

**DIN 34828****DIN**

ICS 21.060.70

Together with  
DIN 1480:2005-09,  
supersedes  
DIN 1480:1975-09

**Welding studs for turnbuckles**

Anschweißenden für Spannschlösser

Document comprises 5 pages

Translation by DIN-Sprachendienst.

In case of doubt, the German-language original should be consulted as the authoritative text.

## **Foreword**

This standard has been prepared by Technical Committee FMV-AA 3.12.2 *Spannschlösser* of the *Normenausschuss Mechanische Verbindungselemente* (Fasteners Standards Committee). It includes the specifications for welding studs from the previous edition of DIN 1480.

### **Amendments**

This standard differs from DIN 1480, September 1975 edition, as follows:

- a) The title of the standard has been amended.
- b) The scope of the standard has been amended.
- c) Specifications for forged turnbuckle nuts are no longer included (but see DIN 1480).
- d) Dimensional tolerances have been specified.
- e) The shank diameter has been changed.
- f) The thread end has been changed.
- g) Property class 3.6 has been deleted.
- h) Grade S235JR and grade S355JR steel are included as materials for welding studs
- i) Specifications relating to surface finish have been included.
- j) Welding studs may now also be made of grade A4-50 stainless steel.
- k) The designation of welding studs has been amended.
- l) The designation of a complete turnbuckle (including turnbuckle nut and two welding studs) has been dropped.
- m) Marking has been specified.

### **Previous editions**

DIN KrK 802: 1928-07

DIN 1480: 1928-07, 1935-03, 1975-09

DIN 1480-1: 1942-04x

## 1 Scope

This standard specifies dimensions and technical delivery conditions for M6 to M56 welding studs for turnbuckles.

## 2 Normative references

The following reference documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

DIN EN 10025, *Hot rolled products of structural steels — Technical delivery conditions*

DIN EN ISO 3269, *Fasteners — Acceptance inspection*

DIN EN ISO 3506-1, *Mechanical properties of corrosion-resistant stainless steel fasteners — Part 1: Bolts, screws and studs*

DIN EN ISO 4042, *Fasteners — Electroplated coatings*

DIN EN ISO 4753, *Fasteners — Ends of parts with external ISO metric screw thread*

DIN EN ISO 4759-1, *Tolerances for fasteners — Part 1: Bolts, screws, studs and fit bolts — Product grades A, B and C*

DIN EN ISO 10683, *Fasteners — Non-electrically applied zinc flake coatings*

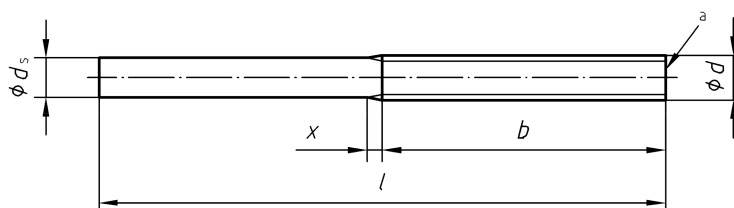
DIN EN ISO 10684, *Fasteners — Hot dip galvanized coatings*

DIN EN ISO 16048, *Passivation of corrosion-resistant stainless steel fasteners*

DIN ISO 965-2, *ISO general purpose metric screw threads — Tolerances — Part 2: Limits of sizes for general purpose external and internal screw threads — Medium quality*

## 3 Dimensions

Stud dimensions shall be as given in figure 1 and table 1.



a As-rolled end (RL) as in DIN EN ISO 4753.

**Figure 1 — Welding stud dimensions (notation)**

**Table 1 — Welding stud dimensions**

Dimensions in millimetres

Thread size ( <i>d</i> )	M6	M8	M10	M12	M16	M20	M24	M30	M36	M42	M48	M56	
<i>P</i>	1	1,25	1,5	1,75	2	2,5	3	3,5	4	4,5	5	5,5	
<i>b</i>	max.	67	67,5	78	78,5	104	125	156	167	188	209	241	
	min. = nominal dimension	65	65,0	75	75,0	100	120	150	160	180	200	230	
<i>d<sub>s</sub></i>	≈ pitch diameter												
<i>l</i>	Nominal dimension	120	120	150	150	200	220	260	260	300	350	380	380
	max.	122	122	152	152	204,6	224,6	265,2	265,2	305,2	355,7	385,7	385,7
	min.	118	118	148	148	195,4	215,4	254,8	254,8	294,8	344,3	374,3	374,3
<i>x</i> max.	2,5	3,2	3,8	4,3	5	6,3	7,5	9	10	11	12,5	14	

#### 4 Technical delivery conditions

See table 2.

**Table 2 — Technical delivery conditions**

Material	Steel	Stainless steel
<b>Thread</b>	Tolerance	6g
	As specified in	DIN ISO 965-2.
<b>Mechanical properties</b>	Steel grade, property class	A4-50
	As specified in	DIN EN ISO 3506-1.
<b>Limit deviations and geometrical tolerances</b>	Product grade	C
	As specified in	EN ISO 4759-1.
<b>Surface finish</b>	As processed. DIN EN ISO 4042 shall apply with regard to electroplating. DIN EN ISO 10684 shall apply with regard to hot dip galvanizing. DIN EN ISO 10683 shall apply with regard to zinc flake coatings.	Passivation in accordance with DIN EN ISO 16048.
<b>Acceptance inspection</b>	DIN EN ISO 3269 shall apply with regard to acceptance inspection.	

## 5 Designation

Designation of an M12 welding stud with right-hand thread (M12), made of grade S355JR steel:

Welding stud DIN 34828 — M12 — S355JR

Designation of an M12 welding stud with left-hand thread (M12 L), made of grade S355JR steel:

Welding stud DIN 34828 — M12 L — S355JR

## 6 Marking

For welding studs made of grade S235JR steel, marking is not required.

Welding studs made of grade S355JR steel shall be marked with the symbol 'S 355', the marking being imprinted on the shank.

Welding studs made of grade A4-50 stainless steel shall be marked with the symbol 'A4-50', the marking being imprinted on the shank.

Welding studs with left-hand thread shall be marked with the symbol 'L', the marking being imprinted on the shank.