INTERNATIONAL STANDARD

ISO 7299-1

First edition
2007-02-01

Diesel engines — End-mounting flanges for pumps —

Part 1: Fuel injection pumps

Moteurs diesels — Brides de montage des pompes —

Partie 1: Pompes d'injection de carburant

Reference number
ISO 7299-1:2007(E)

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

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 7299-1 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 7, *Injection equipment and filters for use on road vehicles*.

This first edition, together with the first edition of ISO 7299-2, cancels and replaces the second edition of ISO 7299 (ISO 7299:1996), which has been technically revised.

ISO 7299 consists of the following parts, under the general title *Diesel engines — End-mounting flanges for pumps*:

— *Part 1: Fuel injection pumps*

— *Part 2: High-pressure supply pumps for common rail fuel injection systems*

Diesel engines — End-mounting flanges for pumps —

Part 1: Fuel injection pumps

1 Scope

This International Standard specifies dimensional requirements for nine types of end-mounting flanges for fuel injection pumps (rotary, distributor and in-line fuel injection pumps) for use in 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 6519, *Diesel engines — Fuel injection pumps — Tapers for shaft ends and hubs*

3 Dimensions and tolerances

3.1 General

Engine manufacturers are encouraged to use the tolerance H8 for the female register diameter.

If functionally necessary, the tolerance g8 on the pump spigot diameter ($\varnothing d_1$ in the figures) may be replaced by f7, and the tolerance H8 on the female register diameter may be replaced by H7, by mutual agreement between supplier and user.

NOTE 1 The diameter d_2 in the figures and tables corresponds to the diameter d specified in ISO 6519.

NOTE 2 The flange configuration can optionally be rotated relative to the pump housing.

3.2 Fuel injection pumps

3.2.1 Type 1 end-mounting flange

See Figure 1 and Table 1.

Dimensions in millimetres

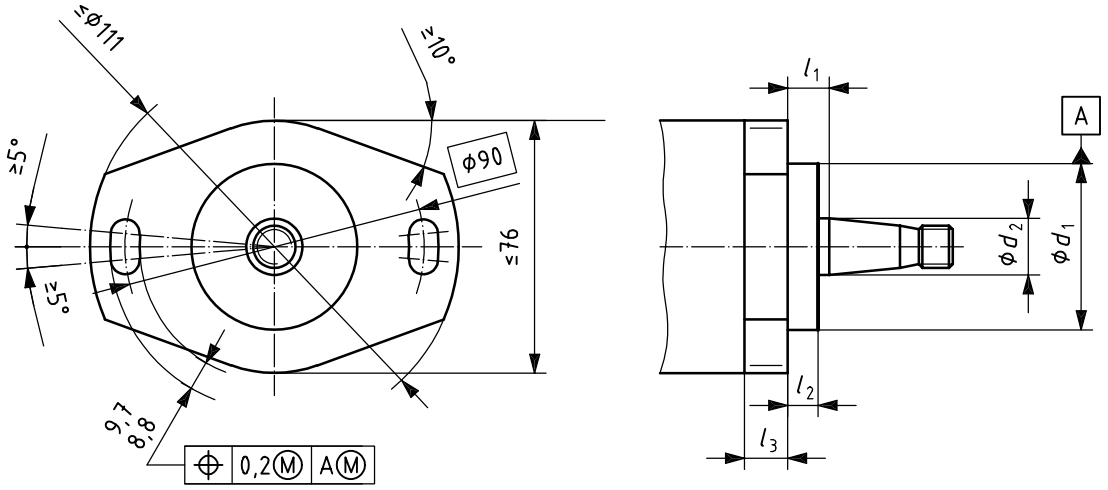


Figure 1 — Fuel injection pumps — Type 1 end-mounting flange

Table 1 — Fuel injection pumps — Type 1 end-mounting flange

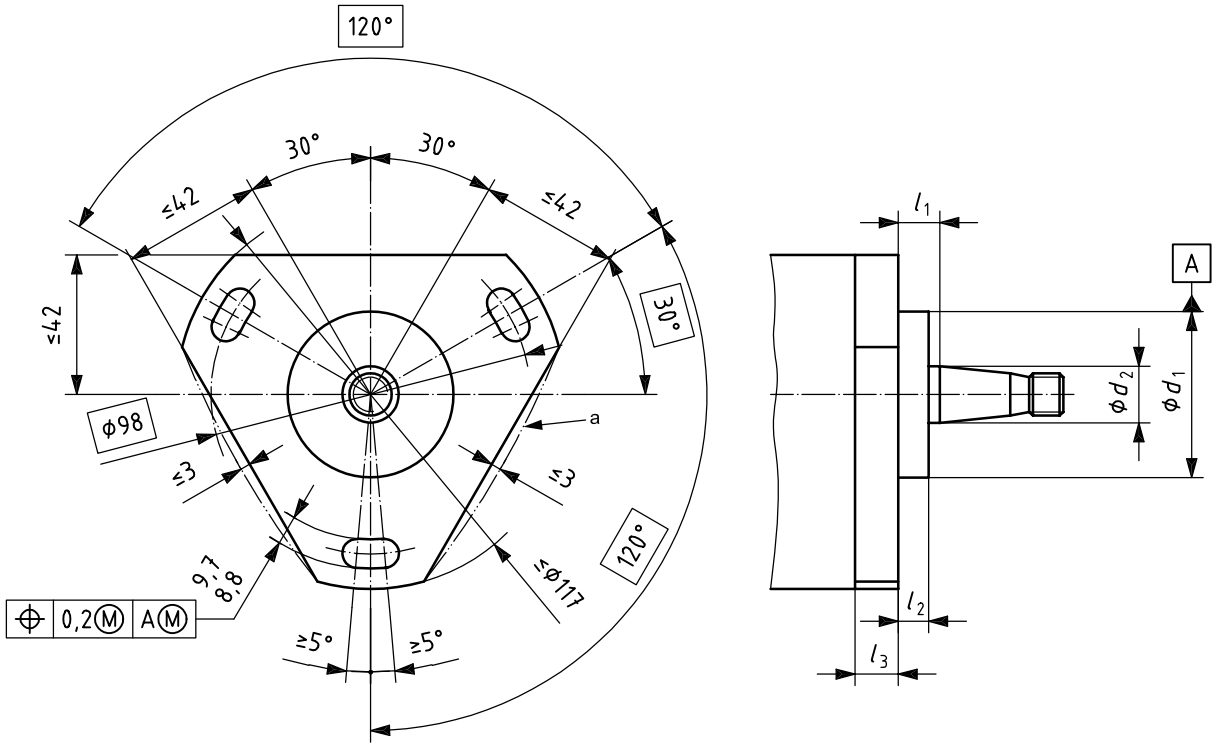
Dimensions in millimetres

d_1	d_2	l_1	l_2	l_3	
g8	nom.	± 0,5	max.	min.	max.
50 or 68	17 or 20	12,5	11	13	16
		26	24,5		

3.2.2 Type 2 end-mounting flange

See Figure 2 and Table 2.

Dimensions in millimetres



[a] This is the optional flange outline.

Figure 2 — Fuel injection pumps — Type 2 end-mounting flange

Table 2 — Fuel injection pumps — Type 2 end-mounting flange

Dimensions in millimetres

d_2 g8	d_2 nom.	l_1 ± 0,5	l_2 max.	l_3	
				min.	max.
50	17 or 20	12,5	11	13	16
		17,4	16		
		26	24,5		
68	17, 20 or 25	12,5	11		
		17,4	16		
		26	24,5		

3.2.3 Type 3 end-mounting flange

See Figure 3 and Table 3.

Dimensions in millimetres

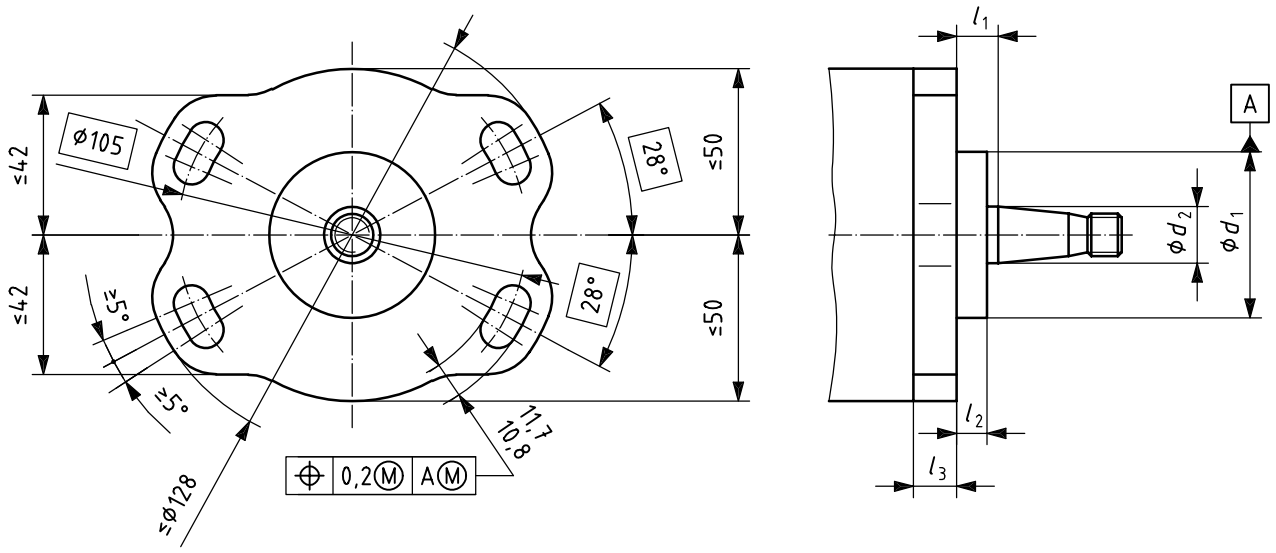


Figure 3 — Fuel injection pumps — Type 3 end-mounting flange

Table 3 — Fuel injection pumps — Type 3 end-mounting flange

Dimensions in millimetres

d_1	d_2	l_1	l_2	l_3	
g8	nom.	± 0,5	max.	min.	max.
50 or 68	17 or 20	9,5 [a]	8,2 [a]	13	16
		12,5	11		
		17,4	16		
		26	24,5		

[a] Non-preferred value; only for interchangeability with certain types of in-line pumps.

3.2.4 Type 4 end-mounting flange

See Figure 4 and Table 4.

Dimensions in millimetres

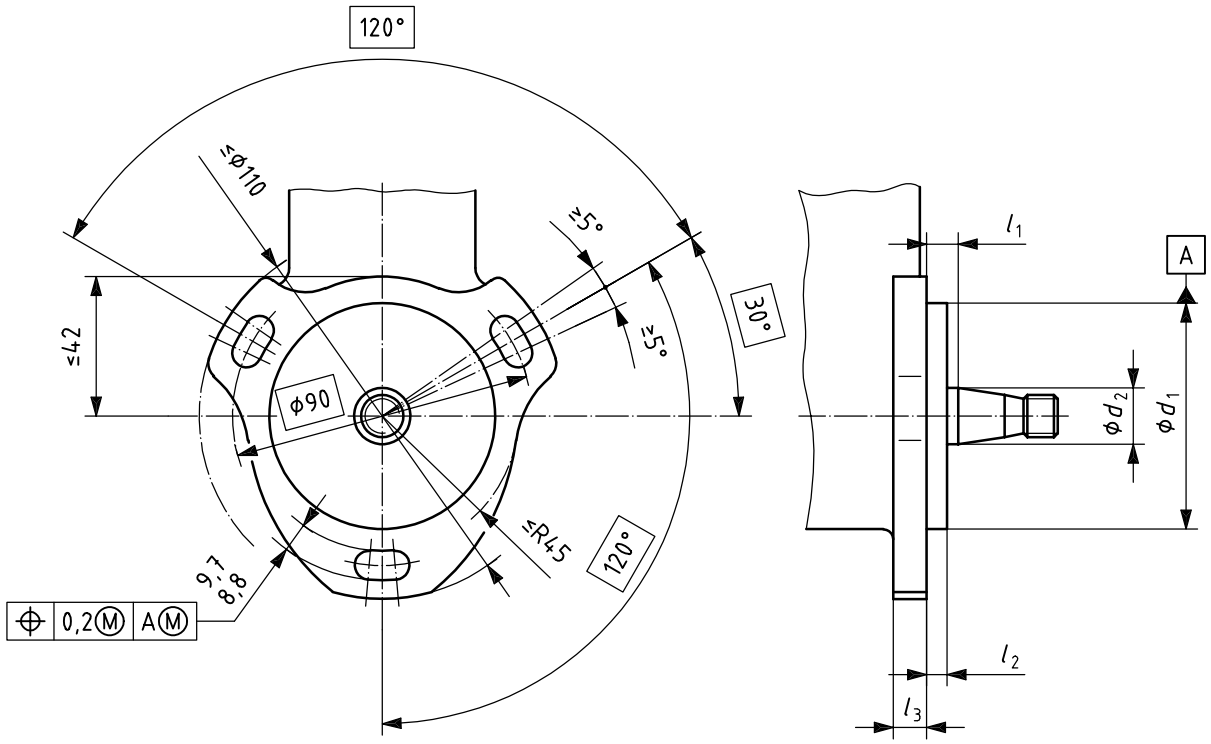


Figure 4 — Fuel injection pumps — Type 4 end-mounting flange

Table 4 — Fuel injection pumps — Type 4 end-mounting flange

Dimensions in millimetres

d_1	d_2	l_1	l_2	l_3	
g8	nom.	± 0,5	max.	min.	max.
68	17	9,5	8	10	16

3.2.5 Type 5 end-mounting flange

See Figure 5 and Table 5.

Dimensions in millimetres

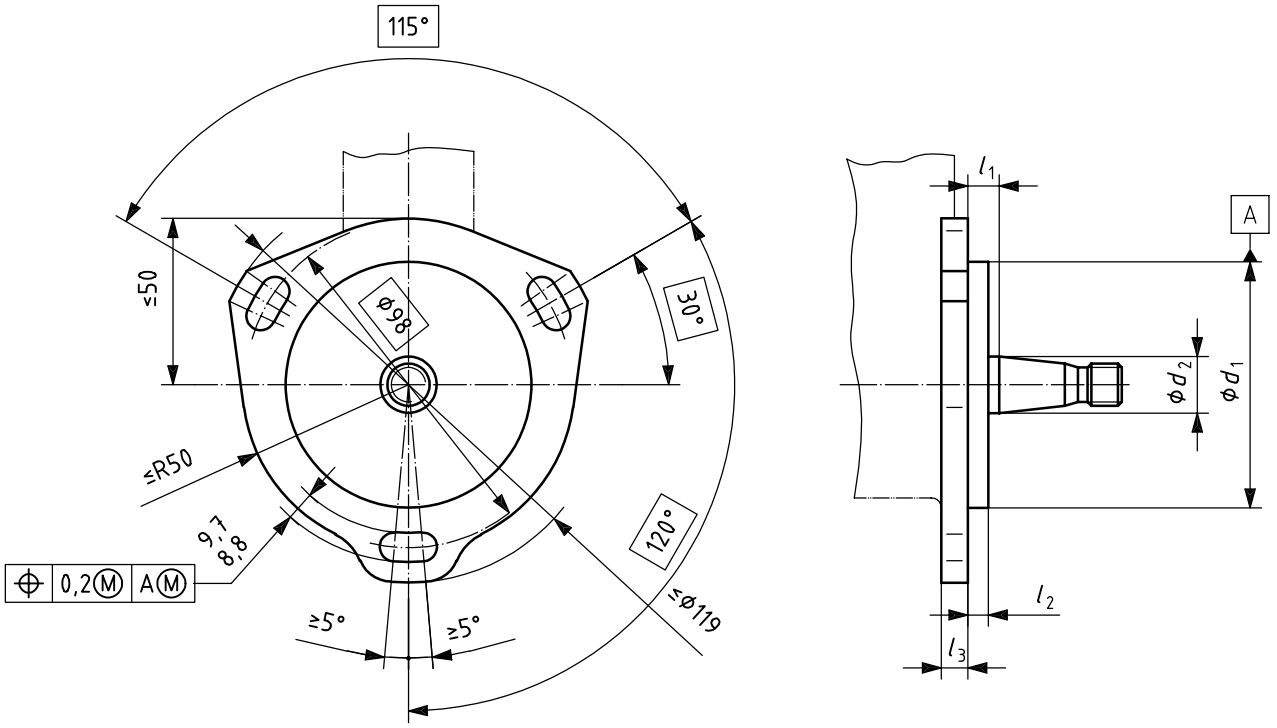


Figure 5 — Fuel injection pumps — Type 5 end-mounting flange

Table 5 — Fuel injection pumps — Type 5 end-mounting flange

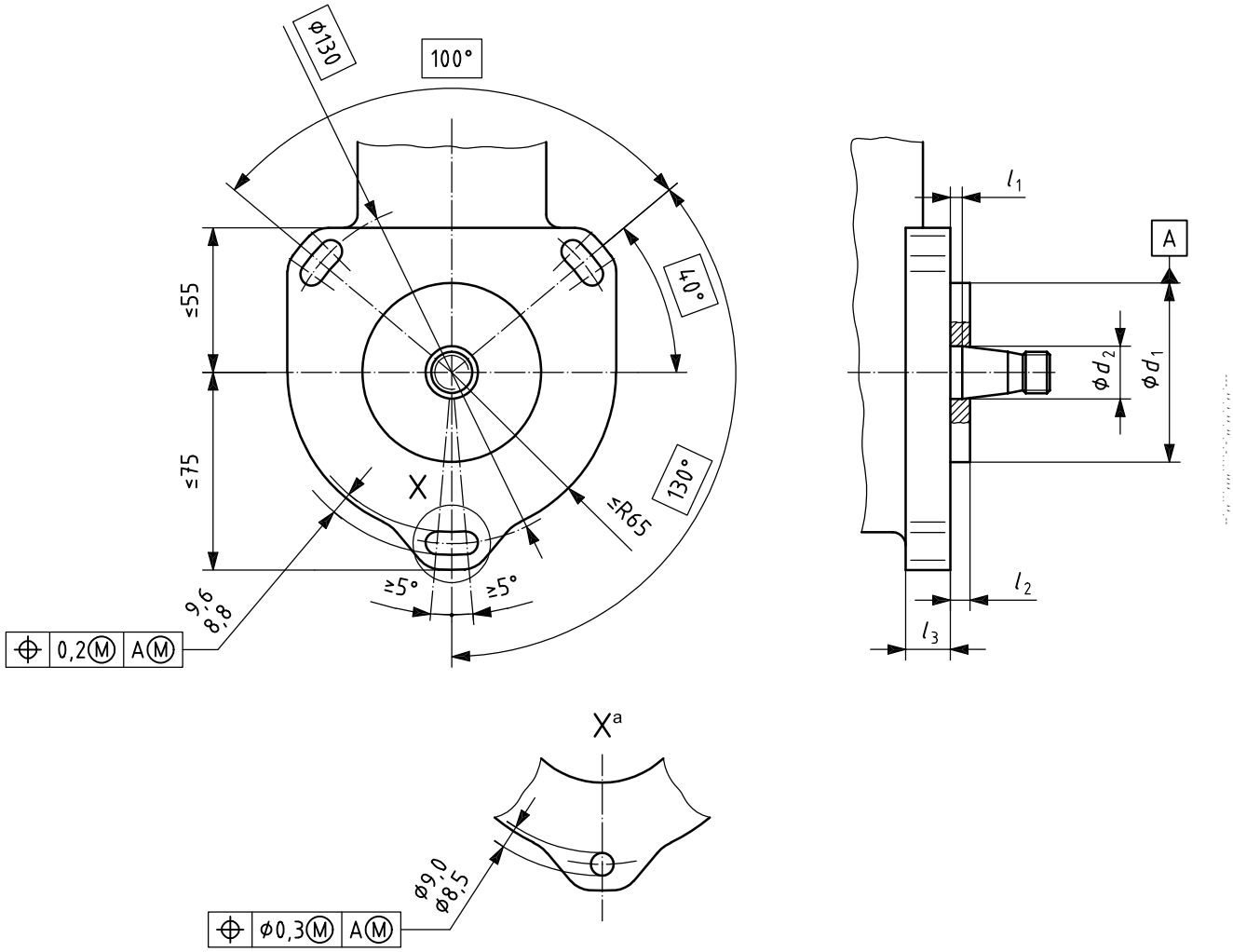
Dimensions in millimetres

d_1	d_2	l_1	l_2	l_3	
g8	nom.	± 0,5	max.	min.	max.
74 or 76	17	9,5	8	8	10

3.2.6 Type 6 end-mounting flange

See Figure 6 and Table 6.

Dimensions in millimetres



[a] This option has three holes.

Figure 6 — Fuel injection pumps — Type 6 end-mounting flange

Table 6 — Fuel injection pumps — Type 6 end-mounting flange

Dimensions in millimetres

d_1	d_2	l_1	l_2	l_3	
g8	nom.	± 1	max.	min.	max.
68, 97 or 112	20 or 22	4,5	7,5	17	18
				24	26

3.2.7 Type 7 end-mounting flange

See Figure 7 and Table 7.

Dimensions in millimetres

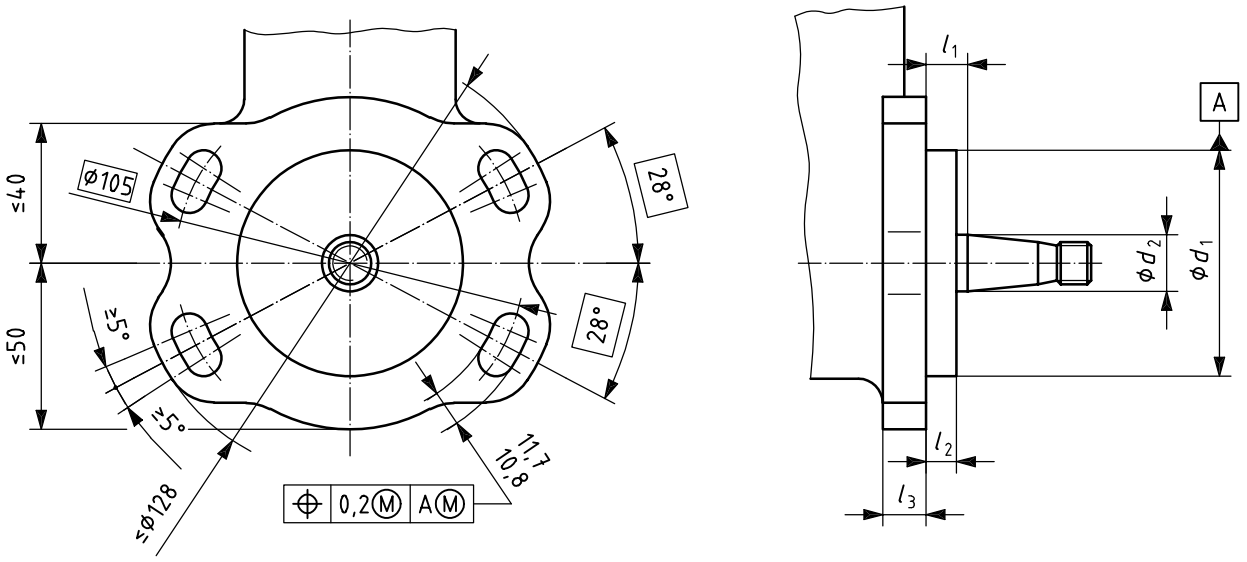


Figure 7 — Fuel injection pumps — Type 7 end-mounting flange

Table 7 — Fuel injection pumps — Type 7 end-mounting flange

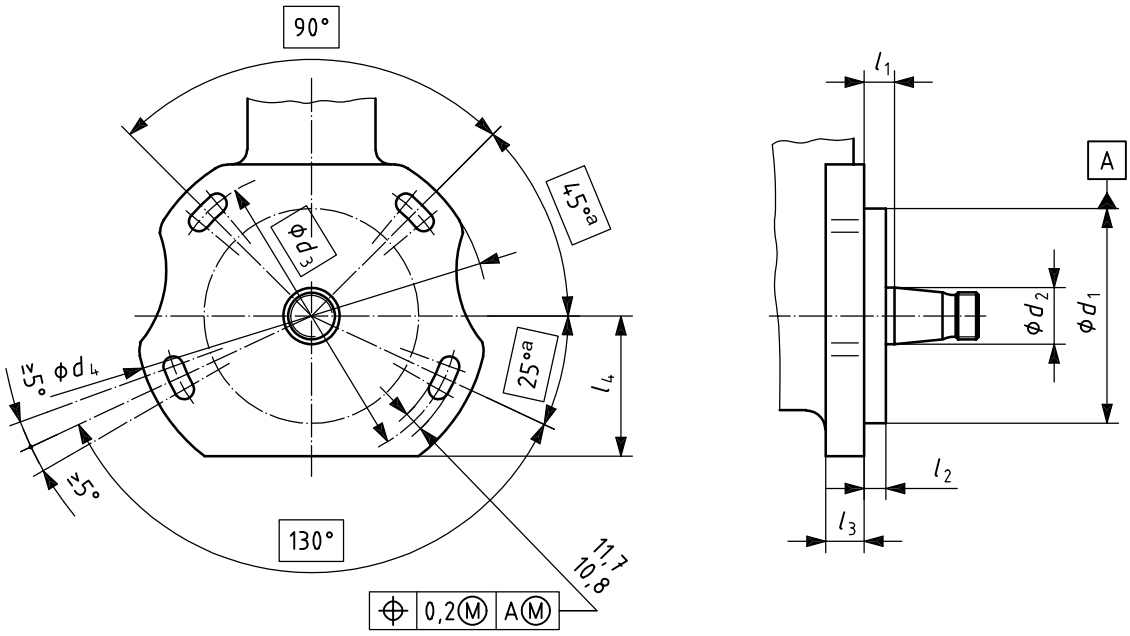
Dimensions in millimetres

d_1	d_2	l_1	l_2	l_3	
g8	nom.	± 0,5	max.	min.	max.
68 or 85	17, 20, 22 or 25	4,5	8,2	15	18
		9,5	8,2		
		12,5	11		
		17,4	16		

3.2.8 Type 8 end-mounting flange

See Figure 8 and Table 8.

Dimensions in millimetres



[a] If it is required to mount a fixed pump, engine manufacturers are encouraged to position the engine studs at true (theoretically correct) angles of 40° above and 20° below the horizontal centreline.

Figure 8 — Fuel injection pumps — Type 8 end-mounting flange

Table 8 — Fuel injection pumps — Type 8 end-mounting flange

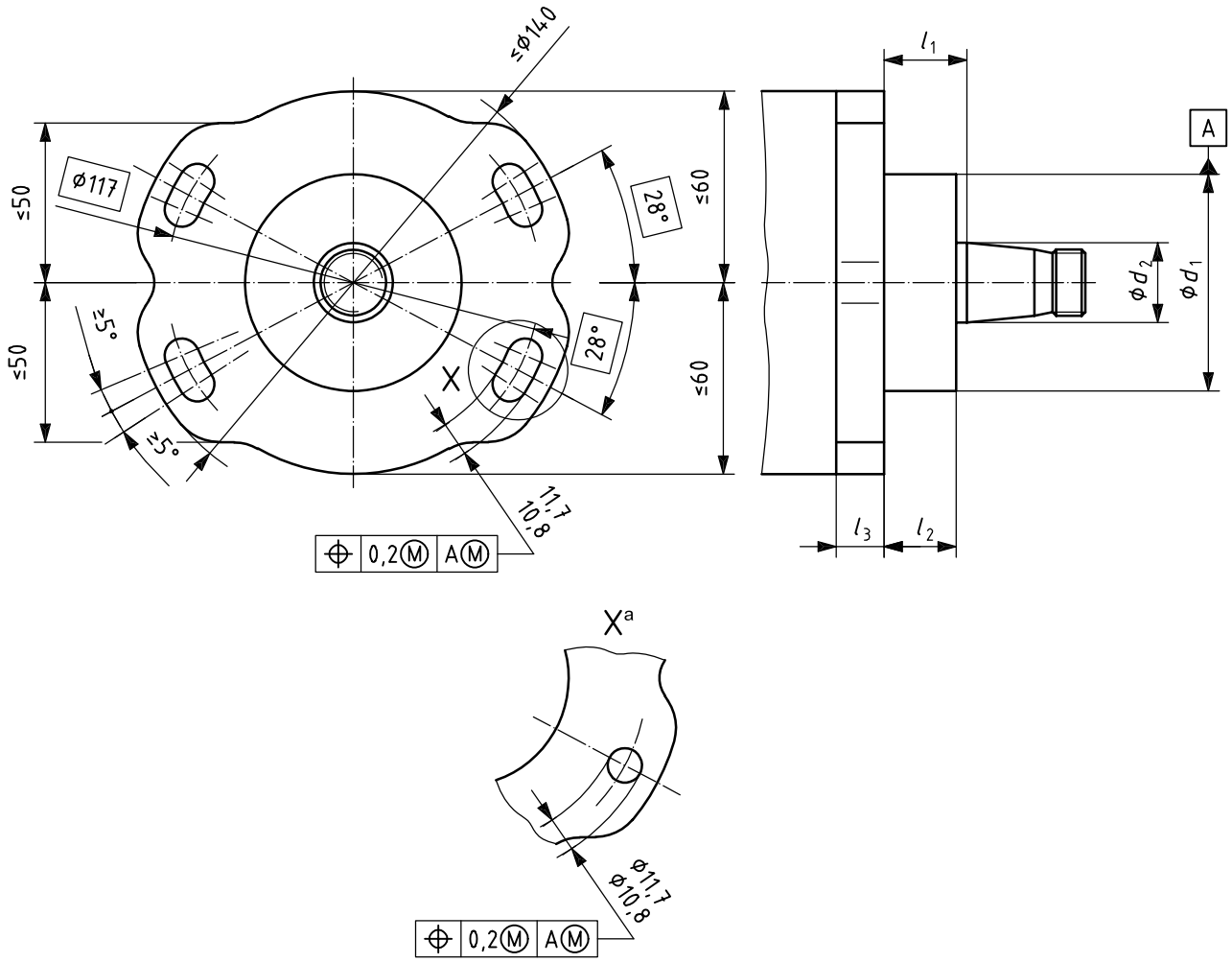
Dimensions in millimetres

d_1 g8	d_2 nom.	l_1 ± 0,5	l_2 max.	l_3 min.	l_3 max.	d_3 nom.	d_4 max.	l_4 max.
95 or 107	20, 25, 30 or 35	9,5	8,2	17	20	130	156	62
		13,5	12 or 20,5					
		18,5	17					
115	35 or 40	13,5	12 or 20,5			140	166	66

3.2.9 Type 9 end-mounting flange

See Figure 9 and Table 9.

Dimensions in millimetres



[a] This is the option with four holes.

Figure 9 — Fuel injection pumps — Type 9 end-mounting flange

Table 9 — Fuel injection pumps — Type 9 end-mounting flange

Dimensions in millimetres

d_1	d_2	l_1	l_2	l_3	
g8	nom.	± 0,5	max.	min.	max.
68 or 85	25	26	24,5	15	18

ICS 43.060.40

Price based on 10 pages