



The table of tightening moments for screws / Tabelle für die Auswahl des Anzugsmoments der Befestigungsschrauben /
Tableau des couples de serrage / Tabela doboru momentu dokręcania śrub mocujących

Screw size / Schraube / Diamètre de vis / Rozmiar śruby	Resistance class / Festigkeitsklasse / Classe de résistance / Klasa wytrzymałości	Tightening moments / Anzugsmoment / Couple de serrage / Moment dokręcania
M10	8.8	46 Nm
M12	8.8 / 10.9 / 12.9**	79 Nm / 115 Nm / 137Nm
M14	10.9*	180 Nm

- * Use for fitting the ball couplings of permissible maximum mass of a trailer above 1500kg to 2999kg.
 * Für die Montage der Zugkugelkupplungen für Anhänger mit einer zulässigen Gesamtmasse über 1500kg bis 2999kg.
 * Les utiliser pour le montage des dispositifs d'attelage pour un poids total en charge dépassant 1500kg à 2999kg.
 ** Use for fitting the ball couplings of permissible maximum mass of a trailer above 3000kg.
 ** Für die Montage der Zugkugelkupplungen für Anhänger mit einer zulässigen Gesamtmasse über 3000kg.
 ** Les utiliser pour le montage des dispositifs d'attelage pour un poids total en charge dépassant 3000kg.
 *** Use for mounting gawic zaczepowych o dopuszczalnej masie całkowitej przyczepy powyżej 1500 kg do 2999kg.
 *** Use for mounting gawic zaczepowych o dopuszczalnej masie całkowitej przyczepy powyżej 3000kg.

ENGLISH

ASSEMBLING, OPERATING AND MAINTENANCE INSTRUCTION OF COUPLING HEADS ZSK AND BC TYPE

1. INTRODUCTION

Coupling heads are made in accordance with the Directive 94/20/EWG and the Regulations ECE-R55. Coupling heads are of great importance for road safety, therefore numerous tests have been carried out to confirm their reliability. Nevertheless, to ensure their reliability it is essential that coupling heads are properly assembled, operated and maintained. Therefore, please read this instruction very carefully and follow all the directions.

2. RANGE OF APPLICATION

Coupling heads can be used only with those trailers where the required parameters marked on the trailer casing have not been exceeded. All coupling heads are to be coupled with A class tow-hook balls (50 mm in diameter) that are made in accordance with the Directive 94/20/EWG and the Regulations ECE-R55.

3. ASSEMBLING INSTRUCTION

A coupling head should be fastened so that the coupling point of the trailer (with horizontal positioning of the bodywork, the maximum permissible „P_{max}” axle load and properly placed load) does not exceed the permissible S value (vertical thrust), engraved on the body of the coupling head, and is 430 ±35 mm above the surface of the tyre adhesion to the ground – see fig. B. All deviations must be taken into consideration when approving the trailer construction. Coupling heads (depending on a design) may be fastened onto pipe shafts (round or square), V-shaped shafts and inertia braked couplings.

Coupling heads, for a tractive force up to 800 kg and intended to be fitted to unbraked O1 trailers, shall be fitted with a secondary coupling device (see fig. I). The secondary coupling device(s) shall withstand a static force equivalent to 2D with a maximum of 15 kN.

3.1. ASSEMBLING TO A PIPE SHAFT (ROUND OR SQUARE)

The casing of the coupling head should be placed on the shaft, properly positioned to the holes and screwed down with 2 bolts, 2 self-retaining nuts, 4 washers and 2 distancing jointing sleeves – see fig. C. When there are three vertical fastening holes, only two are to be used i.e. the front fastening hole and one of the rear ones.

3.2. ASSEMBLING TO A V-SHAPED SHAFT

The recommended way of fastening the coupling heads of ZSK-750K and BC-800L type to a V-shaped shaft with steel sections that are up to 24 mm wide and up to 60 mm high with the use of a connector, horizontally placed 4 fastening screws M12x35 (ISO 4017), 4 self-retaining nuts M12 (ISO 7040), and 8 washers 12,5 mm inside diameter (ISO 7090), is shown in detail in – see fig. D.

The other method of fastening the coupling heads of ZSK-750K and BC-800L type to a V-shaped shaft with steel sections that are up to 30 mm wide and over 60 mm high with the use of a connector, 2 vertically placed fastening screws M12 x 35 (ISO 4017), 2 self-retaining nuts M12 (ISO 7040) and 4 washers 12,5 mm inside diameter (ISO 7090) – see fig. E.

3.3. ASSEMBLING ON THE TOP OF SHAFT (ONLY FOR BC-1200MM)

The coupling head should be placed on the top of shaft (square or round), properly positioned to the holes and screwed down with two M12 x bolts, two self-retaining nuts, four washers – see fig. J (1" in the case of unbraked O1 trailer please use the secondary coupling device(s)).

3.4. It is obligatory to check if all the bolts are screwed down properly after 1,000 kilometers

4. USER'S MANUAL

In order to couple and uncouple the trailer safely one should:

- Make sure that there is a vacant space round the ball of the hook to exclude possible collisions with the spare wheel, frame and other bodywork elements.

• The trailer should be loaded properly, without exceeding the permissible total weight (P_{max}), so that the thrust on the coupling ball does not exceed the "S" value (marked on the body of the coupling head) – see fig. B.

• To make sure that the coupling head is properly fixed it is important to check the position of the indicator and the clearance between the coupling head and the ball of the hook – see fig. F.

• If the coupling between the ball and the coupling head slackens e.g. clatters start occurring during driving, it means that either the ball or the coupling head is used up and should be replaced at once. The diameter of the ball should be at least 49,13 mm. If the value is smaller it indicates that the coupling ball is used up.

• If a coupling head should get damaged or deformed in an accident or because of overload, it should instantly be replaced.

• Being of great importance for road safety, coupling heads should not be altered in any way.

5. OPERATING INSTRUCTIONS OF BC AND ZSK TYPE COUPLING HEADS

• In order to open the coupling head, push the safety bolt "R" with the index finger upward and turn the coupling handle "D" forward – see fig. G.

• The coupling head is opened when the indicator is in the OPEN position - see fig. F.

• In order to couple a coupling head, place the opened coupling head on the ball and push the coupling handle "D" downward – see fig. H, until the bolt "R" clicks outside.

• The coupling head is coupled properly if the safety bolt "R" clicks outside and the indicator is in position ◀ – see fig. F.

• If the indicator is in position ⚡ – see fig. F, it means that either the coupling head is fixed incorrectly or that the parts of the coupling head or the ball are worn and should be replaced immediately.

6. MAINTENANCE

Proper maintenance will provide easy exploitation and proper functioning of a coupling head. To ensure that all joints and bearings should be lubricated – see fig. G and the holding clamp should be cleaned and lubricated regularly.