Design & Access Supporting Statement

Application: Solar Panel Installation Units 18, 19, 20, 21, 51 & 52
Brookes Mill, Armitage Bridge, Huddersfield, HD4 7NR
Applicant: John Brooke & Sons Limited
Project: 4463
Date: Sept 2026

1. Introduction:

This supporting statement has been prepared by Heppenstall Architects on behalf of the applicants John Brooke & Sons Limited to support a planning application for the installation of solar panels on to existing mill building roofs at Brookes Mill, Armitage Bridge, Huddersfield, HD4 7NR.

2. Permitted Development:

The Town and Country Planning (General Permitted Development) (England) Order 2015,
Schedule 2

Part 14 Renewable Energy
Class J – installation or alteration etc of solar equipment on non-domestic premises

Development not permitted
J.1Development is not permitted by Class J if—
(a)
the solar PV equipment or solar thermal equipment would be installed on a pitched roof and would protrude more than 0.2 metres beyond the plane of the roof slope when measured from the perpendicular with the external surface of the roof slope;
(b)
the solar PV equipment or solar thermal equipment would be installed on a flat roof, where the highest part of the solar PV equipment would be higher than 1 metre above the highest part of the roof (excluding any chimney);
(c)
the solar PV equipment or solar thermal equipment would be installed [F1on a roof and] within 1 metre of the external edge of that roof;
F2(d)
. . . . . .
(e)
the solar PV equipment or solar thermal equipment would be installed on a site designated as a scheduled monument; or
(f)
the solar PV equipment or solar thermal equipment would be installed on a listed building or on a building within the curtilage of a listed building.

The block plan drawings 4463-01-02-Existing & 4463-01-03-Proposed, show the positions of the roof planes where solar panels are proposed. Drawing 4463-01-03 Proposed Block Plan attached in Appendix B confirms that the solar panels will be positioned at least 1m away from the edge of the existing roof in accordance with J.1(c) extract above highlighted red.

The solar panels will be installed using a fixing system that ensures the face of the solar panel will be less than 0.2m above the face of the existing roof and J.1(c) be positioned at least 1m from the edges of the roofs. This is in accordance with J.1(a) and J.1(c) extracts above highlighted red.
The existing building units are all of traditional stone walled mill construction with blue slate roof coverings.

The existing Units 20, 21, 51 & 52 are not part of a scheduled monument and are not Listed Building but are within the curtilage of Units 18 & 19 which are both Listed. See separate Heritage Statement for Listing details.

We consider that the proposed solar installations to Units 20, 21, 51 and 52 as detailed on the submission documents are within all limitations of Part 14 Class J.1 (a) and (c) and would be permitted development if not for J.1(f) and the fact the units are within the curtilage of Listed Buildings on the mill complex.

For Units 18 & 19, being the Listed Buildings as referred above, we submit a separate Heritage Statement in support of the solar panel installations.

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3. Justification:

Under Part 14 J.4 (2) Class J(c) development is permitted subject to the condition that before beginning the development the developer must apply to the local planning authority for a determination as to whether the prior approval of the authority will be required as to the design or external appearance of the development, in particular the impact of glare on occupiers of neighboring land.

The solar installation, although not permitted development due to the proximity to Listed Buildings, the Application is made to determine the installations appearance and glare to occupiers of neighboring land and any detriment to the Heritage status of the Listed Buildings.

The solar panels are positioned on traditional mill building roofs, the buildings being positioned centrally within the Brooke's Mills complex. Units 51 & 52 being 4 and 5 storey buildings respectively, whereas units 18, 19, 20 and 21 being 3 storey buildings.
The proposed solar panel installation to units 20 and 21 will be on the south facing roof plane facing woodland, with the nearest properties being along Bourne View Road some 240m distance beyond the woodland buffer. The solar panel installation to units 51 and 52 will also be on the south facing roof plane, being slightly further distant from the above properties at 250m distance. The installation of panels on units 18 and 19 is proposed on the east and west facing roof planes, with the easterly plane facing a row of cottages which have blank elevations facing into the mill complex, thus with the height of the mill building and the blank elevation there are no issues of concern. The west facing roof plane faces into the mill complex, with the nearest properties outside the mill complex being 155m distant along Armitage Road to the northwest, with those properties being at a lower elevation than the mill and thus the panels will not be visible.
We consider the position of all the solar panel installations will minimize any effect on the external appearance of the building and the amenity of the area. See Proposed Block Plan at Appendix B.

The solar panels specified as indicated on the submitted layout plan drawings are the Tiger Neo N-type 54HL4R-BDV 420-440 Watt, bifacial module with dual glass. This panel is constructed from Tempered solar glass with anti-reflective finish. This dark anti-glare finish together with the low installation pitch should avoid any impact of glare on the occupiers of neighboring land.

See JinkoSolar data sheet attached at Appendix C.

Flood Risk:

The flood mapping obtained via the Environment Agency indicates a portion of the north-east site area is within a flood zone 2 designation. Noting that the buildings where solar panels are to be installed are not within this area and the works have zero effect on flood risk nor would they be impacted by flooding on any part of the site.

Bio-Diversity Net Gain:
With the works being only for the installation of solar panels at roof level there is no impact on biodiversity. There will be no change to habitats, vegetation, hedgerows, trees, watercourses or any other element which could impact on biodiversity.
We consider the Application to be exempt from any biodiversity net gain condition for the above stated reasons and the works being deemed as small development.

4. Installation : Reversion

The solar panel fixing system requires a hook type fixing be fixed to the existing rafters. This is undertake by removing a couple of slates locally to screw the hook to the rafters the existing slates are then replaced will the lower/under slate having a small notch cut to accommodate the hook fixing. The only physical alteration to the roof fabric is the notch cut to the under slate that is overlapped by the upper slate and the notch not visible. See appendix C

The installation of the hook support system is entirely revertible, using the same method as installation. The notch cut to the under slat that is not visible could have a lead capping to ensure weather tightness but will not be seen as under the over lapping slate above. Or alternatively the slate could be replaced with a reclaimed slate. Either way the solar installation is entirely revertible.

5. Summary:

All solar panels are minimum of 1m from the roof edge.
This is Permitted Development.

All solar panels do not protrude more than 0.2 metres above the plane of the roof slope and are 1m or more from any roof edge.

All solar thermal equipment is fixed in a revertible manner so as not to damage the fabric of the listed building and can removed as soon as reasonably practicable when no longer needed or reached end of economic life.

The positions on an the mill building roofs within an industrial / commercial mill complex are sighted to minimise the effect on the external appearance of the building or the amenity of the area.

The Solar Panel anti-glare finish together with the low installation pitch should avoid any impact of glare on the occupiers of neighbouring land.

It is important to consider the energy running cost for a listed building are generally much higher than more modern buildings given their construction. For listed building use to continue to be viable every sympathetic opportunity to reduce running costs should be taken. The installation of solar panels to Units 18 & 19 alone will provide a Co2 reduction of 39,941 kg per year, with energy consumption savings being projected at £495,396 over the 20-year panel life.

We consider that on balance the installation of solar panels would not result in significant harm.

Appendx A: Existing Block Plan

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Revision
a | 2026-09-21 redline amended



KEY

Buildings subject of this Application for solar panel installation

building areas

Existing Block Plan
Planning



Existing Block Plan
Solar Panel Installation to Existing Roofs

1:250 5m 10m 15m 20m

Client
John Brooke & Sons Ltd

Project
Proposed Solar Panel installation to existing Roofs
Units 18, 19, 20, 21 51 & 52 Brookes Mill,
Armitage Bridge, Huddersfield HD4 7NR

Drawing
Existing Block Plan

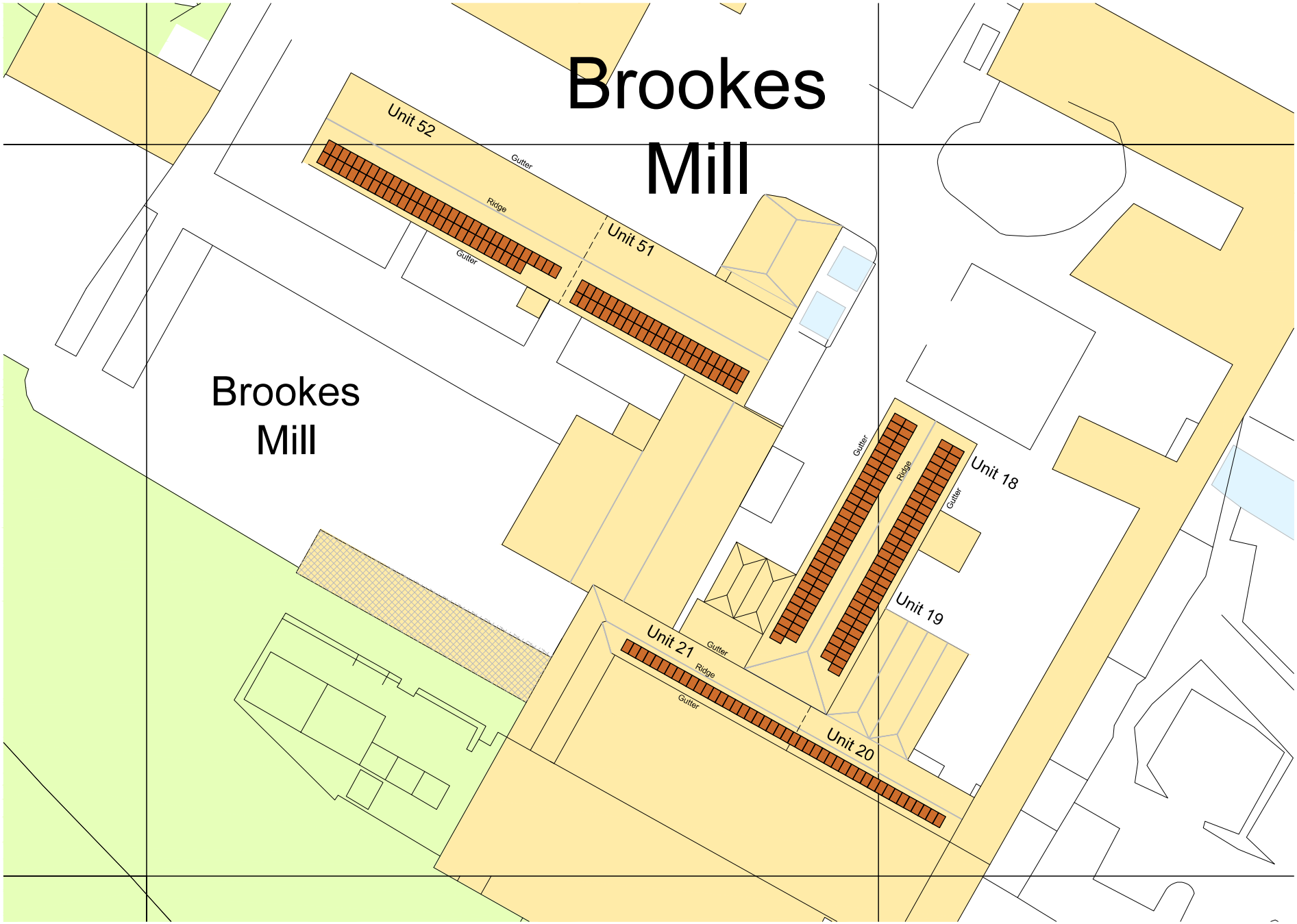
Number
4463-01-02a

Date 09/2026

Scale @ A1
As Marked

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Appendix B: Proposed Block Plan



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Revision
a | 2026-09-18 Layout amend

KEY

Buildings subject of this Application for solar panel installation

building areas

solar panels

Proposed Block Plan
Solar Panel Installation to Existing Roofs

1: 250 (5m 10m 15m 20m)

Proposed Block Plan
Planning

Client
John Brooke & Sons Ltd

Project
Proposed Solar Panel installation to existing Roofs
Units 18, 19, 20, 21 51 & 52 Brookes Mill,
Armitage Bridge, Huddersfield HD4 7NR

Drawing
Proposed Block Plan

Number: 4463-01-03a
Date: 09/2026
Scale @ A1: As Marked

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Appendix C: Panel & Fixing data sheet

www.jinkosolar.com

Building Your Trust in Solar

Tiger Neo N-type 54HL4R-BDV

420-440 Watt

BIFACIAL MODULE WITH DUAL GLASS

N-Type

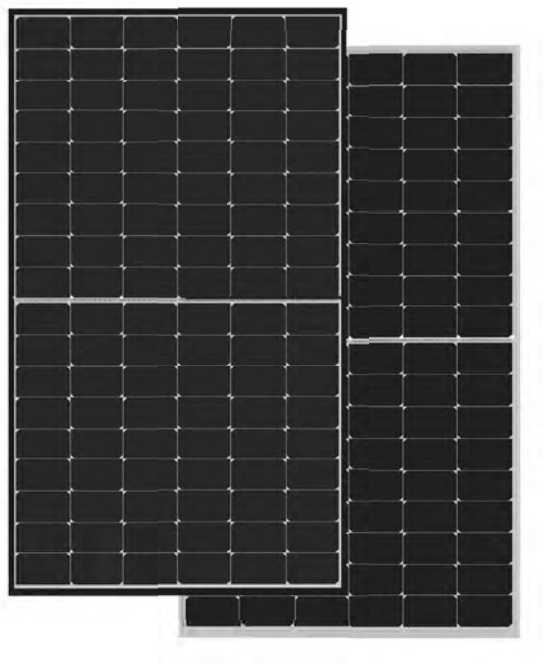
Positive power tolerance of 0~+3%

IEC61215(2016), IEC61730(2016)

ISO9001:2015: Quality Management System

ISO14001:2015: Environment Management System

ISO45001:2018
Occupational health and safety management systems



Key Features

SMBB Technology

Better light trapping and current collection to improve module power output and reliability.

Hot 2.0 Technology

The N-type module with Hot 2.0 technology has better reliability and lower LID/LeTID.

PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.

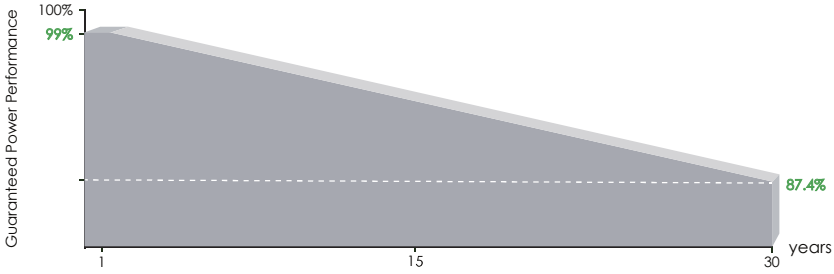
Enhanced Mechanical Load

Certified to withstand: wind load (4000 Pascal) and snow load (6000 Pascal).

Durability Against Extreme Environmental Conditions

High salt mist and ammonia resistance.

LINEAR PERFORMANCE WARRANTY

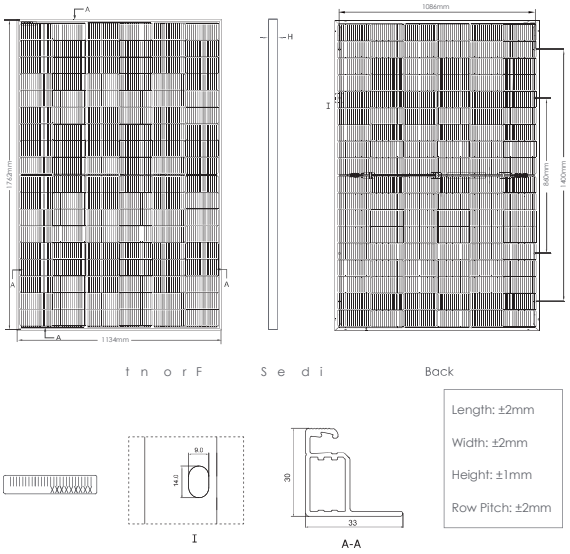


15 Year Product Warranty

30 Year Linear Power Warranty

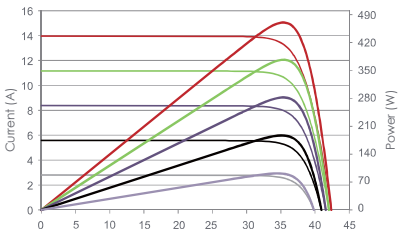
0.40% Annual Degradation Over 30 years

Engineering Drawings

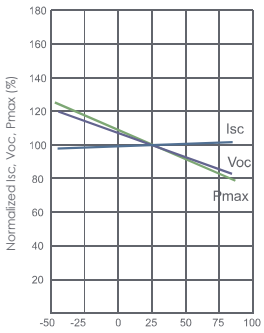


Electrical Performance & Temperature Dependence

Current-Voltage & Power-Voltage Curves (430W)



Temperature Dependence of Isc, Voc, Pmax



Mechanical Characteristics

Cell Type	N type Mono-crystalline
No. of cells	108 (2×54)
Dimensions	1762×1134×30mm (69.37×44.65×1.18 inch)
Weight	22.0 kg (48.50 lbs)
Front Glass	1.6mm, Anti-Reflection Coating
Back Glass	1.6mm, Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68 Rated
Output Cables	TUV 1×4.0mm² (+): 400mm , (-): 200mm or Customized Length

Packaging Configuration

(Two pallets = One stack)

36pcs/pallets, 72pcs/stack, 936pcs/ 40'HQ Container

SPECIFICATIONS

Module Type	JKM420N-54HL4R-BDV		JKM425N-54HL4R-BDV		JKM430N-54HL4R-BDV		JKM435N-54HL4R-BDV		JKM440N-54HL4R-BDV	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	420Wp	316Wp	425Wp	320Wp	430Wp	323Wp	435Wp	327Wp	440Wp	331Wp
Maximum Power Voltage (Vmp)	31.68V	29.57V	31.86V	29.73V	32.04V	29.94V	32.23V	30.12V	32.40V	30.27V
Maximum Power Current (Imp)	13.26A	10.68A	13.34A	10.75A	13.42A	10.80A	13.50A	10.86A	13.58A	10.93A
Open-circuit Voltage (Voc)	38.18V	36.26V	38.38V	36.45V	38.58V	36.64V	38.79V	36.84V	38.98V	37.02V
Short-circuit Current (Isc)	14.03A	11.33A	14.11A	11.39A	14.19A	11.46A	14.27A	11.52A	14.35A	11.59A
Module Efficiency STC (%)	21.02%		21.27%		21.52%		21.77%		22.02%	
Operating Temperature(°C)	-40°C~+85°C									
Maximum system voltage	1500VDC (IEC)									
Maximum series fuse rating	30A									
Power tolerance	0~+3%									
Temperature coefficient of Pmax	-0.29%/°C									
Temperature coefficient of Voc	-0.25%/°C									
Temperature coefficient of Isc	0.045%/°C									
Nominal operating cell temperature (NOCT)	45±2°C									
Bifacial Factor	80±5%									

BIFACIAL OUTPUT-REAR SIDE POWER GAIN

5%	Maximum Power (Pmax)	441Wp	446Wp	452Wp	457Wp	462Wp
	Module Efficiency STC (%)	22.07%	22.33%	22.60%	22.86%	23.12%
15%	Maximum Power (Pmax)	483Wp	489Wp	495Wp	500Wp	506Wp
	Module Efficiency STC (%)	24.17%	24.46%	24.75%	25.04%	25.32%
25%	Maximum Power (Pmax)	525Wp	531Wp	538Wp	544Wp	550Wp
	Module Efficiency STC (%)	26.27%	26.59%	26.90%	27.21%	27.53%

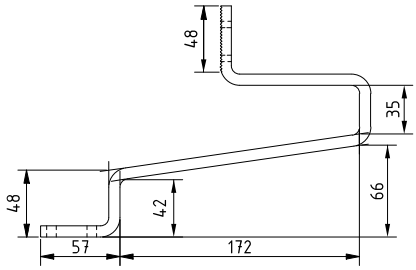
*STC: Irradiance 1000W/m² Cell Temperature 25°C AM=1.5

NOCT: Irradiance 800W/m² Ambient Temperature 20°C AM=1.5 Wind Speed 1m/s

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Specifications included in this datasheet are subject to change without notice.

Renusol Europe GmbH







DACHHAKEN UK BIBER/SCHIEFER HL (OHNE HOLZSCHRAUBE)
ROOF HOOK UK PLAIN TILES/SLATES HL (WITHOUT WOOD SCREW)

420184

170x240x35 mm	*170x240x35 mm*
0,74 kg	*0,74 kg*
Set ist vormontiert	*Set pre-assembled*
Abmessung Grundplatte: 55 x 35 mm	***Dimensions base plate:** 55 x 35 mm*
Material: Edelstahl; Verzinkter Stahl	***Material:** Stainless steel; Galvanised steel*
Materialstärke: 8,0 mm	***Material thickness:** 8,0 mm*
Schraube Ø: M8	***Screw Ø:** M8*
Geeignet für: Holz	***Applicable with:** Wood*
Dacheindeckung: Ziegeldach	***Roof decking:** Tiled roof*
# Schrauben pro Stück 2 x 6,0	***# of screws:** 2 x 6,0*
Höhenverstellung: 20,00 mm	***Height adjustment:** 20,00 mm*
Schutzdauer Verzinkung nach EN ISO 14713-1:2017 Verzinkung Schutzdauer in Korrosionskategorie C3 (mittlere Verunreinigung oder leichte Chloridbelastung): 26-78 Jahre	***Duration of protection Zinc coating according to EN ISO 14713-1:2017 Zinc coating Duration of protection in Corrosion category C3 (medium contamination or light chloride load):** 26-78 years*
Verzinkung Schutzdauer in Korrosionskategorie C4 (hohe Verunreinigung oder beträchtliche Chloridbelastung): 13-26 Jahre	***Verzinkung Schutzdauer in Korrosionskategorie C4 (hohe Verunreinigung oder beträchtliche Chloridbelastung):** 13-26 years*
Für Einsatz in Korrosionskategorie C5 (sehr hohe Verunreinigung und wesentliche Chloridbelastung z.B. Küstenbereiche) nicht geeignet	***For use in Corrosion category C5 (very high contamination andessential chloride contamination e.g. coastal areas) not suitable***

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