

BS ISO 6550-4:2014

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BSI Standards Publication

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

Part 4: M8 x 1 glow-plugs

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National foreword

This British Standard is the UK implementation of ISO 6550-4:2014. Together with BS ISO 17747-1:2015, BS ISO 17747-2:2015 and BS ISO 17747-3:2015, it supersedes BS ISO 6550-4:2009 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MCE/22, Engines for road vehicles.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Third edition
2014-05-01

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

Part 4:
M8 x 1 glow-plugs

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

Partie 4: Bougies M8 x 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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 22, *Road vehicles*, Subcommittee SC 1, *Ignition equipment*.

This third edition cancels and replaces the second edition (ISO 6550-4:2009) of which it constitutes a minor revision.

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 x 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 documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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

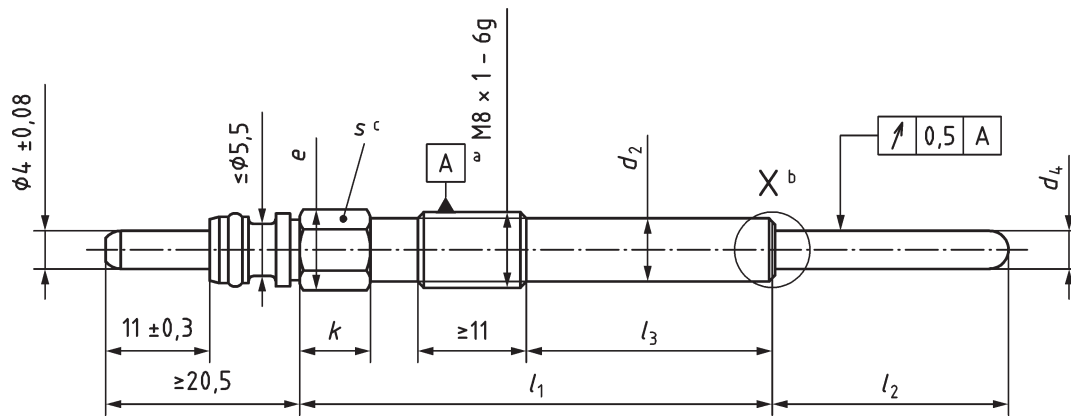
3.1 General

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 6](#), and [Tables 1 and 2](#).

Dimensions in millimetres



Key

- a Major diameter, in accordance with ISO 965-1 or 965-3.
- b See [Figure 2](#).
- c Hexagon.

Figure 1 — Glow-plug with pin terminal

Dimensions in millimetres

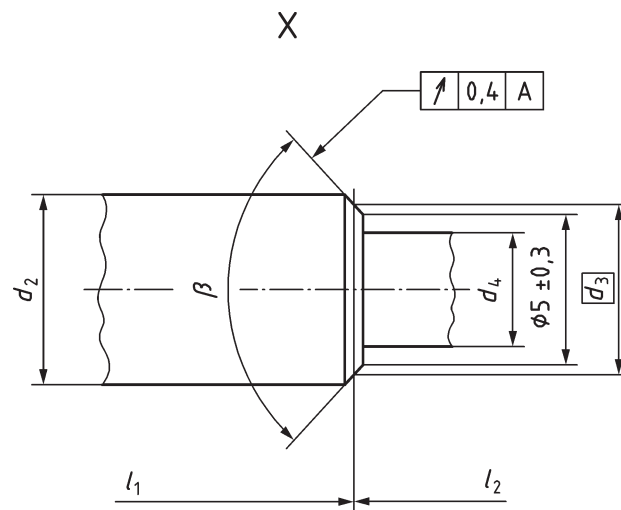
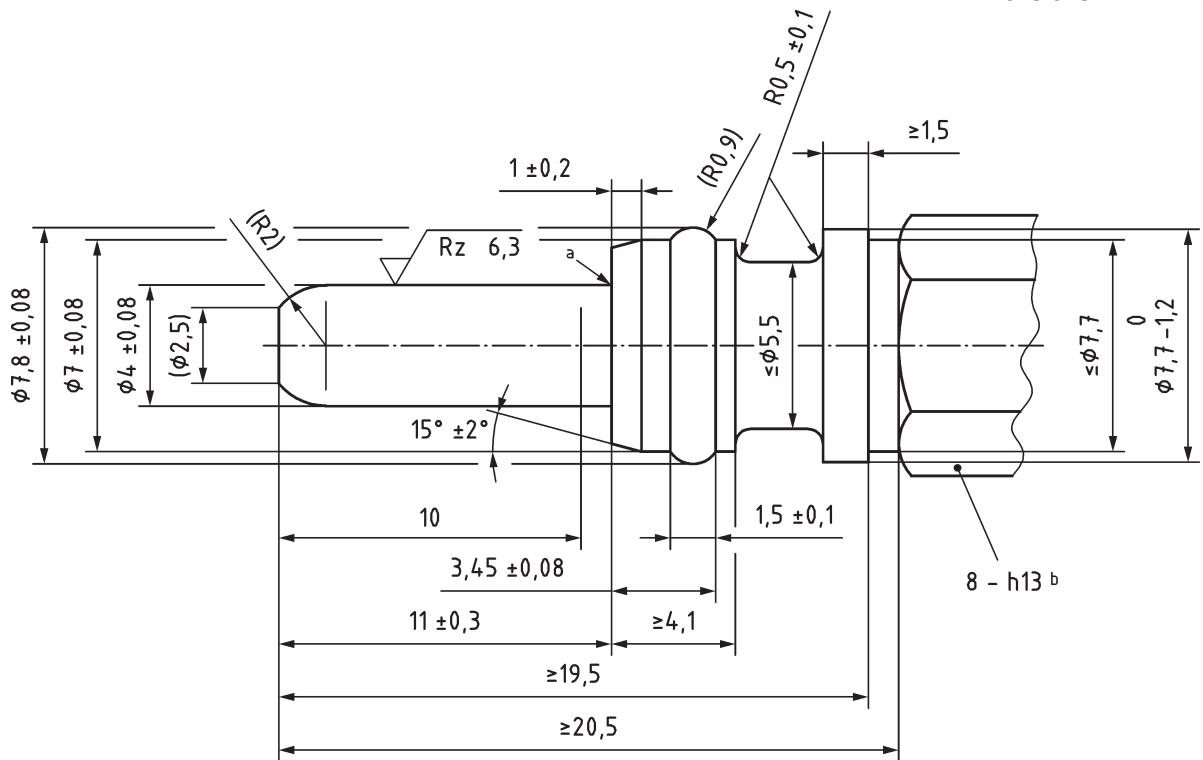


Figure 2 — Detail of X of [Figure 1](#)

Dimensions in millimetres

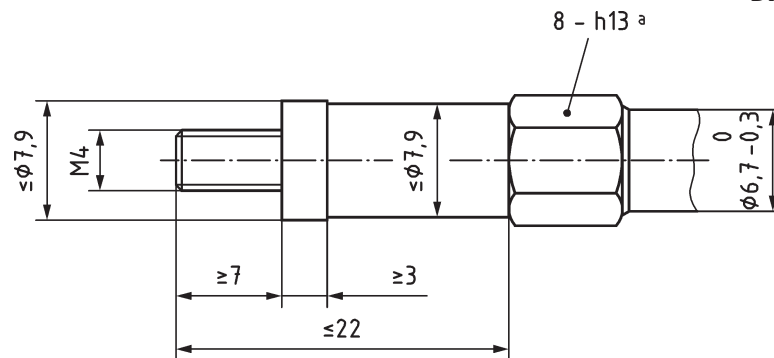


Key

- a Contour agreed between glow-plug and engine manufacturer.
- b Hexagon.

Figure 3 — Glow-plug pin terminal

Dimensions in millimetres

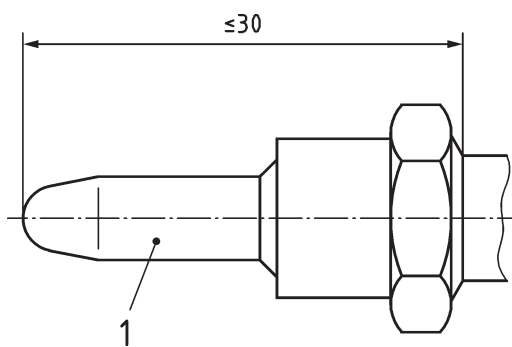


Key

- a Hexagon.

Figure 4 — Glow-plug threaded terminal

Dimensions in millimetres

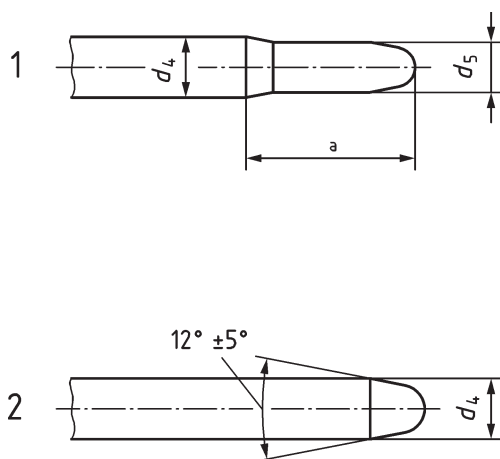


Key

- 1 pin ISO 8092-4:1997 Table 1, pin size 4

Figure 5 — Optional glow-plug pin terminal

Dimensions in millimetres



Key

- 1 glow-plug type A2, A4, A6, A8, B2, B4, B6 and B8
- 2 glow-plug type A1, A3, A5, A7, B1, B3, B5 and B7
- a Contour optional.

Figure 6 — Reduced tip end and cone end

Table 1 — Glow-plug dimensions (dimension l_1 and l_2)

Dimensions in millimetres

$l_1^a \pm 0,5$	27	42	57	67	72	87	102
$l_2^a \pm 0,5$	20	25	28	30	35		
^a Dimensions l_1 and l_2 to be combined as appropriate. Bold numbers are to be preferred.							

Table 2 — Glow-plug dimensions

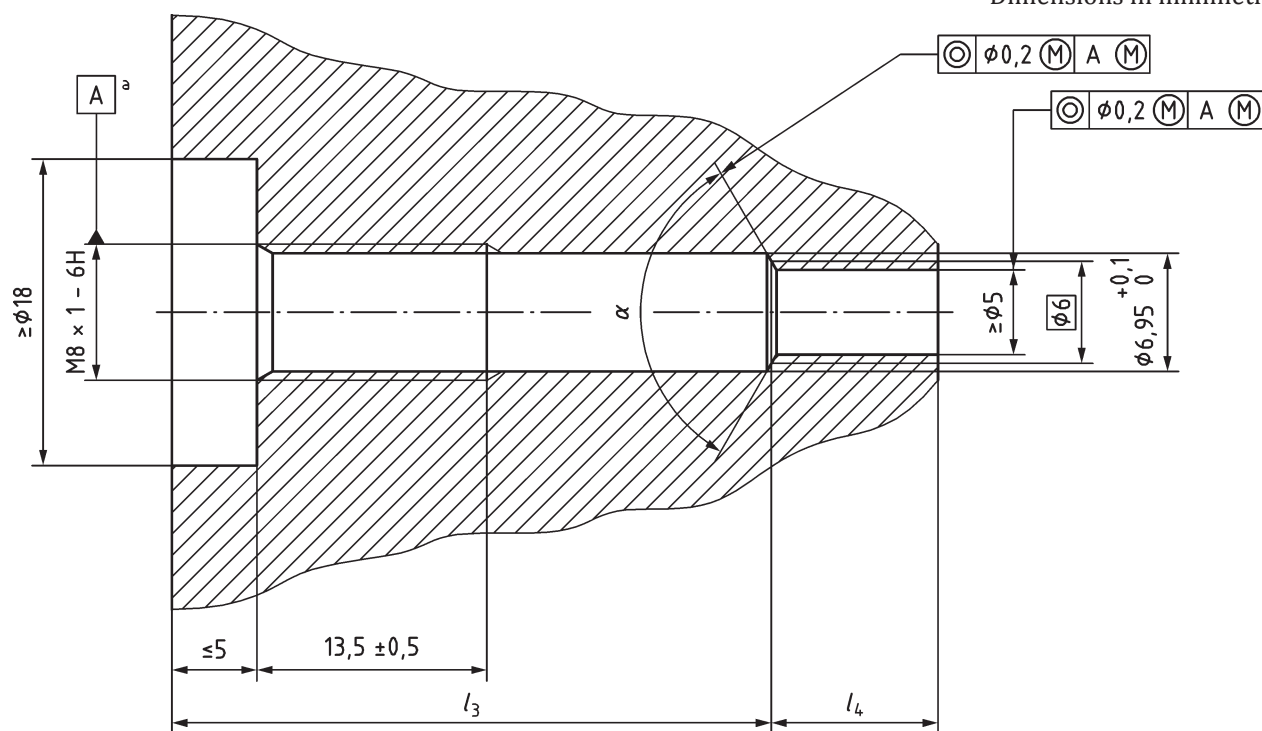
Dimensions in millimetres

Type	Terminal	Hexagon			Body				Glow-plug tube								
		<i>s</i>	<i>e</i> min.	<i>k</i>	β $\pm 2^\circ$	<i>d</i> ₂	<i>d</i> ₃ ref.	<i>l</i> ₃ min.	<i>d</i> ₄ $\pm 0,2$	<i>d</i> ₅ $\pm 0,1$	<i>a</i> min.						
A1	pin	8,0h13	8,6	7,5 ¹ _{-0,3}	93°	6,7 ⁰ _{-0,3}	6,0	10	4,0	—	—						
A2									3,3	5							
A3									4,4	—	—						
A4										3,5	5						
A5	M4				8,0h13				8,6	7,5 ¹ _{-0,3}	93°	6,7 ⁰ _{-0,3}	6,0	10	4,0	—	—
A6															3,3	5	
A7															4,4	—	—
A8																3,5	5
B1	pin	8,0h13	8,6	7,5 ¹ _{-0,3}		123°	6,7 ⁰ _{-0,3}	6,0			10				4,0	—	—
B2															3,3	5	
B3															4,4	—	—
B4																3,5	5
B5	M4				8,0h13	8,6			7,5 ¹ _{-0,3}	123°		6,7 ⁰ _{-0,3}	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 7](#) and [Table 3](#).

Dimensions in millimetres



Key

- a Pitch diameter in accordance with ISO 965-1 or 965-3.
- α $90^\circ \pm 1^\circ$ or $120^\circ \pm 1^\circ$

Figure 7 — Cylinder head housing for 8 mm hexagon

Table 3 — Cylinder head housing dimensions

Dimensions in millimetres

l_3 max.	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	l_3 max. for cylinder head has to correspond to l_1 of the glow plug as in this table.						

3.4 Threads

The threads of M8 × 1 glow-plug and the corresponding tapped hole in 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 × 1

Dimensions in millimetres

Dimensions		Plug thread M8 × - 6g (on finished plug)	Tapped hole in cylinder head M8 × 1 - 6H
Major diameter	max.	7,974	not specified
	min.	7,794	8,000
Pitch diameter	max.	7,324	7,500
	min.	7,212	7,350
Minor diameter	max.	6,747	7,153
	min.	6,596 ^a	6,917
^a With a root radius of fillet $\geq 0,100$ mm (0,1 <i>P</i>).			

4 Installation tightening torque

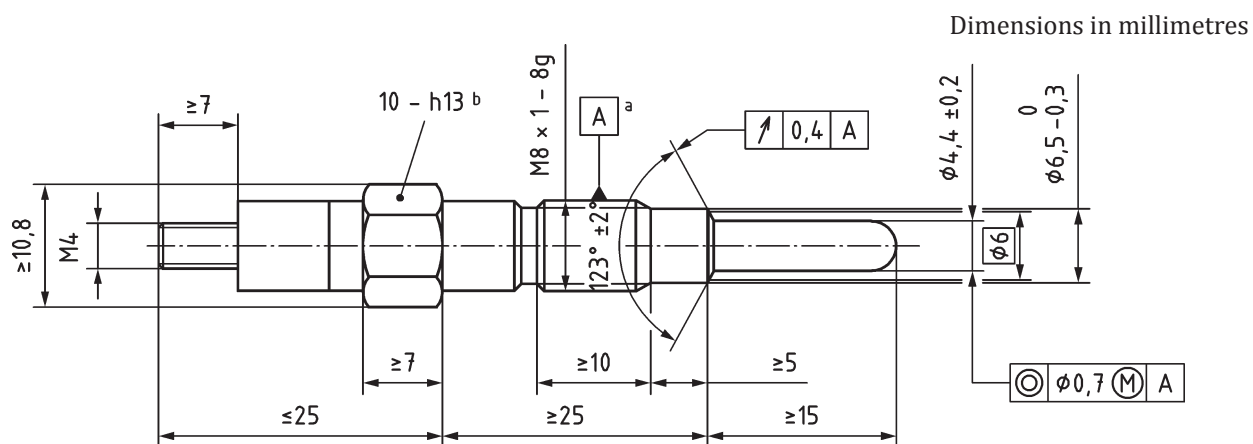
The installation torque values shall be 9 Nm to 12 Nm. These values apply to unused nickel or zinc plated sheath-type glow-plugs without lubricant on the threads.

If glow-plugs are plated with a different material and/or the threads are lubricated 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 big, 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



Key

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

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

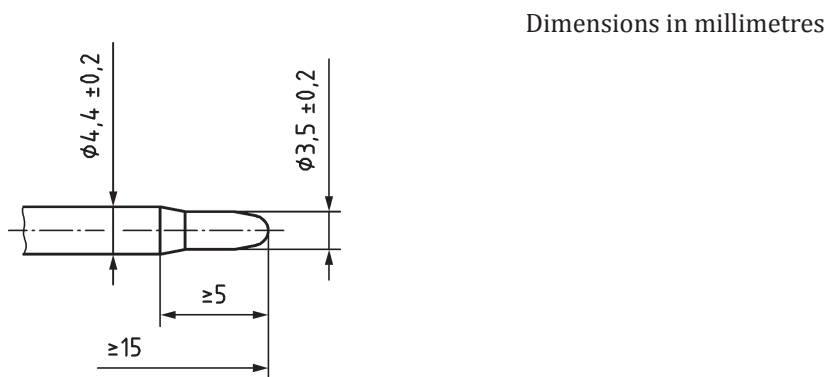
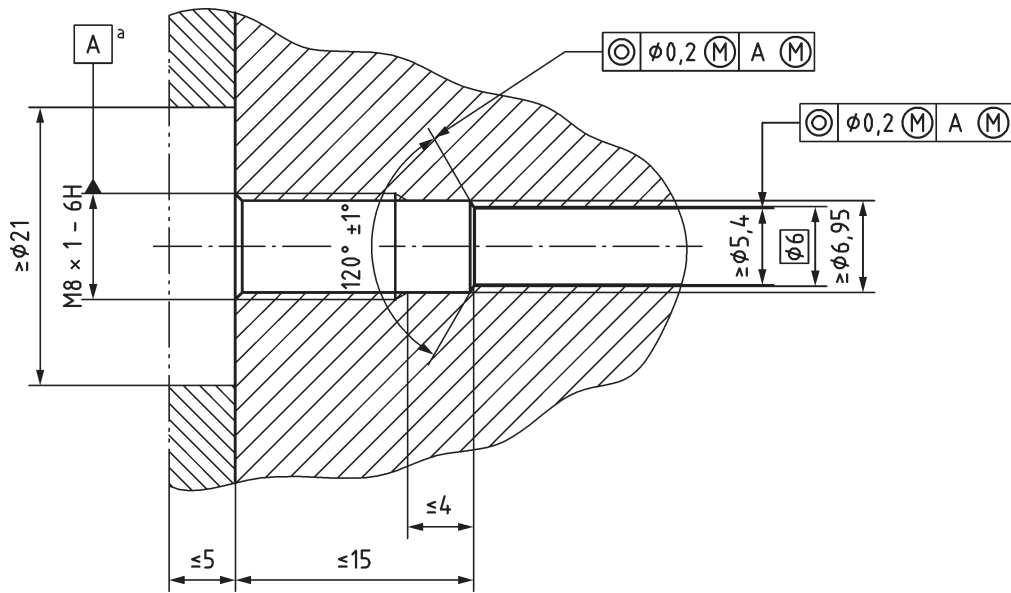


Figure A.2 — Glow-plug tip with reduced cylinder

Dimensions in millimetres



Key

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

Figure A.3 — Cylinder head housing dimensions

Bibliography

- [1] ISO 1101; *Geometrical Product Specifications (GPS) — General tolerancing — Tolerances of form, orientation, location and run-out*

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