UDC 621.882.33

January 1994

Product grade C square nuts

DIN 557

Vierkantmuttern; Produktklasse C

Supersedes February 1985 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.

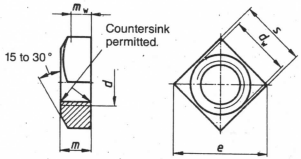
The new widths across flats 16 mm and 18 mm as specified in ISO 272 shall be used instead of the previous widths across flats 17 mm and 19 mm for thread sizes M 10 and M 12; see clause 4 for example of designation.
It is intended to omit the obsolescent widths across flats by 1 January 1999 at the latest.

Dimensions in mm

1 Scope and field of application

This standard specifies requirements for M 10 to M 12 square nuts assigned to product grade C. See DIN 962 (or the standards referred to therein) for special nut types or finishes.
If, in special cases, nuts are to comply with specifications other than those given in this standard (e.g. regarding property class or material), these shall be selected in accordance with the relevant standards.

2 Dimensions



m_w is the minimum wrenching height; for this zone, the minimum value of e shall be maintained.

Table 1

Thread size (d)		M5	M6	M8	M10		M12		M16
P[1])		0,8	1	1,25	1,5		1,75		2
d_w	min.	6,7	8,7	11,5	14,5	15,5	16,5	17,2	22
e	max.	11,3	14,1	18,4	22,6	24	25,4	26,9	33,9
	min.	9,93	12,53	16,34	20,24	21,54	22,84	24,02	30,11
m	max. = nominal size	4	5	6,5	8		10		13
	min.	3,52	4,52	5,92	7,42		9,42		12,3
m_w	min.	2,5	3,2	4,1	5,2		6,6		8,6
s	max. = nominal size	8	10	13	16	17	18	19	24
	min.	7,64	9,64	12,57	15,57	16,57	17,57	18,48	23,16
Mass per 1000 units[2]), in kg		1,31	2,77	5,5	10,7	13	16,3	19,1	38,2

[1]) P = Pitch of thread (coarse pitch thread). [2]) Approximate value, with $\varrho = 7{,}85$ kg/dm³.

Continued on pages 2 and 3.

3 Technical delivery conditions

Table 2

Material		Steel
General requirements		As specified in ISO 8992.
Thread	Tolerance	7H
	As specified in	DIN 13 Part 15.
Mechanical properties	Property class	5
	As specified in	DIN EN 20 898 Part 2.
Limit deviations and geometrical tolerances	Product grade	C
	As specified in	ISO 4759-1.
Surface finish		As processed. ISO 4042 shall apply with regard to electroplating. DIN 267 Part 10 shall apply with regard to hot dip galvanizing.
Acceptance inspection		ISO 3269 shall apply with regard to acceptance inspection.

4 Designation

Designation of an M 8 square nut:

Square nut DIN 557 – M 8

When this designation is used, it should be noted that where M 10 and M 12 threads are specified, the previous widths across flats of 17 mm and 19 mm, respectively, are meant. If it is required that M 10 and M 12 nuts be supplied with the new widths across flats (16 mm and 18 mm), then these widths (SW) are to be incorporated in the designation, e.g.:

Square nut DIN 557 – M 12 – SW 18

The DIN 4000-2-7 tabular layout of article characteristics shall apply to nuts as covered in this standard.

Standards referred to

DIN 13 Part 15	ISO metric screw threads; fundamental deviations and tolerances for screw threads of 1 mm diameter and larger
DIN 267 Part 10	Fasteners; technical delivery conditions; hot-dip galvanized components
DIN 962	Designation system for fasteners
DIN 4000 Part 2	Tabular layouts of article characteristics for screws and nuts
DIN EN 20 898 Part 2	Mechanical properties of fasteners; nuts with specified proof load values, fine pitch thread
ISO 272 : 1982	Fasteners; hexagon products; widths across flats
ISO 3269 : 1988	Fasteners; acceptance inspection
ISO 4042 : 1989	Threaded components; electroplated coatings
ISO 4759-1 : 1978	Tolerances for fasteners; bolts, screws and nuts with thread diameters from 1,6 to 150 mm; product grades A, B and C
ISO 8992 : 1986	Fasteners; general requirements for bolts, screws, studs and nuts

Previous editions

DIN 557 Part 1: 01.41x, 03.63; DIN 557: 04.23, 04.25, 07.36, 05.70, 12.72, 02.85.

Amendments

The following amendments have been made to the February 1985 edition.

a) A note on the period of validity of some of the specifications of this standard has been included.

b) M 20 nuts are no longer specified.

c) For the nut height, m, tolerance h15 has been specified.

d) Different minimum values have been specified for the wrenching height, m_w (previously, m').

e) Minimum values of e have been specified.

f) DIN EN 20 898 Part 2 shall apply with regard to mechanical properties.

g) The standard has been editorially revised.

International Patent Classification

F 16 B 037/00