

## Slotted set screws with cup point

(ISO 7436 : 1983)

English version of DIN EN 27 436

DIN

EN 27 436

This standard incorporates the English version of ISO 7436.

Gewindestifte mit Schlitz und Ringschneide  
(ISO 7436 : 1983 )Supersedes DIN 438.  
September 1986 edition.

European Standard EN 27 436 : 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 slotted set screws 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As a consequence, all DIN Standards covering such screws have been superseded by the corresponding DIN EN Standards (see table below).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
24 766	24 766	Slotted set screws with flat point	551
27 434	27 434	Slotted set screws with cone point	553
27 435	27 435	Slotted set screws with long dog point	417
27 436	27 436	Slotted set screws with cup point	438

See National appendix for guideline values for the mass of slotted set screws not given in the European Standard. In clause 2, ISO Standards 3269 and 4042 are referred to as being at the stage of draft. These standards have since been published.

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

ISO Standard	DIN Standard
ISO 225	DIN EN 20 225
ISO 3269	DIN ISO 3269 (at present at the stage of draft)
ISO 3506	DIN ISO 3506 (at present at the stage of draft)
ISO 4042	DIN ISO 4042
ISO 4759-1	DIN ISO 4759 Part 1

The DIN 4000-2-3 tabular layout of article characteristics applies for screws as covered here.

Continued overleaf.  
EN comprises 5 pages.

### **Standards referred to**

(and not included in **References**)

DIN 4000 Part 2 Tabular layout of article characteristics for bolts, screws and nuts

DIN EN 20 225 Bolts, screws, studs and nuts; symbols and designations for dimensioning

### **Previous editions**

DIN 438: 10.22, 05.24, 02.35, 01.51, 12.56, 02.72, 09.86.

### **Amendments**

In comparison with DIN 438, September 1986 edition, the following amendments have been made.

- a) Guideline values for the mass of set screws have been given in a National appendix.
- b) Property class 22H set screws need not be thermally blackened any longer.
- c) The specifications for surface roughness have been dropped.
- d) The standard designation has been changed.

### **International Patent Classification**

F 16 B 035/00

F 16 B 023/00

UDC 621.882.219.71.092.6

Descriptors: Fasteners, pins, parallel pins, specifications, dimensions, designation.

English version

Slotted set screws with cup point  
(ISO 7436 : 1983)

Vis sans tête, fendues, à bout cuvette  
(ISO 7436 : 1983)

Gewindestifte mit Schlitz und Ring-  
schneide (ISO 7436 : 1983)

This European Standard was approved by CEN on 1992-07-17 and is identical to the ISO Standard as referred to. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization

Comité Européen de Normalisation

Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

## Foreword

In 1992, CEN/TC 185 'Threaded and unthreaded fasteners and accessories', the Secretariat of which is held by DIN, decided to submit International Standard

ISO 7436 : 1983 Slotted set screws with cup point

to Formal Vote. The result was positive.

In the countries bound to implement this European Standard, a national standard identical to this European Standard shall be published, and conflicting national standards withdrawn, by 1993-01-31 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

## Endorsement notice

The text of the International Standard ISO 7436 : 1983 was approved by CEN as a European Standard without any modification.

## 1 Scope and field of application

This International Standard specifies the characteristics of slotted set screws with cup point and thread sizes from M 1,6 to M 12 inclusive and product grade A.

If other specifications are required, it is recommended that they should be selected from existing International Standards, for example ISO 261, ISO 888, ISO 898, ISO 965, ISO 3506, ISO 4759/1.

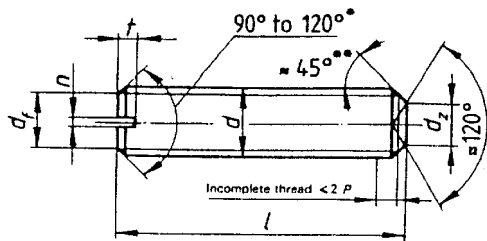
## 2 References

- ISO 225, *Fasteners — Bolts, screws, studs and nuts — Symbols and designations of dimensions.*
- ISO 261, *ISO general purpose metric screw threads — General plan.*
- ISO 888, *Bolts, screws and studs — Nominal lengths, and thread lengths for general purpose bolts.*
- ISO 896, *Mechanical properties of fasteners.*
- ISO 965, *ISO general purpose metric screw threads — Tolerances.*
- ISO 3269, *Fasteners — Acceptance inspection.*<sup>1)</sup>
- ISO 3506, *Corrosion-resistant stainless steel fasteners — Specifications.*
- ISO 4042, *Threaded components — Electroplated coatings components.*<sup>1)</sup>
- ISO 4753, *Fasteners — Ends of parts with external metric ISO thread.*
- ISO 4759/1, *Tolerances for fasteners — Part 1: Bolts, screws and nuts with thread diameters > 1,6 and < 150 mm and product grades A, B and C.*

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<sup>1)</sup> At present at the stage of draft.

### 3 Dimensions



\* The 120° angle is mandatory for short length screws above the dotted stepped line.  
 \*\* The 45° angle applies only to the portion of the point below the root diameter of the thread.

Dimensions in millimetres

Thread size <i>d</i>	M 1,8	M 2	M 2,5	M 3	(M 3,5) <sup>1)</sup>	M 4	M 5	M 6	M 8	M 10	M 12
<i>p</i> <sup>2)</sup>	0,35	0,4	0,45	0,5	0,6	0,7	0,8	1	1,25	1,5	1,75
<i>d<sub>f</sub></i>	Minor thread diameter										
<i>d<sub>2</sub></i>	min.	0,55	0,75	0,95	1,15	1,45	1,75	2,25	2,75	4,7	5,7
	max.	0,8	1	1,2	1,4	1,7	2	2,5	3	5	6
<i>n</i>	nom.	0,25	0,25	0,4	0,4	0,5	0,6	0,8	1	1,2	1,6
	max.	0,45	0,45	0,6	0,6	0,7	0,8	1	1,2	1,51	1,91
<i>l</i>	min.	0,56	0,64	0,72	0,8	0,96	1,12	1,28	1,6	2	2,4
	max.	0,74	0,84	0,95	1,05	1,21	1,42	1,63	2	2,5	3

<sup>1)</sup> 3)												
nom.	min.	max.										
2	1,8	2,2										
2,6	2,3	2,7										
3	2,8	3,2										
4	3,7	4,3										
5	4,7	5,3										
6	5,7	6,3										
8	7,7	8,3										
10	9,7	10,3										
12	11,6	12,4										
(14)	13,6	14,4										
18	15,6	16,4										
20	19,6	20,4										
25	24,6	25,4										
30	29,6	30,4										
36	34,5	35,5										
40	39,5	40,5										
46	44,5	45,5										
50	49,5	50,5										
56	54,4	55,6										
60	59,4	60,6										

Range of commercial lengths

1) Sizes in brackets should be avoided if possible.

2) *P* = pitch of the thread.

3) Min. and max. values according to ISO 4759/1, but rounded to one decimal place.

## 4 Specifications and reference International Standards

Material	Steel	Stainless steel	Non-ferrous metal
Thread	Tolerance		
	6g		
Mechanical properties	International Standards		
	ISO 261, ISO 965		
Tolerances	Property class		
	14H, 22H	A1 - 50	1)
Finish	International Standards		
	ISO 898/5	ISO 3506	
Acceptability	Product grade		
	A		
Acceptability	International Standard		
	ISO 4759/1		
Acceptability	Plain		
	Requirements for electroplating are covered in ISO 4042. If different electroplating requirements are desired or if requirements are needed for other finishes, they should be negotiated between supplier and customer.		
Acceptability	The acceptance procedure is covered in ISO 3269.		

1) Will be covered in a future International Standard.

## 5 Designation

Example for the designation of a slotted set screw with cup point, thread size  $d = M5$ , nominal length  $l = 12$  mm and property class 14H:

Set screw ISO 7436 - M5 × 12 - 14H

National appendix  
(informative)

## Mass of set screws

The values given are guideline values.

Nominal length	Thread size	M 1,6	M 2	M 2,5	M 3	M 3,5	M 4	M 5	M 6	M 8	M 10	M 12
		Approximate mass (7,85 kg/dm <sup>3</sup> ), in kg per 1000 units										
2		0,026										
2,5		0,032	0,038									
3		0,038	0,047	0,074	0,11							
4		0,050	0,066	0,11	0,15	0,20	0,25					
5		0,062	0,085	0,14	0,19	0,26	0,33	0,51				
6		0,074	0,10	0,18	0,23	0,32	0,41	0,63	0,87			
8		0,098	0,14	0,25	0,31	0,44	0,56	0,87	1,22	2,20		
10			0,18	0,32	0,40	0,56	0,72	1,11	1,57	2,90	4,00	
12				0,39	0,48	0,68	0,88	1,35	1,92	3,60	5,00	7,10
14					0,56	0,80	1,04	1,59	2,27	4,30	6,00	8,57
16					0,64	0,92	1,20	1,83	2,62	5,00	7,00	10,1
20						1,16	1,52	2,31	3,32	6,40	9,00	13,0
25								2,91	4,19	8,15	11,5	16,7
30									5,07	9,90	14,0	20,3
35										11,7	16,5	24,0
40										13,4	18,0	27,7
45											21,5	31,4
50											24,0	35,1
55												38,7
60												42,4