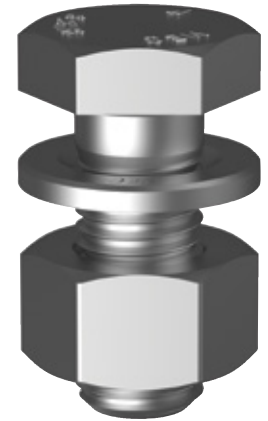


DID YOU KNOW?

about our... **K2 CLASS 10.9 STRUCTURAL ASSEMBLY**



- » EN 14399-3: 2005 Class 10.9 HR Hot Dip Galvanised.
- » Premium Range- Class 10.9.
- » Unique batch head marking.
- » Tolerances tightly controlled during manufacture. Refer details on the label for k factor and torque method.
- » Torque values able to be used for tensioning.
- » Full Quality Assurance documentation online.



K2 10.9 HR STRUCTURAL ASSEMBLY HOT DIP GALVANISED / EN14399-3:2005 K2 / CLASS 10.9

Part	Size	Length (mm)
KBHK9GCM16	M16	40-50
KBHK9GCM20	M20	50-150
KBHK9GCM24	M24	70-130
KBHK9GCM30	M30	80-200
KBHK9GCM36	M36	130-200



Manufacturer's mark

Unique Trace Code for link to test certification

Property Class as per ISO 898-1 and HR

Carton Label

HR, HDG (EN14399-3 10.9 BOLT/ (1) EN14399-3 CL.10 NUT/ (1) EN14399-5 WASHER)		
KBHK9GCM240080 PO# 58949 Trace Code: 2MT	LOT# 2015351400 Hobson Engineering 10 Clay Place Eastern Creek NSW 2766 AUSTRALIA	Quantity: 30 PCS
 935062901642		
M24x3.0Px80		
Torque Method according to EN1090-2 1 1st : 430 Nm 2 2nd : 630 Nm		
k - class K2 3 k_m : 0.120 4 V_k : 0.06		KEG NO: 1 PLT NO: 155

DOWNLOAD:

This product has a
**Test Certificate and/or
Report available**



ONLINE

- 1 The rated torque value required to bring the steel beams to firm contact.
- 2 The rated torque value required to reach the correct tension in the assembly.
- 3 The mean value of the k-factor obtained through testing.
- 4 V_k is the coefficient of variation of the k-factor values obtained in testing.

10.9K2

2006091DYK

DID YOU KNOW?

about our... **K2 CLASS 10.9 STRUCTURAL ASSEMBLY**



Required Documentation

EN 14399: 2005 **K2** 8.8 and 10.9 HR Assembly document structure.

» **European Conformity (CE) Certificate.**

The European Conformity (CE) mark is given to a manufacturer who has been assessed by a notified body and audited to the Harmonised European Standard (hEN) stating that they have the fabrication processes and quality management in place which is acceptable for the products manufactured. It is a requirement in the European Union to have the required CE marking on their products. A CE mark is only required in AS 1252: 2016 for the alternative and additional assembly types.

» **Factory Production Control (FPC) Inspection Certificate.**

» **Declaration of Performance (DoP).**

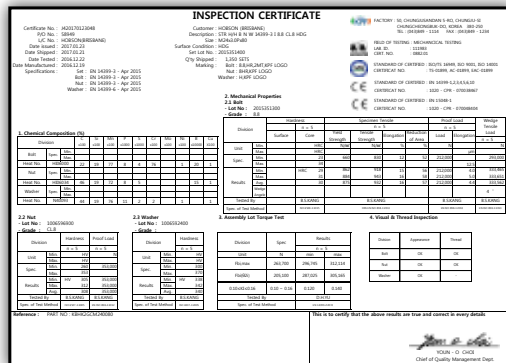


K2 Quality Assurance Documentation Online

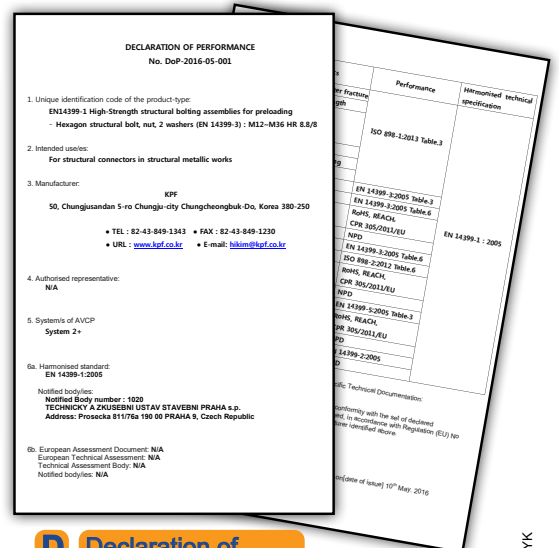
FIND

Find Test Certificates by typing at least 3 characters of a Heat Number. Then press the FIND button to retrieve links to all matching certificates.

Heat Number	Description	Category	Part Number	Certificates
2015351400-2MT	EN 10.9 K2 HDG BNW:M16 X 40	AS1252 Structural	KBHK9GCM160040	



F **Factory Production Control (FPC)**



D **Declaration of Performance (DoP)**

The European Union's Certificate of conformity



DID YOU KNOW?

about our... **K2 CLASS 10.9 STRUCTURAL ASSEMBLY**

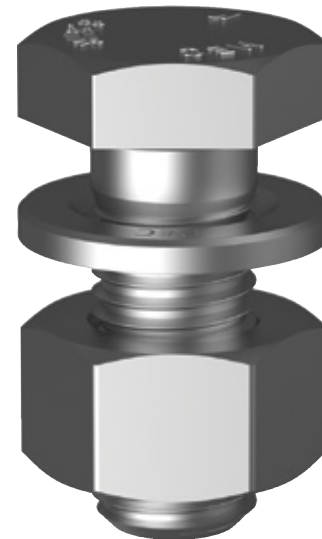


K Classification of Bolt Systems

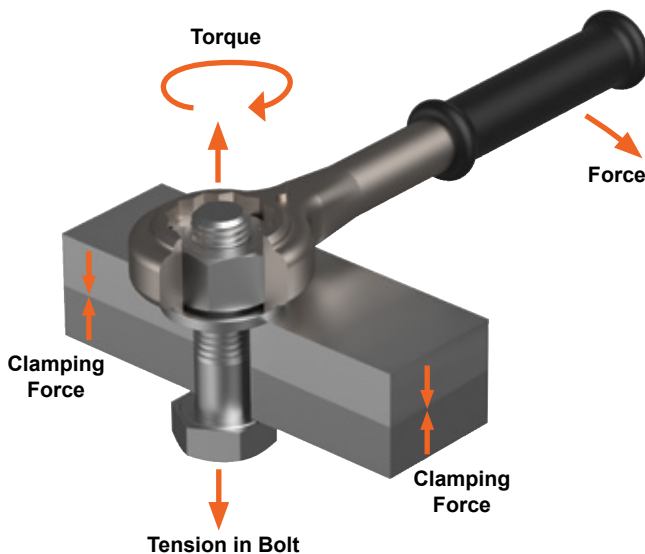
EN 14399 documentation provides performance values for designers along with tests to ensure that the assembly will perform as intended by the standard.

This European standard allows torque to be used when tightening structural bolts. This only applies for K1 and K2 assemblies where the torque-tension relationship is calibrated.

Structural Bolt assemblies that are manufactured to EN 14399 8.8 and 10.9 Type HR with K2 classification comply to the requirement of AS 1252: 2016 and can be used directly in the Australian market.



Torque and Tension?



Forces at play when a bolt is torqued.

Torque is the *rotational* force applied to a solid body.

Tension is the *axial* (along the shank) force applied to a solid body.

We can relate the torque applied to the nut to the tension achieved by the bolt. However, the effect of friction on surfaces that are in contact (threads and nut face) must be calibrated!

Friction

The formula below is applied to relate the tension achieved by the bolt from a specific torque on the nut.

$$M = F \cdot k \cdot d$$

M = torque required on the nut to achieve 'F'

F = required tension on the bolt

k = a factor applied to account for the torque loss primarily due to friction.

d = the thread diameter of the bolt

K Class

The K class of a bolt refers to the control of friction between the threads.

k-class and k-factor

k-class	k-factor
K0	—
K1	$0,10 \leq k_1 \leq 0,16$
K2	$0,10 \leq k_m \leq 0,23 \quad V_k \leq 0,06$

From EN 14399: 2005-04.