
**Road vehicles — Sheath-type glow-plugs
with conical seating and their cylinder
head housing —**

Part 4:
M8 × 1 glow-plugs

*Véhicules routiers — Bougies de préchauffage à fourreau et à siège
conique et leur logement dans la culasse —*

Partie 4: Bougies M8 × 1



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 6550-4 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 1, *Ignition equipment*.

This second edition cancels and replaces the first edition (ISO 6550-4:2005), which has been technically revised.

ISO 6550 consists of the following parts, under the general title *Road vehicles — Sheath-type glow-plugs with conical seating and their cylinder head housing*:

- *Part 1: M14 × 1,25 glow-plugs*
- *Part 2: M12 × 1,25 glow-plugs*
- *Part 3: M10 glow-plugs*
- *Part 4: M8 × 1 glow-plugs*

Road vehicles — Sheath-type glow-plugs with conical seating and their cylinder head housing —

Part 4: M8 × 1 glow-plugs

1 Scope

This part of ISO 6550 specifies the main characteristics of M8 × 1 sheath-type glow-plugs with conical seating and their cylinder head housing, for use with diesel (compression-ignition) engines.

2 Normative references

The following referenced 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.

ISO 68-1, *ISO general purpose screw threads — Basic profile — Part 1: Metric screw threads*

ISO 261, *ISO general purpose metric screw threads — General plan*

ISO 965-1, *ISO general-purpose metric screw threads — Tolerances — Part 1: Principles and basic data*

ISO 965-3, *ISO general purpose metric screw threads — Tolerances — Part 3: Deviations for constructional screw threads*

ISO 2768-2:1989, *General tolerances — Part 2: Geometrical tolerances for features without individual tolerance indications*

ISO 8092-4:1997, *Road vehicles — Connections for on-board electrical wiring harnesses — Part 4: Pins for single- and multi-pole connections — Dimensions and specific requirements*

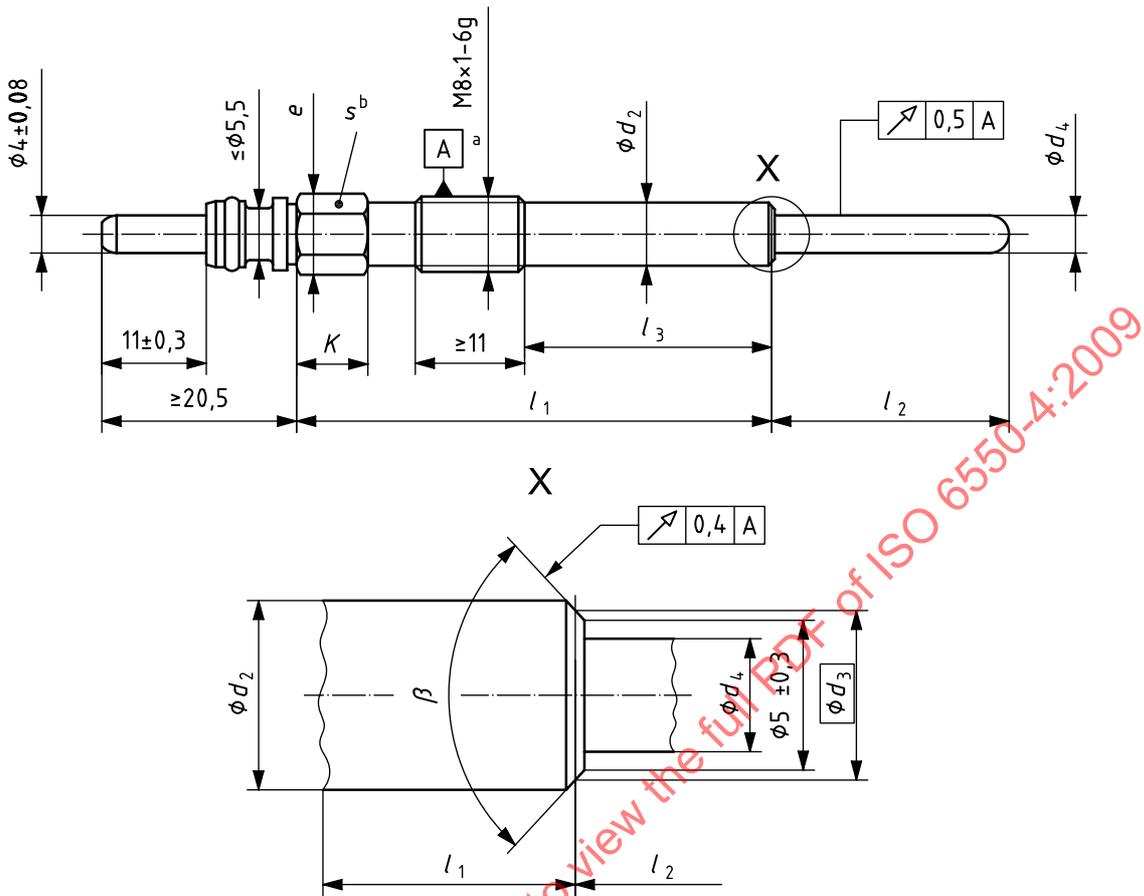
3 Dimensions and tolerances

3.1 General

Unless otherwise specified, the general geometric tolerances in accordance with ISO 2768-2:1989, tolerance class H, apply.

3.2 Glow-plugs

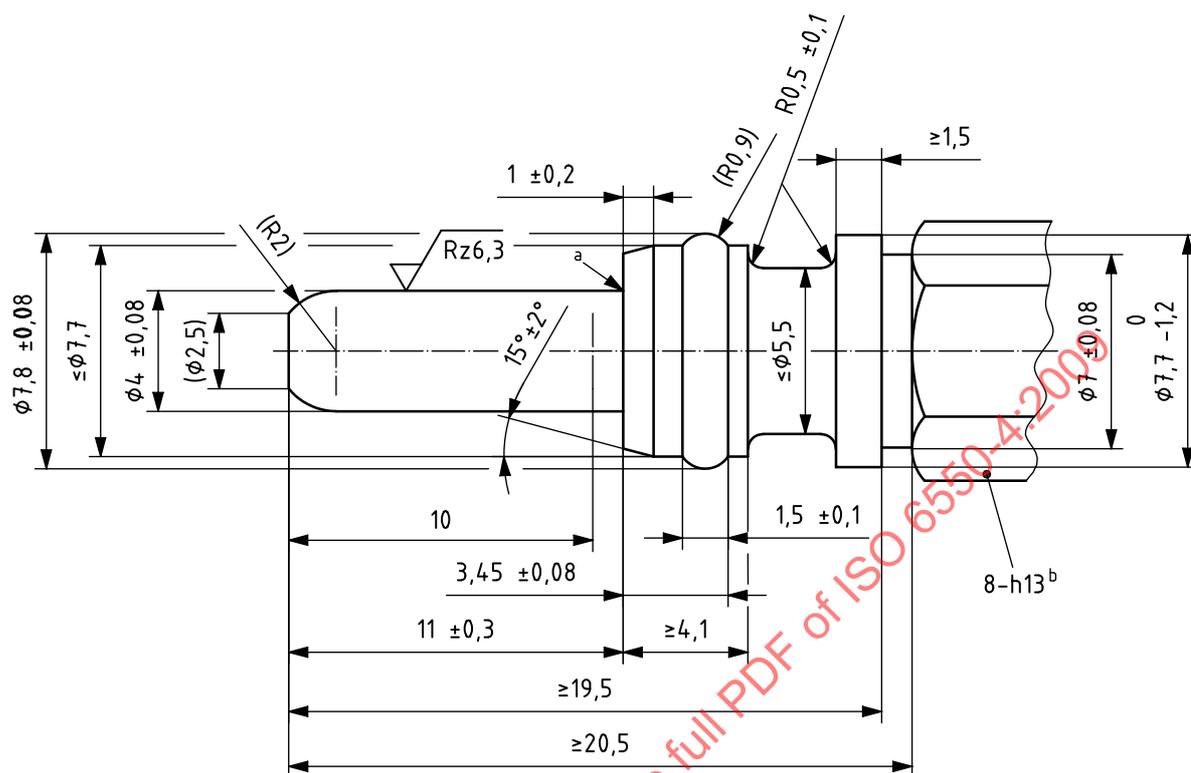
Sheath-type glow-plug dimensions and tolerances shall be as shown in Figures 1 to 5 and Tables 1 and 2.



- a Major diameter, in accordance with ISO 965-1 or ISO 965-3.
- b Hexagon.

Figure 1 — Glow-plug with pin terminal

Dimensions in millimetres

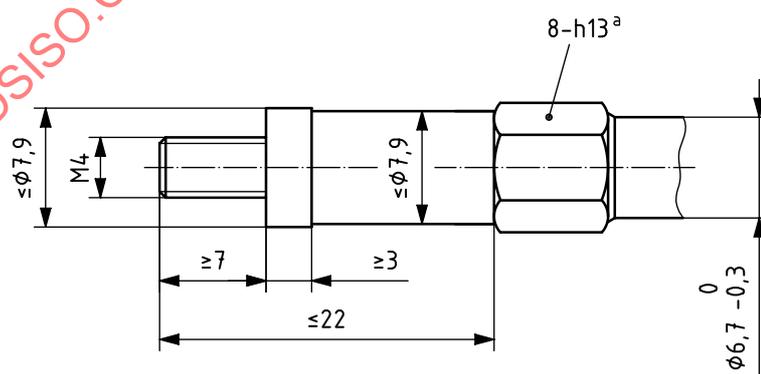


a Contour agreed between glow-plug and engine manufacturer.

b Hexagon.

Figure 2 — Glow-plug pin terminal

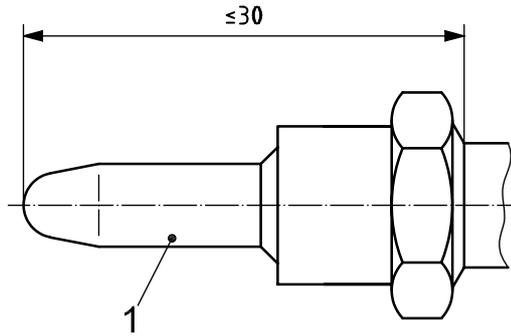
Dimensions in millimetres



a Hexagon.

Figure 3 — Glow-plug threaded terminal

Dimensions in millimetres

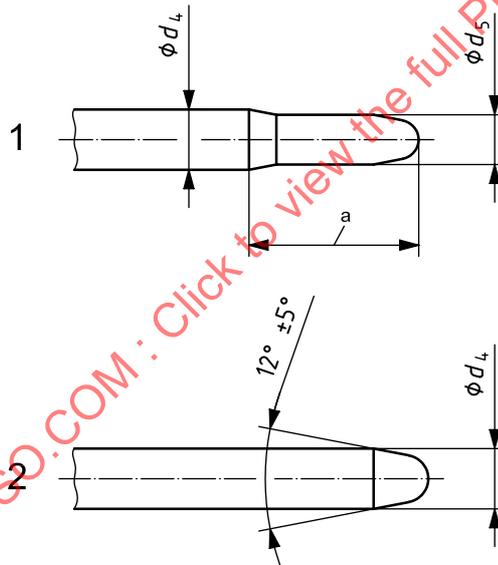


Key

- 1 pin (see ISO 8092-4:1997, Table 1, pin size 4)

Figure 4 — Optional glow-plug pin terminal

Dimensions in millimetres



Key

- 1 cylinder type A2 or A4
- 2 cylinder type A1 or A3
- a Contour optional.

Figure 5 — Reduced tip end and cone end

Table 1 — Glow-plug dimensions l_1 and l_2

Dimensions in millimetres

$l_1 \pm 0,5^a$	27	42^b	57	67	72^b	87	102^b
$l_2 \pm 0,5^a$	20	25^b	28	30^b	35		
^a Dimensions l_1 and l_2 shall be combined as appropriate. ^b Dimensions in bold shall be preferred.							

Table 2 — Other glow-plug dimensions

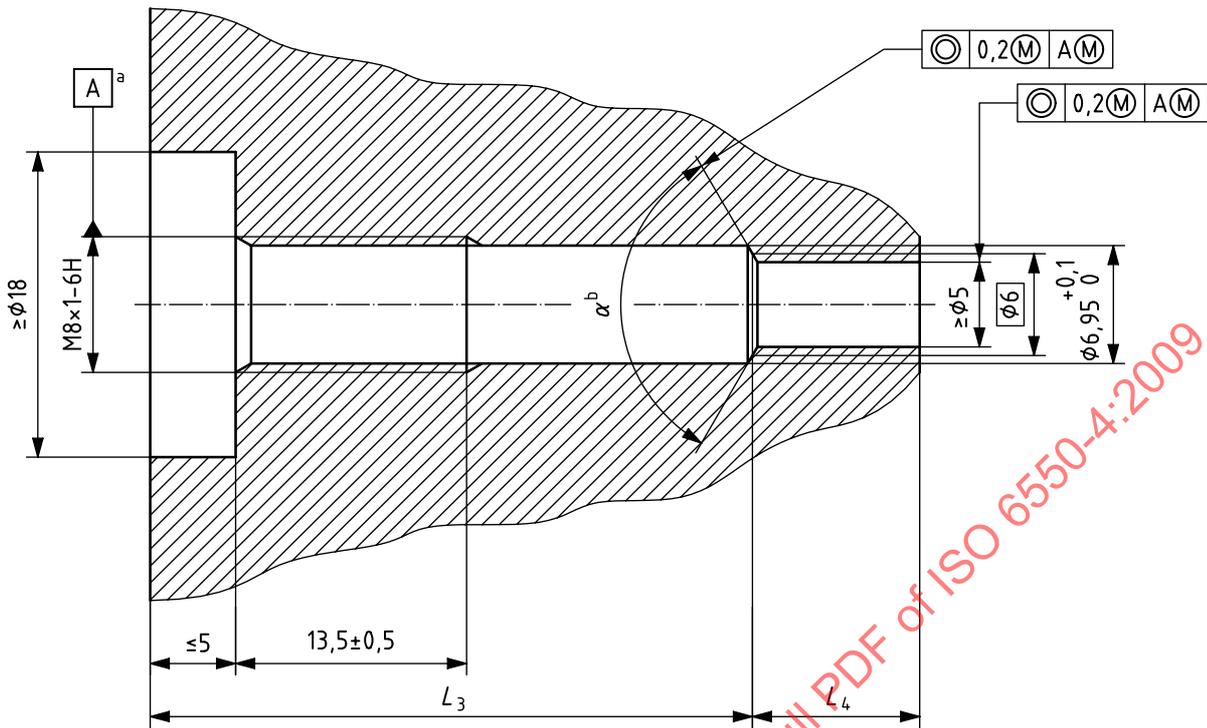
Dimensions in millimetres

Type	Terminal	Hexagon			Body				Glow-plug tube								
		s	e	$k_{-0,3}^0$	$\beta \pm 2^\circ$	$d_{2-0,3}^0$	d_3 ref.	l_3	$d_4 \pm 0,2$	$d_5 \pm 0,1$	a						
A1	Pin	8-h13	$\geq 8,6$	7,5	93°	6,7	6,0	≥ 10	4,0	—	—						
A2									3,3	≥ 5							
A3									4,4	—	—						
A4									3,5	≥ 5							
A5	M4				8-h13				$\geq 8,6$	7,5	93°	6,7	6,0	≥ 10	4,0	—	—
A6															3,3	≥ 5	
A7															4,4	—	—
A8															3,5	≥ 5	
B1	pin	8-h13	$\geq 8,6$	7,5		123°	6,7	6,0			≥ 10				4,0	—	—
B2															3,3	≥ 5	
B3															4,4	—	—
B4															3,5	≥ 5	
B5	M4				8-h13	$\geq 8,6$			7,5	123°		6,7	6,0	≥ 10	4,0	—	—
B6															3,3	≥ 5	
B7															4,4	—	—
B8															3,5	≥ 5	

3.3 Cylinder head housing

The dimensions and tolerances of the cylinder head housing for sheath-type glow-plugs shall be as given in Figure 6 and Table 3.

Dimensions in millimetres



^a Pitch diameter, in accordance with ISO 965-1 or ISO 965-3.

^b $\alpha = (90 \pm 1)^\circ$ or $\alpha = (120 \pm 1)^\circ$.

Figure 6 — Cylinder head housing for 8 mm hexagon

Table 3 — Cylinder head housing dimensions

Dimensions in millimetres

L_3	≤ 22	≤ 37	≤ 52	≤ 62	≤ 67	≤ 82	≤ 97
l_1^a	27	42	57	67	72	87	102
L_4	To be specified by the engine manufacturer.						

^a The maximum value of L_3 for the cylinder head shall correspond to glow-plug dimension l_1 , as specified in this table.

3.4 Threads

The threads of M8 × 1 glow-plug and the corresponding tapped hole in the cylinder head shall be in accordance with ISO 68-1, ISO 261, ISO 965-1 and ISO 965-3.

The thread M8 × 1 – 6g shall be used for the glow-plugs.

The threads in the corresponding tapped holes in the cylinder heads shall be M8 × 1 – 6H.

3.5 Dimension limits of threads M8 × 1

Dimension limits of threads M8 × 1 are given in Table 4.

Table 4 — Dimension limits of threads M8 x 1

Dimensions in millimetres

Dimensions		Plug thread M8 x 1 – 6g (on finished plug)	Tapped hole in cylinder head M8 x 1 – 6H
Major diameter	maximum	7,974	Not specified
	minimum	7,794	8,000
Pitch diameter	maximum	7,324	7,500
	minimum	7,212	7,350
Minor diameter	maximum	6,747	7,153
	minimum	6,596 ^a	6,917

^a With a root radius $\geq 0,100$ mm (0,1 P).

4 Installation tightening torque

The installation torque values shall be 9 Nm to 12 Nm. These values apply to unused nickel- or zinc-plated sheath-type glow-plugs without lubricant on the threads.

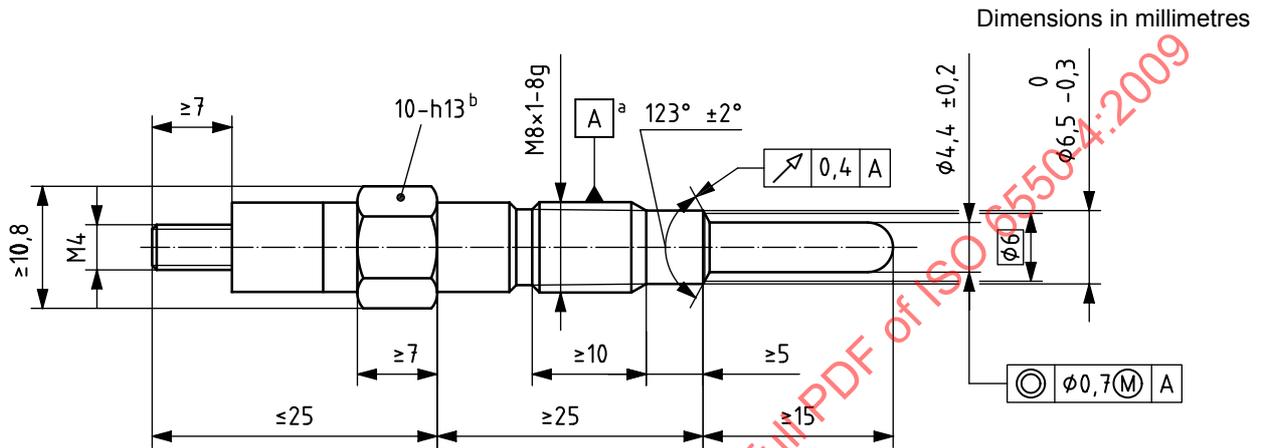
If glow-plugs are plated with a different material, or the threads are lubricated, or both, the applicable torque values shall be agreed between the glow-plug manufacturer and the engine manufacturer.

When the installation deformation by cylinder head housing material and by glow-plug plating is significant, consultation should be held between glow-plug manufacturers and engine manufacturers.

Annex A
(informative)

M8 × 1 glow-plugs with 10 mm hexagon and their cylinder head housing

Figures A.1 to A.3 illustrate M8 × 1 glow-plugs with 10 mm hexagon and their cylinder head housing.



- a Major diameter, in accordance with ISO 965-1 or ISO 965-3.
- b Hexagon.

Figure A.1 — Glow-plugs with threaded terminal and 10 mm hexagon

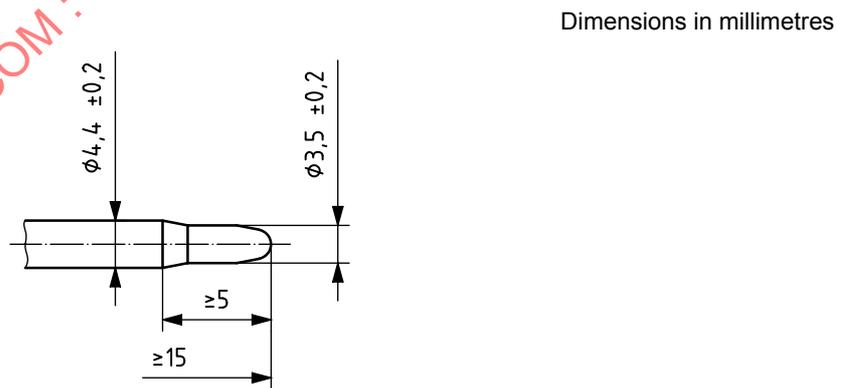


Figure A.2 — Glow-plug tip with reduced cylinder