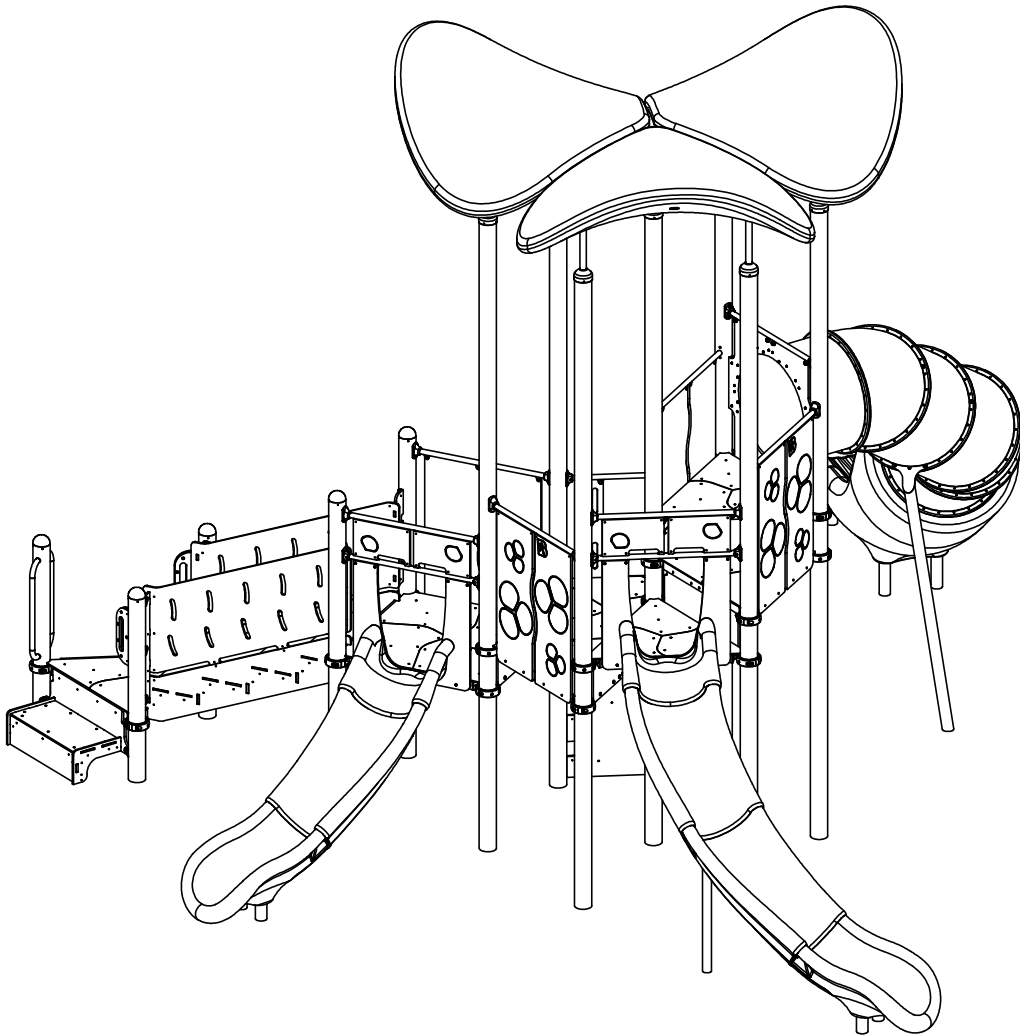
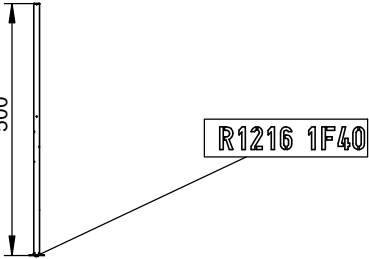
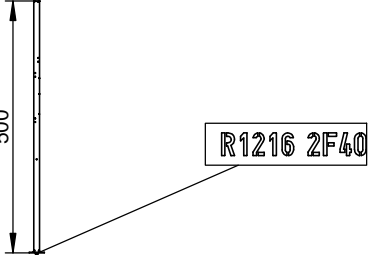
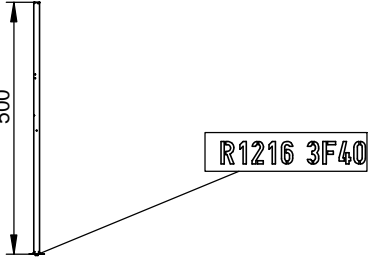
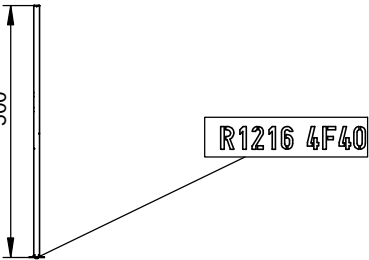
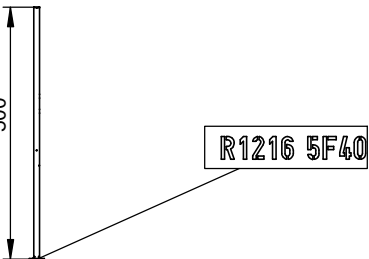
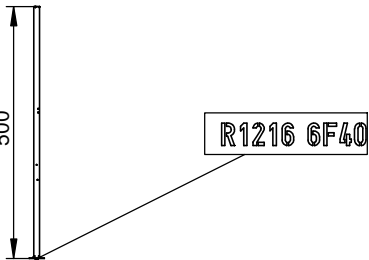
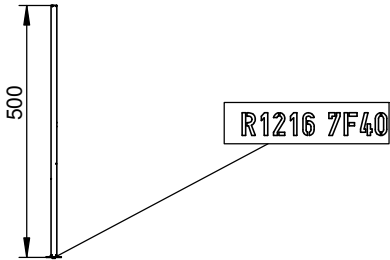
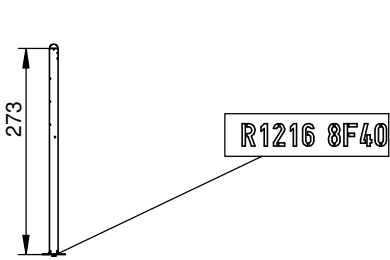
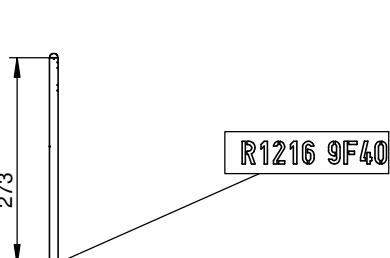
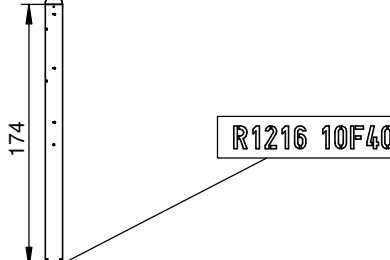
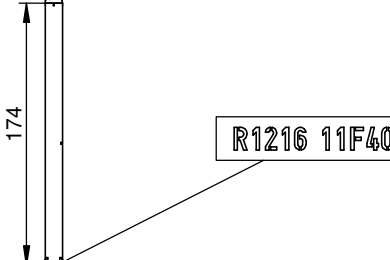
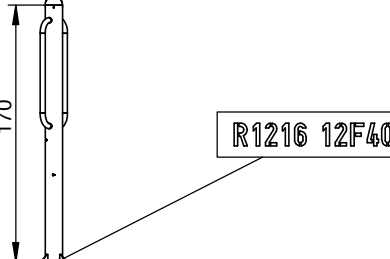


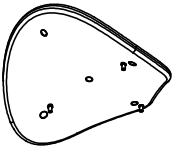
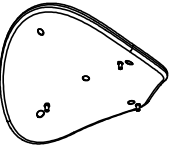

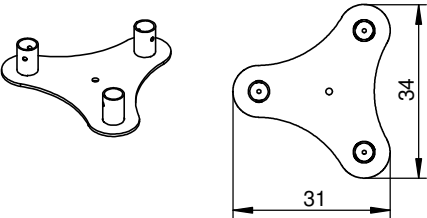
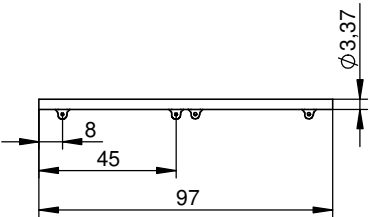
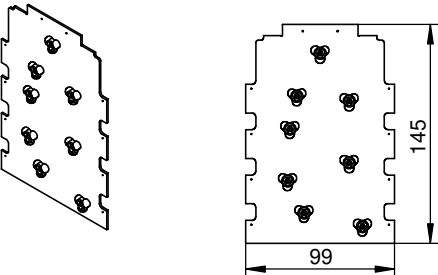
1216



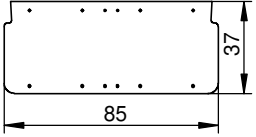
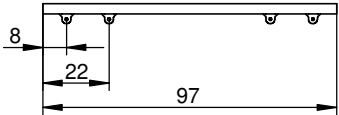
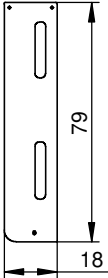
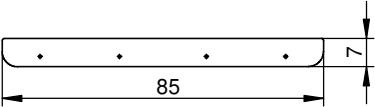
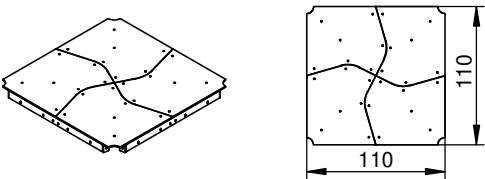
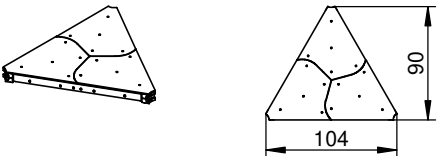
1216N

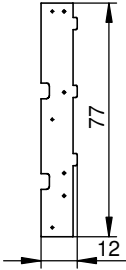
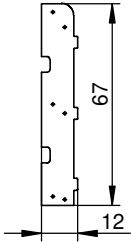
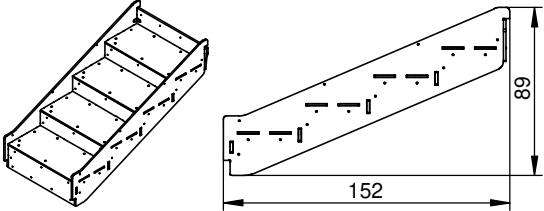
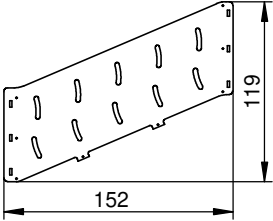
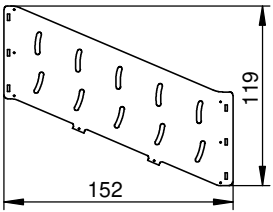
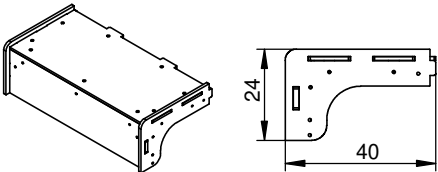
NR	ELEMENT	1216N
E1		1
E2		1
E3		1
E4		1
E5		1
E6		1

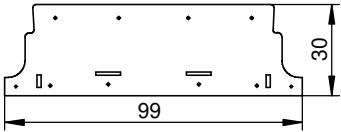
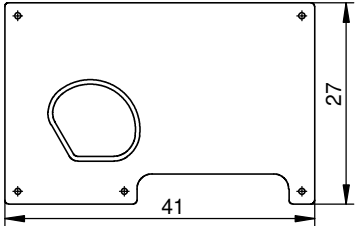
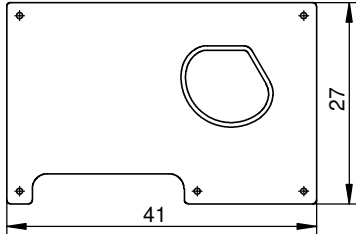
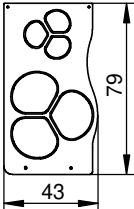
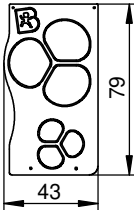
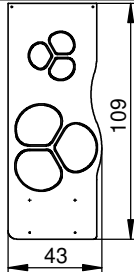
NR	ELEMENT	1216N
E7		1
E8		1
E9		1
E10		1
E11		1
E12		1

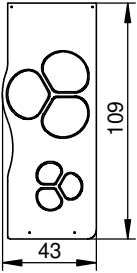
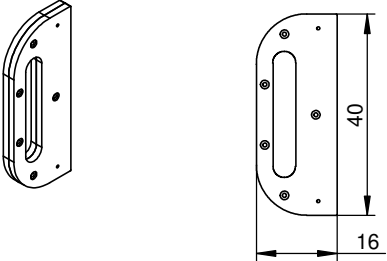
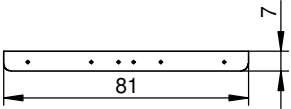
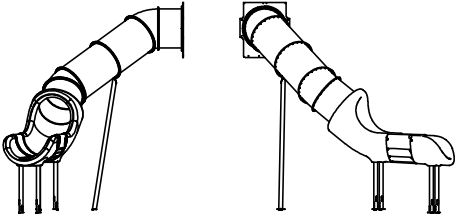
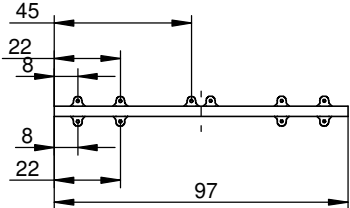
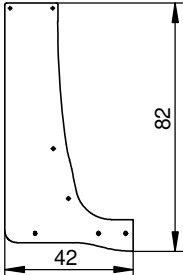
NR	ELEMENT	1216N
E13A		1
E13B		2
E14		6
E15		1
E16		1
E17		8
E18		1

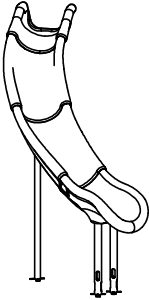
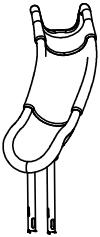
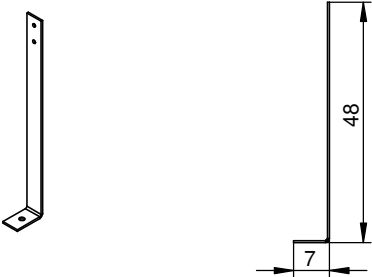
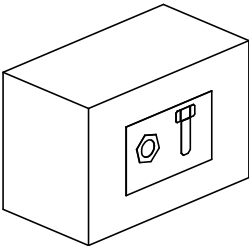


NR	ELEMENT	1216N
E19		4
E20		1
E21		2
E22		1
E23		1
E24		7

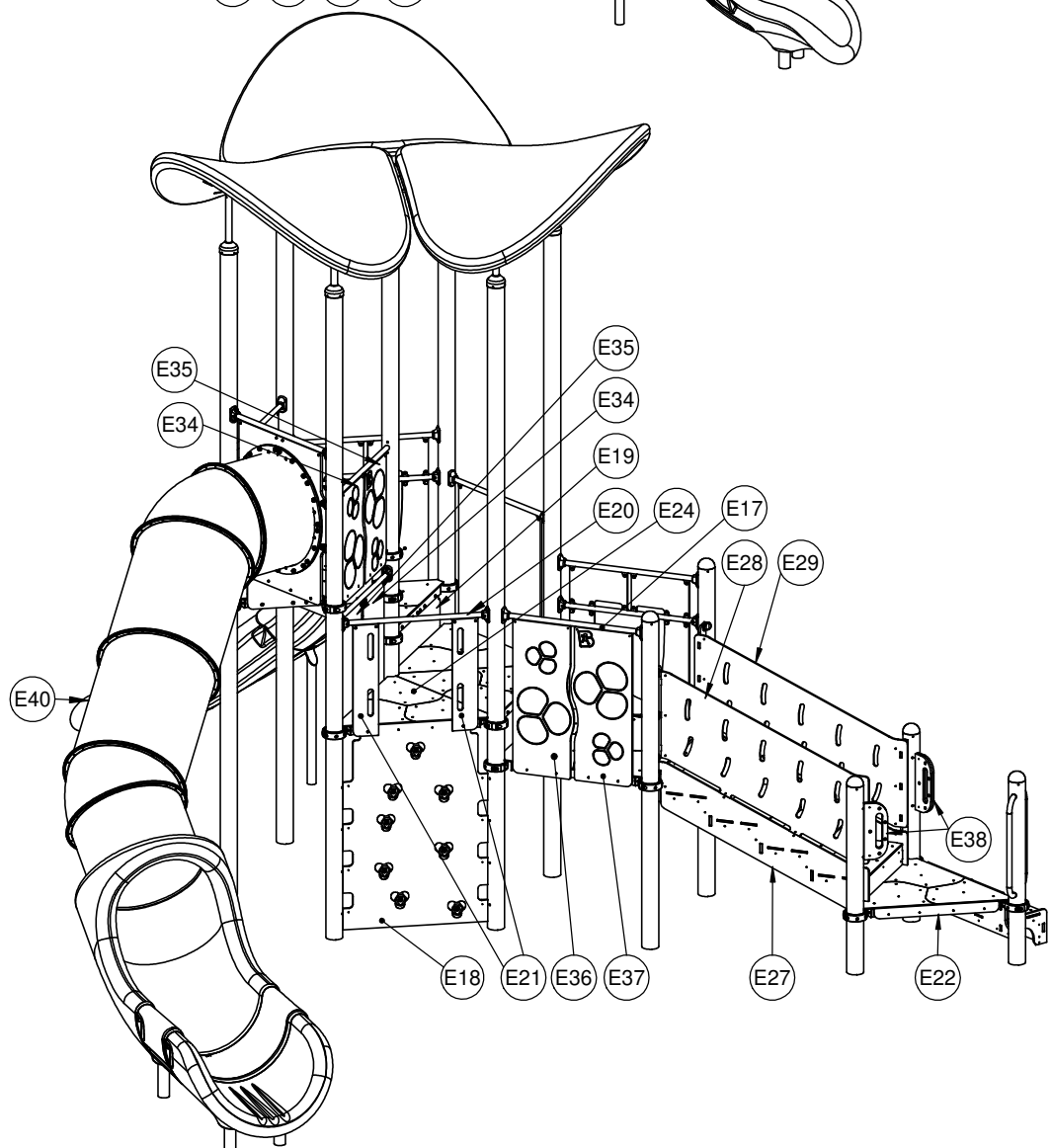
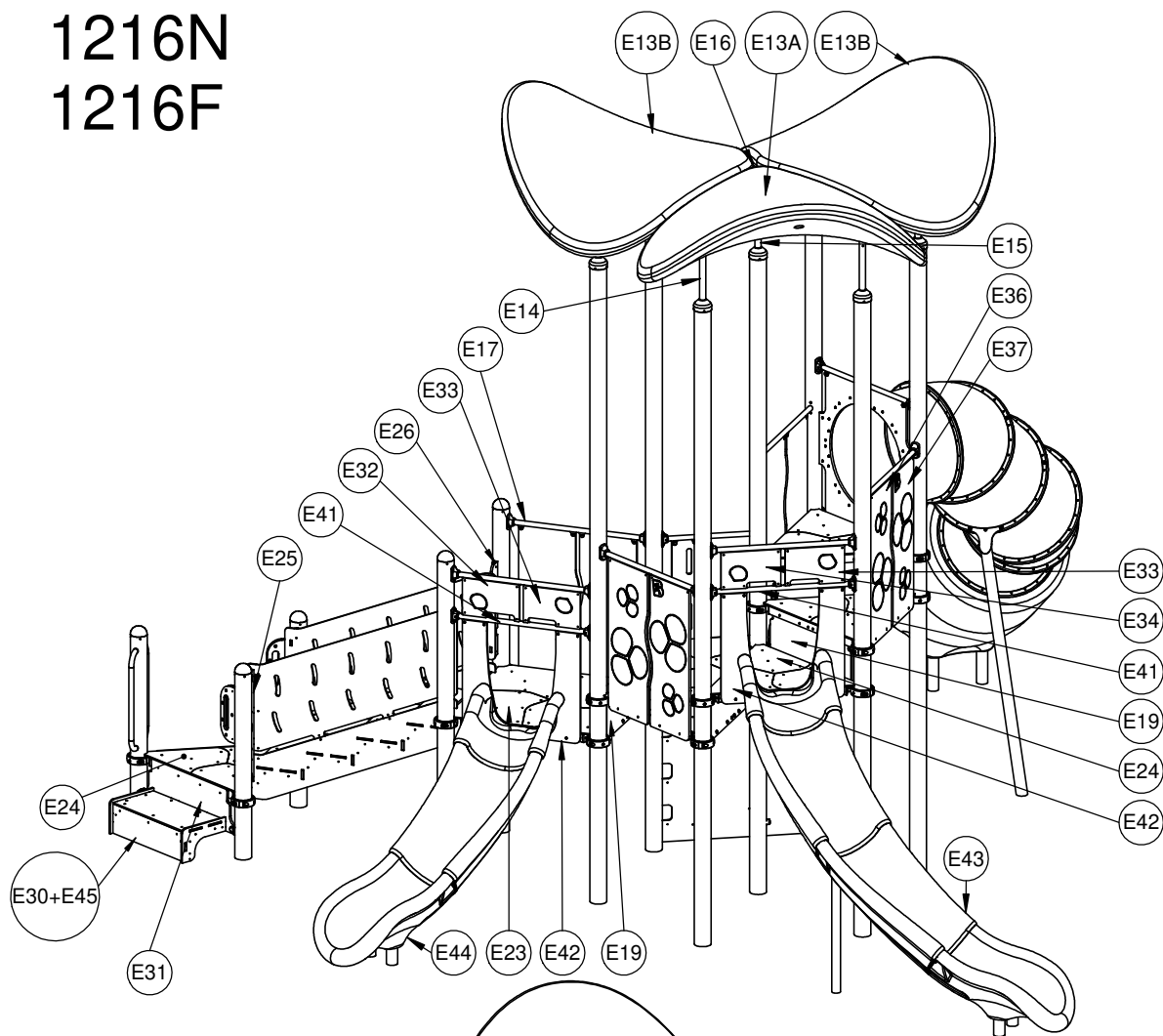
NR	ELEMENT	1216N
E25		2
E26		2
E27		1
E28		1
E29		1
E30		1

NR	ELEMENT	1216N
E31		1
E32		2
E33		2
E34		2
E35		2
E36		3

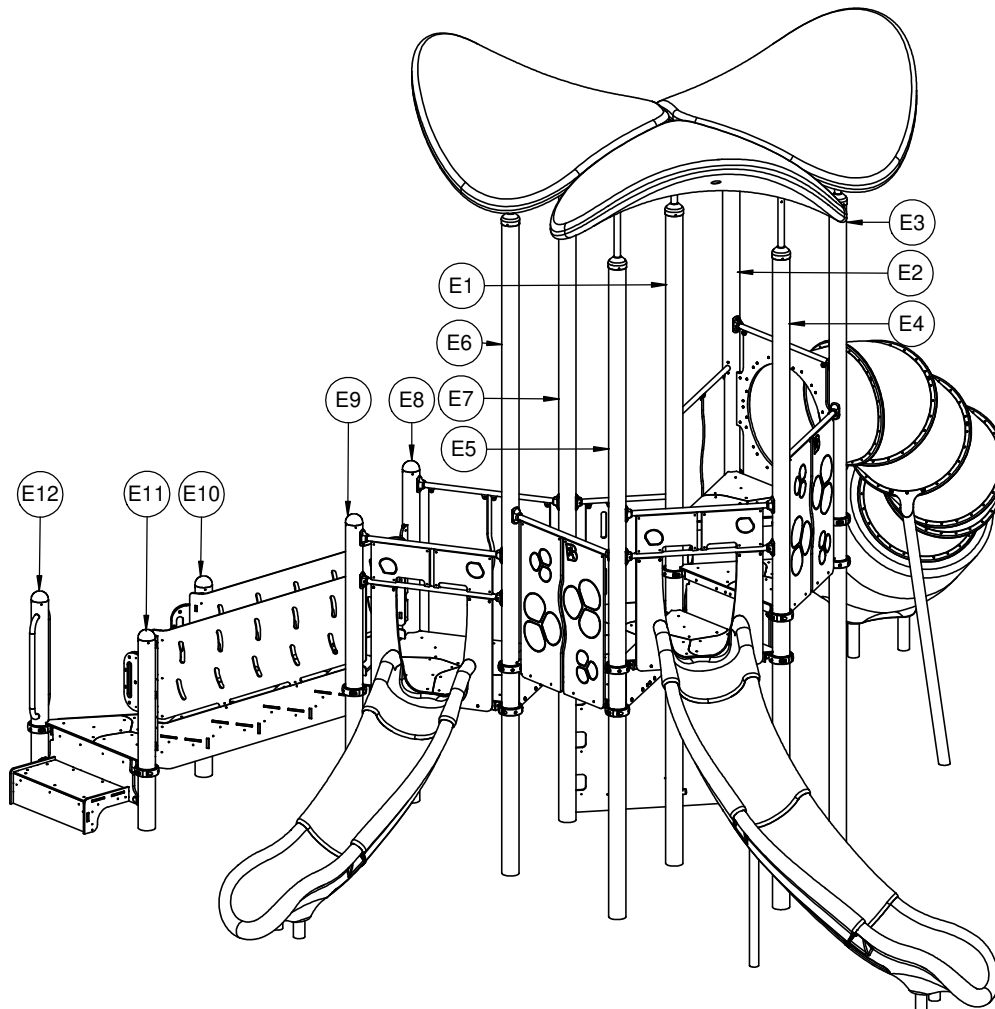
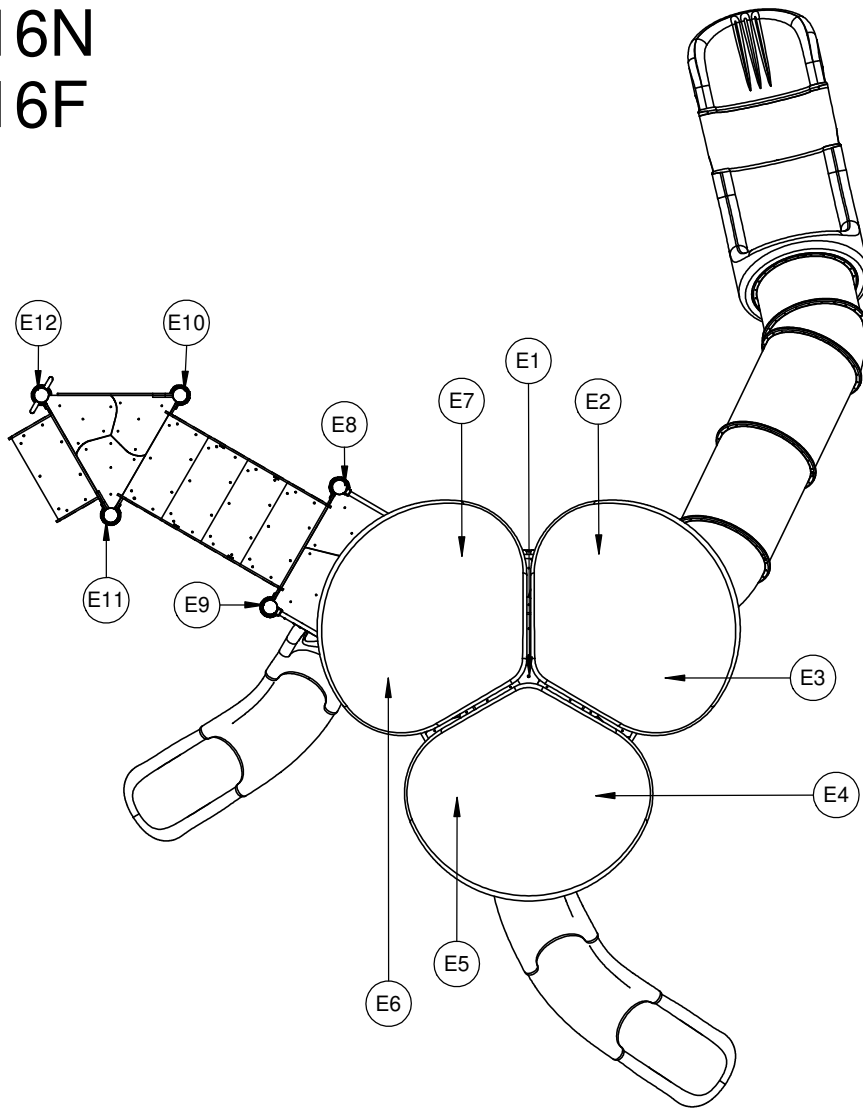
NR	ELEMENT	1216N
E37		3
E38		2
E39		2
E40		1
E41		2
E42		4

NR	ELEMENT	1216N
E43		1
E44		1
E45		2
E46		1

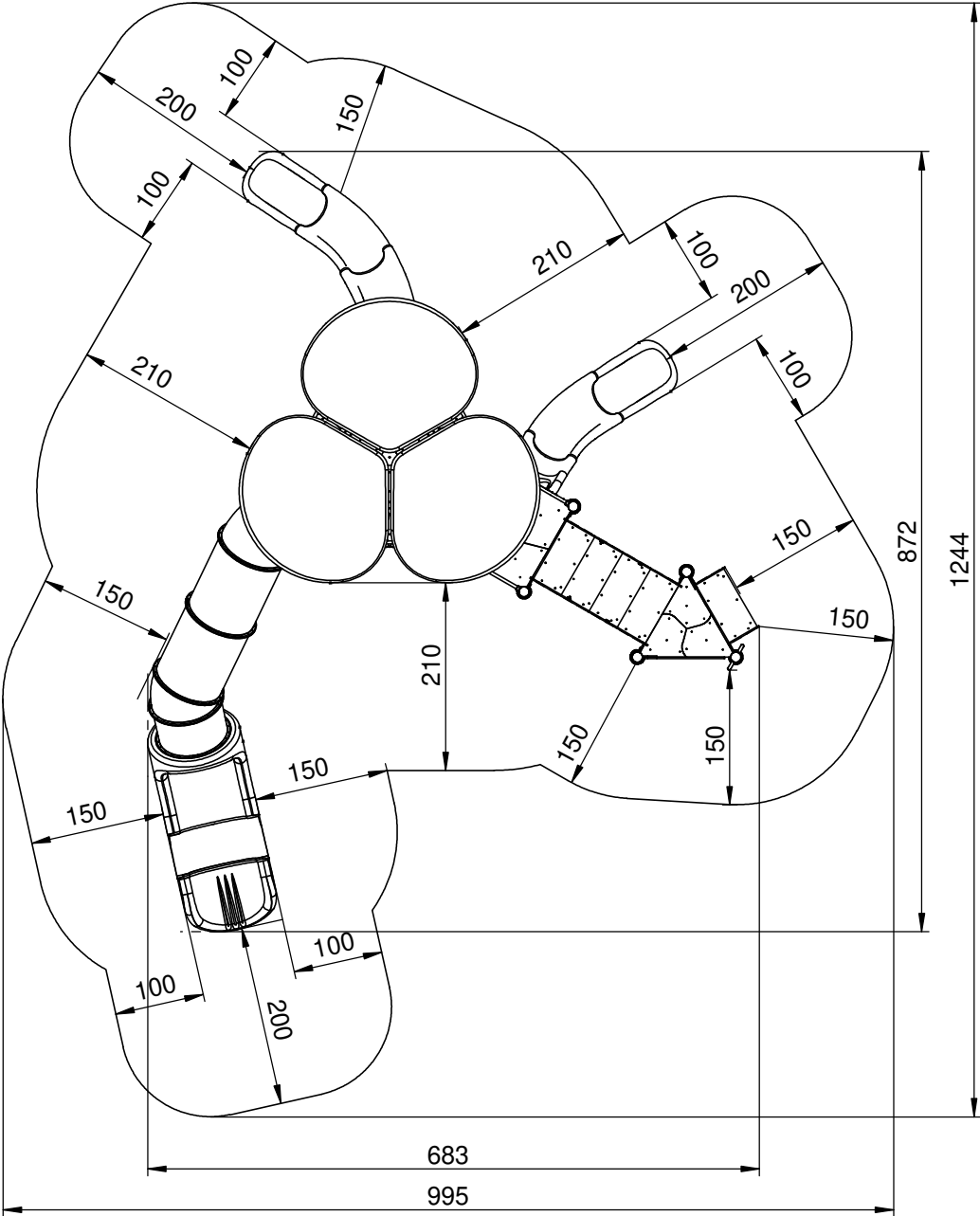
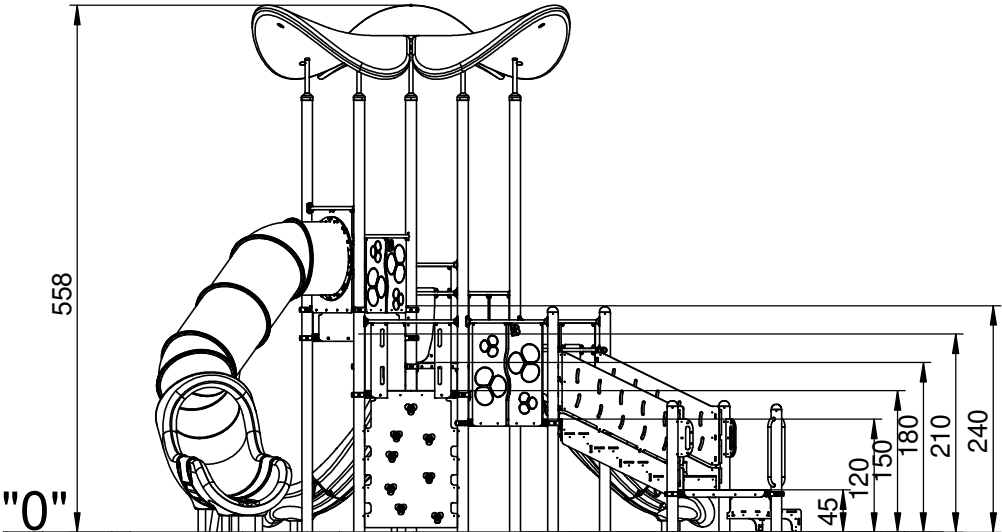
1216N  
1216F



1216N  
1216F



1216N  
1216F

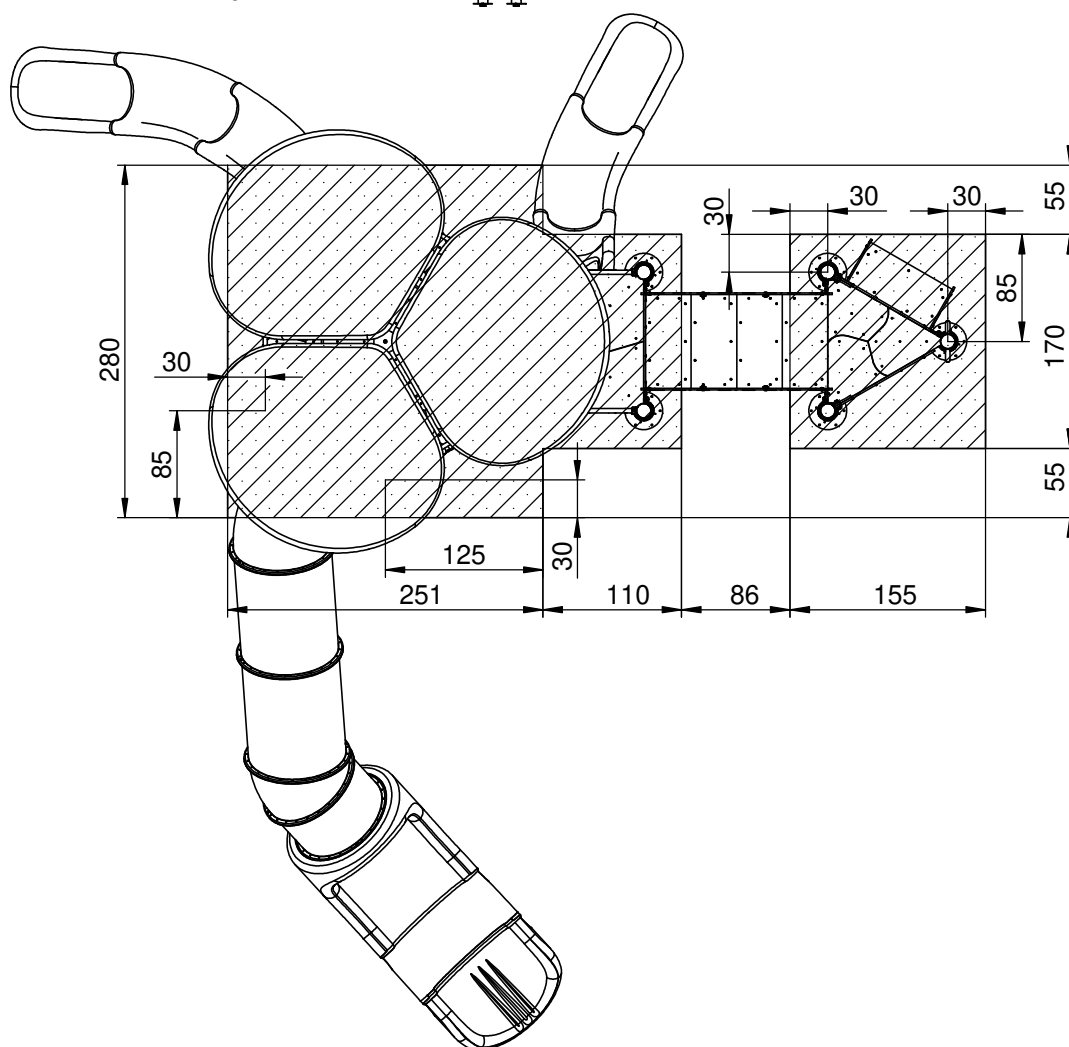
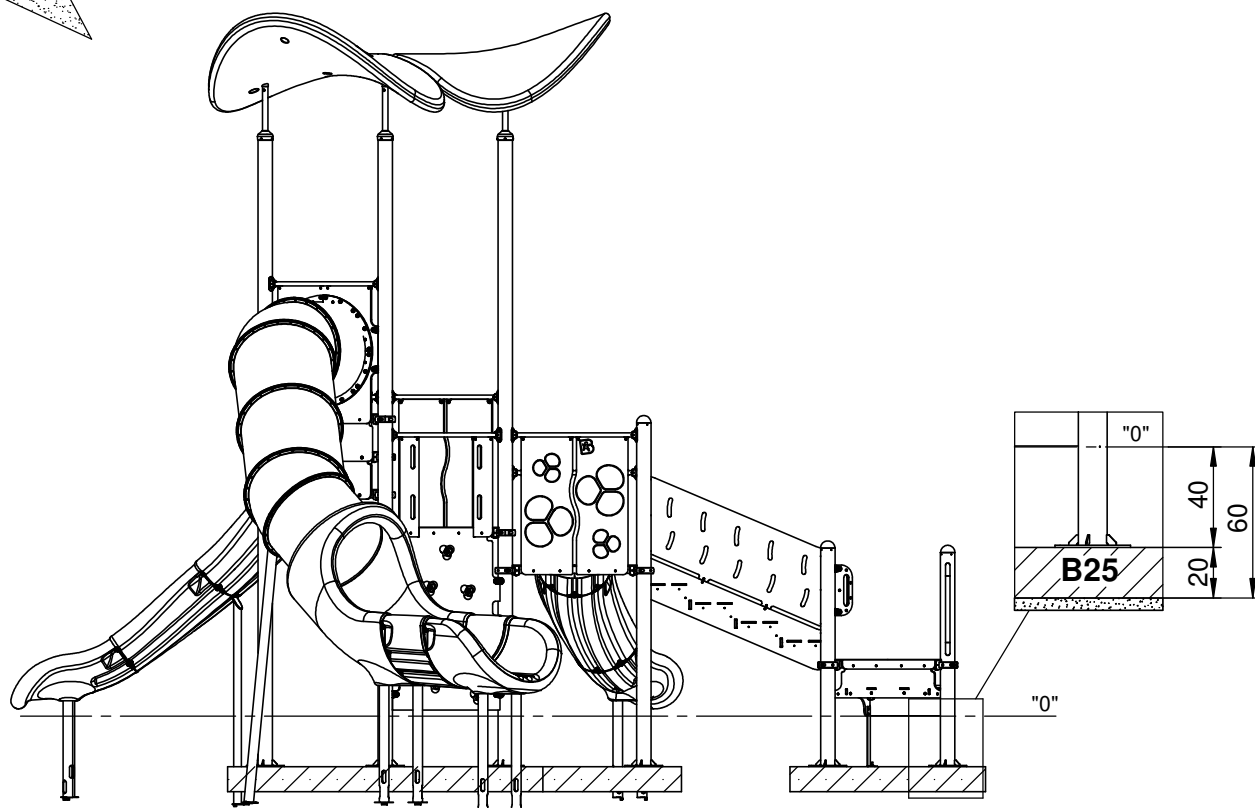
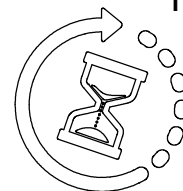
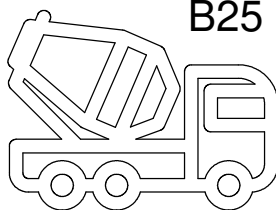
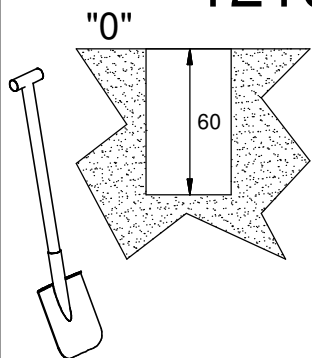




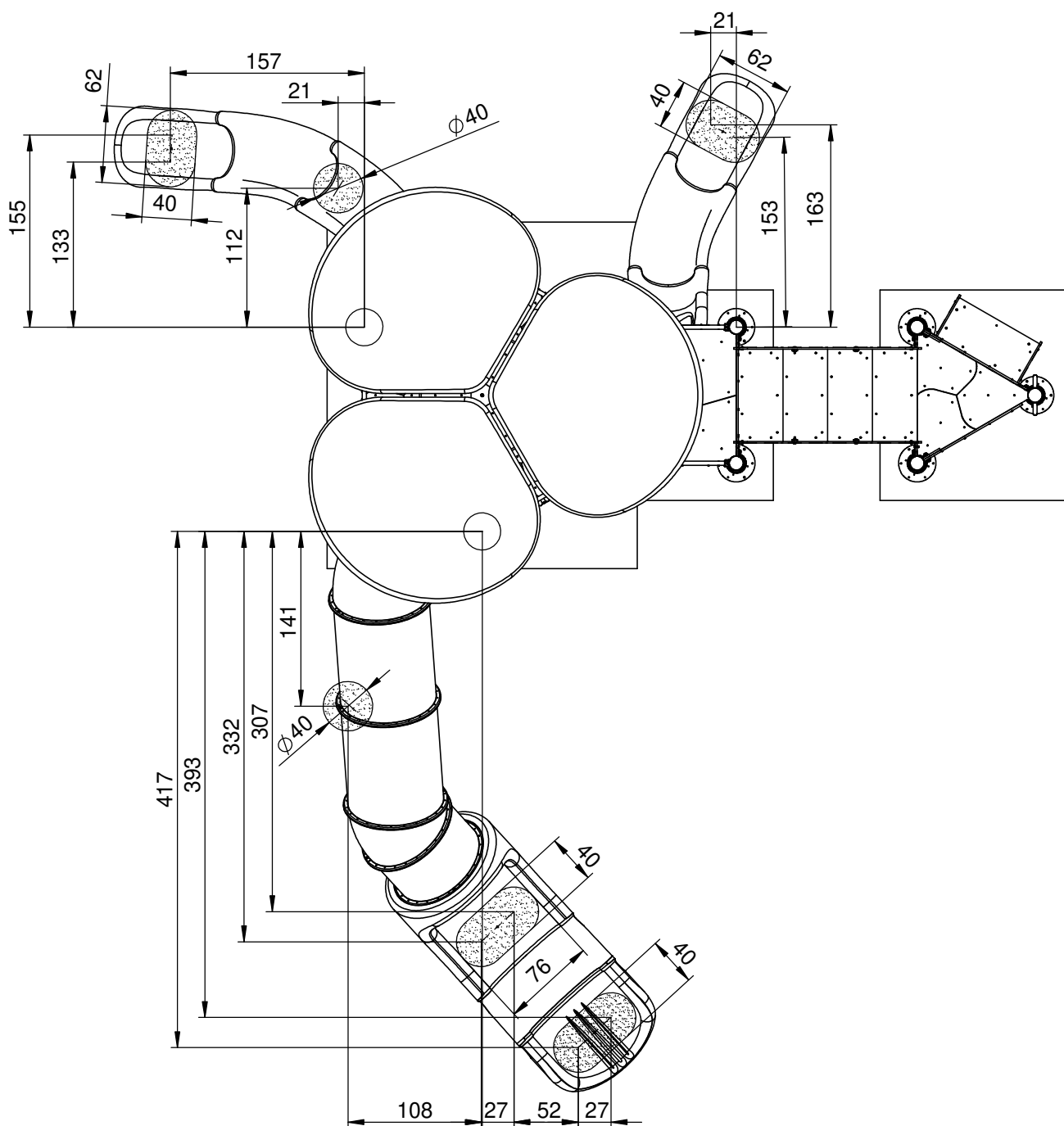
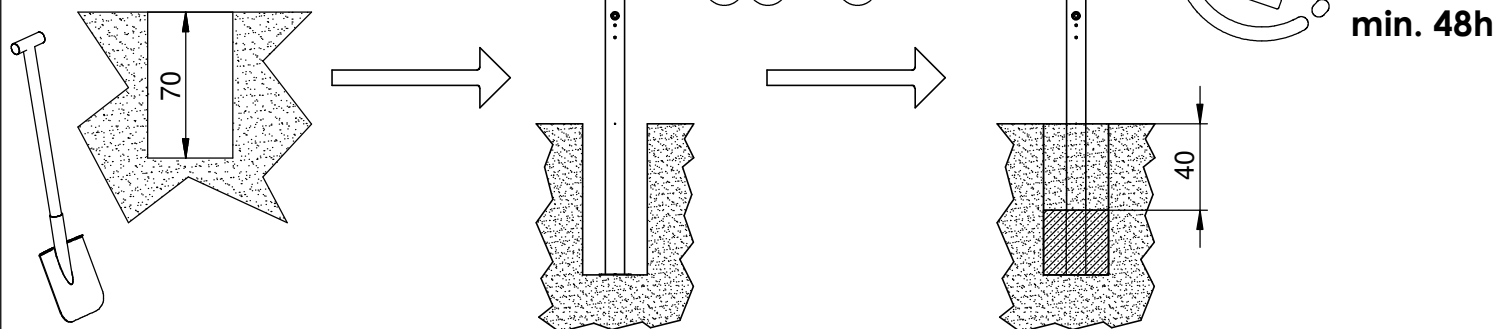
# 1216N

B25 2,4 m<sup>3</sup>

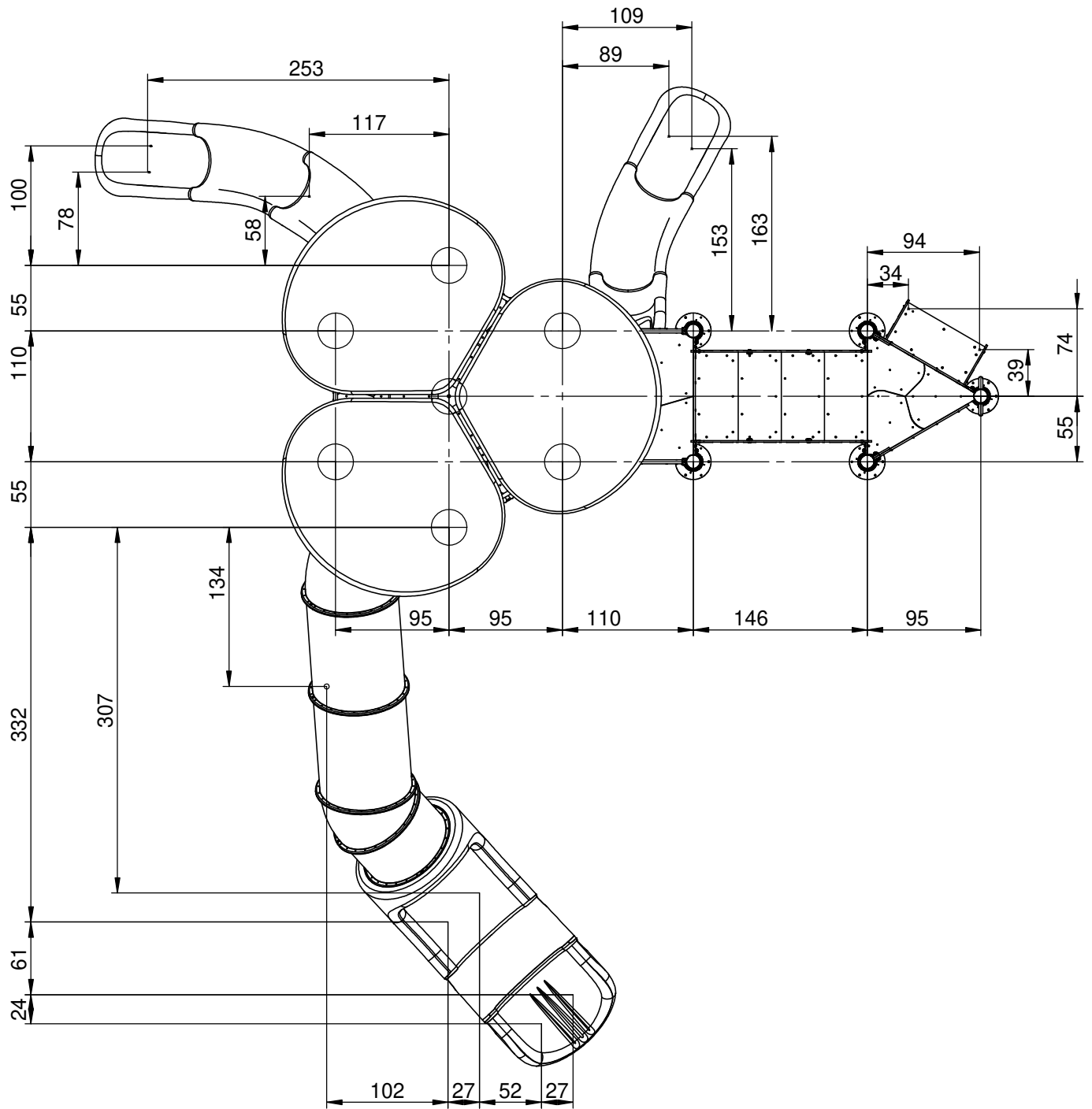
min. 48h

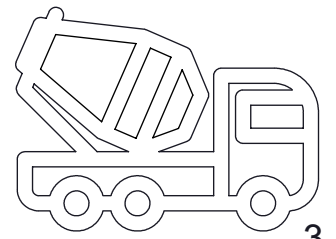


# 1216N



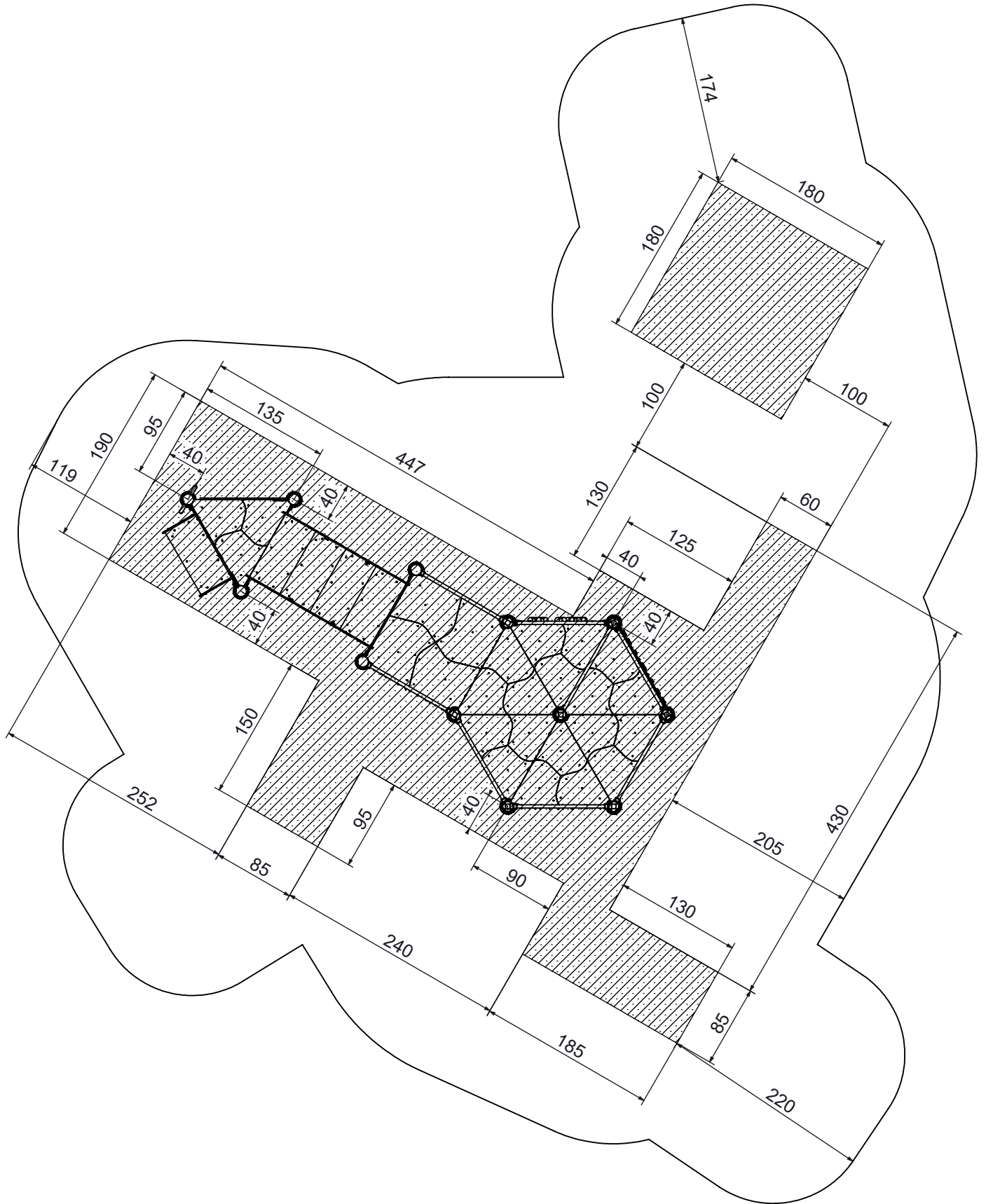
# 1216F



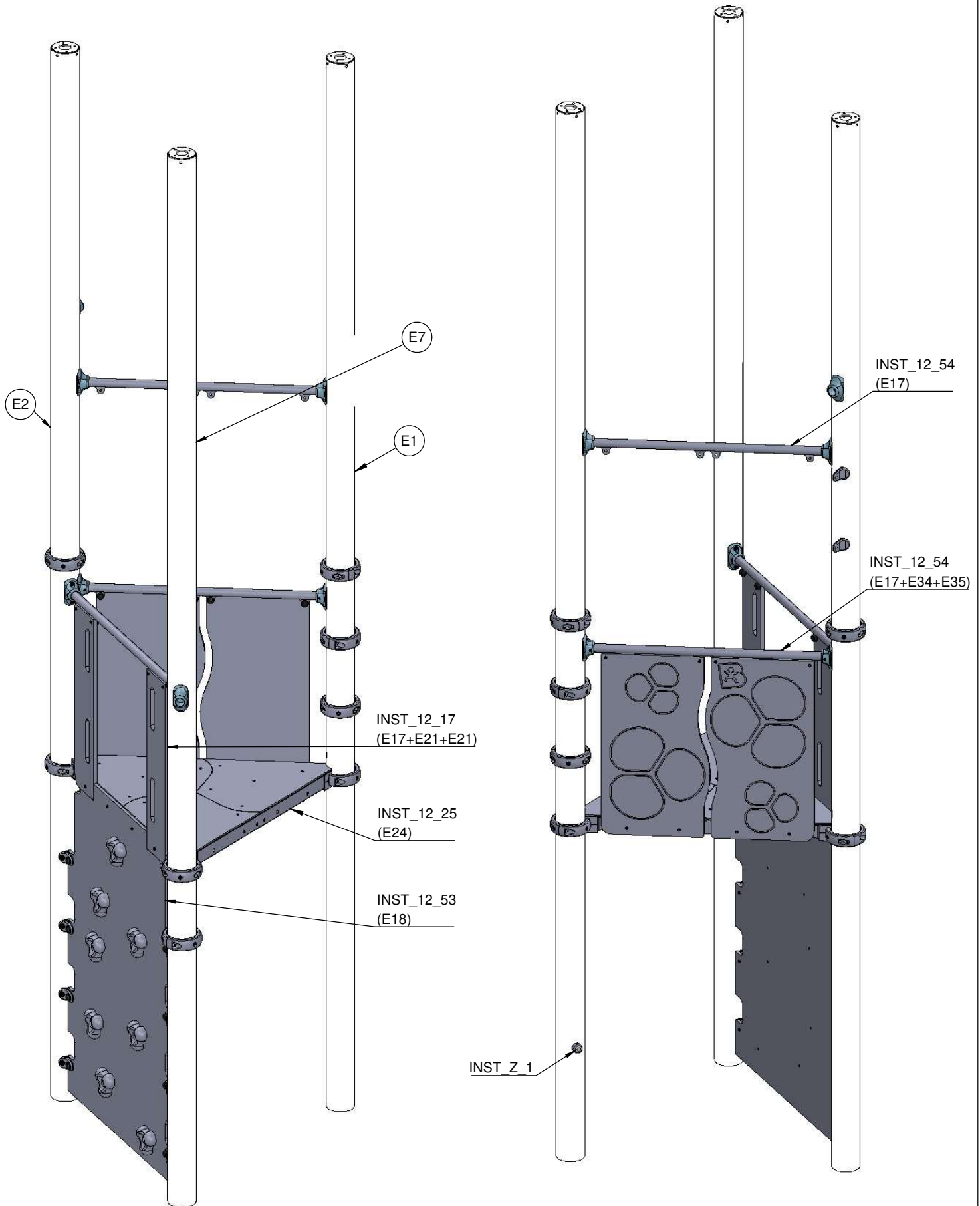


1216

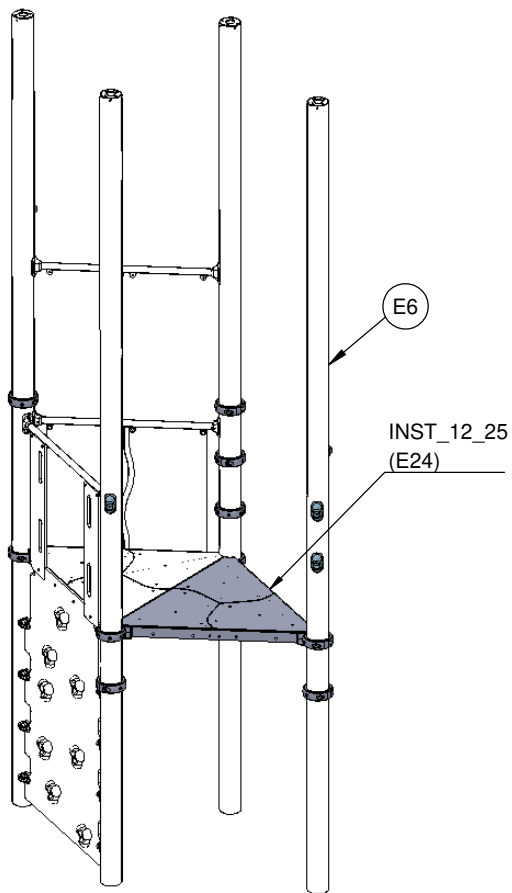
B25 4,5m



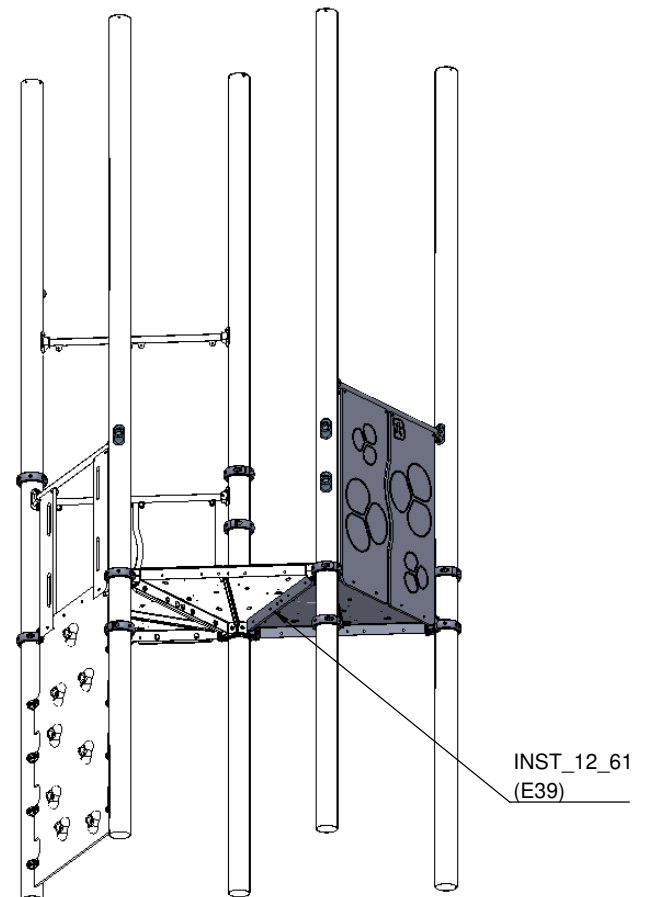
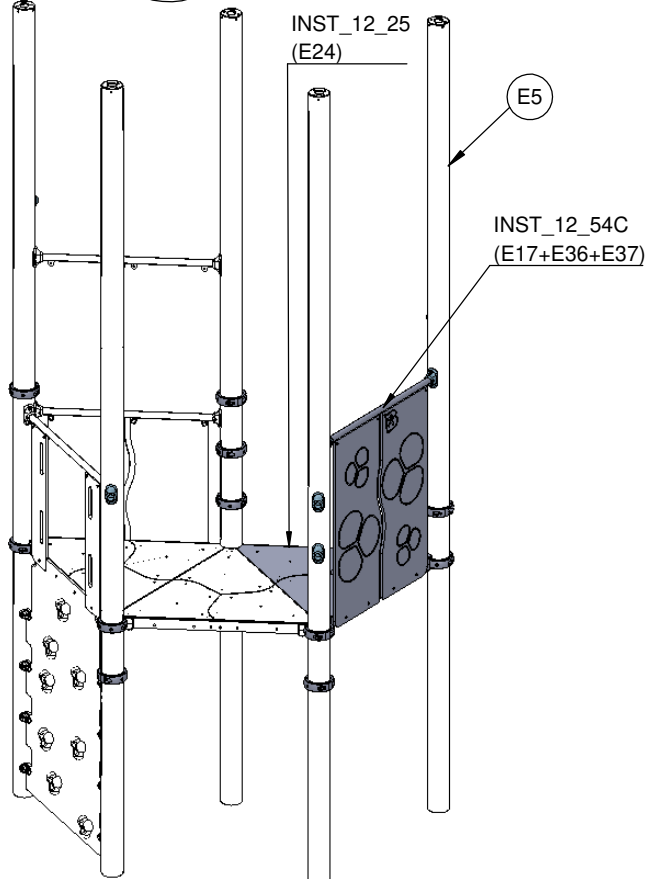
# 1 1216N 1216F



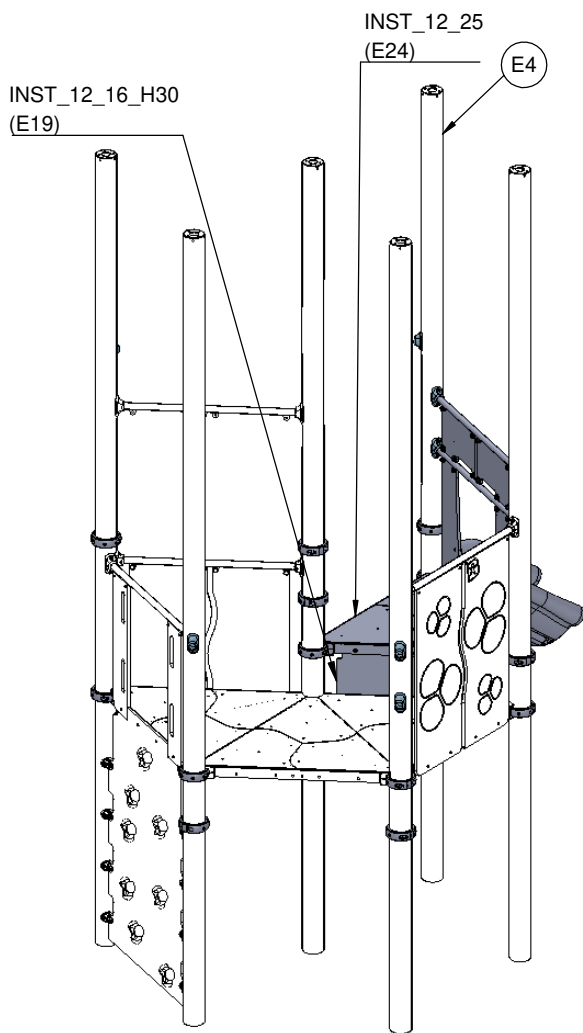
## 2 1216N 1216F



## 3 1216N 1216F

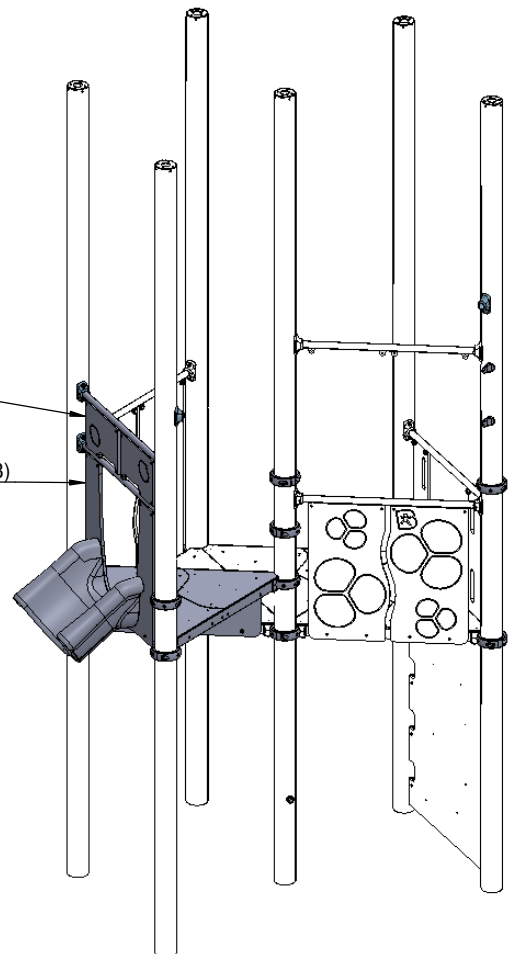


# 4 1216N 1216F

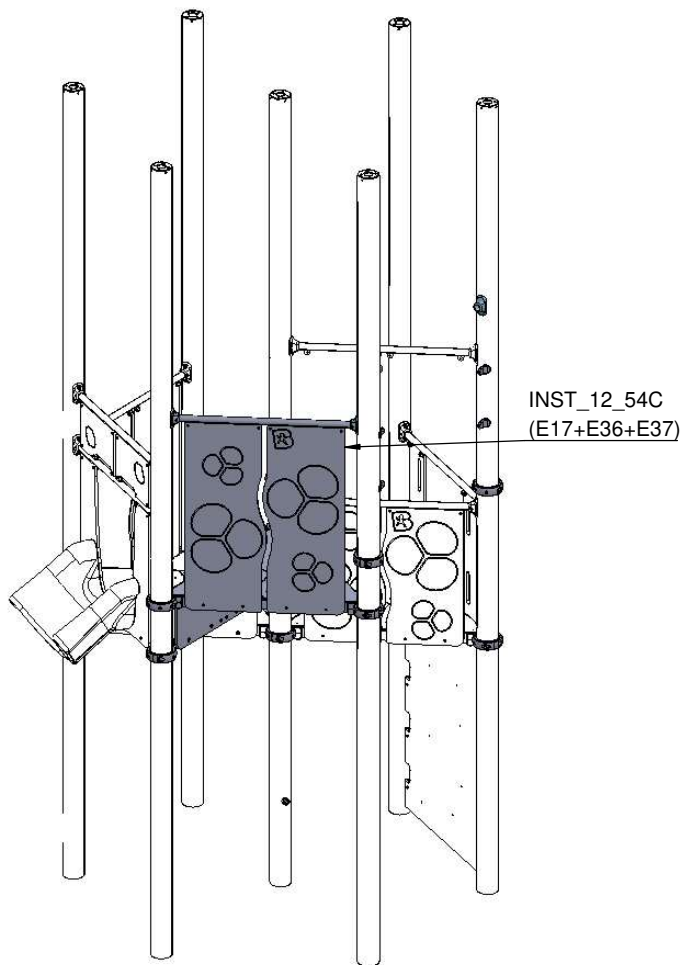
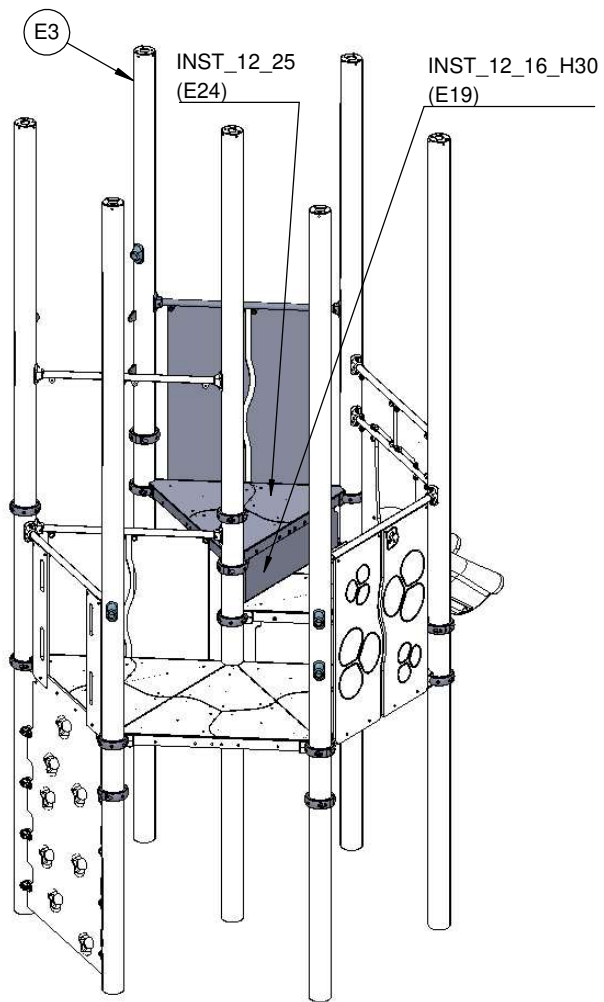


INST\_12\_79  
(E17+E32+E33)

INST\_12\_69  
(E41+E42+E42+43)



**5** 1216N  
1216F



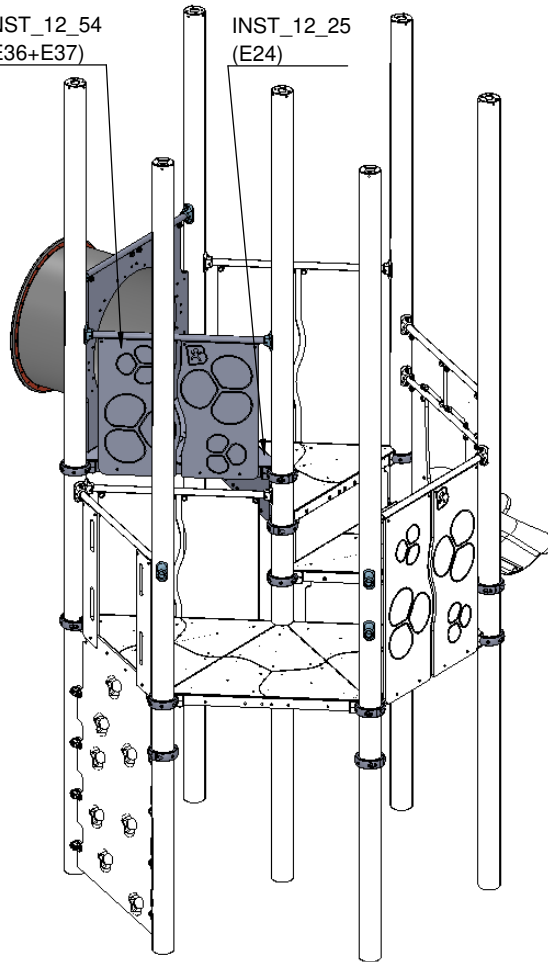


6

1216N  
1216F

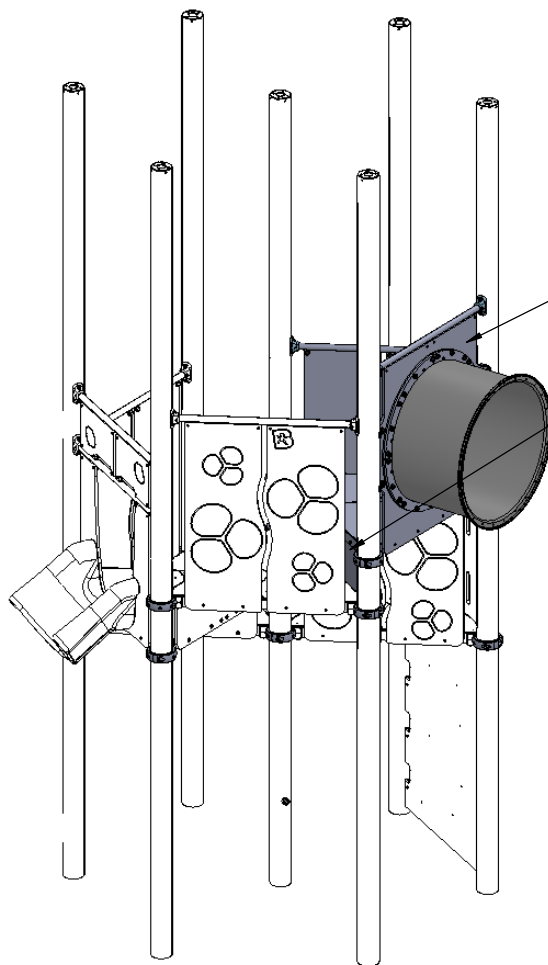
INST\_12\_54  
(E36+E37)

INST\_12\_25  
(E24)

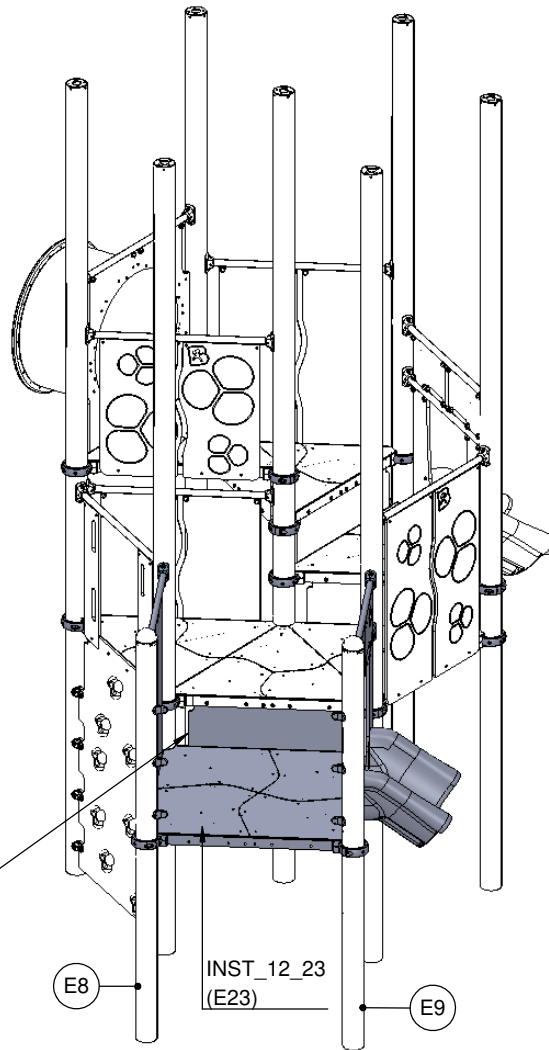


INST\_12\_66  
(E17+E40)

INST\_12\_16\_H30  
(E19)



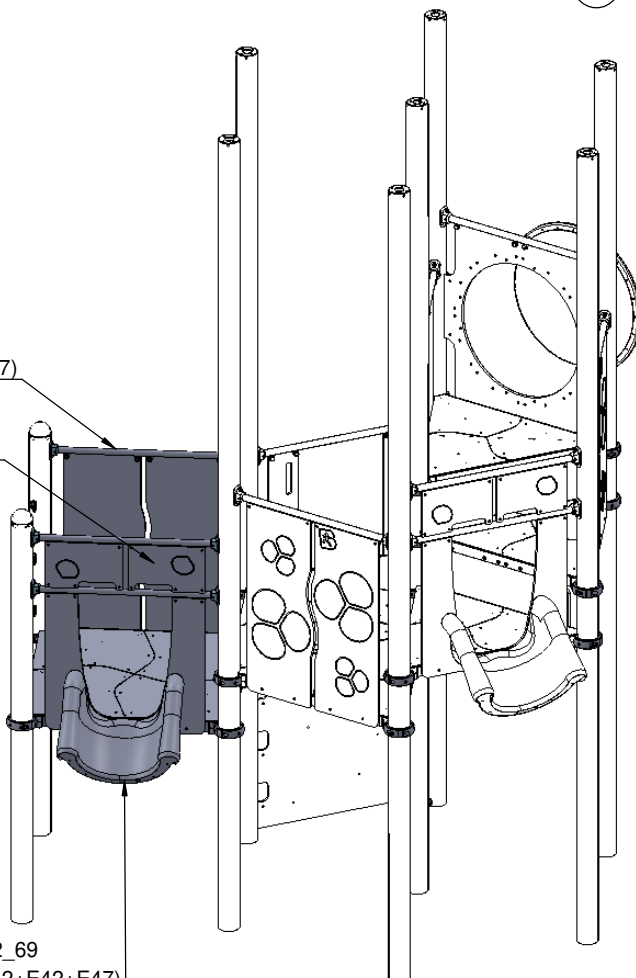
# 7 1216N 1216F



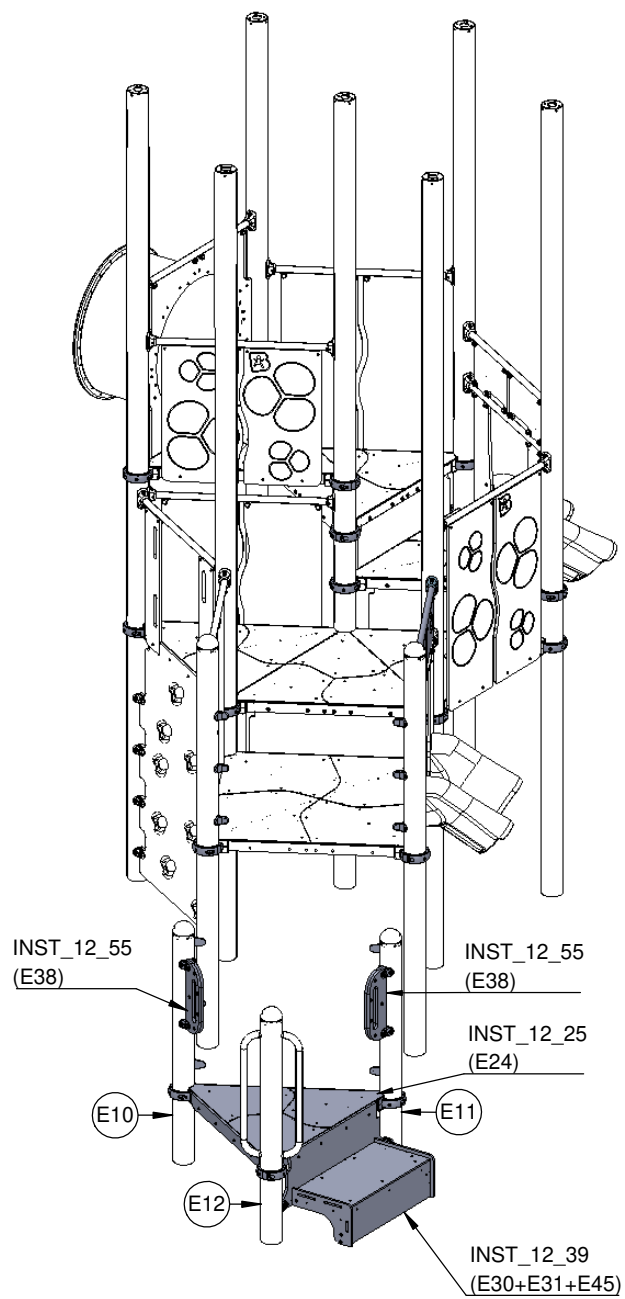
INST\_12\_54C  
(E17+E36+E37)

INST\_12\_74  
(E17+E32+E33)

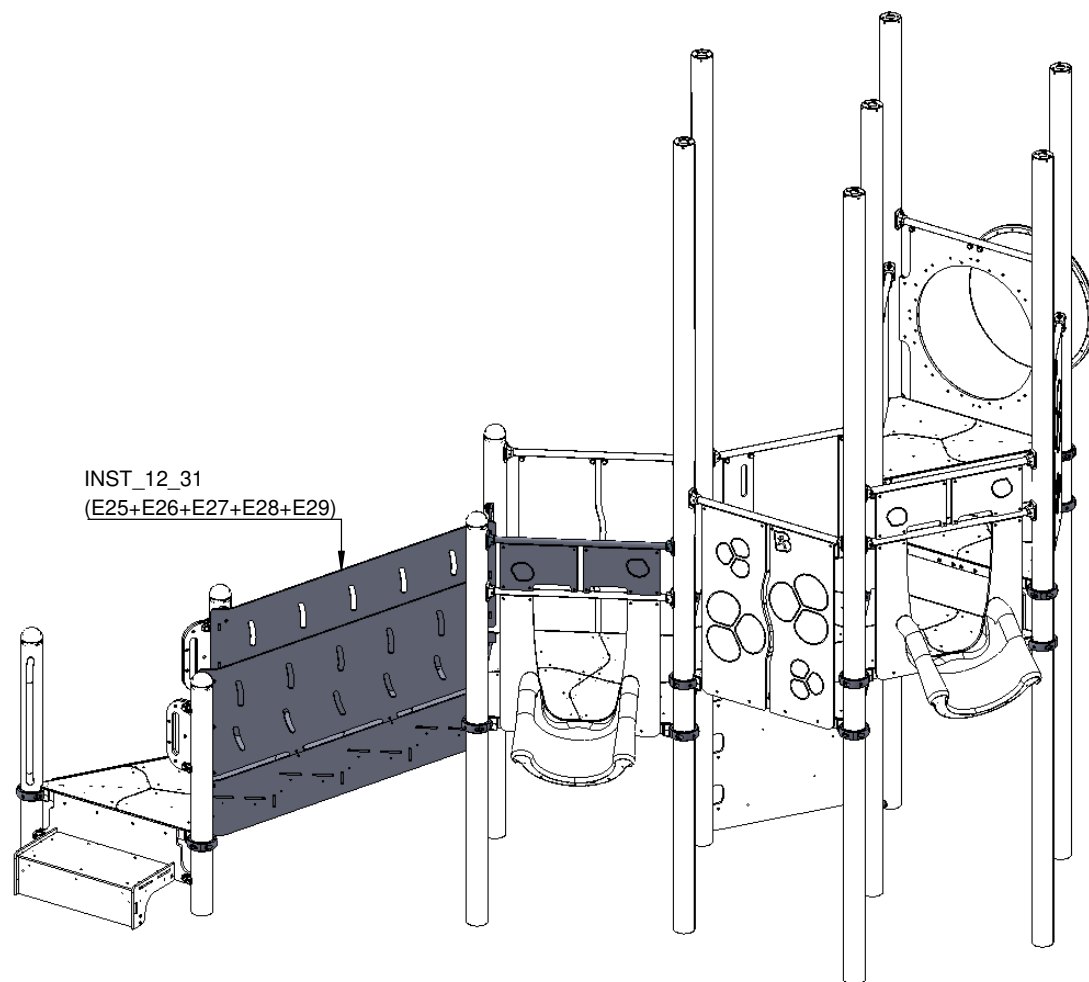
INST\_12\_69  
(E41+E42+E42+E47)



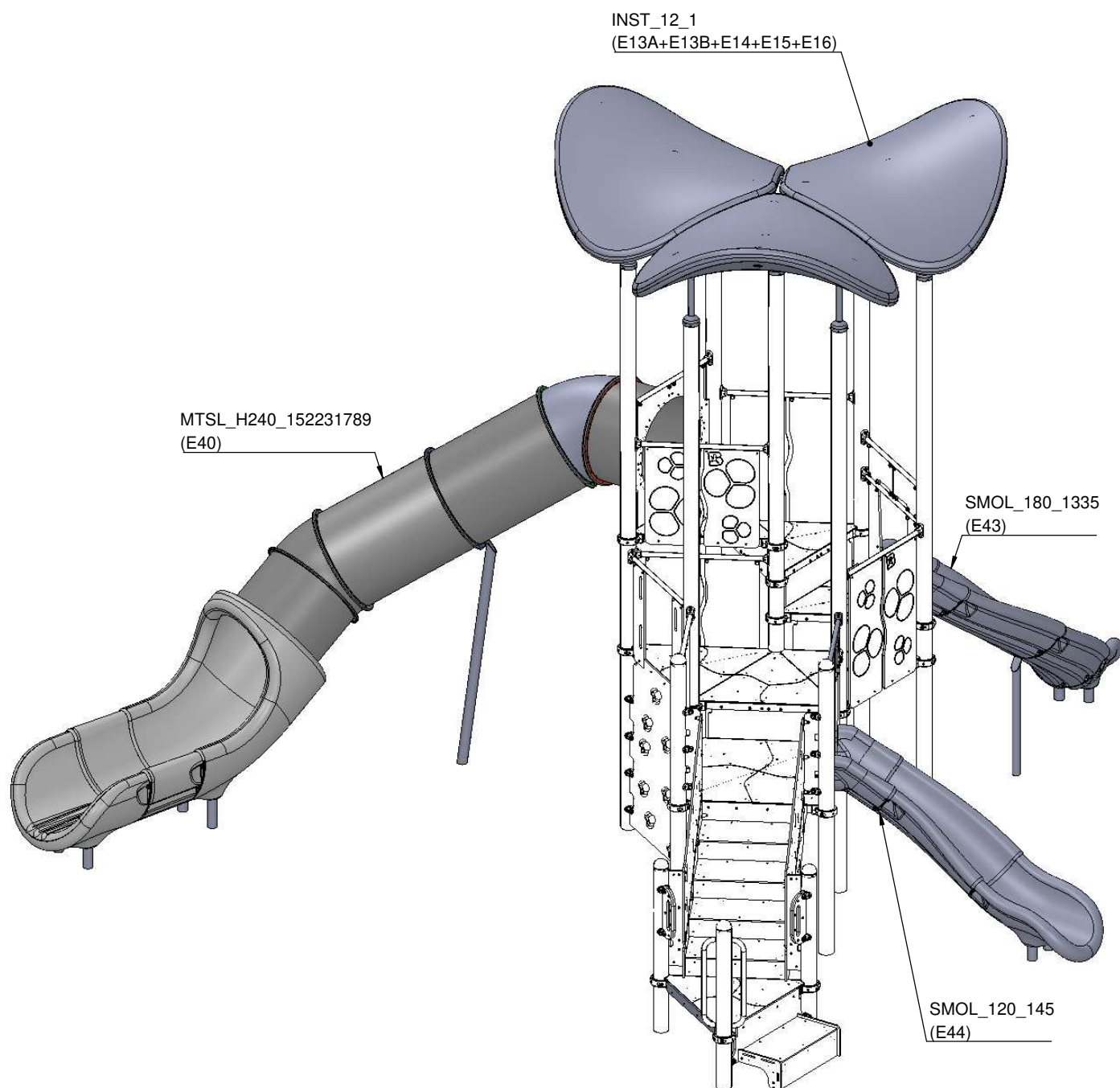
# 8 1216N 1216F




9 1216N  
1216F

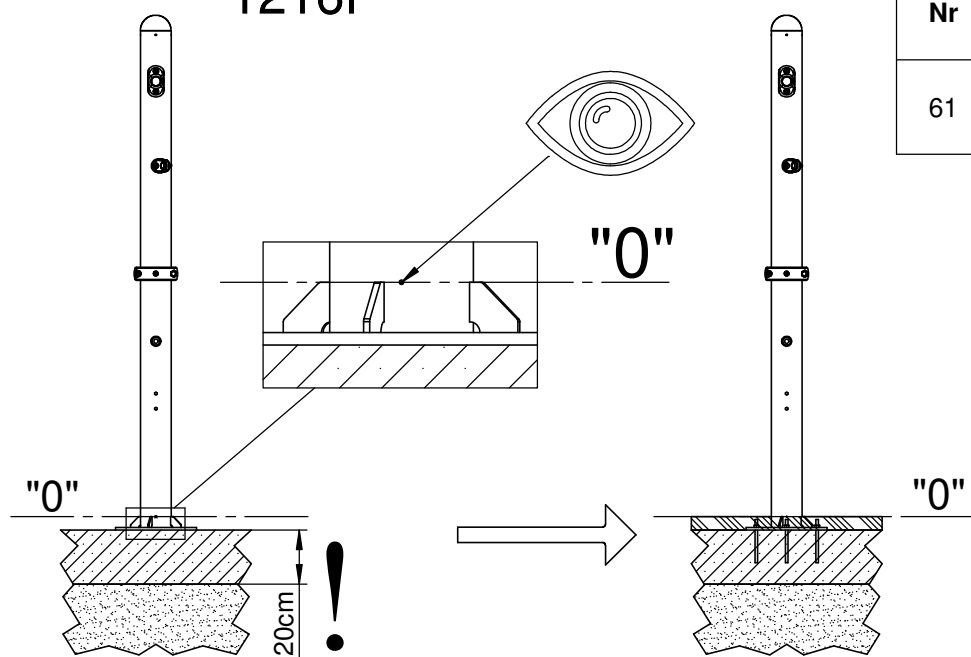


# 10 1216N 1216F



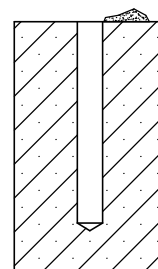
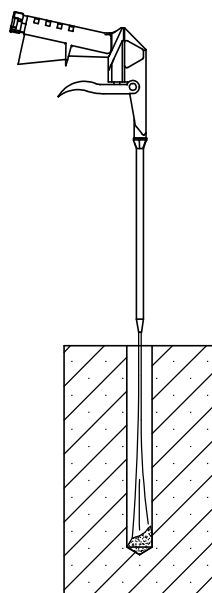
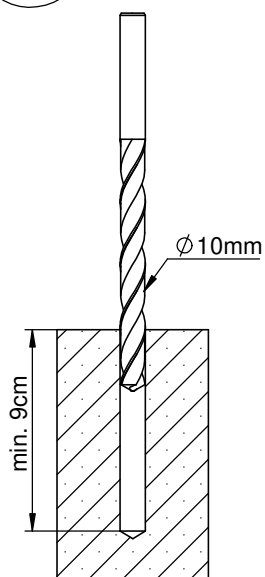
# 1216F

Nr	Element		
61		-	KL105



I

II

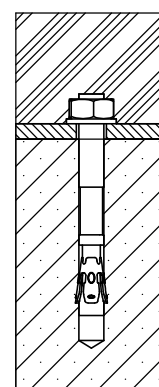
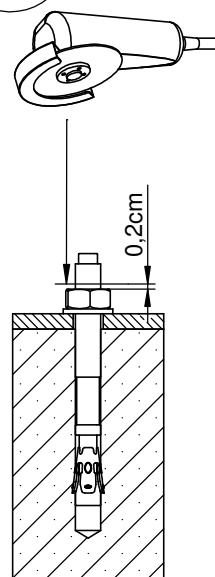
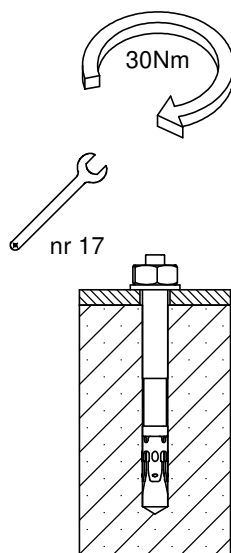
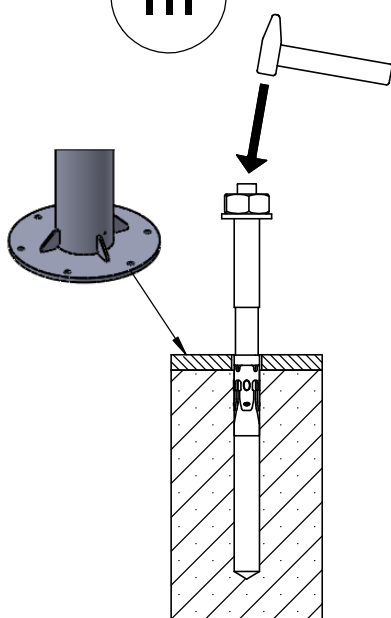


III

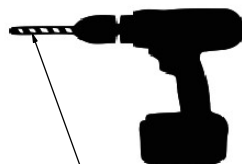
IV

V

VI



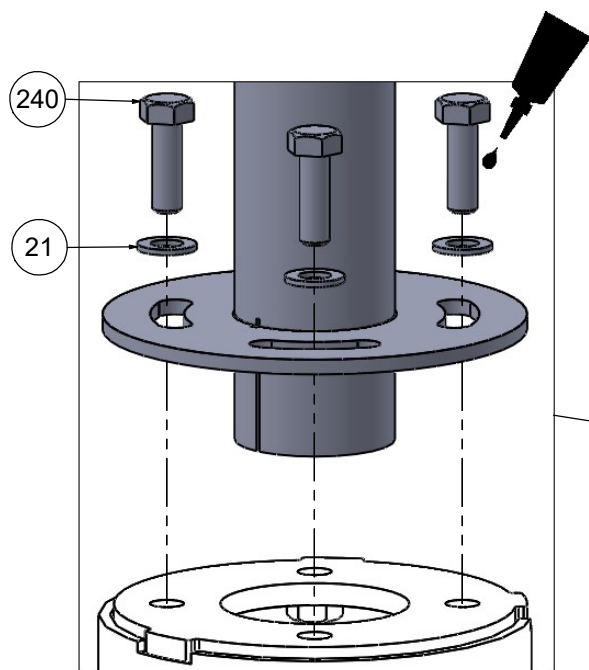
# INST\_12\_1



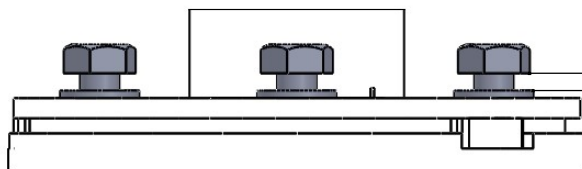
Nr. 13 Nr. 4, 8 Nr. T30

Ø 8

1



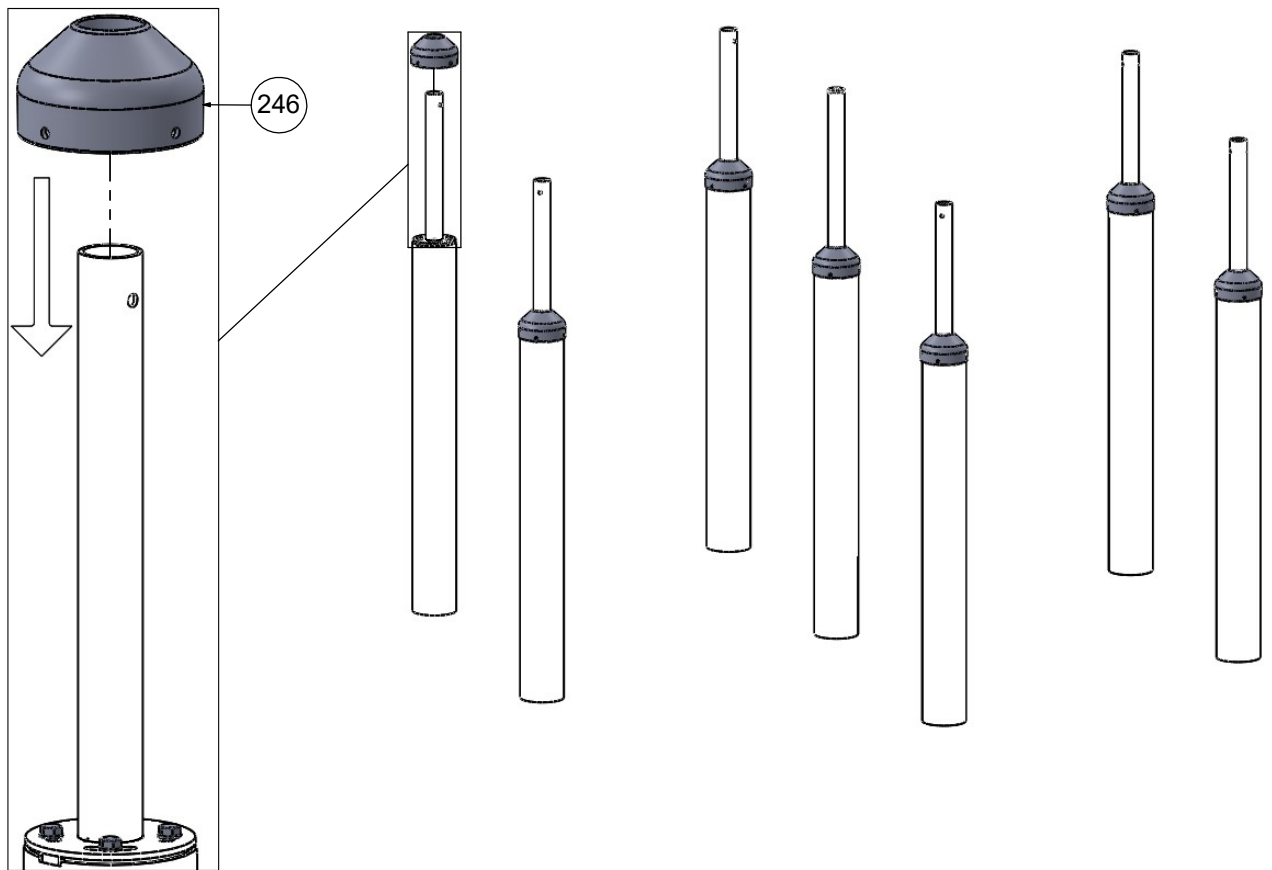
0,5 cm



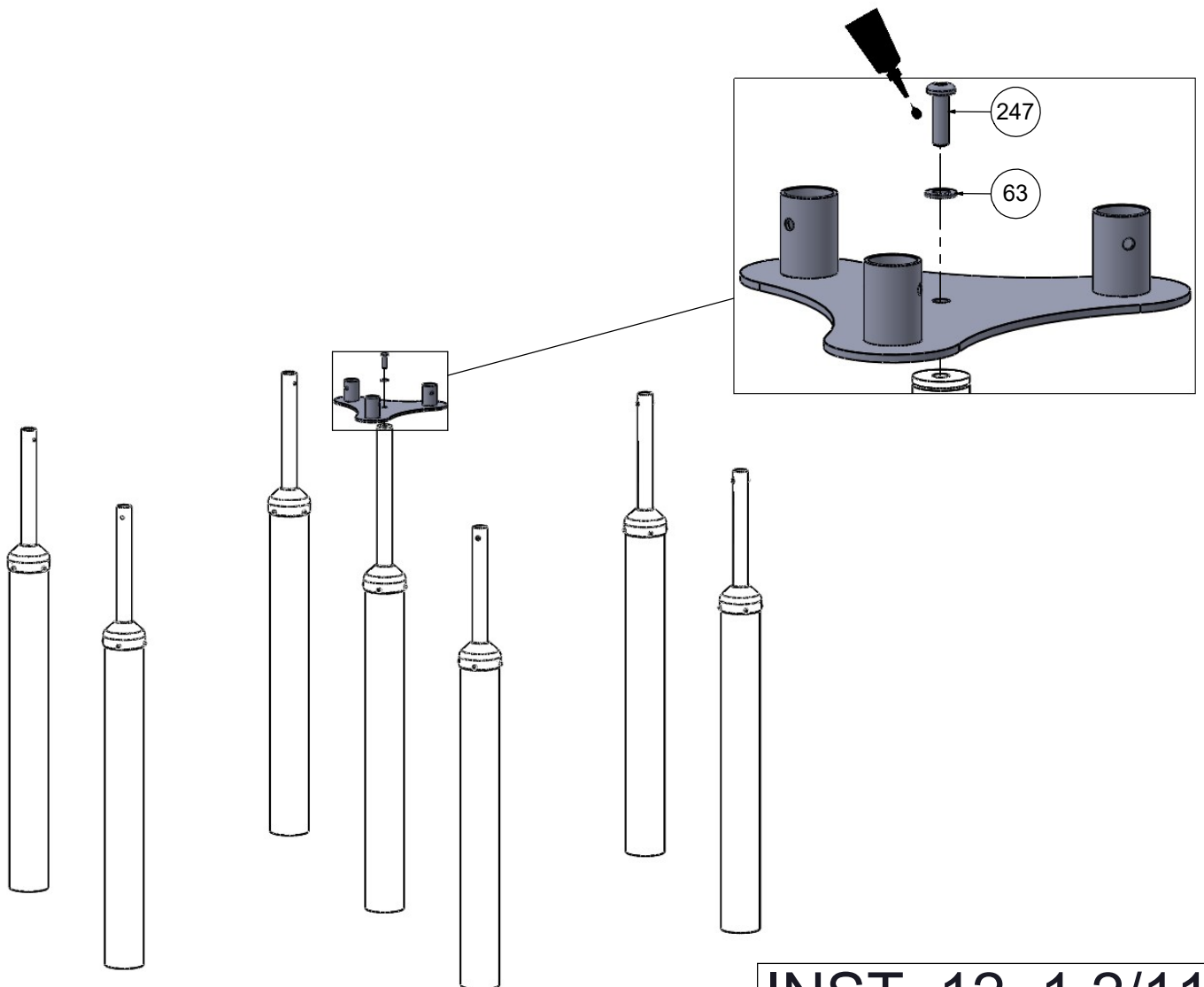
Nr	Σ	Element		
13	28		ISO 7380	M6x20
15	3		ISO 7380	M6x30
19	9		ISO 7380	M6x40
21	37		DIN 125	8x16
22	40		DIN 125	6x12
58	1		-	LOCTITE
63	1		DIN 125	12x24
147	9		-	M6x10
240	28		DIN 933	M8x25
246	7		-	MAS_114,3
247	1		ISO 7380	M12x40
248	3		-	W1200_3_AI SI304_v4



2

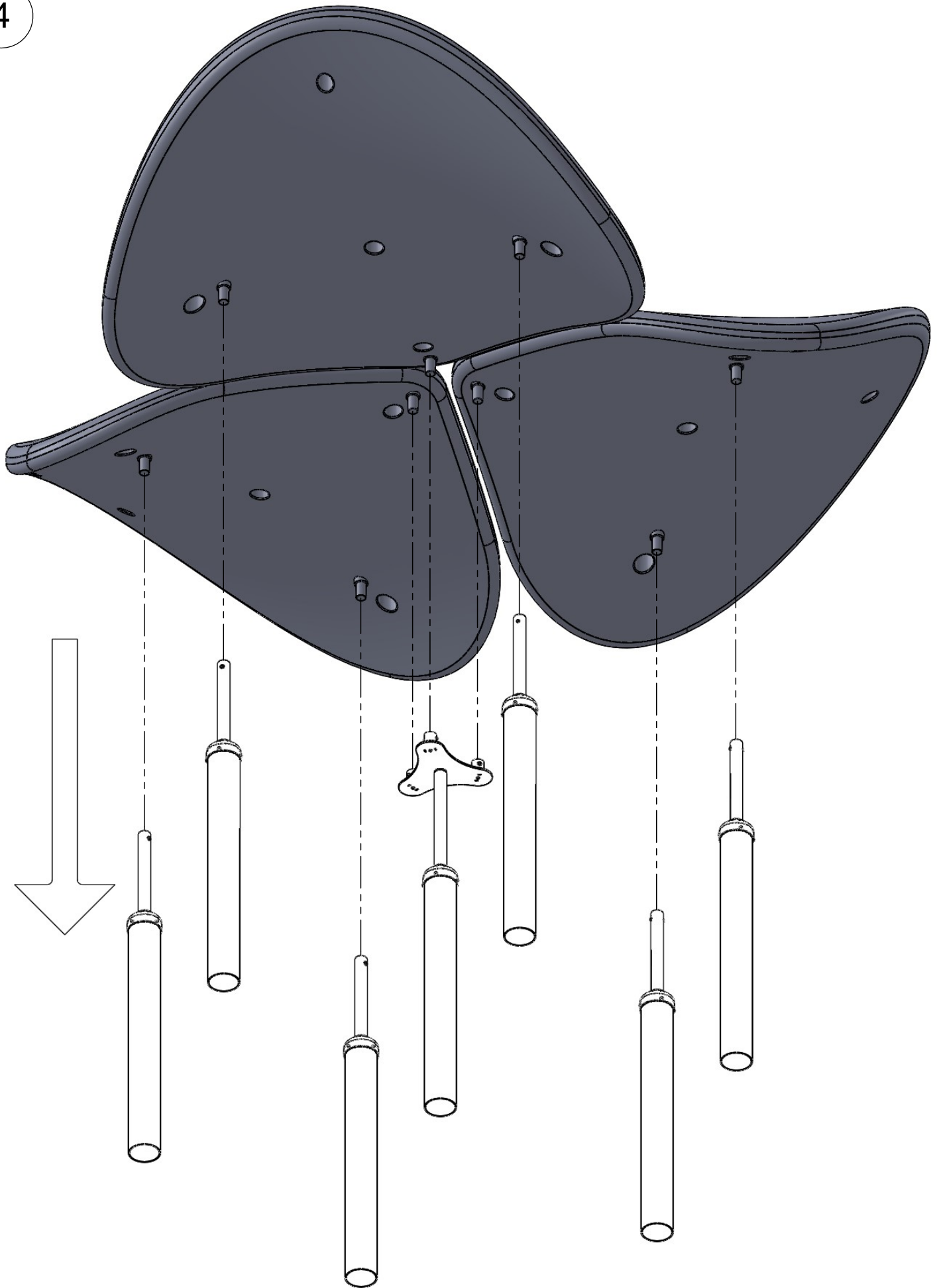


3

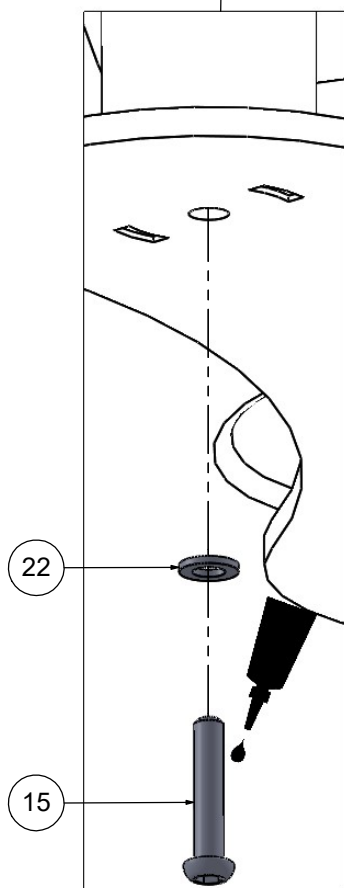
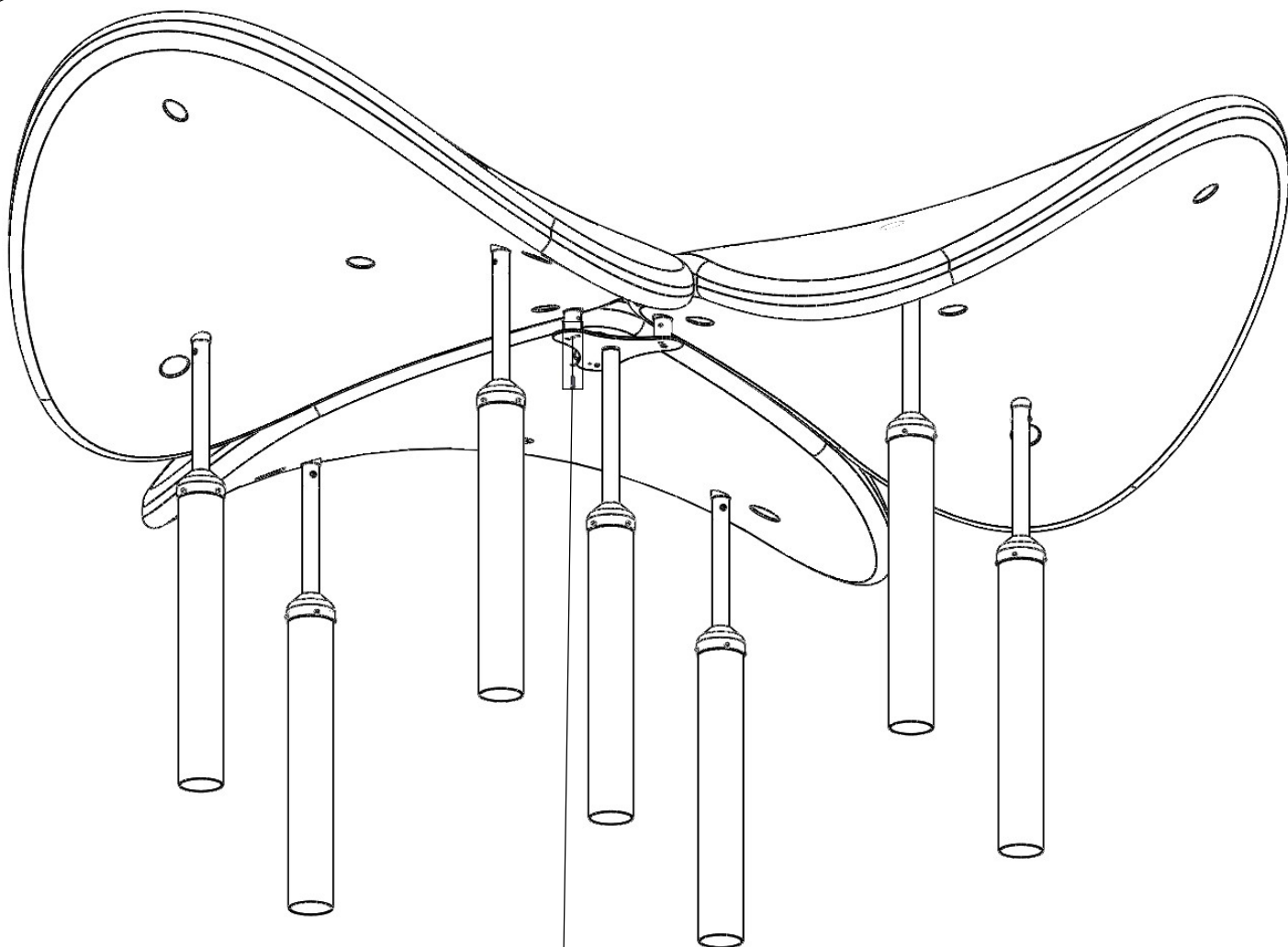




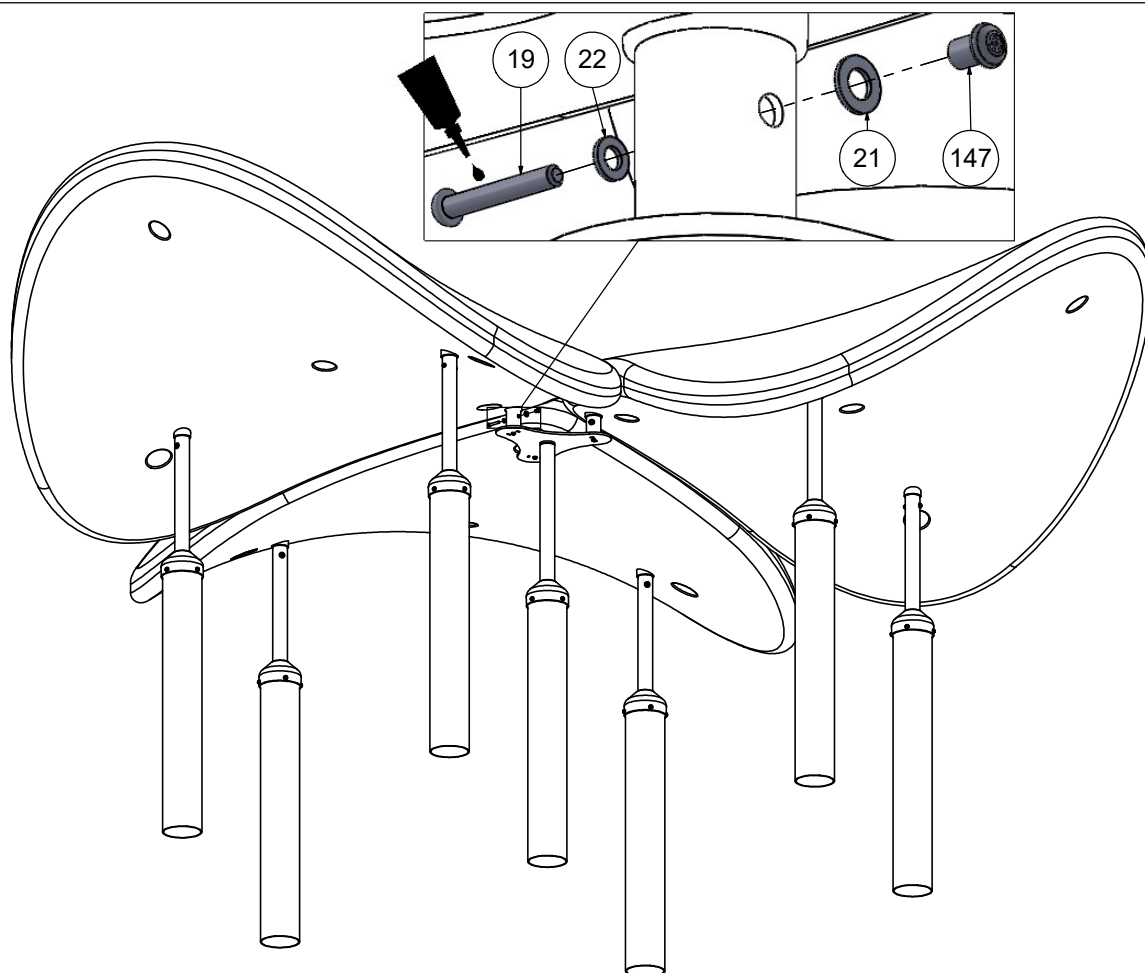
4



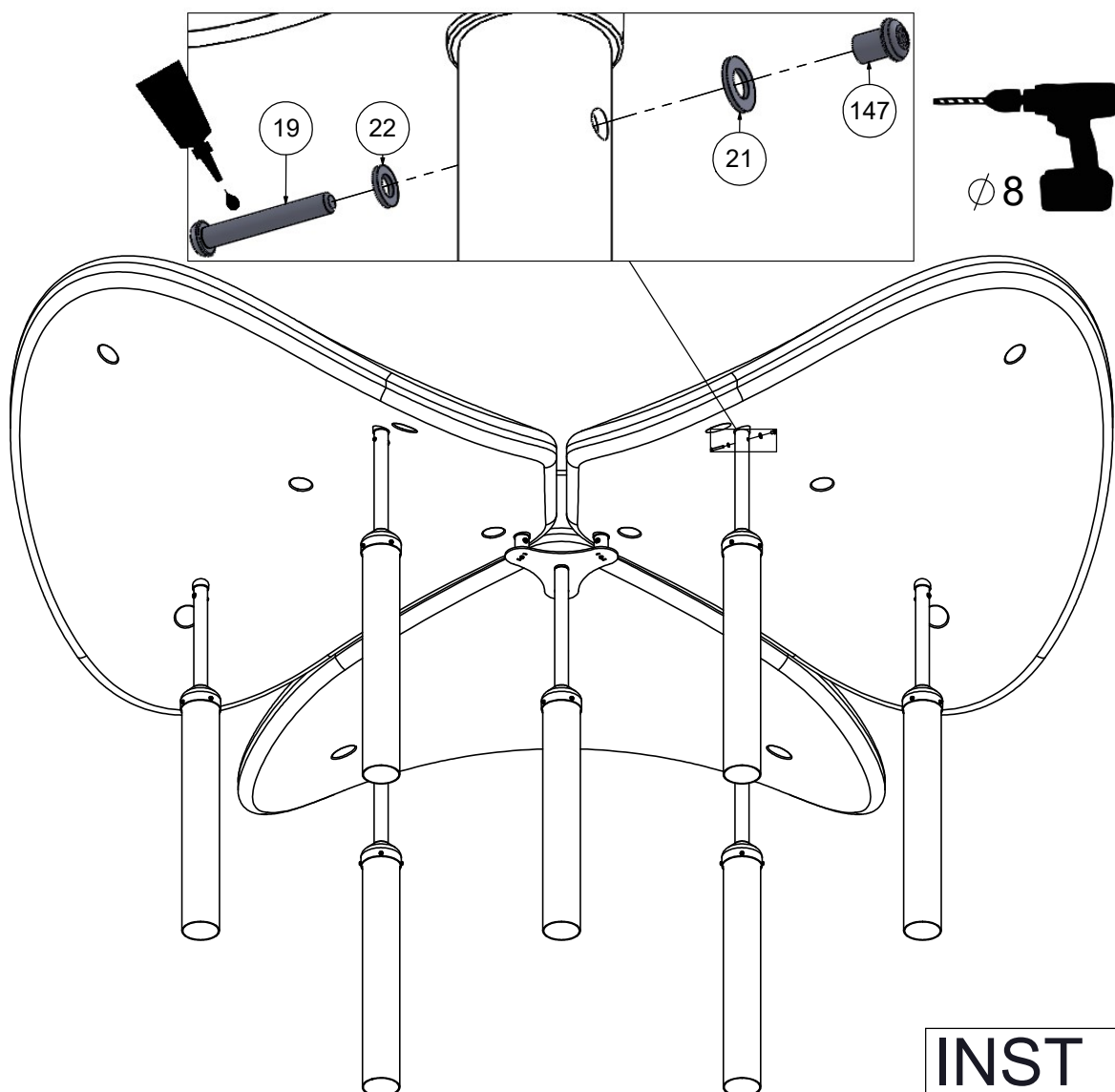
5



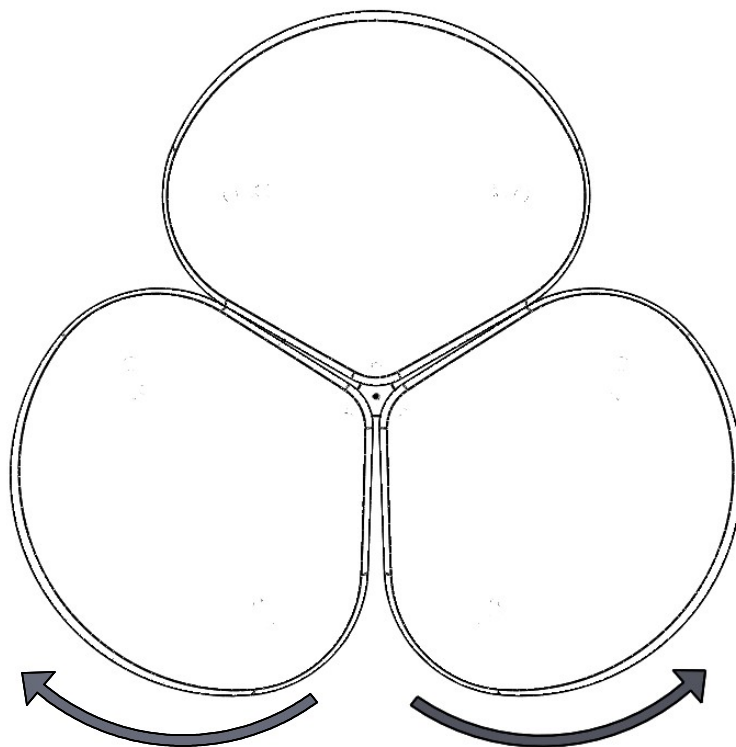
6



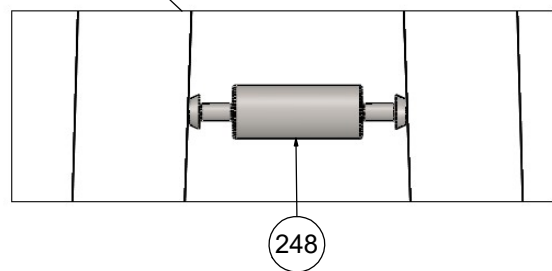
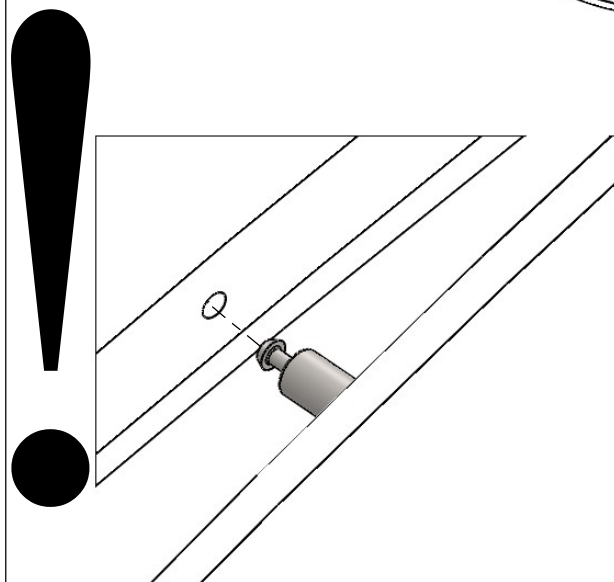
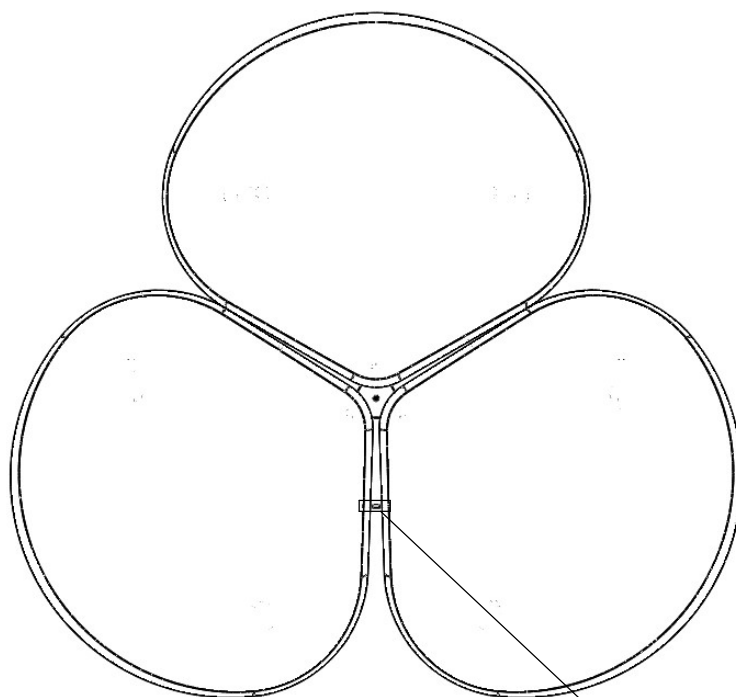
7

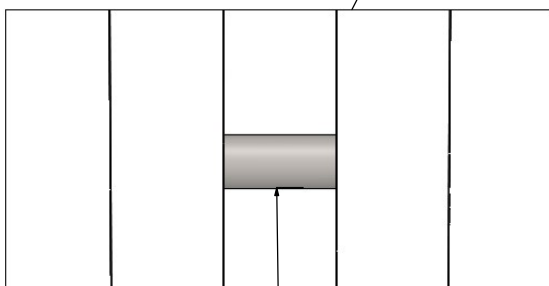
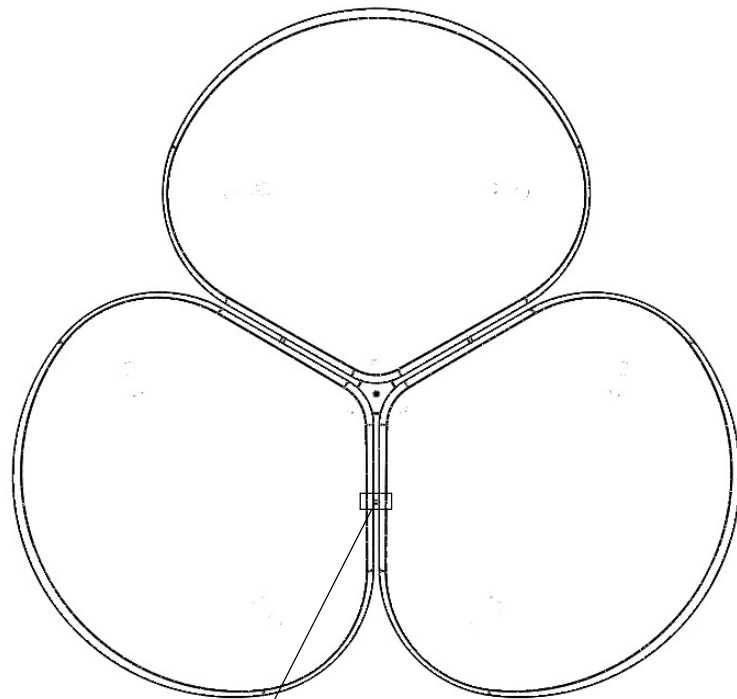
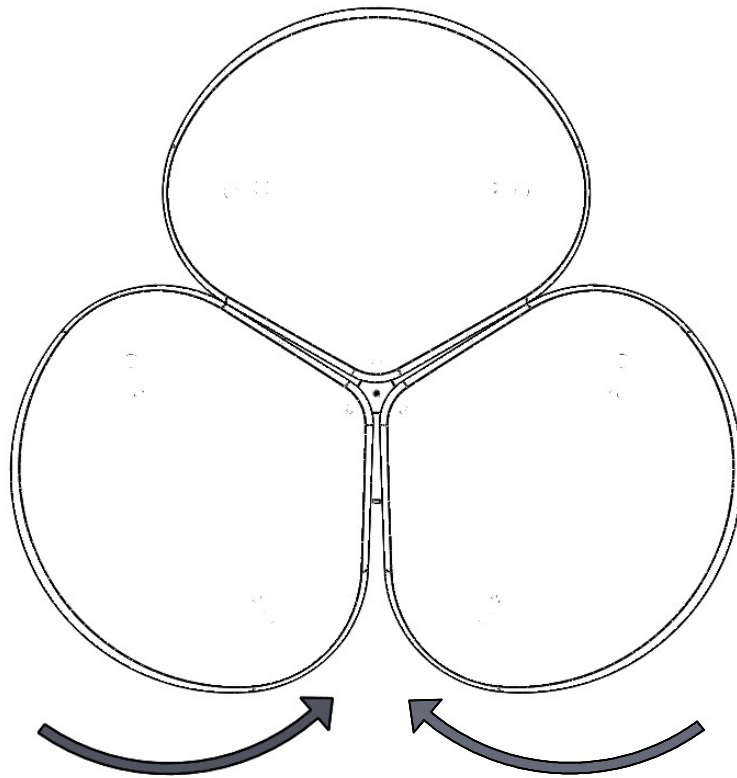


7

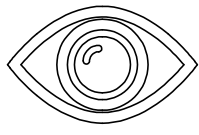


8





10



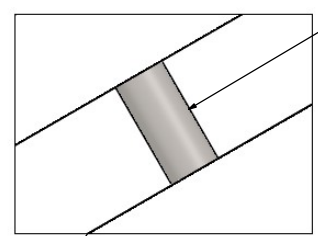
7



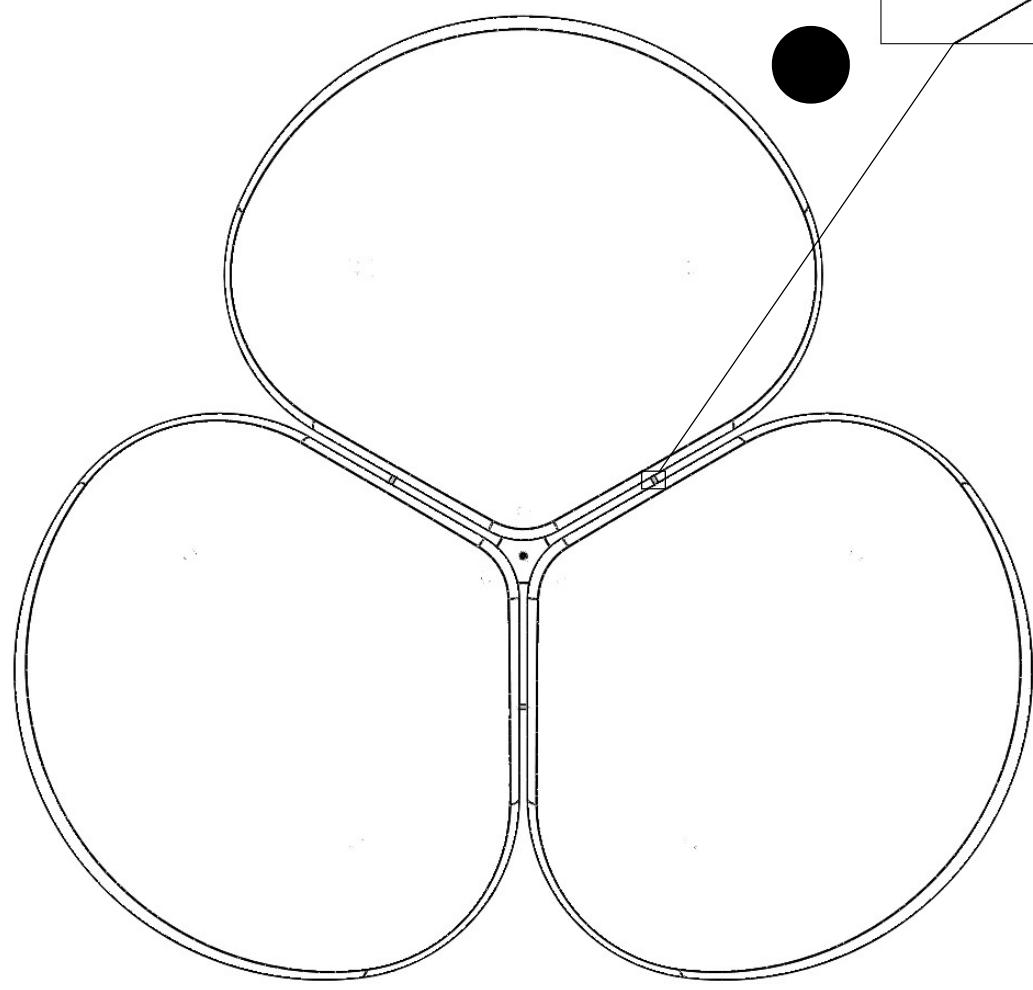
8



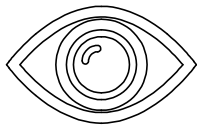
9



248



11



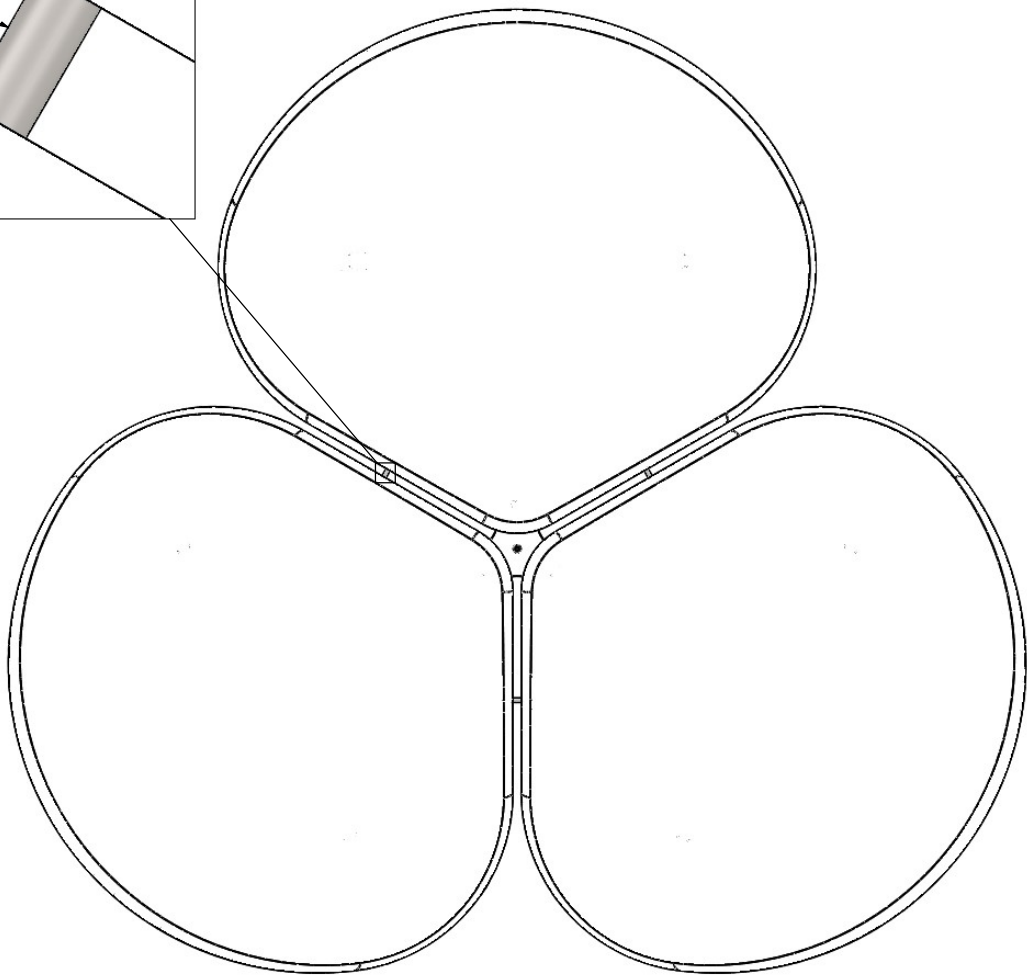
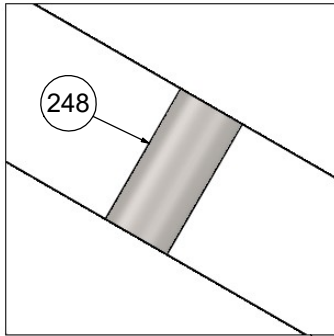
7



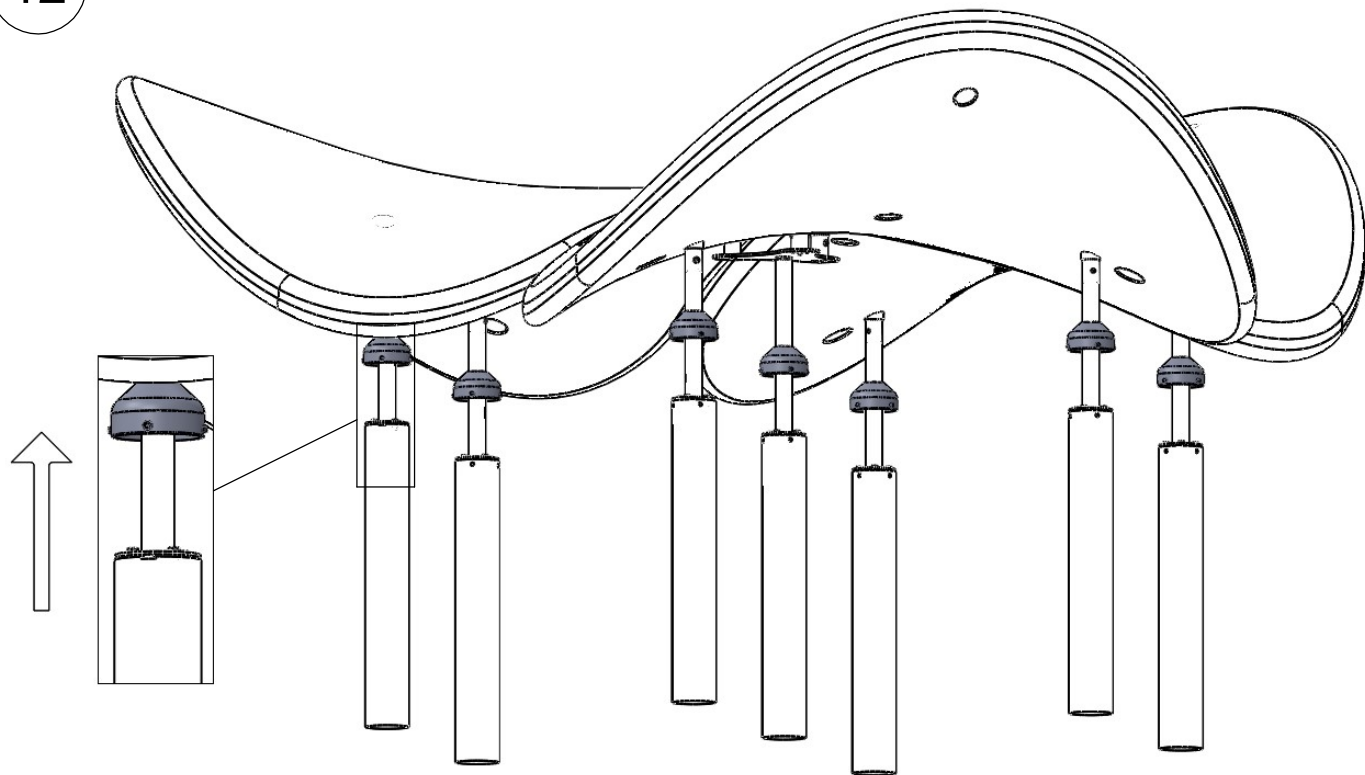
8



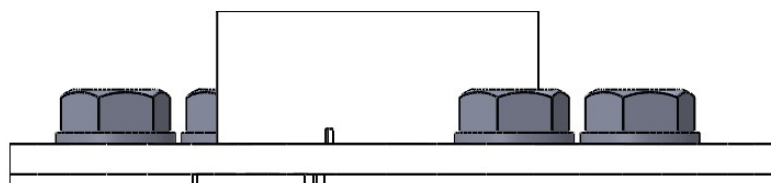
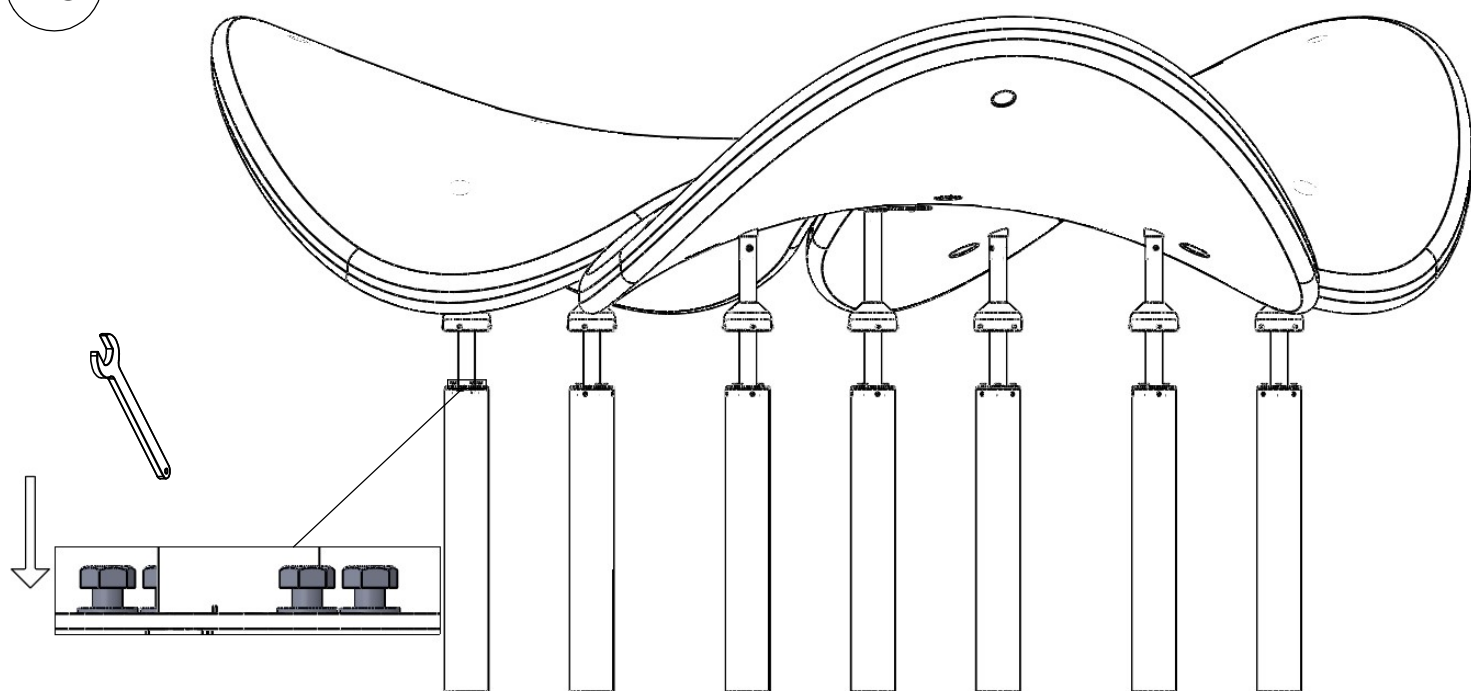
9



12

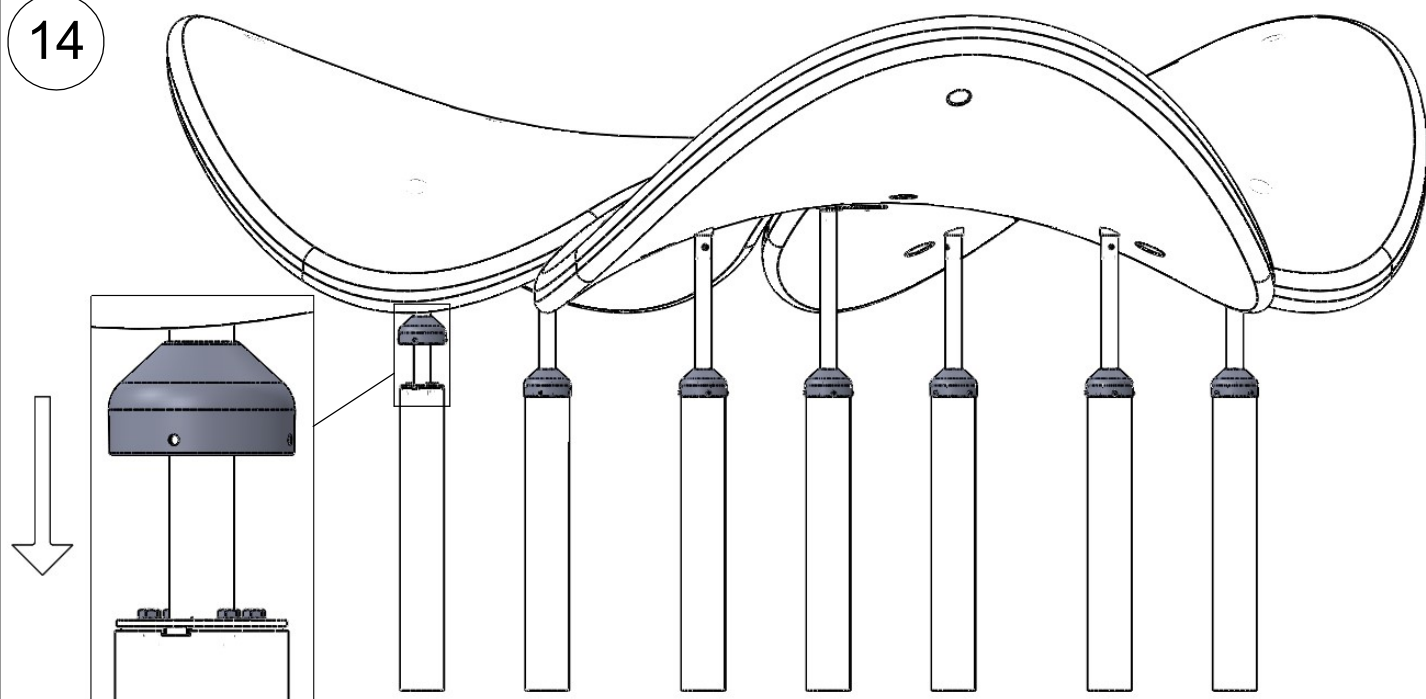


13

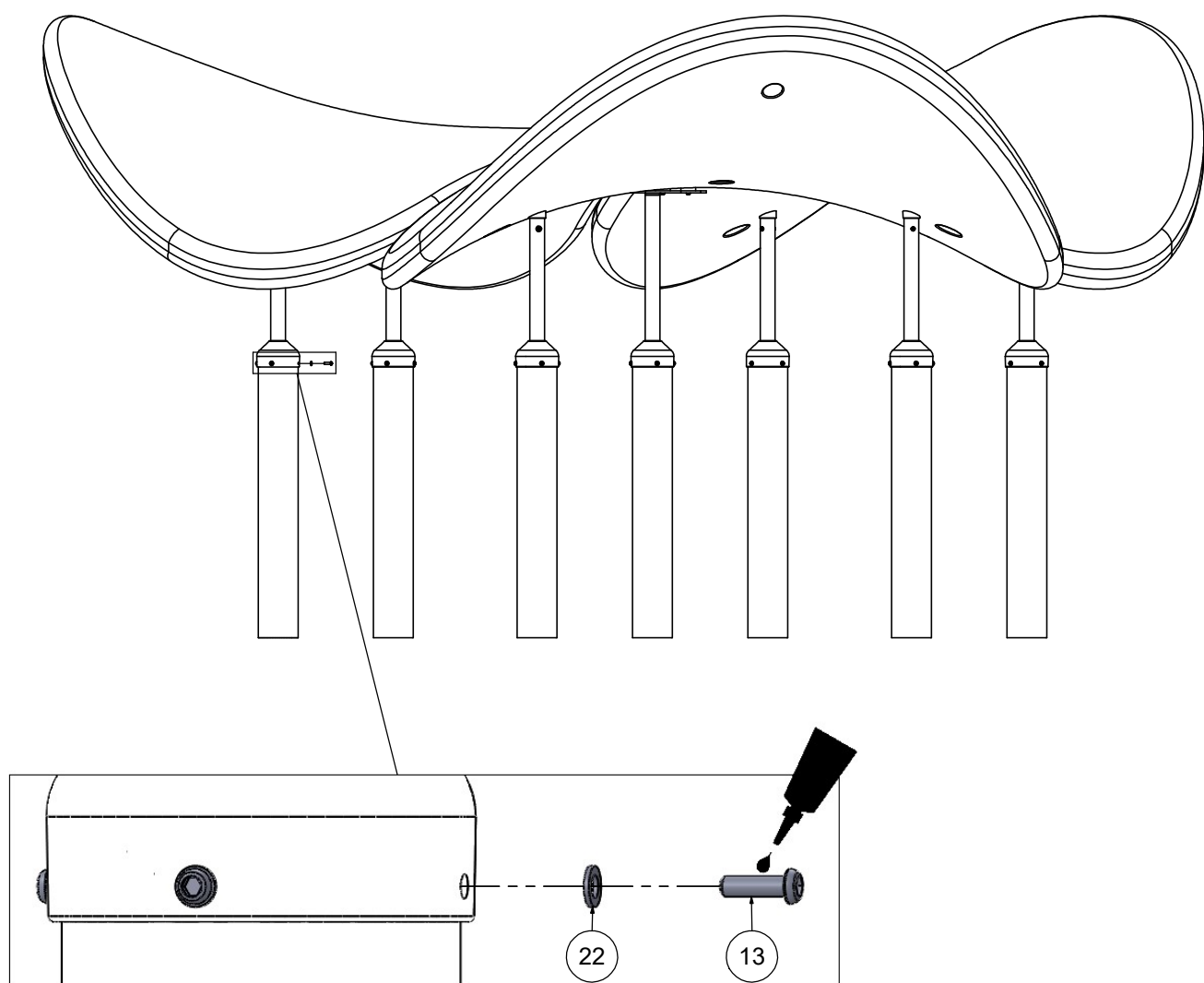









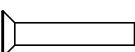
14



15



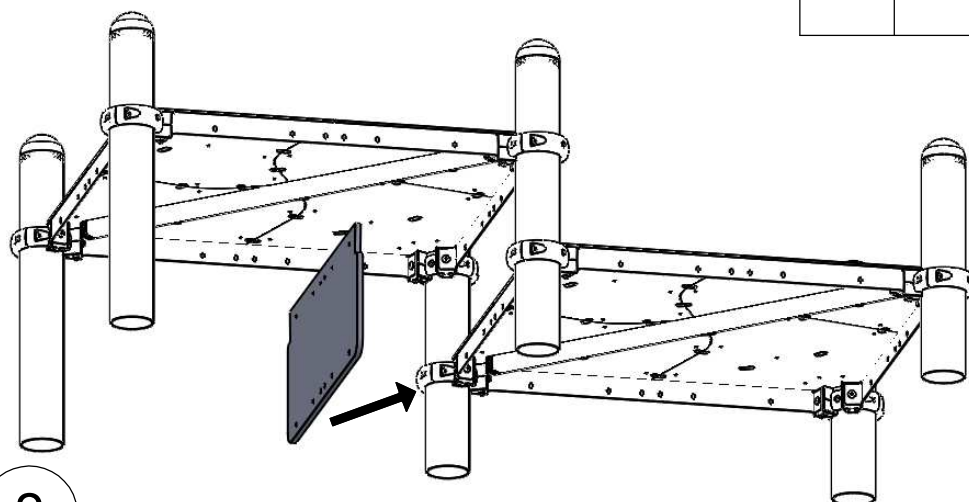
# INST\_12\_16\_H30

Nr	Σ	Element		
2	12		-	W6x60
10	12		DIN 9021	6x18
16	12		-	K1_d21_B
17	12		-	Z1_d21_B
18	12		DIN 985	M6 (OC)
100	12		DIN 7991	M6x35

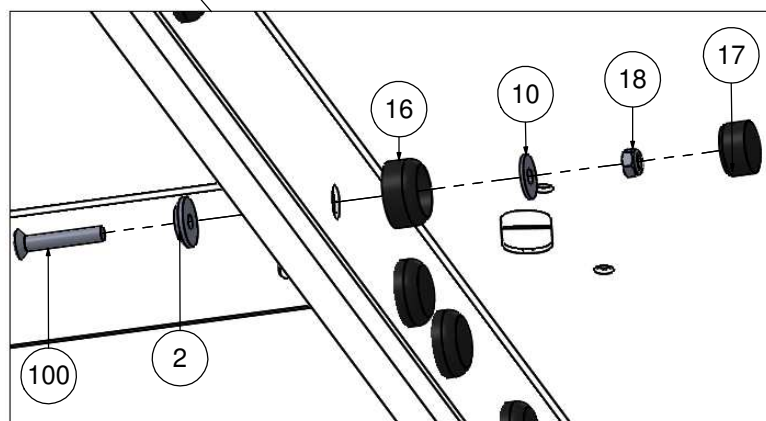
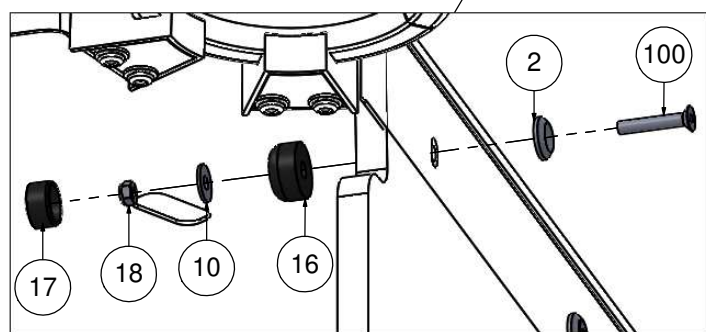
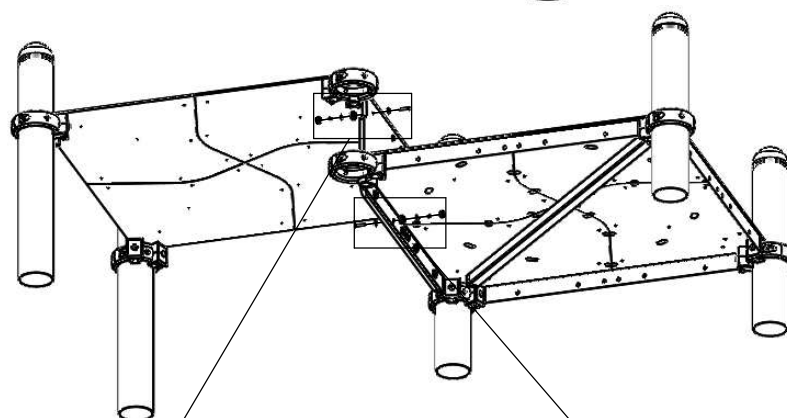


Nr. 4    Nr. T30

1



2




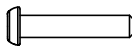





# INST\_12\_17

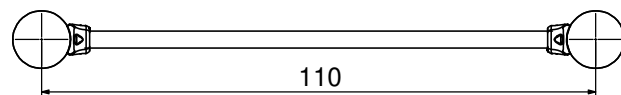


1

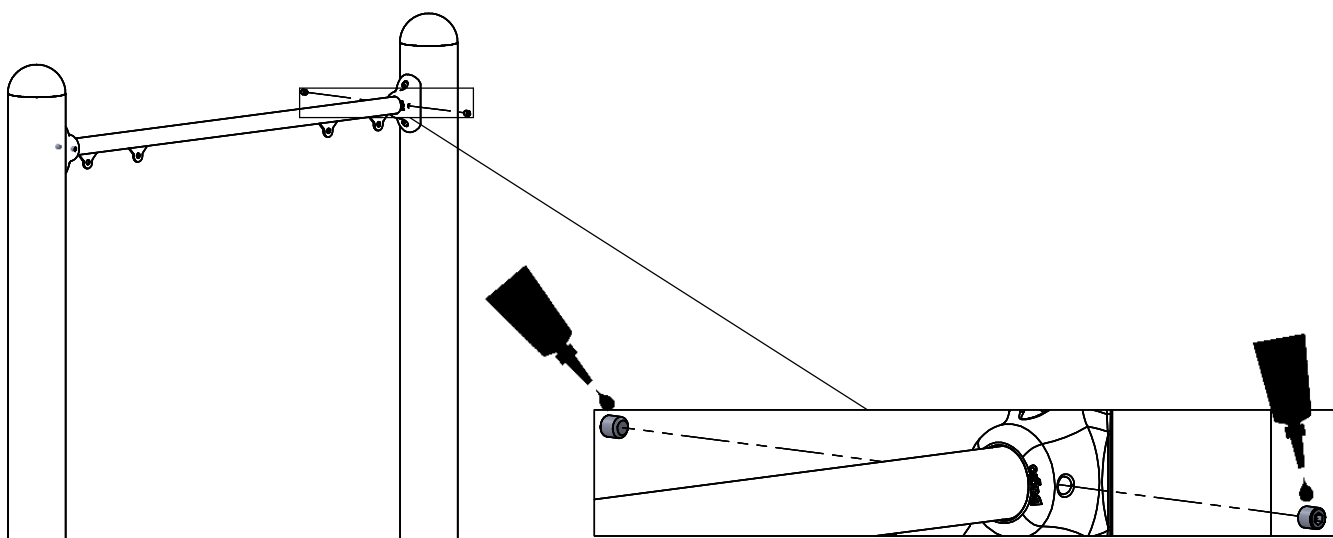
Nr. 4, 5 Nr. T30



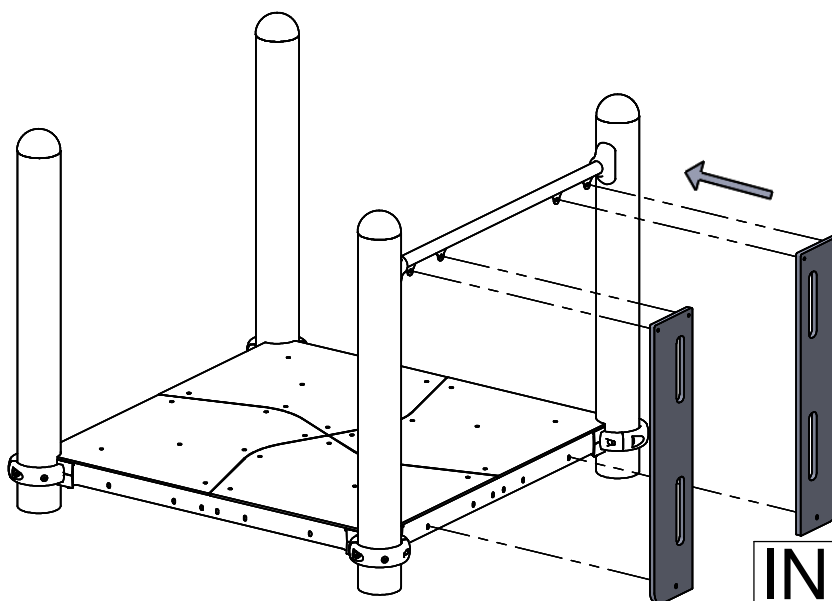
Nr	Σ	Element		
10	6		DIN 9021	6x18
15	6		ISO 7380	M6x30
16	6		-	K1_d21_B
17	6		-	Z1_d21_B
18	6		DIN 985	M6 (OC)
22	6		DIN 125	6x12
58	1		-	LOCTITE



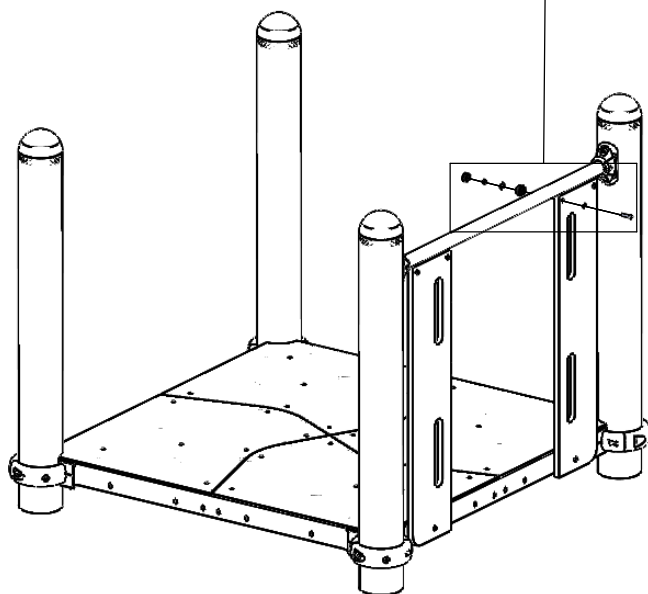
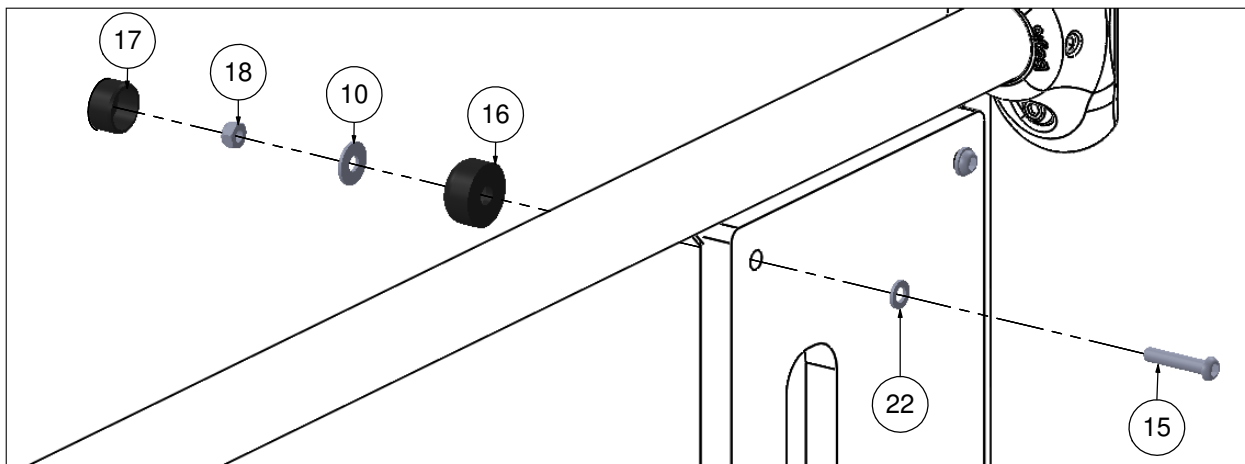
2



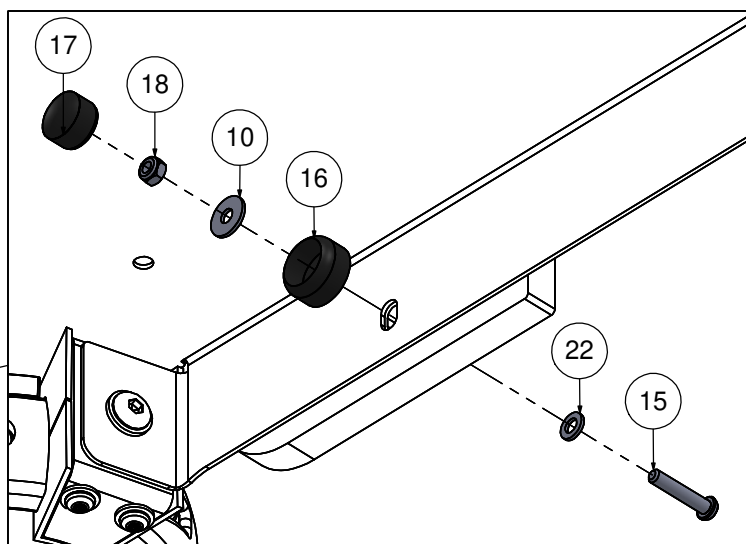
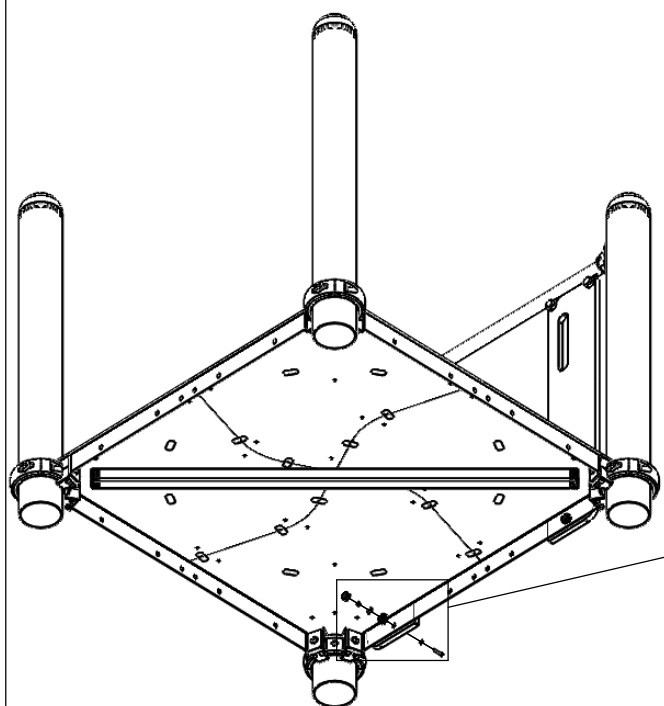
3



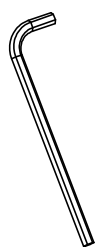
4



5

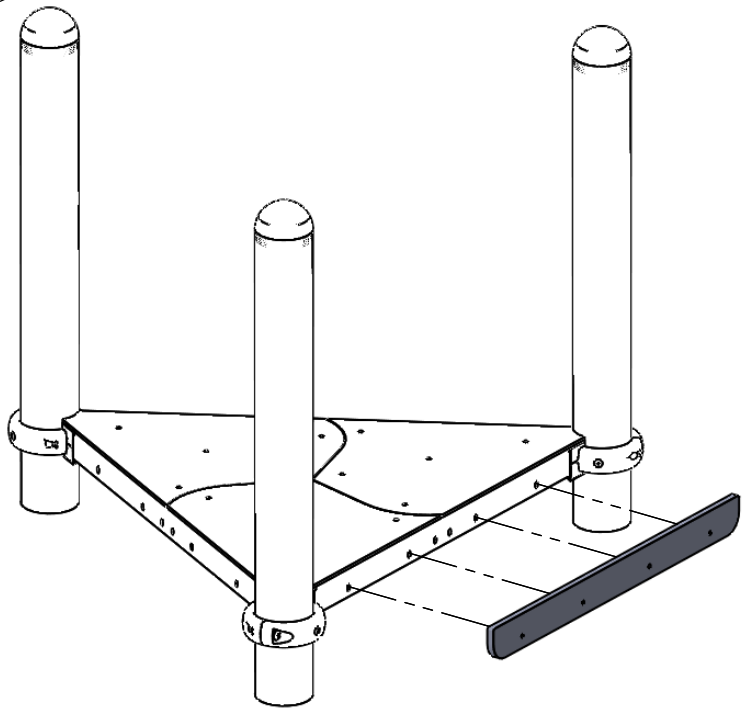


# INST\_12\_18



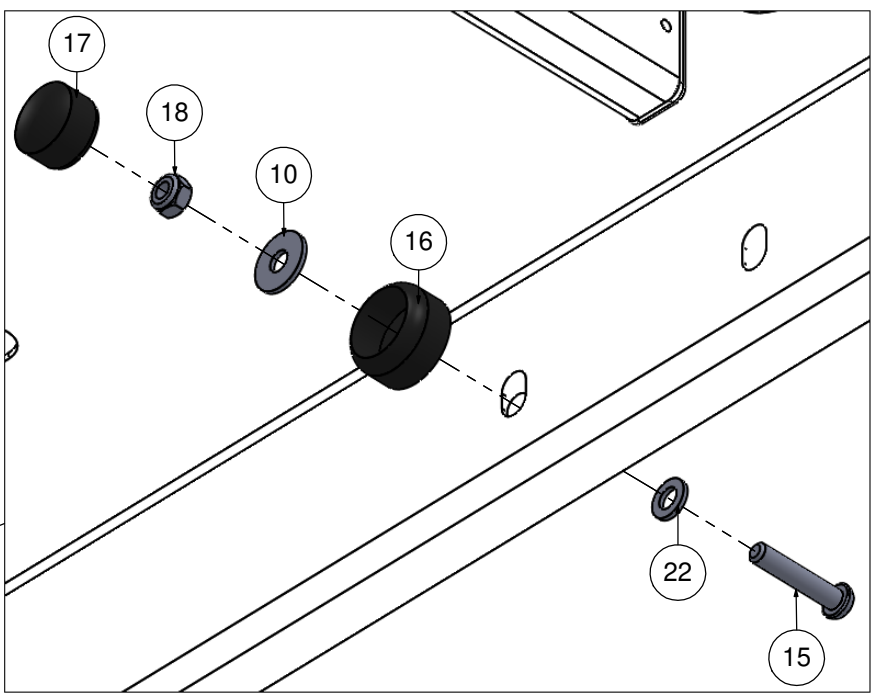
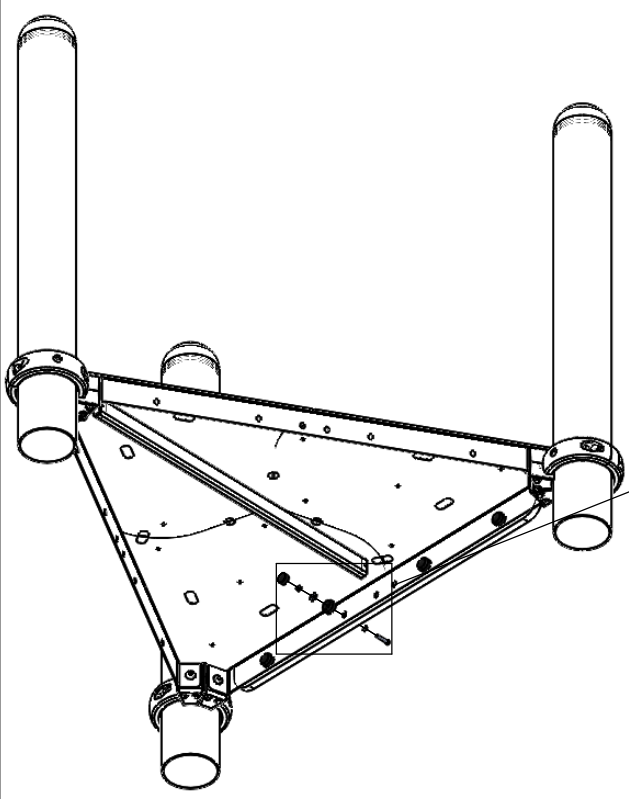
Nr. 4    Nr. T30

1









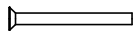



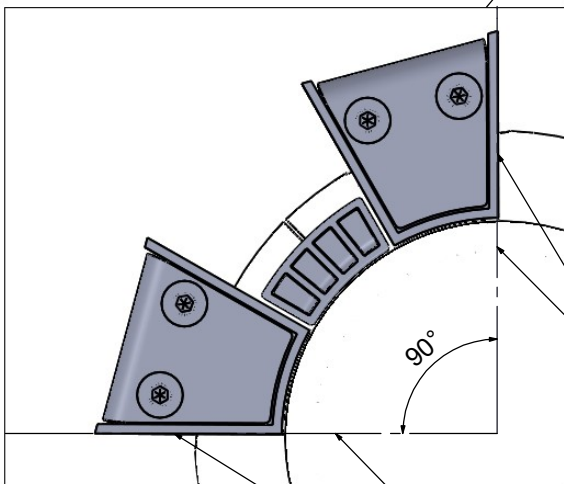
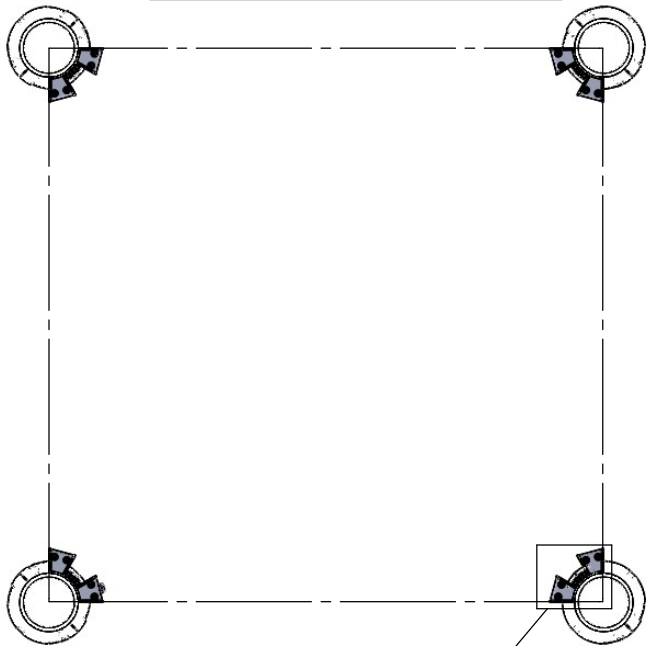
Nr	Σ	Element		
10	4		DIN 9021	6x18
15	4		ISO 7380	M6x30
16	4		-	K1_d21_B
17	4		-	Z1_d21_B
18	4		DIN 985	M6 (OC)
22	4		DIN 125	6x12
58	1		-	LOCTITE

2

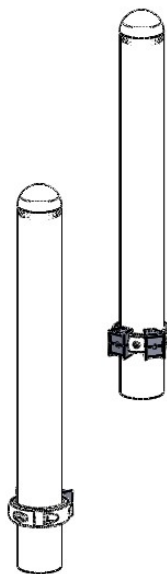
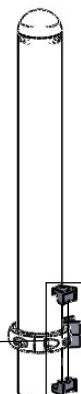
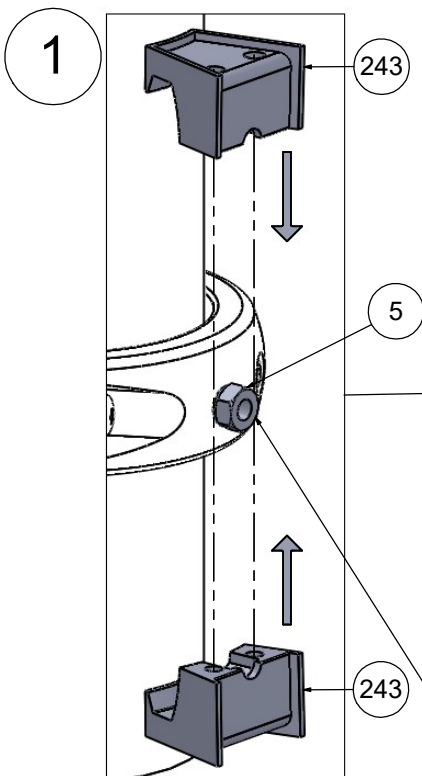


# INST\_12\_23

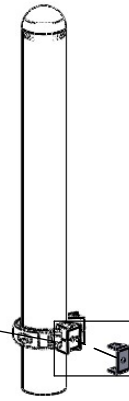
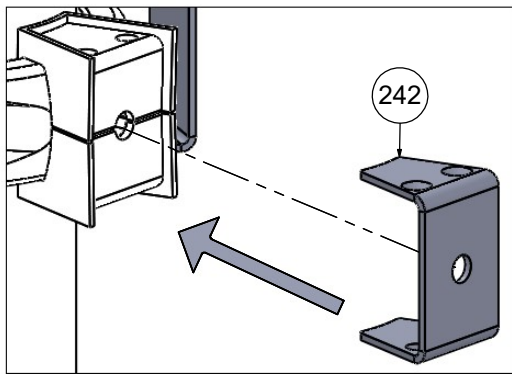
Nr	Σ	Element		
5	8		DIN 985	M10
21	16		DIN 125	8x16
44	8		ISO 7380	M10x25
58	1		-	LOCTITE
147	16		-	M6x10
242	8		-	1200_1_A2_g3_G_v3
243	16		-	UCHW_114,3
244	4		-	Z_P_114,3
245	16		DIN 7991	M6x65
249	8		NYLON DIN 125	10x20



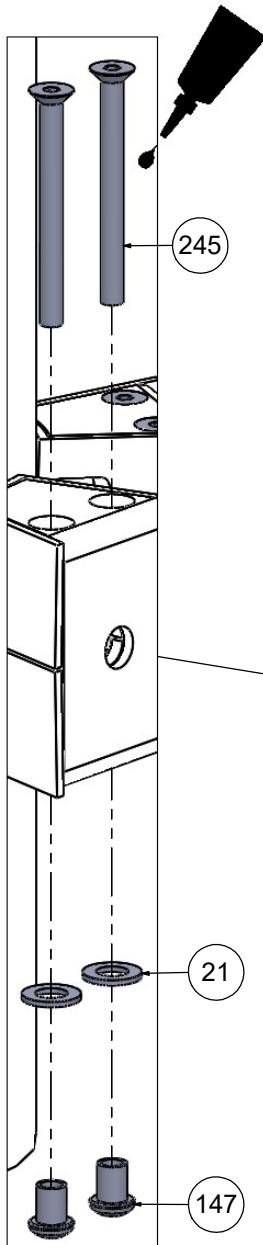
Nr. 4, 6 Nr. T30



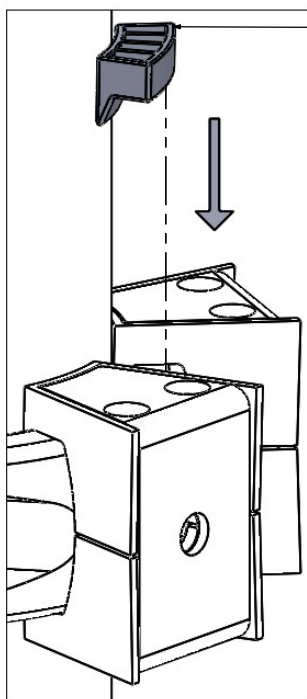
2



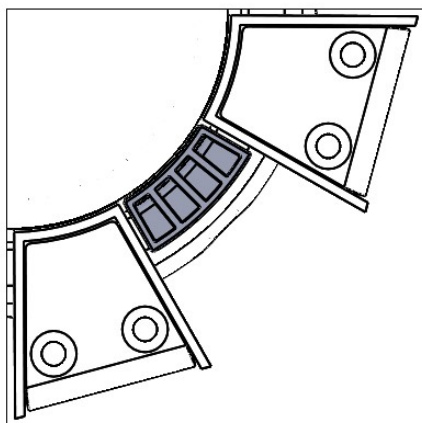
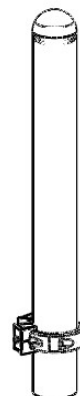
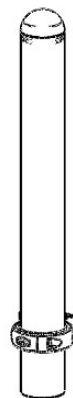
3



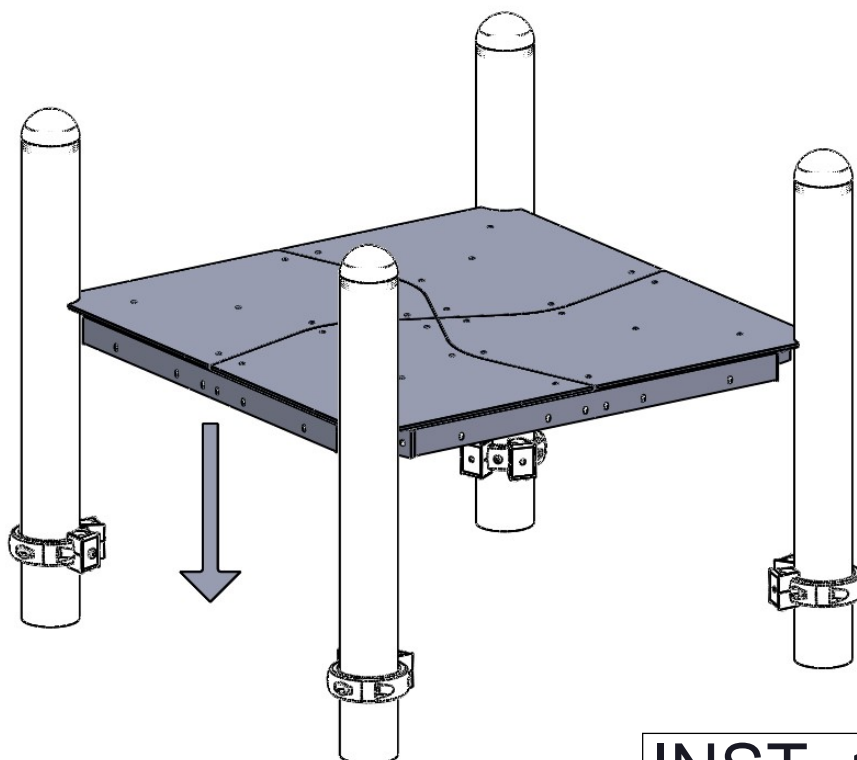
4



244



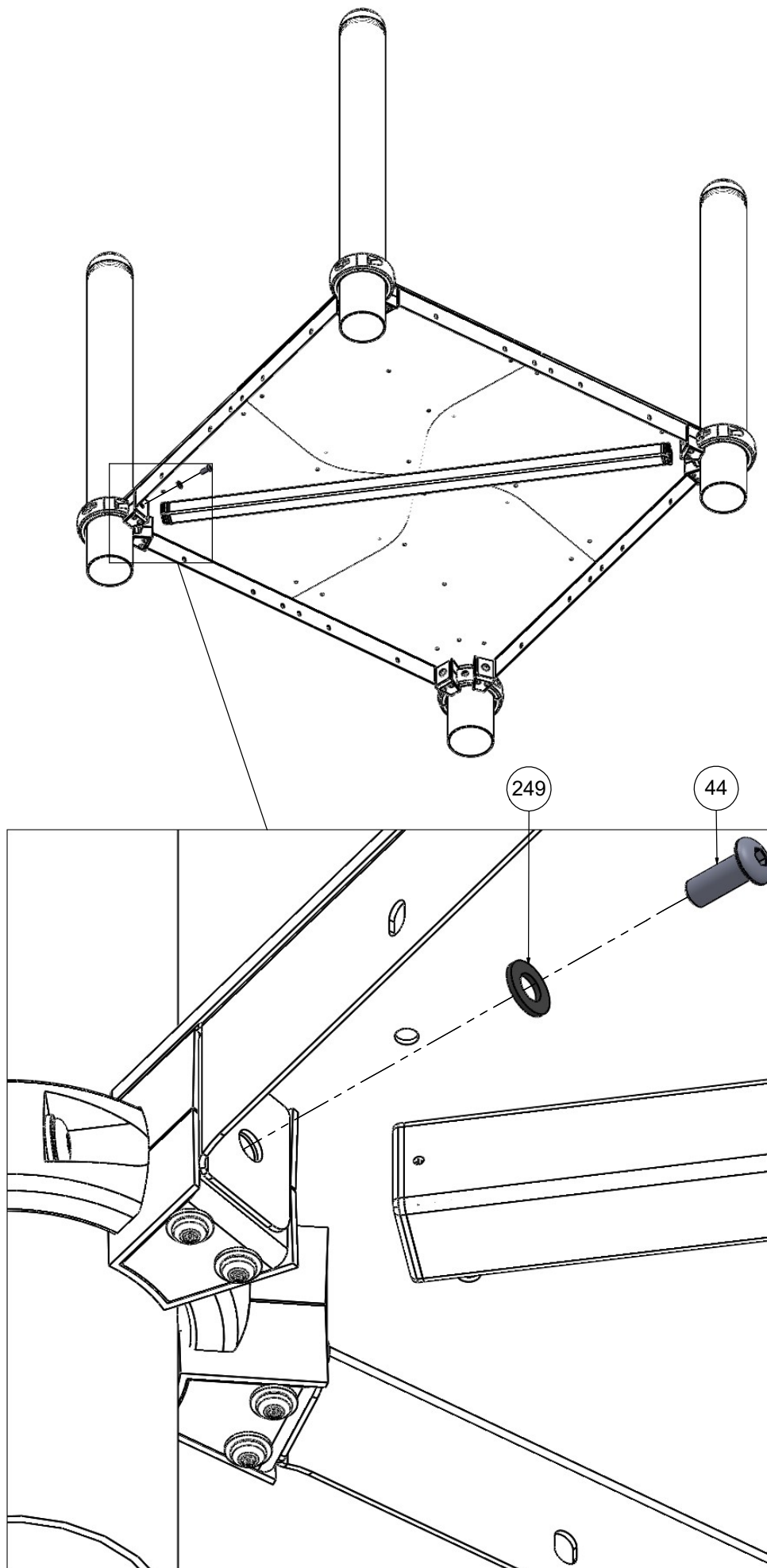
5



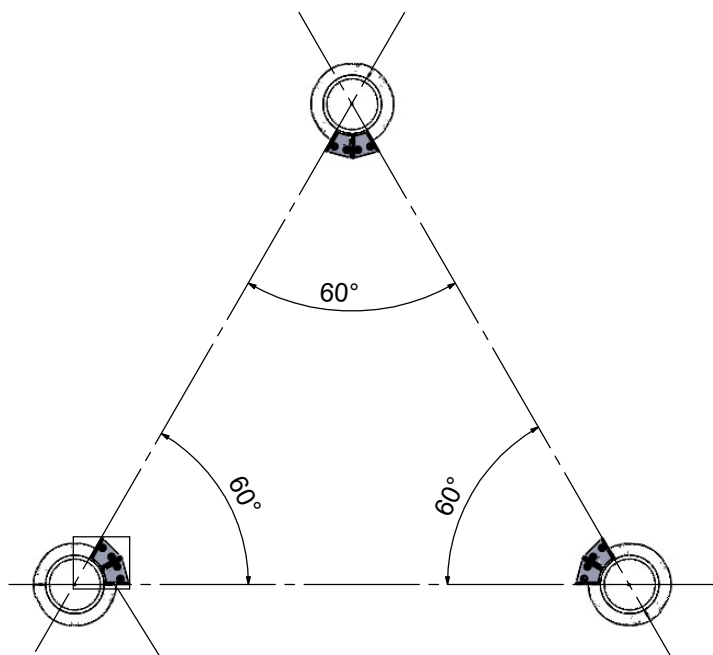
INST\_12\_23 3/4








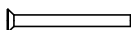



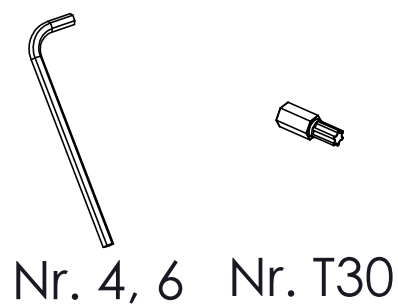
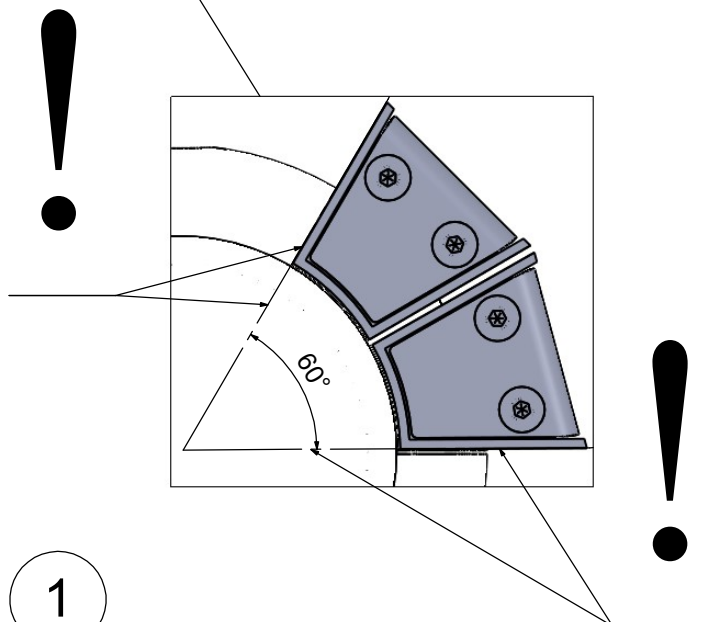
6



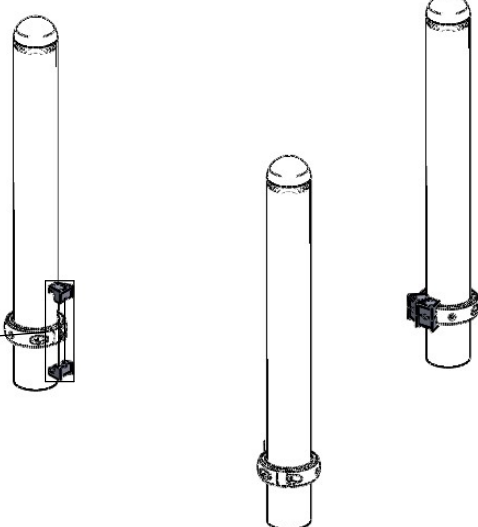
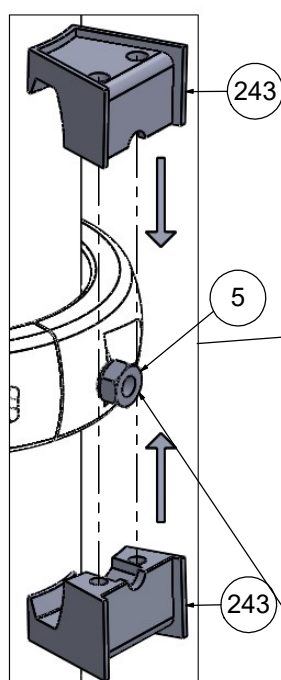
# INST\_12\_25



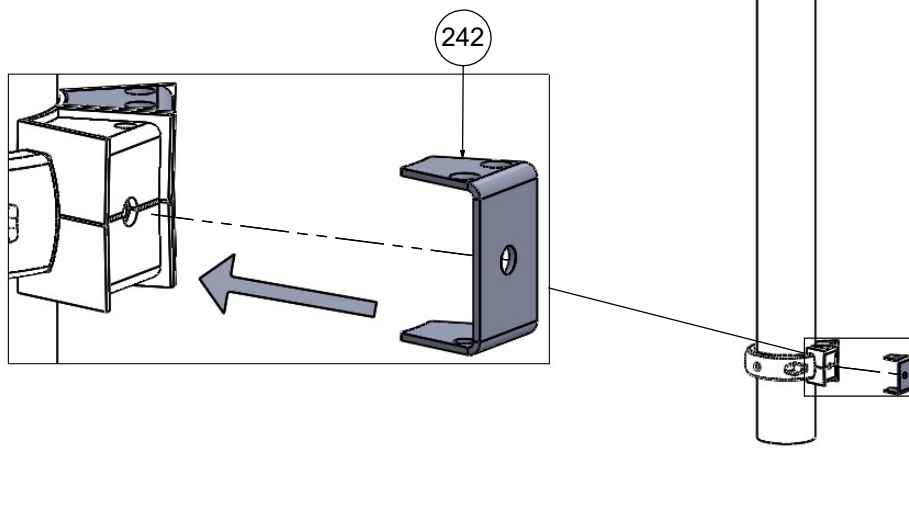
Nr	Σ	Element		
5	6		DIN 985	M10
21	12		DIN 125	8x16
44	6		ISO 7380	M10x25
58	1		-	LOCTITE
147	12		-	M6x10
242	6		-	1200_1_A2_g3_G_v3
243	12		-	UCHW_114_3
245	12		DIN 7991	M6x65
249	6		NYLON DIN 125	10x20



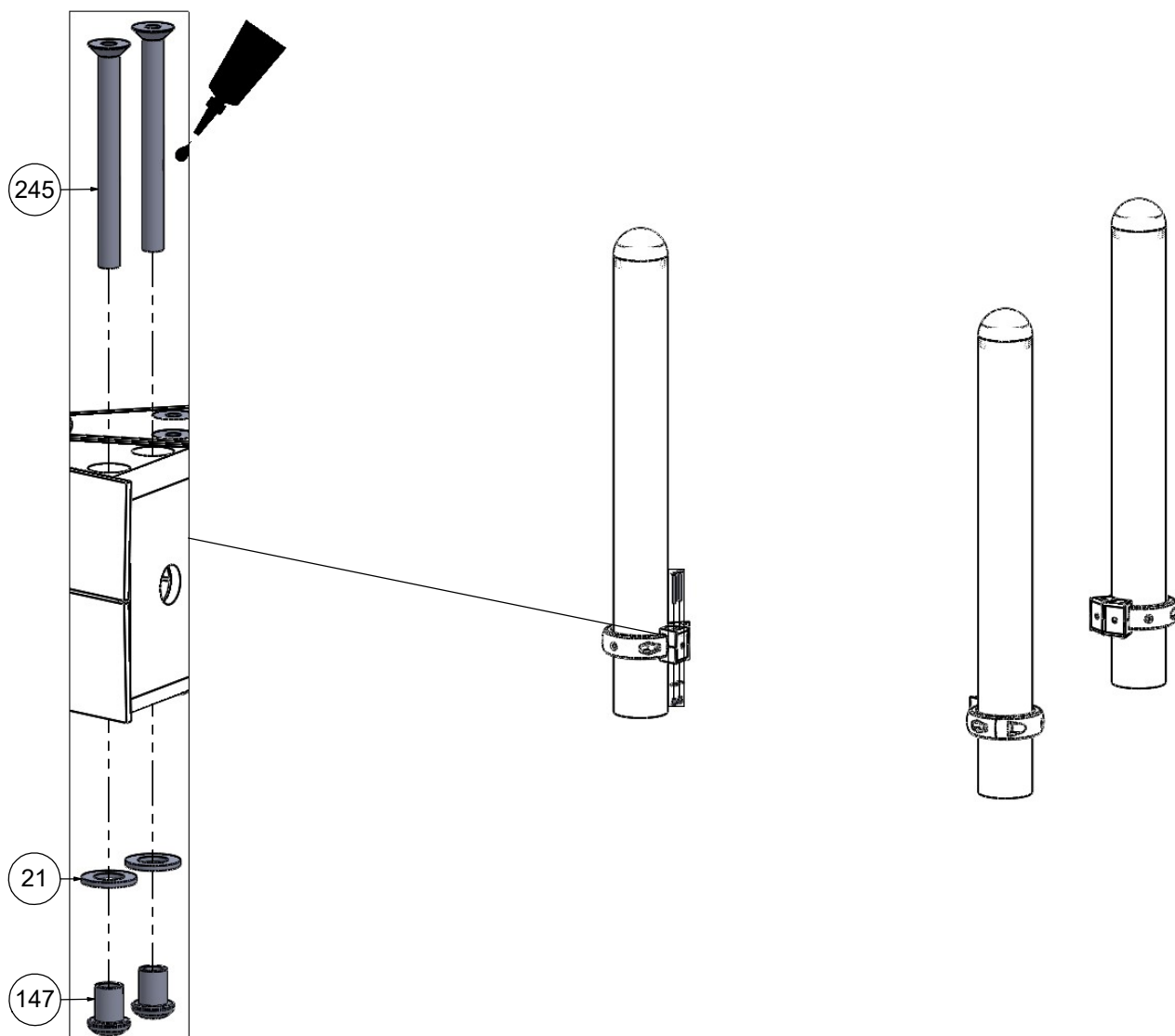
1



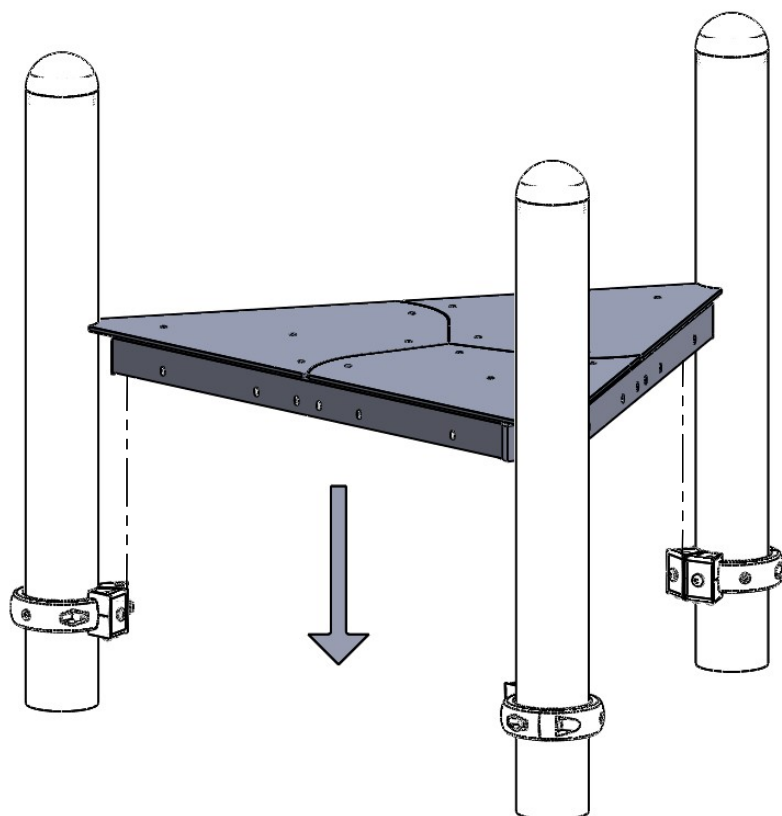
2



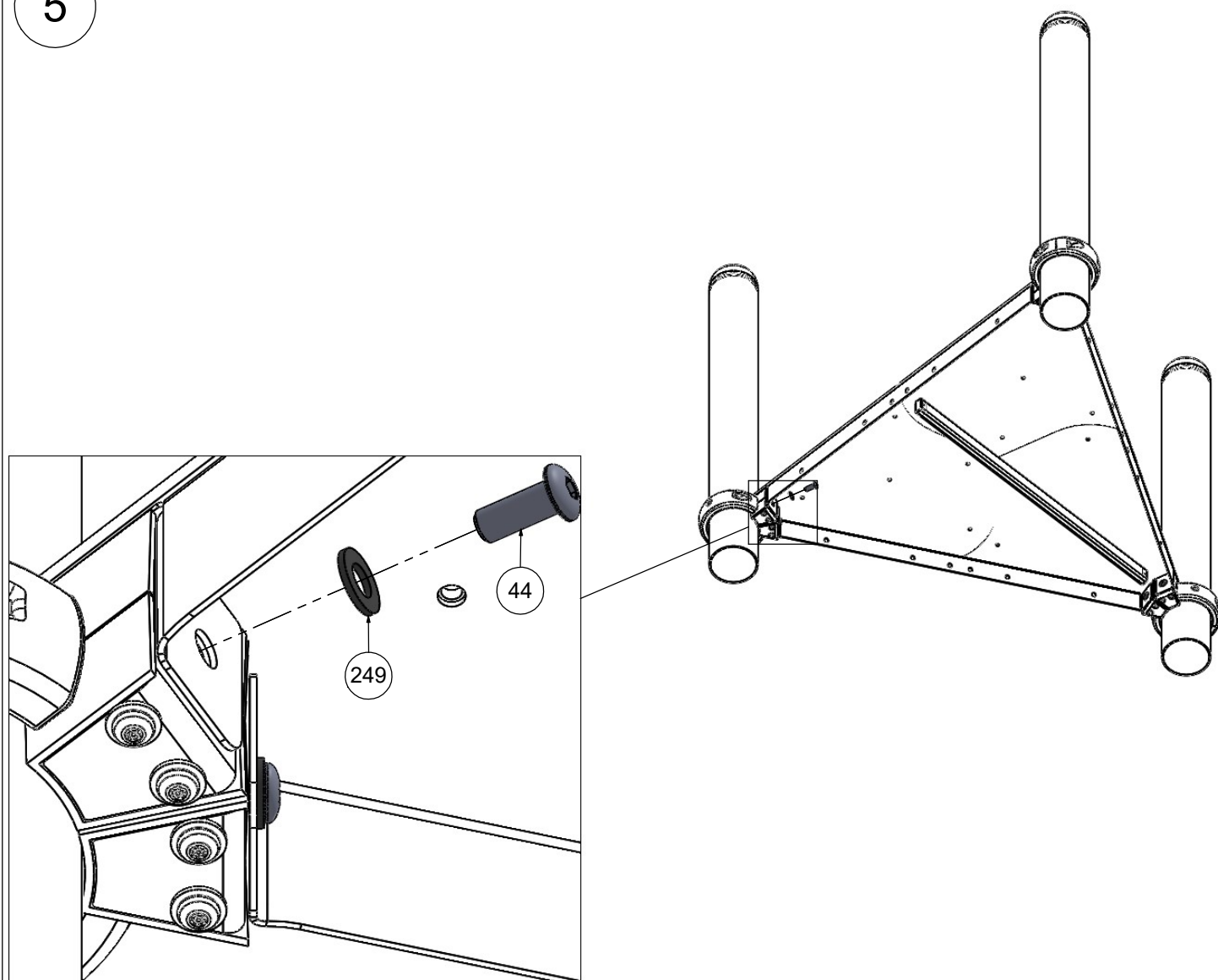
3



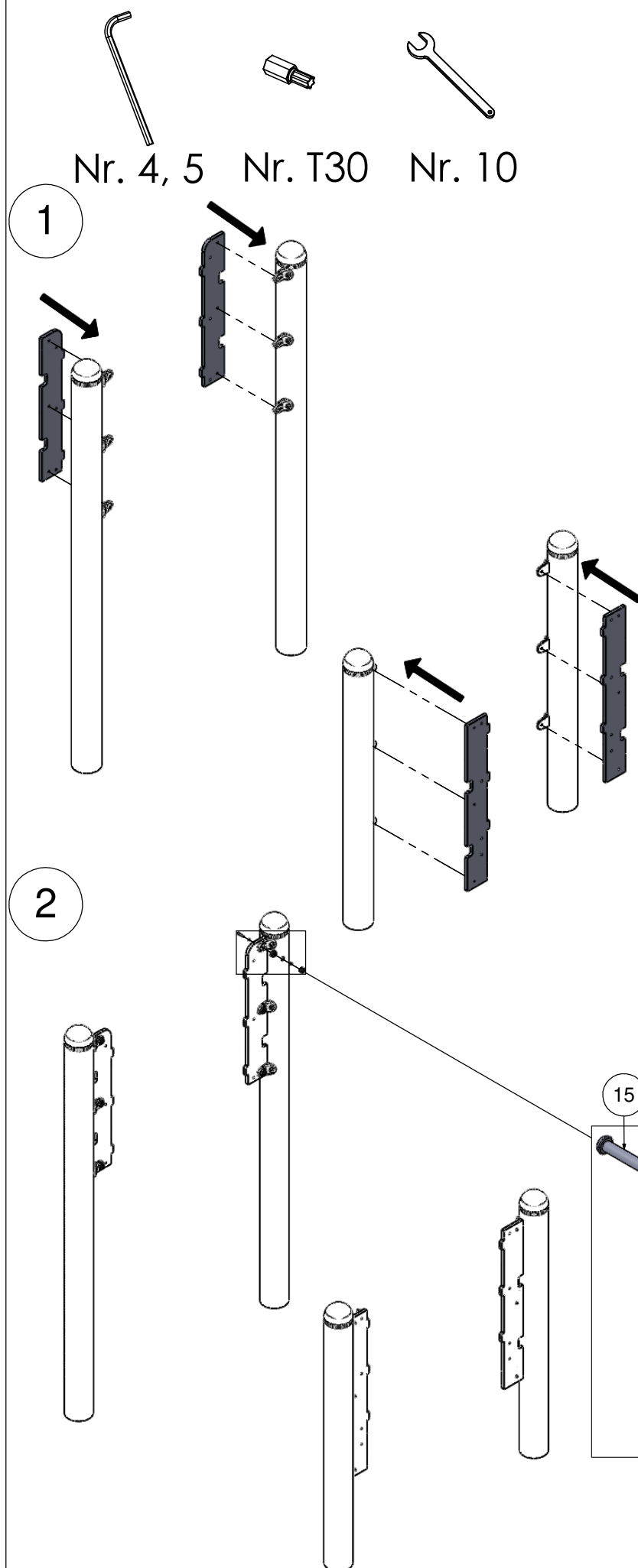
4



5

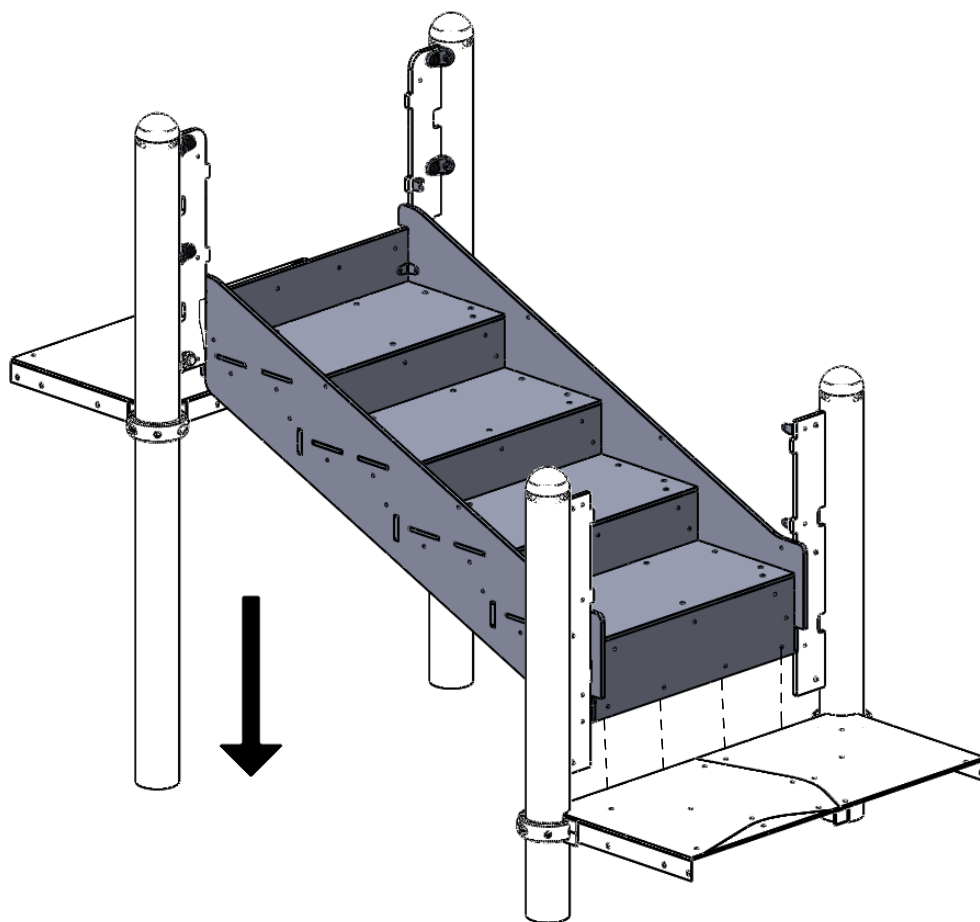


# INST\_12\_31

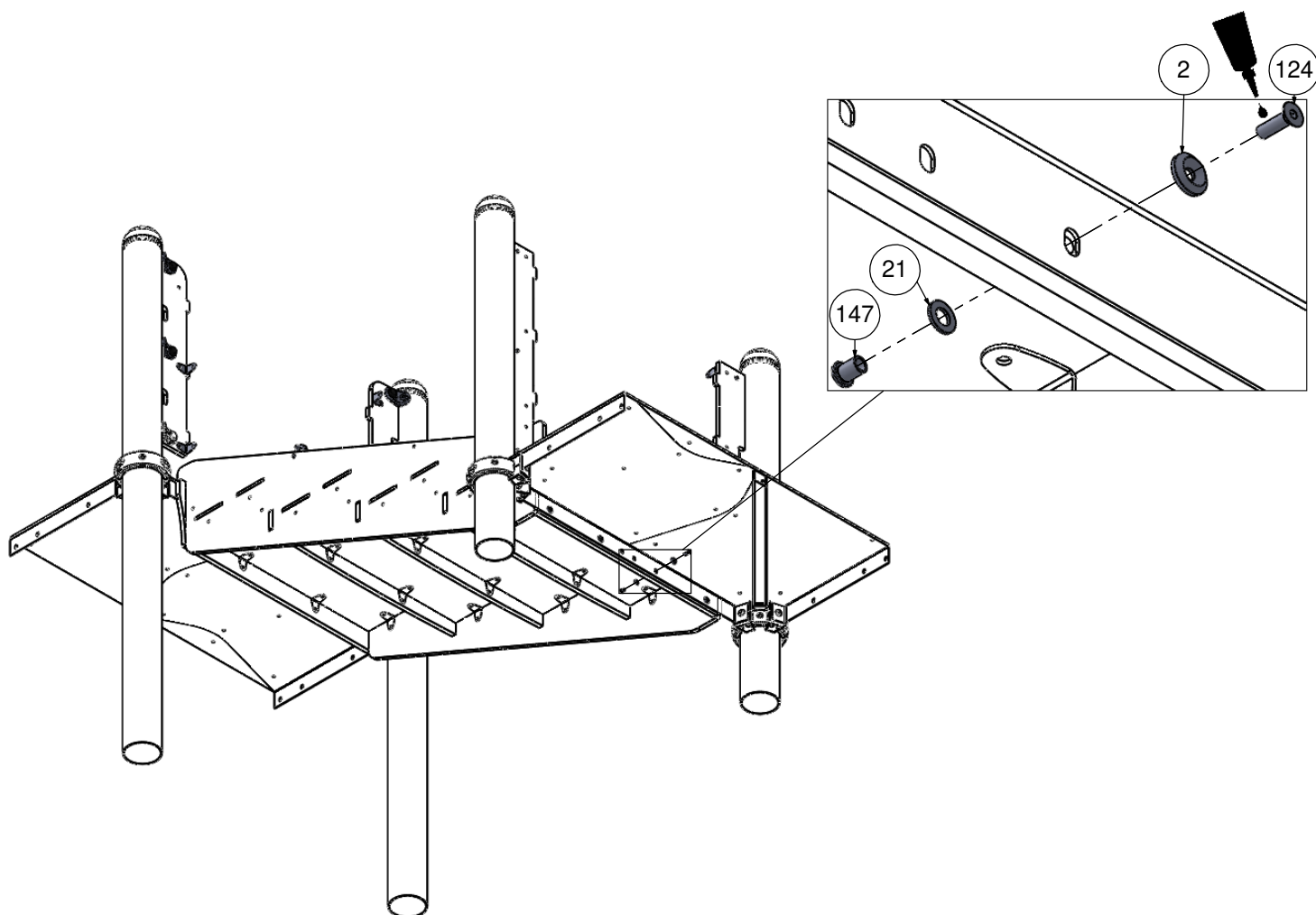


Nr	Σ	Element		
2	8		-	W6x60
9	8		ISO 7380	M6x25
10	12		DIN 9021	6x18
14	28		ISO 7380	M6x12
15	12		ISO 7380	M6x30
16	12		-	K1_d21_B
17	12		-	Z1_d21_B
18	12		DIN 985	M6
21	44		DIN 125	8x16
22	48		DIN 125	6x12
29	14		-	K_5_A2_g2_G_v2
58	1		-	LOCTITE
98	4		-	F20X_44_HP_g13_v1
124	8		DIN 7991	M6x20
147	44		-	M6x10

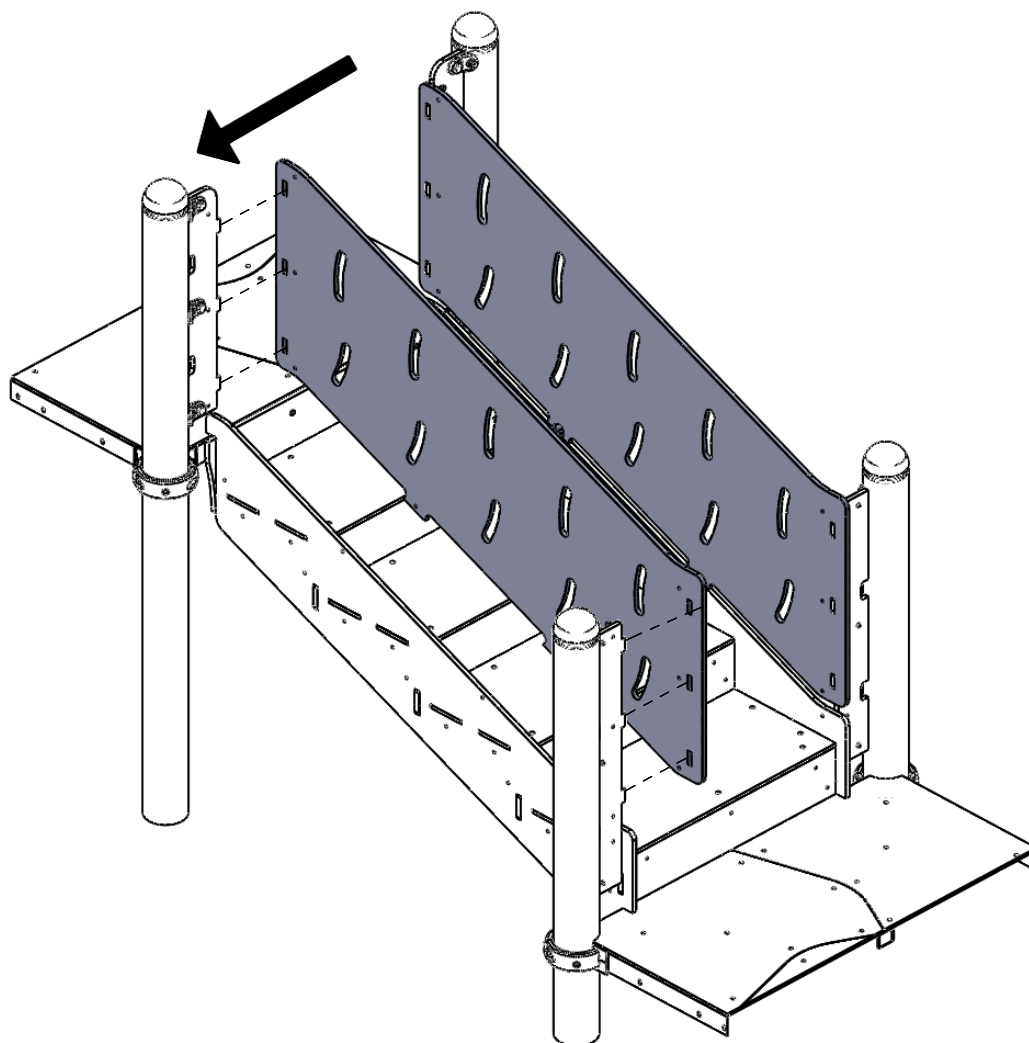
3



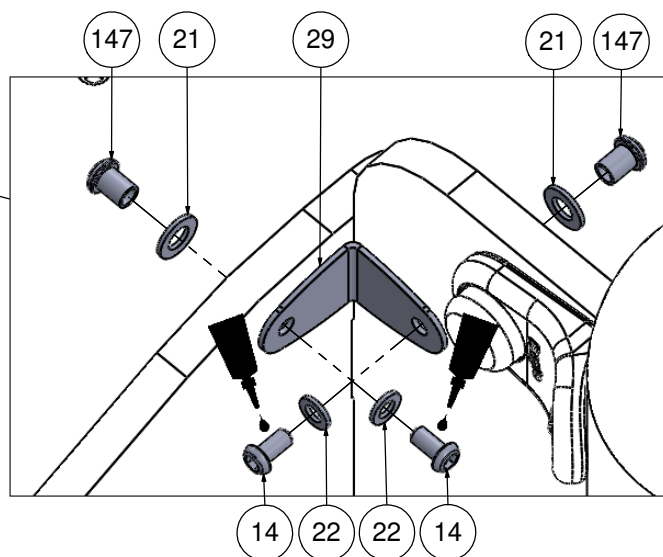
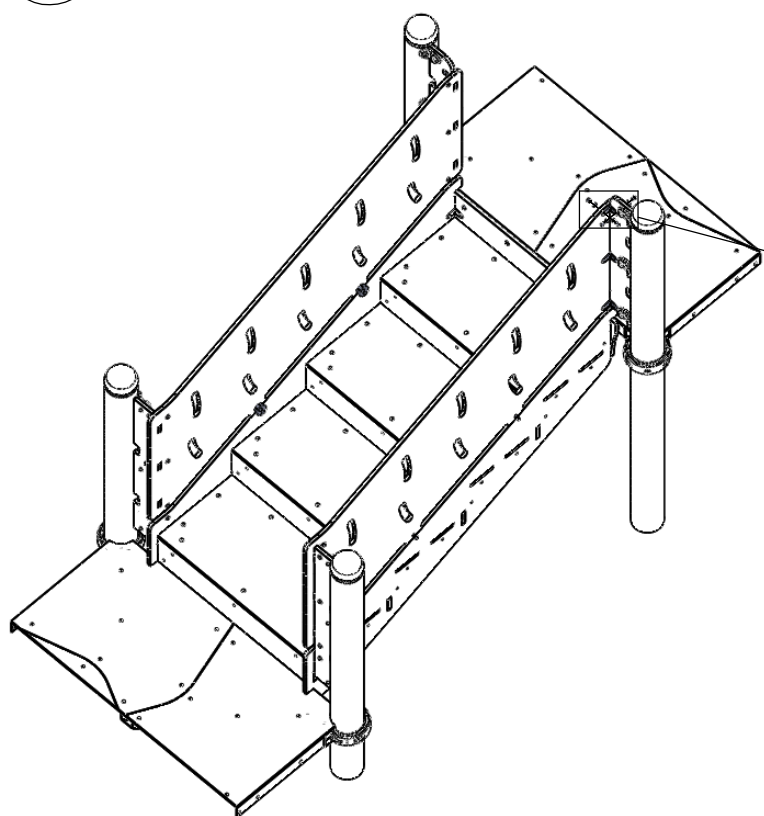
4



5



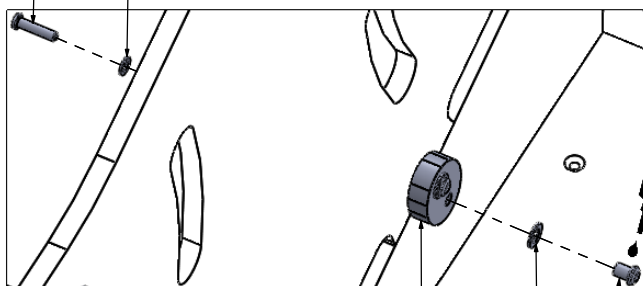
6



7

9

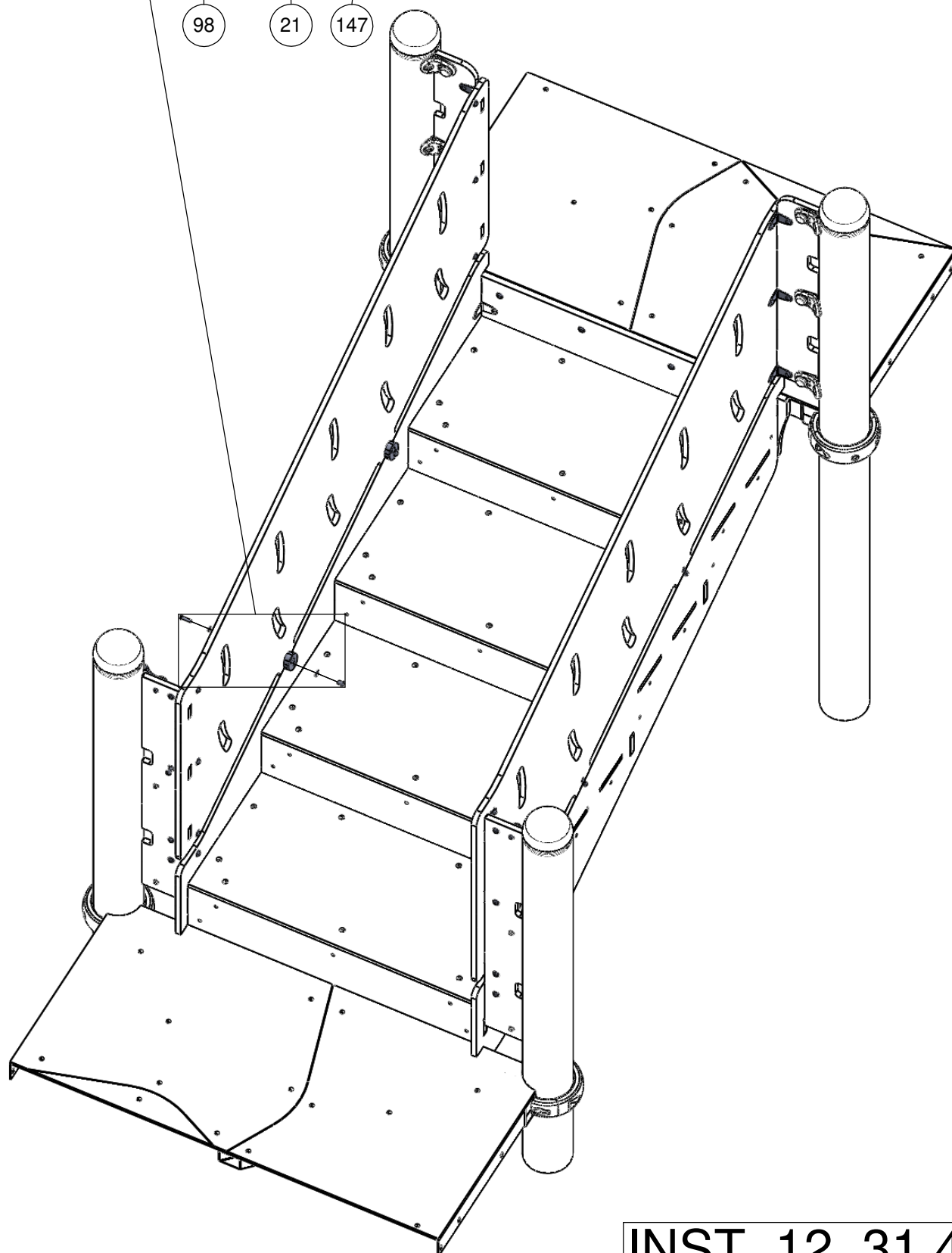
22



98

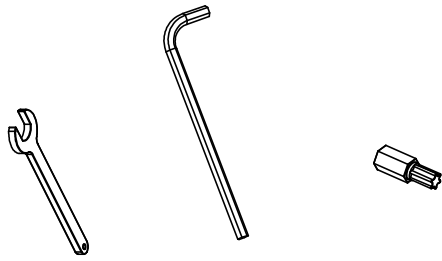
21

147



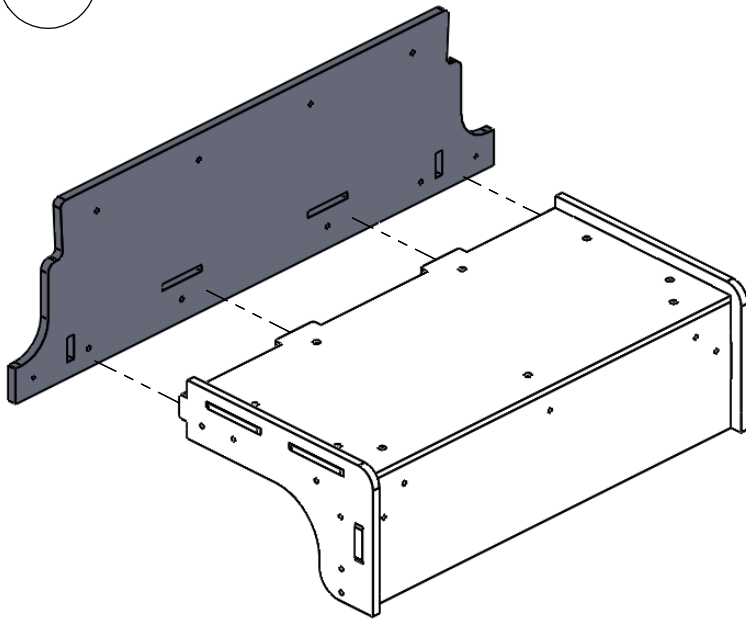


# INST\_12\_39

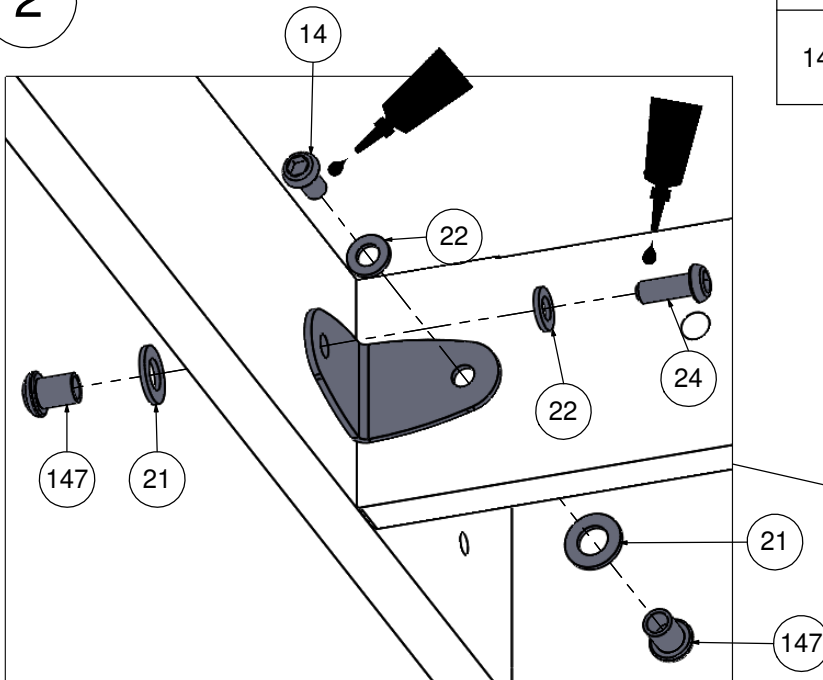


Nr. 10 Nr. 4 Nr. T30

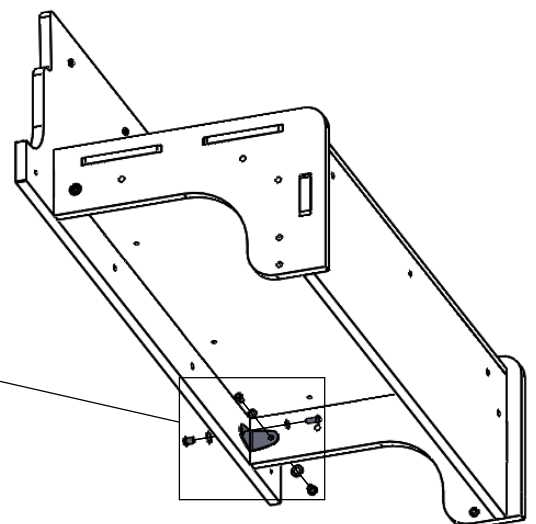
1



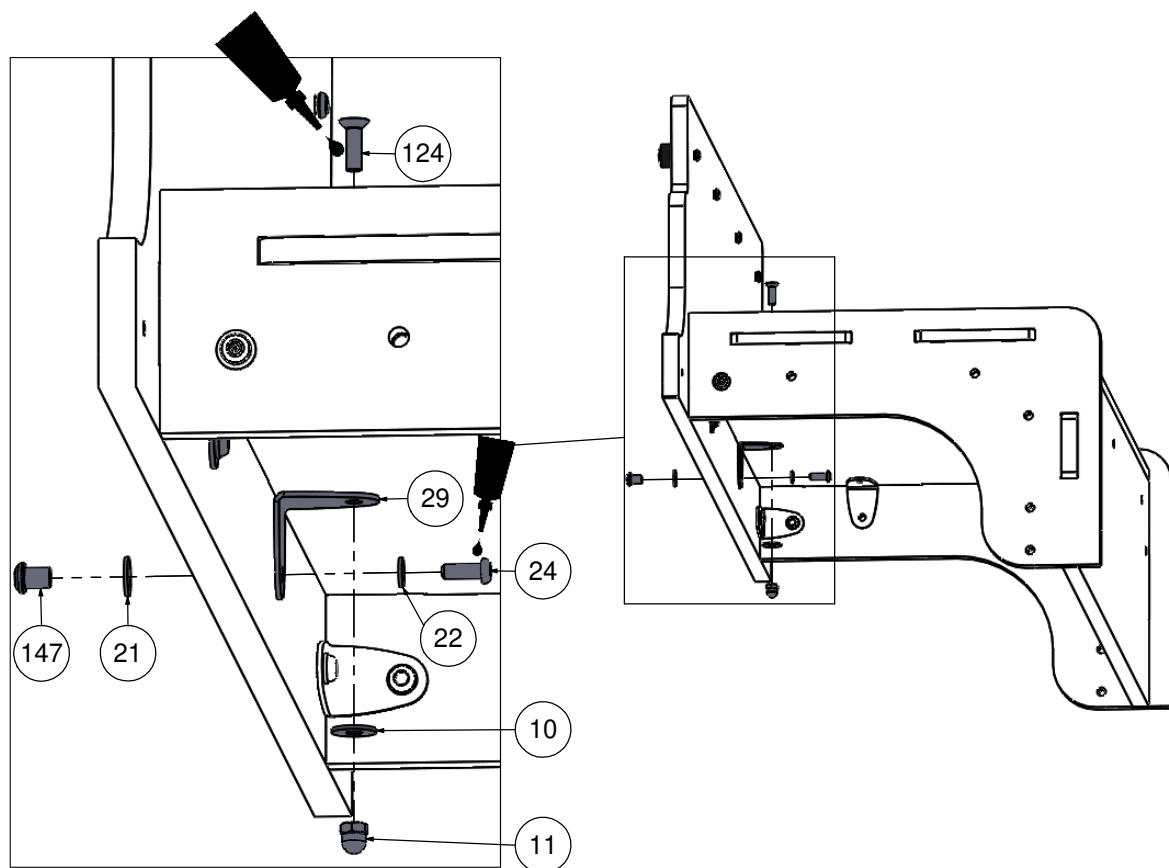
2



Nr	Σ	Element		
10	8		DIN 9021	6x18
11	2		DIN 1587	M6
14	2		ISO 7380	M6x12
15	4		ISO 7380	M6x30
16	6		-	K1_d21_B
17	6		-	Z1_d21_B
18	6		DIN 985	M6 (OC)
21	6		DIN 125	8x16
22	12		DIN 125	6x12
24	4		ISO 7380	M6x16
25	2		ISO 7380	M6x35
29	4		-	K_5_A2_g2_ G_v2
58	1		-	LOCTITE
124	2		DIN 7991	M6x20
147	6		-	M6x10

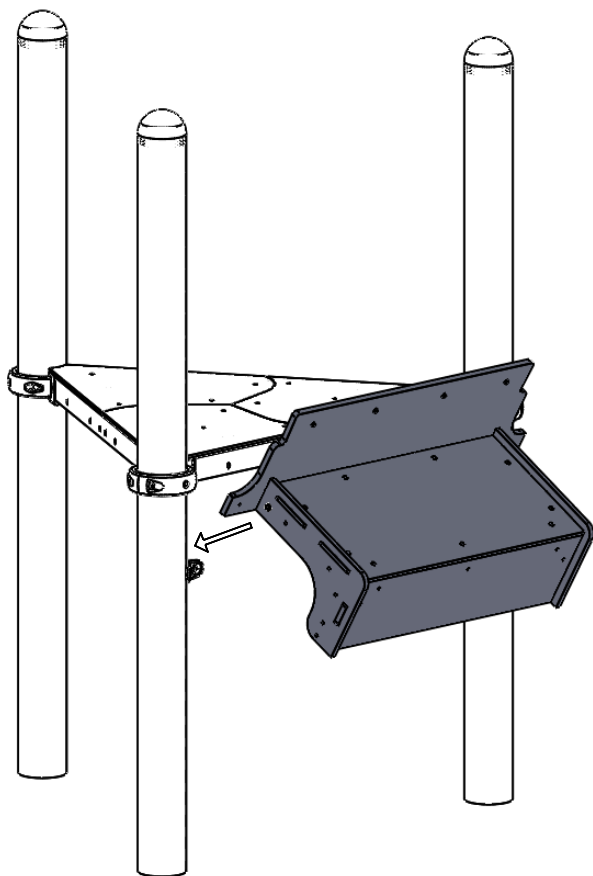


3

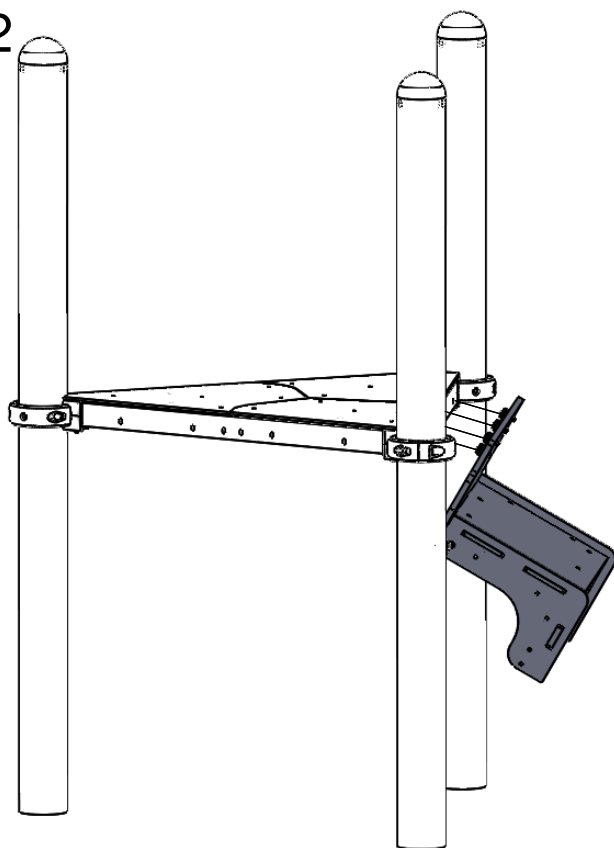


4

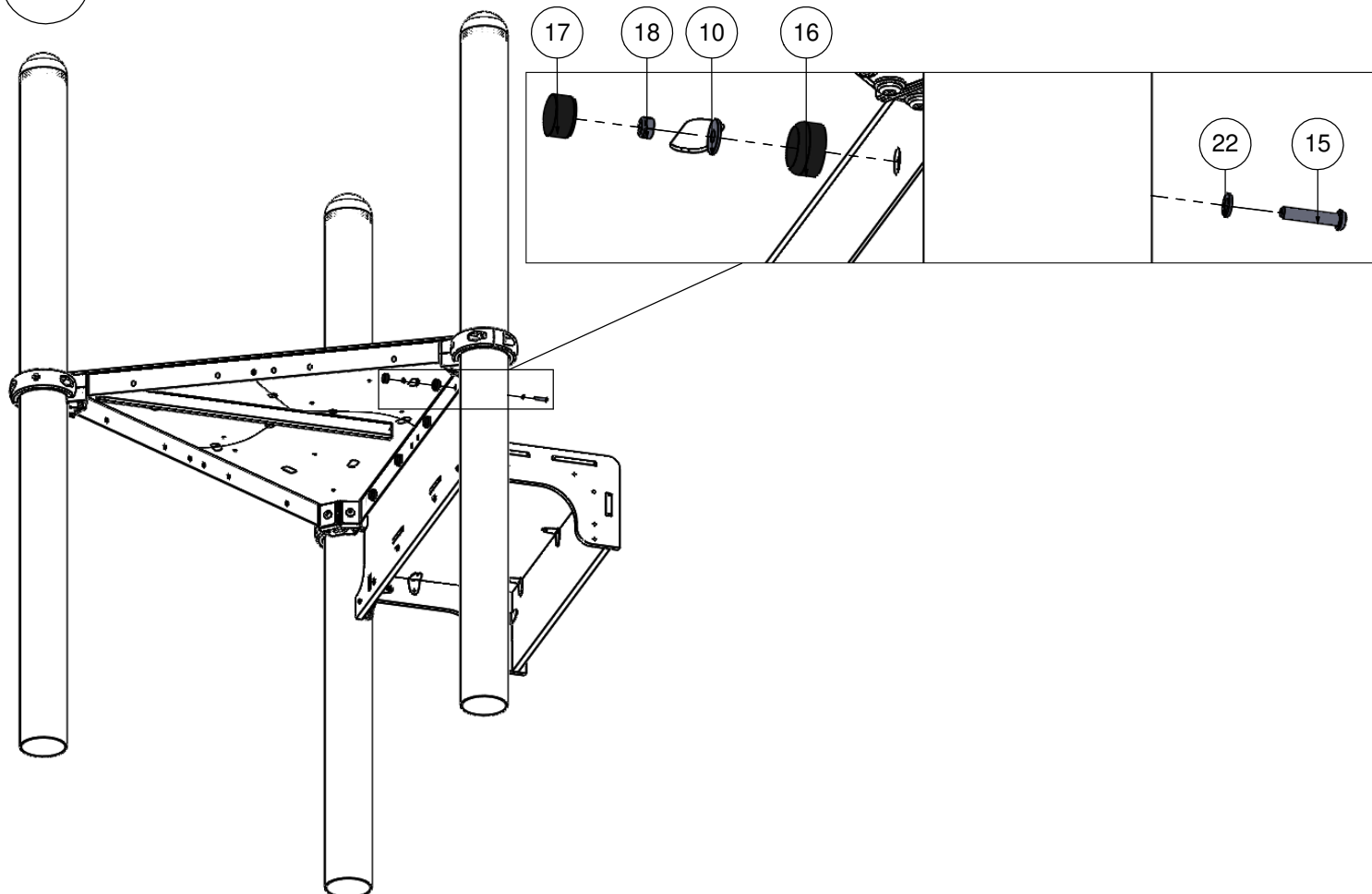
4.1



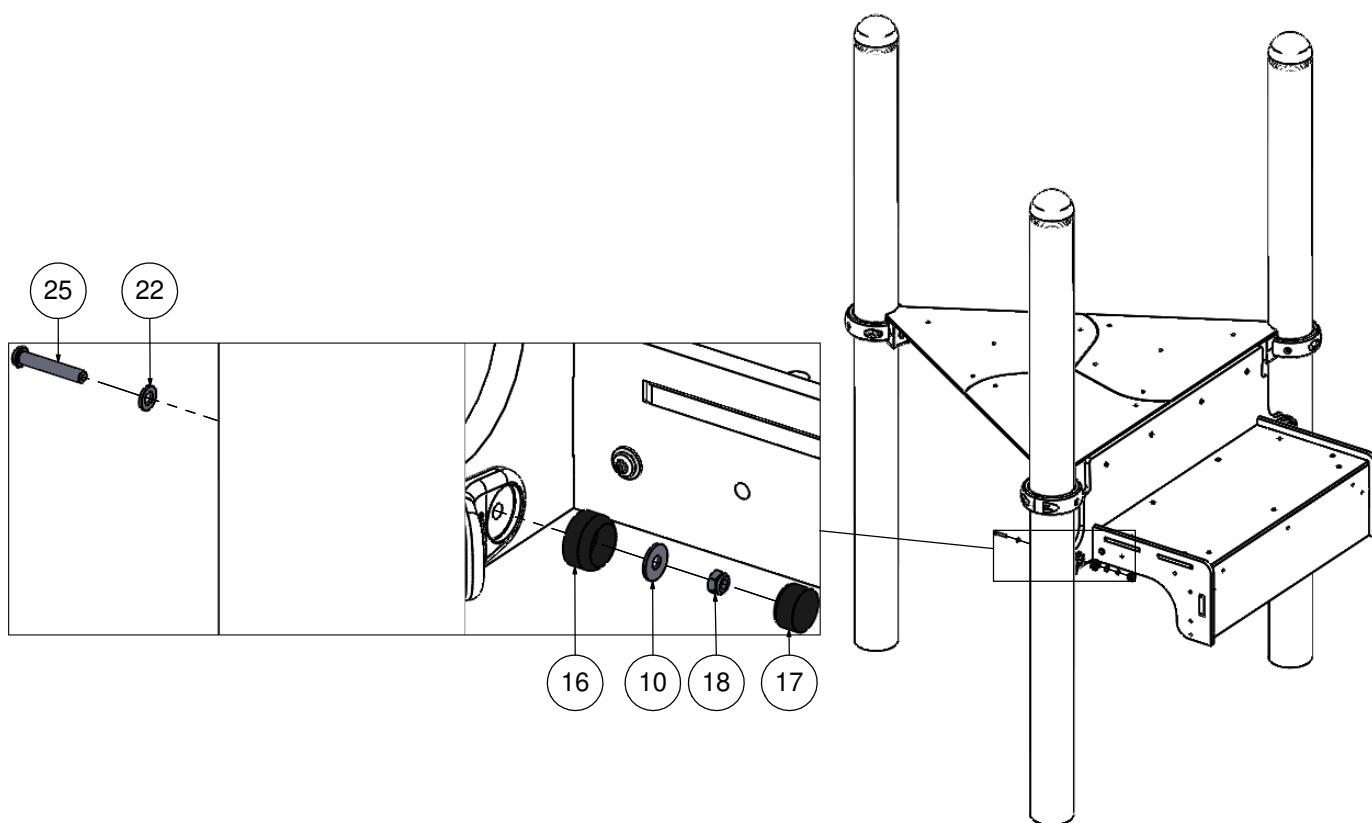
4.2



5









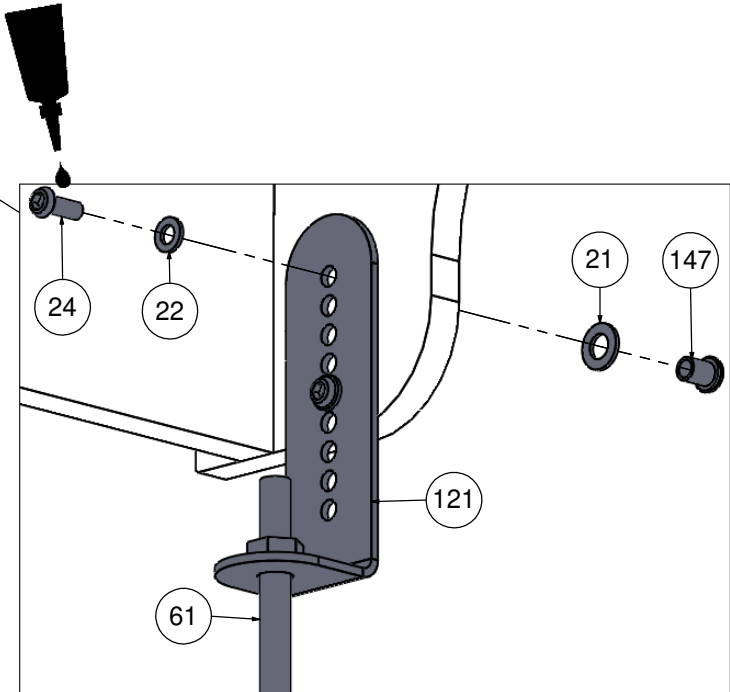
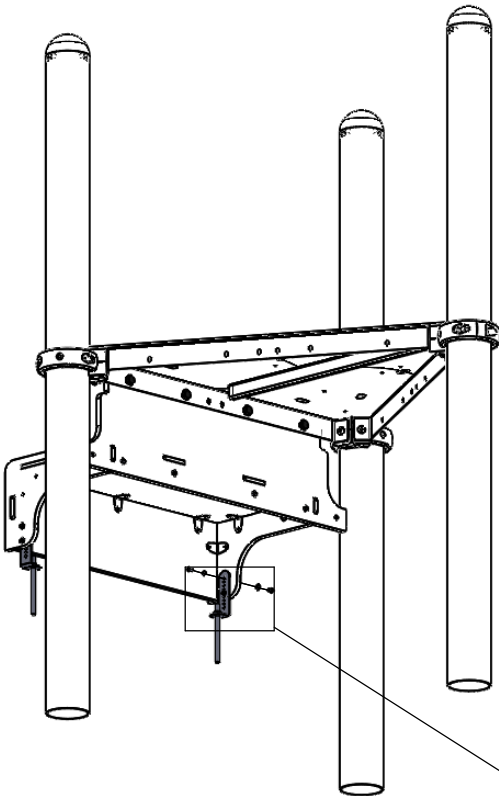
6



7







F5

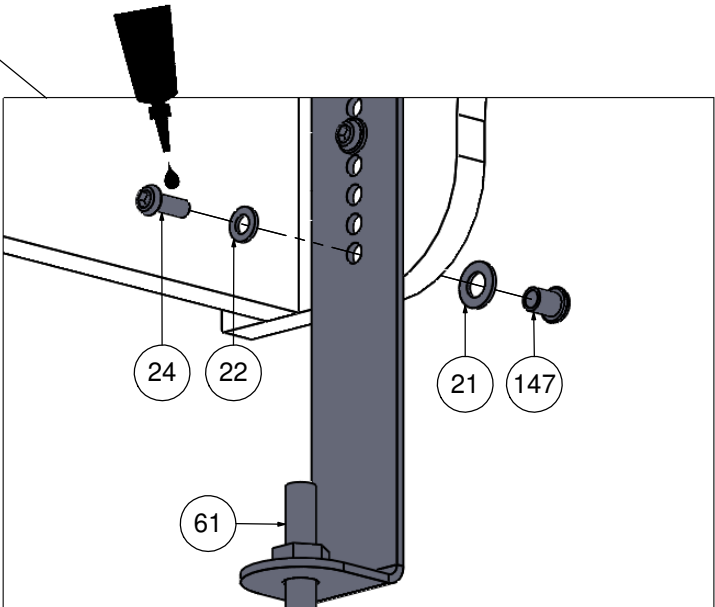
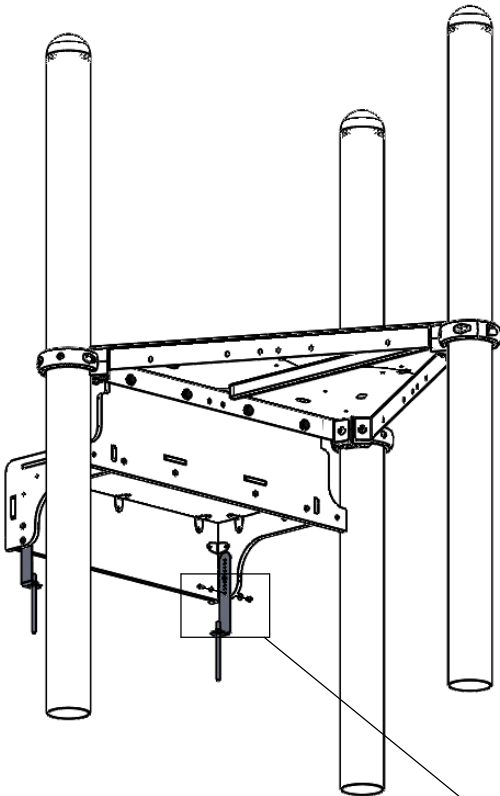
Nr	Σ	Element		
21	4		DIN 125	8x16
22	4		DIN 125	6x12
24	4		ISO 7380	M6x16
61	2		-	KL105 (OC)
121	2		-	7100_5_A2_g3_G_v1
147	4		-	M6x10



7






F10

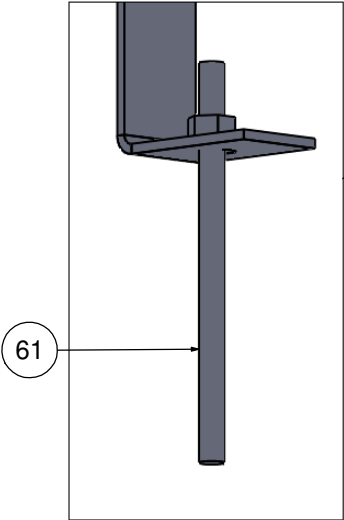
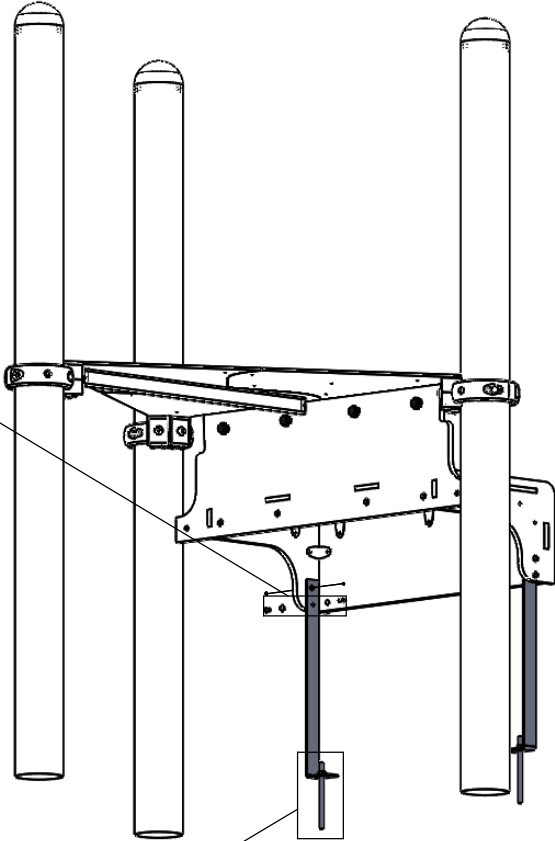
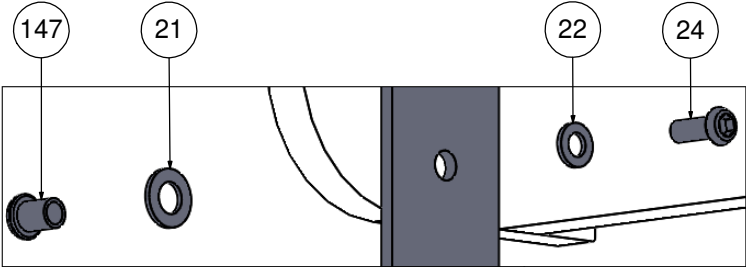
Nr	Σ	Element		
21	4		DIN 125	8x16
22	4		DIN 125	6x12
24	4		ISO 7380	M6x16
61	2		-	KL105 (OC)
136	2		-	1100_6_A2_g3_G_v2
147	4		-	M6x10



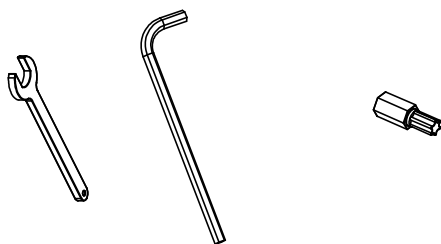
7

F40

Nr	Σ	Element		
21	4		DIN 125	8x16
22	4		DIN 125	6x12
24	4		ISO 7380	M6x16
61	2		-	KL105 (OC)
147	4		-	M6x10


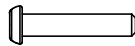







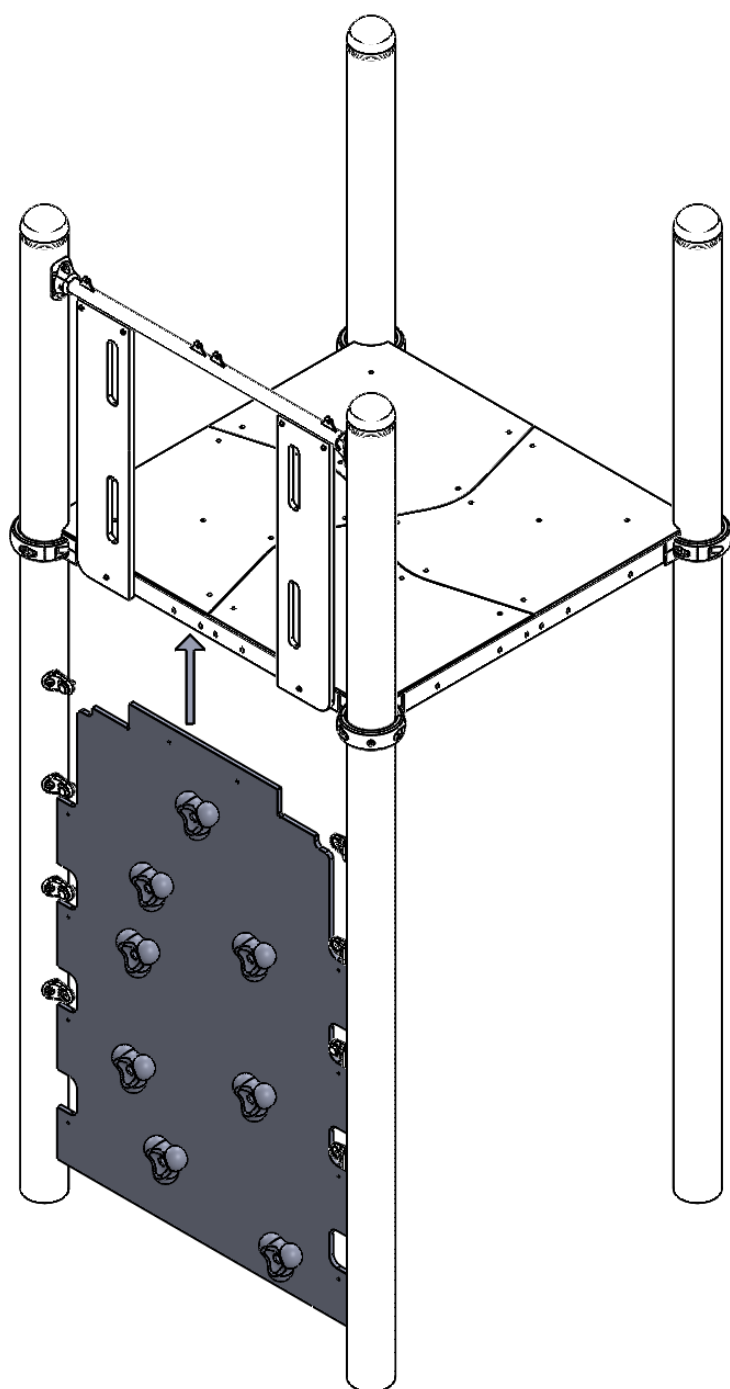
# INST\_12\_53



Nr. 10    Nr. 4    Nr. T30

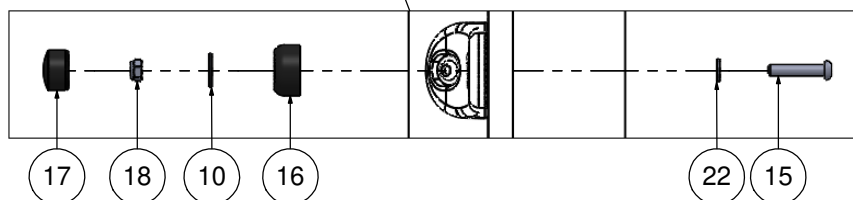
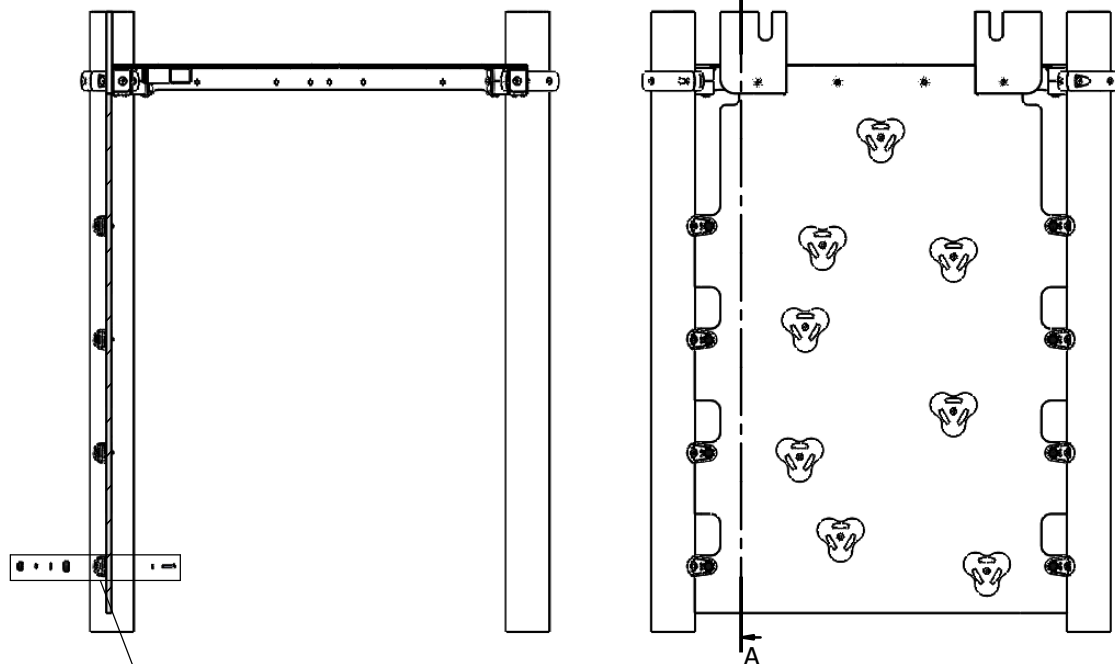
1

Nr	Σ	Element		
10	10		DIN 9021	6x18
15	10		ISO 7380	M6x30
16	10		-	K1_d21_B
17	10		-	Z1_d21_B
18	10		DIN 985	M6 (OC)
22	10		DIN 125	6x12
58	1		-	LOCTITE

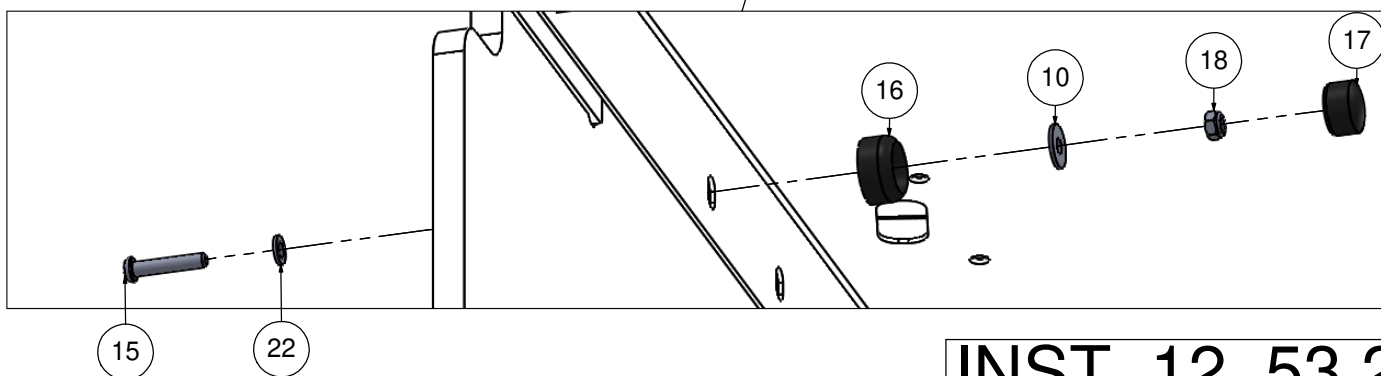
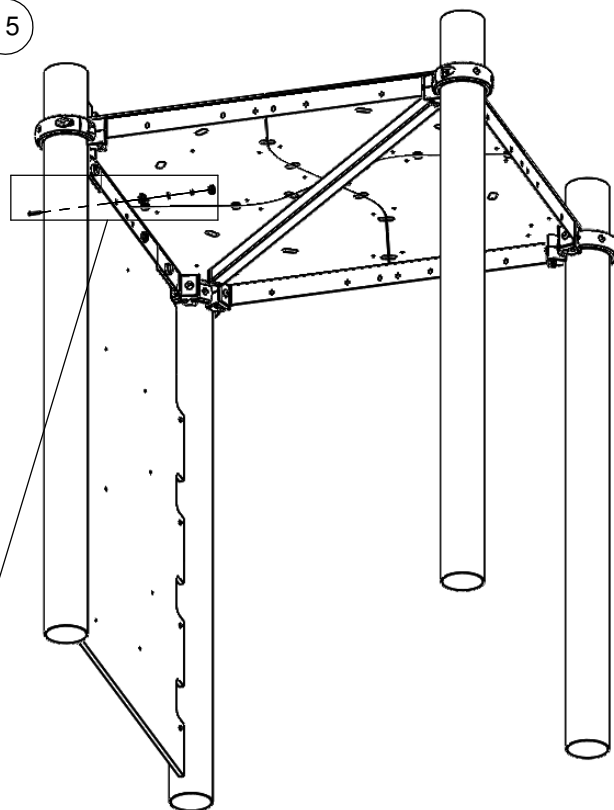


A-A

2

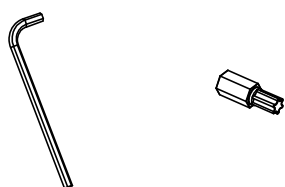


3



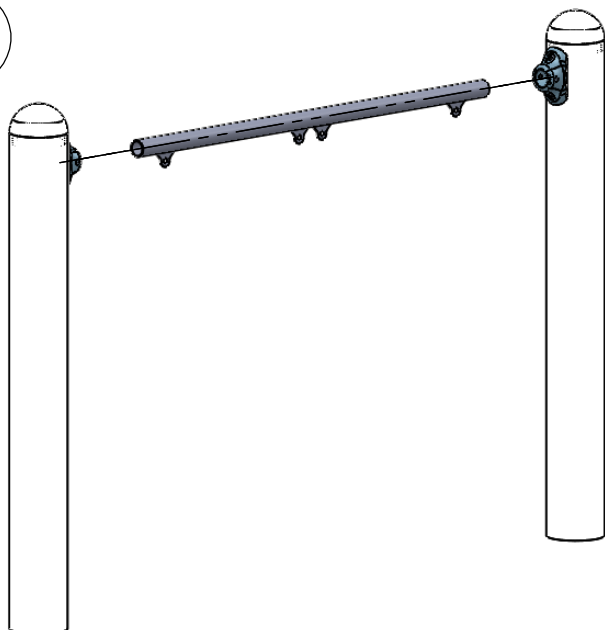


# INST\_12\_54

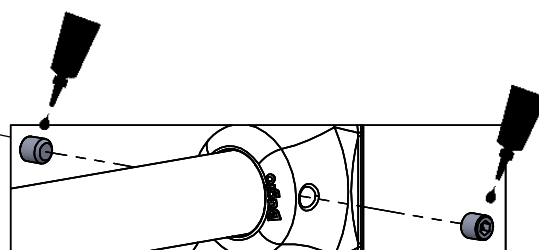
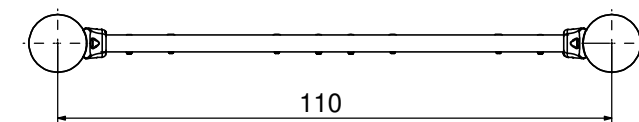
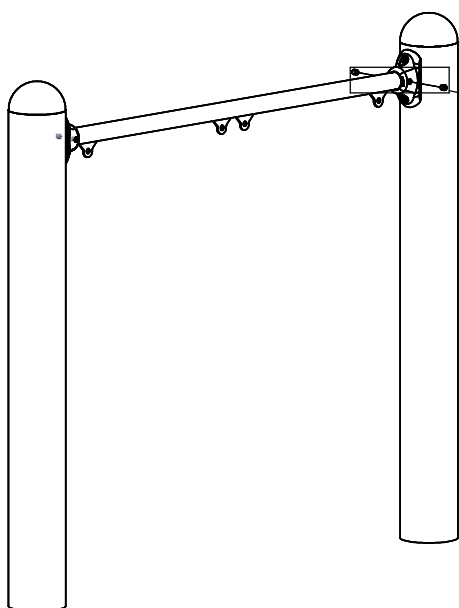


Nr. 4, 5 Nr. T30

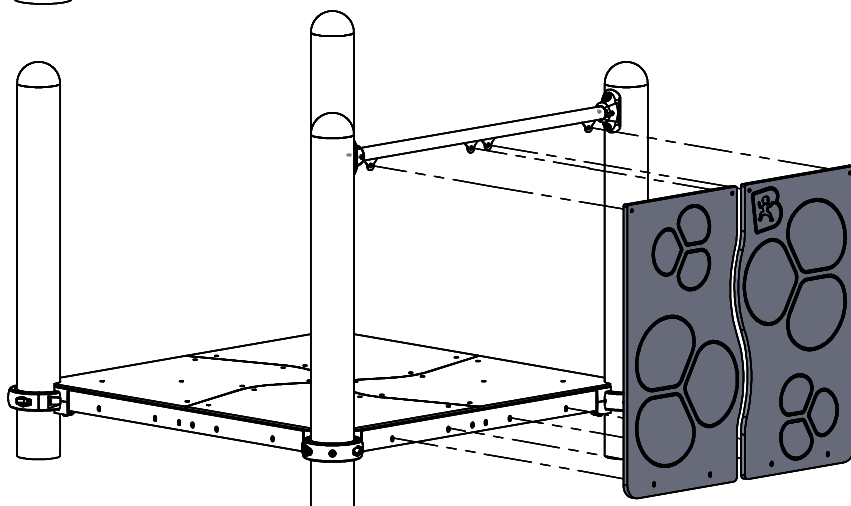
1


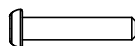







2



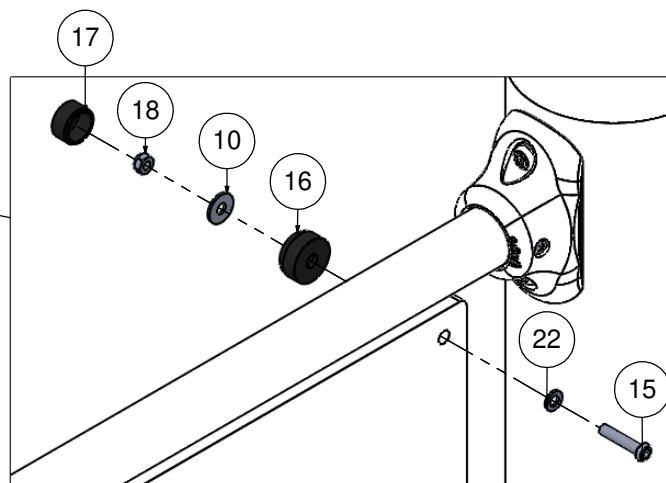
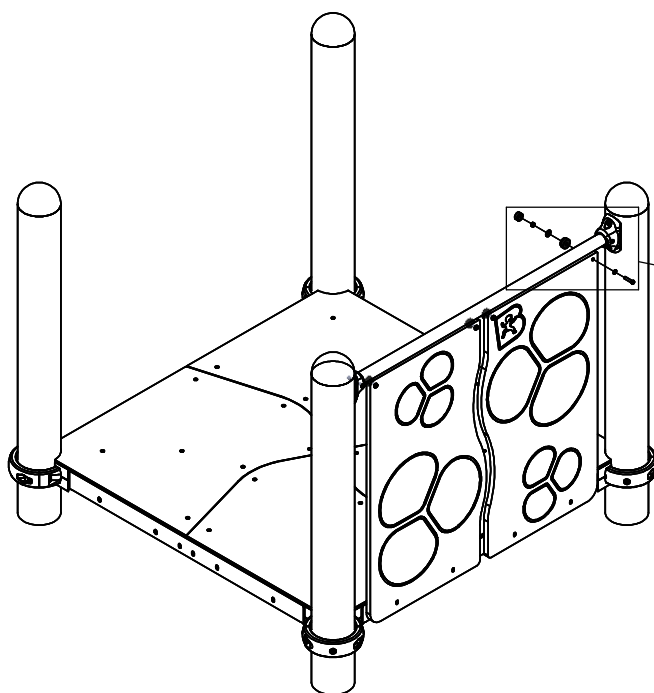
3



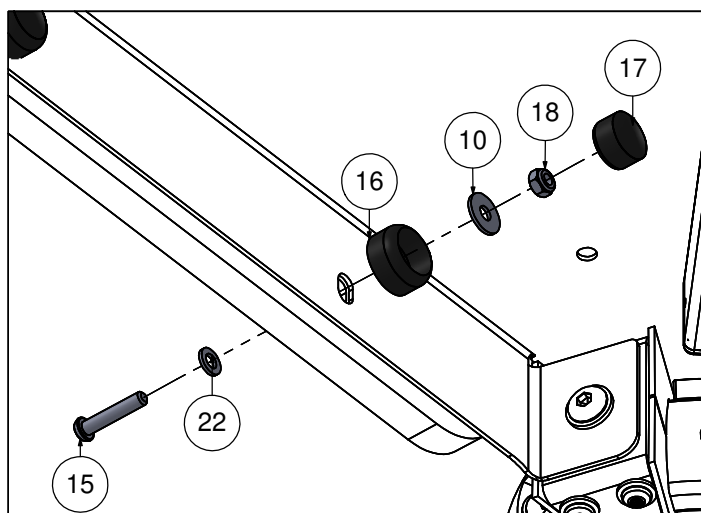
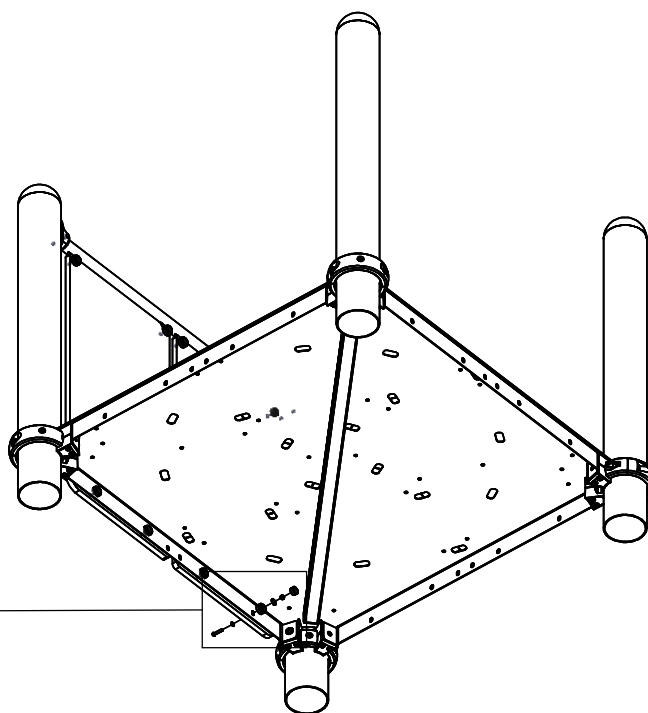
Nr	Σ	Element		
10	8		DIN 9021	6x18
15	8		ISO 7380	M6x30
16	8		-	K1_d21_B
17	8		-	Z1_d21_B
18	8		DIN 985	M6 (OC)
22	8		DIN 125	6x12
58	1		-	LOCTITE

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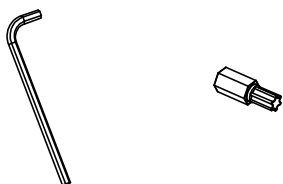
4



5

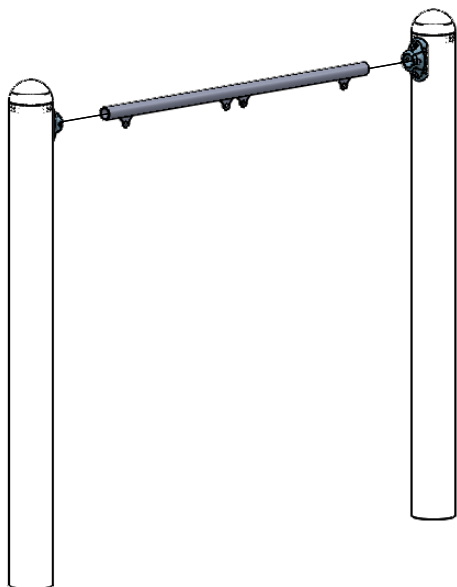



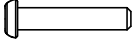





# INST\_12\_54C

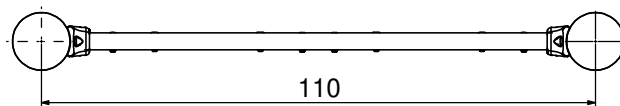


Nr. 4, 5 Nr. T30

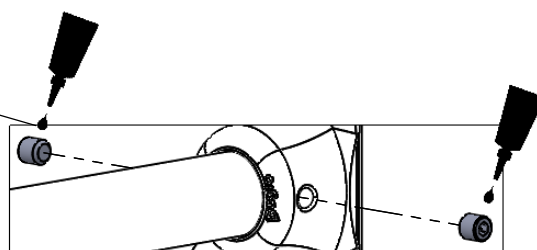
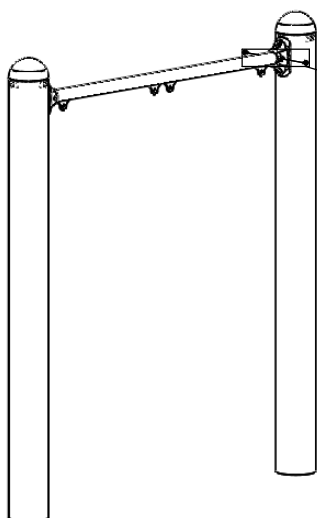
1



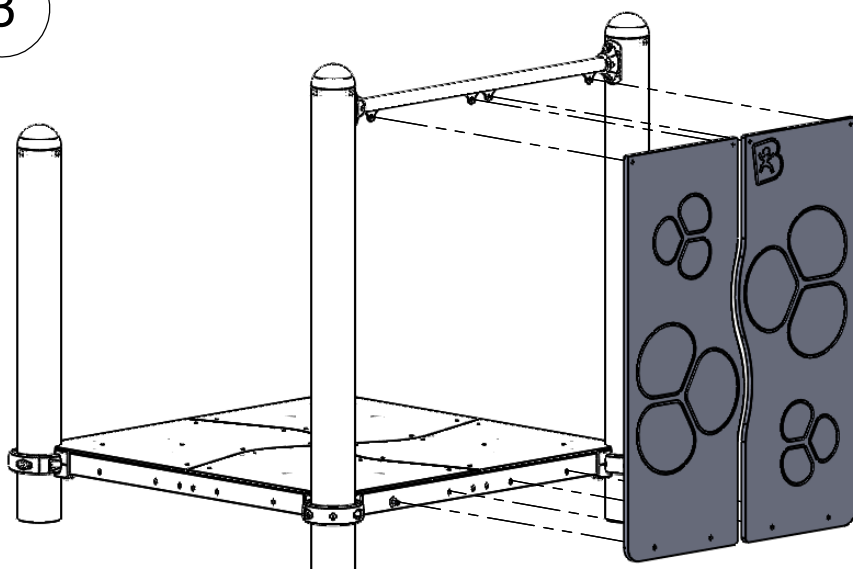
Nr	Σ	Element		
10	8		DIN 9021	6x18
15	8		ISO 7380	M6x30
16	8		-	K1_d21_B
17	8		-	Z1_d21_B
18	8		DIN 985	M6 (OC)
22	8		DIN 125	6x12
58	1		-	LOCTITE



2

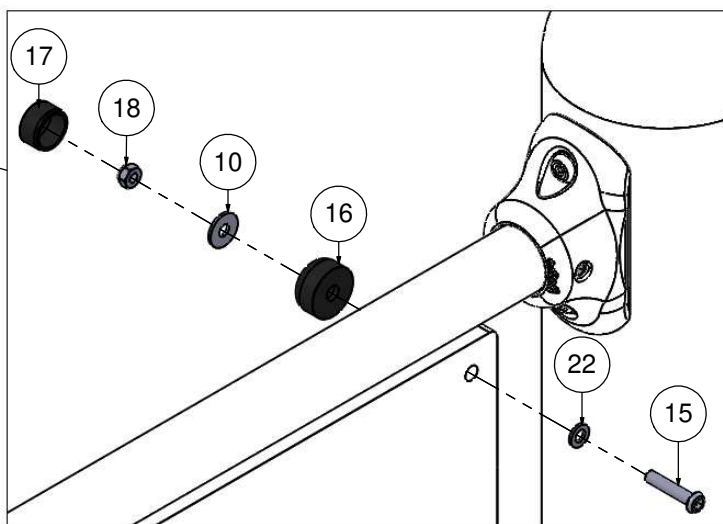
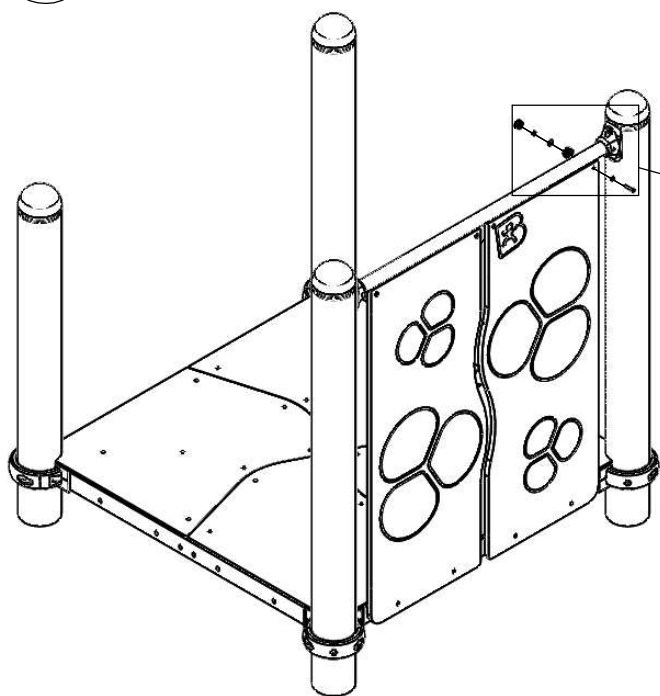


3

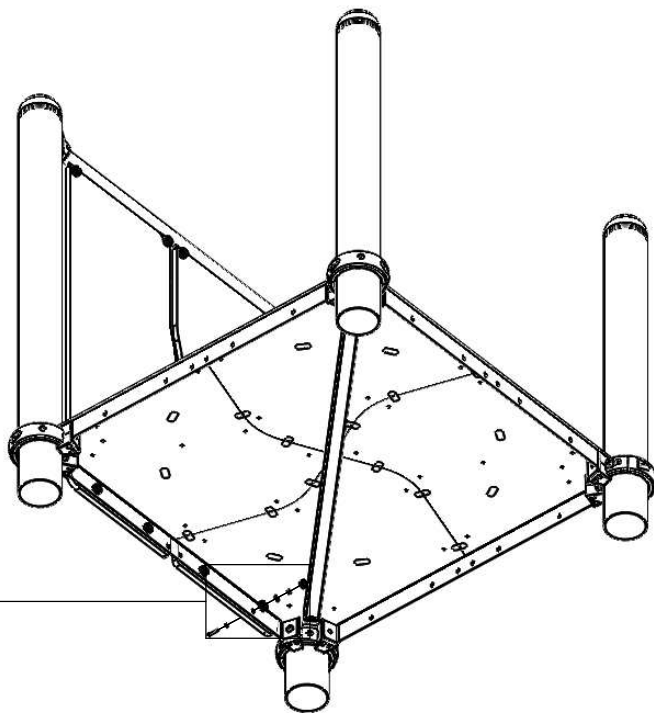
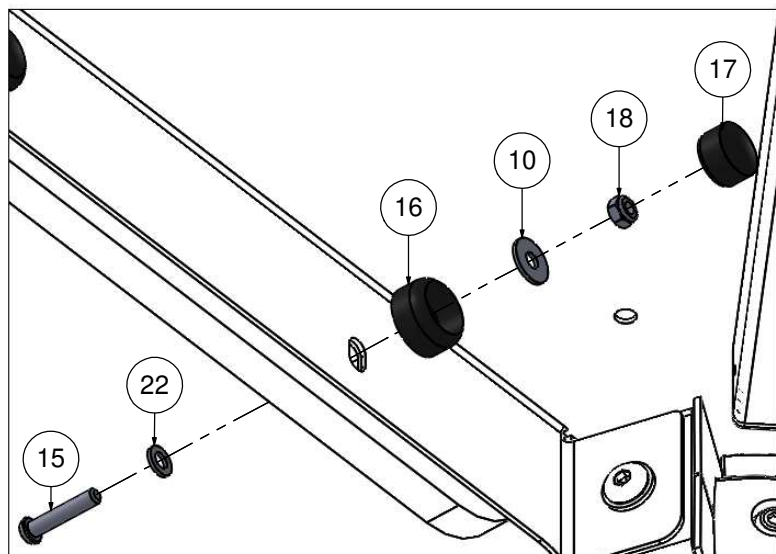






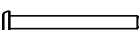
INST\_12\_54C 1/2

4

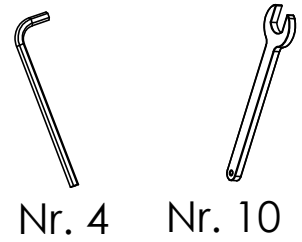
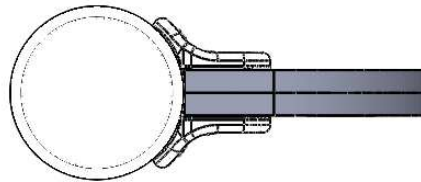
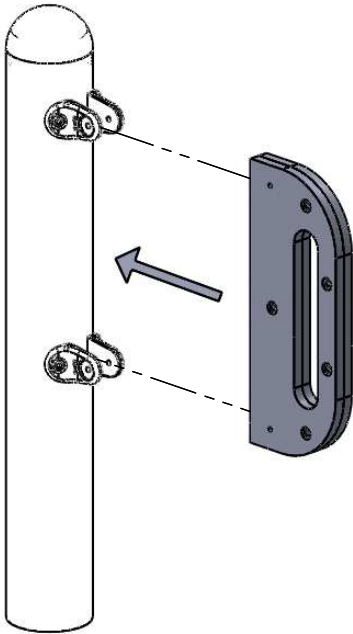


5

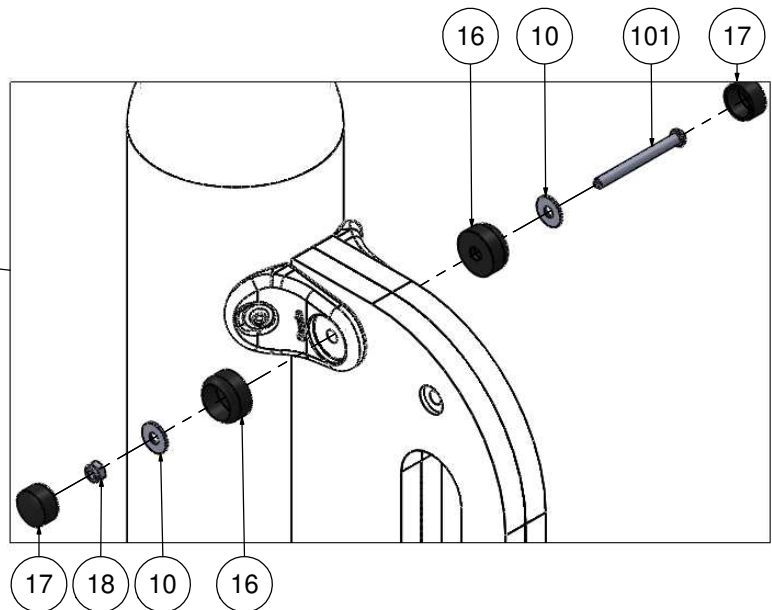
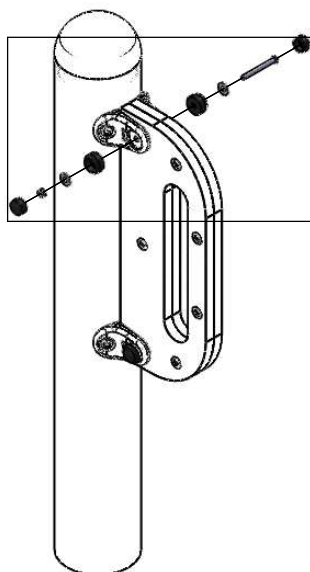


Nr	Σ	Element		
10	4		DIN 9021	6x18
16	4		-	K1_d21_B
17	4		-	Z1_d21_B
18	2		DIN 985	M6
101	2		ISO 7380	M6x60

1



2

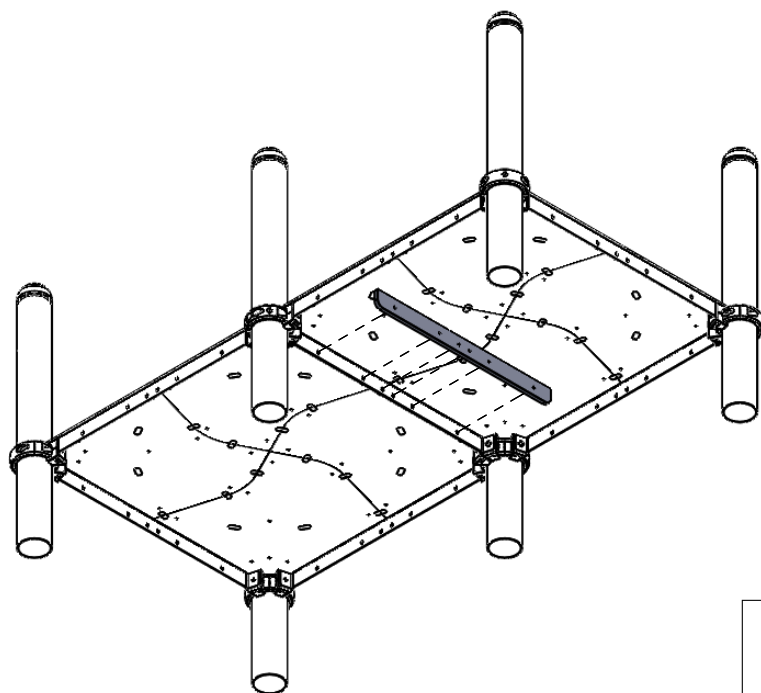











Nr. 4

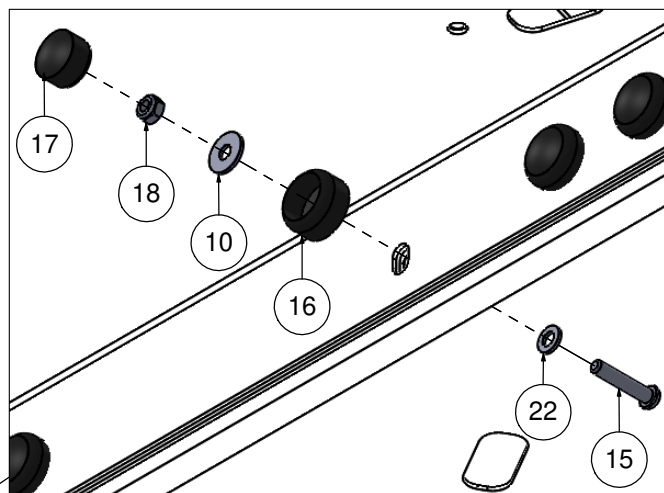
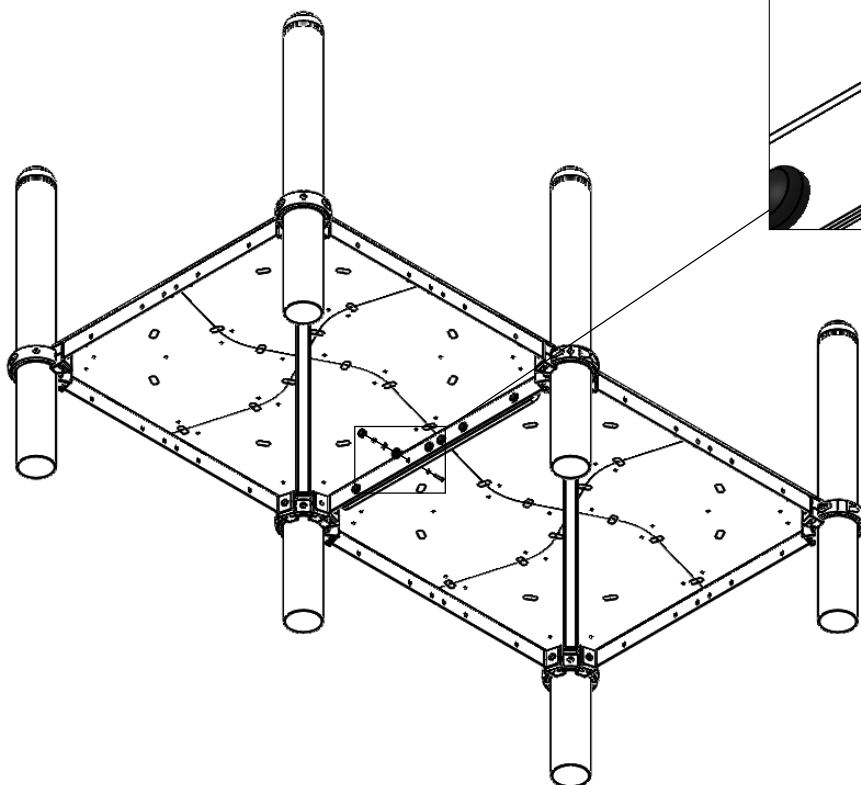
Nr. T30

1

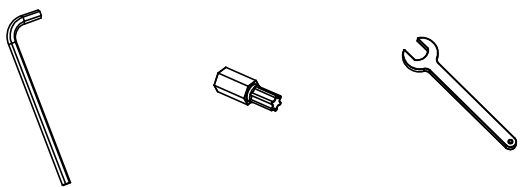


Nr	Σ	Element		
10	6		DIN 9021	6x18
15	6		ISO 7380	M6x30
16	6		-	K1_d21_B
17	6		-	Z1_d21_B
18	6		DIN 985	M6 (OC)
22	6		DIN 125	6x12
58	1		-	LOCTITE

2

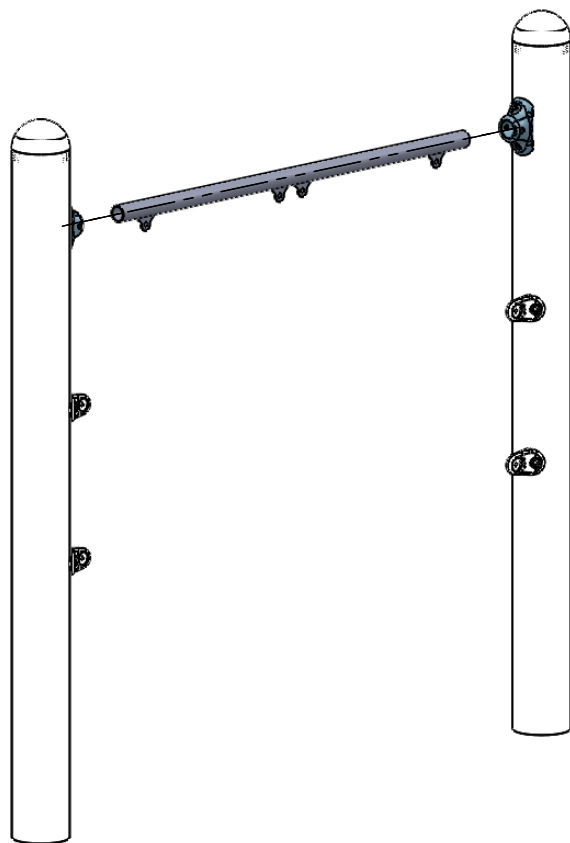


# INST\_12\_66

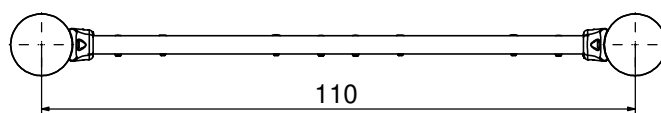


Nr. 4, 5   Nr. T30   Nr. 10

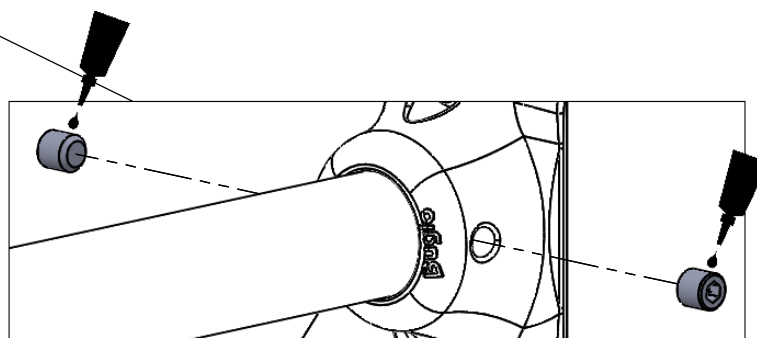
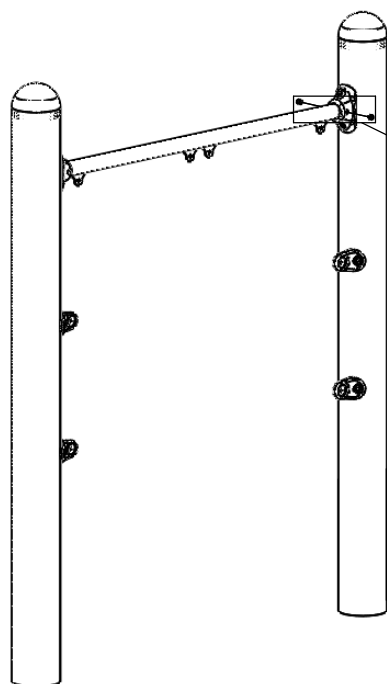
1



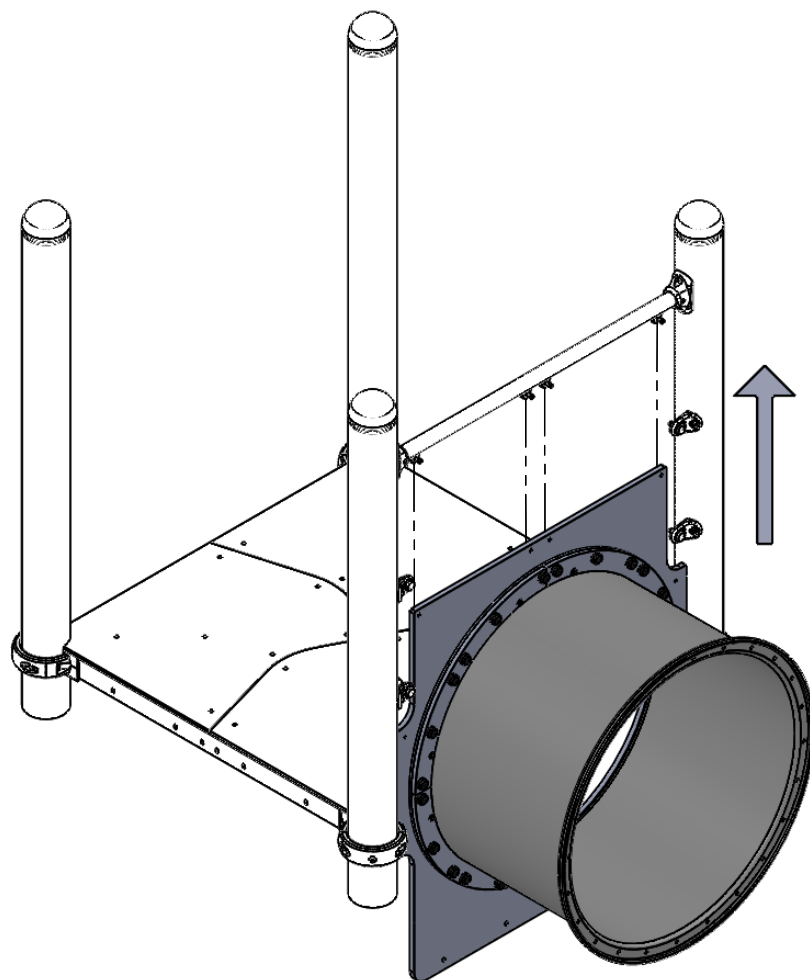
Nr	Σ	Element		
10	12		DIN 9021	6x18
15	8		ISO 7380	M6x30
16	12		-	K1_d21_B
17	12		-	Z1_d21_B
18	12		DIN 985	M6 (OC)
22	12		DIN 125	6x12
25	4		ISO 7380	M6x35
58	1		-	LOCTITE



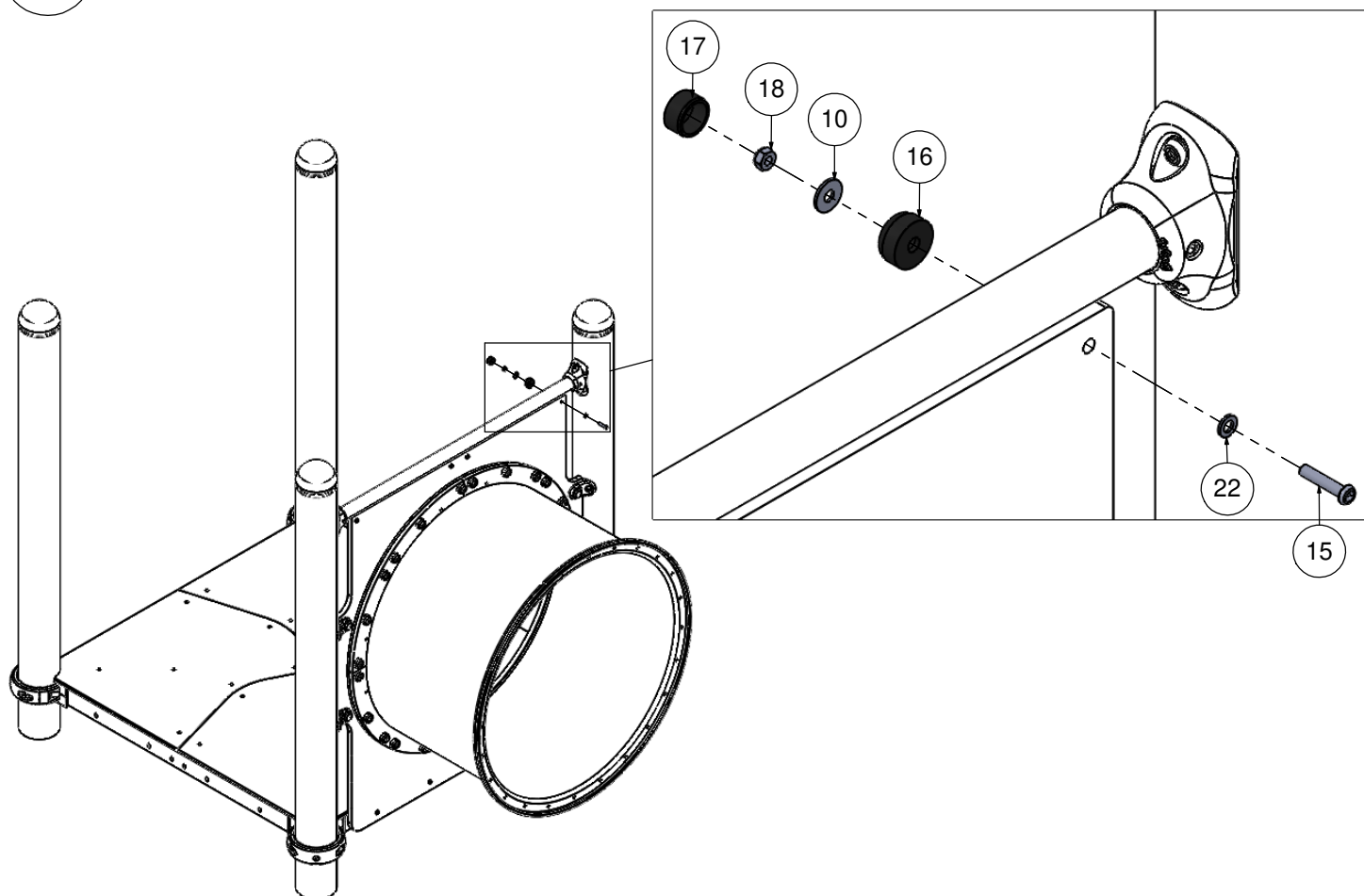
2



3

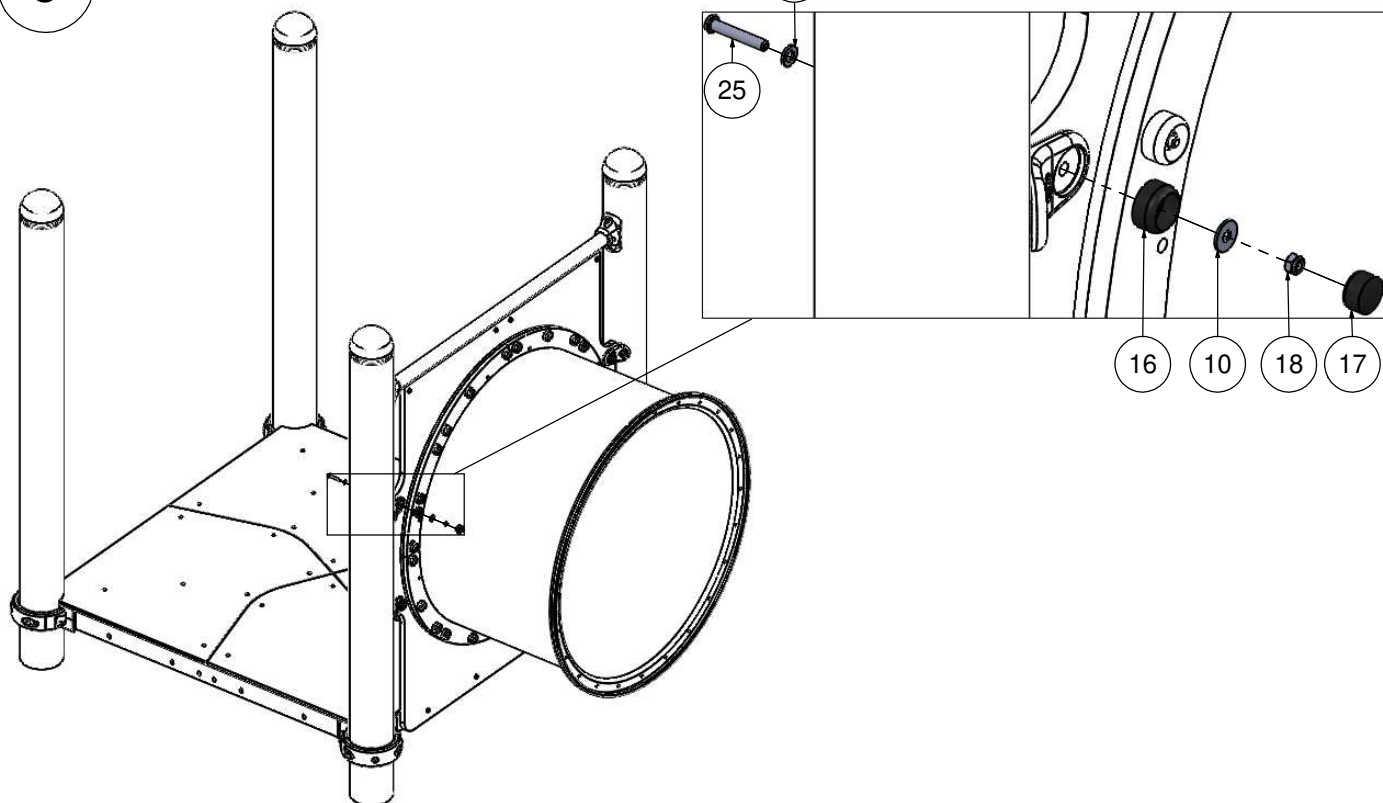


4

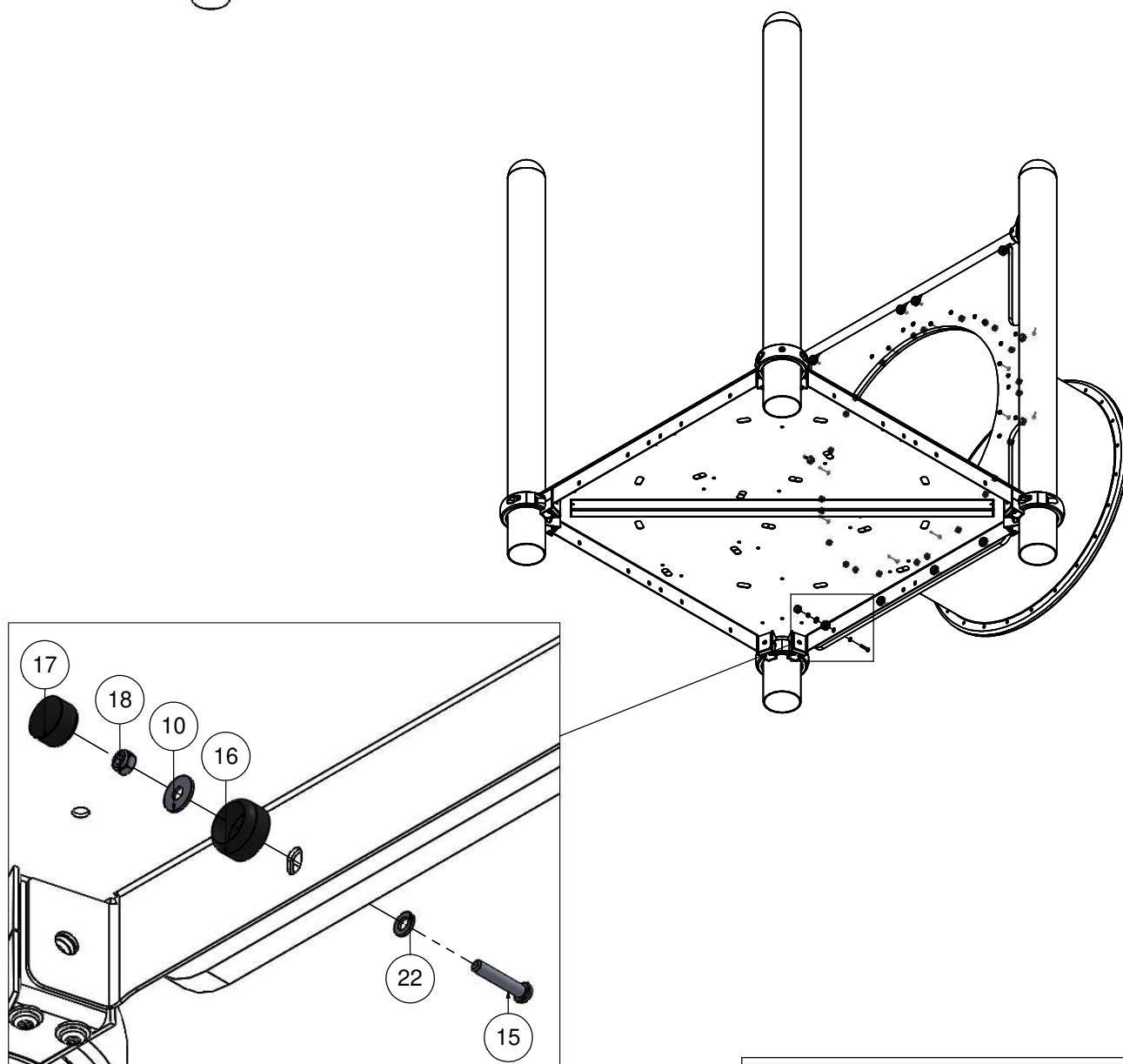




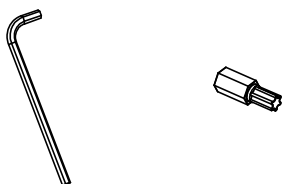
5



6

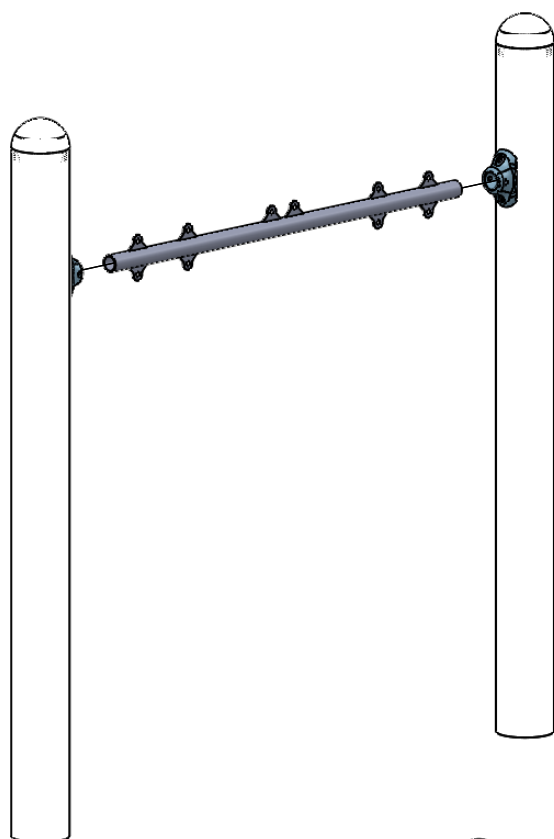


# INST\_12\_69

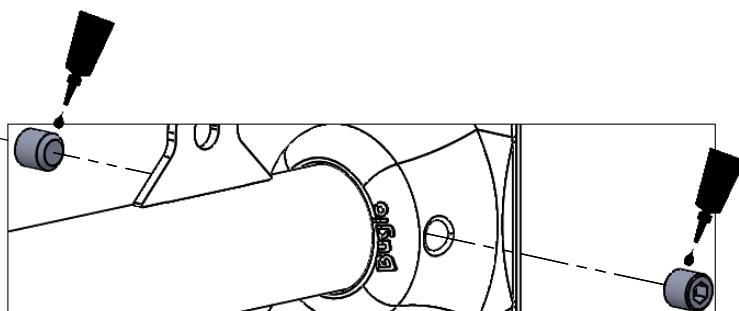
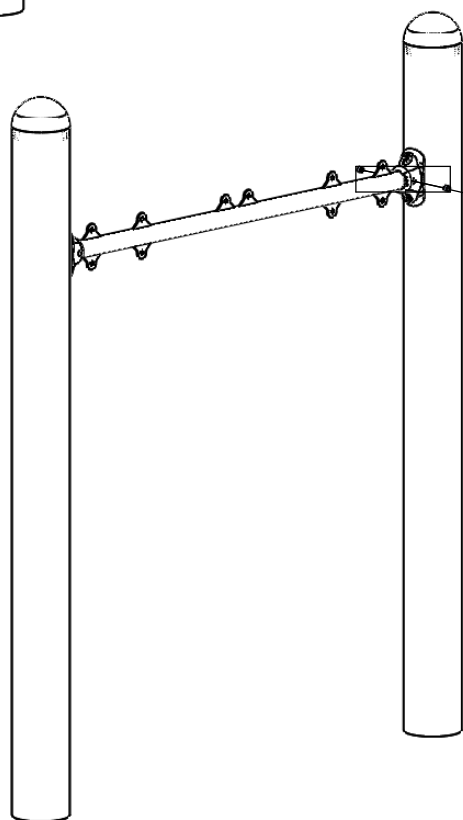













Nr. 4, 5    Nr. T30

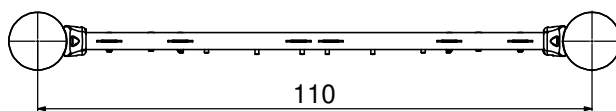
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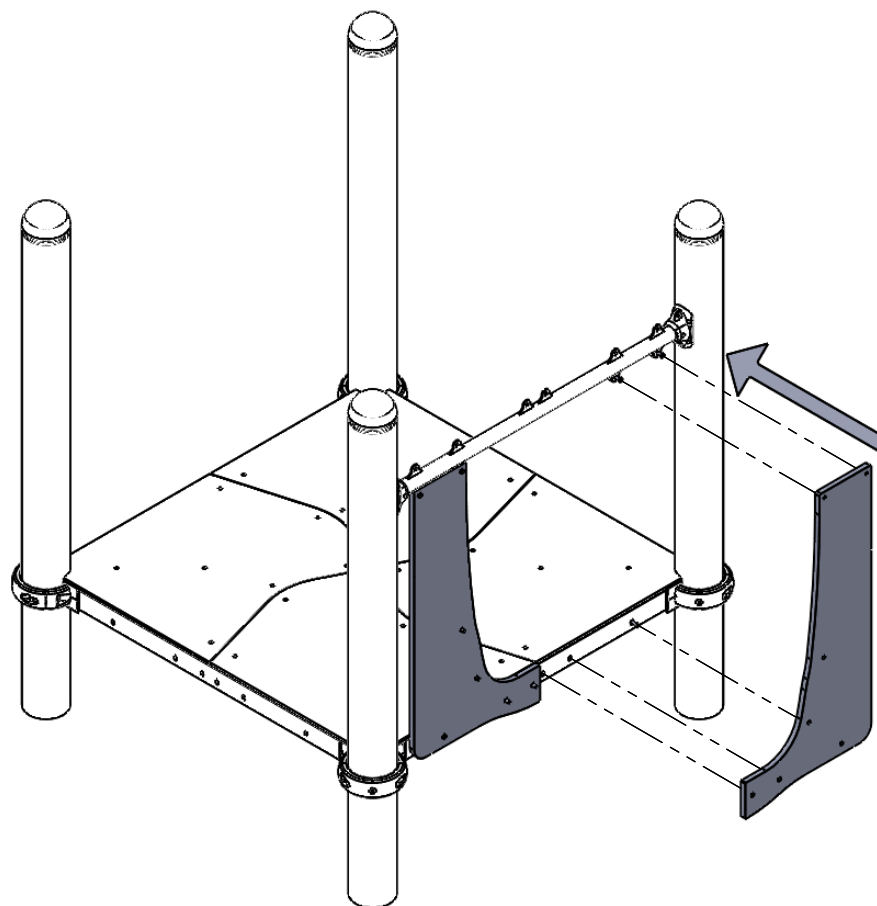
2



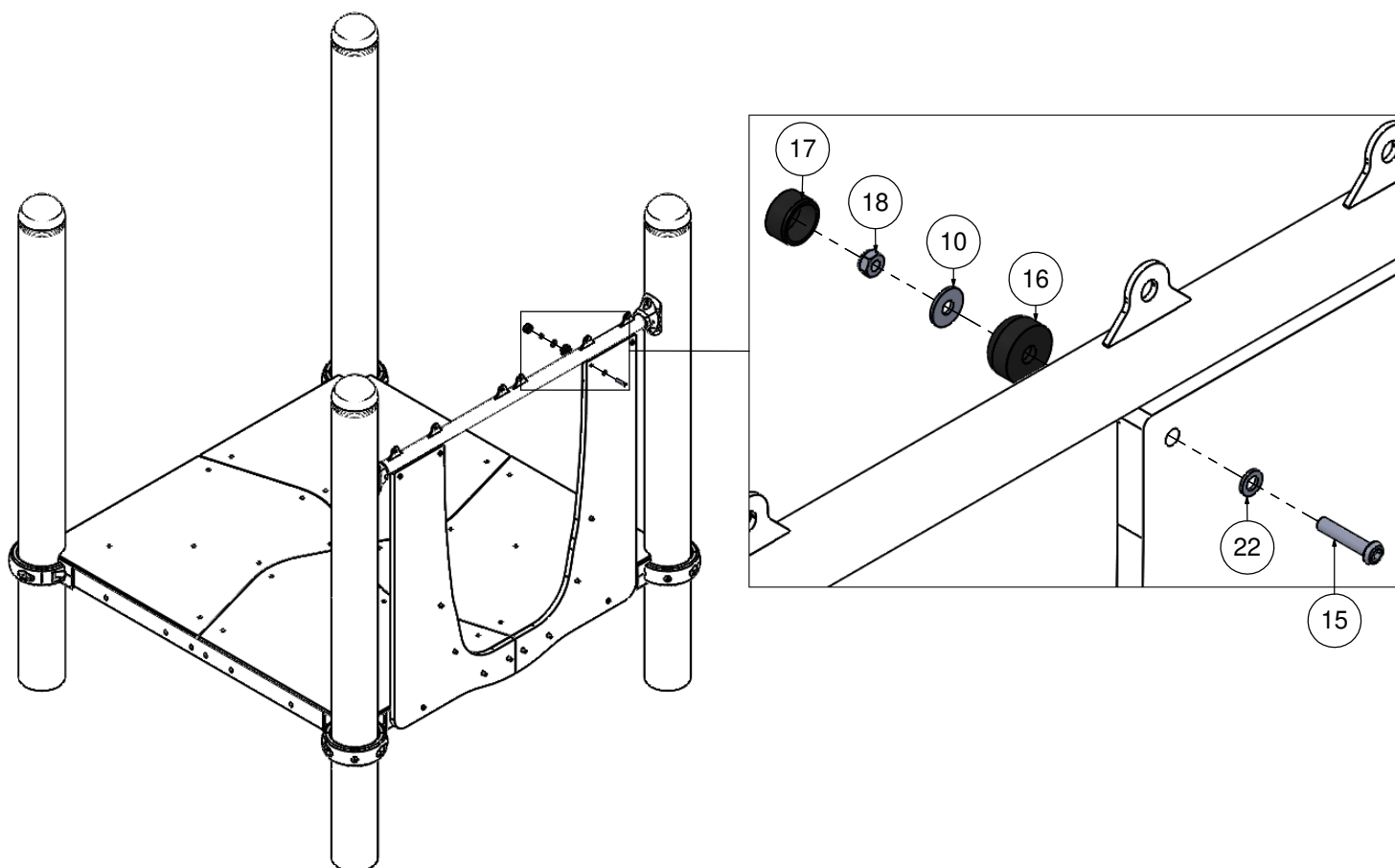
Nr	Σ	Element		
10	6		DIN 9021	6x18
15	6		ISO 7380	M6x30
16	6		-	K1_d21_B
17	6		-	Z1_d21_B
18	6		DIN 985	M6 (OC)
21	4		DIN 125	8x16
22	6		DIN 125	6x12
28	4		ISO 7380	M8x25
45	4		ISO 7380	M8x30
58	1		-	LOCTITE
218	4		NYLON DIN 125	8x16



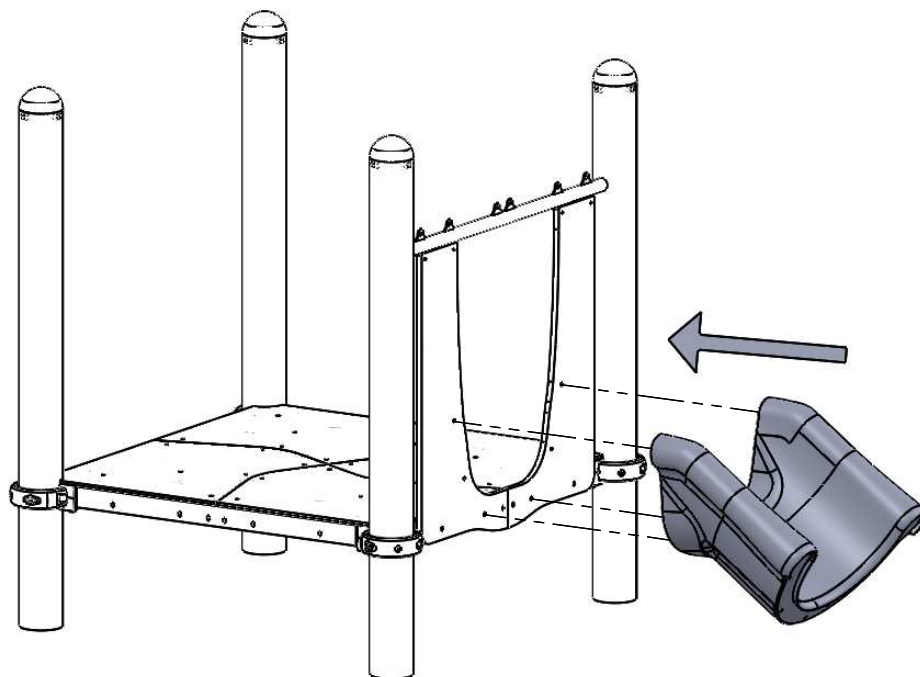
3



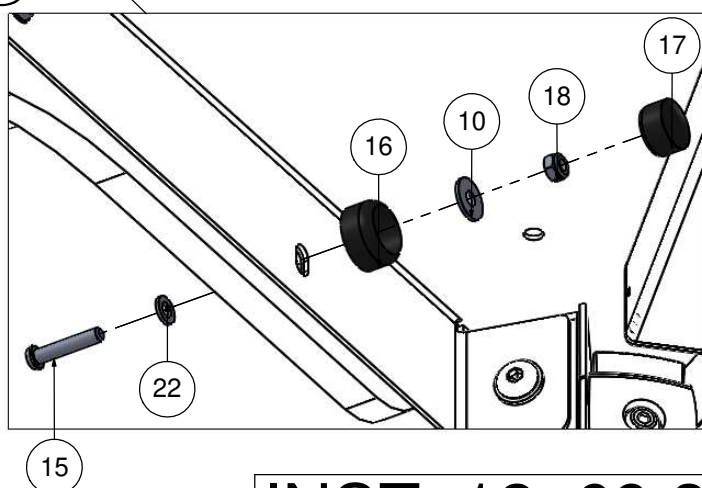
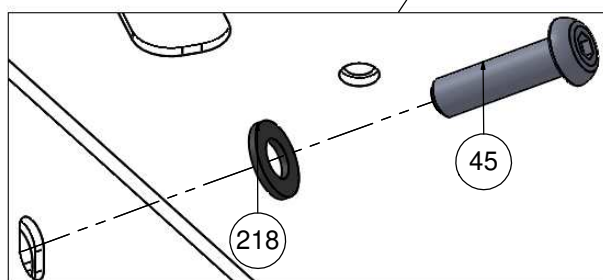
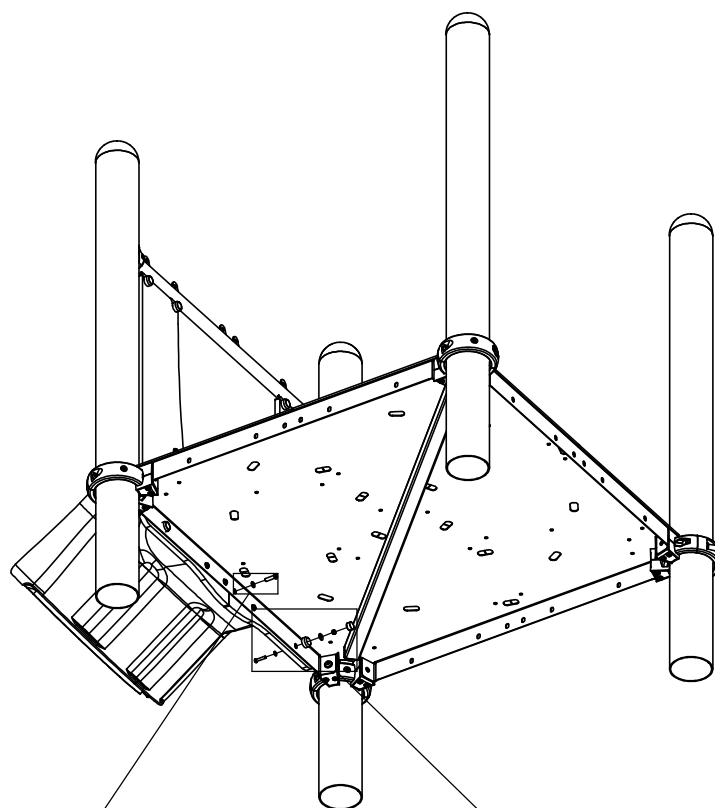
4



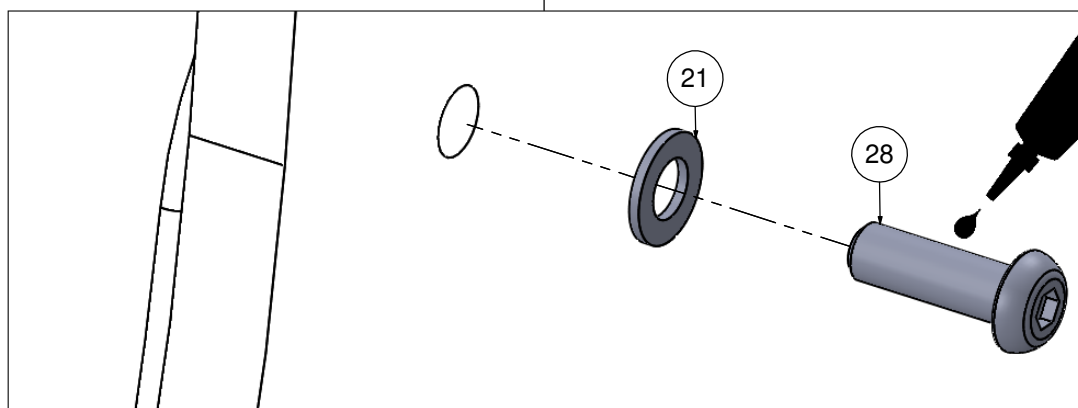
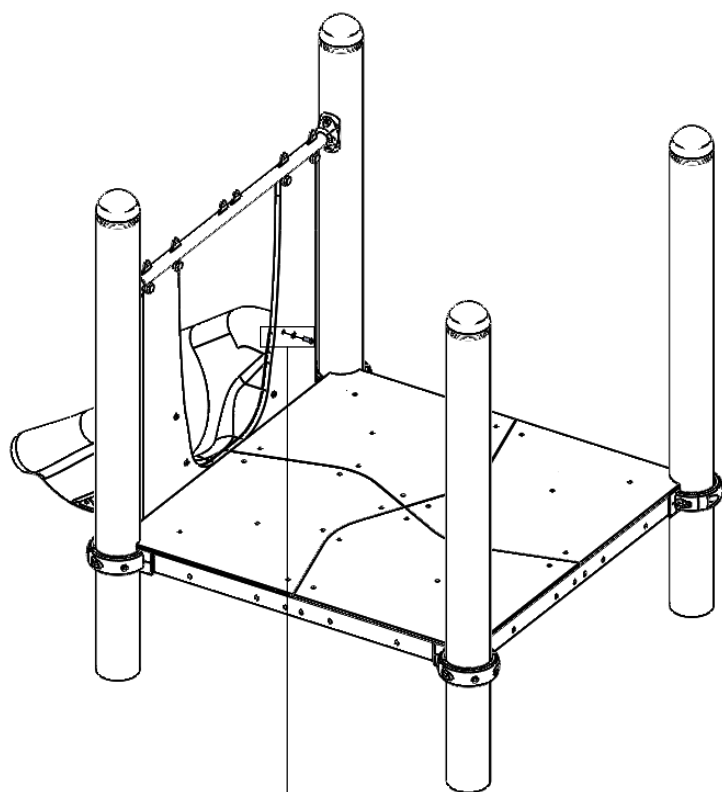
5



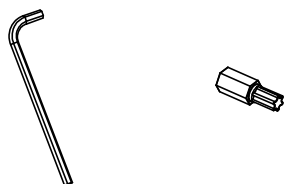
6



7

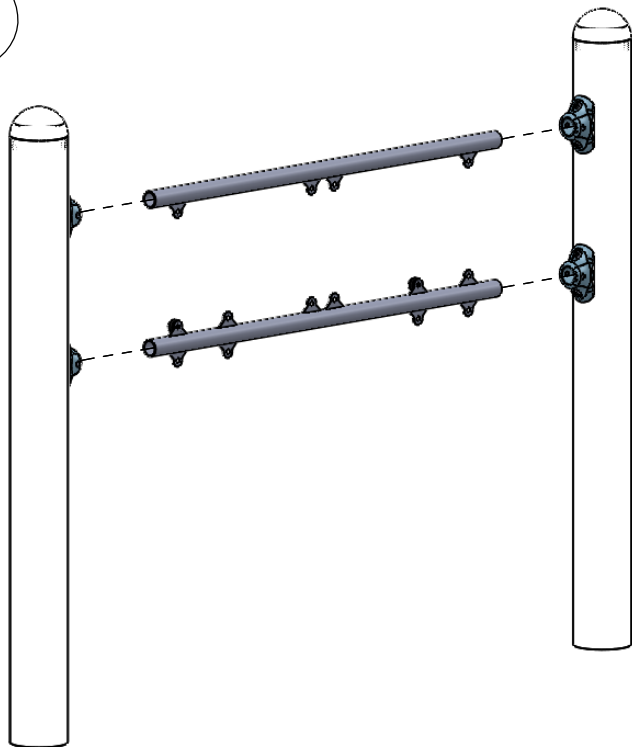



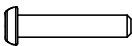





# INST\_12\_74

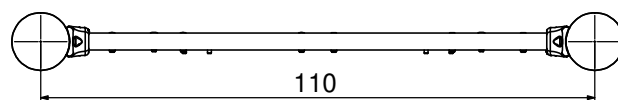


Nr. 4, 5 Nr. T30

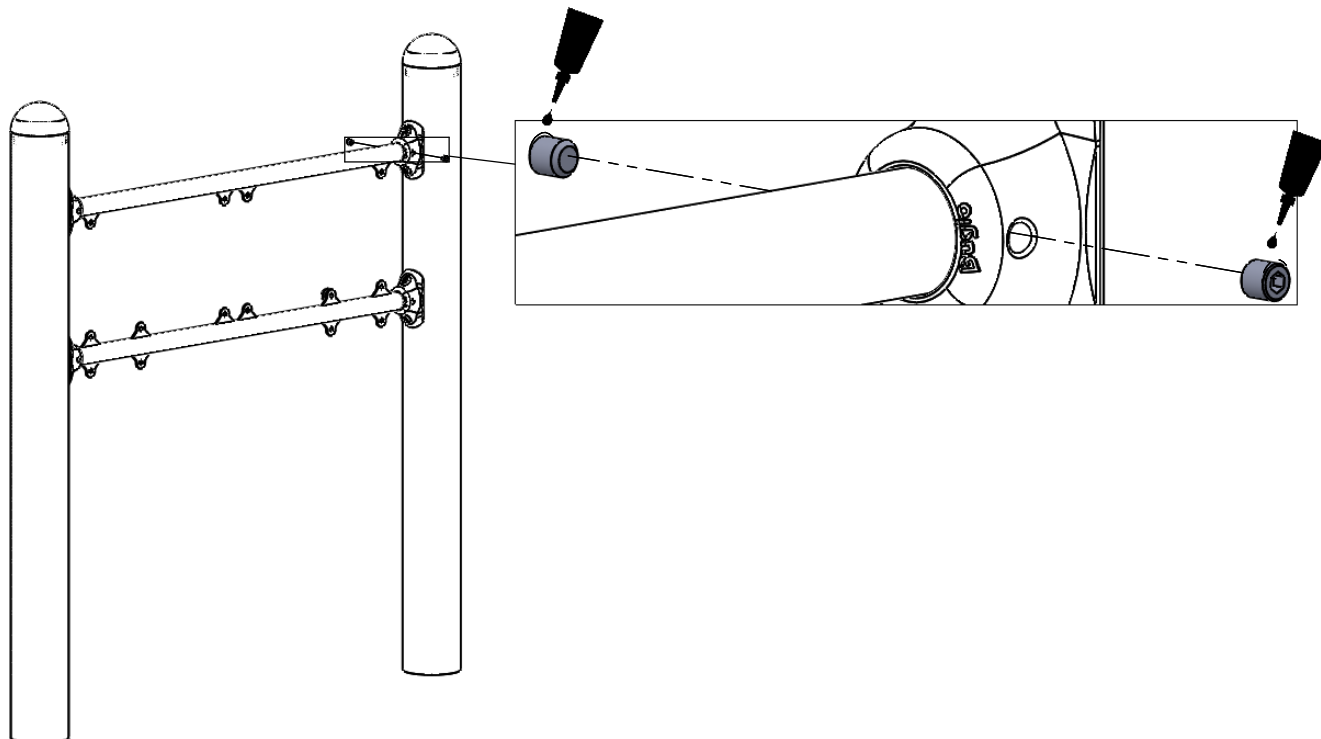
1



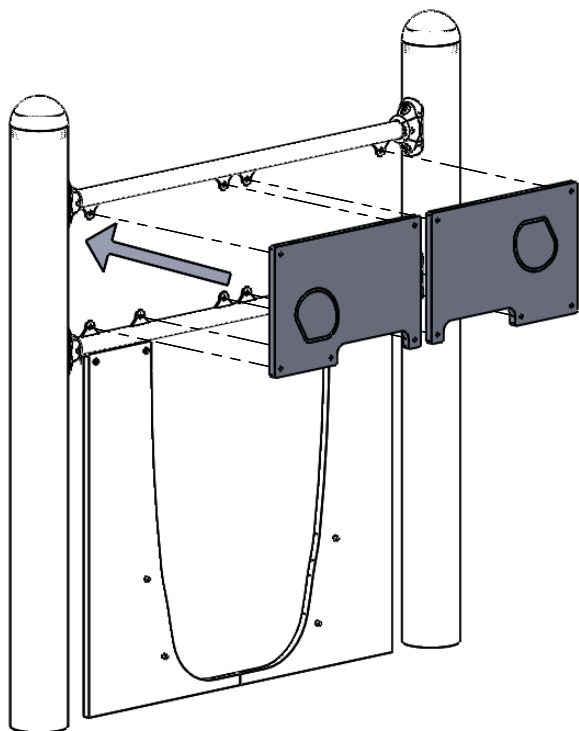
Nr	Σ	Element		
10	10		DIN 9021	6x18
15	10		ISO 7380	M6x30
16	10		-	K1_d21_B
17	10		-	Z1_d21_B
18	10		DIN 985	M6 (OC)
22	10		DIN 125	6x12
58	1		-	LOCTITE



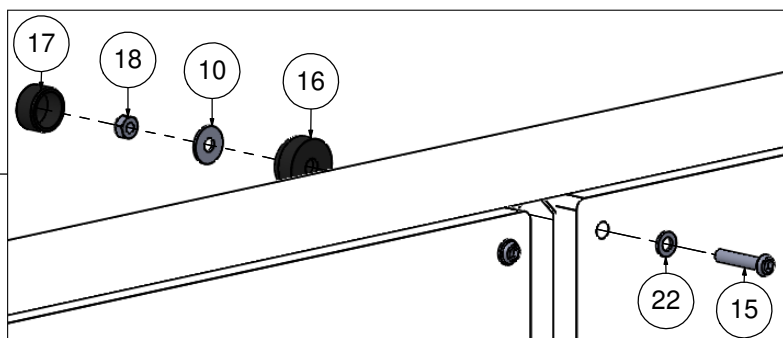
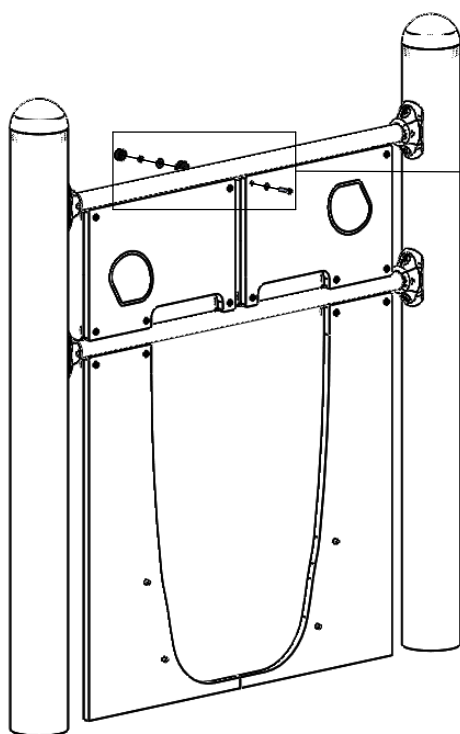
2



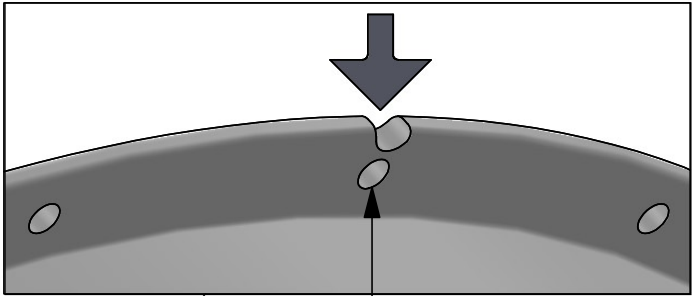
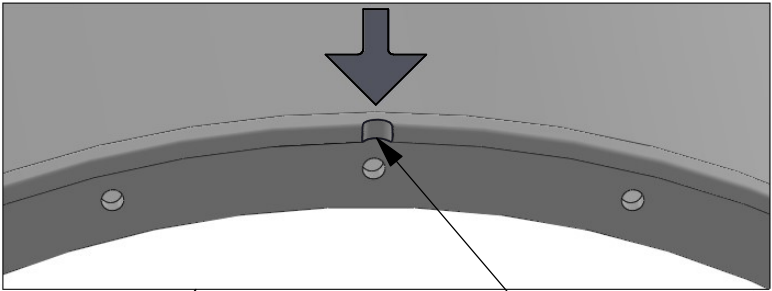
3



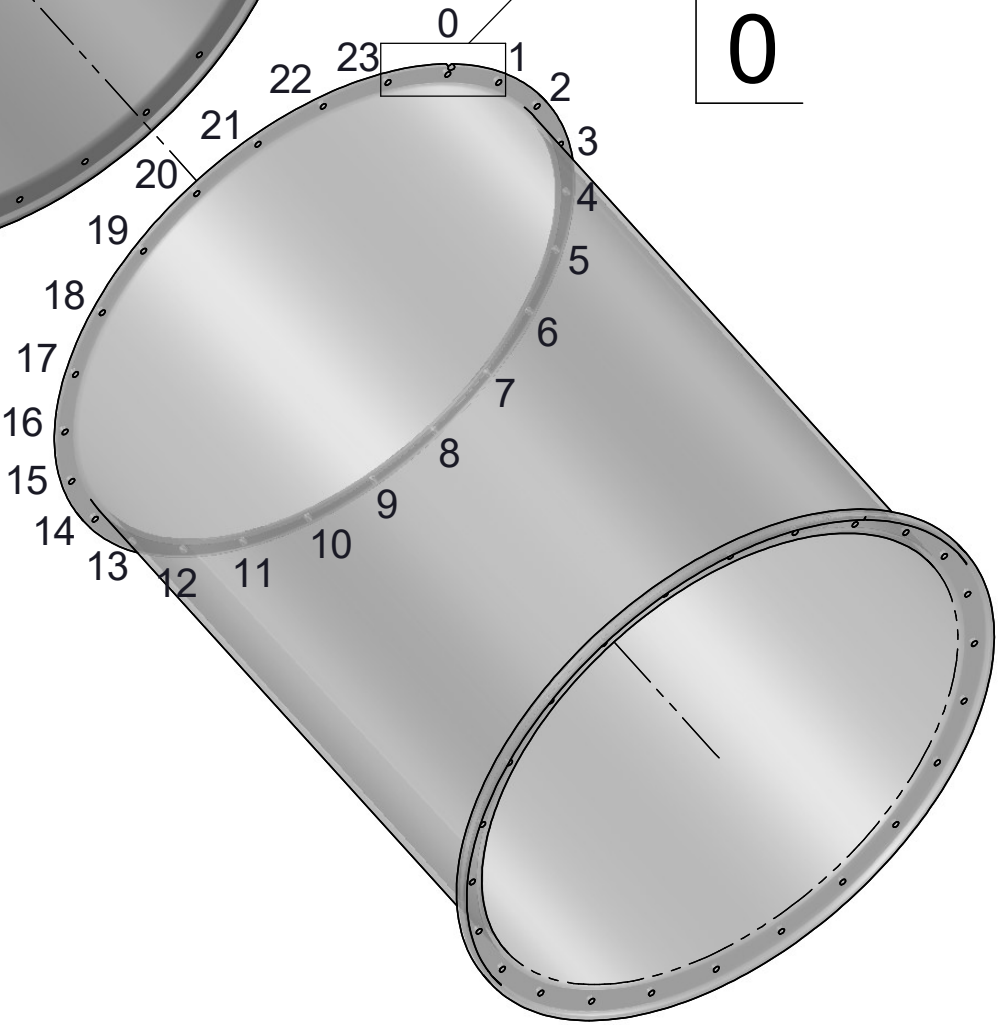
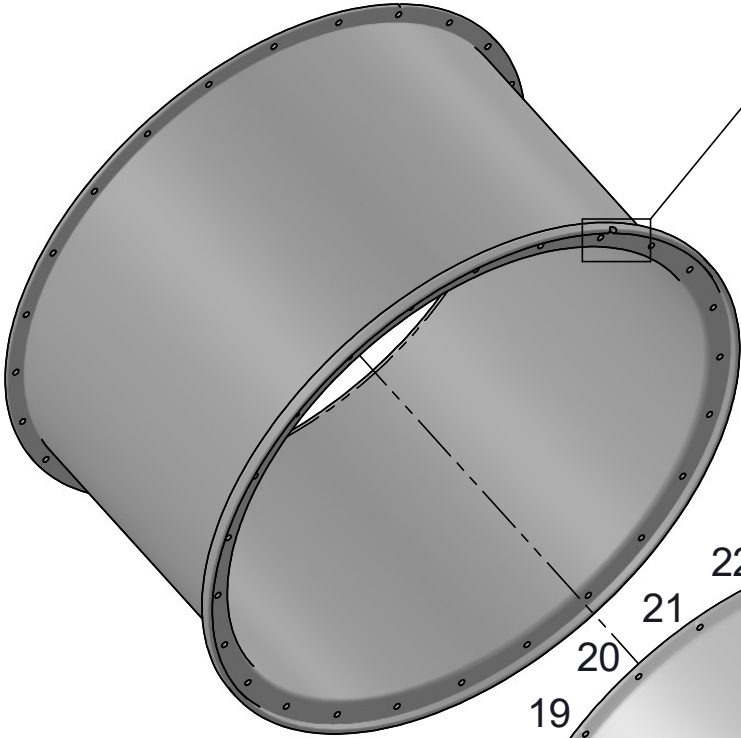
4



# INST\_MTS\_2



0


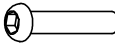





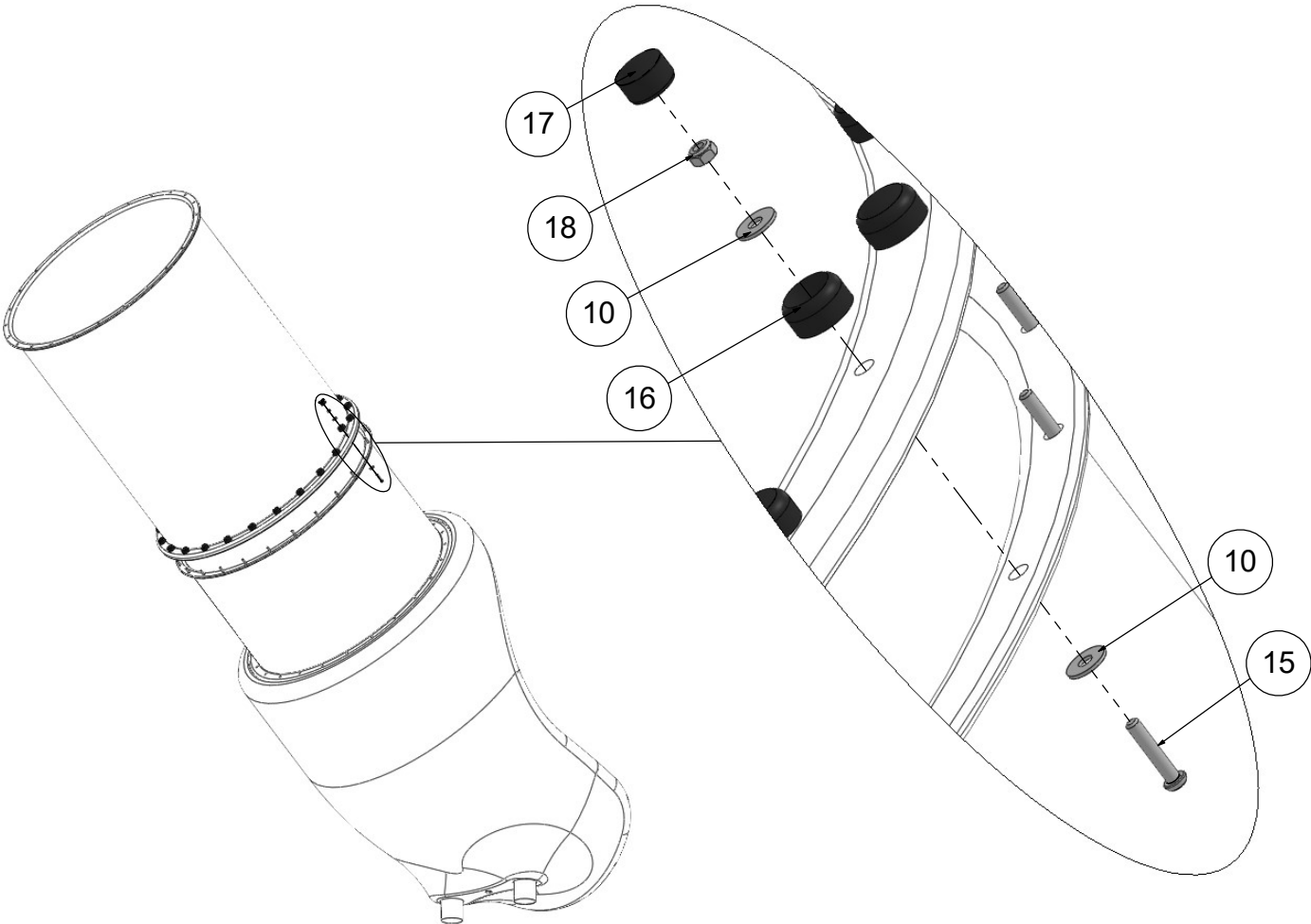
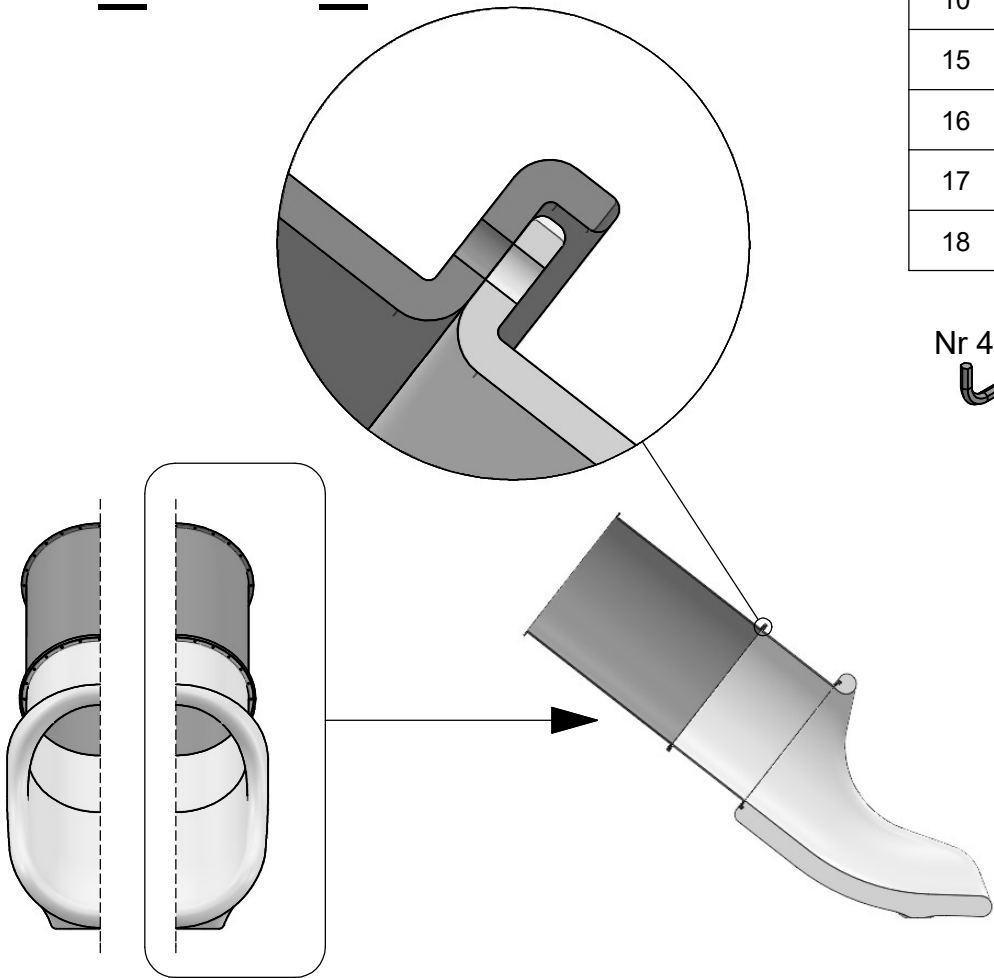
[buglo.pl/mts-manual](http://buglo.pl/mts-manual)

MANUAL



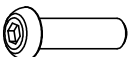



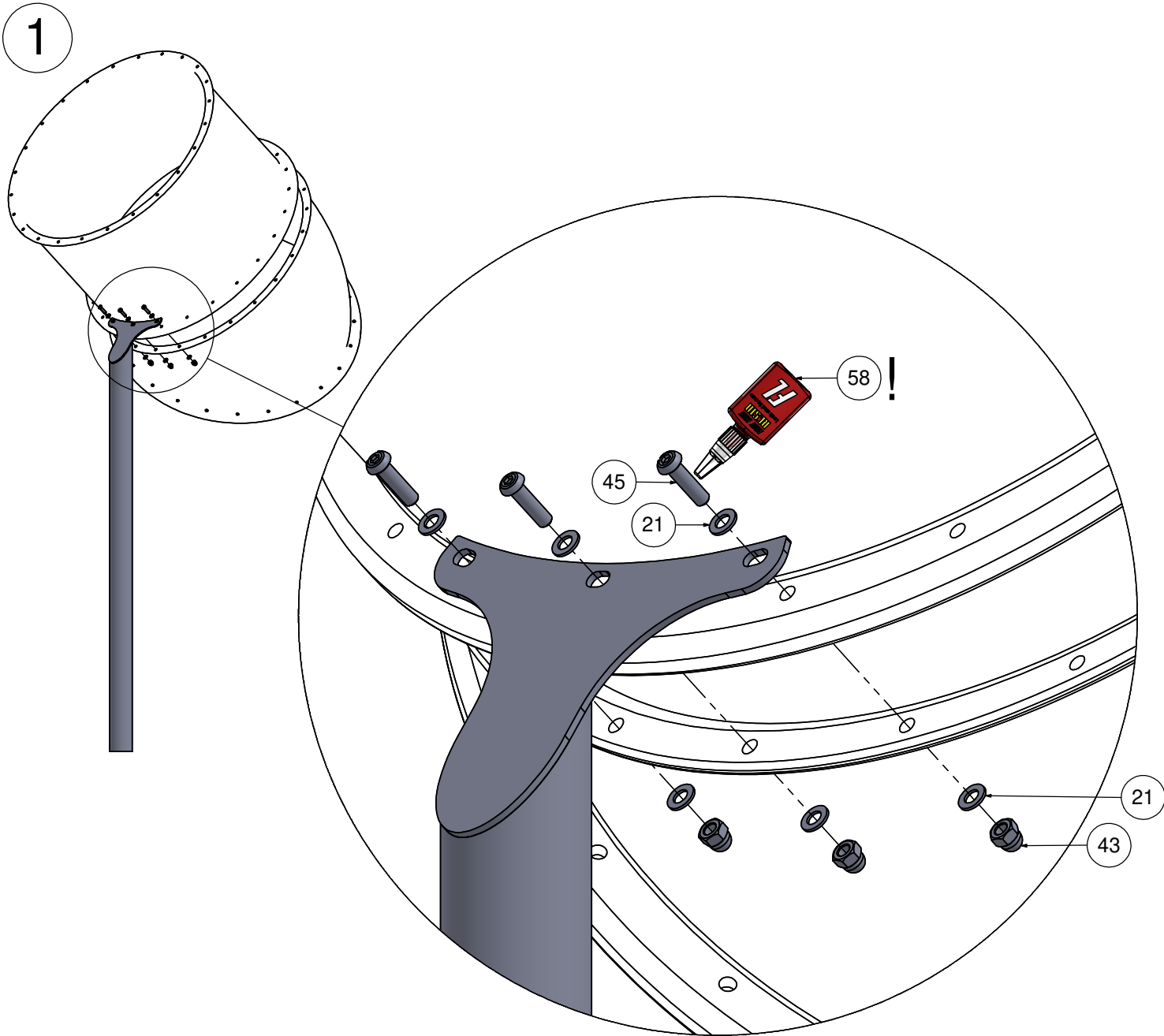
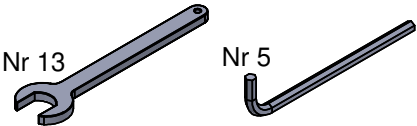
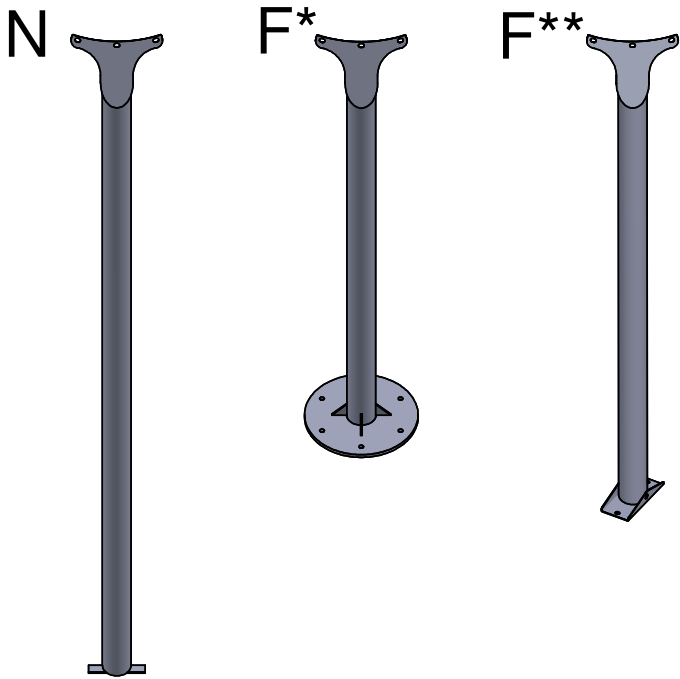
# INST\_MTS\_3

Nr	Element	DIN	ELEMENT
10		DIN 9021	6x18
15		ISO 7380	M6x30
16		-	K1_d21_B
17		-	Z1_d21_B
18		DIN 985	M6

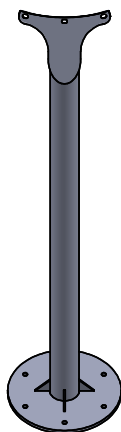


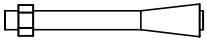
INST\_MTS\_4

Nr	Σ	Element		
21	6		DIN 125	8x16
43	3		DIN 1587	M8
45	3		ISO 7380	M8x30
58	1		-	LOCTITE



F\*

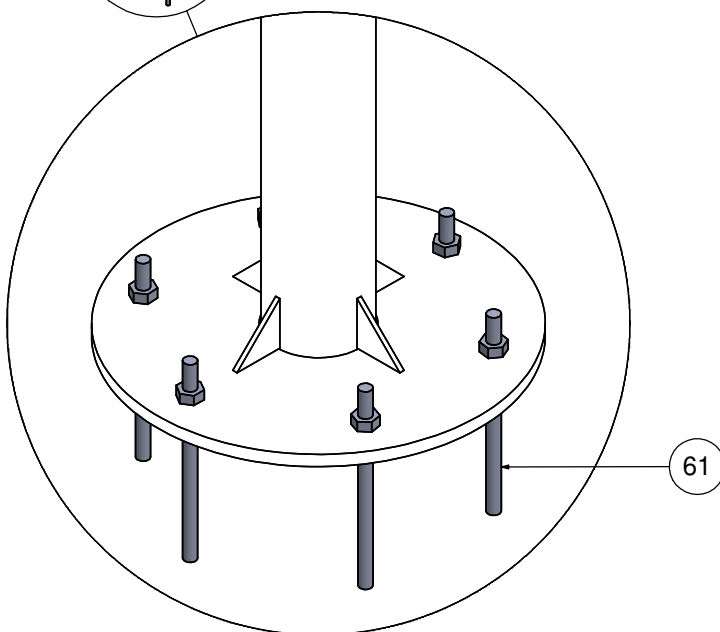
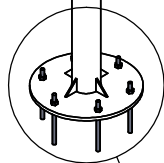
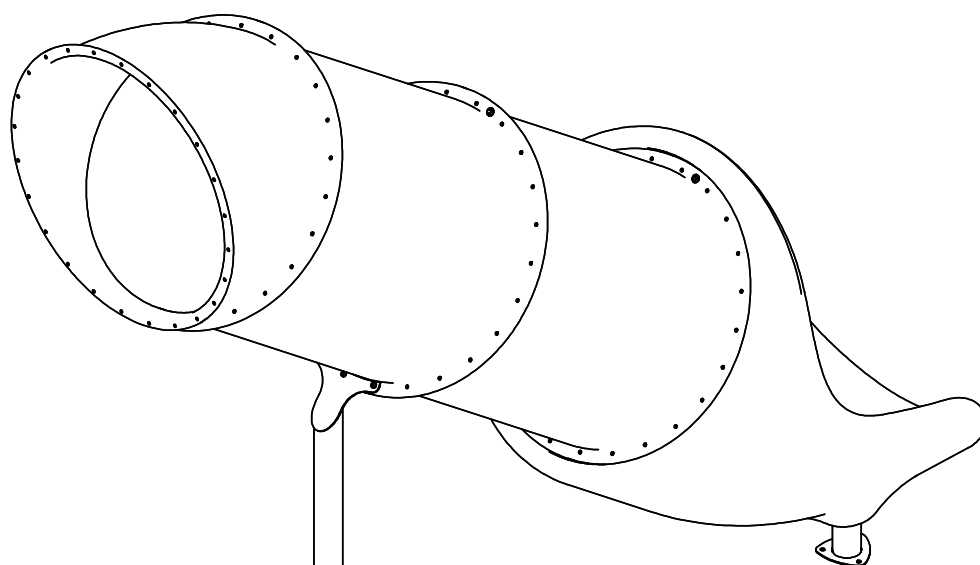


Nr	Σ	Element	DIN	ELEMENT
61	6		-	KL105

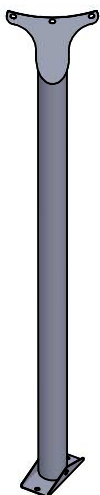
Nr 17

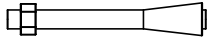


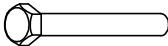
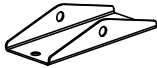


2F\*

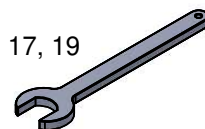


F\*\*

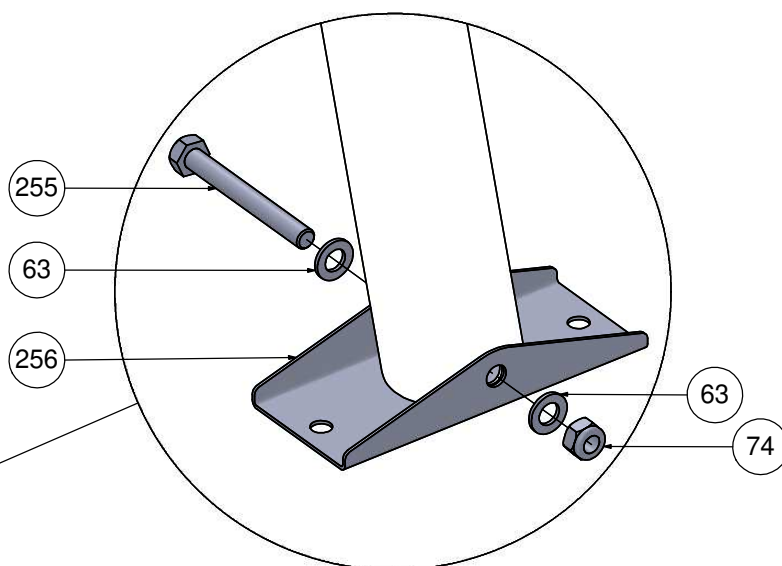
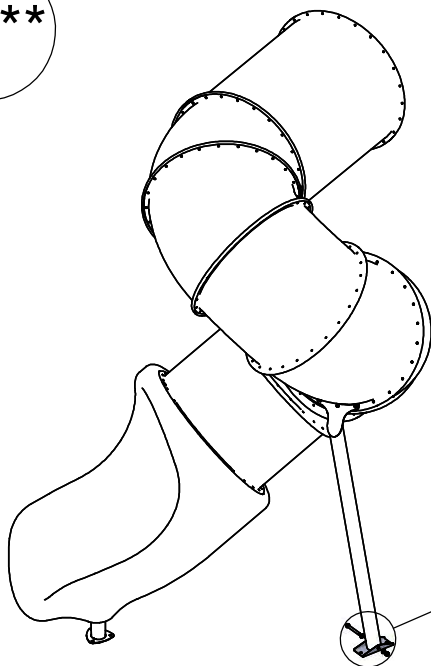


Nr	Σ	Element		
61	2		-	KL105
63	2		DIN 125	12x24
74	1		DIN 985	M12
255	1		DIN 931	M12x100
256	1		-	MTS_5_g2_G_v1

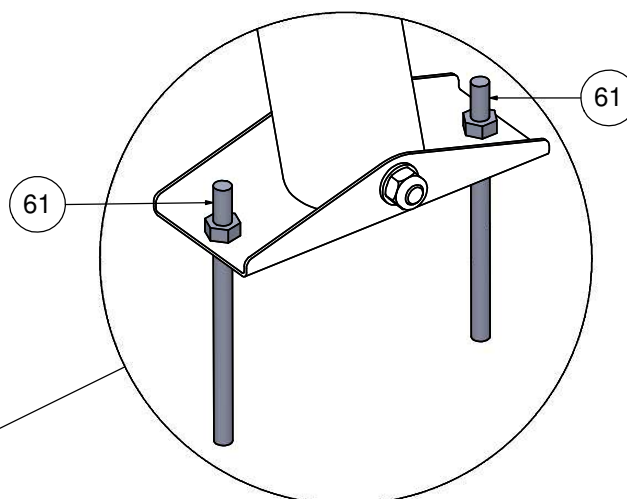
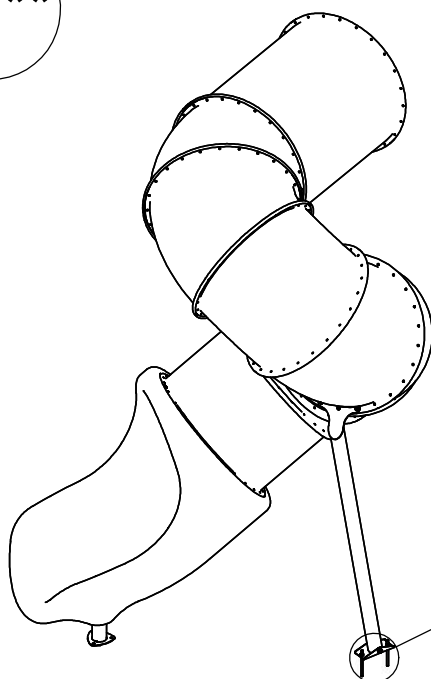
Nr 17, 19



2F\*\*



3F\*\*



# INST\_MTS\_5



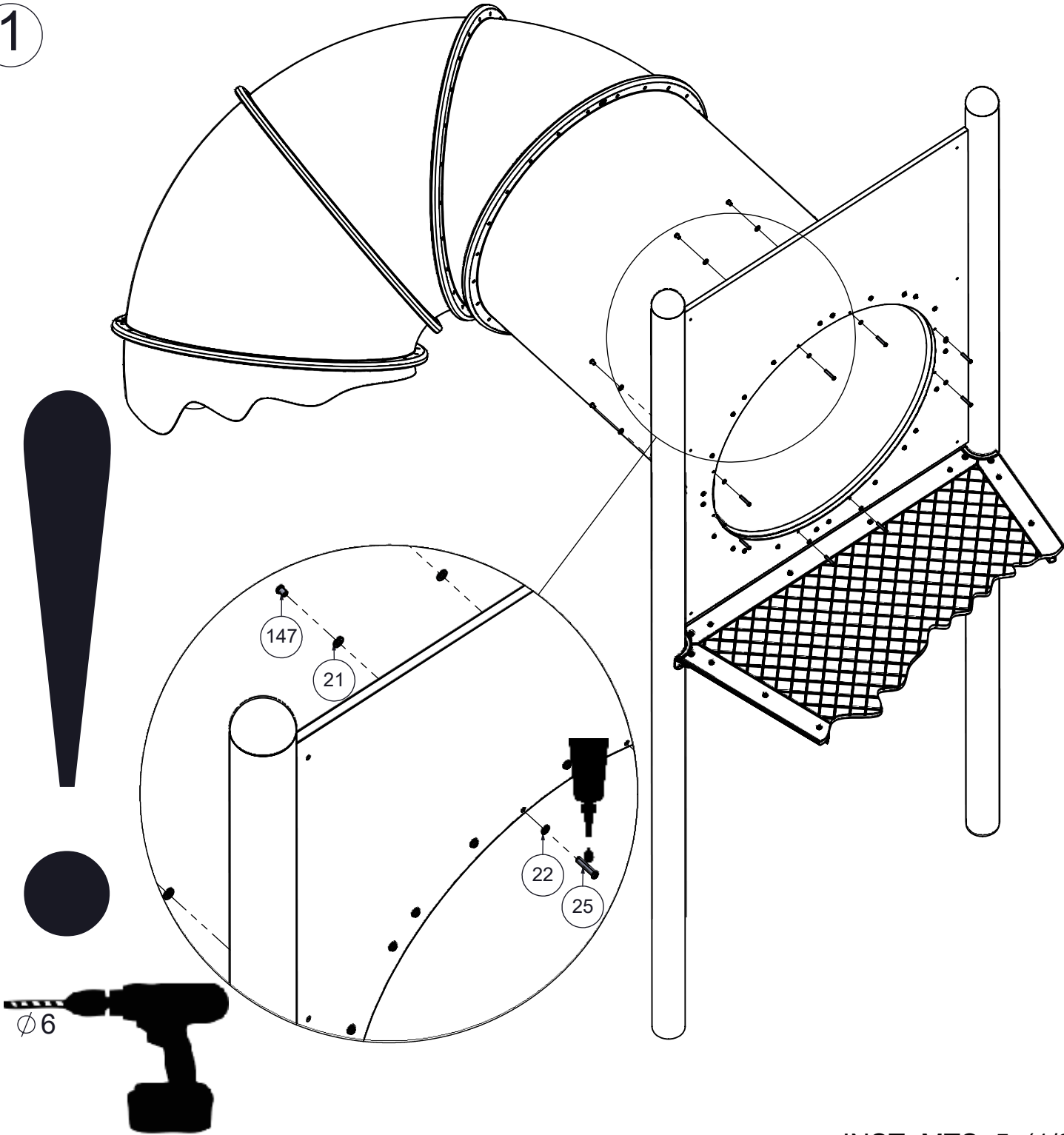
Nr 4, 5



Nr T30

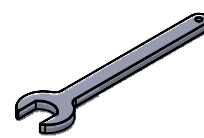
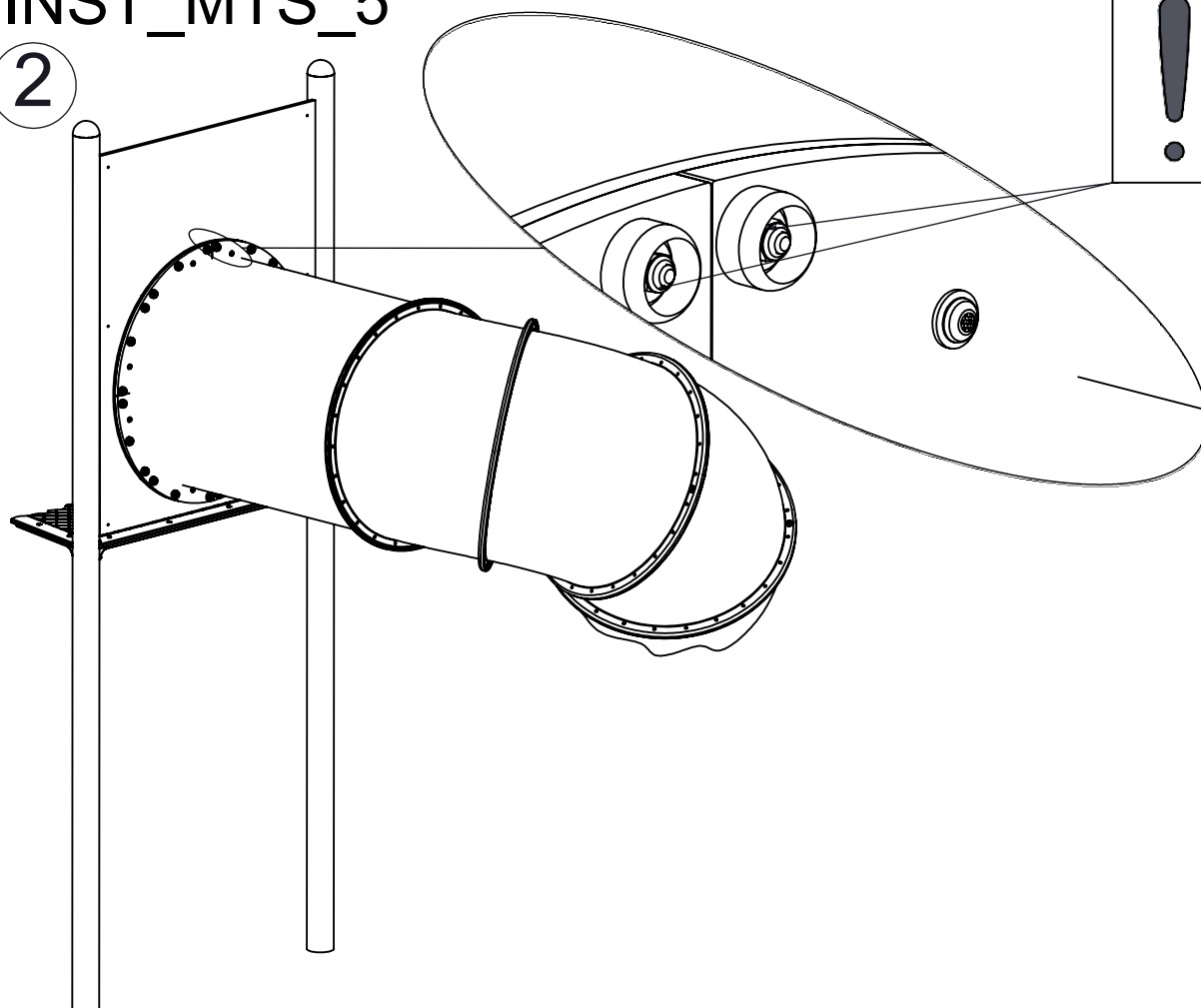
Nr	Σ	Element	DIN	ELEMENT
17	24		-	Z1_d21_B
21	8		DIN 125	8x16
22	8		DIN 125	6x12
25	8		ISO 7380	M6x35
147	8		-	M6x10

1



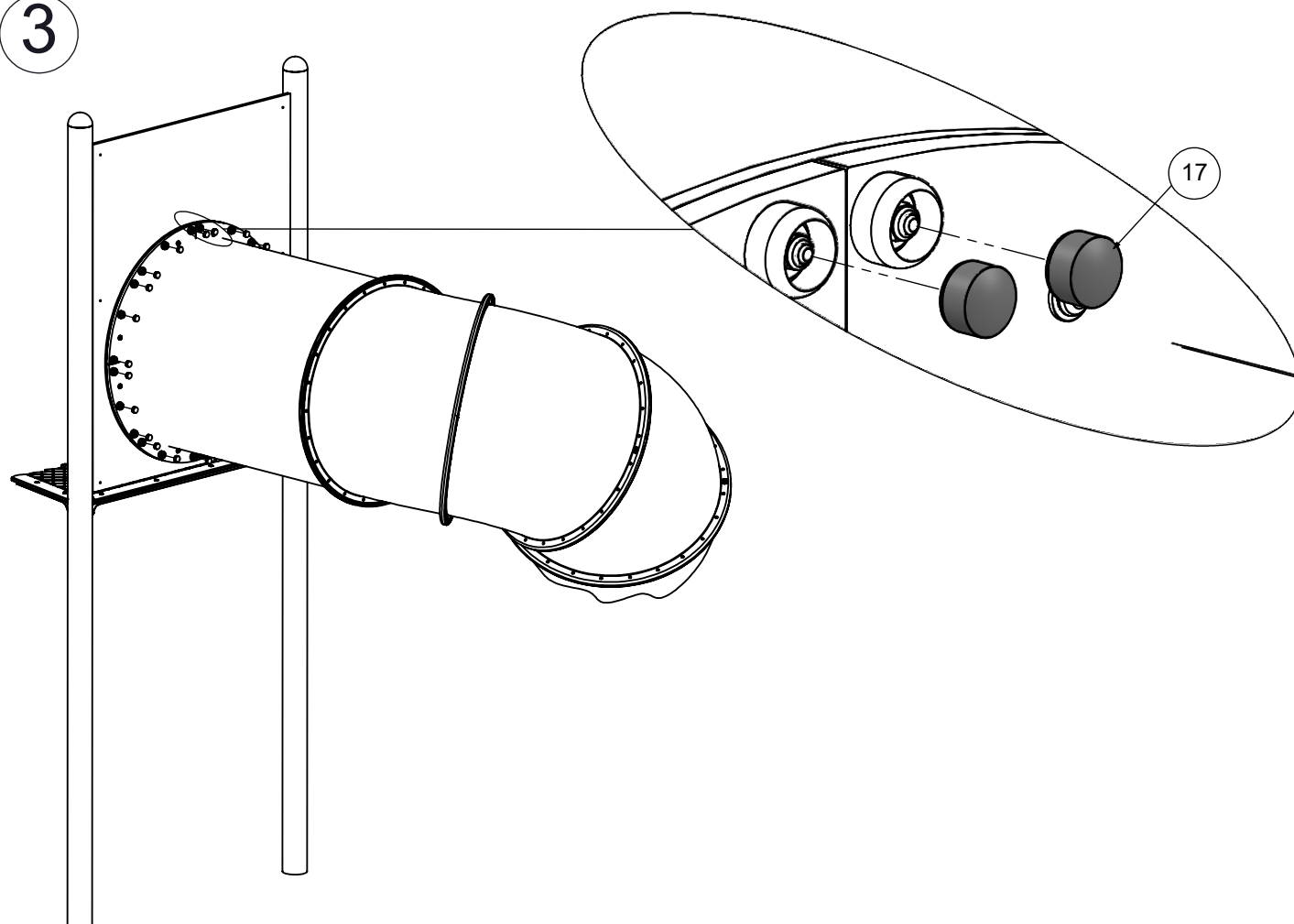
# INST\_MTS\_5

2

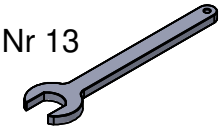


Nr 13




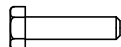
3

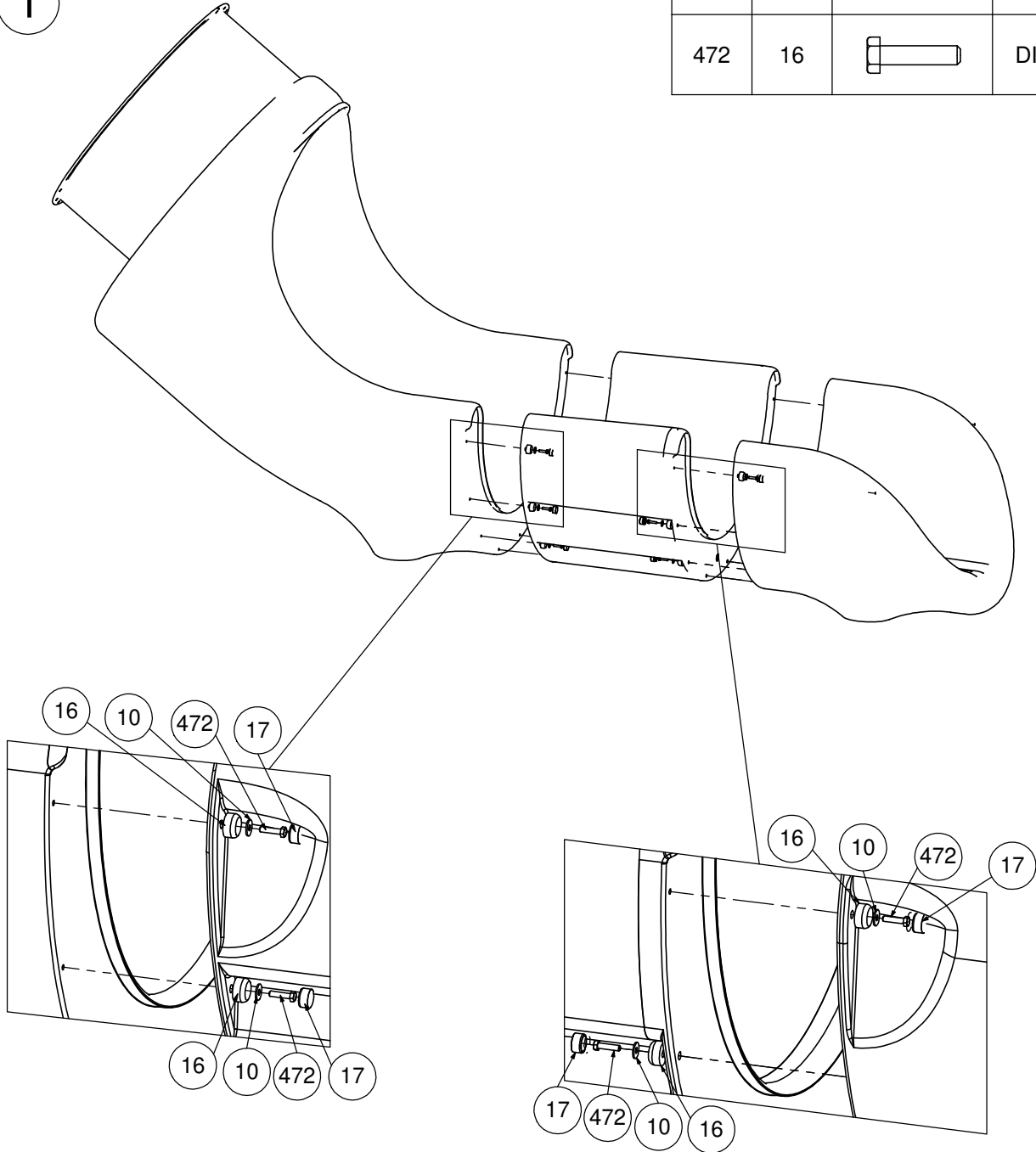


# INST\_MTS\_11

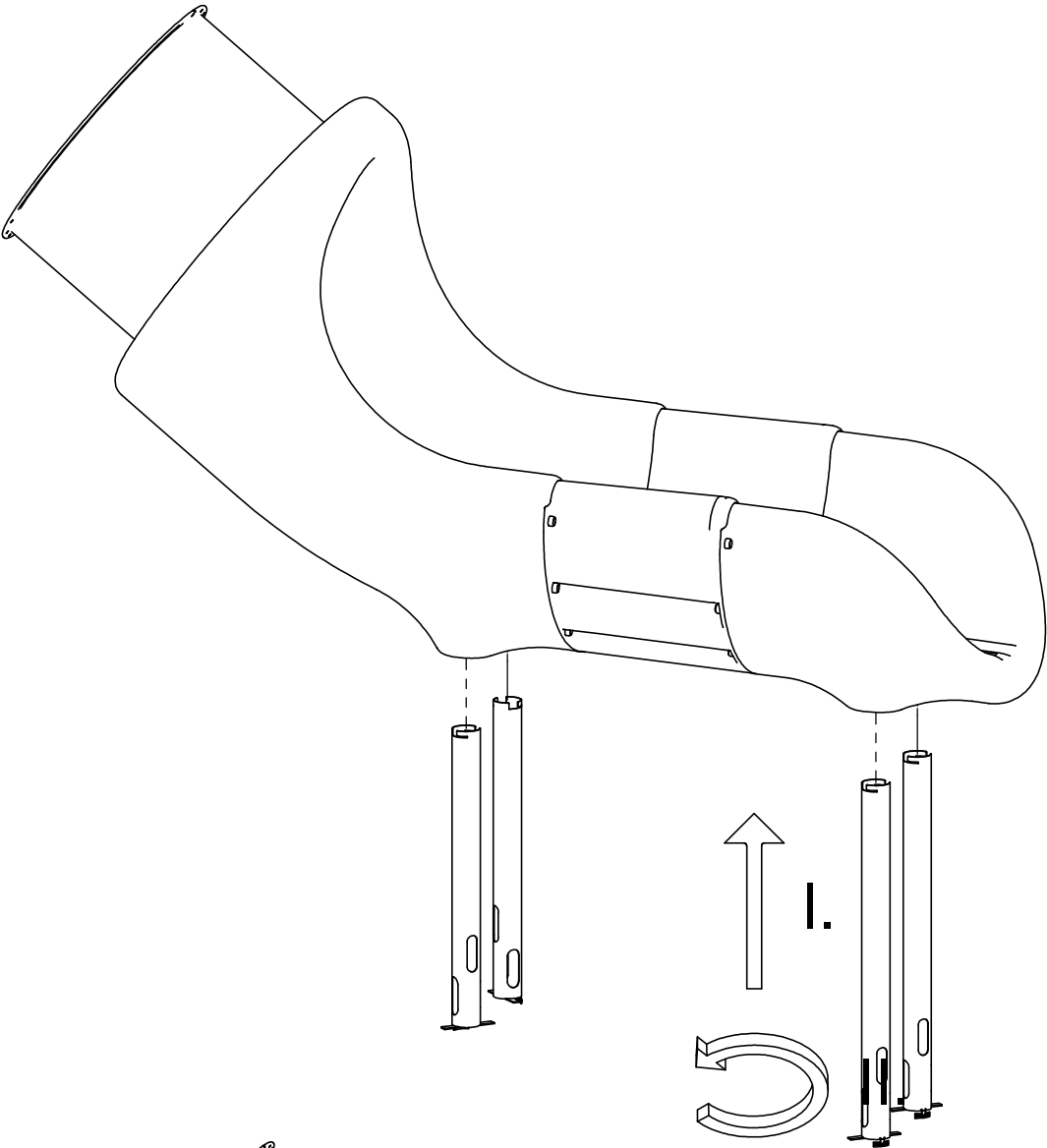


1

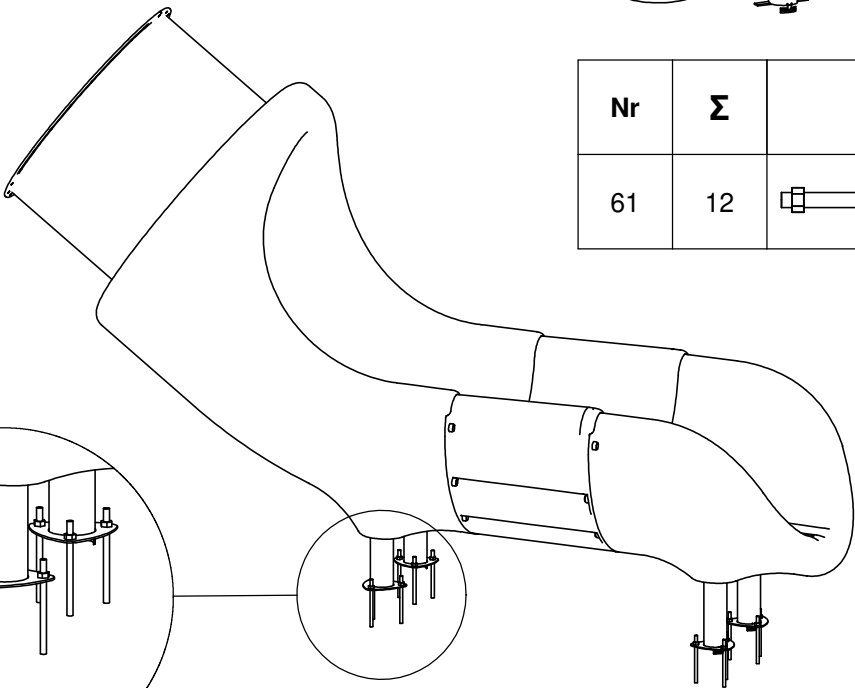
Nr	Σ	Element		
10	16		DIN 9021	6x18
16	16		-	K1_d21_B
17	16		-	Z1_d21_B
472	16		DIN 933	M6x25 (OC)

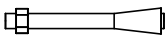


2



3 F

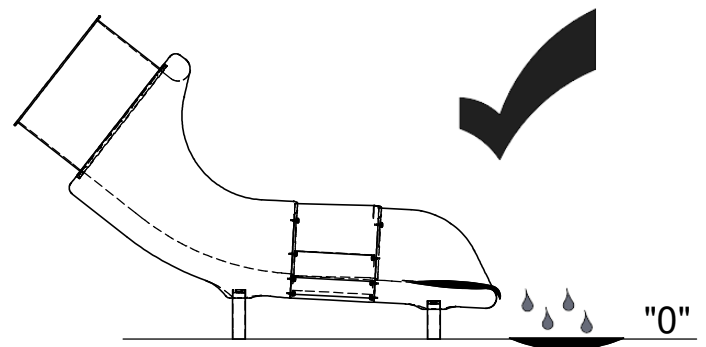
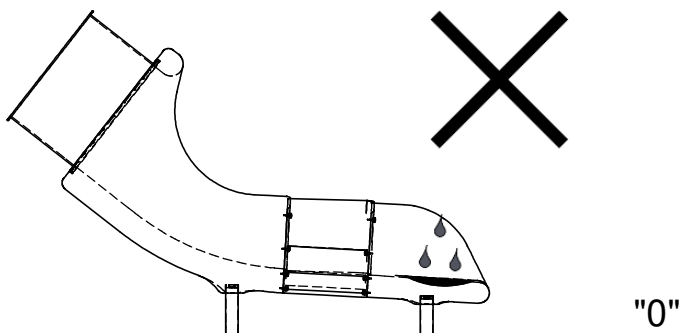
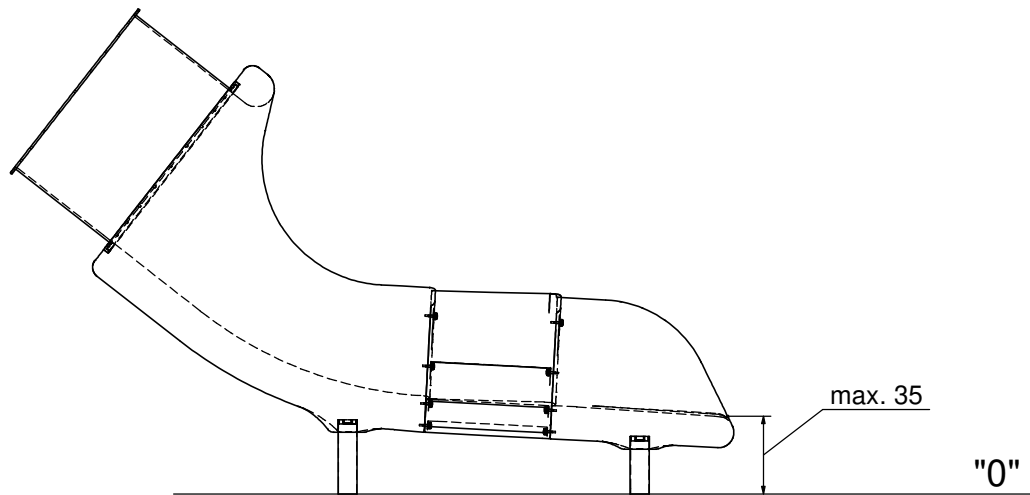


Nr	$\Sigma$	Element		
61	12		-	KL105 (OC)






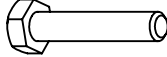



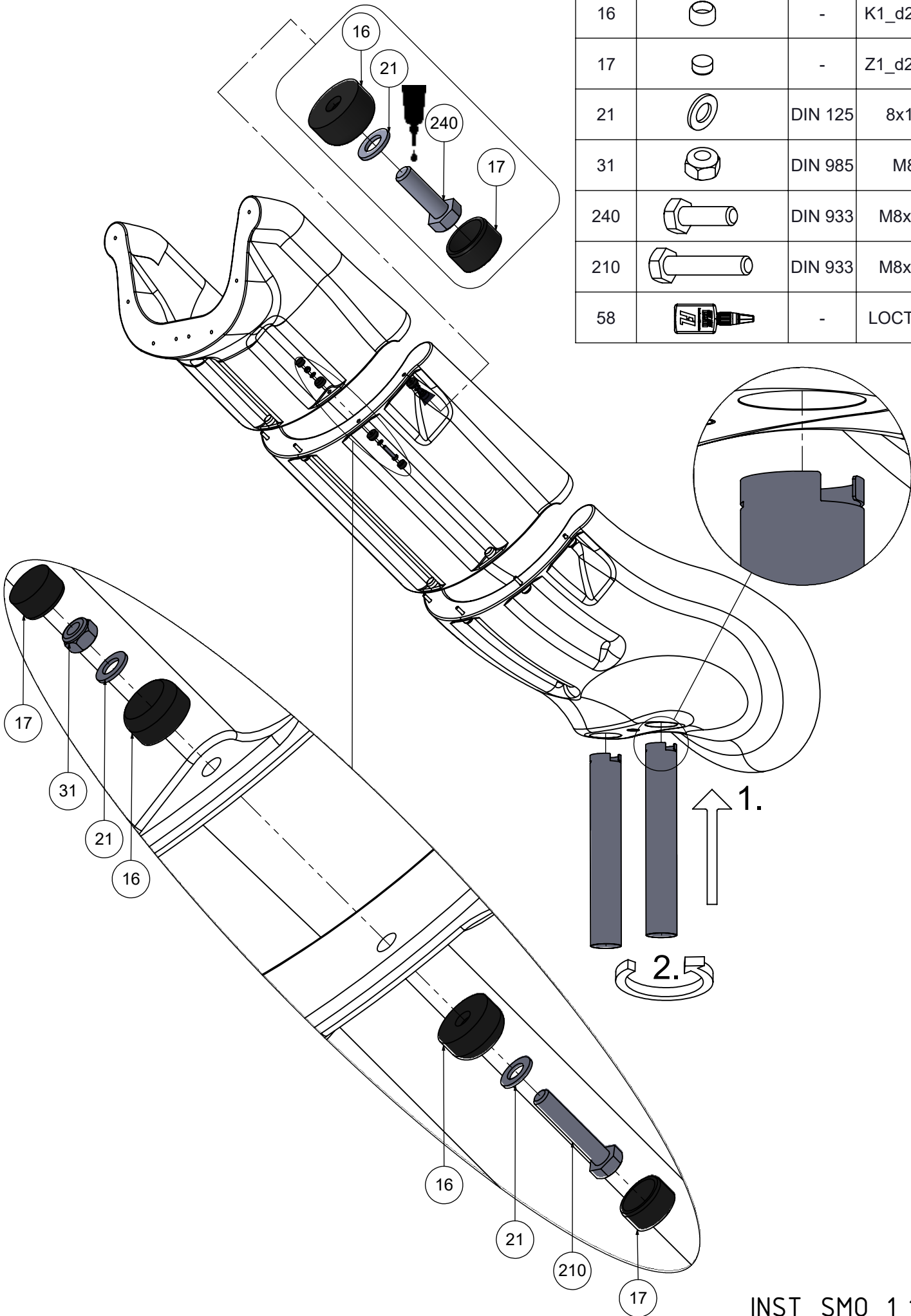


3





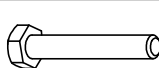


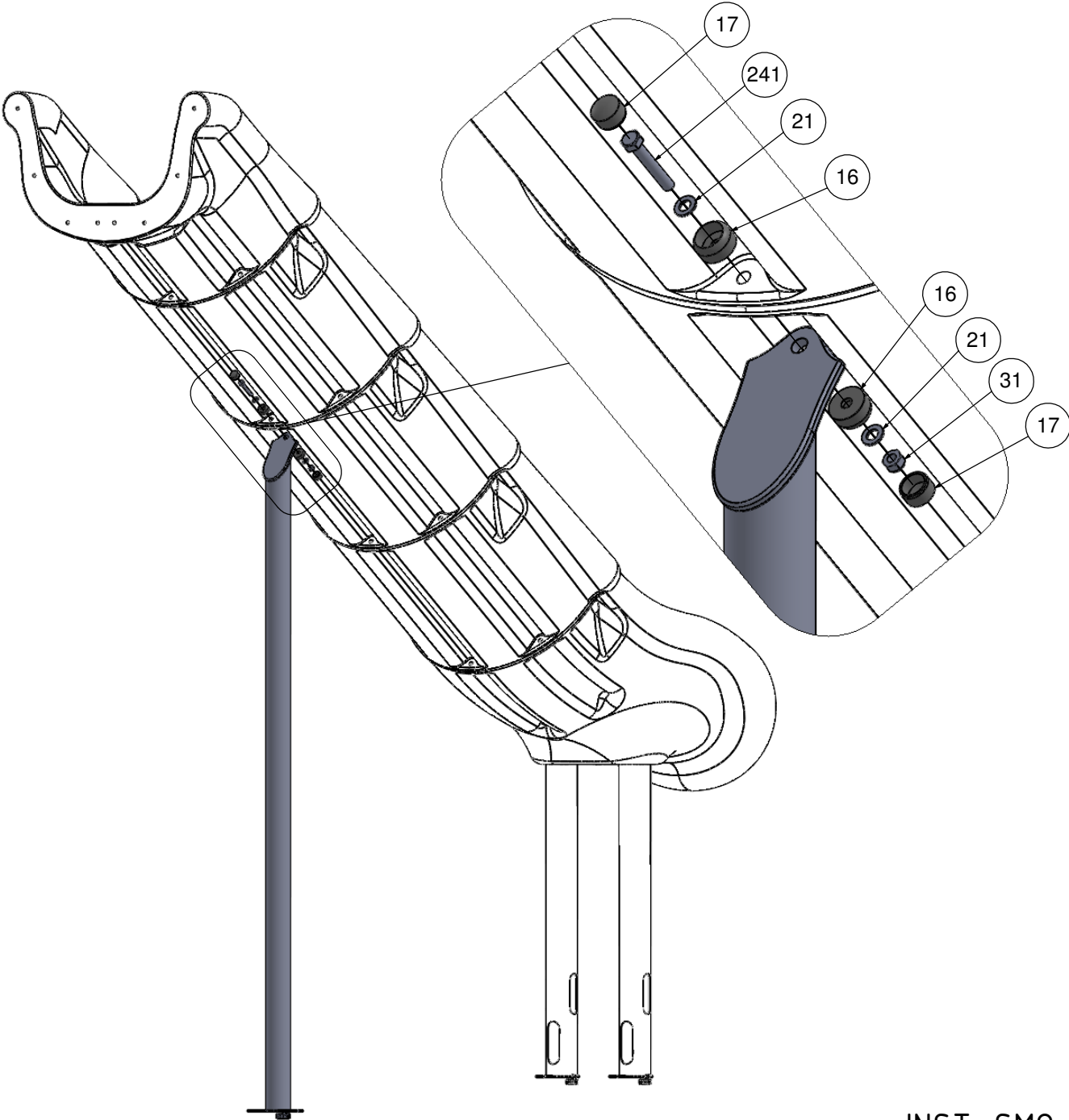
# INST\_SMO\_1

Nr	Element	DIN	ELEMENT
16		-	K1_d21_B
17		-	Z1_d21_B
21		DIN 125	8x16
31		DIN 985	M8
240		DIN 933	M8x25
210		DIN 933	M8x40
58		-	LOCTITE





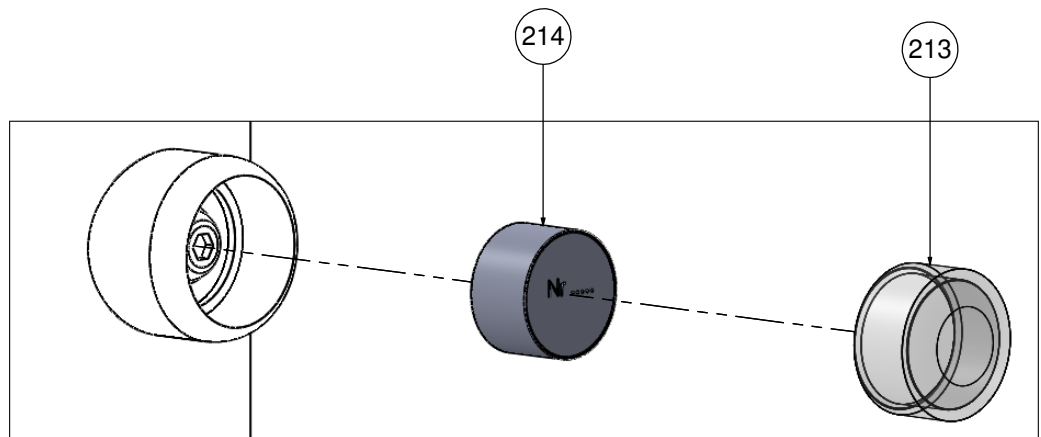
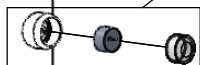
# INST\_SMO\_2

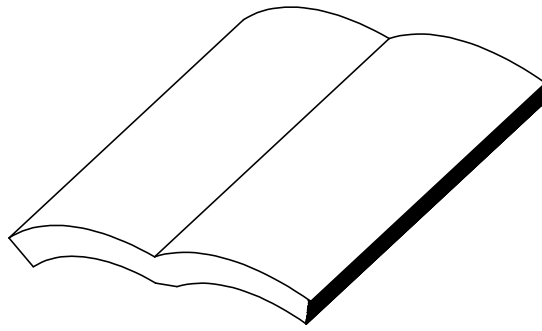
Nr	Element	DIN	ELEMENT
16		-	K1_d21_B
17		-	Z1_d21_B
21		DIN 125	8x16
31		DIN 985	M8
241		DIN 933	M8x50



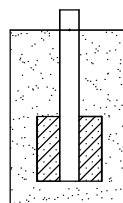
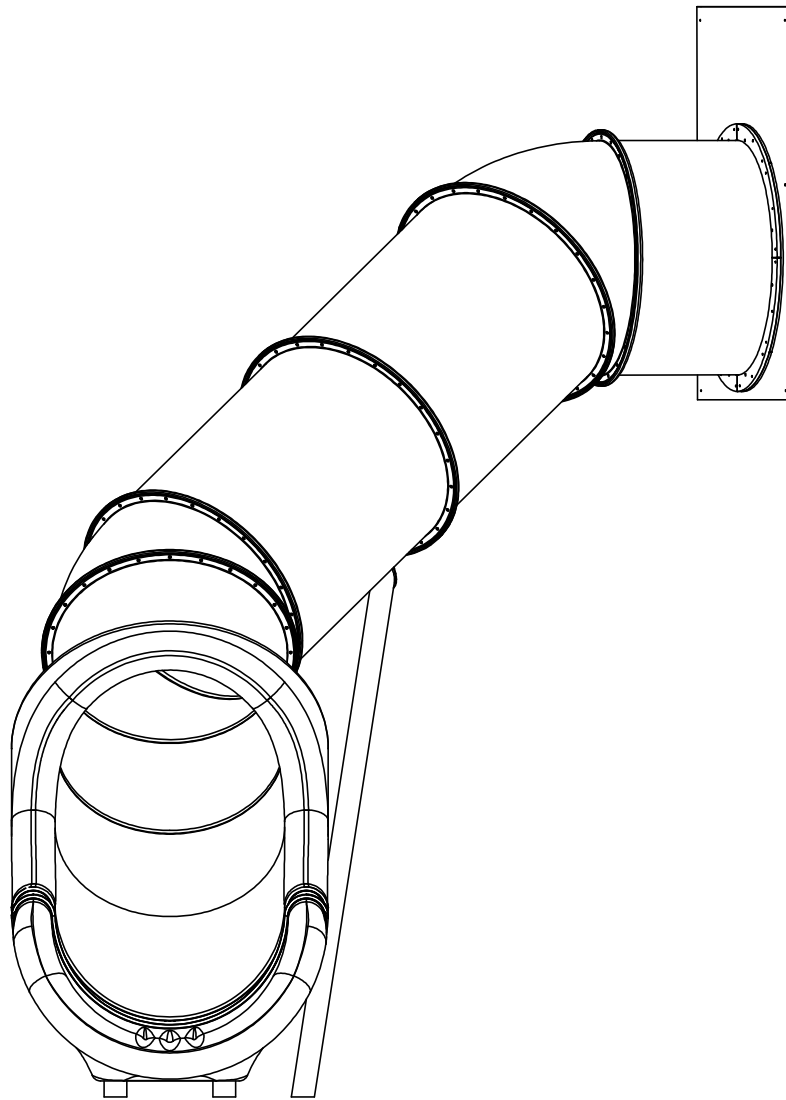
INST\_Z\_1

Nr	Σ	Element		
213	1		-	Z_NA_1
214	1		-	Z_NA_2

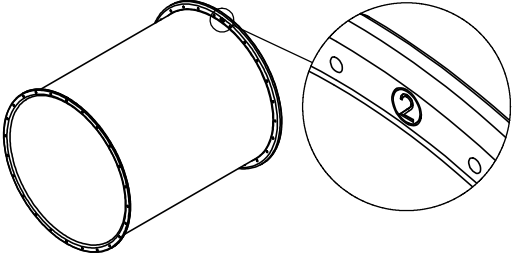
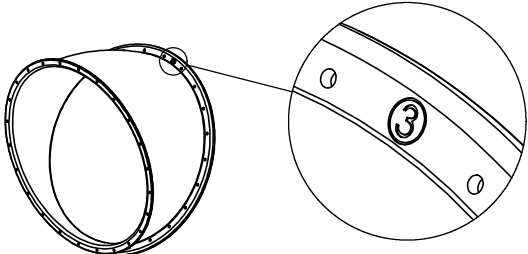
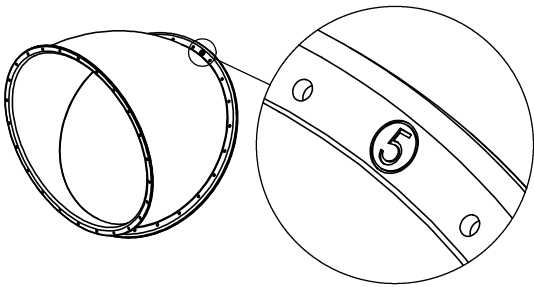


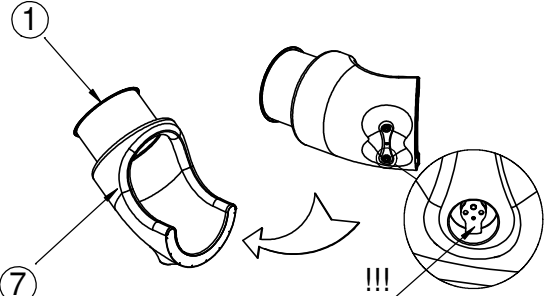
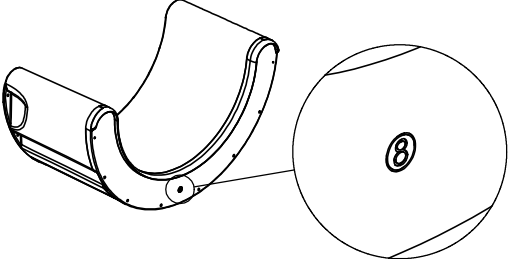
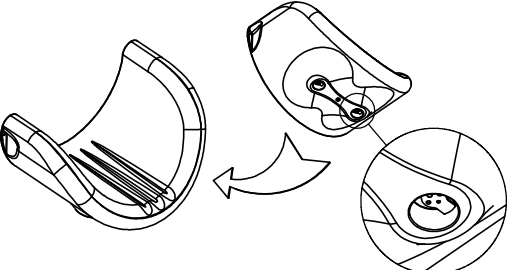
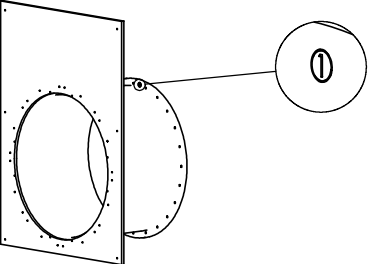
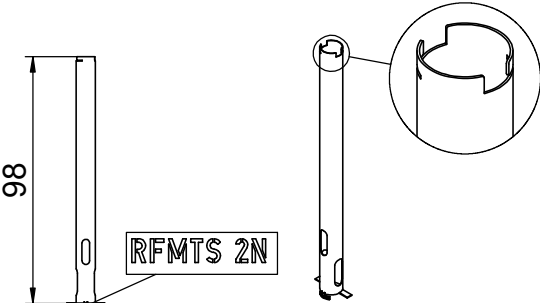


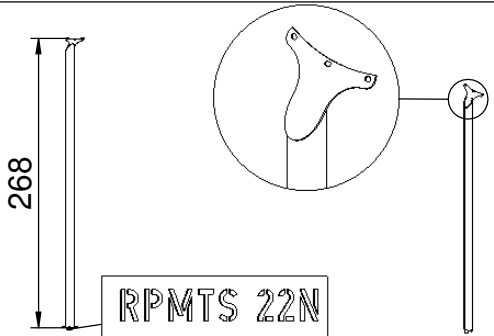
MTSL\_H240\_152231789

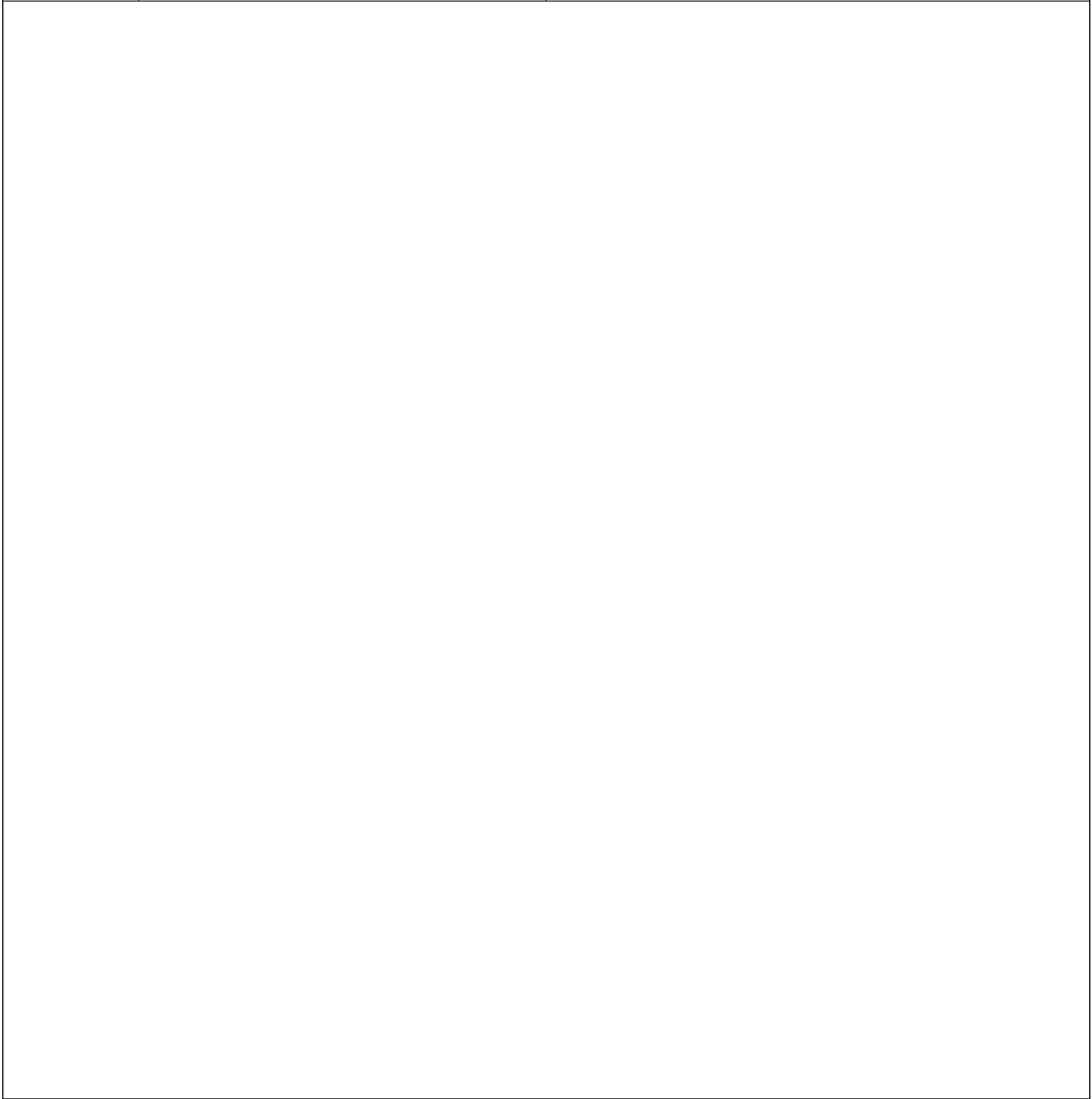


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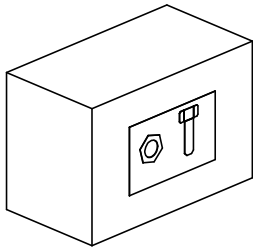
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3		1
4		
5		1
6		

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8		1
9		1
10		1
11		4
12		










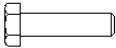
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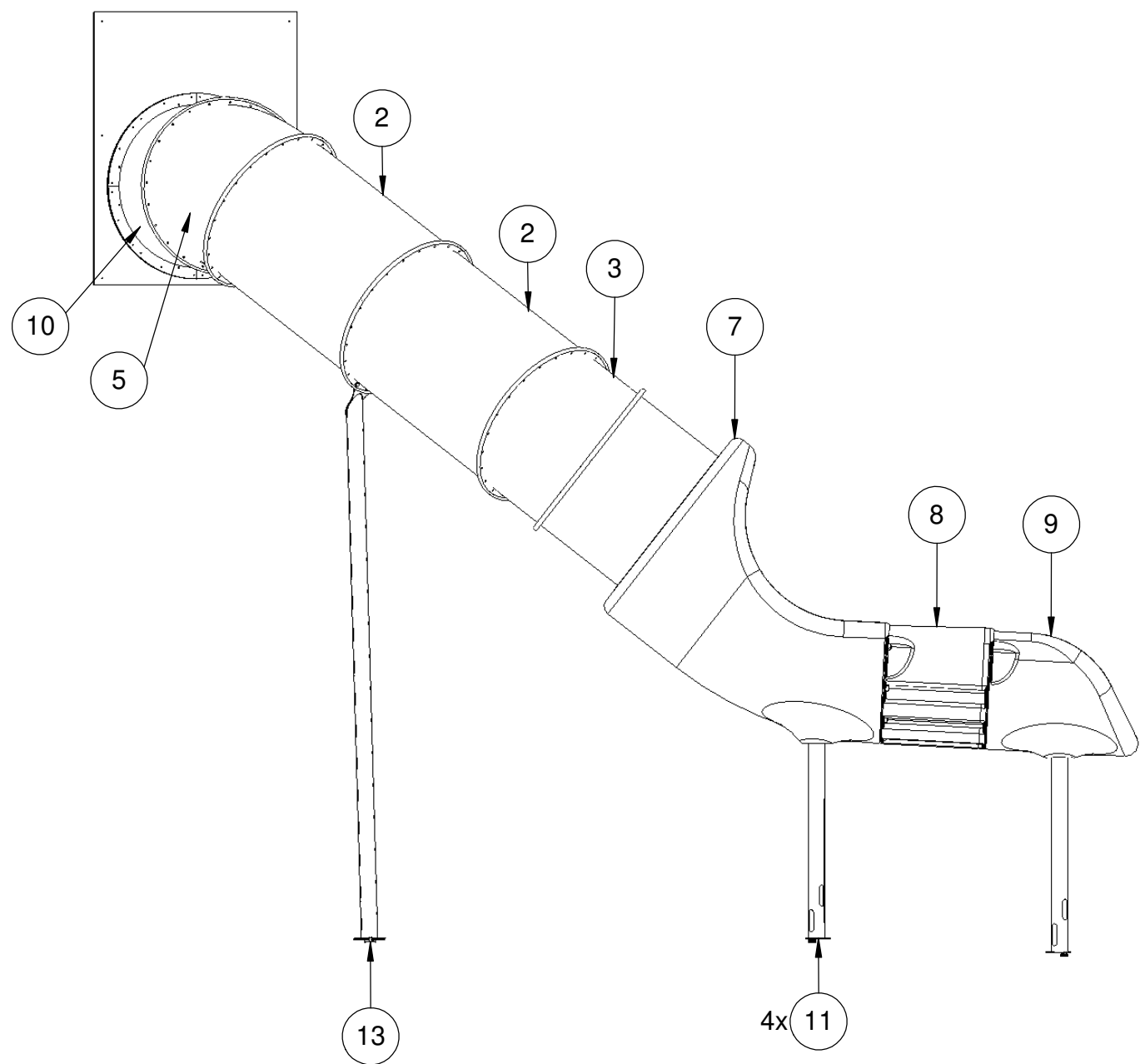






MTSL\_H240\_152231789N

Nr	Element			$\Sigma$
10		DIN 9021	6x18	256
15		ISO 7380	M6x30	120
16		-	K1_d21_B	136
17		-	Z1_d21_B	136
18		DIN 985	M6 (OC)	120
21		DIN 125	8x16	6
43		DIN 1587	M8	3
45		ISO 7380	M8x30	3
58		-	LOCTITE	1
472		DIN 933	M6x25 (OC)	16

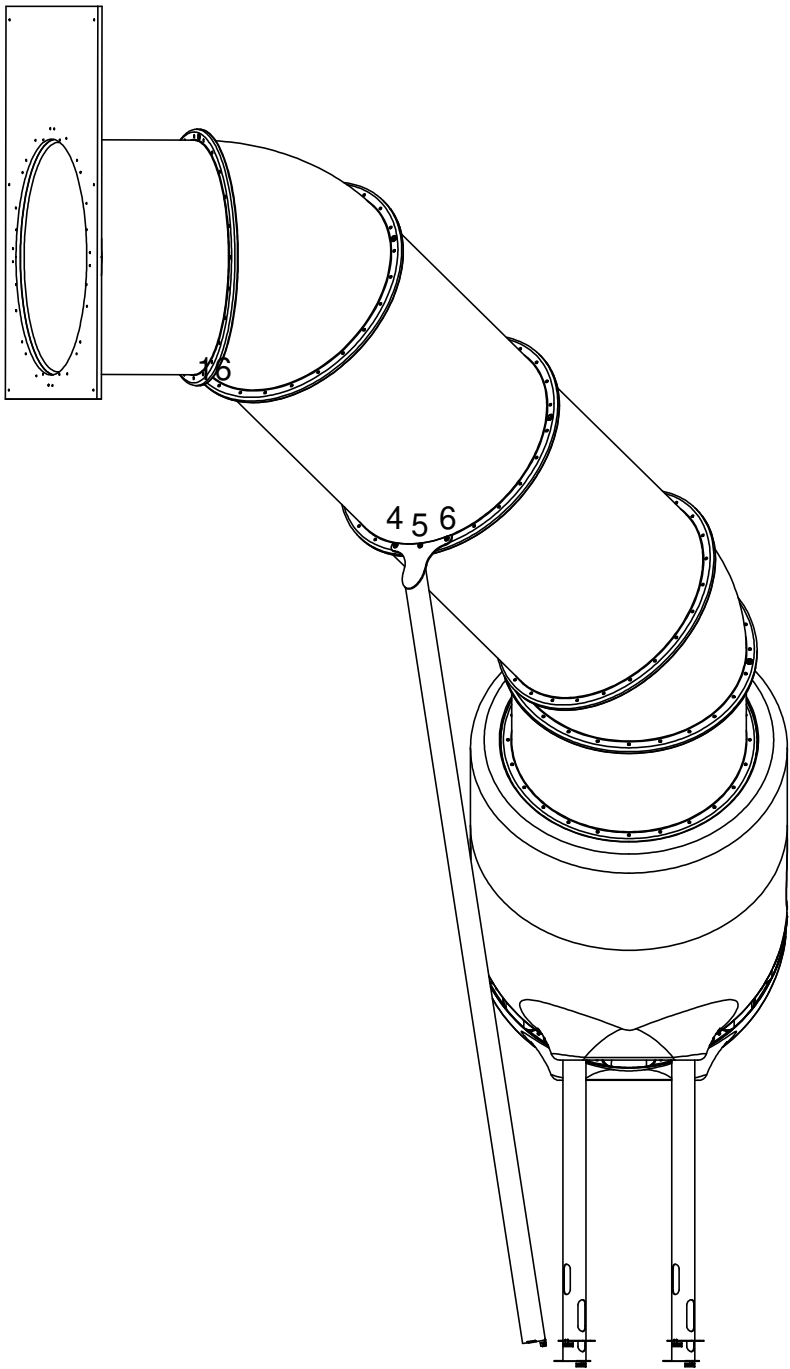
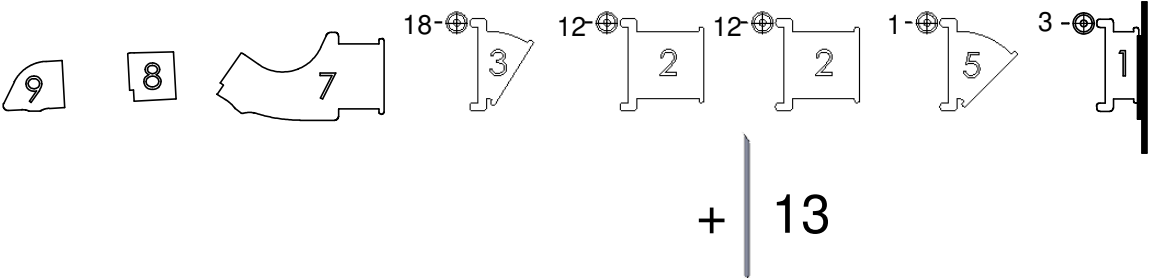


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MTSL\_H240\_152231789N

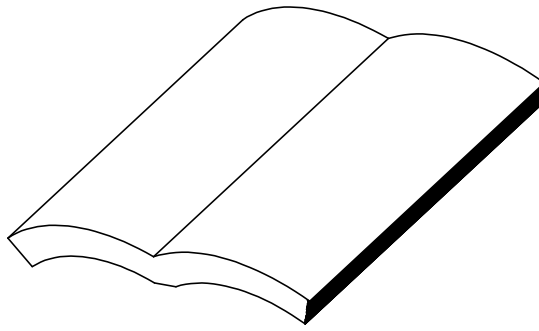


INST\_MTS\_2  
INST\_MTS\_3  
INST\_MTS\_4  
INST\_MTS\_5  
INST\_MTS\_11

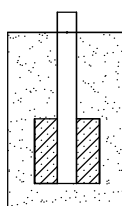
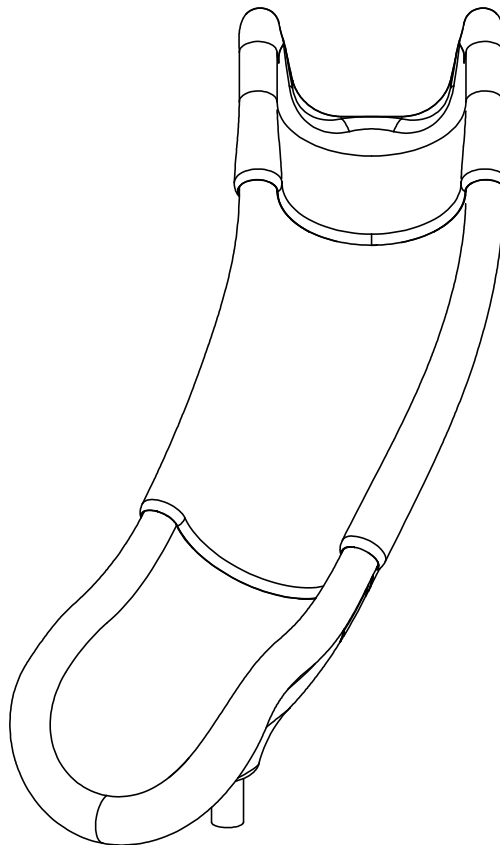


[buglo.pl/mts-manual](http://buglo.pl/mts-manual)

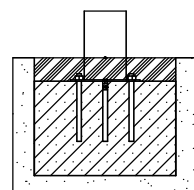
**MANUAL**



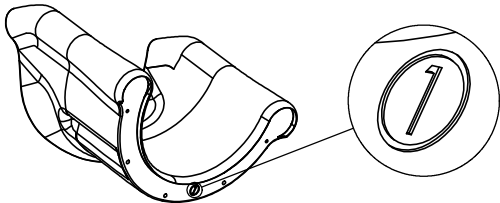
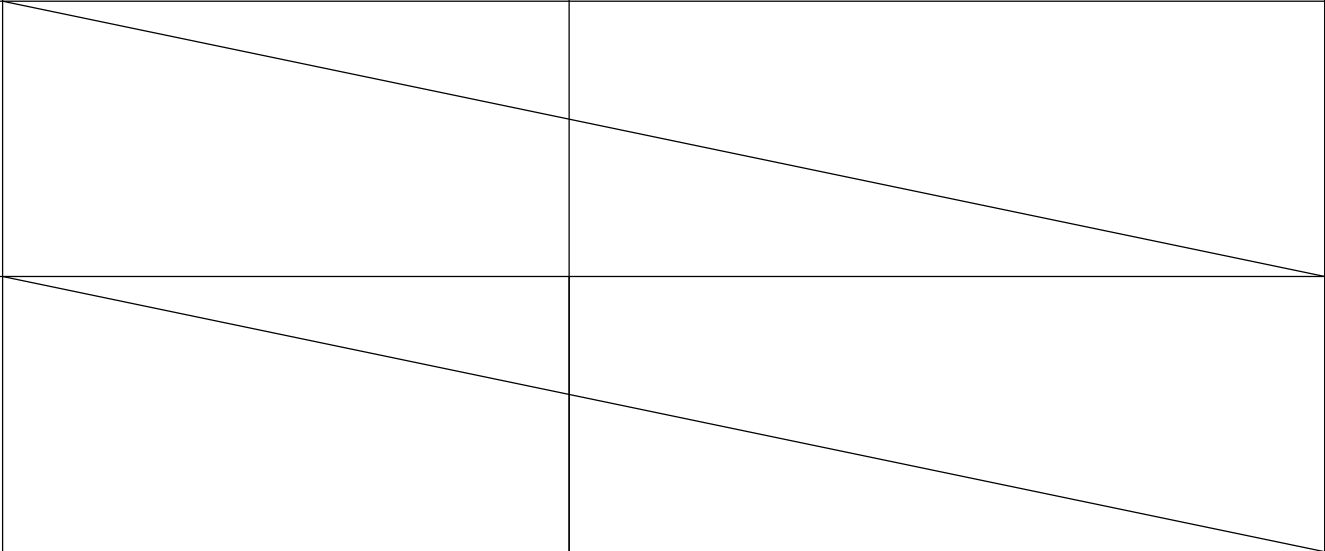
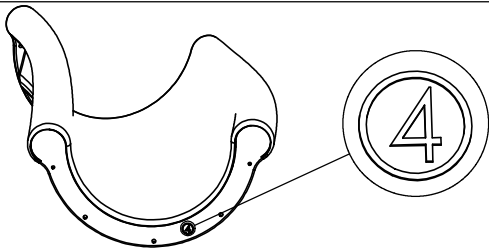
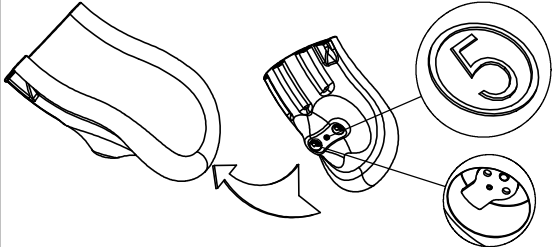
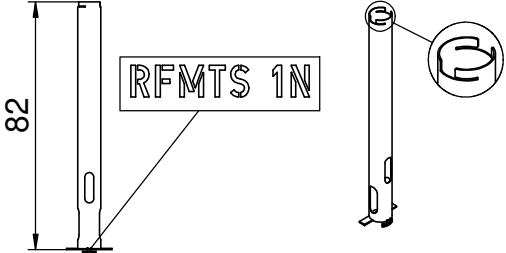
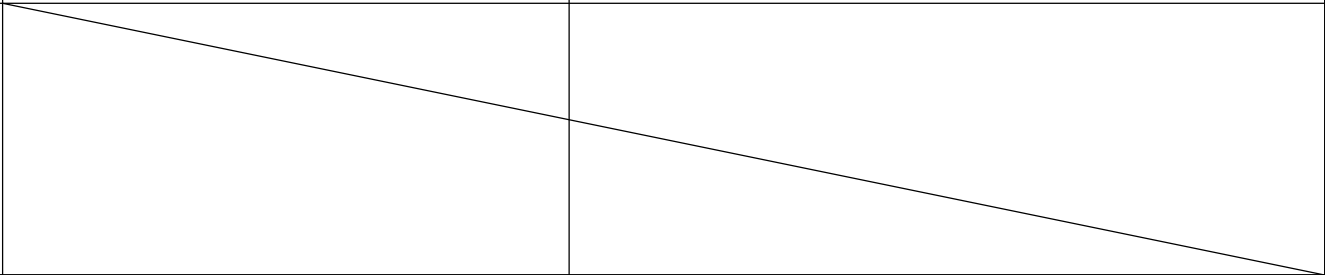
SMOL\_120\_145

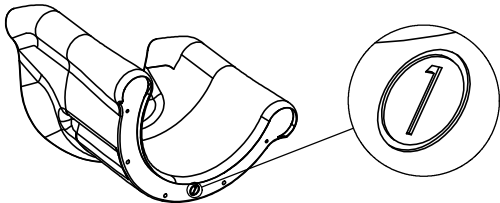
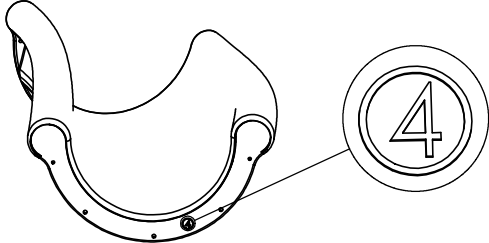
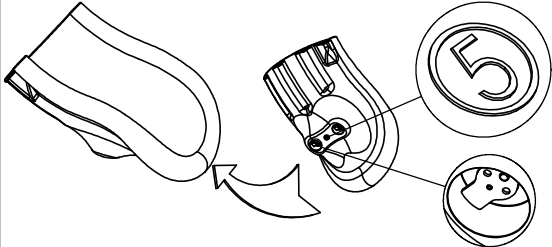



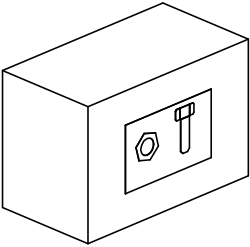






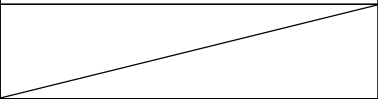
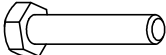
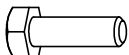
SMOL\_120\_145N



SMOL\_120\_145F

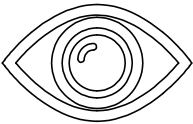
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3		
4		1
5		1
6		2
7		

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2		
3		
4		1
5		1
6		2
7		

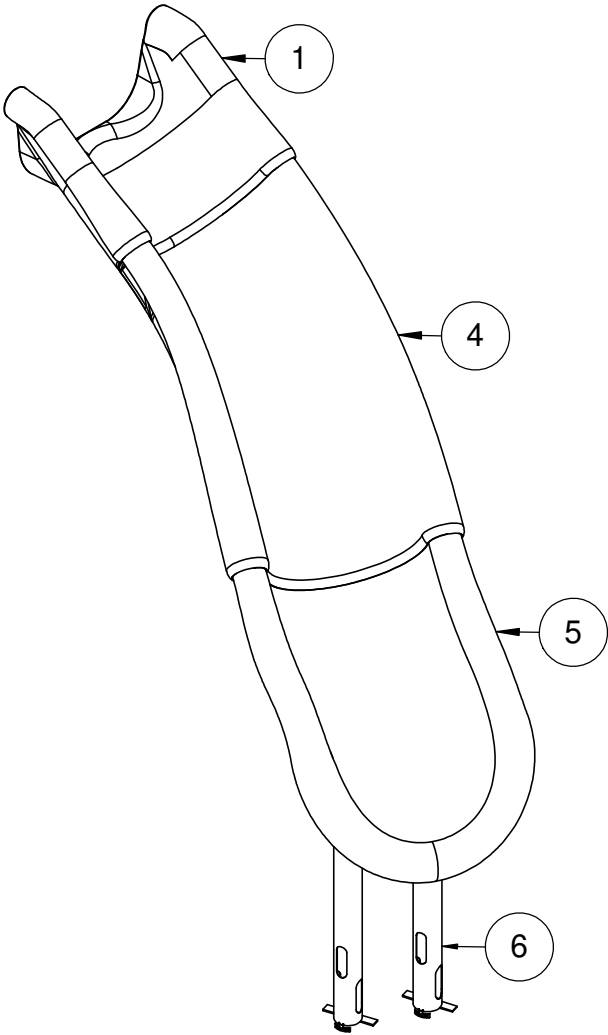
				SMOL_120_145N	SMOL_120_145F
Nr	Element			Σ	Σ
16		-	K1_d21_B	16	16
17		-	Z1_d21_B	16	16
21		DIN 125	8x16	16	16
31		DIN 985	M8	6	6
58		-	LOCTITE	1	1
61		-	KL105		6
210		DIN 933	M8x40		6
240		DIN 933	M8x25	4	4

1

SMOL\_120\_145N



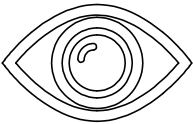
INST\_SMO\_1



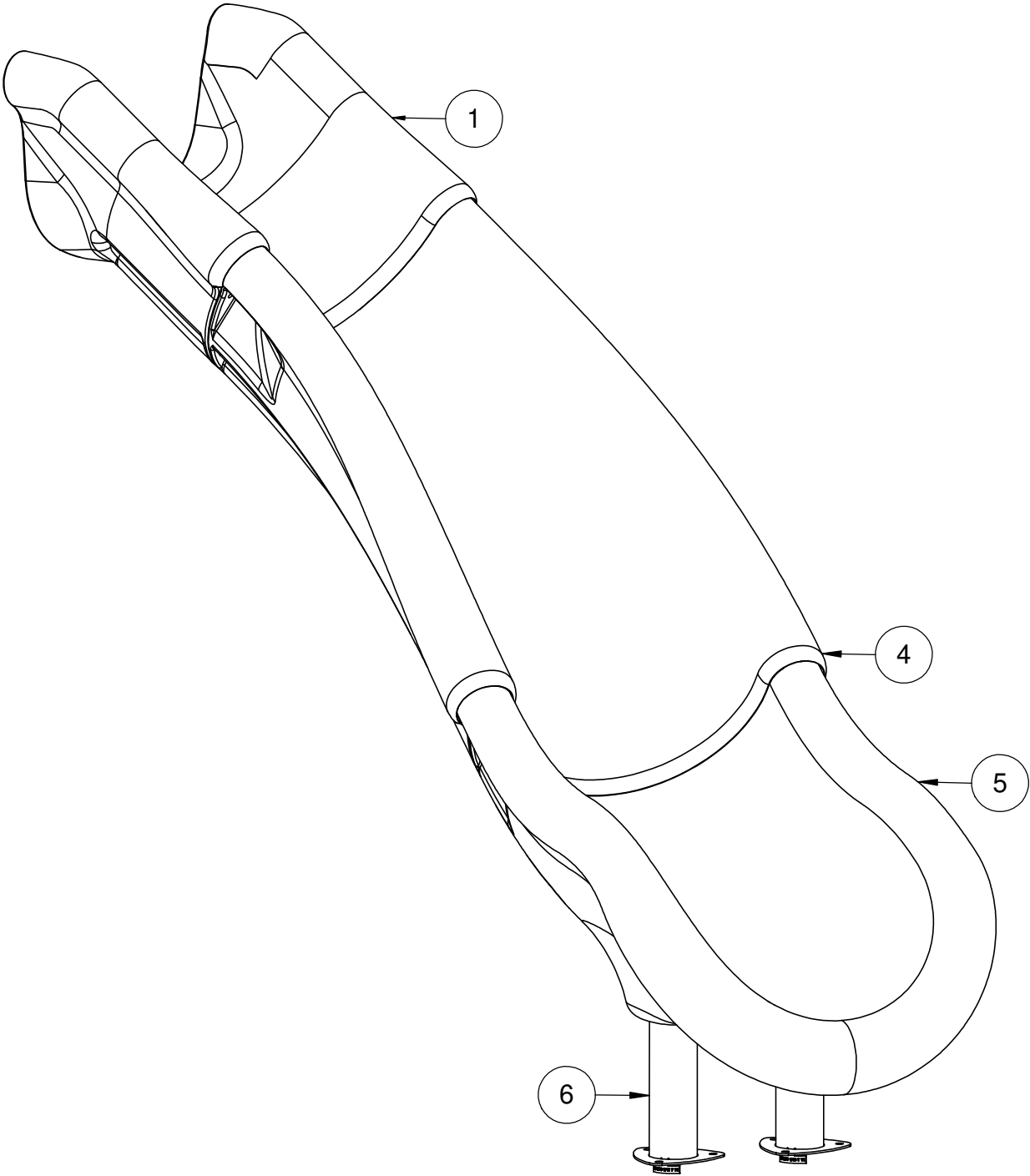


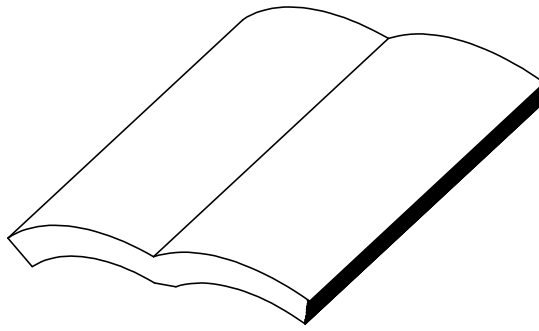
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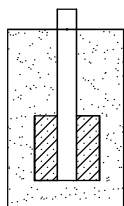
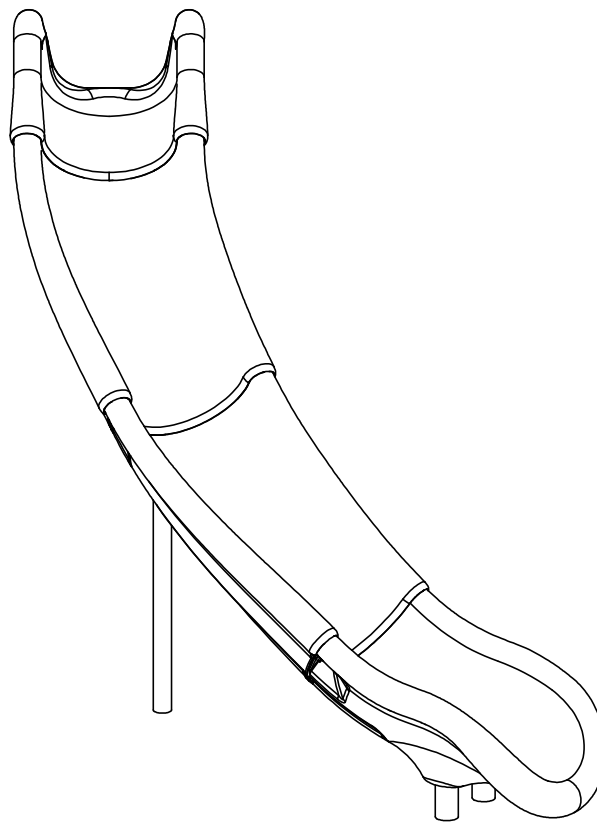


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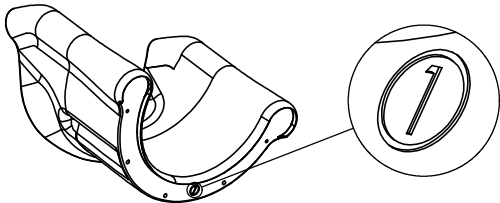
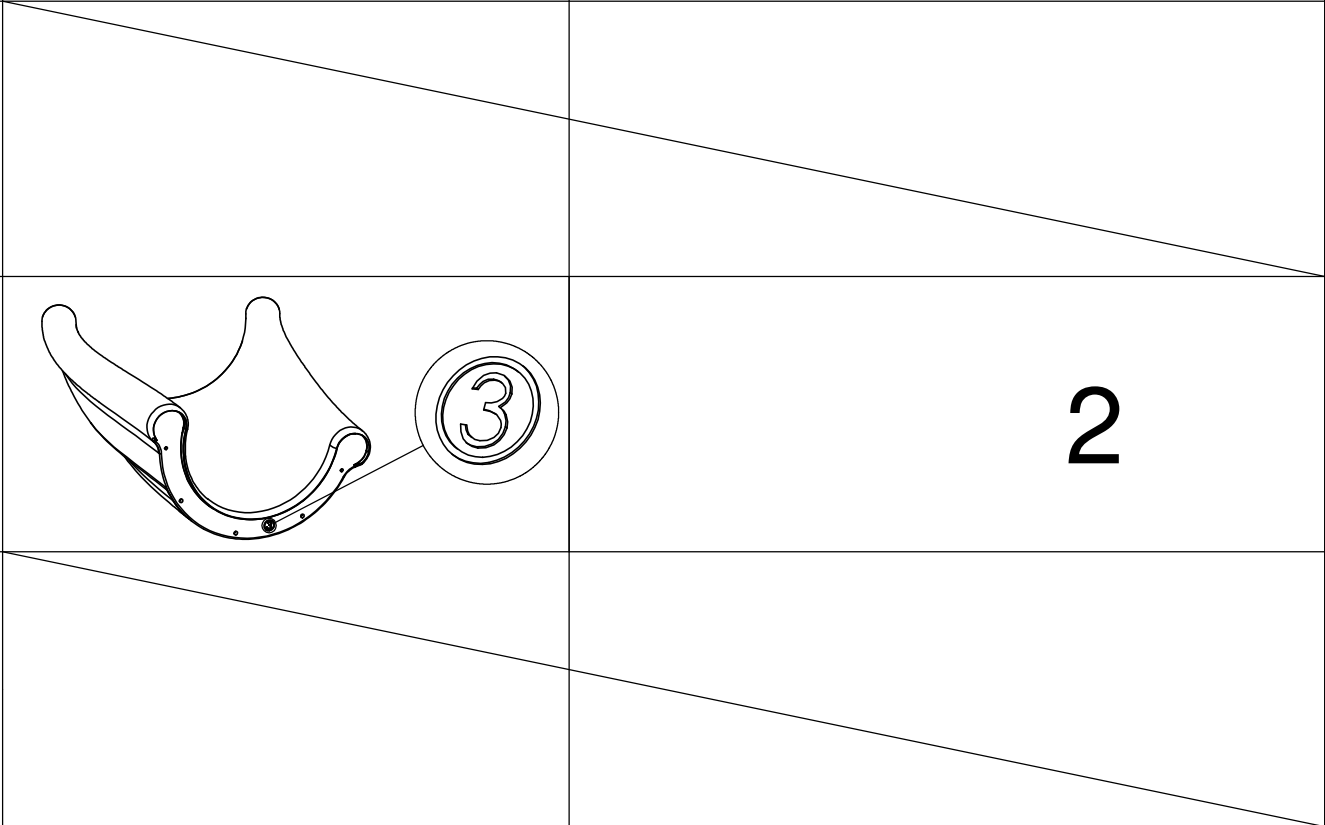
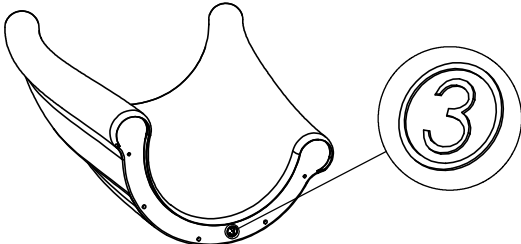
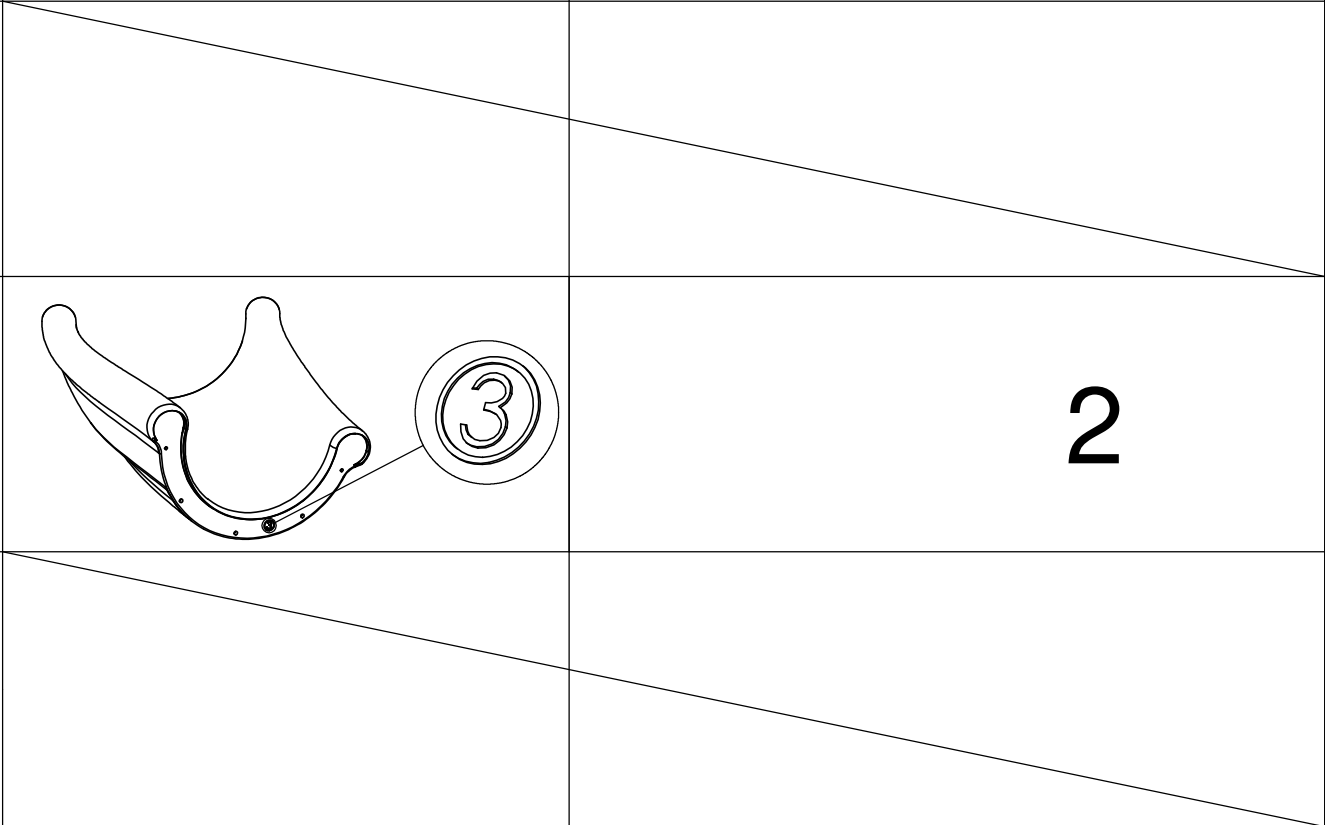
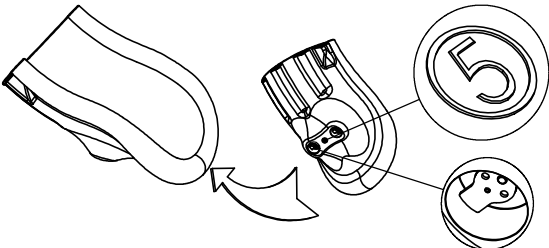
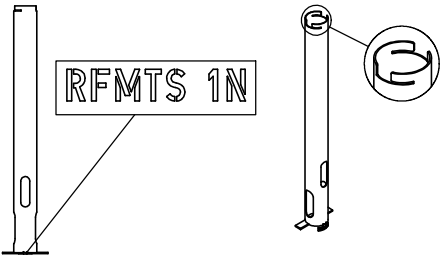
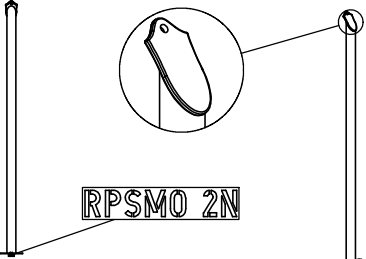


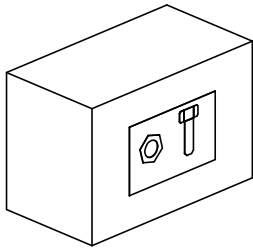


SMOL\_180\_1335






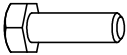
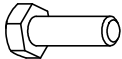
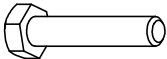


SMOL\_180\_1335N

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3		2
4		
5		1
6		2
7		1

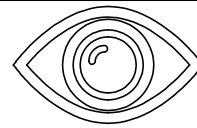


SMOL\_180\_1335N

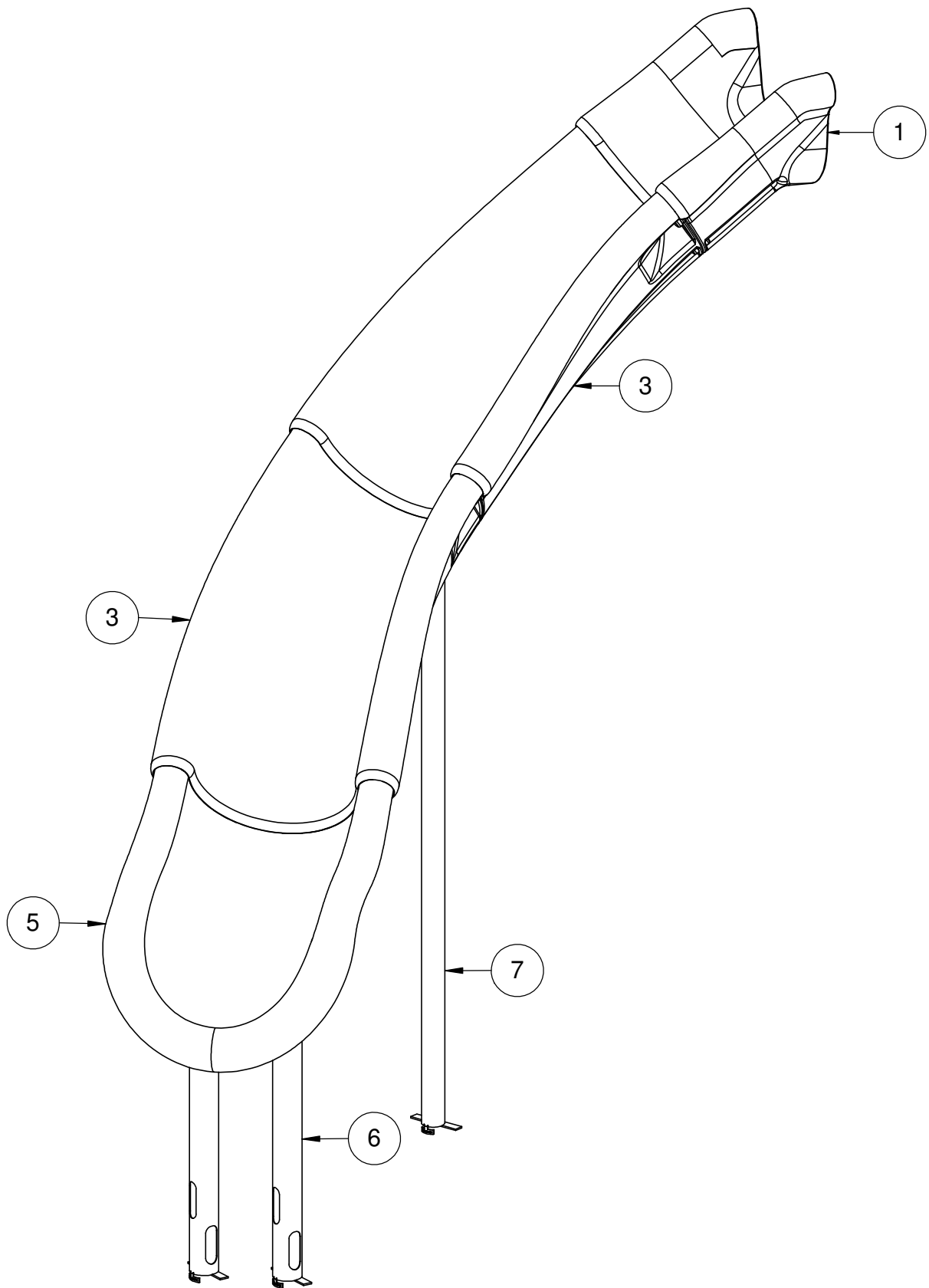
Nr	Element			$\Sigma$
16		-	K1_d21_B	26
17		-	Z1_d21_B	26
21		DIN 125	8x16	26
31		DIN 985	M8	10
58		-	LOCTITE	1
210		DIN 933	M8x40	9
240		DIN 933	M8x25	6
241		DIN 933	M8x50	1

1

SMOL\_180\_1335



INST\_SMO\_1  
INST\_SMO\_2



# Technical specifications of the ELLIPSUM series products

All substitutionary parts for BUGLO's products are available at producer's during whole use period (working life) of the product.  
Necessary toolset for the assembly of the products:

- Cross head screwdriver
- Box wrenches nr 10, 13, 17
- Hex wrenches
- Electrical screwdriver (extra ends: T20 and T30)
- Drill nr 6, 8, 10, 12 (for the foundation)
- Mallet rubber (rubber hammer)
- Tools used to making holes in the ground/surface
- Level
- Crane
- Ladder
- Angle grinder

During the assembly pay attention to: vertical columns setting, tightening all screws, securing and marking mounting location. Before putting device into use it's required to check the stability of all elements, remove protecting tapes and check level and the condition of the amortization surface.

Product installation, conservation and replacement of elements pose a threat for playing children, which is why it is required to mark and secure the assembly space. Such security must guarantee no access to the work space both during and after work. Main threats can be caused by electrical devices and tools, deep foundation holes and incomplete product sets.

During the installation it's required to ensure the assembly space to be about the same size as the safety zone of the equipment. You must pay attention to the direction of the location of the slide made of stainless steel. The steel part of the slide cannot be directed to the south because it may get heat (very hot).

# Conservation and control of the Product

## According to the PN EN 1176-1 : 2017-12-Norm

### The conservation and exploitation:

It is required to consult with the Manufacturer about all maintaining works of the Products' parts which are under guarantee.

### The anticorrosive surface:

Damaged paint coat should be first cleaned out of dust, fat and corrosion centres. After that, the cleaned surface should be covered with an anticorrosive primer for steel surfaces. When the layer is dry, paint twice with spray paint.

### The colour combination used by BUGLO according to the RAL palette:

Grey – RAL 7035, Yellow – RAL 1003, Blue – RAL 5015, Red – RAL 3000, Green – RAL 6018, Black – RAL 9005, Purple – RAL 4008, Anthracite – RAL 7016, Silver – RAL 9006, Beige – RAL 1019, Orange – RAL 2009, Brown - RAL 8017

### Wood:

Elements made of glued laminated timber require a regular renovation. Depending on climate conditions, level of exploitation and mechanical damages, it is advised to renew the impregnation layer after a period of 2 – 5 years. Before finishing, timber elements need to be mattified, then following products need to be applied:

- 1) Impregnating Foundation – GORI 356
- 2) Surface paint – NORDICA EKO 3330 – 12TM1806

Products are available via distribution network of Teknos Company ([www.teknos.com](http://www.teknos.com)). Usage according to the producer's instructions.

IROKO wood: preserve with Owatrol D1.

### Stainless steel:

It is recommended to clean stainless steel elements once a year, to remove sediments and contaminants, which accumulation can cause steel discolouring. Wash with cotton cloths and gentle detergent dissolved in water, eg. dishwashing liquid. After cleaning rinse with water and wipe dry.

### **Caution!**

Cleaners used to clean stainless steel **must not** contain: chlorine, salt, acids or bleaches. Even small amount of these substances can cause permanent damage of chromium oxide surface.

### **Recommendations for the product control according to the EN 1176-7: 2020-Norm Playground equipment and the surfaces part 7: Guidelines for the assembly, control, conservation and exploitation/running.**

1) Post-installation inspection – recommended before the playground opens for public use to assess the access to the product and its surroundings taking into consideration overall security level.

2) The periodic control – if the product is used very intensively or is exposed to vandalism, the control should be carried out once a week or more frequently.

The periodic control includes:

- potential damage of any elements,
- tightening of the connectors,
- outer coat of the set,
- condition of the shock-absorbing surface,
- bearing lubrication,
- completeness of the products,
- checking if there are no cracks, sharp edges or other damages,
- the cleanness around the Product (broken glass determines a big danger) and smoothing the safety surface,
- the presence of obstacles in the safe space or fall space and their removal if present,
- general safety status of the playground.

3) The functional control – should be carried out once every three months.

It includes the range of the periodic inspection enlarged by examining the product's functions.

- during the functional control the fixed elements of the product should be checked (completeness of caps and masking elements),
- checking the stability of the posts,
- checking the loose-fill safety surface (eg. sand, gravel, bark, woodchips) and evening it out. If the level is under 10cm below the marked surface level, it must be filled in,
- tighten all screws,
- checking the tensions of the zip line rope, nets and rope pyramids,
- checking of the condition of welds,
- replacing of worn or damaged elements.

4) The functional control and the main control – mandatory once a year.

The main control covers:

- checking the construction's stability,
- checking and reconstructing the anti-corrosion coating that was damaged,
- checking the foundation's condition,
- checking the loose-fill safety surface (eg. sand, gravel, bark, woodchips) and evening it out. If the level is under 10cm below the marked surface level, it must be filled in,
- checking the condition of wooden elements, if included.

The equipment should have a regular check-up control by competent people (with certified level of competence).

Every time the check-up control takes place, the playground administrator should record it on inspection sheets. Any modifications of the equipment or design that may affect the basic safety of the equipment should be carried out after consultation with the manufacturer or a competent person.

All personnel involved in playground safety management must be competent.

Full range of requirements according to EN 1176-7:2020.

A sample of playground inspection sheet is included in attachment A1.



# Control sheet of the playground



Administrator of the playground

Controlled equipment (product number, manufacturer number)

## Check-up plan

Check-up run once a week or more often, depends on how intensively the product is used (periodically)		YES	NO
1	General condition of the safety on the playground.		
2	Tightening of the connectors, bearings lubrication, checking of the shock-absorbing surface.		
3	Is the set complete?		
4	Are there any cracks, sharp edges or other damages in the device?		
5	Is the area surrounding the device clean (no glass, safe surface horizontal/even)?		
6	Are there any obstacles in the clear space or fall space?		

Check-up run once in a three months (functional)		YES	NO
1	Are the non-separable elements complete (covers and masking elements are complete)?		
2	Are the posts stable?		
3	Is the loose safe surface horizontal/even?		
4	Is the level of the safety surface up to the marked level or is max. 10cm below this level?		
5	Is the condition of the connectors adequate?		
6	Is the condition of the welds adequate?		
7	Are the ropes and nets tensioned correctly?		
8	Replacing of worn or damaged elements.		

Check-up run once a year (functional an main)		YES	NO
1	Is the construction stable?		
2	Are there any damages to the anticorrosional coat?		
3	Is the powdery safe surface horizontal/even?		
4	Is the condition of the foundation adequate?		
5	Is the condition of wooden elements adequate?		
6	Is the level of the safety surface up to the marked level or is max. 10cm below this level?		

## Fault/Repair

1	
2	
3	
4	
5	

## Parts exchange

	Name of the part	Qty	Reason
1			
2			
3			

Date	Inspector's name
1	
2	
3	
4	