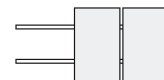


# TILE ROOF HOOK INSTALLATION MANUAL







Minimum number of people for assembly: 2 people.

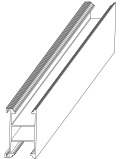
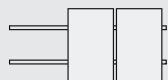
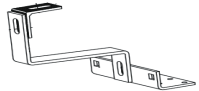

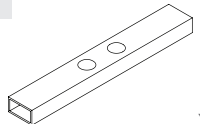
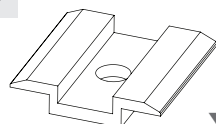
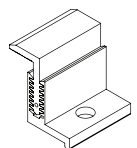

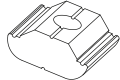
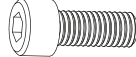
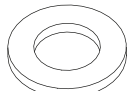


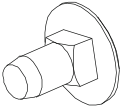
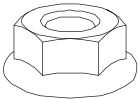

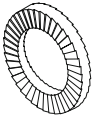
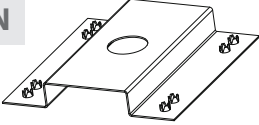
Estimated assembly time: 2 h (time depends on the experience of the people performing the assembly, location and assembly conditions).

## Tools needed for installation

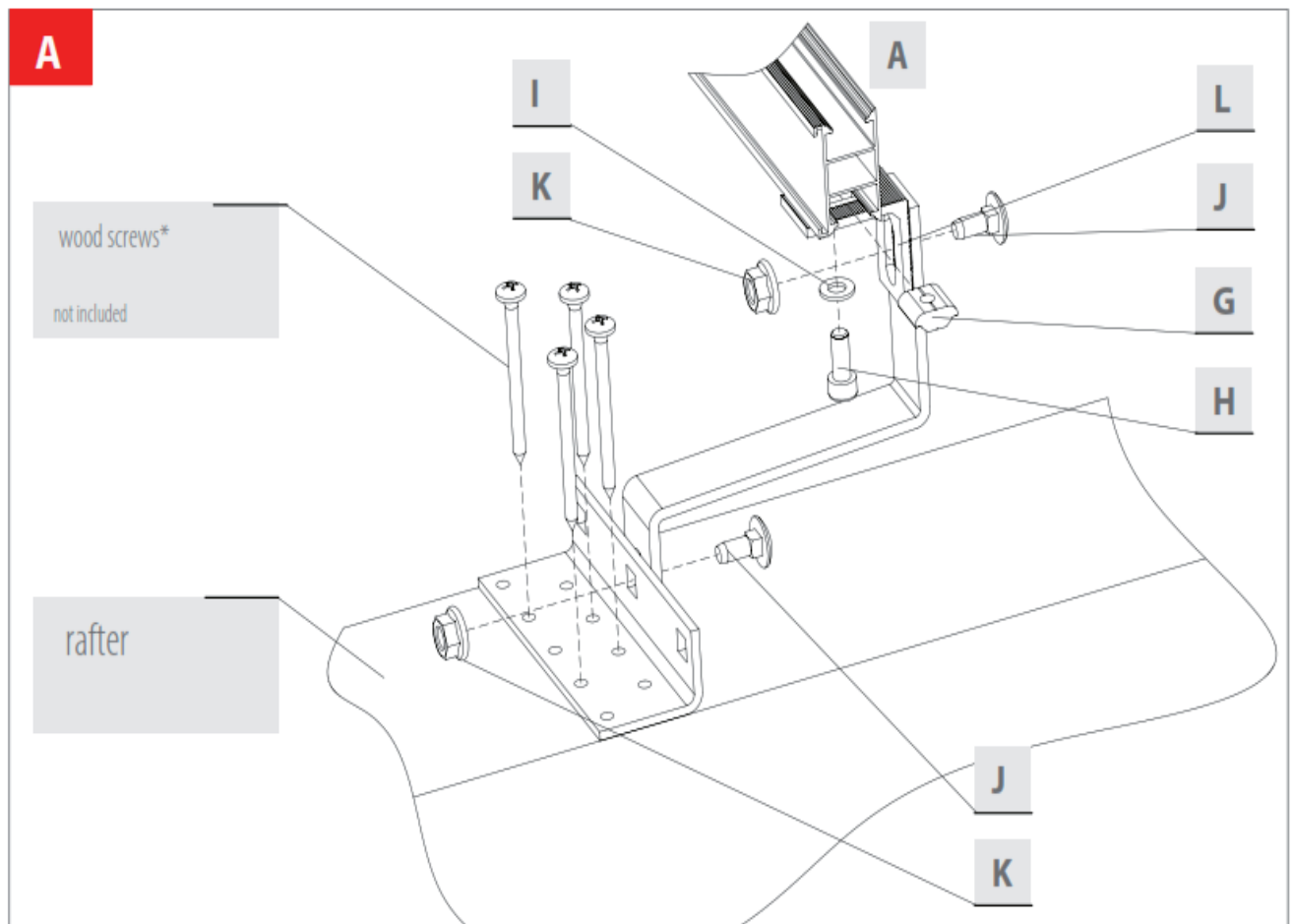
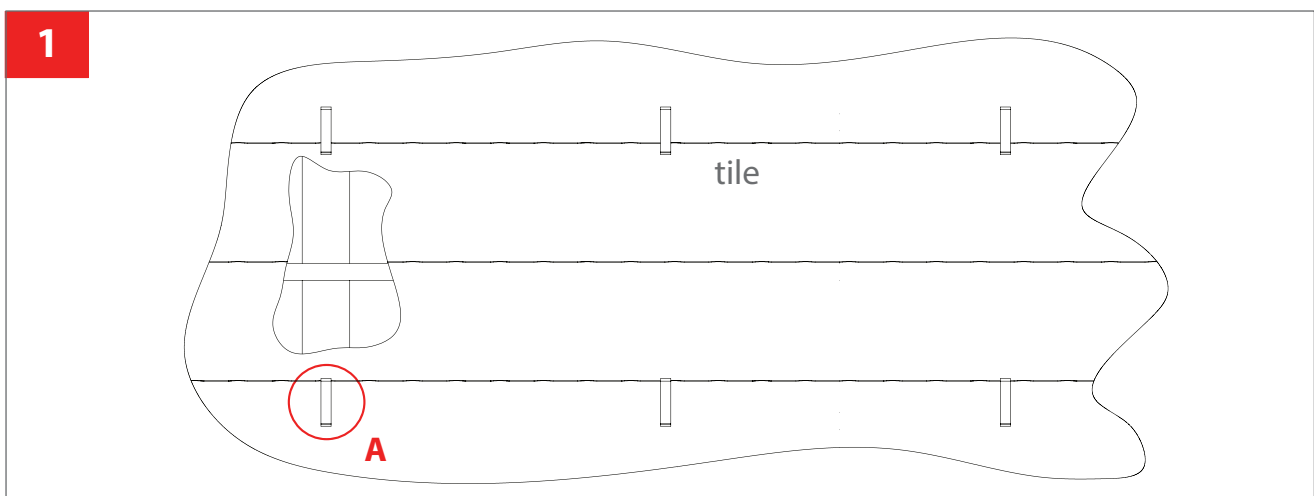
-  size 6
-  size 15 mm
-  screwdriver
-  screwdriver bits

## Elements

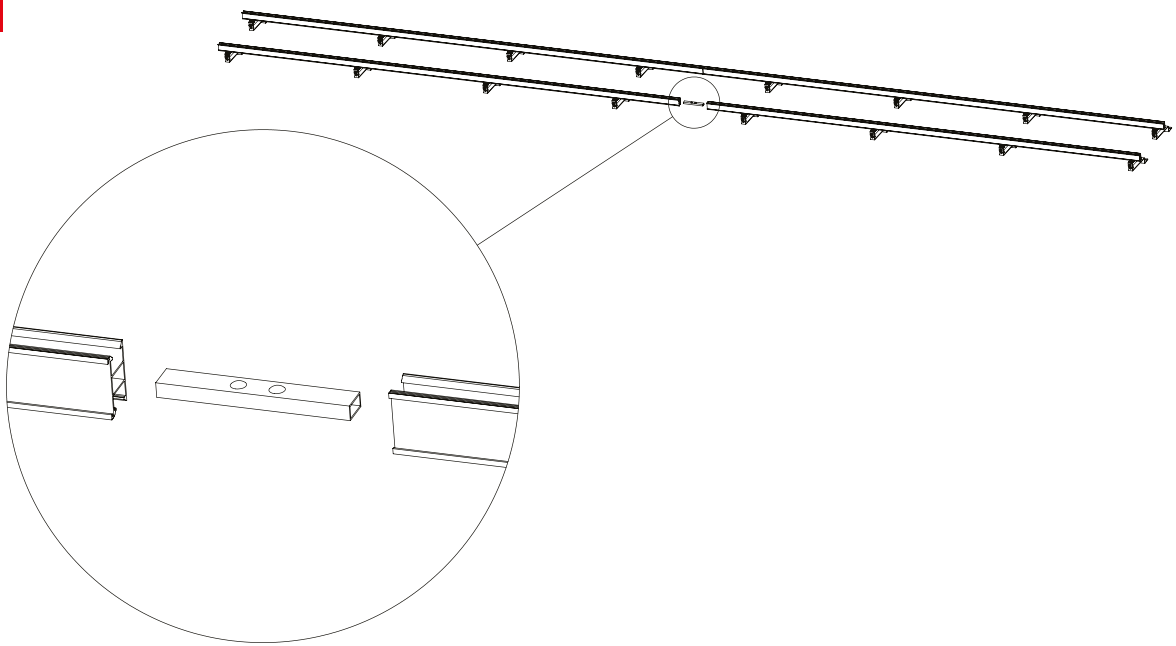
<p><b>A</b></p> 	<p><b>11869 x4</b> mounting rail SM-30x50/2110 AL aluminum</p> 	
<p><b>B</b></p> 	<p><b>11855 x10</b> Mounting bracket stainlesssteel</p> 	
<p><b>C</b></p>  <p><b>x2</b></p>	<p><b>INCLUDED WITH 11854</b> Assembly cross clamp aluminum</p>	<p><b>D</b></p>  <p><b>x6</b> 11854 Mid clamp aluminum</p>
<p><b>E</b></p>  <p><b>x4</b></p>	<p><b>11871</b> End clamp aluminum</p>	<p><b>F</b></p>  <p><b>x6</b> <b>INCLUDED WITH 11854</b> 17 Nm</p>
<p><b>G</b></p>  <p><b>x20</b></p>	<p><b>H</b></p>  <p><b>x14</b> 17 Nm</p>	<p><b>I</b></p>  <p><b>x10</b></p>

<b>J</b> INCLUDED WITH 11855  <b>x20</b>	<b>K</b> INCLUDED WITH 11855  <b>x10</b>	<b>L</b> INCLUDED WITH 11855  <b>x10</b>
<b>M</b> INCLUDED WITH 11855  <b>x10</b>	<b>N</b>  11847 <b>x6</b>	<p>Max distance between points of support = 1200 mm  Max distance between end of rail and last point of support = 300 mm</p>

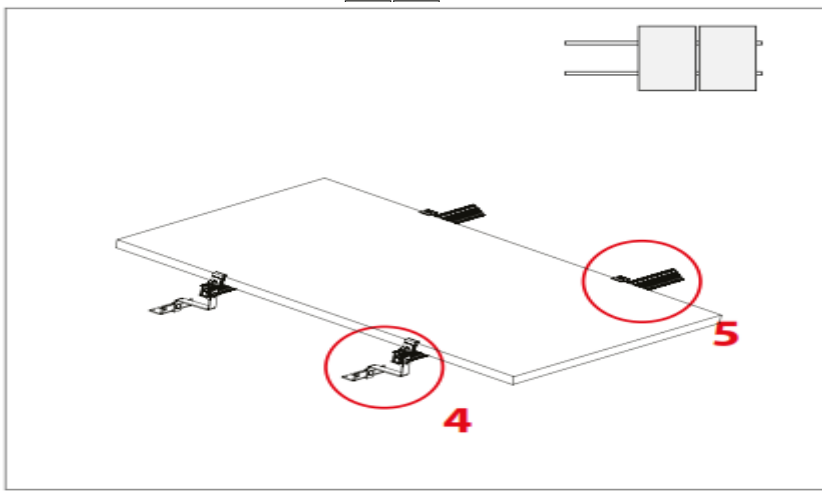
## Installation



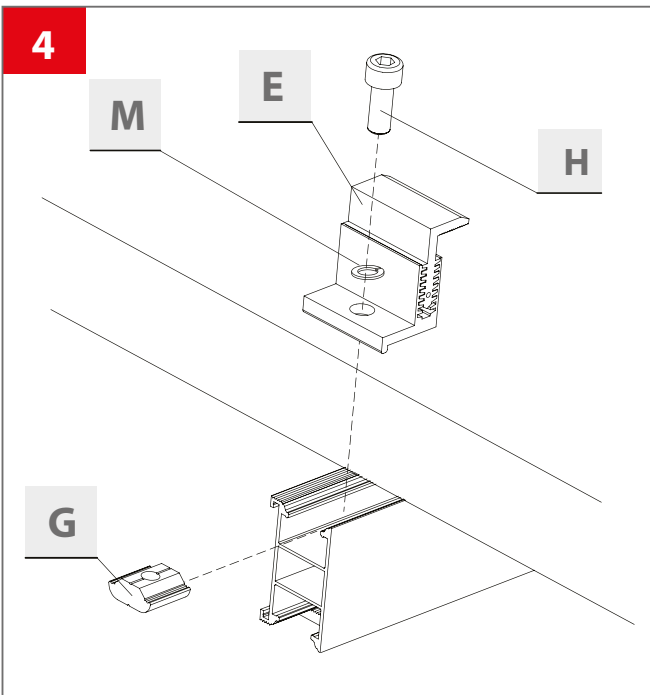
2



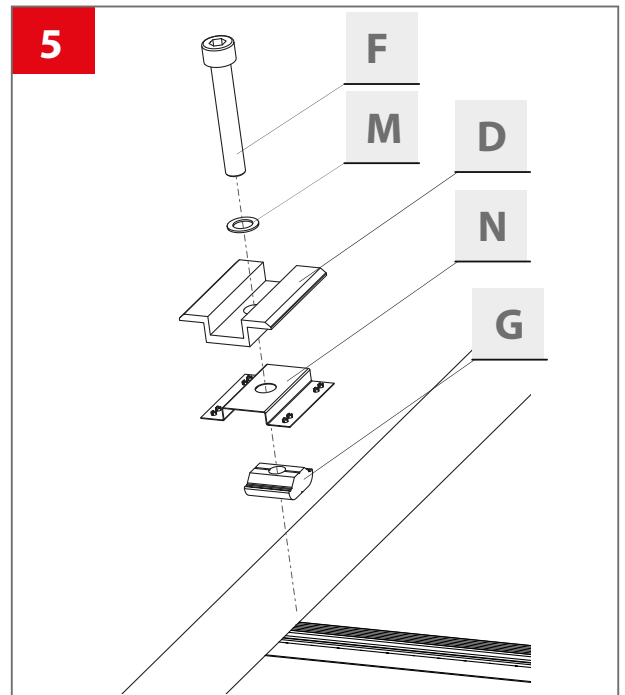
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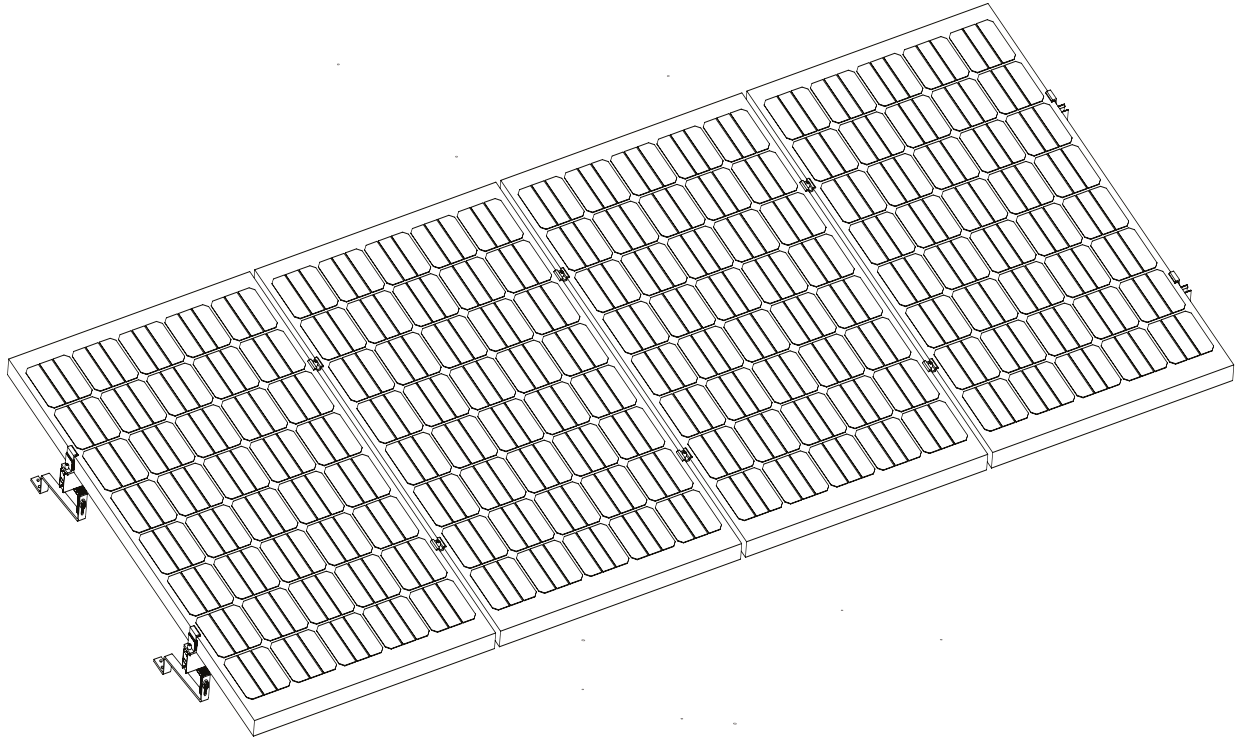
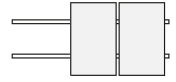


4



5





## LEGAL CLAUSE

*This manual specifies only the minimum assembly and use safety standards for the mounting system of photovoltaic panels. We would like to draw attention to the fact that the manual does not serve as a design of a photovoltaic installation and must not be used to replace such a design. The proper choice of the mounting system for photovoltaic panels and other relevant elements must be made by people who are directly involved in the assembly of such a system. Corab S.A. manufactures mounting systems for photovoltaic installations. Our product range includes a broad selection of solutions and materials. The products are of very high quality and dedicated to specialist applications under various conditions, including flat and pitched roofs. The solutions we offer provide for the variety of materials that roof coverings are made of. However, as a manufacturer of mounting systems, we shall not assume any liability for their correct use and proper assembly. Corab S.A. does not analyze the needs of final customers or the expected placement conditions of photovoltaic installations.*

*As a manufacturer, Corab S.A. also does not prepare designs of photovoltaic installations and does not supervise their assembly. Such activities must be performed by contractors that, as part of the said activities, must acknowledge i.a., the condition of roof coverings, the quality of materials such constructions are made of, as well as the local weather.*

*The decision regarding the used systems, all their elements, as well as the method of connecting them with buildings or the ground must be made by contractors who have a direct contact with the final customers. Corab S.A. shall not bear any responsibility for actions of such persons, since it does not analyze the needs of final customers or the appropriateness of solutions used by contractors working on the installations.*

*As a manufacturer of mounting systems for photovoltaic panels, we would like to draw attention to the fact that in order to maintain the safe use of such systems, qualified personnel must inspect the installations on a regular basis. Such inspections should take place at least once every twelve months and after every event in which the speed of wind exceeded 79 km/h since our products are dedicated for the so-called "1st wind-load zone". Systems must not be exposed to excessive deterioration of their properties or loss of technical efficiency. Any alterations in the construction of mounting systems, including connection with third-party elements, modifications of the systems, such as welding, length adjustments, reduction of the number of elements specified in the installation manual or the provided proposal, where such elements are intended for the construction of a specific system, length adjustments of such elements, etc., non-compliance with the minimum safety rules described in the installation manual or the sent proposal, higher system load or use of the systems against their intended purpose shall result in loss of guarantee rights and may have a direct impact on durability and safety of the systems.*

*During the installation, it must be ensured that the system of photovoltaic panels will be used only according to its original intended purpose. Both the installation and the assembly should be performed by professional fitters. During the assembly, please pay attention to compliance with the applicable domestic and European standards (PN and EN) on electrical installations, building regulations and OH&S rules. Non-compliance with instructions provided in this document may lead to electrocution, fire, severe injuries to the fitter or third-persons, and damage or destruction of property.*

**Caution!** Before using the photovoltaic panels, one must carefully read the manual! The manual must be kept throughout the whole period of use.

## HAZARDS TO PROPERTY AND HEALTH

**Caution!** Connection of the installation must be conducted only by qualified personnel with a proper fitter license. Corab® mounting systems can be used only in accordance

with their original intended purpose described in the manual that also contains information regarding maintenance. The manufacturer shall not be liable for any damage resulting from non-compliance with instructions of this installation manual. The assembly must be performed in line with OH&S and rules concerning work at heights.

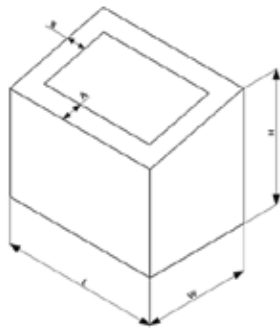
In order to ensure many years of operation of the photovoltaic system, it must not be mounted and used in areas with a high level of dustiness (dust, sand) or environmental pollution leading to so-called acid rain.

**Caution!** The system is designed for environment with corrosivity class up to C3. In case of installation of the system in environment with corrosivity class above C3, installer should contact CORAB S.A.

**Caution!** All calculations concerning system resistance should be made in accordance with the current standards regarding wind load for the so-called 1st wind-load zone,

in the case of which speed of wind must not exceed 79 km/h. What is more, whenever there have been extreme, percussive wind blows exceeding 79 km/h, the position of the installation must be re-inspected since the manufacturer is unable to exclude the possibility of system shifts caused by such winds.

**The contents of this installation manual are up-to-date as of the delivery of the manual. The manufacturer shall reserve the right to make changes that will not be detrimental to the technical condition of the offered systems.**



Indication of zones with increased suction forces of the wind is determined on the basis of general dimensions of the building (Fig.1), where:

$$A = L/10 \text{ or } H/5,$$

$B = W/10 \text{ or } H/5$  (to determine the zones, choose the lower calculation value).

Fig. 1. General dimensions of the building/determination of zones with increased suction force of wind.

## MAINTENANCE

For repairs, use only original spare parts!

The use of other spare parts may lead to serious damage to property or hazards to health of people in the vicinity of the PV system! The Corab® system forms a uniform and consistent set of elements.