



JUAL  
SOLAR

WE ARE  
EXPERTS ON  
**ROOFINGS**

READY TO SEE  
WHAT **JUAL SOLAR**  
CAN DO FOR YOUR  
NEXT PROJECT?  
**CONTACT US TODAY!**

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JUAL SOLAR A/S

2017

JUAL SOLAR CONSOLE SYSTEMS

PROOF ENOUGH.

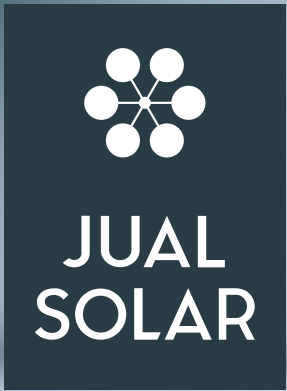
**PART OF JUAL GROUP**

JUAL A/S, JUAL CHINA, JUAL SOLAR A/S and PERFORM A/S are all  
a part of JUAL GROUP and we are always UNITED IN PERFORMANCE



PROOF ENOUGH.





# WE WANT TO BE YOUR PREFERRED BUSINESS PARTNER FOR INSTALLATIONS ON ROOFINGS

Our mission is to help our partners supply strong, competitive and industri compliant installations for roofings whether it is about installing solar or climate related equipment.

Both product groups; The Console System and The Climate Products have been designed with the purpose of providing a systematic solution for structural fixation of various types of installations on roof surfaces sealed with a roofing membrane. Both solutions have been constructed according to roof industry guidelines and with direct involvement of roof applicators.

The Conlsole System has already been installed on roofs in many different countries, and it is respected as a proven and consistent product solution!

The new Uni Roof Vent line of products is based upon the same principles where durable materials are used effciently to form a range of high end flexible flahsings or ventilation units. The technical core know-how within the JUAL GROUP has been applied to ensure that the water proofing element of the product line matches the same high quality standard as the other JUAL SOLAR products.

The different lines of products are compliant with roofing manufacture specifications and are installed on roof surfaces using standard well proven and most of all feasible roofing techniques.

The Roof Console, The Tube Flashing and also the Uni Roof Vent have all been designed and developed with the same proven concept as JUAL roof accessories, e.g. outlets, ventilation units, cable flashings, etc. These have been delivered to the market for more than 25 years.

WE KNOW HOW  
TO ATTACH **SOLAR  
PANELS** SAFELY  
ON ROOFS



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# UNI ROOF VENT

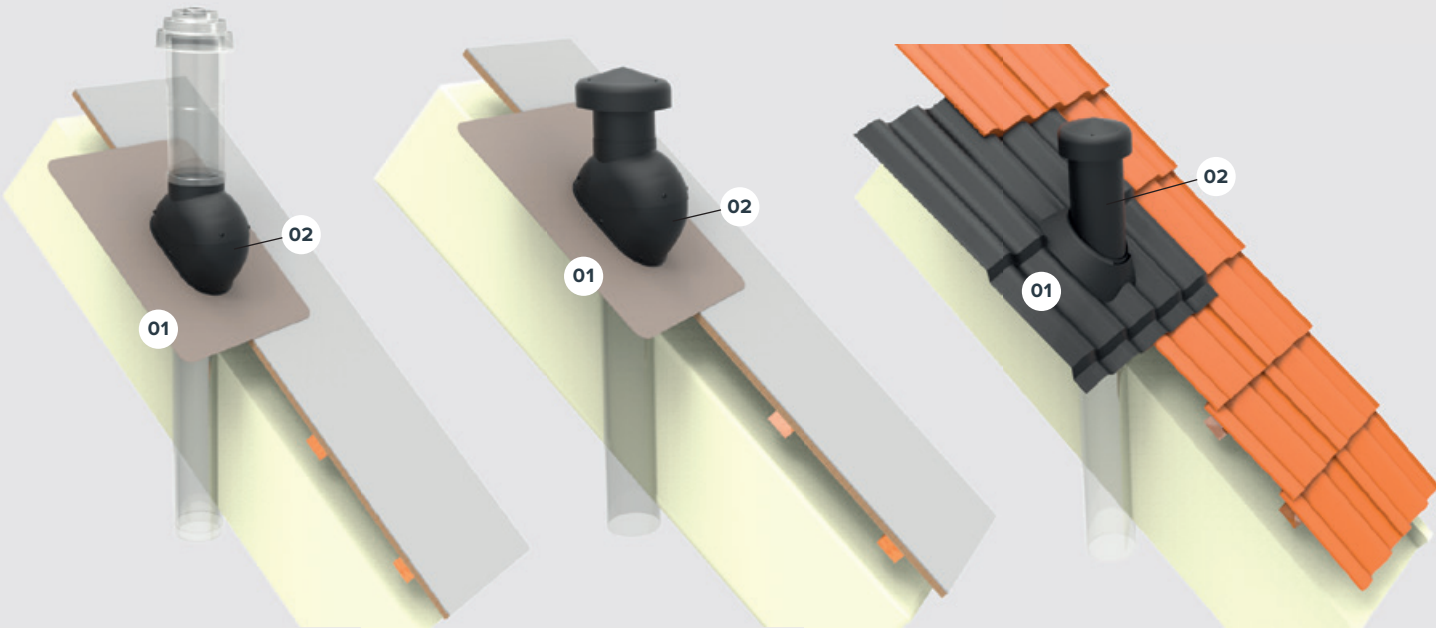
## FOR INCLINED AND FLAT ROOFS

With the continuous ambition to offer high quality products and solutions, a new universal roof flashing has been created.

All industries, who do installations where the waterproofing of a roof is penetrated, can benefit from this product solution. Main applications are ventilation intake and exhausts, gas burner exhausts or other flashings.

It is a unique feature of the product that the choice of material is aluminium, as opposed to most other products in the market which are in plastic. The Uni Roof Vent is consequently far more sustainable and offers the highest possible quality concerning fire restrictions as well as durability.

The Uni Roof Vent can be supplied with a range of different membrane types as well as lead free flashing material for tile, eternit, steel or other.



**THE UNI ROOF VENT INCLUDES:**

- 01** Uni Vent Bottom element with integrated membrane; bitumen, single ply or flexible flashing material. For adhesive flashing solutions JUAL SOLAR recommends Wakaflex material.
- 02** Uni Vent Top Connection element with standard dimensions.

The connection interface of the Uni Roof Vent is based upon EN1506 and the fire technical classification is founded on DS428:4.



**HIGH QUALITY UNI ROOF VENT**

Loyalty towards the existing roof is essential. The black coated aluminium body represents high quality and long endurance! The integrated membrane or flashing material fully matches the life and integrity expectancies of the other present materials which have been chosen for the project.

**PROOF ENOUGH**

System compliance is one of the natural elements in the Uni Vent System where elements such as fully flexible flashing material, standardized interface dimensions (EN1506) and a fire property classification (DS428:4) ensure that the product will comply to specific water proofing requirements. The unit fits common applications and equipment and the application does not cause a breach in the buildings level of safety.

**INCLINED ROOFS AND FLAT ROOFS**

The Uni Roof Vent covers a wide range of different roof inclinations from flat roof to inclined roofs with 10°-48° inclination. The Uni Roof Vent complies with various types of roofing membranes (e.g. bitumen SBS/APP, single ply (PVC, TPO EPDM etc.) as well as tiles, eternit, steel, etc. The Uni Roof Vent products can also be installed on different construction types (warm/cold roofs etc.). This flexibility simplifies the planning process for engineers or architects as they will be able to apply the same system for many types of constructions.

**NEWS**

### INCLINED ROOF CONSTRUCTION TYPES

INCLINED ROOF with bitumen or single ply	INCLINED ROOF with tiles	FLAT ROOF with bitumen or single ply

# CONSOLE SYSTEM

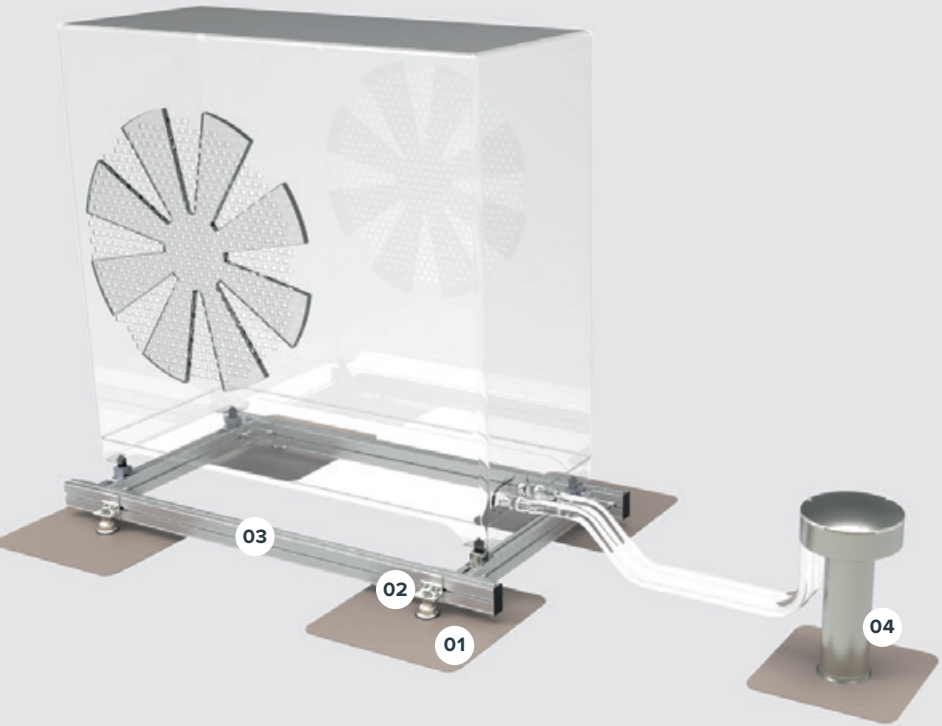
## HEAT PUMPS / CLIMATE PRODUCTS

Flat roof and inclined roof surfaces represent large areas which serve as the foundation for utilizing many types of equipment. Some installation types are large and project driven where as other types of equipment is approached most efficiently by applying standard components. To specifically facilitate the rising number of heat pump and climate related installations on roof surfaces with roofing membranes the Console System is hereby presented as a standard roofing solution.

The Console System for the climate products is based upon the general JUAL SOLAR Console System where the conventions from the membrane related roofing industry are brought into the context of climate product installations where both rain, wind and snow must be considered to ensure an enduring and trouble free installation to the satisfaction of the end customer.

JUAL SOLAR can offer assistance to setup specific configured standard kits or to assist with general standard system design.

NEWS



**THE CONSOLE SYSTEM INCLUDES:**

- 01 Roof Console, integrated with the roof specific membrane with fixation through the membrane directly into the building structure.
- 02 Roof Console - Platform connectors with a leveling function.
- 03 Aluminum platform with carriage profiles, cross beams and internal corner joints.
- 04 Tube Flashing, integrated with the roof specific membrane.

Every installation is made with 100% membrane compliant roof consoles **SBS, APP, PVC, TPO, etc.**



**CONSOLE SYSTEM**

The Console System for the climate related products is a standardized systematic and roof compliant package solution with all components in one box necessary for the structural fixation as well as the installation of tubes and cables.

**FLEXIBILITY**

The design of the platform part of the Console System is constructed of carriage profiles with fixation tracks which enables a two directional adjustment, whereby one standard package can be configured as the standard installation package for a variety of e.g. heat pump sizes.

**EASY LEVELING**

Within the Console System there is a range of Roof Console Platform connectors which provide a vertical adjustment function for each Roof Console connection point. Ensuring that a heat pump or a compressor is correctly leveled, is hereby an easy process.

**TUBING AND CABELING**

Both heat pumps and cooling compressors require cables and tubes which must be brought through the waterproofing and the Tube Flashing from the Console System provide a standardized, effective and systematic method for a successful result without compromising the integrity of the roof.

The Tube Flashing components consist of stainless steel and the membrane integration is founded on the same proved system as the Roof Console.

## INCLINED ROOF CONSTRUCTION TYPES

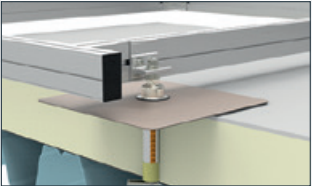
**COLD ROOF**  
Plywood on rafters with membrane (bitumen or single ply)



**WARM ROOF**  
Concrete structure with (bitumen or single ply)



**WARM ROOF**  
Trapeziod structure with (bitumen or single ply)



**WARM ROOF**  
Wooden structure with (bitumen or single ply)





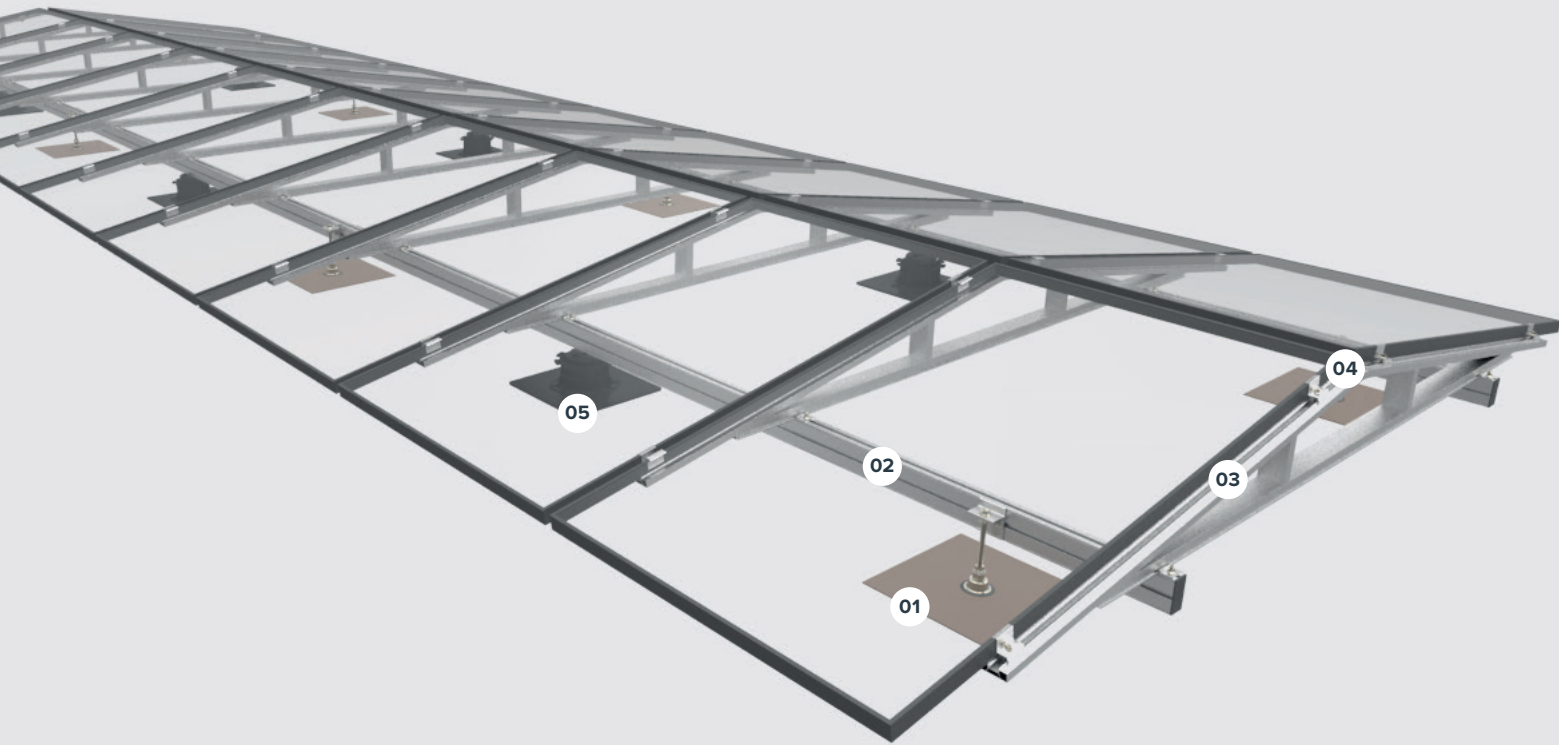
# THE JUAL SOLAR CONSOLE SYSTEM FOR FLAT ROOFS

It is imperative for JUAL SOLAR to respect the original design and layout of the roof surface. The utmost attention is put on retaining the original functionality of the roof, hereby maintaining drainage capacity and avoiding any load the roof membrane as well as the roof insulation. As a result we have chosen to raise the system from the roof surface and only attach it to the roof via the 100% water-proof Roof Consoles.

The design of the east-west solution based on the JUAL SOLAR Console System has a remarkable high pulling capacity — thanks to the fixation directly in the building structure — which means that the wind factor is no longer critical. The pulling capacity of the console is usually up to three times the needed capacity.

We offer fully detailed documentation of all products and solutions, such as datasheets, mounting instructions and animations.

Visit us at [jualsolar.dk](http://jualsolar.dk)



**THE EAST/WEST SYSTEM INCLUDES:**

- 01** Roof console. Integrated with the roof specific membrane with fixation through the membrane directly into the building structure.
- 02** Carriage profile in aluminium. Height adjustable according to roof leveling. ALU or BLACK.
- 03** East/west triangle in aluminium. 10 degrees. ALU or BLACK.
- 04** Clips for solar panels. Adaptive to the thickness of the panel. ALU or BLACK.
- 05** Height adjustable intermediate supports.

Design calculations are based upon the **EuroCode EN1991 1-3** and **EN1991 1-4** where aerodynamic values derived from specific wind tunnel tests form the foundation for the wind related fixation into the building structure.



**EAST-WEST SOLUTION**

When choosing an east-west solution the space the roof is optimized, and you can usually install more panels compared to south-oriented solutions on the same roof space. With an east-west solution the building owner will ensure a high power generation during as many hours of the day as possible, and avoid any peak midday effects that may not be used economically.

**PATENTED ROOF CONSOLE**

The east-west solution optimizes the use of the patented roof console. The triangular design ensures that you can use as few consoles as possible, but still have the needed fixation into the building.

**REMARKABLE HIGH PULLING CAPACITY**

Wind is often the critical factor to a ballasted installation. When using the east-west solution from JUAL SOLAR this factor can often be disregarded as the pulling capacity of the roof consoles are more than enough to meet the requirements — thanks to the fixation directly in the building structure.

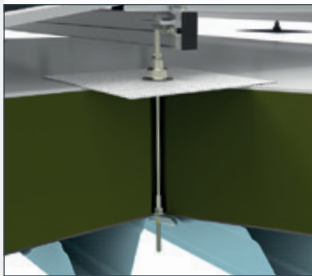


The waterproofing concept for all Roof Consoles has been verified by TÜV Rheinland.

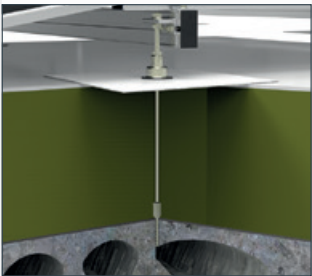
## FLAT ROOF CONSTRUCTION TYPES

We have developed a range of anchors to be used with most various roof types. For roofs with special requirements we are ready to use engineering resources to find the right solution and the right cost effective solution for the specific project.

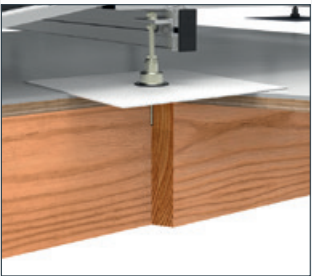
WARM ROOF  
In trapezoid sheet structure



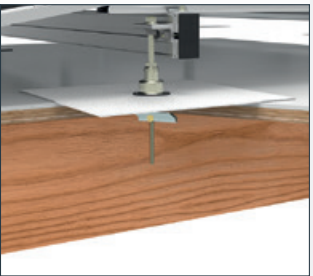
WARM ROOF  
In concrete structure



COLD ROOF  
In wooden rafters



COLD ROOF  
In sheets with toggle anchor



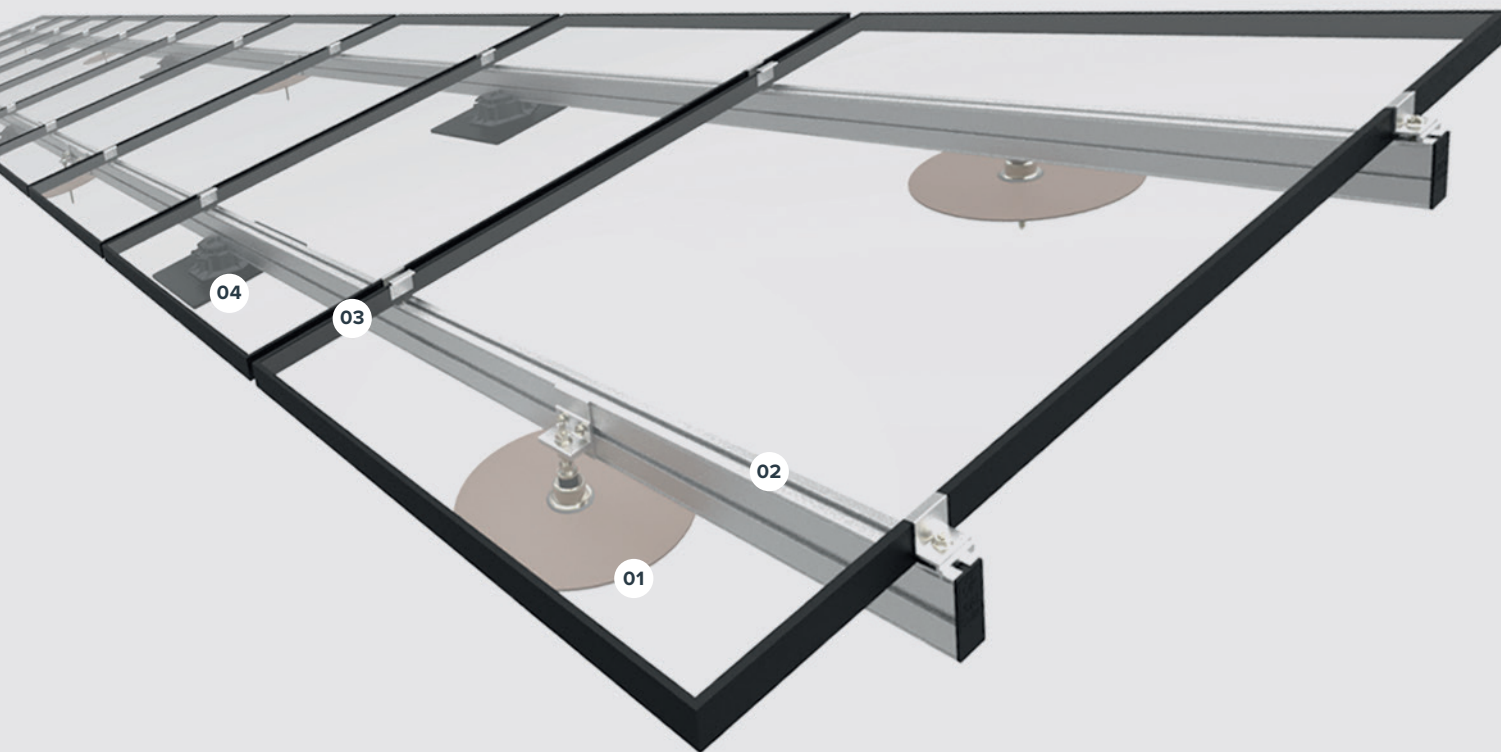
## THE JUAL SOLAR CONSOLE SYSTEM FOR PITCHED ROOFS

The parallel roof solution is in many principles based on the same design as the east-west solution. However, when the installation is on pitched roofs the specifications for the Roof Console are very different.

As the parallel solution is intended for inclined roofs there is no risk for water building up at the penetration points, and the console has therefore been optimized for this purpose.

In doubt whether the system applies to your roof construction?  
We are happy to help.

**Tel. +45 76 83 11 41**



### THE PARALLEL SYSTEM INCLUDES:

- 01** Roof Console. Integrated with the roof specific membrane and anchored through the membrane directly into the building structure.
- 02** Carriage profile in aluminium. Height adjustable according to roof leveling. ALU or BLACK
- 03** Clips for solar panels. Adaptive to the thickness of the panel. ALU or BLACK
- 04** Height adjustable intermediate supports.

The parallel solution may be chosen for a flat roof as well. In that case it is combined with the types of roof consoles used in the east-west system.



### WIND AND SNOW

Having a roof parallel solution means that you apply a »new« roof on top of the existing roof, and all weight from the system and any snow load will be applied directly into the fixation points of the system. If the roof structure is a cold roof, fixation can easily be made directly into the different structures under the membrane.

### ROOF PARALLEL FORCES

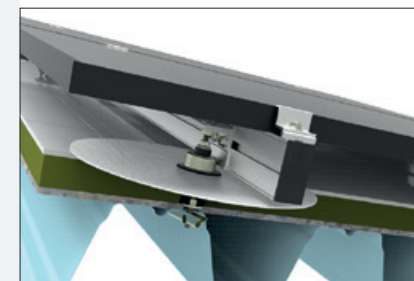
The load of the system will result in a roof parallel force, and especially on warm pitched roofs it is important to document that the fixation is sufficient for this. Most often the best result is obtained by making fixation directly into the rafters or beams of the building structure or alternatively to use more anchor points.

JUAL SOLAR Console Systems are all fully fixed installations based on a safe and systematic penetration of the membrane.

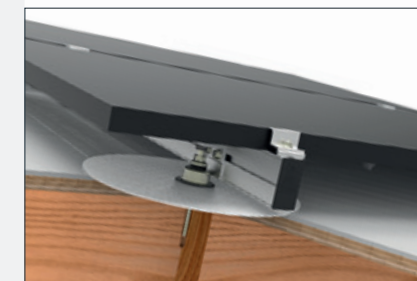
## PITCHED ROOF FIXATION TYPES

For installation on a cold roof the fixation is easily made directly in the different structures under the membrane. For warm roofs we are always ready to use engineering resources to find the right solution – if the standard anchors are not suitable.

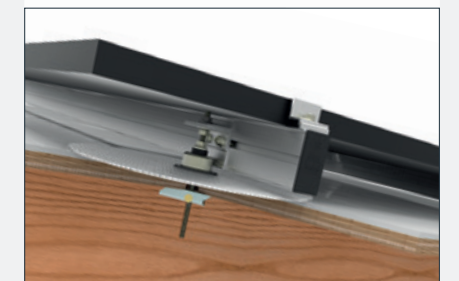
**WARM ROOF**  
In trapezoid/concrete



**COLD ROOF**  
In wooden rafters



**COLD ROOF**  
In sheets with toggle anchor





# THE JUAL SOLAR CONSOLE SYSTEM FOR THERMAL COLLECTORS

JUAL SOLAR Console System for Thermal Collectors is based on the same concept as Console Systems for Photovoltaic. However, the technical requirements for thermal mounting systems are different than for photovoltaic systems. The cost per panel is typically higher and it is consequently beneficial to aim for a high pitched collector installation. A greater part of the wind impact is hereby transferred into a horizontal force causing higher horizontal fixation requirement in the roof.

The Console System for Thermal Collectors consists of Roof Consoles – configured to meet the horizontal forces – and a corresponding rigid framing platform on which the collectors with framing can be safely installed. This solution offers suitable, proper and effective fixation, which is applicable for most thermal collector brands.

JUAL SOLAR products  
are designed to take  
care of your roof!



**THE THERMAL COLLECTORS SYSTEM INCLUDES:**

- 01** Roof Console, integrated with the roof specific membrane and anchored through the membrane directly into the building structure.
- 02** Rigid aluminum framing platform.
- 03** Brand depending collector framing.

The Thermal Collector solution is chosen for all roof types equipped with roofing membrane, bitumen or foil.



**PARTNERSHIP WITH MANUFACTURERS OF COLLECTORS**

The rigid framing platform is designed to offer a standard installation. And the collector installer can easily and effectively install the collectors and the collector framing directly onto the framing platform supplied by JUAL SOLAR.

For some collector brands JUAL SOLAR offers customized interface brackets, which will be supplied with the framing platform. The installation is easy and effective and will meet the individual requirements concerning wind- and snowload for the special installation.

**ROOF CONFORM INSTALLATION**

The type of roof structure is always taken into consideration. This may be concrete-, wood- or trapezoidal decks, and the compliance to the existing roof membrane is always matched. The Roof Console is always supplied with a factory-integrated roofing membrane, which is configured for each individual project.

Solar panels safely on the roof?  
**Please contact us for further information!**

## INCLINED ROOF CONSTRUCTION TYPES

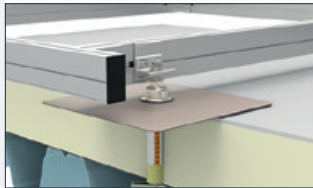
**COLD ROOF**  
Plywood on rafters with  
membrane  
(bitumen or single ply)



**WARM ROOF**  
Concrete structure with  
(bitumen or single ply)



**WARM ROOF**  
Trapeziod structure with  
(bitumen or single ply)



**WARM ROOF**  
Wooden structure with  
(bitumen or single ply)





# LEAVE THE SYSTEM DESIGN TO US AND TO THE TECHNICAL DESIGN REPORT

Prior to an installation JUAL SOLAR always offers to make a full Technical Design Report for the system. The report takes the specific wind factor as well as the potential snow loads for the specific installation into consideration. Whether the installation is in windy, coastal or snowy regions.

The report is also the basis for the continued warranty on the system as well as the products, and it is often a valued technical evaluation model for engineers and specifiers when taking decision on installing solar on roofs. The report includes a roof specific evaluation taking into consideration how the current roof surface is influenced.



# WE OFFER A FULL PROGRAMME OF ROOF ACCESSORIES SAFE AND EFFECTIVE INSTALLATION

Based on more than 25 years of experience in JUAL we offer a full programme of solar related accessories when the roof membrane must be penetrated.

The product will always from factory be equipped with the roof relevant membrane integrated. This concept is very well known and respected by roofers and very often required by specifiers and requested by the membrane manufacturer. Life-time is ensured to be the same as the remaining elements on the roof.



TUBE FLASHING for flat roof

NEWS

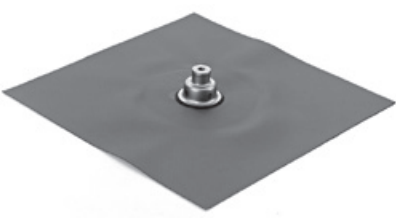


The JUAL SOLAR Roof Consoles are well known and well accepted by major membrane manufacturers.

ROOF CONSOLE for pitched roof



ROOF CONSOLE single layer



ROOF CONSOLE double layer



CABLE FLASHING Ø 75/110 mm



CABLE FLASHING Ø 32 mm for pitched roof



CABLE FLASHING Ø 50 mm

