



DIMENSIONAL CHARACTERISTICS OF ATTACHMENT - TRUCK WHEELS

E S 3.16

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CARACTERISTIQUES DIMENSIONNELLES DES ATTACHES DE ROUES POIDS LOURD
ANSCHLUSSMASSE FÜR NUTZFAHRZEUGRÄDER

1 - SCOPE

This EUWA Standard specifies the dimensional characteristics necessary for the attachment of the wheel on the hub. The flat attachment type with centring on central bore (hub centring) is the recommended type for future equipment.

The specifications indicated hereafter do not imply that the wheel is interchangeable from one vehicle to another.

The fatigue life performance of the wheel can depend on the vehicle's hub shape. The hub should provide a full circular support of the wheel attachment face in order to have no negative influence on the fatigue life behaviour. For non circular or non flat hubs a negative effect to the wheel's endurance behaviour is given.

---Wheels used on such hubs have to be checked towards cracks on the inner and outer attachment face each 50.000km. In case of crack detection the wheels have to be replaced immediately---

In such cases also the hubs should be checked with regard to wearout & cracks and if necessary the hubs should be replaced.

In addition wheels should not be used on different types of hubs due to the fact, that the different imprints and contact surfaces can lead to local higher surface pressure with an additional negative fatigue life effect and an additional risk for the loss of torque moment of the wheel nuts.

2 - FIELD OF APPLICATION

This standard applies to wheel attachments for commercial vehicles whose fixing includes 6, 8, 10 and 12 stud holes.

3 - FLAT ATTACHMENT WITH CENTRING ON CENTRAL BORE (HUB CENTRING)

The dimensions and tolerances for the wheel center shall be as in Table 1 and Fig. 1

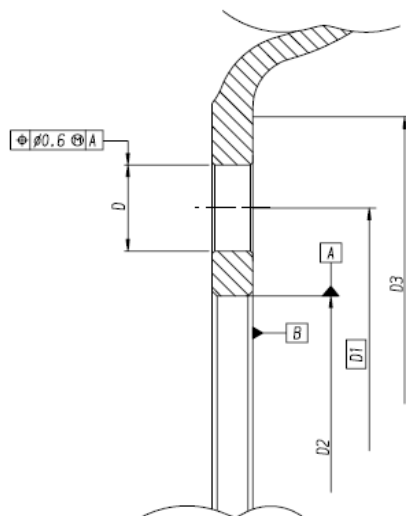
Main changes compared to the last issue:

Chapter 1 "The fatigue life ..." revised – In Table 1 nos. of "PCD" and 12 studs added - In Table 2 PCD 285,8 deleted – Figures 1, 2 and 3 added – Mixed Centring added

Table 1

No. of studs	PCD D1	Central bore D2 1)	Disc flat D3	Hub contact
		$\text{Ø} +0,2$	Ø min	D3 -5
6	170	130	223	
	205	161	255	250
	245 3)	191	295	290
	245	202	295	290
8	222,25 4)	164	280	
	275	221	325	320
10	225	176	275	270
	285,75 4)	220	345	
		221,45	340	
335	281	390	385	
12 5)	168	130	215	210

- 1) Values are for ferrous wheels, for aluminium wheels: central bore diameter + 0,2
- 2) If requested, datum face "B" can also be on the other side of the attachment face
- 3) New: Special use, i.e. due to increased bolt diameter
- 4) Not of current use in Europe: to be used for specific market only.
- 5) New: Direct mounting application

Fig. 1


**4 - ATTACHMENTS WITH SPHERICAL OR CONICAL CENTRING
ON THE STUD HOLE (NO CENTRING ON CENTRAL BORE)
OR WITH MIXED CENTRING (AT STUD HOLE AND CENTRAL
BORE)**

For a stud hole centered wheel, dimensions and tolerances for the wheel center shall be as in Table 2 and Fig. 2.

For a mixed centered wheel, dimensions and tolerances for the wheel center shall be as in Table 2 and Fig. 3.

Table 2

No. of studs	PCD		Central bore	Disc flat	Hub contact
	D1	D2	$\varnothing +1$ for stud centring $\varnothing +0,2$ for mixed centring	D3 \varnothing min	D3 -5
6	205	161		255	250
	222,25	164,31		280	
		164		280	
	245	202		295	290
8	165	116		212	
	275	221		325	320
	285	221		345	
10	222,25 1)	164,3		280	
	225	176		275	270
	285,75	221,45		345	
	335	281		390	385

1) Not of current use in Europe: to be used for specific market only.

Fig. 2 (Stud Centring)

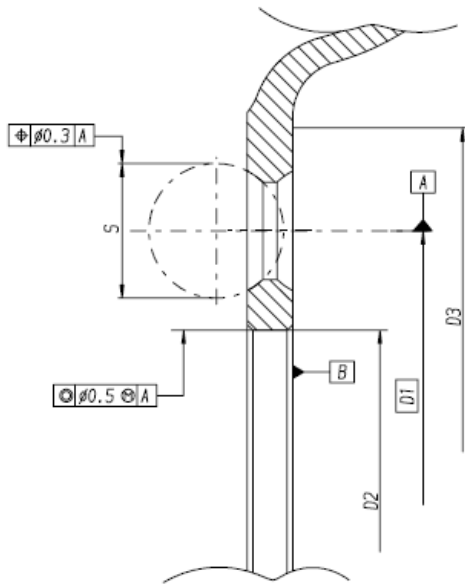
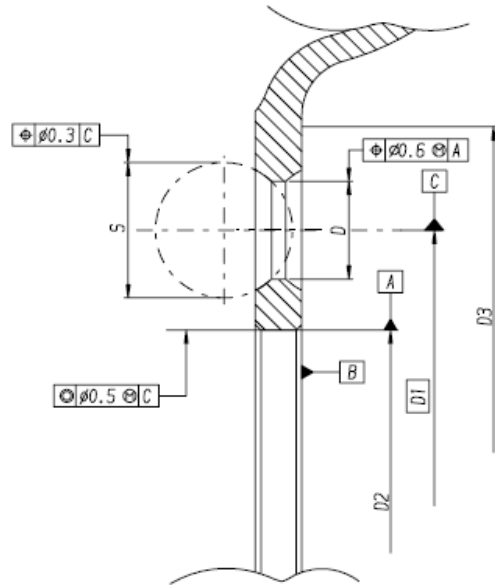


Fig. 3 (Mixed Centring)



2) If requested, datum face “B” can also be on the other side of the attachment face