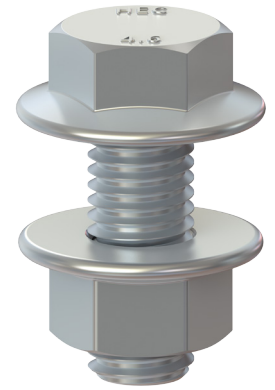# Product Data Sheet

## Hobson 4.6 Flange Purlin Bolt Assemblies

A Hobson 4.6 Purlin Bolt assembly consists of a property class 4.6 flange bolt and a class 5 flange nut. They come in two types of coating, zinc plated (ZP) and hot dip galvanised (HDG).

In the absence of tightening torque information from specifying engineers or purlin suppliers, the indicative tightening torque shown below can be used as a guide to establish the suitable tightening torque.



KBFMS* Bolt



KBFMS* Nut
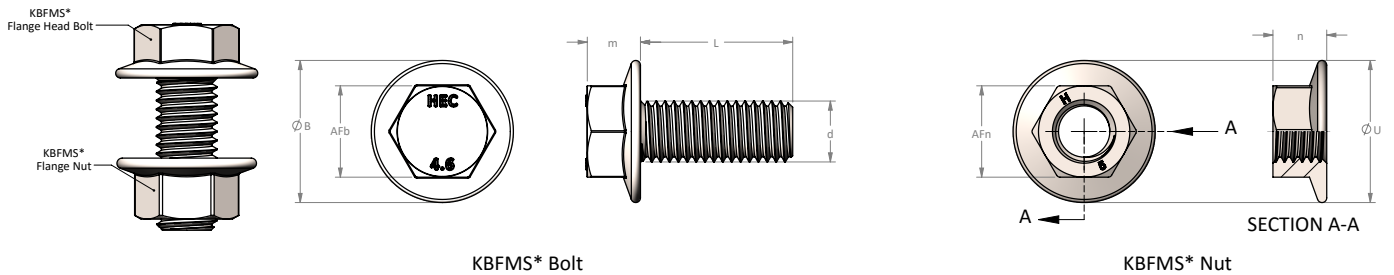
| Part Number | Finish | Thread Size | Bolt | | | | Nut | | | Indicative Tightening Torque[1] | Bolt Tension[2] |
| | | | Across Flats | Head Height | Flange Diameter | Bolt Length | Across Flats on Nut | Nut Flange Diameter | Nut height | | |
| | | $d$ | $AF_b$ | $m$ | $ØB$ | $L$ | $AF_n$ | $ØU$ | $n$ | $T$ | $P$ |
| | | | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (mm) | (N-m) | (N) |
| KBFMSGCM120030 | HDG | M12 | 18 | 10.5 | 28 | 30 | 18 | 28 | 12.5 | 28.0 | 9,500 |
| KBFMSZCM120030 | ZP | M12 | 18 | 10.5 | 28 | 30 | 18 | 28 | 12.5 | 25.0 | 9,500 |
| KBFMSZCM120055 | ZP | M12 | 18 | 10.5 | 28 | 55 | 18 | 28 | 12.5 | 25.0 | 9,500 |
| KBFMSZCM160030 | ZP | M16 | 24 | 13.5 | 32 | 30 | 24 | 32 | 17.5 | 62.0 | 17,650 |
| KBFMSZCM160035 | ZP | M16 | 24 | 13.5 | 32 | 35 | 24 | 32 | 17.5 | 62.0 | 17,650 |

## Important Notes:

[1] Tightening torque $T$ is calculated by using the basic formula, $T = P \cdot k \cdot D$, where $P$ is the intended bolt tension assumed to be 50% percent of the bolt's proof load, $k$ is the torque-friction factor and $D$ is the thread diameter. The $k$ value used for zinc plated and hot dip galvanised assemblies are 0.22 and 0.25 respectively. Note that the value of $k$ can vary depending on thread conditions, thread/bearing surfaces lubrication and site conditions. All relevant bearing surfaces are assumed to be in full contact as shown in Fig. 1. The required bolt tension and torque should be validated/defined by the deciding engineer.

[2] Bolt tension is calculated at 50% percent of the bolt's proof load.

## Installation Reminder:

Skewed bolt assembly orientation should be avoided. The base of the head and the base of the nut should be in full contact with the fastened component(s) as shown on Fig. 1.

Hole size and dimensions should be in accordance with AS4600 or as specified by the designing engineer.
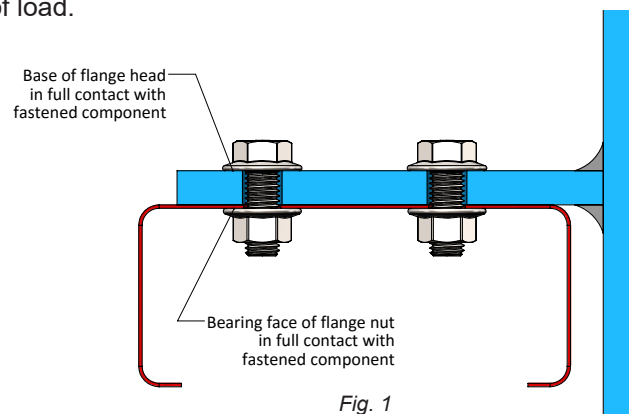


Base of flange head in full contact with fastened component

Bearing face of flange nut in full contact with fastened component

Fig. 1