**ASTON**
SWEDEN

# ALU FACADE SCREW

## SELF DRILLING SCREW FOR FASTENING OF CLADDING TO WOOD



- Good corrosion resistance

- #1 drill point for increased pull-out values

- Tall head for easy and stable mounting

- Supplied with washer with bonded EPDM for better load distribution and sealing abilities

- Available in more than 500 colours (QUALICOAT certified powder)



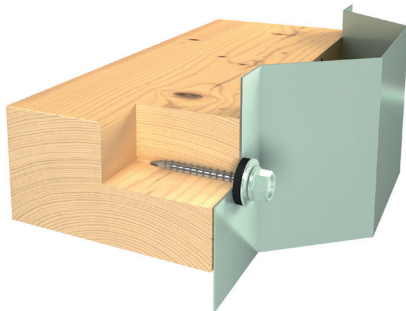Effective length | Hex head | Corrosion category C3 | Aluminium

## PRODUCT RANGE

| MG/PG | Item no. | Item name | Washer [mm] | Thread [mm] | Length L [mm] | Effective length L$_{ef}$ [mm] | Drill capacity [mm] | Head [mm] | Unit [pcs] |
|-------|----------|-----------|-------------|-------------|---------------|-------------------------------|---------------------|-----------|------------|
| 06 5310 | 13109 | HWH ALU 5.5 X 35 #1 "A" HX8 ALU-16B | ALU Ø16 | Ø5.5 | 35 | 24.5 | 2 x 0.5 - 2 x 1.0 | Ø10.0 HEX 8.0 | 250 |

## TYPICAL APPLICATION

- Fastening of cladding to wood

TECHNICAL DATA SHEET
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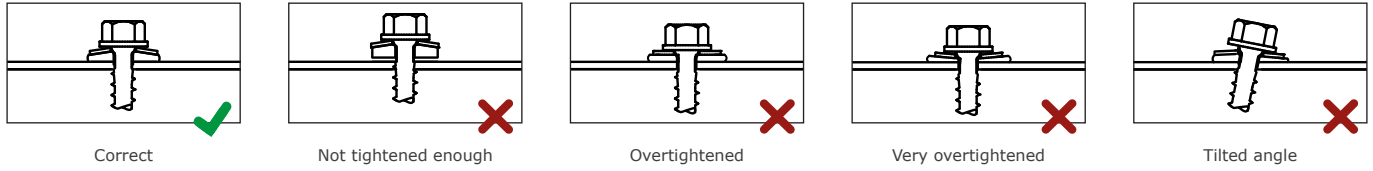SWEDEN

## INSTALLATION INSTRUCTIONS

For optimal performance it is important to follow the installation instructions. An incorrect installation may lead to decreased sealing abilities and/or load bearing capacity.

For optimal drill performance, it is recommended that the rotational speed is 1200 - 1800 RPM.

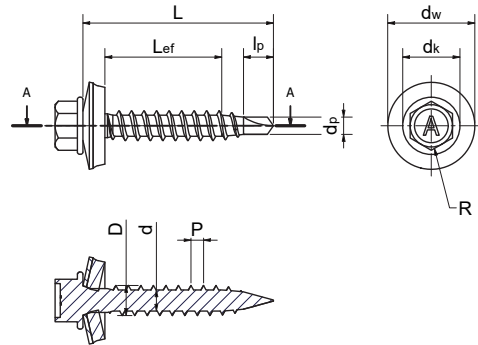| Correct | Not tightened enough | Overtightened | Very overtightened | Tilted angle |
|---|---|---|---|---|

## GOOD TO KNOW

Self-drilling aluminium screws secure a one-step installation in soft materials such as aluminium and plastic. However, due to the mechanical properties of aluminium a self-drilling aluminium screw cannot drill in other metals harder than aluminium.

## TECHNICAL DATA

| | | |
|---|---|---|
| Outer diameter, D | [mm] | Ø5.5 |
| Inner diameter, d | [mm] | Ø3.9 |
| Head diameter, $d_k$ | [mm] | Ø10.0 |
| Washer diameter, $d_w$ | [mm] | Ø16.0 |
| Drill point diameter, $d_p$ | [mm] | Ø3.2 |
| Drill point length, $l_p$ | [mm] | 5.5 |
| Pitch, P | [mm] | 2.3 |
| Drive type, R | [-] | HEX 8.0 |

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## DESIGN RESISTANCE

The design resistance of the screw is determined in accordance with EN 1999-1-4:2007 + AC:2010 + A1:2011, Eurocode 9 for aluminium structures and EN 1995-1-1:2004 + AC:2006 + A1:2008 + A2:2014, Eurocode 5 for timber structures.

The resistance when loaded in tension, $N_{Rd}$, appears from the table on the right and is the minimum value of the pull-out resistance of the supporting object, the pull-through resistance of the fixed object, and the tension resistance of the screw.

The resistance when loaded in shear, $V_{Rd}$, appears from the table on the right and is the minimum value of the bearing resistance of the supporting object and the fixed object, and the shear resistance of the screw.

The theoretical values must be considered indicative since the conditions at the construction site may vary. Practical tests of the specific application are recommended for verification of the listed values.

Assumptions:

Fixed object: Aluminium EN AW-6063 - EN 573
Ult. tensile strength, $f_u$ = 190 N/mm²

Supporting object: Structural wood, C24
Density, $\rho_k$ = 350 kg/m³

L = Length of the screw [mm]
t = Thickness of the fixed object [mm]

All resistances are stated in kN (1 kN ≈ 100 kg)
Safety factor: $\gamma_M$ = 1.35, $k_{mod}$ = 0.90

MG/PG: 06 5310 HWH ALU 5.5 X L #1 "A" HX8 ALU-16B

| Design resistance when loaded in tension, $N_{Rd}$ [kN] | |
|---|---|
| t \ L | 35 |
| 0.50 | 0.24 |
| 0.55 | 0.26 |
| 0.63 | 0.30 |
| 0.75 | 0.36 |
| 0.88 | 0.42 |
| 1.00 | 0.47 |
| 1.13 | 0.54 |
| 1.25 | 0.59 |

| Design resistance when loaded in shear, $V_{Rd}$ [kN] | |
|---|---|
| t \ L | 35 |
| 0.50 | 0.51 |
| 0.55 | 0.51 |
| 0.63 | 0.51 |
| 0.75 | 0.51 |
| 0.88 | 0.51 |
| 1.00 | 0.51 |
| 1.13 | 0.51 |
| 1.25 | 0.51 |

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