

# SVENSK STANDARD

## SS 550100-1:2017



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### **Vägfordon – Utbytbarhet vid tillämpning – Del 1: Bygelkoppling 57 mm**

### **Commercial road vehicles – Interchangeability in application – Part 1: Clevis coupling 57 mm**

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**SS 550100-1:2017 (En)**

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## **Introduction**

This standard is applied to clevis coupling 57 mm for commercial vehicles. This standard is part of the series SS 550100. There are two series of standards which concern interchangeability. The interchangeability is divided into two parts, interchangeability in installation and interchangeability in application.

The series of standards include:

SS 550000-1, *Commercial road vehicles – Interchangeability in installation – Part 1: Drawbar coupling*

SS 550000-2, *Commercial road vehicles – Interchangeability in installation – Part 2: Drawbar eye*

SS 550100-1, *Commercial road vehicles – Interchangeability in application – Part 1: Clevis coupling 57 mm*

SS 550100-2, *Commercial road vehicles – Interchangeability in application – Part 2: Drawbar eye 57 mm*

This standard draws on SS-ISO 3584. SS-ISO 3584 defines 50 mm clevis coupling while a standard for 57 mm clevis coupling has hitherto been missing. While introducing a standard for 57 mm clevis couplings a new structure is introduced to this new standard. It is splitting information relevant for OEM:s from information relevant to end users. Furthermore, many non-value adding dimensions are deleted from the standard as compared to SS-ISO 3584. The current series of national standards focus on the geometric compatibility with specific address to 57 mm clevis couplings which are dominating in Sweden. A number of different coupling classes based on different performance values as in SS-ISO 3584 are not adopted. Hence the structure becomes simpler. Further information on interchangeability in installation is needed when mounting the equipment i.e. one or a couple of times during the lifetime of the vehicle. Information on interchangeability in application is needed almost every day. Accordingly, the structure of this series of standards, is tuned to the need of the user at different stages.

## SS 550100-1:2017 (En)

### 1 Scope

This Standard specifies the characteristics necessary for interchangeability in application of clevis couplings 57 mm to tow a trailer.

This Standard is applicable to 57 mm clevis couplings intended for connection to trailers equipped with a 57 mm drawbar eye on the drawbar of the trailer.

### 2 Normative references

This paragraph is referencing the below listed documents that are required when applying this document. For dated references only that edition of the document applies. For undated references the latest valid edition of the document applies.

SS-ISO 8718, *Commercial road vehicles – Clevis couplings and eyes for hinged drawbars – Strength tests*

SS-ISO 12357, *Commercial road vehicles – Clevis couplings and eyes for rigid drawbars – Strength tests*

SS 550000-1, *Commercial road vehicles – Interchangeability in installation – Part 1: Drawbar coupling*

SS 550000-2, *Commercial road vehicles – Interchangeability in installation – Part 2: Drawbar eye*

SS 550100-2, *Commercial road vehicles – Interchangeability in application – Part 2: Drawbar eye 57 mm*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

**3.1 drawbar**  
<hinged> structure connected through a hinge to the front end of the towed vehicle through which the towed vehicle is mechanically coupled to the towing vehicle by means of a clevis coupling

<rigid> structure rigidly connected to the front of the towed vehicle through which the towed vehicle is mechanically coupled to the towing vehicle by means of a clevis coupling

NOTE 1 TO ENTRY: For special applications, hinged drawbars with drawbar eyes in both ends exist.

**3.2 drawbar eye**  
component fitted to the forward extreme of the drawbar to enable mechanical coupling to a clevis coupling. A drawbar eye can be either toroidal or have a specific detailed design with a specific internal diameter

**3.3 clevis coupling**  
component that by means of a bolt or hook locks the drawbar eye to the towing vehicle

**3.4 clevis coupling**  
coupling that has a clevis to hold a bolt that locks the drawbar eye to the towing vehicle

**3.5 characteristic performance value**  
performance value that shows the capacity of the coupling to transfer longitudinal or vertical forces between towing and towed vehicles

## 4 Designation

### 4.1. Referencing

Reference may be made to this standard for the clevis coupling dimensions.

### 4.2. Reference

Clevis couplings meeting the requirements of this standard shall be identified by the following information, in the order given:

a) reference to this standard

b) code C57

EXAMPLE      SS 550100-1 C 57

## 5 Installation categories

Mounting dimensions shall be as specified in SS 550000-1. The coupling C57 shall be used together with installation category 5 of SS 550000-1.

## 6. Clevis coupling 57 mm

### 6.1. General

The requirements of 6.2 and 6.3 are applicable to all clevis couplings. Additional requirements applicable to C57 and classified couplings are given in 6.4.

The C57 clevis couplings shall only be used with D57 drawbar eyes specified in SS 550100-2.

### 6.2. Characteristic performance values

A clevis coupling according to this standard shall have characteristic performance values defined for  $D$ -,  $D_c$ - and  $V$ -values. Those performance values shall be in kN. The characteristic performance value  $S$  indicating the static load on the coupling shall be 1 000 kg. In cases where the clevis coupling is not intended for applications (e.g. center axle trailers, dollies) containing vertical loads on the coupling the  $D_c$ -,  $V$ - and  $S$ -values may be excluded. The characteristic performance values shall be verified through tests according to 6.3 of this standard.

Characteristic performance values shall be verified for all applicable installation categories.

### 6.3. Test requirements

The clevis coupling having capacity to support vertical dynamic loads shall satisfy the tests specified in SS-ISO 12357-1.

The clevis coupling not having capacity to support vertical dynamic loads shall satisfy the tests specified in SS-ISO 8718.

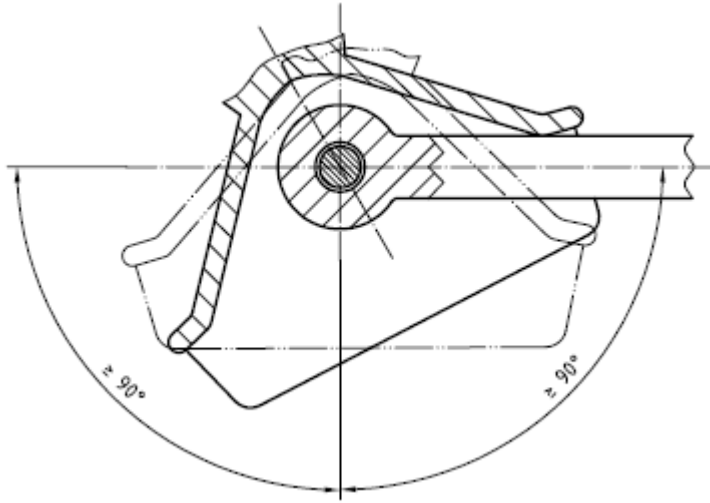
### 6.4. Articulation angles

The clevis coupling shall be designed to permit a compatible drawbar eye, i.e. a drawbar eye compliant with SS 550100-2, when coupled but not fitted to the vehicle, to reach the following non-simultaneous degrees of articulation:

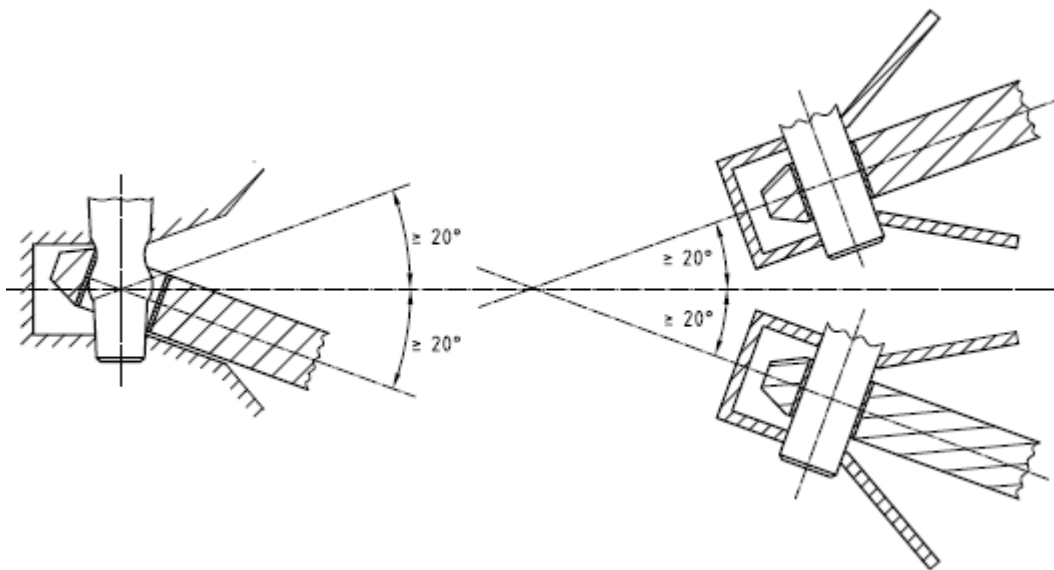
- $\pm 90^\circ$  horizontally about the vertical axis from the longitudinal axis of the vehicle (see Figure 1)
- $\pm 20^\circ$  vertically about the transverse axis from the horizontal plane of the vehicle (see Figure 2)
- $\pm 25^\circ$  axial rotation about the longitudinal axis from the horizontal plane of the vehicle (see Figure 3)

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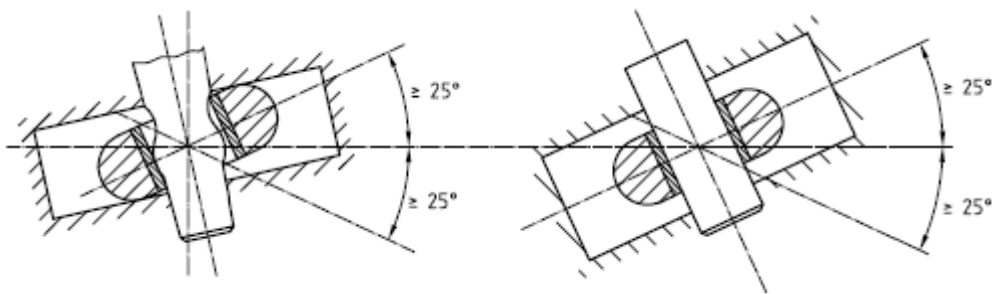
NOTE Dimensions for ensuring operating clearance between towing vehicles and trailers are given in SS-ISO 11406 and SS-ISO 11407



**Figure 1 – Horizontal angle**



**Figure 2 – Vertical angle**



**Figure 3 – Rotation angle**