INTERNATIONAL STANDARD

ISO 2699

Third edition
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Diesel engines — Flange-mounted fuel injectors, size "S" — Types 2, 3, 4, 5 and 6

Moteurs diesels — Porte-injecteurs de combustible complets de taille «S», à fixation par bride — Types 2, 3, 4, 5 et 6

Reference number
ISO 2699:1994(E)

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.

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.

International Standard ISO 2699 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 7, *Injection equipment and filters for use on road vehicles*.

This third edition cancels and replaces the second edition (ISO 2699:1983), of which it constitutes an editorial revision only.

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Diesel engines — Flange-mounted fuel injectors, size "S" — Types 2, 3, 4, 5 and 6

1 Scope

This International Standard specifies dimensions necessary for the mounting and interchangeability of flange-mounted fuel injectors of size "S", types 2, 3, 4, 5 and 6, containing the nozzles specified in ISO 2697, for diesel (compression-ignition) engines.

The location of the fuel inlet and leak-off connections are not defined since they vary according to the particular application.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 2692:1988, *Technical drawings — Geometrical tolerancing — Maximum material principle.*

ISO 2697:1974, *Road vehicles — Fuel injection nozzles — Size "S".*

3 Dimensions and tolerances

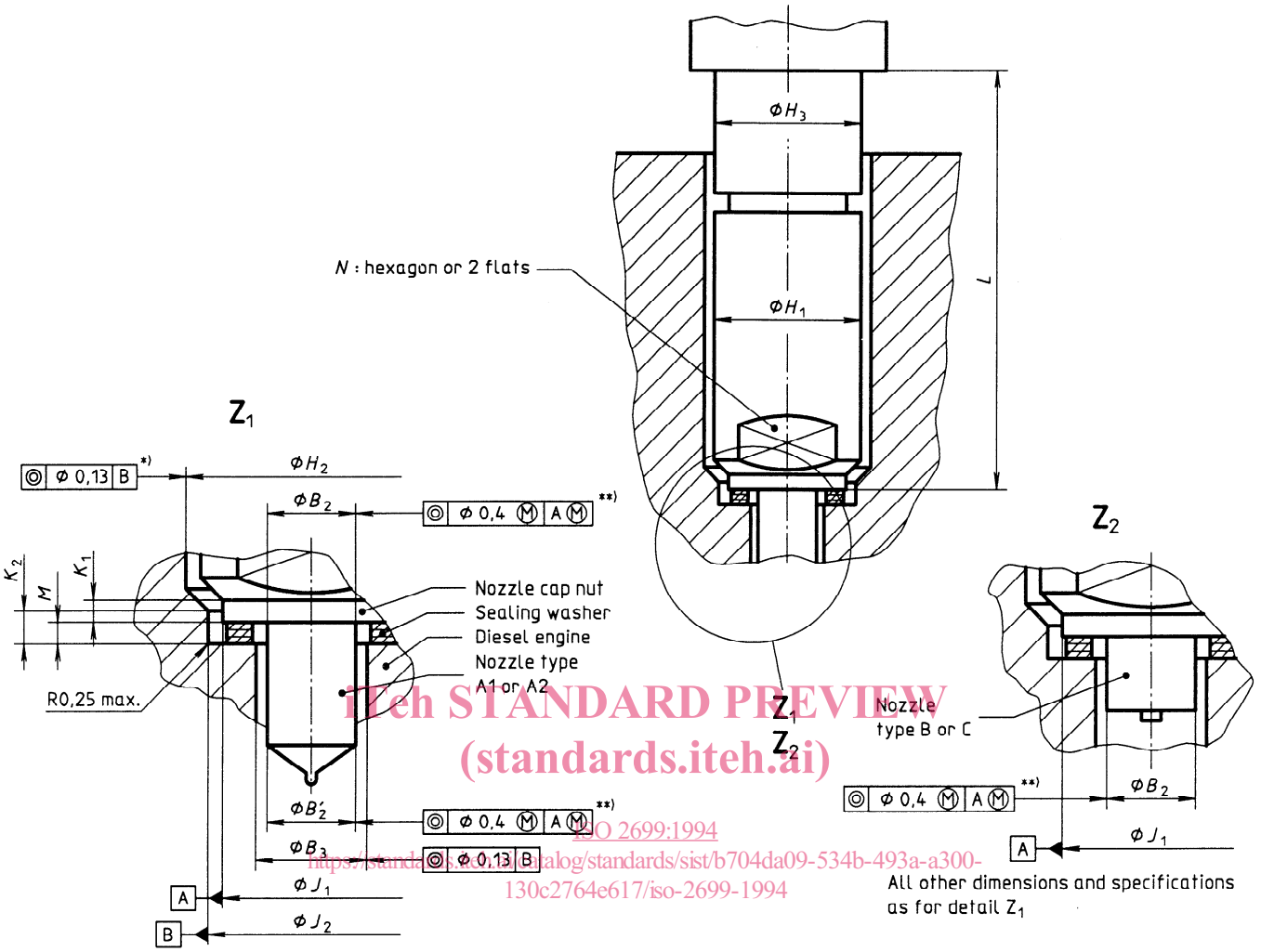
General dimensions of injectors shall be as given in figures 1 to 3. The preferred shank lengths (dimension L) are given in table 1.

Table 1

Dimensions in millimetres

Injector type	Nozzle type	$L \pm 0,8$				
2	A1 or A2	52	67	—	97	112
	B or C	35	45,5	50	80	95
3 and 5	A1 or A2	52	67	82	97	112
4 and 6	B or C	35	50	65	80	95

Dimensions in millimetres



*) This tolerance applies only in the case where a small clearance exists between H_1 and H_2.

**) See footnote 2) in the table and ISO 2692.

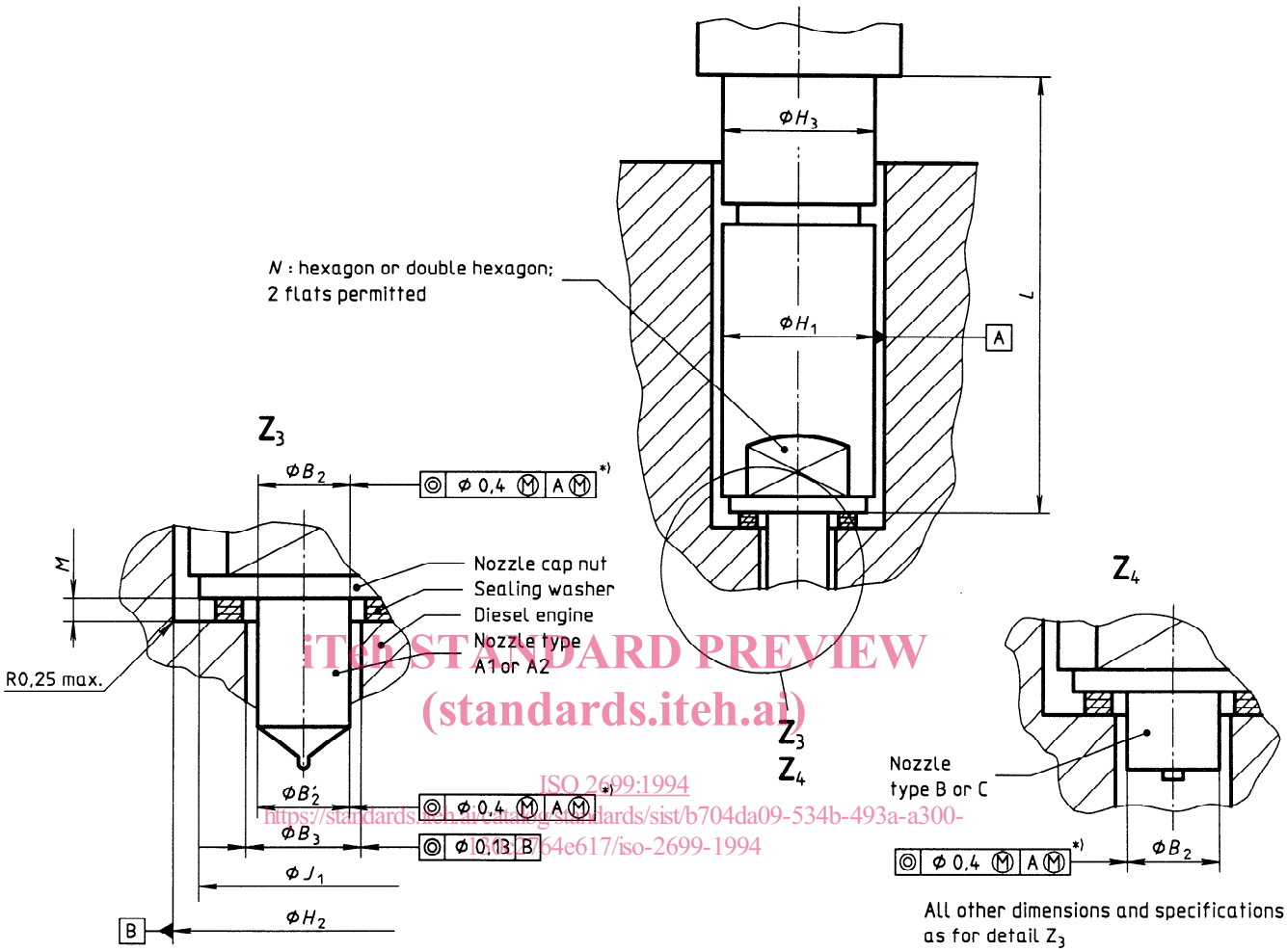
Injector type	Nozzle type	H_1 max.	H_2 min.	H_3 max.	B_2	B'_2 $^{+0,3}_{0}$	B_3	J_1 h11	J_2 C11	K_1 min.	K_2 $^{+1}_{0}$	M 1) nom.	N across flats h11
2	A1 or A2	25	25,2	25	9,2 max. ($B_2 \geqslant B'_2$)	8,9	2)	21,5	21,5	3,5	3,5	2	22
	B or C				14 c11	—							

1) With commercial tolerances (before compression).

2) The determination of the diameter B_3 in the cylinder head is left to the manufacturer's choice. For this purpose the maximum value for the nozzle stem which is given as a result of the maximum material principle and the maximum tolerance value of the cylinder head hole shall be taken into account. The clearance shall be kept to a minimum to facilitate nozzle cooling.

Figure 1 — Flange-mounted injector size "S", type 2

Dimensions in millimetres



*) See footnote 2) in the table and ISO 2692.

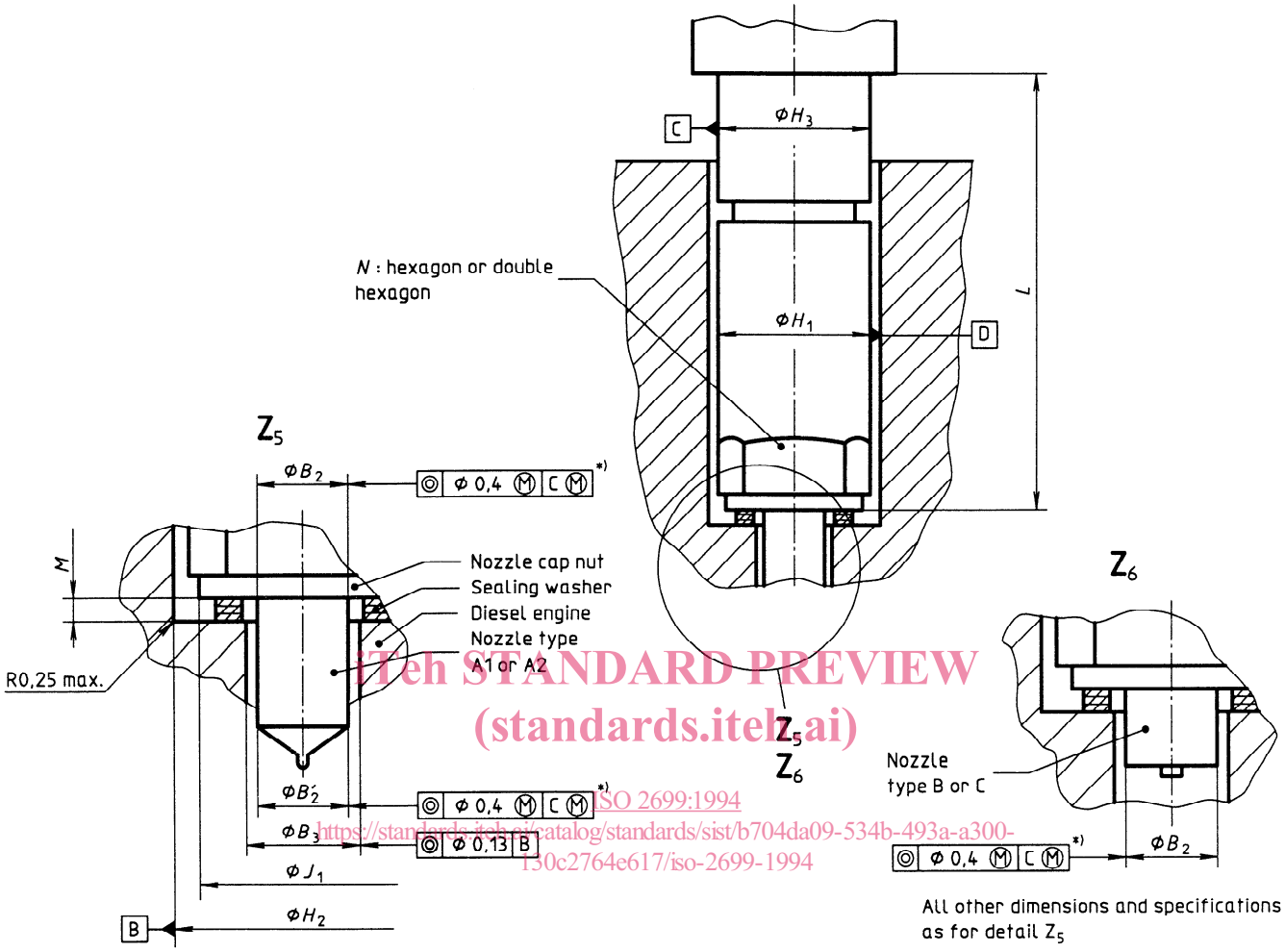
Injector type	Nozzle type	H_1 max.	H_2 +0,1 0	H_3 max.	B_2	B'_2 +0,3 0	B_3	J_1 min.	M 1) nom.	N across flats h11
3	A1 or A2	21,5	21,6	21,3	9,2 max. ($B_2 \geqslant B'_2$)	8,9	2)	18,5	2	19
4	B or C				14 c11	—				
NOTE — Injectors types 3 and 4 are not recommended for future designs.										

1) With commercial tolerances (before compression).

2) The determination of the diameter B_3 in the cylinder head is left to the manufacturer's choice. For this purpose the maximum value for the nozzle stem which is given as a result of the maximum material principle and the maximum tolerance value of the cylinder head hole shall be taken into account. The clearance shall be kept to a minimum to facilitate nozzle cooling.

Figure 2 — Flange-mounted injectors size "S", types 3 and 4

Dimensions in millimetres



*) See footnotes 1) and 3) in the table and ISO 2692.

Injector type	Nozzle type	H_1 max.	H_2 1) $^{+0,1}_{0}$	H_3 max.	B_2	B'_2 $^{+0,3}_{0}$	B_3	J_1 min.	M 2) nom.	N across flats h11
5	A1 or A2	20,9	21,1	21	9,2 max. ($B_2 \geqslant B'_2$)	8,9	3)	18,5	2	19
6	B or C				14 c11	—				

1) For types 5 and 6 injectors without shanks, dimension H_2 shall be reduced by 0,1 mm. In this case concentricity tolerances apply, under the same conditions, to reference D instead of reference C.

2) With commercial tolerances (before compression).

3) The determination of the diameter B_3 in the cylinder head is left to the manufacturer's choice. For this purpose the maximum value for the nozzle stem which is given as a result of the maximum material principle and the maximum tolerance value of the cylinder head hole shall be taken into account. The clearance shall be kept to a minimum to facilitate nozzle cooling.

Figure 3 — Flange-mounted injectors size "S", types 5 and 6

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Descriptors: road vehicles, diesel engines, injection nozzle holders, dimensions.

Price based on 4 pages