TECHNICAL REPORT

AJUSA head types for cylinder head bolts

ajusa

PURPOSE

Instruct our customers of **different types of bolt heads that AJUSA currently provided** in the cylinder head bolts sets and the correct tool for the proper tightening of each type.

INTRODUCTION

The structure of the cylinder head bolt in general, like most of conventional bolts, is **composed of two different parts, the bolt head and the stem.**
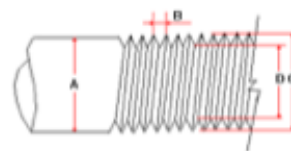

Bolt Head   Stem

what is a
STEM?

The **stem** is the cylindrical rod which begins under the head to the tip end of the bolt. The designs of the stem with respect to diameter, length, finishing, etc... **are different depending on maker**. The main element found in the stem is the thread.

A. Stem diameter
B. Thread lead
C. Thread external diameter
D. Thread internal diameter

what is a
BOLT HEAD?

By other hand we can define the **bolt head** as the part of larger diameter that the stem, situated on the top of it.

The flat bottom of the bolt head will seat against the cylinder head while the top or the profile of the head will support the corresponding socket wrench in the moment of apply the tightening.

It **is common to find a washer or flange** on the bottom of the bolt head **to increase the bearing surface** against the cylinder head, so the clamping forces are better distributed and avoids the need of using larger sized heads.

The bolt head design may be different depending on the maker or manufacturer, so the tool (socket type) needed to tighten is different in each case. It is essential to use always the correct socket wrench, that will be inserted in the dynamometric key or/and the goniometer tool to proceed with the tighten.

HEAD TYPES AND CORRECT SOCKET WRENCH

SPLINE SOCKET			Use RIBE Socket type	
MULTIPOINT SOCKET			Use XZN Socket type	
EXTERNAL MULTIPOINT			Use OGV Socket type	
HEXAGON SOCKET			Use HEX Socket type	
EXTERNAL HEXAGON			Use HEX Socket type	
INTERNAL TORX			Use TORX Socket type	
EXTERNAL TORX			Use TORX Socket type	