DEUTSCHE NORM May 1994

# Stud ends and tapped holes

for use with compression couplings, valves and screw plugs
Type E stud end dimensions

**DIN 3852 Part 11**

ICS 23.040.60

Einschraubzapfen und Einschraublöcher für Rohrverschraubungen, Armaturen, Verschlußschrauben; Einschraubzapfen Form E; Konstruktionsmaße

Supersedes parts of DIN 3852 Part 1, February 1992 edition, and DIN 3852 Part 2, November 1991 edition.

*In keeping with current practice in standards published by the International Organization for Standardization (ISO), a comma has been used throughout as the decimal marker.*

Dimensions in mm

## 1 Scope and field of application

This standard specifies dimensions and designations for type E stud ends for use with compression couplings, valves and screw plugs to be installed in type X or Y tapped holes as specified in DIN 3851 Part 1 and DIN 3852 Part 2.

Type E stud ends are intended for use with DIN 3869 ring seals.

## 2 Dimensions and designation

Details left unspecified are to be selected as appropriate.

### 2.1 Assembly

Figure 1 shows the correct and incorrect positions of a DIN 3869 ring seal fitted into an undercut of a type E stud end.

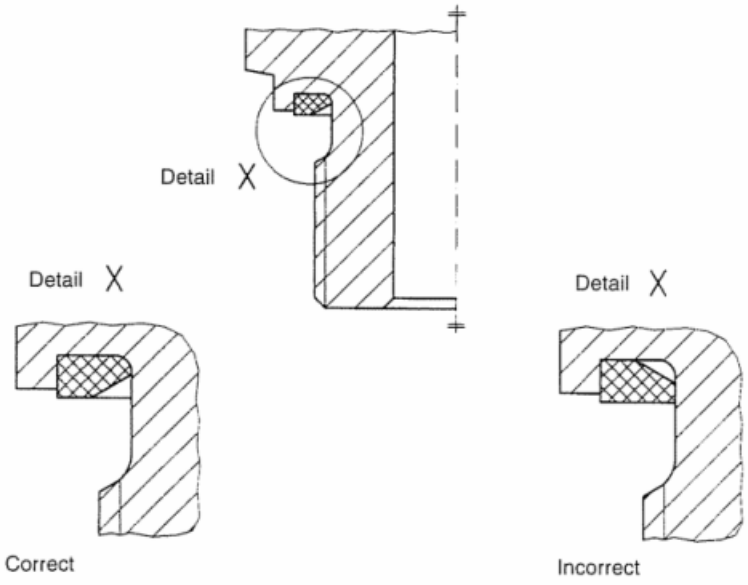


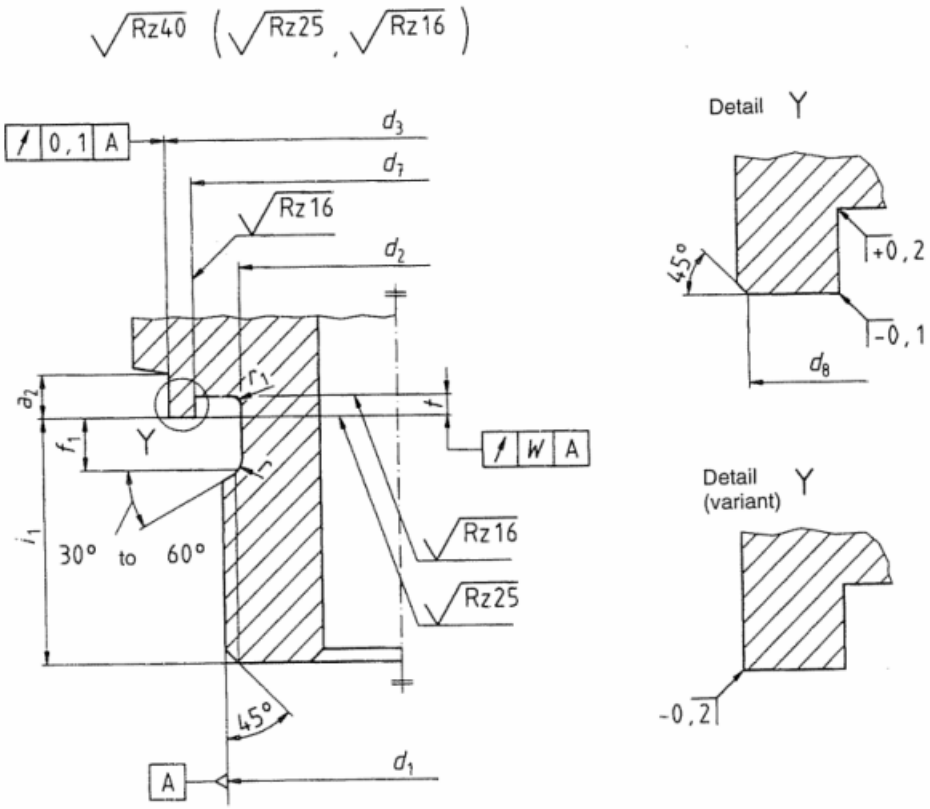

**Figure 1: Position of a ring seal fitted into a stud end**

Continued on pages 2 to 4.

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

## 2.2 Stud end

Type E, with sealing by DIN 3869 ring seal




Thread chamfered to minor diameter

**Figure 2: Type E stud end (notation)**

**Table 1: Dimensions of studs end with metric fine pitch thread**

| $d_1$ | $d_2$ $^{0}_{-0,2}$ | $d_3$ $^{0}_{-0,2}$ | $d_7$ $^{+0,1}_{0}$ | $d_8$ $^{0}_{-0,2}$ | $a_2$ min. | $f_1$ $^{+0,3}_{0}$ | $i_1$ ± 0,2 | $t$ $^{+0,1}_{0}$ | $r$ | $r_1$ | $W$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **M 10 × 1** | 8,3 | 13,9 | 12 | | 1,5 | 2 | 8 | 0,7 | 1 | 0,5 | 0,1 |
| **M 12 × 1,5** | 9,7 | 16,9 | 14,5 | – | 2 | 3 | 12 | 1,2 | 1,2 | 0,5 | 0,1 |
| **M 14 × 1,5** | 11,7 | 18,9 | 16,6 | | 2 | 3 | 12 | 1,2 | 1,2 | 0,5 | 0,1 |
| **M 16 × 1,5*)** | 13,7 | 21,9 | 19 | 21,6 | 2 | 3 | 12 | 1,2 | 1,2 | 0,5 | 0,1 |
| **M 18 × 1,5*)** | 15,7 | 23,9 | 21 | 23,6 | 2,5 | 3 | 12 | 1,2 | 1,2 | 0,6 | 0,1 |
| **M 20 × 1,5*)** | 17,7 | 25,9 | 23 | 25,6 | 2,5 | 3 | 14 | 1,2 | 1,2 | 0,6 | 0,1 |
| **M 22 × 1,5** | 19,7 | 26,9 | 24,5 | – | 3 | 3 | 14 | 1,2 | 1,2 | 0,6 | 0,1 |
| **M 26 × 1,5*)** | 23,8 | 31,9 | 29,3 | 31,6 | 3 | 3 | 16 | 1,2 | 1,2 | 0,6 | 0,2 |
| **M 27 × 2** | 23,8 | 31,9 | 29,3 | – | 3 | 4 | 16 | 1,2 | 1,6 | 0,6 | 0,2 |
| **M 33 × 2*)** | 29,6 | 39,9 | 36 | 39,6 | 3 | 4 | 18 | 1,6 | 1,6 | 0,8 | 0,2 |
| **M 42 × 2*)** | 38,6 | 49,9 | 46 | 49,6 | 3 | 4 | 20 | 1,6 | 1,6 | 0,8 | 0,2 |
| **M 48 × 2** | 44,5 | 54,9 | 51 | – | 3 | 4 | 22 | 1,6 | 1,6 | 0,8 | 0,2 |
| *) With 45° chamfer (see detail Y in figure 2). | | | | | | | | | | | |

**Table 2: Dimensions of stud ends with Whitworth pipe thread**

| $d_1$ | $d_2$ $^{0}_{-0,2}$ | $d_3$ $^{0}_{-0,2}$ | $d_7$ $^{+0,1}_{0}$ | $d_8$ $^{0}_{-0,2}$ | $a_2$ min. | $f_1$ $^{+0,3}_{0}$ | $i_1$ ± 0,2 | $t$ $^{+0,1}_{0}$ | $r$ | $r_1$ | $W$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **G 1/8 A** | 8,3 | 13,9 | 12 | – | 1,5 | 2 | 8 | 0,7 | 1 | 0,5 | 0,1 |
| **G 1/4 A*)** | 11,2 | 18,9 | 16,6 | 18,6 | 2 | 3 | 12 | 1,2 | 1,2 | 0,5 | 0,1 |
| **G 3/8 A** | 14,7 | 21,9 | 19 | – | 2,5 | 3 | 12 | 1,2 | 1,2 | 0,6 | 0,1 |
| **G 1/2 A*)** | 18,4 | 26,9 | 24 | 26,6 | 3 | 4 | 14 | 1,2 | 1,2 | 0,6 | 0,1 |
| **G 3/4 A** | 23,8 | 31,9 | 29,3 | – | 3 | 4 | 16 | 1,2 | 1,2 | 0,6 | 0,2 |
| **G 1 A*)** | 29,6 | 39,9 | 36 | 39,6 | 3 | 5 | 18 | 1,6 | 1,6 | 0,8 | 0,2 |
| **G 1 1/4 A*)** | 38,6 | 49,9 | 46 | 49,6 | 3 | 5 | 20 | 1,6 | 1,6 | 0,8 | 0,2 |
| **G 1 1/2 A** | 44,5 | 54,9 | 51 | – | 3 | 5 | 22 | 1,6 | 1,6 | 0,8 | 0,2 |
| *) With 45° chamfer (see detail Y in figure 2). | | | | | | | | | | | |

## 2.3 Screw thread

Type E stud ends shall be provided with either a metric fine pitch thread as specified in DIN 13 Parts 5 to 7 (cf. table 1) or a pipe thread as in ISO 228-1, tolerance class A (cf. table 2).

## 2.4 Designation

Designation of a type E stud end having a thread of size M 27 × 2:

Stud end DIN 3852 – E – M 27 × 2

Designation of a type E stud end having a thread of size G 3/4 A:

Stud end DIN 3852 – E – G 3/4

## Standards referred to

| | |
|---|---|
| DIN 13 Part 5 | ISO metric screw threads; 1 mm and 1,25 mm fine pitch threads with diameters from 7,5 mm to 200 mm; nominal sizes |
| DIN 13 Part 6 | ISO metric screw threads; 1,5 mm fine pitch threads with diameters from 12 mm to 300 mm; nominal sizes |
| DIN 13 Part 7 | ISO metric screw threads; 2 mm fine pitch threads with diameters from 17 mm to 300 mm; nominal sizes |
| DIN 3852 Part 1 | Stud ends and tapped holes with metric fine pitch thread, for use with compression couplings, valves and screw plugs; dimensions |
| DIN 3852 Part 2 | Stud ends and tapped holes with pipe thread, for use with compression couplings, valves and screw plugs; dimensions |
| DIN 3869 | Ring seals |
| ISO 228-1 : 1982 | Pipe threads where pressure-tight joints are not made on the threads; designation, dimensions and tolerances |

## Previous editions

DIN KrG 403: 12.31; DIN 7602: 10.35, 05.47; DIN 3852 Part 1: 08.53x, 10.64, 05.66, 09.78, 02.92; DIN 3852 Part 2: 08.53x, 10.64, 11.91.

## Amendments

The following amendments have been made to the February 1992 edition of DIN 3852 Part 1 and the November 1991 edition of DIN 3852 Part 2:

a) type E stud ends are now dimensioned in more detail;

b) a reference has been made to ring seals and their correct position when fitted.

## Explanatory notes

This standard is intended to supplement the specifications of DIN 3852 Parts 1 and 2, where the method of sealing type E stud ends has been specified as being subject to agreement. It has been prepared in conjunction with DIN 3869 giving details of the undercut to receive the ring seal specified in the other standard.

It should be noted that some values of $d_3$ and details of the undercut differ from those specified in DIN 3852 Parts 1 and 2.

## International Patent Classification

F 16 L 037/10

F 16 L 041/10

F 16 L 015/00

F 16 L 019/00

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