

PV-R

Product Ref: (DsR1-0111)  
Issue No: 02



### MOUNTING SYSTEM FOR PHOTOVOLTAIC PANELS ON WATERPROOFING MEMBRANES

- Aesthetic: High quality aluminium extrusions used throughout.
- Simple: retro-fit over the existing or newly installed roofing system.
- Quality: 20 year system guarantee.
- Adaptability: compatibility with any glass faced PV panel, flat or pitched mounted.

### MAIN USES

- Low rise applications.
- Roof falls  $\geq 3\%$ .
- Suitable substrates: concrete cast or preformed slabs, timber boarding, plywood, woodwool slabs and profiled steel decks. Both cold and warm roof compatible incorporating ridged insulation boards.

### ADVANTAGES

- Compatible with all bituminous and synthetic waterproofing membranes.
- Base plates and frames are quickly and easily installed.
- PV, easy access, maintenance and cleaning.
- PV Cabling support.

### DESCRIPTION

The PV-R system is designed for use with bituminous or synthetic waterproofing membranes.

Load bearing support in two parts:

1. **PV-R FIX: Main**

The stainless steel plate 40 x 40 cm, is designed to provide high mechanical strength with minimal weight. The plate incorporates a factory bonded weathering collar incorporating the required waterproof membrane together with a stainless steel mount.

The PV-R framing will support all calculated designed dead and wind loads when fixed in accordance with the detailed fixing and specification guide. Note - loadings are site specific, frame design and loading calculations will be required on all installations, full technical support is available on request from our technical department. Thermal expansion is accommodated by the free movement in the horizontal plane ("free floating forks").

## 2. PV-R DIF: Interim

The polypropylene PV-R DIF pads are placed and adhered to the waterproofing membrane between the main console FIX mounting points and are designed to evenly distribute interim loads and provide height and level adjustment for the supporting frame.

## MAIN ACCESSORIES

- Alucllic 80 Profile : Aluminium profile main bearer for the PV-R FIX and PV-R DIF consoles. Profile receives speed fixings for the Alucllic 40 profile.
- Alucllic 40 Profile : Aluminium profile interim bearer for photovoltaic modules and fixing clamps.
- MNC-E / MNC-I: Clamping system for frameless glass modules.
- MC-E / MC-I: Clamping system for framed modules.

Product	Pack Qty	Packaging	Use
PV-R FIX	5	Box	Structural bearer mechanically fixed to the existing substrate
PV-R DIF	27	Bundle	Load distribution, height adjustment
Dynol Adhesive WM18	24	290ml cartridge	Bonding adhesive for PV-R DIF
Alucllic Fix 5,5x19	500	Box	Alucllic 80 fastening to PV-R FIX
Alucllic 80 (length : 6,1m)	1	Bundle	Primary rail
Alucllic 40 (length : 6,1m)	1	Bundle	PV modules bearer
Alucllic Connector	50	Box	Alucllic 40 and Alucllic 80 connection
MNC-E Fixing	100	Box	Frameless module clamp
MNC-I Fixing	220	Box	Frameless modules clamp
MC-E Fixing (32 to 50mm)	50	Box	Framed modules clamp
MC-I Fixing Element (thickness between 32 and 50mm)	100	Box	Framed modules clamp
Alucllic Nut	100	Box	Fastening on Alucllic profiles
Alucllic Angle Brace	100	Box	Assembly Alucllic 40 on Alucllic 80
Bolt DIN 912 M8-35	200	Box	Bolt for MNC- E and MNC- I clamps
Bolt DIN 912 M8-16	200	Box	Bolt for Alucllic bracket
M8 Locking Washer	1000	Box	Washer DIN 912 M8-35
M8 Washer	1000	Box	Washer DIN 912 M8-16
PV-R Fix Base fixing	N/A	N/A	Site specific, please contact Langley Technical services

## CERTIFICATION

Mounting instructions and system requirements validated in France (N° 100-309-10-01 - performed by Alpha Contrôle).

## MOUNTING MAIN STEPS

After setting out and aligning the structure

1. Mechanically fix PV-R FIX through the existing waterproofing membrane to the bearing substrate. Base fixings will vary on substrate and loadings.
2. Bond the PV-R FIX membrane to the newly installed or existing waterproofing.
3. Set out as require PV-R DIF, bond to the existing waterproofing membrane using the WM18 Dynol Adhesive.
4. Adjust levels as required (PV-R DIF consoles).
5. Mechanically fix the Alucllic 80 profiles to the PV-R FIX Based mounts.
6. Set out and fix the Alucllic 40 interim bearer to the Alucllic 80 profile.

Fix Photovoltaic modules with clamps (MNC-E Clamp/ MNC-I Clamp or MC-E Clamp/ MC-I Clamp) adjust tilt angle as required.

## TECHNICAL SUPPORT BY LANGLEY

- Site survey
- Wind, fixing and load calculations
- Frame design and planning
- Electrical (kWh) yield calculations
- On-site technical support