INTERNATIONAL STANDARD 2697

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Road vehicles — Fuel injection nozzles — Size "S"

Véhicules routiers — Injecteurs — Taille «S»

First edition — 1974-04-01

UDC 621.43.03

Ref. No. ISO 2697-1974 (E)

Descriptors : diesel engines, fuel injectors, dimensions, interchangeability.

Price based on 5 pages

FOREWORD

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Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 2697 was drawn up by Technical Committee ISO/TC 22, *Road vehicles,* and circulated to the Member Bodies in February 1973.

It has been approved by the Member Bodies of the following countries:

Australia	Hungary	South Africa, Rep. of
Belgium	Iran	Spain
Bulgaria	Italy	Sweden
Canada	Japan	Switzerland
Czechoslovakia	Mexico	Thailand
Egypt, Arab Rep. of	New Zealand	Turkey
France	Poland	United Kingdom
Germany	Romania	U.S.S.R.

No Member Body expressed disapproval of the document.

Printed in Switzerland

Road vehicles — Fuel injection nozzles — Size "S"

1 SCOPE

This International Standard specifies the essential dimensional requirements for a certain category of fuel injection nozzles used in diesel engines.

These requirements shall allow the assembly and interchangeability of the nozzles in the corresponding nozzle holders.

2 FIELD OF APPLICATION

This International Standard is applicable to size "S" injection nozzles, which comprise the hole type, long stem (types "A1" and "A2") nozzles and the pintle nozzles (type "B").

NOTE — Type A1 and type B injection nozzles are the preferred types. The "non-preferred" hole type, short stem nozzle type "C" is shown in the annex.

3 REFERENCE

ISO ..., *Injection nozzle holders — Types 1 to 6.*[1)]

1) At present DIS 2699 and DIS 2700.

4 DIMENSIONS AND TOLERANCES

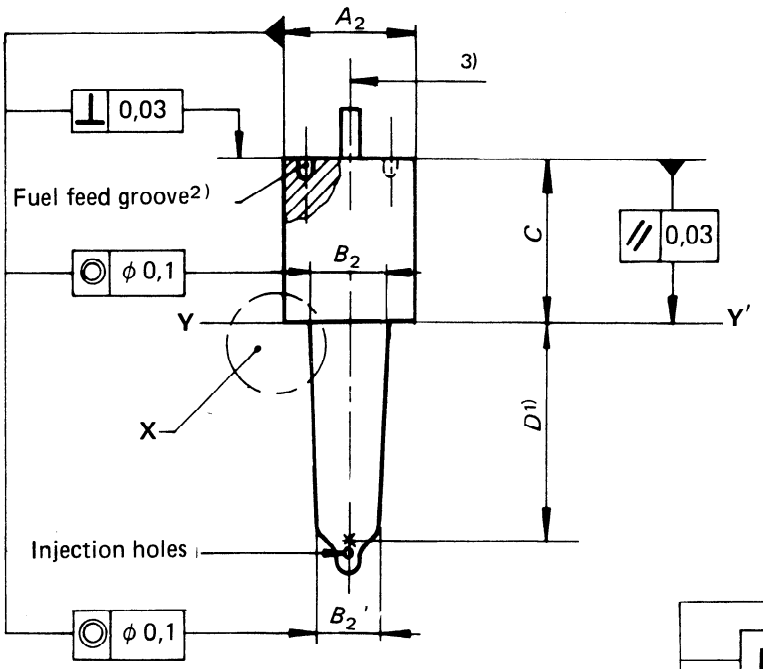


FIGURE 1 – **Hole type, long stem nozzle – Type "A1" and "A2"**

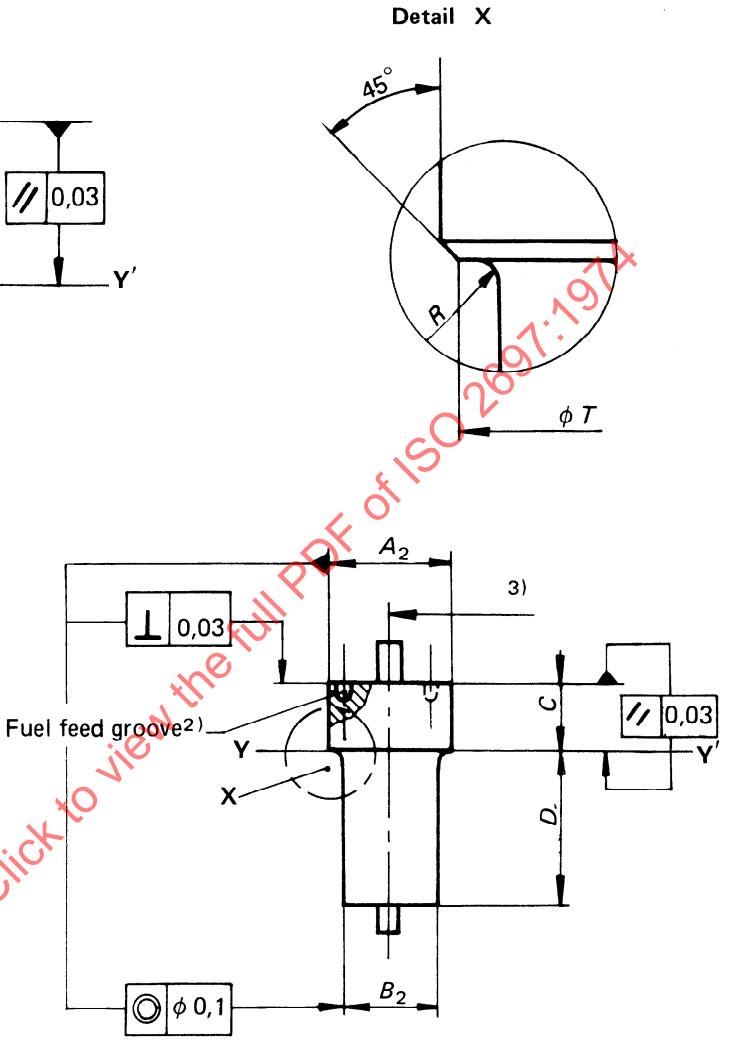


FIGURE 2 – **Pintle nozzle – Type "B"**

1) This dimension determines the distance between the reference plane yy′ and the point of intersection of the injection holes axes with the nozzle axis.

2) A fuel feed groove is necessary only on nozzles without dowel holes and on nozzles having multiple fuel feed holes.

3) The reference axis for the nozzle passes through the centre of the circle of diameter A_2.

TABLE 1

Dimensions in millimetres

Dimension / Nozzle type	A_2	B_2	B_2'	C	D	T	R
A1 (Preferred type)	17 h11	9,2 max. ($B_2 \geqslant B_2'$)	8,9 min.	$25\ ^{0}_{-0,6}$	$26,5\ ^{+0,2}_{-0,3}$	$15,5\ ^{+0,5}_{0}$	0,6 max.
A2					$38,5\ ^{+0,2}_{-0,3}$		
B		14c11		$8\ ^{0}_{-0,4}$	$19 \pm 0,2$	$16,3\ ^{+0,2}_{0}$	0,25 max.

5 ASSEMBLY OF NOZZLES IN NOZZLE HOLDERS

5.1 Dimensions and tolerances of the nozzle cap nut

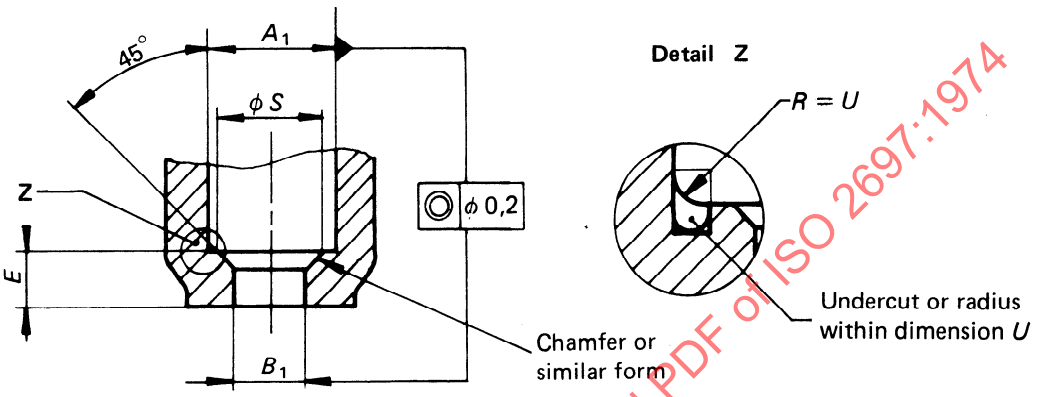


FIGURE 3 — Nozzle cap nut

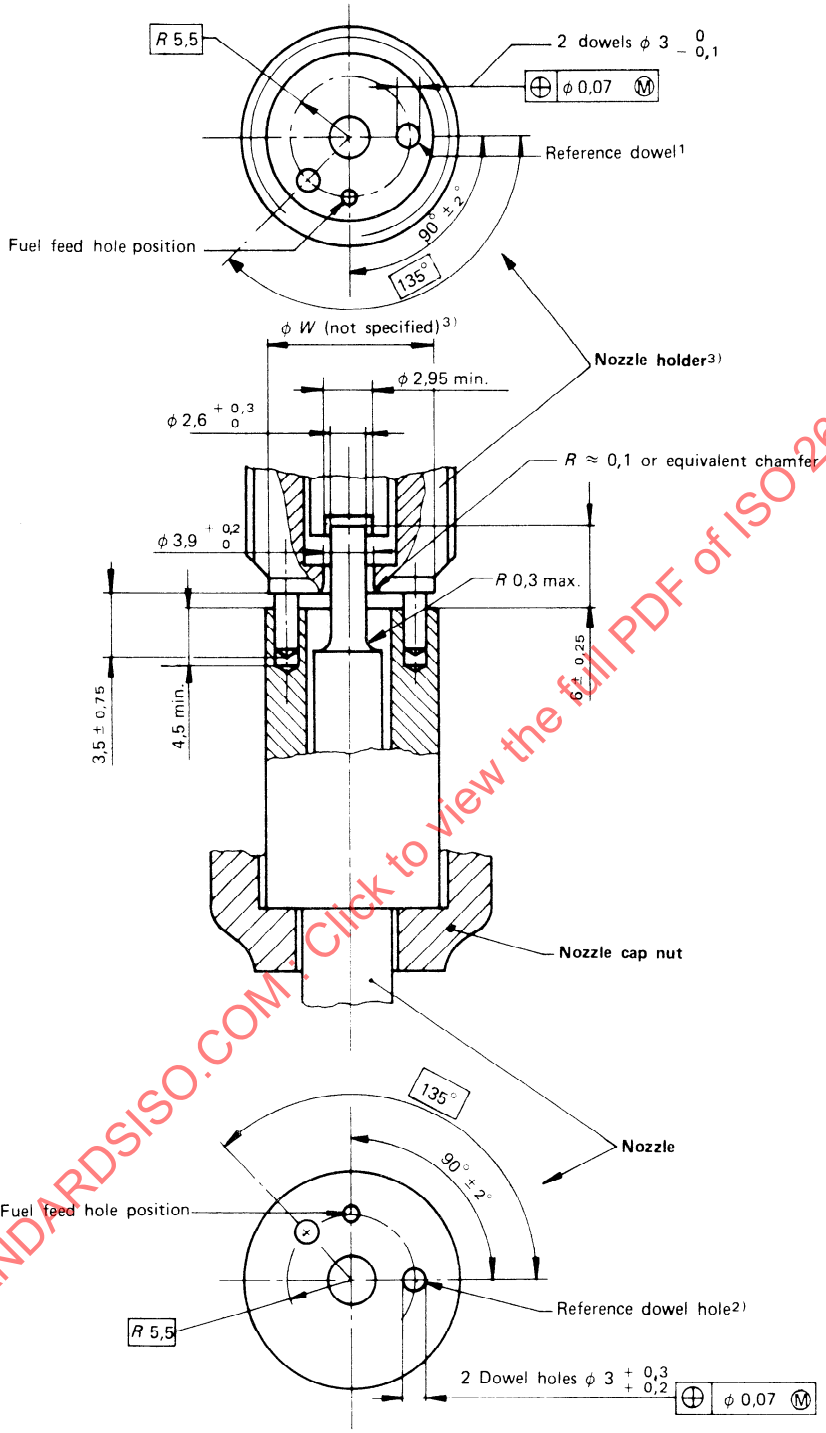
TABLE 2

Dimensions in millimetres

Dimension / Nozzle type	A_1	B_1	E	S	U
A1 and A2	17D13	$10^{+0,16}_{-0,05}$	$6,2^{0}_{-0,2}$	$11,5^{+0,3}_{0}$	0,4 max.
B		$14,3^{+0,2}_{0}$		15,0 ± 0,1	0,2 max.

5.2 Dimensions and tolerances of the assembly

Dimensions in millimetres



1) The angular tolerance between the reference dowel and the locating device which fixes the position of the nozzle holder in the Diesel engine is ± 1°. Depending on the design of the locating device, it may be necessary to consider the axis of a hole in a fixing flange, a fixing lug, or a fixing slot.

2) The angular tolerance between the reference dowel hole and the injection holes is ± 1° 30′.

3) The reference axis of the nozzle holder shall pass through the centre of the circle of diameter *W*.

FIGURE 4 – **Assembly**

NOTES

1 The dimensions of the nozzle holder dowels and the nozzle dowel holes, as well as the dimensions and tolerances for their position, are necessary only if nozzles destined for asymmetrical injection are employed.

2 The assembly dimensions and tolerances given in 5.2 apply to nozzle types A1, A2 and B and to nozzle holder types 1 to 6. (See the International Standards listed in section 3.)