

Nails for assembling timber pallets

DIN
68 163

Befestigungselemente für die Herstellung von Paletten aus Holz; Nägel

In keeping with current practice in standards published by the International Organization for Standardization (ISO), a comma has been used throughout as the decimal marker.

Dimensions in mm

1 Scope and field of application

This standard specifies requirements for nails used in the assembly of timber pallets.

NOTE: Use of other nails is permitted if these meet the relevant requirements (particularly with regard to the withdrawal strength, fastening strength and behaviour in the drop test) and proof of compliance issued by an accredited test house can be provided. See the relevant standards and documentation on timber flat pallets.

2 Concept

For the purposes of this standard, nails for assembling timber pallets are fasteners that meet the relevant requirements with regard to withdrawal strength by virtue of their shank design.

3 Dimensions and designation

3.1 Type K, annular ringed shank flat head nail

Recess for marking
(only for $l = 70$ mm)
 $2,7^{+0,5}_0$ ($\approx 0,3$ deep)

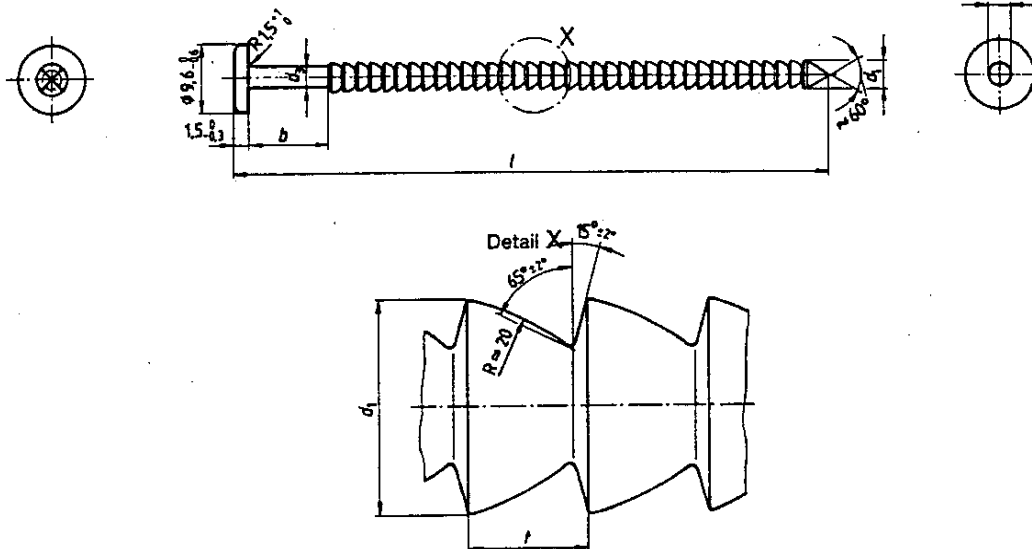


Figure 1: Annular ringed shank flat head nail

Designation of a type K nail (K) with a nominal diameter, d_1 , of 4,2 mm and a length, l , of 38 mm:

Nail DIN 68 163 – K 4,2 × 38

Table 1

Nominal diameter, d_1	Length, l	Pitch, t	b	d_3	Approximate mass per 1000 units, in kg \approx
0 -0.3	0 -2	± 0.2	+3 0	0 -0.06	
4.2	38	2.0	12	3.64	3.4
	70				6.0
	90				7.0

1) For information on test houses, contact Normenausschuß Verpackungswesen (Packaging Standards Committee), Burggrafenstraße 6, 10787 Berlin.

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3.2 Type A, helical threaded shank flat head nail

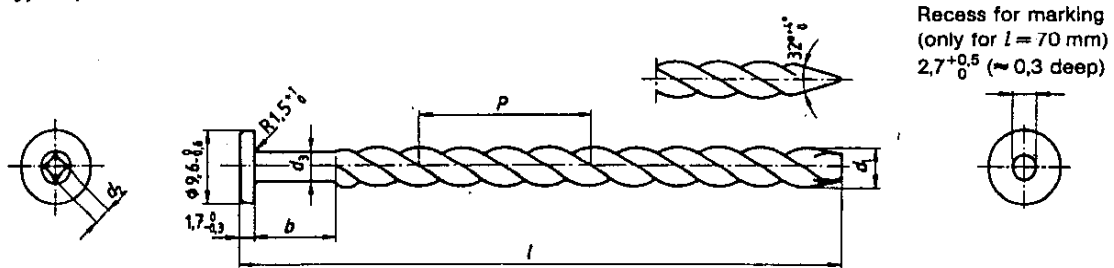


Figure 2: Helical threaded shank flat head nail

Designation of a type A nail (A) with a nominal diameter, d_1 , of 5,2 mm and a length, l , of 70 mm:

Nail DIN 68 163 – A 5,2 × 70

Table 2

Nominal diameter, d_1	Length, l	Thread		b	d_3	Approximate mass per 1000 units, in kg
		Minor diameter, d_2	Pitch, P			
$0^{+0.4}$	0^{-2}	$0^{-0.2}$	± 1	$^{+3}_0$	$^0_{-0.07}$	-
5,2	70	3,3	3,3, 4-start thread	12	4,0	7,1
	90					9,0

4 Material

Nails shall be made of cold drawn steel wire and have a minimum tensile strength as specified in table 3.

Table 3

Length, l	Minimum tensile strength, in N/mm ²
38	600
70	650
90	700

5 Testing and acceptance

For testing and acceptance, ISO 3269 shall apply (except for clause 5).

6 Marking

Only nails with a length of 70 mm shall be marked by means of a recess in the head of $2,7^{+0.5}_0$ mm diameter and about 0,3 mm deep.

Standards referred to

ISO 3269: 1988 Fasteners; acceptance inspection

Other relevant standards

DIN 15 147 Timber flat pallets; quality requirements

Explanatory notes

The specification to provide a recess in the head for marking purposes for nails 70 mm in length shall ensure that they can be distinguished from nails 90 mm in length which have been driven into the pallets.

The notation used here and the specification of d_1 as a nominal value comply with the relevant UIC specifications.