INTERNATIONAL STANDARD

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Clutch housings for reciprocating internal combustion engines — Nominal dimensions and tolerances

Cloches d'embrayage pour moteurs alternatifs à combustion interne — Dimensions nominales et tolérances

Reference number
ISO 7649:1991(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 7649 was prepared by Technical Committee ISO/TC 22, *Road vehicles*.

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Clutch housings for reciprocating internal combustion engines — Nominal dimensions and tolerances

1 Scope

This International Standard specifies the nominal dimensions and tolerances which affect the interchangeability between clutch housings for spring-loaded clutches and mating parts for reciprocating internal combustion engines.

All other dimensions and tolerances are left to the discretion of the component manufacturer.

This International Standard applies to reciprocating internal combustion engines, with the exception of engines for aircraft and passenger cars; it may be used for other engine applications where no specific International Standard exists.

Clutch housings of size codes 1 to 4 in table 1 are recommended for commercial vehicles and buses.

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 286-2:1988, *ISO system of limits and fits — Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts.*

ISO 1101:1983, *Technical drawings — Geometrical tolerancing — Tolerancing of form, orientation, location and run-out — Generalities, definitions, symbols, indications on drawings.*

SAE J499a, *Parallel side splines for soft broached holes in fittings.*

3 Nominal dimensions, tolerances and spacing of clearance holes

3.1 Nominal dimensions and tolerances for the preferred sizes of clutch housings which affect interchangeability shall be as shown in table 1 and figure 1 and figure 2.

The flywheel housing which mates with the clutch housing shown in figure 1 should be in accordance with ISO 7648, *Flywheel housings for reciprocating internal combustion engines — Nominal dimensions and tolerances.*

3.2 The sizes of bearing location diameters, K, and splines shall be selected from table 2.

3.3 For spacing of clearance holes, see table 1 and figure 2. For definitions and symbols for geometrical tolerances, see ISO 1101.

For size code 1, in the case where 24 clearance holes are required, intermediate hole positions shall be used.

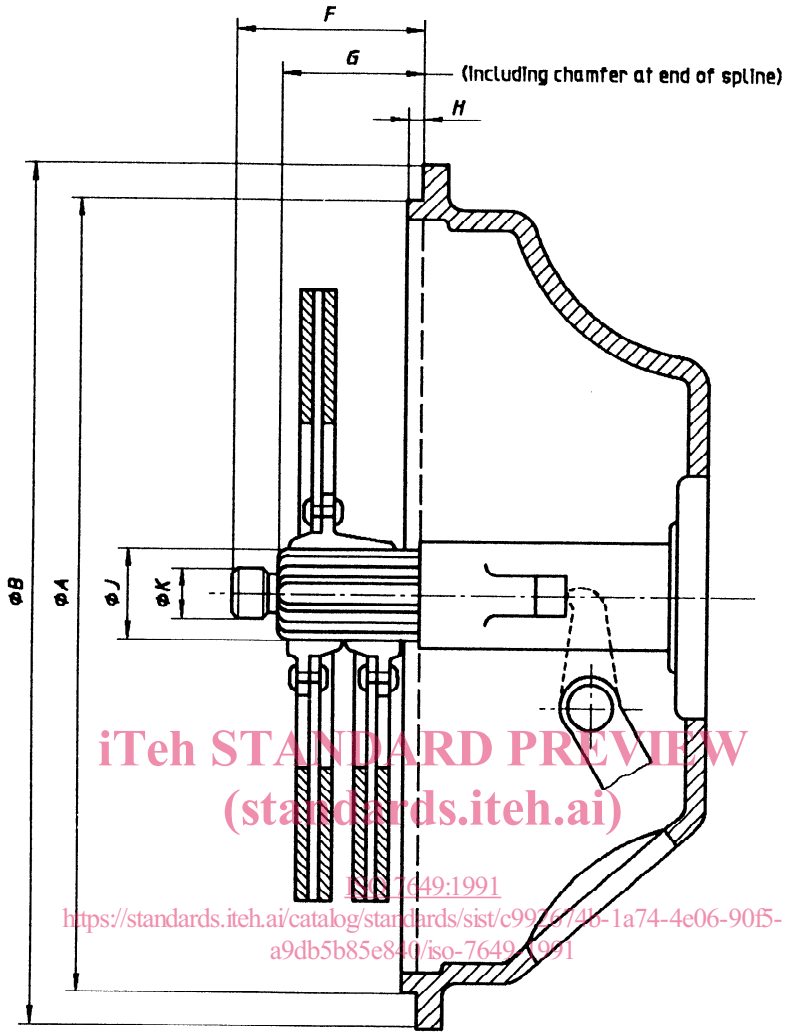

Figure 1 — Clutch housing

Dimensions in millimetres

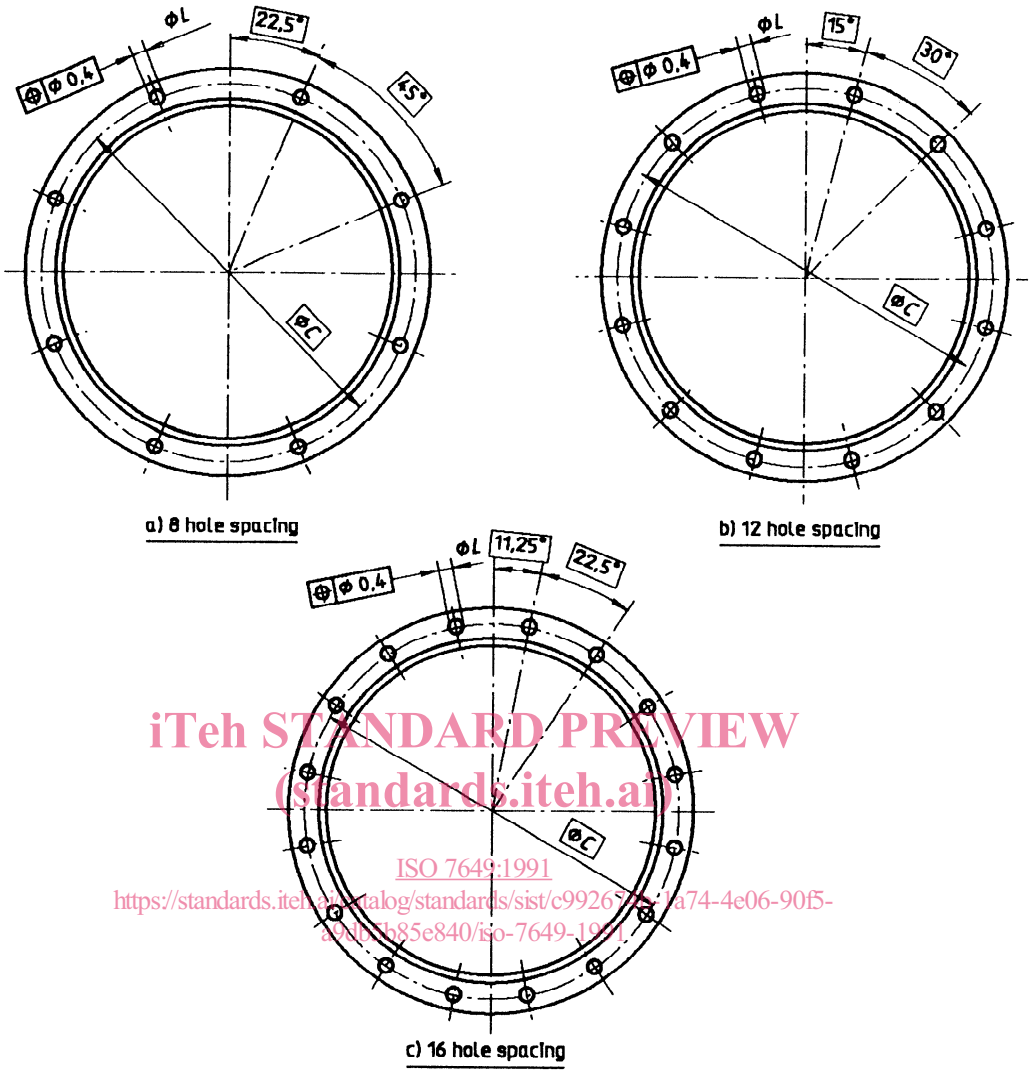

Figure 2 — Bolt/screw spacing

Table 1 — Clutch housing nominal dimensions and tolerances

Dimensions in millimetres

Size code	*A*		*B*	*C*	*F*	Optional *F* dimension for:		*G*	*H*	*L*	No. of clearance holes
		tol.[1]				double plate clutch when extra-heavy flywheel is used	clutch shaft bearing located in pilot bore of flywheel or crank-shaft end			H13[1]	
00	787,4	g8	883	850,9	104	—	—	80	6	13,5	16
0	647,7	g8	711	679,45	104	—	—	80	6	13,5	16
1/2	584,2	g8	648	619,12	104	—	—	80	6	13,5	12
1	511,18	g7	553	530,22	104	137	116	80	6	11[2]	12[3]
2	447,68	g7	489	466,72	104	—	116	80	6	11	12
3	409,58	g7	451	428,62	104	—	—	80	6	11	12
4	361,95	g7	404	381	104	—	—	80	6	11	12
5	314,32	g7	356	333,38	75	—	—	58	6	11	8
6	266,7	g7	308	285,75	75	—	—	58	6	11	8

1) See ISO 286-2.

2) 13,5 mm diameter may be used for high engine torque applications.

3) 24 clearance holes are optional for attachment to aluminium flywheel housing of size code 1.

Table 2 — Bearing location diameters and associated splines

K mm	Spline profile[1] *J* in	ref.
20	1 3/8	SAE 10C[2]
25	1 1/2	
25	1 3/4	
25 or 30[3]	2	

1) The use of involute splines is also permitted if agreed between manufacturer and user.

2) This is the shape type and size specified in SAE J499a.

3) If a 30 mm diameter bearing bore is used, dimension $G = 80$ mm, table 1, is reduced to 78 mm.

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UDC 629.114.4/.5:621.838.2

Descriptors: road vehicles, commercial road vehicles, internal combustion engines, clutches, dimensions, connecting dimensions.

Price based on 4 pages