UDC 621.886.7 February 1977

Taper Pins

with Thread Ends and Constant Taper Lengths

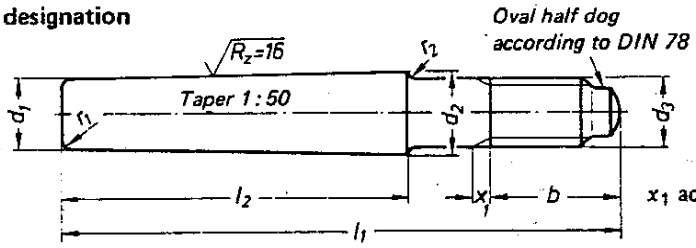
DIN 258

Kegelstifte mit Gewindezapfen und konstanten Kegellängen

For connection with standardizing work by the International Organization for Standardization (ISO), see Explanations.

Dimensions in mm

1 Dimensions and designation



x_1 according to DIN 76

Designation of a taper pin with thread end and constant taper length, of nominal diameter d_1 = 10 mm, length l_1 = 85 mm, made of 9 SMnPb 28 K (St):

Pin DIN 258 – 10 X 85 – St

Table 1.

d_1 h10	5	6	8	10	12	14	16	20	25	30	40	50
b $^{+2P}_{0}$	14	18	22	24	27	30	35	35	40	46	58	70
d_2 ≈	5,5	6,6	8,8	10,9	13,1	15,3	17,4	21,7	27	32,2	42,6	53
d_3	M 5	M 6	M 8	M 10	M 12	M 12	M 16	M 16	M 20	M 24	M 30	M 36
l_2	25	30	40	45	55	65	72	85	100	110	130	150
r_1 ≈	0,3	0,4	0,4	0,5	0,6	0,6	0,8	0,8	1	1	1,2	1,6
r_2 ≈	0,6	0,6	0,6	1	1	1	1,6	1,6	1,6	2,5	2,5	4
l_1 js15	Weight (7.85 kg/dm³) kg/1000 pieces ≈											
40	6,0											
45	6,8	9,8										
50	7,5	10,9										
55		12,0										
60		13,1	23,9									
65			25,9	39,3								
75			29,9	45,5								
85				51,7	73,6	98,4						
100				61,0	87,0	112						
120					105	131	190	272				
140					123	150	222	304	515			
160							254	336	564	820		
190								384	638	926	1640	
220									712	1030	1810	2910
250									786	1140	1980	3150
280										1250	2160	3390
320											2380	3710
360												4030

Lengths above 360 mm are to be graded in 40 mm steps.

Commercially available lengths lie between the _____ stepped lines.

In the case of taper pins of lengths above the – – – stepped line, $b \approx l_1 - (l_2 + 1.5\,x_1)$

If taper pins of lengths above the upper stepped line are required, taper pins according to DIN 7977 are recommended.

Continued on page 2
Explanations on page 2

2 Material

St = 9 SMnPb 28 K according to DIN 1651

Other materials by agreement.

3 Finish

Permissible deviations for dimensions without tolerance indication: medium DIN 7168

The tolerances listed in DIN 7178 Part 1 apply to the taper, viz.:

Tolerance on taper angle: AT 10

4 Requirements

DIN 267 Part 1 applies to general requirements

5 Testing

5.1 Testing for dimensional accuracy and finish

The provisions of DIN 267 Part 5 apply as appropriate to the testing for dimensional accuracy and finish. Table 2 applies to the main and subsidiary features; Table 3 applies to the acceptable quality level.

Table 2. **Main and subsidiary features**

Main feature	Subsidiary feature, e.g.
Diameter of taper d_1 Angle of taper Thread limits	Nominal lengths l_1 Taper lengths l_2 Thread lengths b Surfaces

Table 3. AQL-values

Type of feature	Acceptable quality level (AQL)	
	for testing for features	for testing for faulty parts
Main feature	1	1.5
Subsidiary feature	1.5	4

5.2 Testing of mechanical properties and materials

The provisions of DIN 267 Part 5 apply as appropriate to the testing of mechanical properties and materials. In cases of doubt, the Brinell hardness testing is decisive.

Explanations

As part of the work of Technical Committee ISO/TC 2, ISO standards for parallel pins and taper pins have been drawn up which necessitated a general revision of existing DIN standards. In that process, a new version of DIN 258 has also been prepared which differs from the issue of March 1961 in the following alterations and additions:

- The diameter 13 mm has been omitted.
- The dimensioning of the thread end has also been altered in conformity with DIN 78, reference being made to this Standard regarding the oval half dog. These alterations do not give rise to any replacement difficulties, because the existing system has, in principle, been retained.
- The nominal lengths l_1 and the taper lengths l_2 have not been changed, so that here, too, no difficulties will arise. However, the tolerance on the nominal length has been altered to js15.
- Detailed technical conditions of delivery based on DIN 267 Part 5 have been incorporated. DIN 7178 Part 1 forms the basis of the tolerances on taper.
- 9 SMnPb 28 K, according to DIN 1651, has been specified as the normal material, but other materials, which are to be agreed, are also permissible.
- When dismantling the pins, difficulties can arise if the larger diameter of the taper has sharp edges. It is therefore recommended either that a small chamfer be made at this point or that the taper be made cylindrical at the edge of the upper part over a length of about 1 mm.
- The designation has been amended to conform to DIN 820 Part 27.