UDC 621.886.113 October 1992

Unhardened parallel pins with internal thread
(ISO 8733 : 1986)
English version of DIN EN 28 733

DIN
EN 28 733

This standard incorporates the English version of ISO 8733.

Zylinderstifte mit Innengewinde, ungehärtet
(ISO 8733 : 1986)

This standard, together with DIN EN 28 735, October 1992 edition, supersedes DIN 7979, February 1977 edition.

European Standard EN 28 733 : 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 pins 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As a consequence, all DIN Standards covering such screws have been superseded by the corresponding DIN EN Standards (see table below).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

It should be noted that ISO Standard ISO 965, to which reference has been made in clause 2, has been superseded by ISO 965-2.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 5 pages.

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 7979: 06.63, 02.77.

Amendments

In comparison with DIN 7979, February 1977 edition, the following amendments have been made.

a) Type D pins are now specified in DIN EN 28 735.

b) The nominal lengths and their tolerances have been amended.

c) The nominal lengths of 14 mm, 60 mm, 70 mm, and 80 mm have been dropped.

d) Some values of t_1 have been changed.

e) The hardness is now specified as Vickers hardness.

f) The standard designation has been changed.

International Patent Classification

F 16 B 19/02

1 Scope and field of application

This International Standard specifies the characteristics of unhardened parallel pins with internal thread, with metric dimensions and nominal diameters, d_1, from 6 to 50 mm inclusive.

2 References

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

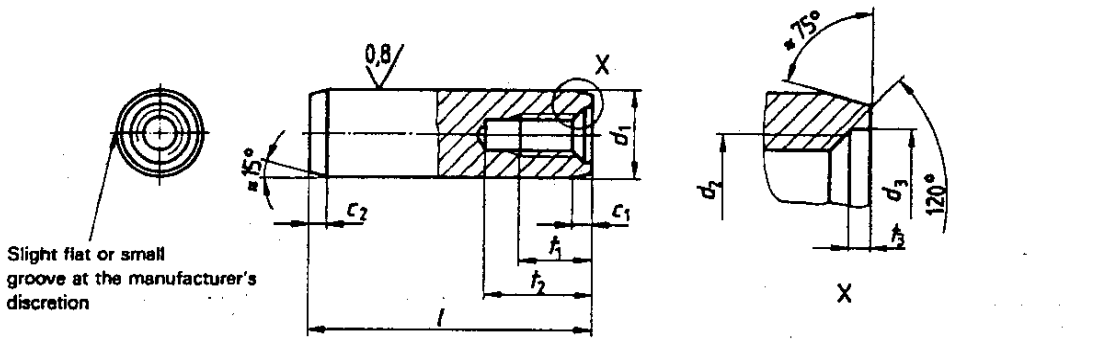
ISO 2081, *Metallic coatings — Electroplated coatings of zinc on iron or steel.*

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	m6[1]	6	8	10	12	16	20	25	30	40	50
c_1	≈	0,8	1	1,2	1,6	2	2,5	3	4	5	6,3
c_2	≈	1,2	1,6	2	2,5	3	3,5	4	5	6,3	8
d_2		M4	M5	M6	M8	M8	M10	M16	M20	M20	M24
p[2]		0,7	0,8	1	1	1,25	1,5	2	2,5	2,5	3
d_3		4,3	5,3	6,4	6,4	8,4	10,5	17	21	21	25
t_1		6	8	10	12	16	18	24	30	30	36
t_2	min.	10	12	16	20	25	28	35	40	40	50
t_3		1	1,2	1,2	1,2	1,5	1,5	2	2	2,5	2,5
l[3] nom.	min.	max.									
16 18 20	15,5 17,5 19,5	16,5 18,5 20,5									
22 24 26	21,5 23,5 25,5	22,5 24,5 26,5									
28 30 32	27,5 29,5 31,5	28,5 30,5 32,5	Range								
35 40 45	34,5 39,5 44,5	35,5 40,5 45,5			of						
50 55 60	49,5 54,25 59,25	50,5 55,75 60,75									
65 70 75	64,25 69,25 74,25	65,75 70,75 75,75					commercial				
80 85 90	79,25 84,25 89,25	80,75 85,75 90,75									
95 100 120	94,25 99,25 119,25	95,75 100,75 120,75							lengths		
140 160 180 200	139,25 159,25 179,25 199,25	140,75 160,75 180,75 200,75									

1) Other tolerances as agreed between customer and supplier.

2) P = thread pitch.

3) For nominal lengths above 200 mm, steps of 20 mm.

4 Specifications and reference International Standards

Screw thread	Metric screw thread with tolerance 6H 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 a 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.
Acceptability	The acceptance procedure is covered in ISO 3269.

5 Designation

Example for the designation of an unhardened steel parallel pin with internal thread, nominal diameter d_1 = 6 mm and nominal length l = 30 mm :

Parallel pin ISO 8733 - 6 × 30 - St