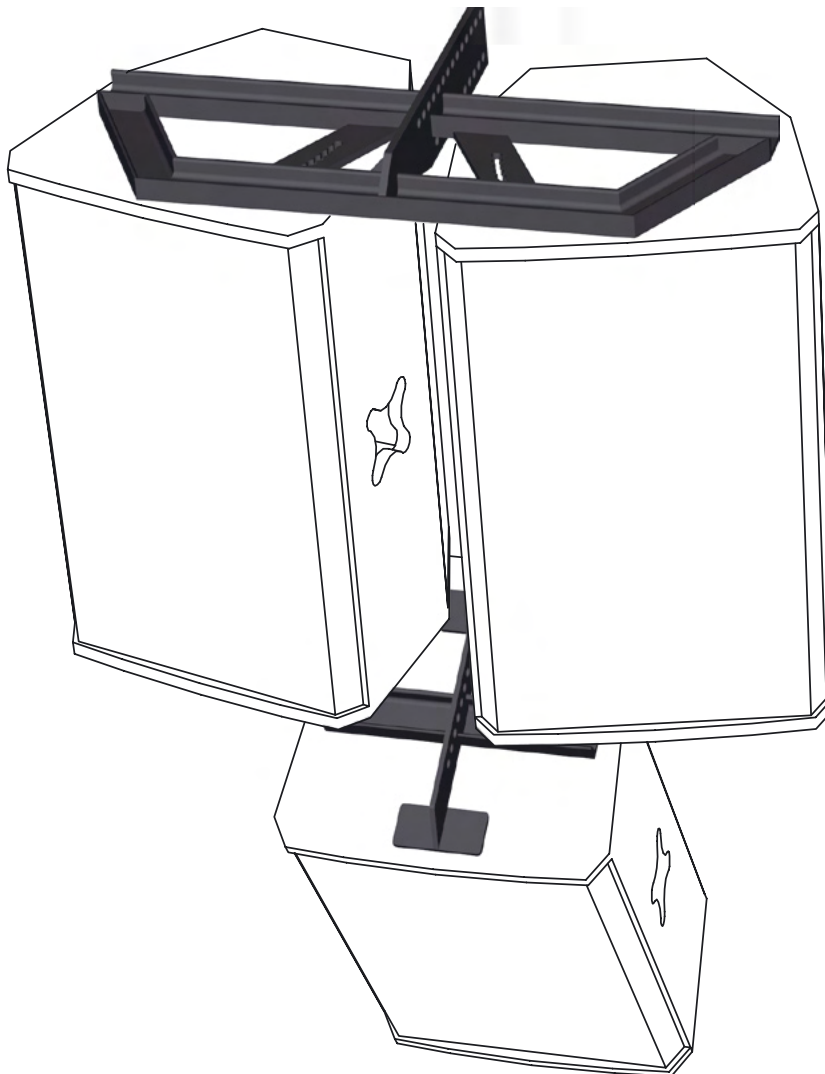


Cradle
Cradle ZU

CA 1201
CA 1215
CA 1515



User's Manual



**Important Informationen,
Please Read before Use!**

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1. Symbols in User's Manual

The following symbols in this user's manual serve for improved orientation when observing fitting and assembly directions as well as directions specific to eventual safety regulations:



This symbol indicates the possibility of life-threatening danger and a health risk for the operator. Not following these instructions may result in serious health problems including potentially fatal injuries.



This symbol indicates a possibly dangerous situation. Not following these instructions may cause minor injuries or cause property damage.



This symbol gives instructions for the proper use of the described products. Not following these instructions may lead to operational fault in the product or its surroundings.

2. Information about this User's Manual

User's Manual Cradle / Cradle ZU for CA 1201, CA 1215 and CA 1515 08/2002

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All specifications in this manual are based on information available at the time of publishing for the features and safety guidelines of the described products.

Technical specifications, measurements, weights and properties are not guaranteed.

The manufacturer reserves the right to make product alterations within legal provisions as well as changes to improve product quality.

Please keep these instructions for future reference!

We appreciate any input with suggestions and improvements for this manual. Please send this to us at the following address:

Info@kling-freitag.de or to:

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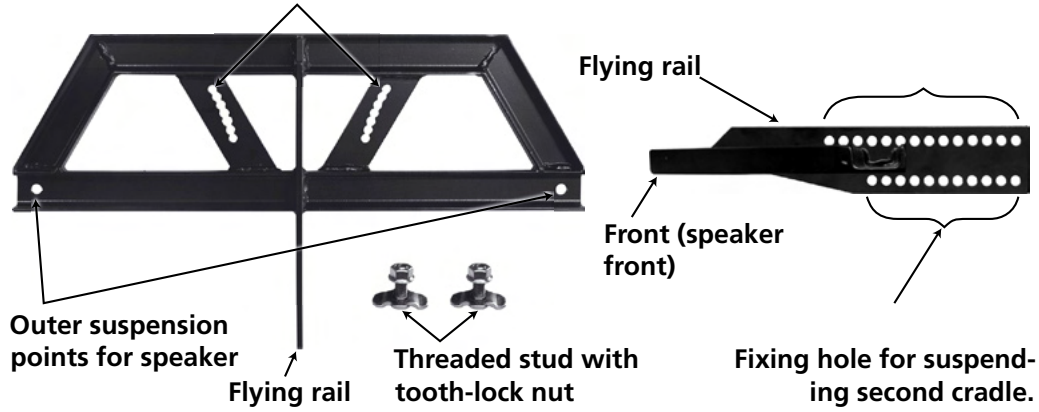
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3. Shipped Components and Definitions

3.1 Cradle

Inner suspension points on hole radius.
(Selection of drill hole depends on desired horizontal alignment of the speakers)

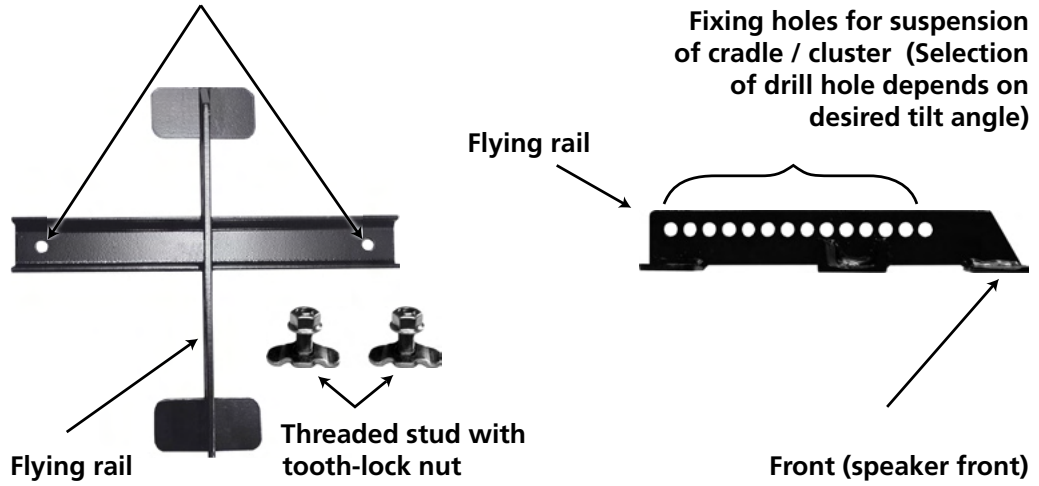
Fixing holes for suspension of cradle / cluster (Selection of drill hole depends on desired tilt angle)



3.2 Cradle ZU

Fixing holes for speaker

Fixing holes for suspension of cradle / cluster (Selection of drill hole depends on desired tilt angle)

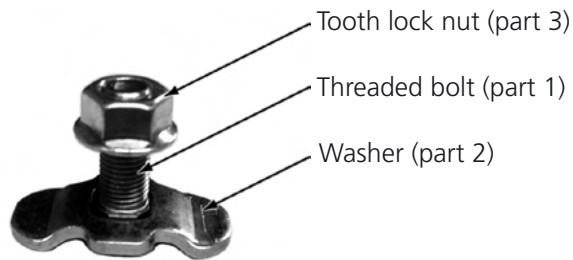


4. Mounting and Usage

1. Ancra Flying Point
on speaker enclosure



Threaded stud (3-part)



WARNING

- 2.



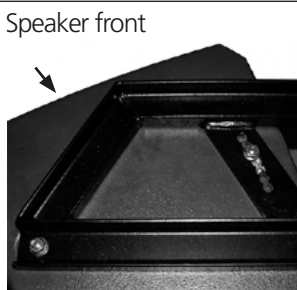
Place the threaded bolt (part 1) of the flying stud in the flying point. Turn the threaded bolt so that the eye of the stud slides under the guides on the flying point.

- 3.



Place the washer of the threaded stud (part 2) over the threaded bolt so that the washer fits into the Ancra flying point.

- 4.



Speaker front

Put the cradle with the speaker attachment drill holes onto the threaded bolts (select drill hole from hole radius, depending on the horizontal arrangement of the speakers, see following pages). The front side of the speakers must face the front of the cradle (Definition Chapter 3). Subsequently, screw the self-locking tooth-lock nuts with a tightening torque of 30 Nm into the threaded bolts. If necessary, retighten the screws after some time has passed. Proceed correspondingly with the Cradle ZU.

- 5.



Following assembly, control whether the stud is sitting correctly and is tightly anchored to the enclosure.

5. Safety Instruction



WARNING

The Cradle (ZU) is sufficiently sized for the designated use. It may only be used for purposes and in the manner as described in this manual. If these guidelines are not observed, the load capability of the cradle or the speaker enclosure may be exceeded. Only the delivered parts should be used for assembly. Using other parts – especially those from other manufacturers – is not permissible.

The Cradle must be assembled so that the shorter of the parallel sides of the trapeze frame faces the front of the speaker. See Chapter 3.

Cradle ZU must be assembled so the tapered off side of the flying rail faces the front of the speaker. See Chapter 3.

The Cradle serves as a receptacle for **two** speakers, the Cradle ZU is intended just for **one** speaker! Please note that the safe working load (SWL) may not be exceeded (information about the working load: see last page).

A speaker or a maximum of a second cradle with two speakers may only be mounted from a Cradle ZU from the mounting drill holes for suspending a further cradle (definition Chapter 3).

Only use Kling & Freitag original parts.

The cradles are not to be used to mount any other loads or in combination with other speaker systems aside from those described here!

Please observe the other delivered safety instructions for speakers and assembly equipment.

6. Correct Alignment of the Speakers

6.1 Horizontal Speaker Alignment on K&F Cradle

The K&F Cradle offers the possibility to array various speakers based on usage in an optimal horizontal angle to one another. In order to do so, a certain drill hole in the radius is selected.

The recommended adjustment angle for each speaker can be taken from the following table. Further information can be found in the corresponding speaker manuals.

The selection of the drill holes and the corresponding adjustment angle can be seen on the graphics on the next page.

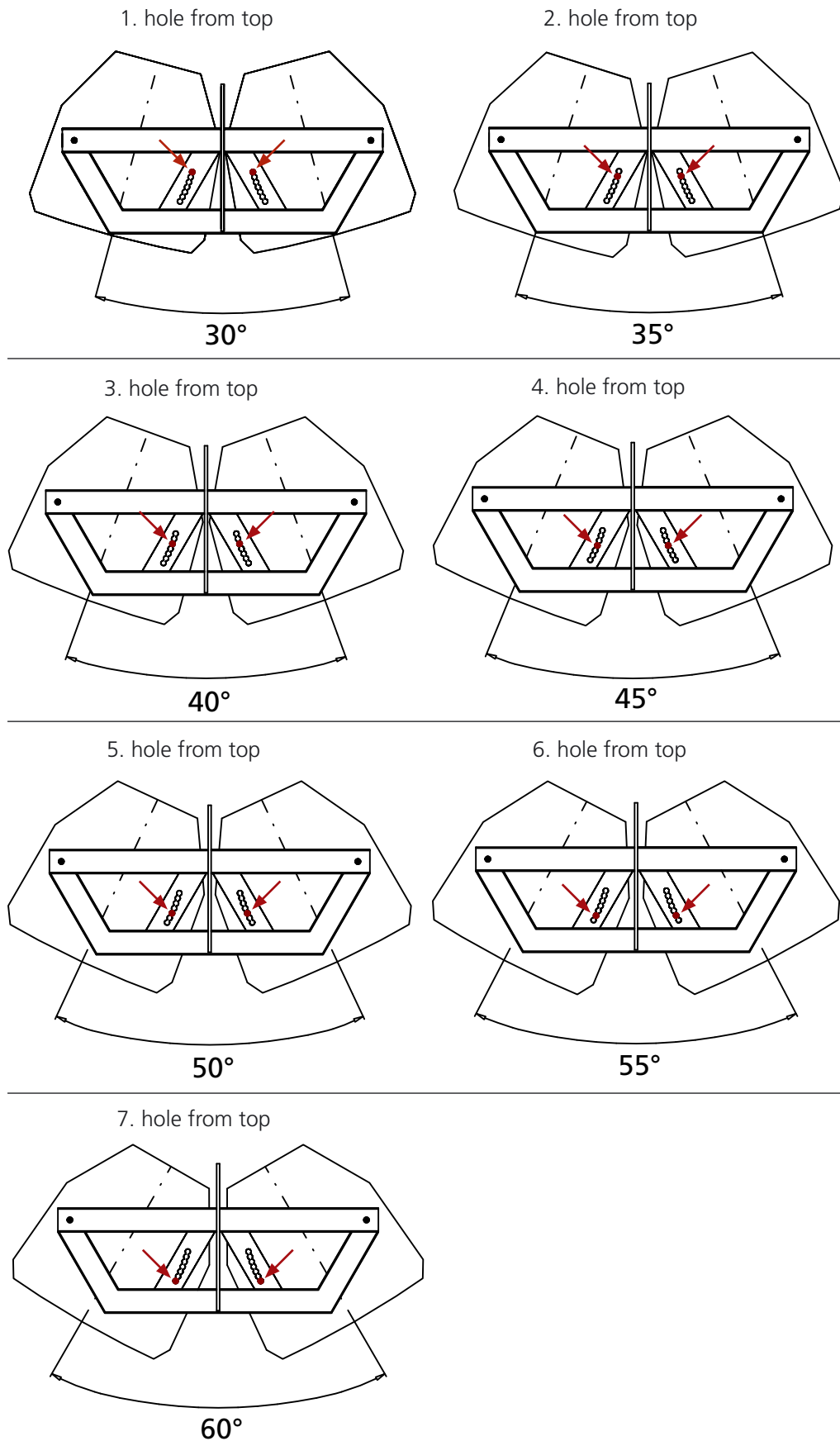


IMPORTANT

Model	Coverage angles	Recommended horizontal angle
CA 1201	standard (90°h x 60°v)	40°-60°
	rotated horn (60°h x 90°v)	35°-40°
CA 1215-6	standard (65°h x 50°v)	35°-40°
	rotated horn (50°h x 65°v)	30°
CA 1215-9	standard (90°h x 50°v)	40°-60°
	rotated horn (50°h x 90°v)	30°
CA 1215-6	standard (65°h x 50°v)	35°-40°
	rotated horn (50°h x 65°v)	30°
CA 1215-9	standard (90°h x 50°v)	40°-60°
	rotated horn (50°h x 90°v)	30°

6.1.1 Selecting the Drill Hole on the Radius for different Angles

In Chapter 6.1, we recommend which horizontal adjustment angle should be selected for each of the speaker types. Based on the following graphs, you can see which drill hole needs to be selected in the hole radius in order to achieve this adjustment angle



6.2 Suspension with different Tilt Angles

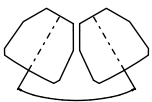
The selection of the drill hole in the flying rail to suspend the cradle determines the vertical tilt angle of the speaker. The various tilt angles can be found on the tables listed on the following pages (dependent upon the horizontal adjustment and the speaker type).

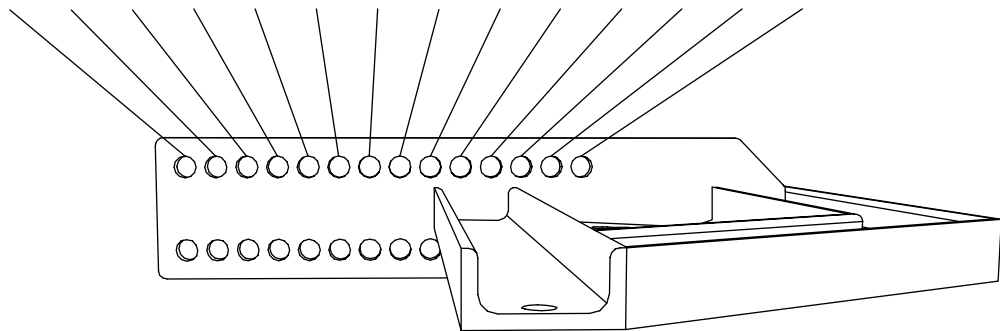
Please note that mounting a second Cradle or a Cradle ZU under the speaker influences the vertical tilt angle. In this case, the desired tilt angle must be adjusted by selecting another drill hole in the flying rail.

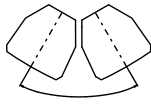


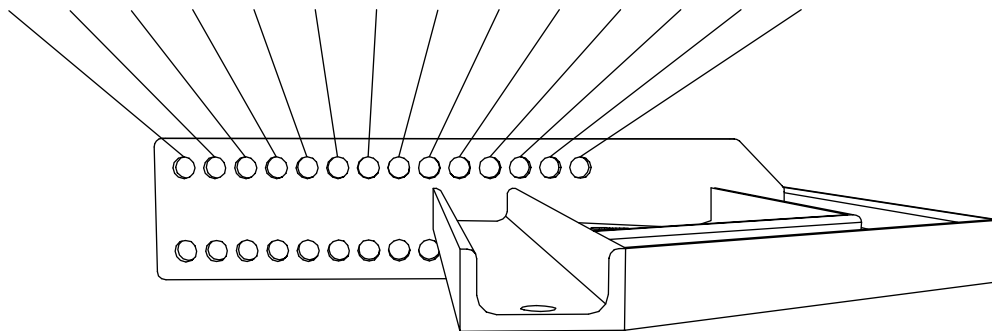
To ensure that the cradle does not fall down, when mounting, be sure to secure it from a second independent source.

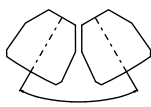
Steel chains or ropes of steel wire are to be used for mounting and securing. These devices must be designed to carry the load, and dynamic loads (i.e. falling down) must be taken into consideration so that they are sufficiently sized. Detailed instructions for rigging hardware such as ropes, chains and shackles can be found in our Safety and Assembly Manual.

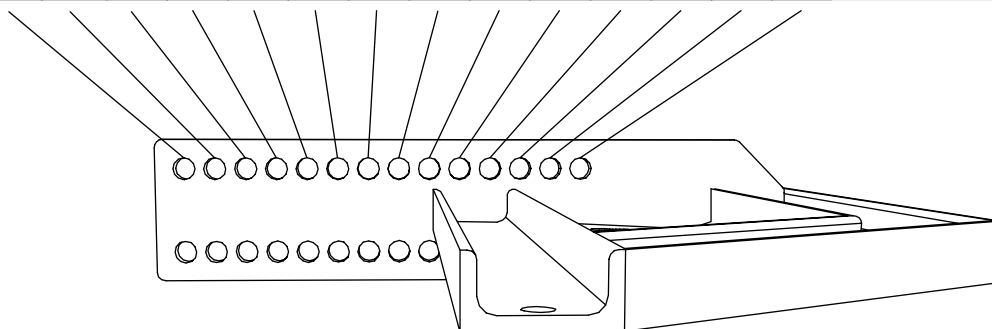
Cradle for CA 1201(M)														
vertical angle°														horizontal angle
33.5	31	29	27	24.5	22	19	16.5	13	10	6.5	3	0	-3.5	30°
34	31.5	29	27	24.5	22	19.5	16.5	13.5	10.5	7.5	4	0.5	2.5	35°
35.5	32.5	30	27.5	25	22.5	19.5	16.5	14	10.5	7.5	4.5	1.5	-2	40°
35	32.5	30.5	28	25.5	23	20.5	17.5	14.5	11.5	8.5	5	2	-1	45°
36	33.5	31	29	26.5	24	21	18.5	15.5	12.5	9.5	6	3	0	50°
35.5	33	31	28.5	26	23.5	21	18	15.5	12.5	9	6	3	0.5	55°
35	32.5	30.5	28	25.5	23	20.5	17.5	15	12	9	5.5	2.5	0.5	60°

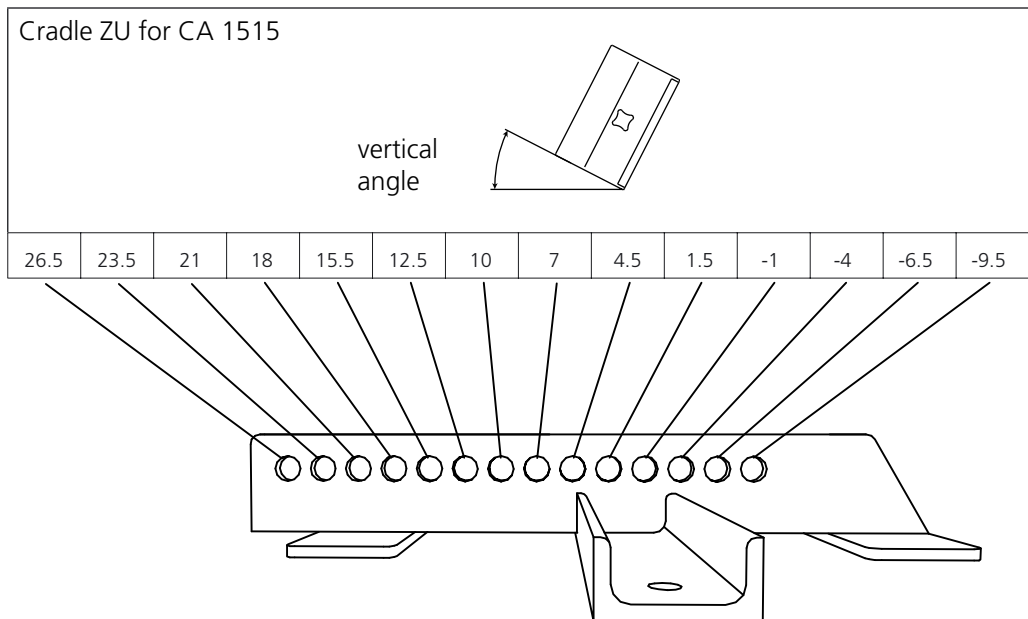
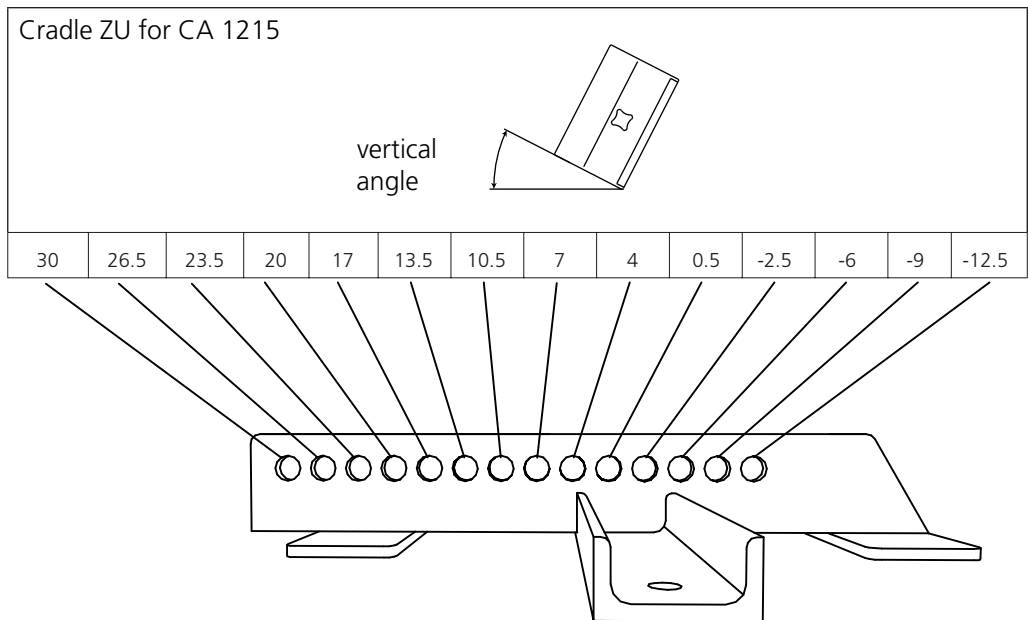
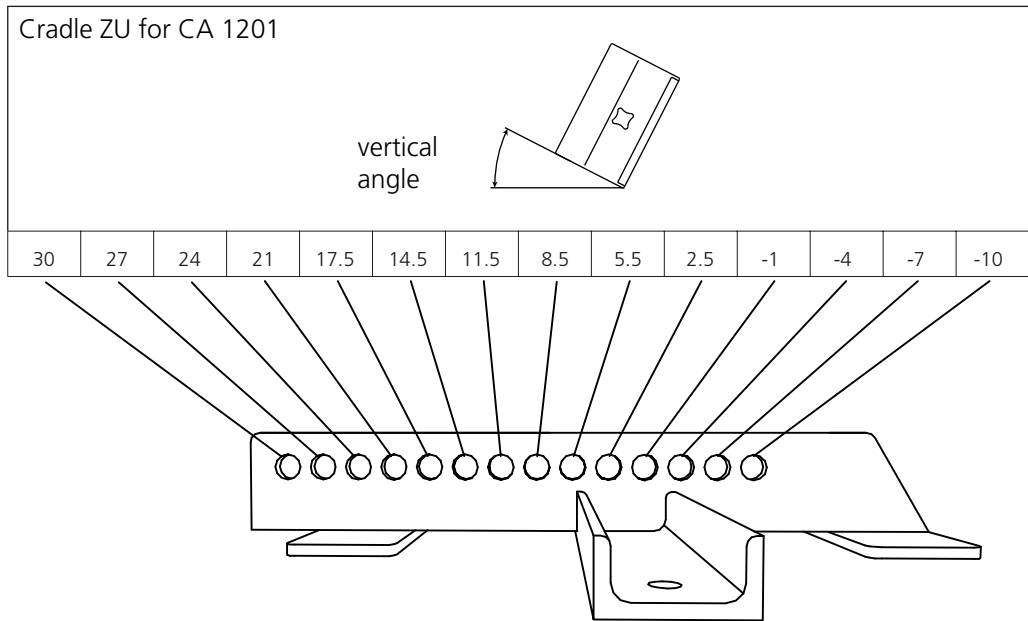


Cradle for CA 1215														
vertical angle°														horizontal angle
34.5	32	29.5	26.5	24	21	18	15	11.5	8.5	4.5	1	-2.5	-6	30°
34.5	32	29.5	27	24.5	22	19	16	12.5	9.5	6	2	-1.5	-5	35°
35	32.5	30	27.5	25	22	19.5	16.5	13	10	6.5	3	-0.5	-4	40°
36	33.5	30.5	28	25.5	22.5	20	17	13.5	10.5	7	3.5	0	-3.5	45°
35.5	33	30.5	28	25.5	23	20	17	14	11	7.5	4	1	-2.5	50°
35	32.5	30.5	28	25.5	23	20	17.5	14.5	11.5	8	5	1.5	-1.5	55°
34.5	32	30	28	25.5	23	20.5	17.5	14.5	11	8	5	2	-1	60°

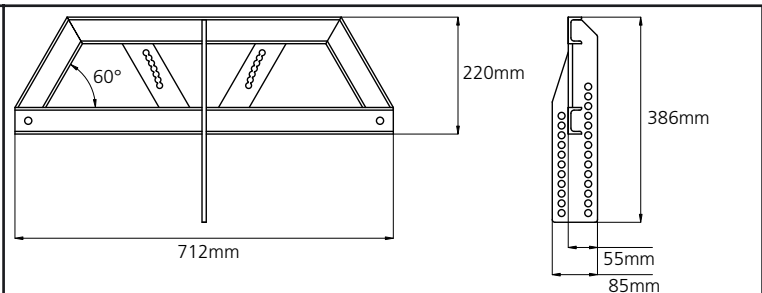
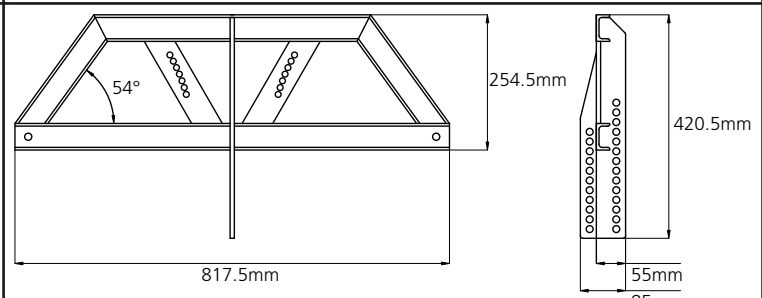
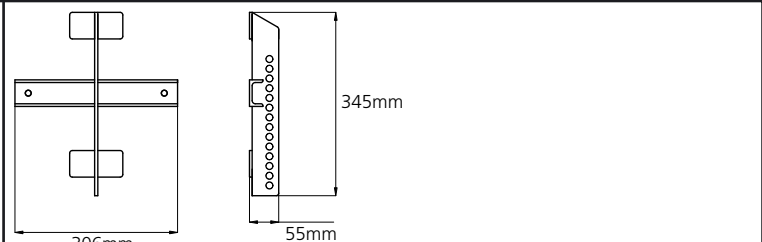
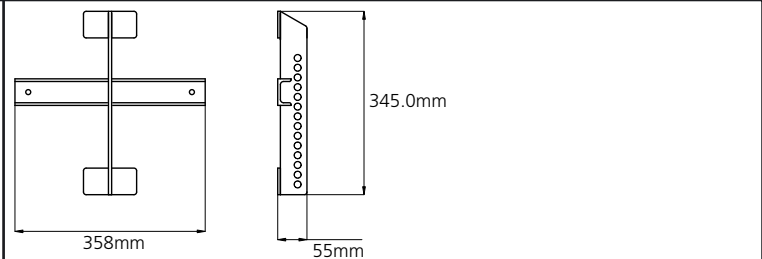


Cradle for CA 1515														
vertical angle°														horizontal angle
32	29.5	27	25	22.5	20	17.5	14.5	12	9.5	6.5	3.5	1	-2	30°
33	30.5	28	25.5	23	20.5	18	15.5	12.5	10	7	4	1	-2	35°
33	30.5	28.5	26	24	21.5	19	16	13.5	10.5	7.5	4.5	1	-2	40°
34	31.5	29.5	27	25	22.5	20	17	14.5	11.5	9	6	3	0	45°
34.5	32	30	27.5	25.5	23	20.5	18	15	12	9	6	3	0	50°
34.5	32	30	28	26	23.5	21	18.5	16	13	10.5	7.5	4.5	1.5	55°
34	32	29.5	27.5	25.5	23	20.5	18.5	16	13	10.5	7.5	5	2	60°





7. Basic Dimensions, Weight and Load Capability

<p>Cradle for CA 1201 / CA 1215</p>	 <p>Weight: 7.8 kg Save working load: 72 kg With second cradle suspended below: 144 kg</p>
<p>Cradle for CA 1515</p>	 <p>Weight: 9.3 kg Save working load: 80 kg With second cradle suspended below: 160 kg</p>
<p>Cradle ZU for CA 1201 / CA 1215</p>	 <p>Weight: 2.1 kg Save working load: 36 kg</p>
<p>Cradle ZU for CA 1515</p>	 <p>Weight: 2.3 kg Save working load: 40 kg</p>

