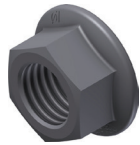


HDG ANTI VIBRATION

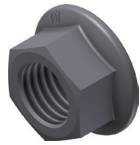
ØS HDG Anti
Vibration flange nuts



| Type | Description | Finish | Spanner size (mm) | Recommended torque (Nm) | Maximum torque (Nm) | Comment |
|------|---------------------------|--------|-------------------|-------------------------|---------------------|-------------------|
| M6 | Flange Nuts S-M NU-FL-M6 | A4 | 10 | 8 | 10 | A4 is used for M6 |
| M10 | Flange Nuts S-M NU-FL-M10 | HDG | 15 | 55 | 55 | |
| M12 | Flange Nuts S-M NU-FL-M12 | HDG | 18 | 95 | 95 | |

SS ANTI VIBRATION

ØS SS (A4) Anti
Vibration flange nuts



| Type | Description | Finish | Spanner size (mm) | Recommended torque (Nm) | Maximum torque (Nm) | Comment |
|------|---------------------------|--------|-------------------|-------------------------|---------------------|------------------------|
| M6 | Flange Nuts S-M NU-FL-M6 | A4 | 10 | 8 | 10 | |
| M8 | Flange Nuts S-M NU-FL-M8 | A4 | 13 | 20 | 23 | |
| M10 | Flange Nuts S-M NU-FL-M10 | A4 | 15 | 40 | 45 | Hilti AT compatible ** |
| M12 | Flange Nuts S-M NU-FL-M12 | A4 | 18 | 80 | 85 | |

**Hilti AT compatible - see user guide ØI-RD-UG-EN-0431 for compatibility, applications, conditions and tools

STANDARD

DIN 934 Standard nuts
ØS UNO Channel nuts***



| Type | Description | Finish | Spanner size (mm) | Max torque (Nm) DIN 934 | Max torque (Nm) ØS UNO | Comment |
|------|-------------|--------|-------------------|-------------------------|------------------------|---------|
| M6 | S-M NU-M6 | A4/HDG | 10 | 7 | 7 | |
| M8 | S-M NU-M8 | A4/HDG | 13 | 17 | 17 | |
| M10 | S-M NU-M10 | A4/HDG | 17 | 37 | 33 | |
| M12 | S-M NU-M12 | A4/HDG | 19 | 64 | 62 | |

***Metallic UNO only. For installations with FRP UNO, use 6Nm. See ØI-RD-UG-0396

WITH NYLON INSULATION

Nylon insulation for
galvanic barrier solutions



| Type | Description | Material | Spanner size (mm) | Recommended torque (Nm) | Maximum torque (Nm) | Comment |
|------|-------------------------------|----------|-------------------|-------------------------|---------------------|--|
| M6 | Insulation sleeve and washers | Nylon | - | 6 | 7 | Recommended torque for Nylon types in direct contact with A4 nut. See ØI-RD-PB-EN-0113 |
| M8 | Insulation sleeve and washers | Nylon | - | 15 | 17 | |
| M10 | Insulation sleeve and washers | Nylon | - | 30 | 33 | |
| M12 | Insulation sleeve and washers | Nylon | - | 60 | 62 | |

NOTES FOR USE

Grade

The data shown is for Øglænd System bolt & nut fasteners only in A4-70 and Class 8.8 for SS/HDG respectively with corresponding material fastener parts where not specified.

Application & conditions

Our recommendation is based only on fastening Øglænd System products in corresponding material, without additional washers or additional lubricants. The recommendations given are for stiff / full contact connections.

Depending on the material specification, it may be necessary to reduce the tightening torque from that shown in the table above to prevent damage. An additional level of protection to prevent loosening must also therefore be considered depending on the application together with consideration of a maintenance and inspection program.

Pre-tension

Bolted connections rely on the pre-tension or "stretch" of the bolt to maintain the clamping force between the parts when tightened. There are several factors which can reduce this pre-tension including but not limited to; embedment, thermal expansion and contraction, shock and vibration.

Anti Vibration

Øglænd System anti-vibration flange nuts prevent loosening from vibration when the clamping force is retained. Inspection and maintenance programs must be considered where other sources of loosening may be present, particularly when clamping non-metallic elements.

Fastening non-metallic materials

When fastening non-metallic materials such as composites or polymers with steel bolts, the hardness of the material being fastened may limit the pre-tension which can be achieved by tightening the bolt. Material creep and relaxation over time may also reduce the pre-tension further.

Fasteners

M6 FRP BOLT

For use with FRP Cable Trays
(only with M6-FRP nut - not for use with metallic nuts)



| Article no. | Description | Type | Material | Recommended torque (Nm) |
|-------------|---------------------------|------|----------|-------------------------|
| 75249 | Hex Bolt S-M HE-E-M6 x 25 | M6 | FRP | 2 |

M10 FRP BOLT

For use with FRP Cable Ladders



| Article no. | Description | Type | Material | Recommended torque (Nm) |
|-------------|----------------------------|------|----------|-------------------------|
| 75253 | Hex Bolt S-M HE-E-M10 x 40 | M10 | FRP | 6 |

FRP STUD BOLT

For use with FRP Supports
(Note: SS bolts are recommended for use with FRP support as Best Practice)



| Article no. | Description | Type | Material | Recommended torque (Nm) |
|-------------|-----------------|------|----------|-------------------------|
| 71487 | S-M HE-M10 x 30 | M10 | FRP | 12 |
| 72374 | S-M HE-M10 x 40 | M10 | FRP | 12 |
| 71488 | S-M HE-M10 x 50 | M10 | FRP | 12 |
| 71489 | S-M HE-M10 x 80 | M10 | FRP | 12 |

FRP NUT

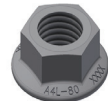
For use with FRP fasteners



| Article no. | Description | Type | Material | Recommended torque (Nm) |
|-------------|----------------------------|------|----------|-------------------------|
| 73917 | Flange Nut S-M NU-FL-E-M6 | M6 | FRP | 2 |
| 71319 | Flange Nut S-M NU-FL-E-M10 | M10 | FRP | 12 |

ØS A4 NUT

Stiff* connections only with A4 bolts.



| Article no. | Description | Type | Material | Recommended torque (Nm) |
|-------------|-----------------|------|----------|-------------------------|
| 1371971 | LN-AV-FL-M6 A4 | M6 | A4 | 10 |
| 1371973 | LN-AV-FL-M10 A4 | M10 | A4 | 40 |

FRP UNO CHANNEL NUT

For use with FRP fasteners



| Article no. | Description | Type | Material | Recommended torque (Nm) |
|-------------|----------------------------|------|----------|-------------------------|
| 71551 | UNO-F NU-M10 | M10 | FRP | 6 |
| 72026 | UNO-F NU-M10 (with spring) | M10 | FRP | 6 |

FRP CH100S CHANNEL NUT

For use CH100S Channel
(must be lightly oiled during installation)



| Article no. | Description | Type | Material | Recommended torque (Nm) |
|-------------|------------------|------|----------|-------------------------|
| 73913 | NU-SL-M10-45 FRP | M10 | FRP | 12 |

Conditions

The recommendations above are maximum values. Damage can occur with over tightening.

Only manually operated hand tools are suitable for fastening FRP fasteners.

Combinations of examples above must use recommended torque for the part with the least tightening torque to avoid damaging the fastener.

*Connections where full / stiff contact is established, for example FRP to FRP support, FRP > Steel etc. Applications where non-stiff items, or where gaps shall be closed by the fastening tension may require less tightening to prevent damage.