

Geometrical product specifications (GPS)
GO workshop screw plug gauges, check plugs and setting
plugs for general purpose ISO metric screw threads with
nominal diameters over 40 mm up to 200 mm

DIN
2281-2

ICS 17.040.30; 21.040.10

Supersedes
November 1989 edition.

Geometrische Produktspezifikation (GPS) – Gewinde-Gutlehrdorne –
Teil 2: Gutarbeitslehren, Prüf- und Einstelldorne für Metrisches
ISO-Gewinde allgemeiner Anwendung über 40 mm bis 200 mm
Gewinde-Nenndurchmesser

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.

Foreword

This standard has been prepared by Technical Committee *Gewindeprüfung* of the *Normenausschuss Technische Grundlagen* (Fundamentals in Technology Standards Committee).

Amendments

This standard differs from the November 1989 edition as follows:

- a) The terminology has been harmonized with that used in DIN ISO 1502.
- b) Symbols and details of designation have been changed.
- c) The standard has been editorially revised.

Previous editions

DIN 91510: 1940-05; DIN 91510-6: 1944-07; DIN 2281-2: 1953-11, 1977-12, 1989-11.

All dimensions are in millimetres.

1 Scope

This standard specifies the dimensions and designation for GO screw plug gauges used for checking general purpose ISO metric screw threads with a basic profile as in DIN ISO 68-1 and a nominal profile as in DIN 13-19, for GO check plugs for GO and NOT GO screw ring gauges, and for setting plugs for GO screw calliper gauges.

2 Normative references

This standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the titles of the publications are listed below. For dated references, subsequent amendments to or revisions of any of these publications apply to this standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

- DIN 13-19 General purpose ISO metric screw threads – Nominal profiles
DIN 2239 Gauges for use in dimensional metrology – Requirements and testing
DIN 2240-2 Geometrical product specifications (GPS) – Gauge handles for gauging members over 40 mm nominal diameter – Handles, fixing screws and locking prongs



Continued on pages 2 and 3.

Translation by DIN-Sprachendienst.

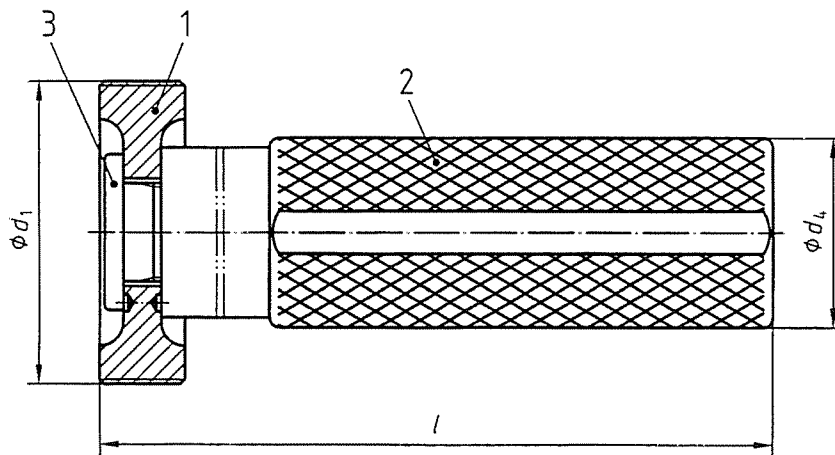
In case of doubt, the German-language original should be consulted as the authoritative text.

- DIN 2279 Geometrical product specifications (GPS) – Gauges for internal and external ISO metric screw threads – Overview of types, marking and application
- DIN 2282-2 GO screw gauging members for workshop plug gauges, check plugs and setting plugs for general purpose ISO metric screw threads with nominal diameters over 40 mm up to 200 mm
- DIN ISO 68-1 General purpose ISO screw threads – Basic profile – Part 1: Metric screw threads (ISO 68-1 : 1998)
- DIN ISO 1502 ISO general-purpose metric screw threads – Gauges and gauging (ISO 1502 : 1996)

3 Dimensions and designation

3.1 Dimensions

GO screw plug gauge dimensions shall be as given in figure 1 and tables 1 to 3.



Key to figure

- 1 GO screw gauging member as in DIN 2282-2
- 2 Gauge handle as in DIN 2240-2
- 3 Hexagon socket head cap screw as in DIN 2240-2

Figure 1: GO screw plug gauge dimensions (notation)

3.2 Designation

Designation of a GO screw plug gauge designed to check an M52 thread made to 6H tolerance:

Gauge DIN 2281 – M52 – 6H

Designation of a GO check plug (GO) for inspecting a new solid GO screw ring gauge (G) designed to check an M52 thread made to 6g tolerance:

Check plug DIN 2281 – GO – G – M52 – 6g

Designation of a GO check plug (GO) for inspecting a new solid NOT GO screw ring gauge (A) designed to check an M48 × 1,5 thread made to 6g tolerance:

Check plug DIN 2281 – GO – A – M48 × 1,5 – 6g

Designation of a setting plug (set) for inspecting an adjustable GO screw calliper gauge (GO) designed to check an M60 × 2 thread made to 8g tolerance:

Setting plug DIN 2281 – set – GO – M60 × 2 – 8g

Table 1: Gauge handle dimensions

Nominal diameter, d_1	d_4	Gauge handle as in DIN 2240-2	Hexagon socket head cap screw as in DIN 2240-2 for a pitch of	
			0,35 to 4,5	5 to 6
Over 40 up to 62	34	GE 25	M12 x 1,25 x 45	M12 x 1,25 x 45
Over 62 up to 120	40	GE 30	M22 x 1,5 x 40	M22 x 1,5 x 60
Over 120 up to 200	40	GE 30	M22 x 1,5 x 40	M22 x 1,5 x 60

Table 2: Length l (coarse pitch thread)

Nominal diameter, d_1	l (approx.)
From 42 to 48	160
From 52 to 60	165
64 and 68	168

Table 3: Length l (fine pitch thread)

Nominal diameter, d_1	Approximate length, l , for a pitch of								
	0,35	0,5	0,75	1	1,5	2	3	4	6
From 42 to 50	134	134	134	134	138	138	145	152	-
From 52 to 62	-	-	134	134	138	138	145	152	-
From 63 to 80	-	-	140	140	143	143	150	157	168
From 82 to 100	-	-	-	-	-	143	150	157	168
From 102 to 110	-	-	-	-	-	145	150	157	171
From 112 to 120	-	-	-	-	-	145	150	160	171
From 122 to 140	-	-	-	-	-	145	153	160	171
From 142 to 150	-	-	-	-	-	145	153	160	175
From 152 to 160	-	-	-	-	-	-	153	160	175
From 162 to 200	-	-	-	-	-	-	154	160	175

4 Requirements

Plug gauges shall comply with the technical delivery conditions specified in DIN 2239, their marking being as specified in DIN 2279.

Other relevant standards

- DIN 2278 Dirt grooves on screw gauges for screw threads with ISO metric profile
- DIN 2281-1 Geometrical product specifications (GPS) – GO workshop screw plug gauges, check plugs and setting plugs for general purpose ISO metric screw threads with nominal diameters from 1 mm to 40 mm
- DIN 2281-3 Geometrical product specifications (GPS) – GO workshop screw plug gauges and check plugs for ISO metric screw threads with nominal diameters over 40 mm up to 250 mm, for use in precision engineering