

Internal Combustion Engines—Piston Rings—Oil Control Rings

This SAE Standard is equivalent to ISO Standard 6625.

1. Scope—Differences, where they exist, are shown in Appendix A.

This SAE Standard specifies the dimensional features of S, G, D, and DV oil control piston ring types.

The normal range for the axial width of oil control rings (2.5 to 8 mm inclusive) is divided into 0.5 or 1.0 increments. In Table 7, dimensions in inch units are given for oil control rings with axial width 4.75 mm (equal to 3/16 in) for existing applications.

The requirements of this document apply to oil control rings for reciprocating internal combustion piston engines up to and including 200 mm in diameter. They may also be used for piston rings of compressors working under similar conditions.

1.1 Rationale—SAE J2002 is being discontinued because the content of this standard is also contained in ISO 6625. Therefore, to eliminate duplication and confusion in coordinating the standards between ISO and SAE, this document will be discontinued. The SAE Piston and Ring Standards Committee will now continue to support ISO in updating the standards as appropriate.

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2. References

2.1 Applicable Publications—The following publications form a part of the specification to the extent specified herein. Unless otherwise indicated the latest revision of SAE publications shall apply.

2.1.1 SAE PUBLICATIONS—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE DESIGNATION	ISO ¹ EQUIVALENT
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INTERNAL COMBUSTION ENGINES—PISTON RINGS

J1588	6621/1	Vocabulary
J1589	6621/2	Measuring principles
J1590	6621/3	Material specifications
J1591	6621/4	General specifications
J1996	6621/5	Quality requirements

INTERNAL COMBUSTION ENGINES—PISTON RINGS

J1997	6622/1	Rectangular rings
J1998	6622/2 TR	Rectangular rings with narrow ring width

J19996623 INTERNAL COMBUSTION ENGINES—PISTON RINGS—SCRAPER RINGS

INTERNAL COMBUSTION ENGINES—PISTON RINGS

J2000	6624/1	Keystone rings
J2001	6624/2 TR	Half keystone rings

J2002	6625	INTERNAL COMBUSTION ENGINES—PISTON RINGS—OIL CONTROL RINGS
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J2003	6626	INTERNAL COMBUSTION ENGINES—PISTON RINGS—COIL SPRING LOADED OIL CONTROL RINGS
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J2004	6627 TR	INTERNAL COMBUSTION ENGINES—PISTON RINGS—EXPANDER/SEGMENT OIL CONTROL RINGS
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J2226		INTERNAL COMBUSTION ENGINES—PISTON RINGS—STEEL RECTANGULAR RINGS
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3. Ring Types and Designation Examples

3.1 Type S—Slotted Oil Control Ring

3.1.1 GENERAL FEATURES

NOTE—See Table 5 or 7 for dimensions and forces.

1. TR refers to Technical Report

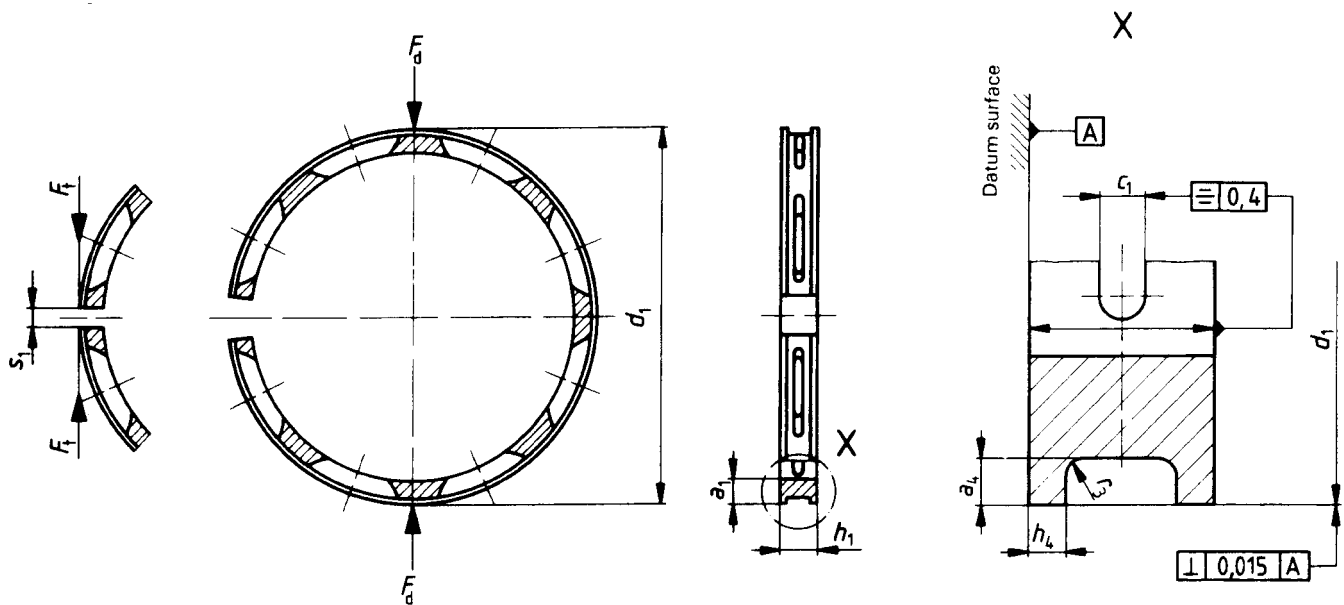


FIGURE 1—TYPE S

3.1.2 DESIGNATION EXAMPLE—Designation of a slotted oil control ring of $d_1 = 90$ mm nominal diameter, $h_1 = 4$ mm ring width, made of grey cast iron, nonheat-treated (material subclass 12), general features as shown in Figure 1, and inside chamfered edges.

3.2 Type G—Double Bevelled Oil Control Ring

3.2.1 GENERAL FEATURES

NOTE—See Table 6 or 7 for dimensions and forces.

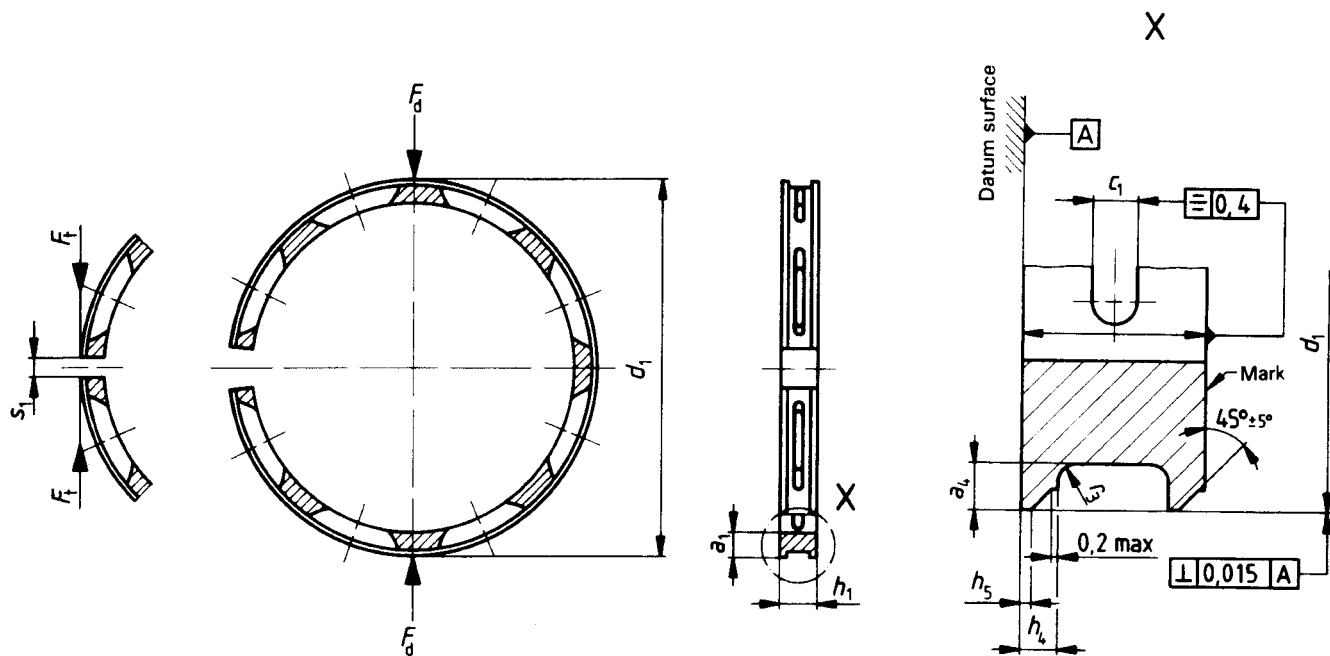


FIGURE 2—TYPE G

3.2.2 DESIGNATION EXAMPLE—Designation of a double bevelled oil control ring of $d_1 = 90$ mm nominal diameter, $h_1 = 4$ mm ring width, made of grey cast iron, nonheat-treated (material subclass 12), general features as shown in Figure 2, and phosphate coated.

3.3 Type D—Bevelled Edge Oil Control Ring

3.3.1 GENERAL FEATURES

NOTE—See Table 6 or 7 for dimensions and forces.

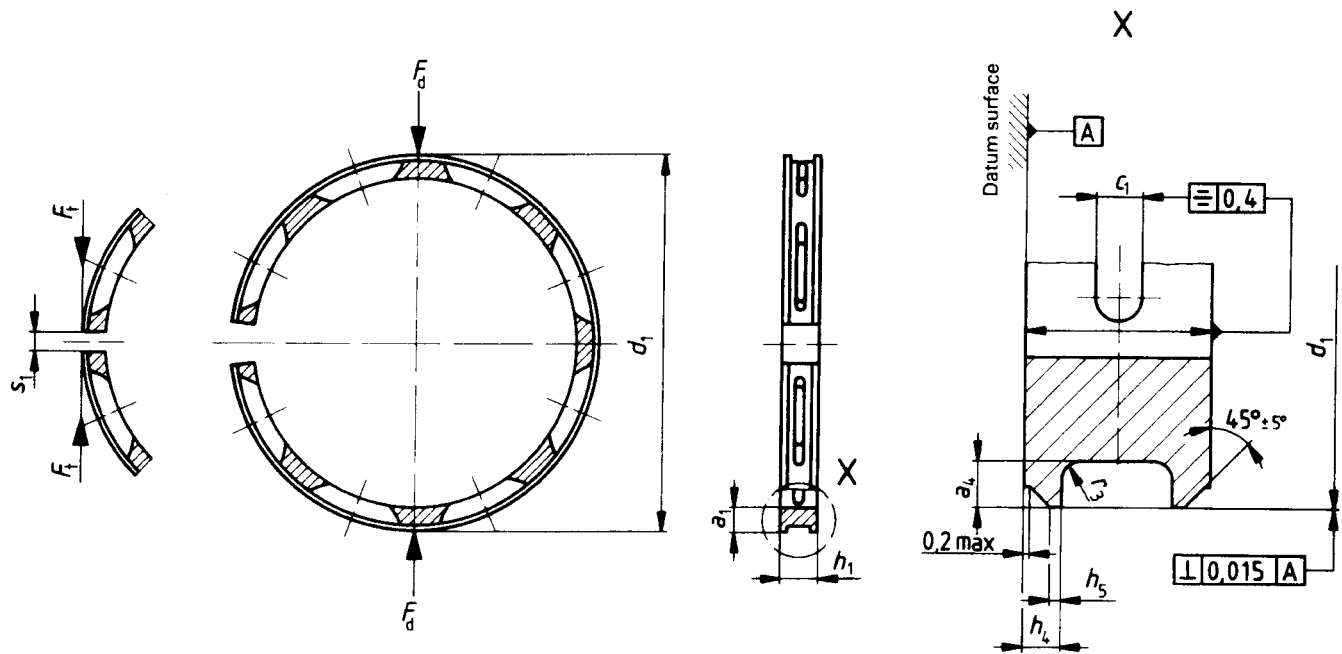


FIGURE 3—TYPE D

3.3.2 DESIGNATION EXAMPLE—Designation of a bevelled edge oil control ring of $d_1 = 90$ mm nominal diameter, $h_1 = 4$ mm ring width, made of grey cast iron, nonheat-treated (material subclass 12), general features as shown in Figure 3.

3.4 Type DV—Bevelled Edge V-Groove Oil Control Ring (Only for Ring Widths $h_1 > 4$ mm)

3.4.1 GENERAL FEATURES

NOTE—See Table 6 or 7 for dimensions and forces.

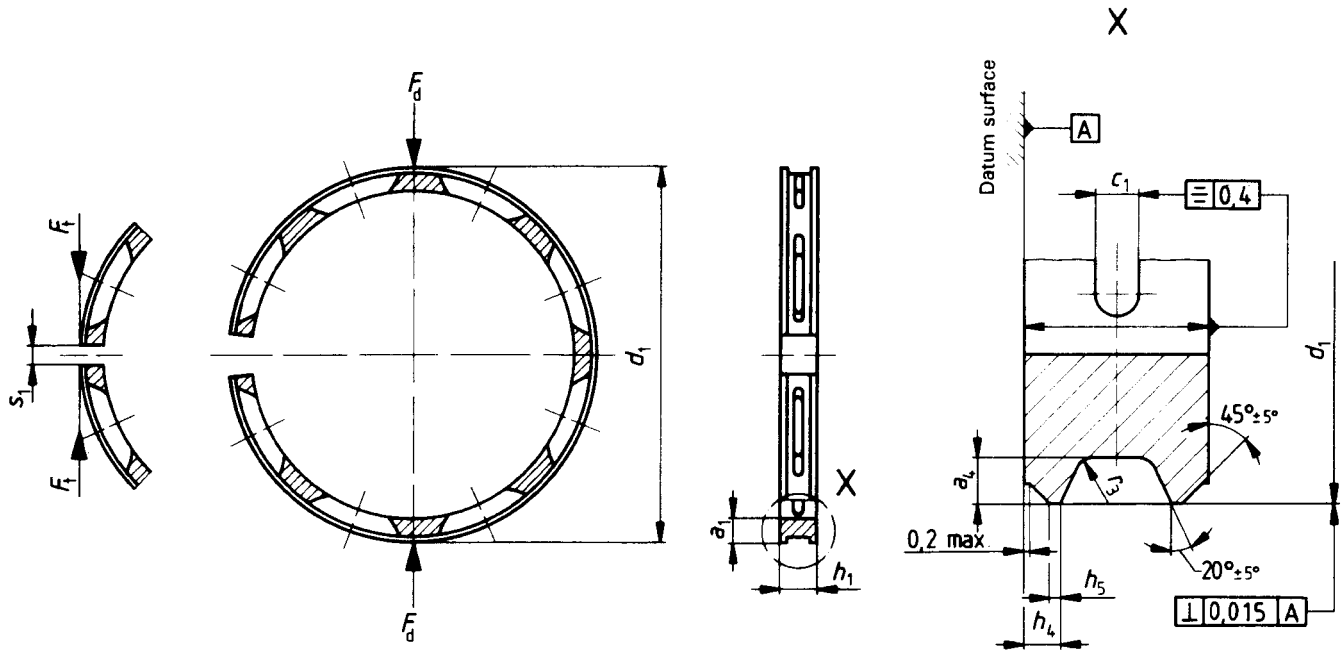


FIGURE 4—TYPE DV

3.4.2 DESIGNATION EXAMPLE—Designation of a bevelled edge V-groove oil control ring of $d_1 = 90$ mm nominal diameter, $h_1 = 4.5$ mm ring width, made of grey cast iron, nonheat-treated (material subclass 12), general features as shown in Figure 4.

4. Common Features

4.1 S, G, D, and DV Rings—Arrangement of Slots

NOTE—See Tables 1 and 2 for dimensions.

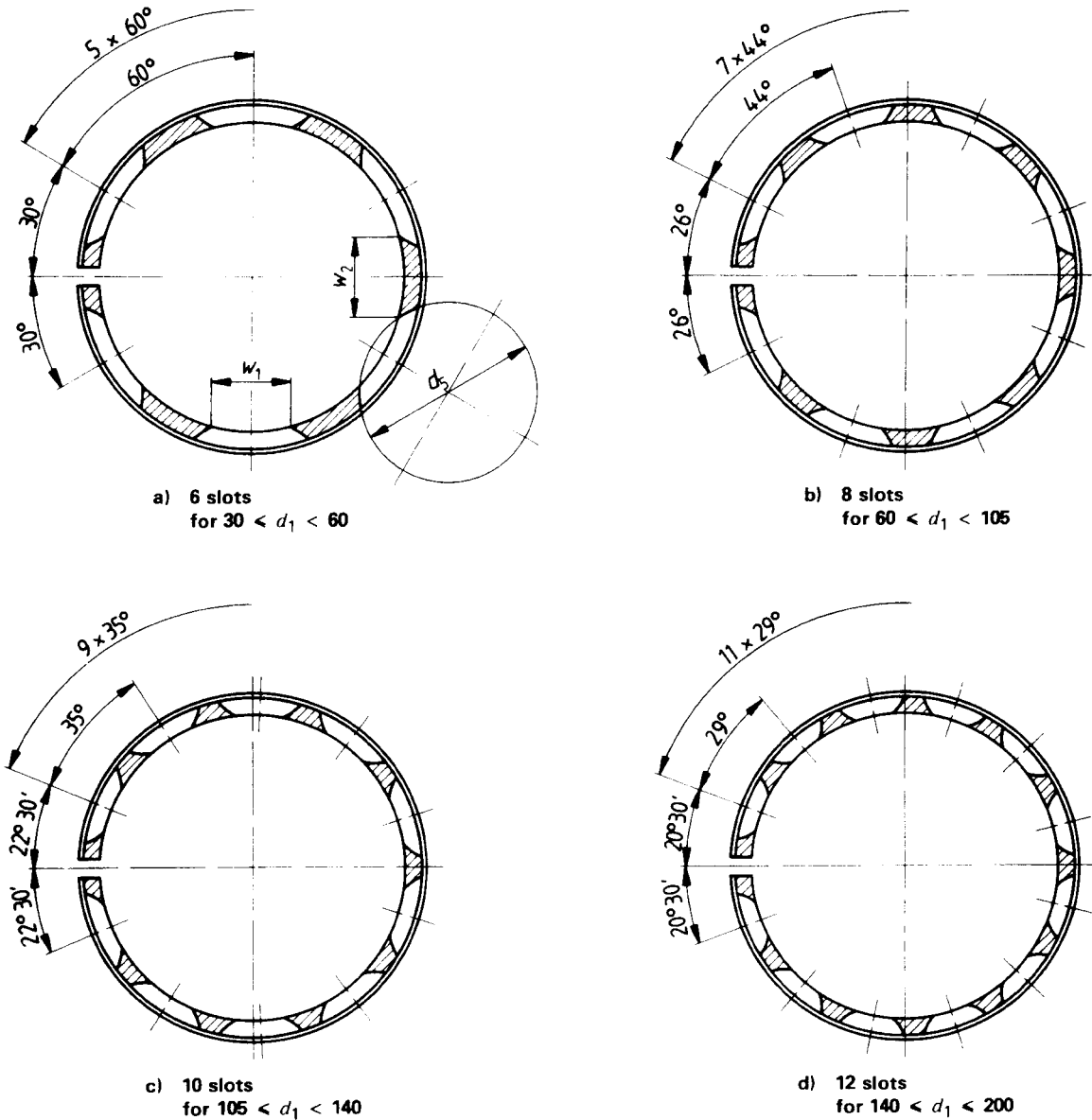


FIGURE 5—ARRANGEMENT OF SLOTS