

UDC 621.886.115

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	Unhardened taper pins with external thread (ISO 8737 : 1986) English version of DIN EN 28 737	DIN EN 28 737
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This standard incorporates the English version of ISO 8737.

Kegelstifte mit Gewindezapfen, ungehärtet
 (ISO 8737 : 1986)

Supersedes DIN 7977,
 February 1977 edition.

European Standard EN 28 737 : 1992 has the status of a DIN Standard.

A comma is used as the decimal marker.

National foreword

The publication of this standard is in keeping with a decision made by CEN/TC 185 to adopt, without alteration, a series of ISO Standards covering parallel and taper pins as European Standards. The responsible German body involved in their publication is the *Normenausschuß Mechanische Verbindungselemente* (Fasteners Standards Committee).

As a consequence, all DIN Standards covering such pins have been superseded by the corresponding DIN EN Standards (see table below).

EN Standard	DIN EN Standard	Title	Previous DIN Standard
22 338	22 338	Unhardened parallel pins	7
22 339	22 339	Unhardened taper pins	1
28 733	28 733	Unhardened parallel pins with internal thread	7979
28 734	28 734	Hardened parallel pins	6325
28 735	28 735	Hardened parallel pins with internal thread	7979
28 736	28 736	Unhardened taper pins with internal thread	7978
28 737	28 737	Unhardened taper pins with external thread	7977

See National appendix for guideline values for the mass of taper pins not given in the European Standard.

It should be noted that ISO Standard ISO 965, to which reference has been made in clause 2, has been superseded by ISO 965-2.

The DIN Standards corresponding to the ISO Standards referred to in clause 2 of the EN are as follows:

ISO Standard DIN Standard

ISO 965 DIN 13 Part 13

ISO 2081 DIN 50 961

ISO 3269 DIN ISO 3269 (at present at the stage of draft)

The DIN 4000-9-1 tabular layout of article characteristics applies for pins as covered here.

Continued overleaf.
 EN comprises 6 pages.

Page 2 DIN EN 28 737

Standards referred to

(and not included in References)

- DIN 13 Part 13 ISO metric screw threads; series of preferred sizes for screws, bolts and nuts from 1 mm to 52 mm diameter and limits of sizes
- DIN 4000 Part 9 Tabular layout of article characteristics for bolts, screws, pins, rivets, keys, and lock washers
- DIN 50 961 Chromating of zinc and cadmium coatings on iron and steel

Previous editions

DIN 7977: 06.56, 03.61, 02.77.

Amendments

In comparison with DIN 7977, February 1977 edition, the following amendments have been made.

- a) The nominal diameter of 14 mm has been dropped.
- b) The tolerances on length have been amended.
- c) Some values of z have been changed.
- d) The material hardness has been specified.
- e) The standard designation has been changed.
- f) Guideline values for the mass of taper pins have been given in a National appendix.

International Patent Classification

F 16 B 35/00

1 Scope and field of application

This International Standard specifies the characteristics of unhardened taper pins with external thread, and metric dimensions and nominal diameters, d_1 , from 5 to 50 mm inclusive.

2 References

ISO 965, *ISO general purpose metric screw threads — Tolerances.*

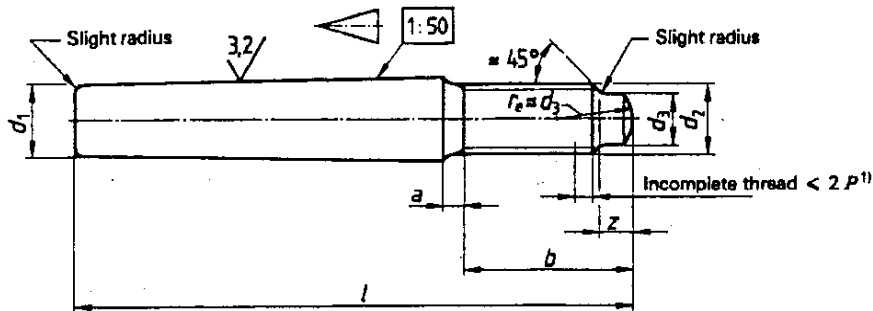
ISO 2081, *Metallic coatings — Electroplated coatings of zinc on iron or steel.*

ISO 3269, *Fasteners — Acceptance inspection.*

ISO 4520, *Chromate conversion coatings on electroplated zinc and cadmium coatings.*

3 Dimensions

Surface roughness values in micrometres



Dimensions in millimetres

d_1	h10 ²⁾	5	6	8	10	12	16	20	25	30	40	50
a	max.	2,4	3	4	4,5	5,3	6	6	7,5	9	10,5	12
b	max.	15,6	20	24,5	27	30,5	39	39	45	52	65	78
	min.	14	18	22	24	27	35	35	40	46	58	70
d_2		M5	M6	M8	M10	M12	M16	M16	M20	M24	M30	M36
p ¹⁾		0,8	1	1,25	1,5	1,75	2	2	2,5	3	3,5	4
d_3	max.	3,5	4	5,5	7	8,5	12	12	15	18	23	28
	min.	3,25	3,7	5,2	6,6	8,1	11,5	11,5	14,5	17,5	22,5	27,5
z	max.	1,5	1,75	2,25	2,75	3,25	4,3	4,3	5,3	6,3	7,5	9,4
	min.	1,25	1,5	2	2,5	3	4	4	5	6	7	9
nom.	³⁾ min.	max.										
40	39,5	40,5										
45	44,5	45,5										
50	49,5	50,5										
65	54,25	55,75		Range								
80	59,25	60,75										
95	64,25	65,75										
75	74,25	75,75			of							
85	84,25	85,75										
100	99,25	100,75										
120	119,25	120,75					commercial					
140	139,25	140,75										
160	159,25	160,75										
180	189,25	190,75								lengths		
220	219	221										
250	249	251										
280	279	281										
320	319	321										
360	359	361										
400	399	401										

1) P = thread pitch.
 2) Other tolerances as agreed between customer and supplier.
 3) For nominal lengths above 400 mm, steps of 40 mm.

4 Specifications and reference International Standards

Screw thread	Metric screw thread with tolerance 6g to ISO 965.
Material	St = Free-cutting steel, hardness 125 to 245 HV. Other materials as agreed between customer and supplier.
Surface finish	Plain, i.e. pins to be supplied in natural finish, treated with rust-preventative lubricant, unless otherwise specified by agreement between customer and supplier. Preferred coatings are black oxide, phosphate coating or zinc plating with chromate conversion coating (see ISO 2081 and ISO 4520). Other coatings as agreed between customer and supplier. All tolerances shall apply prior to the application of a plating or coating.
Workmanship	Parts shall be uniform in quality and free of irregularities or detrimental defects. No burrs shall appear on any part of the pin.
Taper	The taper shall be inspected by use of an adequate optical comparator.
Acceptability	The acceptance procedure is covered in ISO 3269.

5 Designation

Example for the designation of an unhardened steel taper pin with external thread, nominal diameter $d_1 = 6$ mm and nominal length $l = 50$ mm :

Taper pin ISO 8737 - 6 x 50 - St

National appendix
(Informative)

Mass of taper pins

The values given are guideline values.

Size	5	6	8	10	12	16	20	25	30	40	50
Nominal length	Approximate mass (7,85 kg/dm ³), in kg per 1000 units										
40	5,90										
45	6,90	9,60									
50	7,90	10,9									
55		12,2	20,2								
60		13,6	22,7								
65			25,2	36,8							
75			30,1	44,5							
85				52,2	74,0						
100				63,8	90,7	154					
120					113	191	270				
140						230	328	490			
160						272	386	582	795		
190							485	720	990	1618	
220								870	1190	1948	2800
250								1020	1400	2298	3370
280									1620	2648	3900
320										3149	4630
360											5400
400											6140