IAN BENNIE AND ASSOCIATES

TEST REPORT NO. 2017-022-S3

RWE04
SKYLIGHT TESTS TO AS 4285-2007

for

Keylite Roof Windows

November 2017

NATA

Accredited Laboratory No. 2371
Accredited for compliance with ISO/IEC 17025.

IAN BENNIE & ASSOCIATES PTY. LTD.
Building Performance Testing
ACN : 007 133 253

Accredited Laboratory No. 2371

TEST REPORT NUMBER 2017-022-S3

Client: **Keylite Roof Windows**
Derryloran Industrial Estate, County Tyrone, Northern Ireland

Sample: **RWE04 .**
The sample was mounted on a timber base of 90 x 45 mm pine in accordance with the fitting instructions included in Appendix B. Appendix B provided y theClient details modifications required in order to pass the water penetration test.
Overall size: 780 x 980 mm
Shaft opening size: 730 x 940 mm
Glazing: Type 2004 laminated IGU
(4 mm toughened outer/20 mm argon space/6.38 laminated inner glass)

Test Location: Ian Bennie & Associates Laboratory **Test Date:** 26 June 2017
Dandenong, Victoria

Test Results: The sample was subjected to Watertightness, Resistance to Concentrated Loads, and Resistance to Wind Pressures for Non-cyclone Regions tests for Skylight assemblies nominated in Clause 3.2.2 of Australian Standard AS4285-2007, Skylights, with test methods and results as summarised below.

Watertightness ..... **PASS at 5°, 15°, 27° (default) 45° and 60°**

Method: AS2050 Appendix C modified as required in AS4285
Test pitch angle(s): 5°, 15°, 27° (default) 45° and 60° roof pitch
Sample orientations: Square and at 45°
Sample detailing: Prior to the test the flashing was crimped and the base sealed.
Observations: No water penetration was observed during the tests.

Resistance to Concentrated Loads ..... **PASS**

Method: AS4040.1 modified as required in AS4285
Load applied: 1.1kN at the centre of the glazing and at one corner.
Observations: Each load was sustained for the test duration of 1 minute.

1 Luisa Avenue, Dandenong 3175, Victoria , Australia
Telephone : (03) 9768 3640 International : +613 9768 3640 Facsimile: (03) 9768 3642

Resistance to Wind Pressures for Non-cyclone Regions

Method: AS4040.2 modified as required in AS4285.

Loads applied and sustained for 1 minute (kPa):

Positive	4.22	**PASS**
Negative	6.39	**PASS**

Observations: No sign of failure was observed at the test pressures above.

Conclusion:

The test sample passed the test requirements of Australian Standard AS4285-2007 for Watertightness, Resistance to Concentrated Loads, and Resistance to Wind Pressures for Non-cyclone Regions at the test loads.

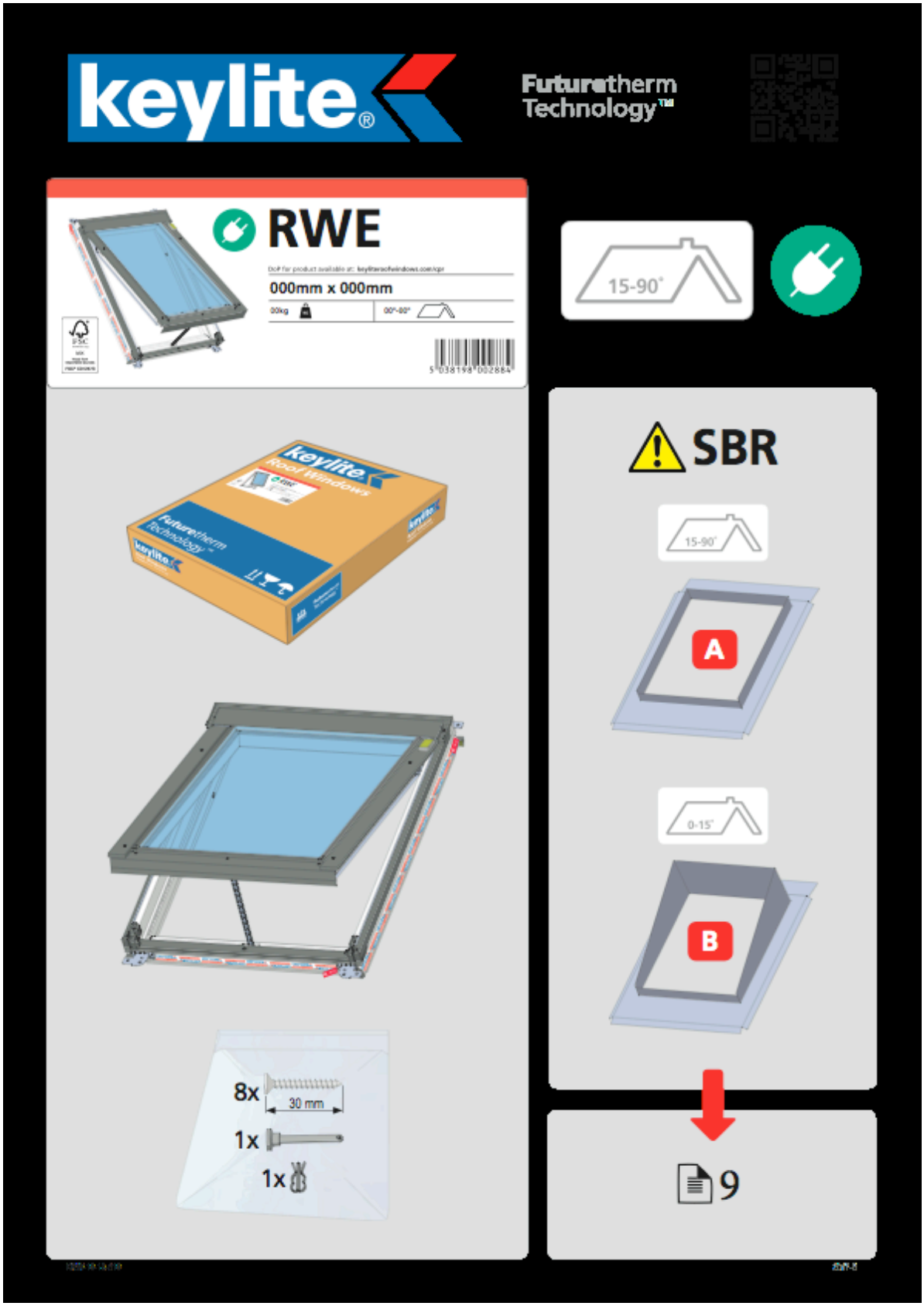
The test of Resistance to Wind Pressures for Non-cyclone Regions determined the maximum Strength Limit State pressures sustained by the skylights during testing.

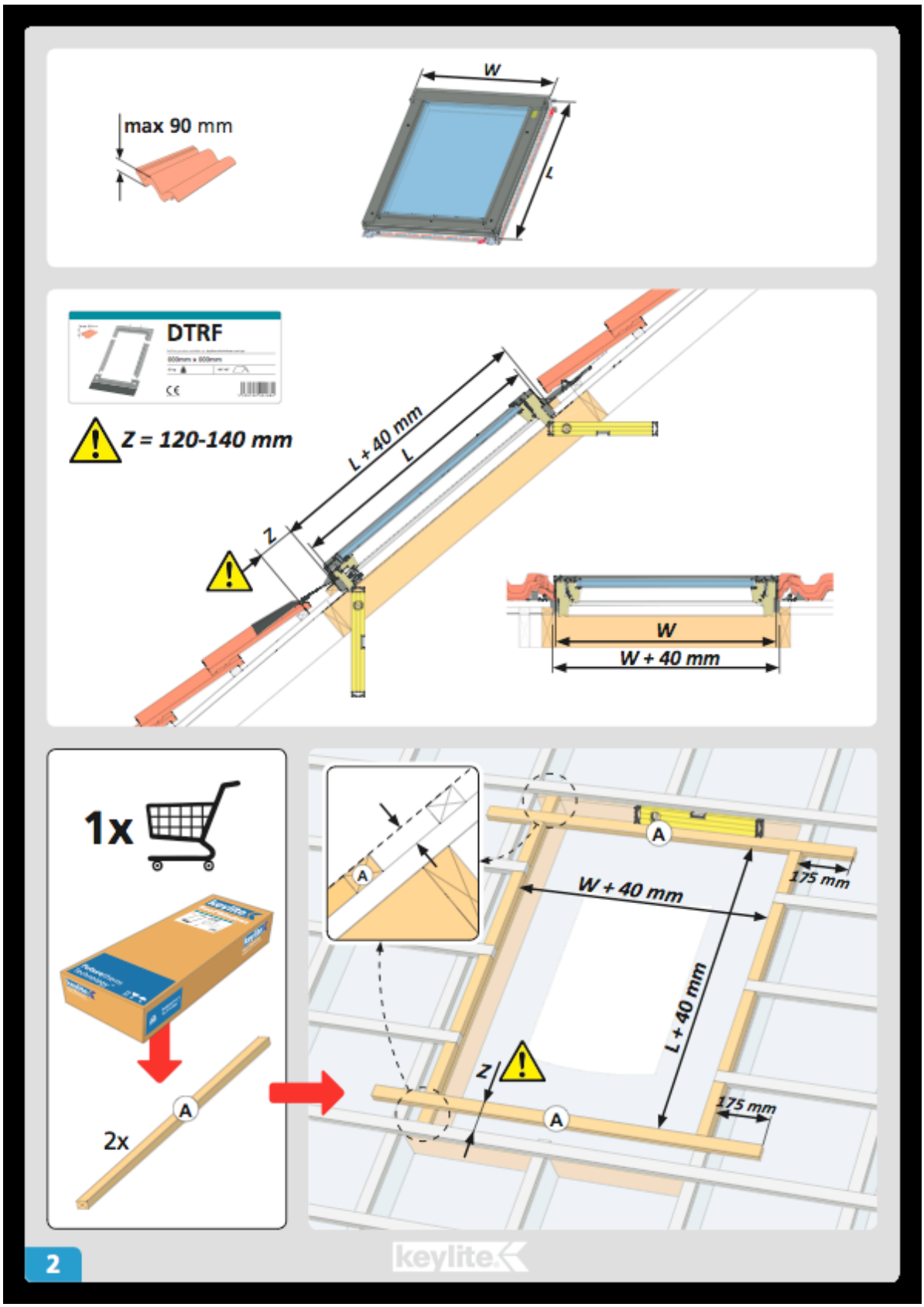
Maximum Strength Limit State Pressures Sustained	
+ 4.22 kPa	**- 6.39 kPa**

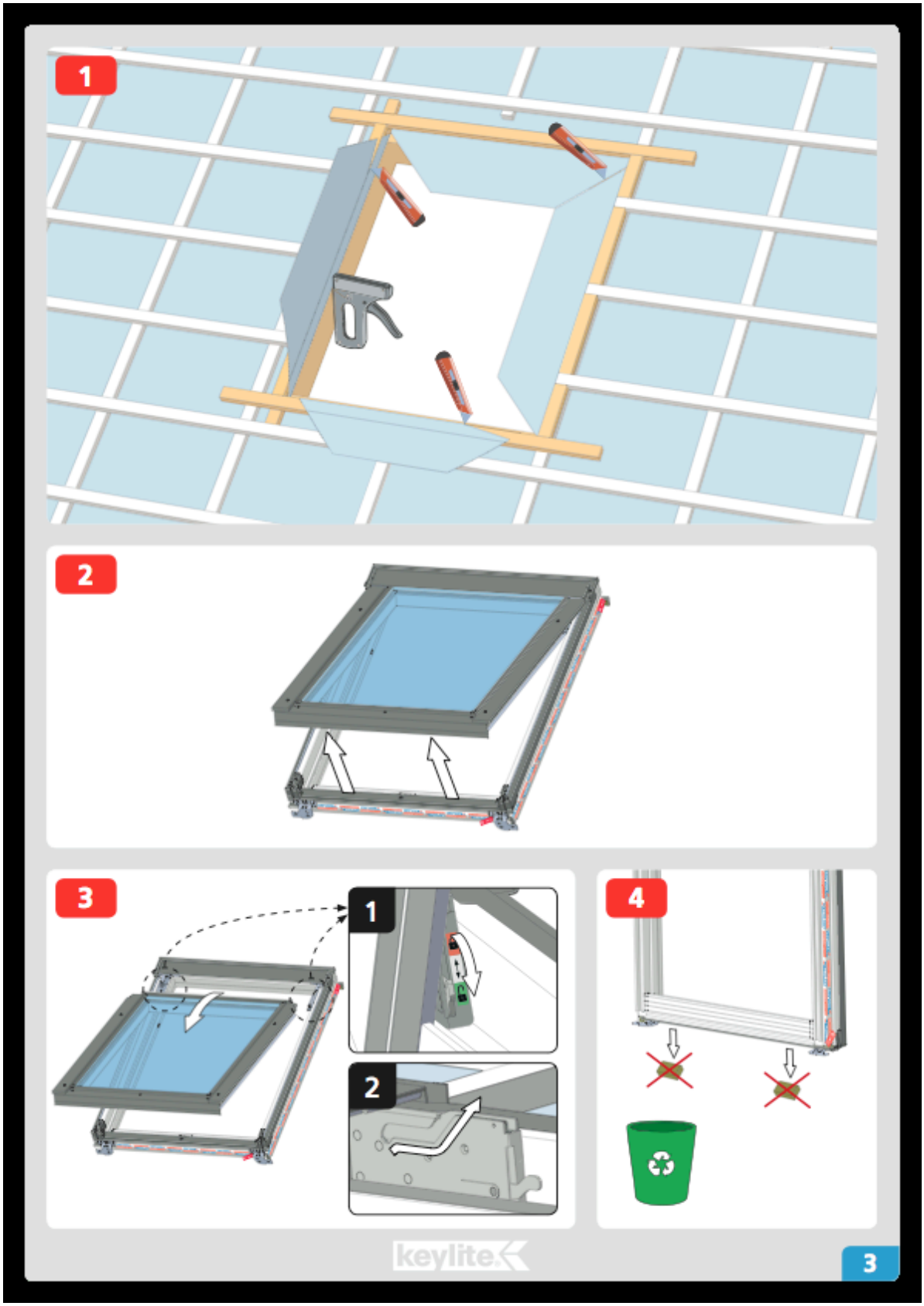
These loads correspond with the static loads nominated in AS4055-2012 for Wind Classes up to C4 for the General roof zone (away from edges) defined in that Standard

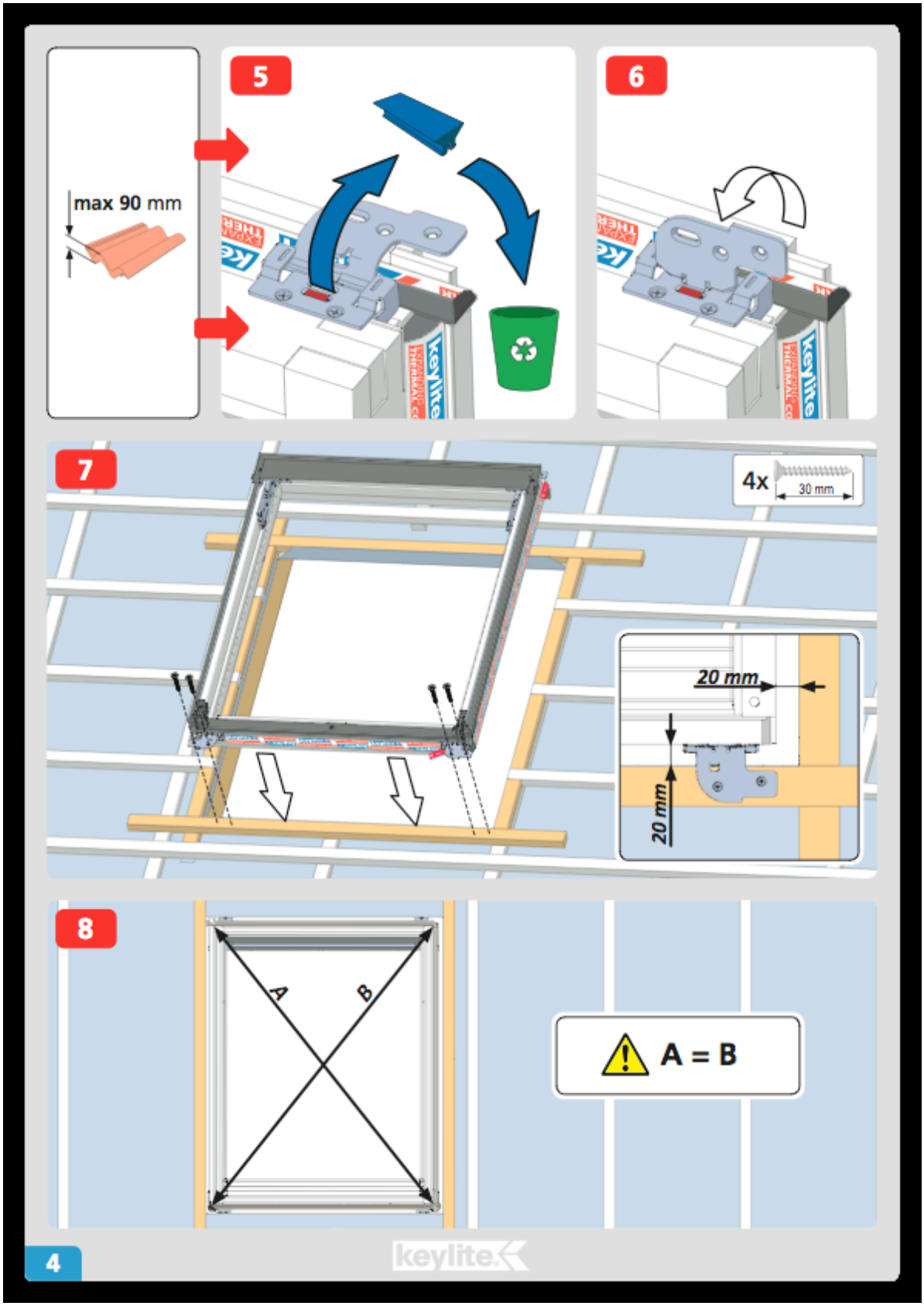
DISTRIBUTION:
Ian Bennie & Associates.....2
Keylite Roof Windows .....PDF

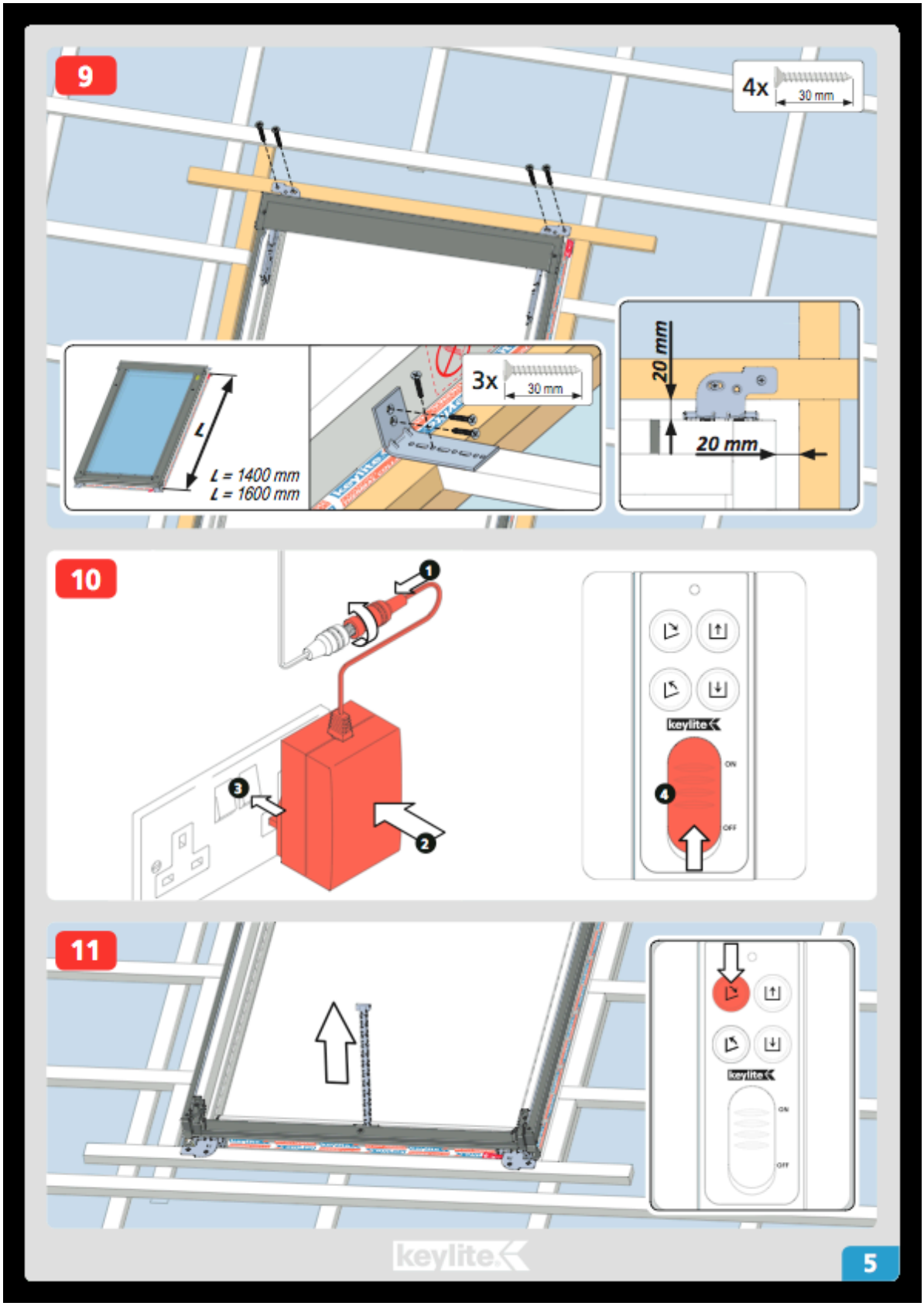
Ian Bennie 30 November 2017
Authorised Signatory

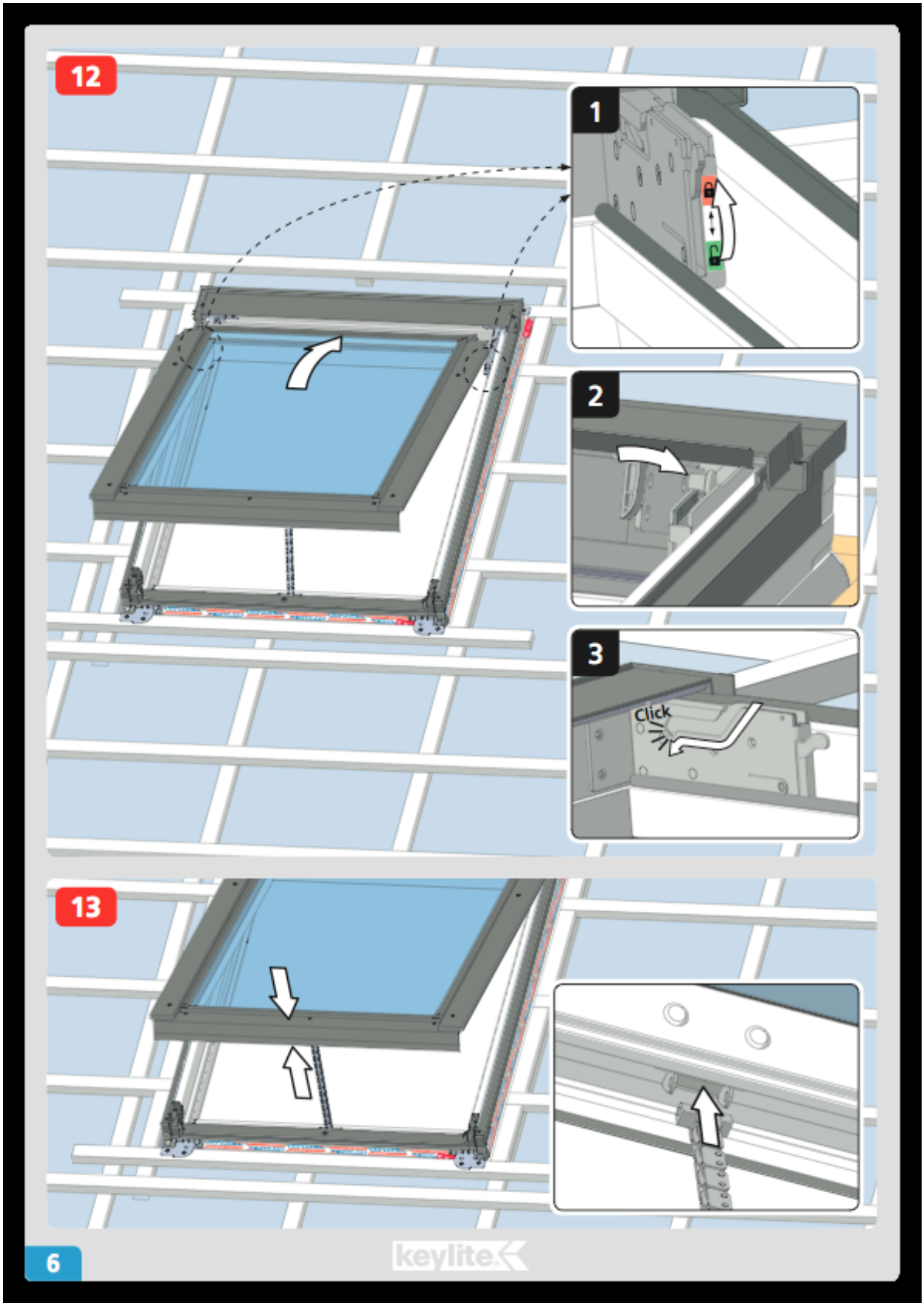

keylite
Futuretherm Technology™
RWE
000mm x 000mm
15-90°
SBR
15-90°
A
0-15°
B
8x
30 mm
1x
1x
9

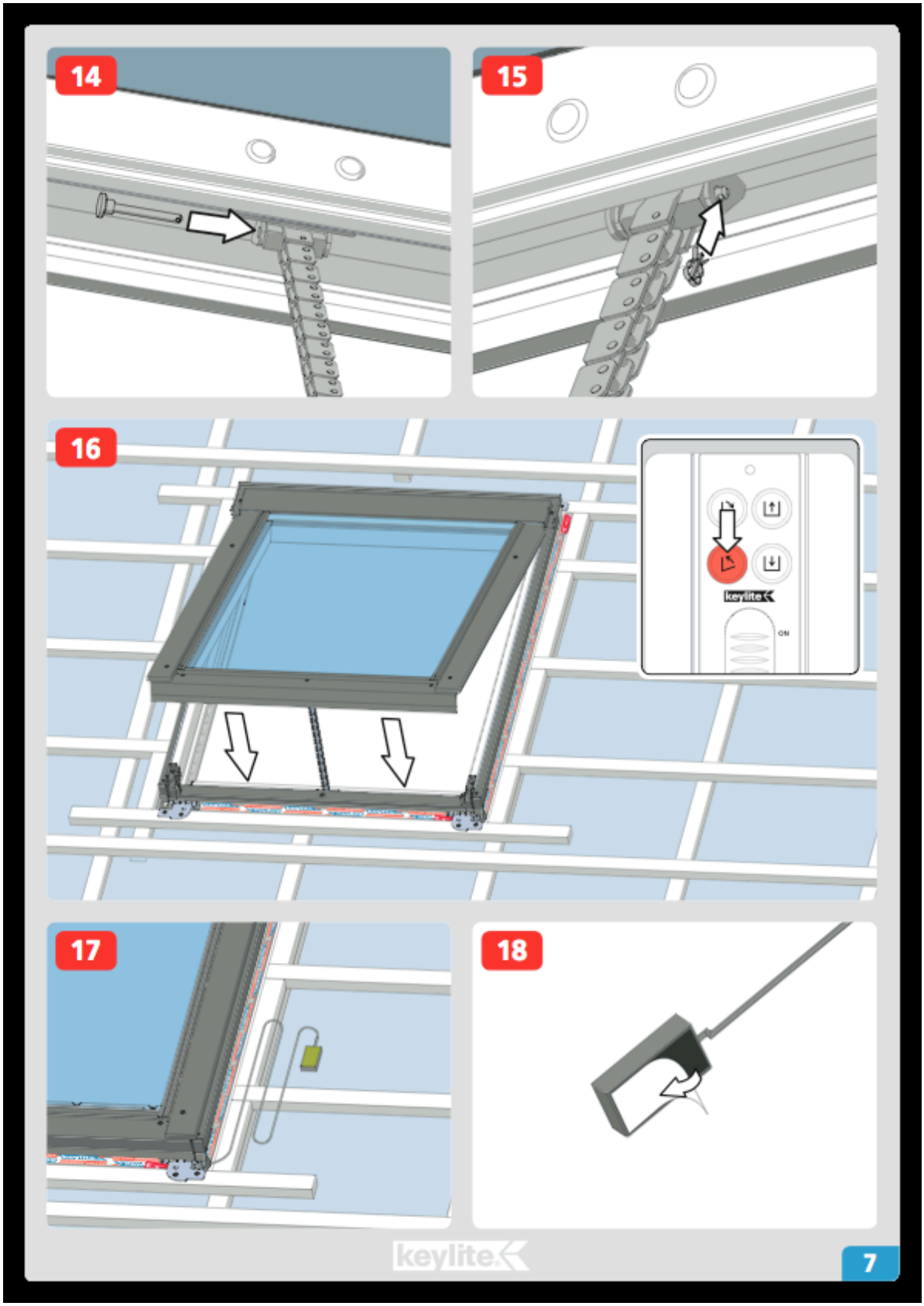

max 90 mm
W
L
DTRF
Z = 120-140 mm
L + 40 mm
L
Z
W
W + 40 mm
1x
2x
A
A
W + 40 mm
175 mm
L + 40 mm
Z
A
175 mm
2
keylite

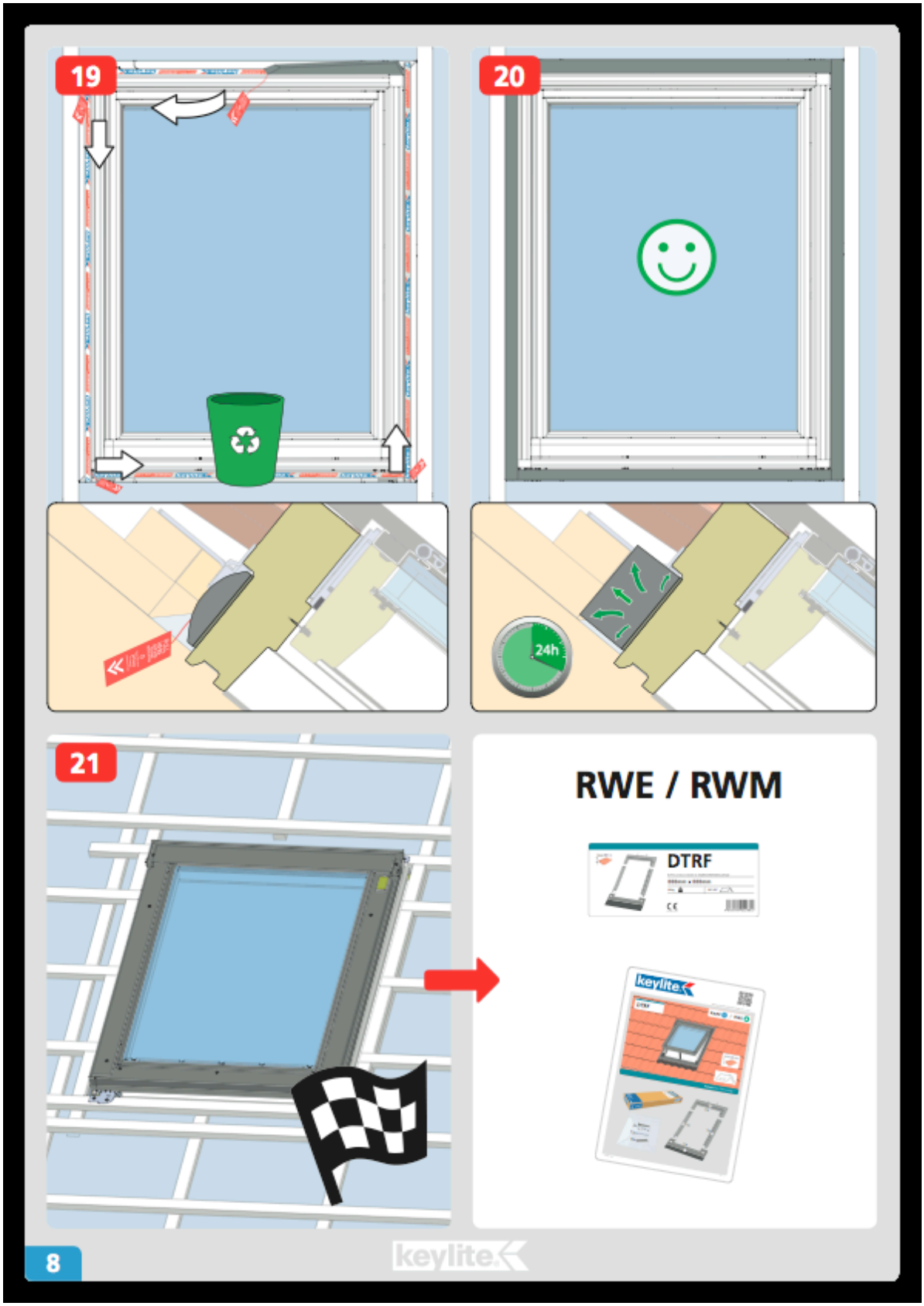

1
2
3
1
2
4
keylite
3


max 90 mm
5
6
7
4x
30 mm
20 mm
20 mm
8
A
B
A = B
4
keylite


9
4x
30 mm
3x
30 mm
L
L = 1400 mm
L = 1600 mm
20 mm
20 mm
10
1
2
3
4
keylite
ON
OFF
11
keylite
ON
OFF
keylite
5


12
1
2
3
Click
13
6
keylite


14
15
16
keylite
17
18
keylite
7


19
20
24h
21
RWE / RWM
DTRF
keylite
8
keylite

Keylite Product test for RWE04

Product Test at Ian Bennie & Associates - 26/6 and 27/6 2017

RWE 04

RWE 04 3D printer corner part was replaced with production corner part and window sealed along front with Sikaflex Pro Additional rubber seals and mastic was fitted by to the production corner part.

This production corner part will be standard in all production release products. Crimping of the rear capping along the sides is required and included in installation instructions.

- **Water Test**

Pass 27 degrees
Pass 15 degrees
Pass 5 degrees
Pass 45 degrees
Pass 60 degrees

- **Load Test**

Tested @ two points, Middle of window and front Right corner

Product pass

- **Wind Load Test**

Pass positive test to maximum Australian Standards for both non-cyclonic and Cyclonic conditions
Pass negative test to maximum Australian Standard s for both non-cyclonic and Cyclonic conditions

Overall test is a Pass.