



SIS - Standardiseringskommissionen i Sverige

Standarden utarbetad av

**SMS, SVERIGES MEKANSTANDARDISERING**

**SVENSK STANDARD SS-ISO 6625**

Första giltighetsdag

Utgåva

Sida

Registrering

1988-04-01

1

1 (20)

**SMS reg 462.1362**

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## Vägfordon – Förbränningsmotorer – Kolvringar – Oljeskraperingar

Denna standard utgörs av den engelska versionen av den internationella standarden ISO 6625-1986.

Av de ISO-standarder som åberopas i standarden är följande överförda till svenska standarder:

ISO 1101	=SS-ISO 1101 (SMS reg 12.55), Form- och lägetoleranser – Allmänt, definitioner, symboler, ritningsangivning, E + Sv
ISO 6621/1	=SS-ISO 6621/1 (SMS reg 462.1304), Vägfordon – Förbränningsmotorer – Kolvringar – Engelsk terminologi, E
ISO 6621/2	=SS-ISO 6621/2 (SMS reg 462.134), Bilar – Förbränningsmotorer – Kolvringar – Kontrollmetoder, E
ISO 6621/3	=SS-ISO 6621/3 (SMS reg 462.132), Bilar – Förbränningsmotorer – Kolvringar – Del 3: Materialspecifikationer, E
ISO 6622/1	=SS-ISO 6622/1 (SMS reg 462.1352), Vägfordon – Förbränningsmotorer – Kolvringar – Ringar med rektangulärt tvärsnitt, E

E betecknar engelsk text, Sv svensk.

## Internal combustion engines – Piston rings – Oil control rings

This Swedish standard consists of the English version of the International Standard ISO 6625-1986.

Of the ISO standards referred to in this standard the following are adopted in Swedish standards:

E indicates English text, Sv Swedish text.

# Internal combustion engines – Piston rings – Oil control rings

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## 0 Introduction

ISO 6625 is one of a series of International Standards dealing with piston rings for reciprocating internal combustion engines:

ISO 6621, *Internal combustion engines – Piston rings –*

*Part 1: Vocabulary.*

*Part 2: Measuring principles.*

*Part 3: Material specifications.*

*Part 4: General specifications.<sup>1)</sup>*

*Part 5: Quality requirements.<sup>1)</sup>*

ISO 6622, *Internal combustion engines – Piston rings –*

*Part 1: Rectangular rings.*

*Part 2: Rectangular rings with narrow ring width.<sup>2)</sup>*

ISO 6623, *Internal combustion engines – Piston rings –  
Scrapper rings.*

ISO 6624, *Internal combustion engines – Piston rings –*

*Part 1: Keystone rings.*

*Part 2: Half keystone rings.<sup>3)</sup>*

ISO 6625, *Internal combustion engines – Piston rings – Oil  
control rings.*

ISO 6626, *Internal combustion engines – Coil spring loaded oil  
control rings.<sup>1)</sup>*

The common features and dimensional tables presented in this International Standard constitute a broad range of variables, and the designer, in selecting a particular ring type, shall bear in mind the conditions under which it will be required to operate.

It is also essential that the designer refers to the specifications and requirements of ISO 6621/3 and ISO 6621/4, before completing his selection.

## 1 Scope and field of application

This International Standard specifies the essential 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 mm 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 International Standard apply to oil control rings for reciprocating internal combustion piston engines, up to and including 200 mm diameter. It may also be used for piston rings of compressors working under similar conditions.

## 2 References

(The ISO standards adopted in Swedish standards are also given on page 1.)

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

ISO 6621, *Internal combustion engines – Piston rings –*

*Part 3: Material specifications.*

*Part 4: General specifications.<sup>1)</sup>*

1) At present at the stage of draft.

2) At present at the stage of draft (will be published as a Technical Report).

3) In preparation (will be published as a Technical Report).

### 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.

Dimensions in millimetres

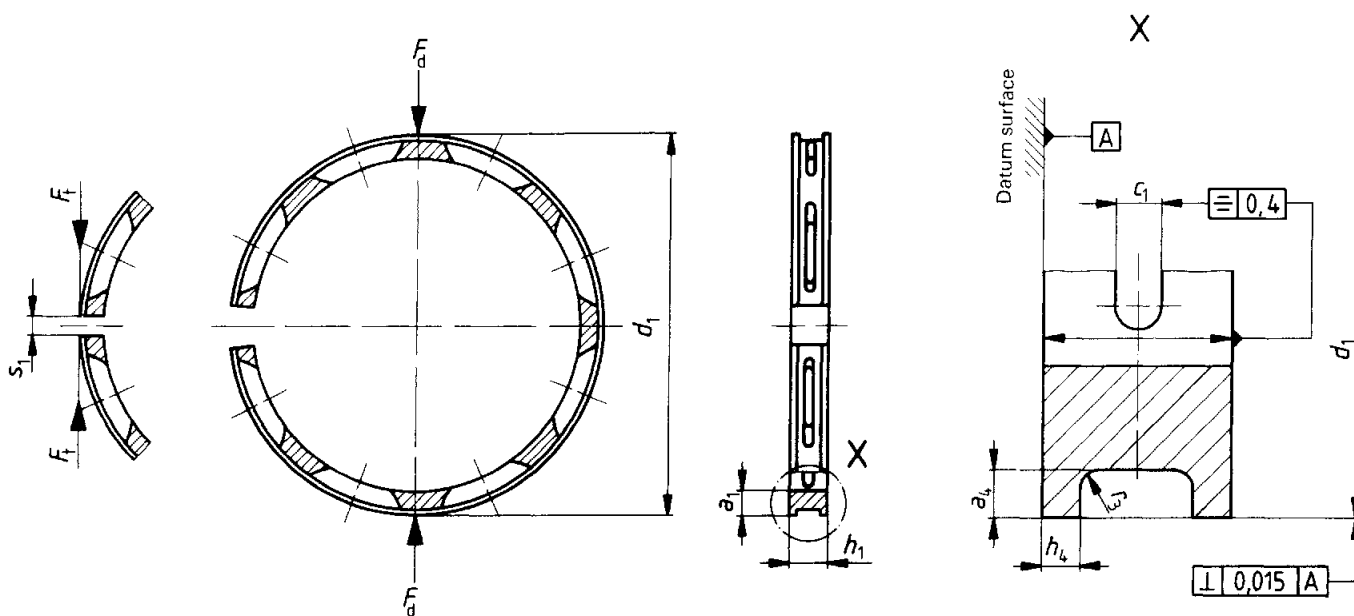


Figure 1 – Type S

##### 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, non-heat-treated (material subclass 12), general features as shown in figure 1, and inside chamfered edges:

**Piston ring ISO 6625 - S - 90 × 4 - MC12 KI**

### 3.2 Type G – Double-bevelled oil control ring

#### 3.2.1 General features

NOTE – See table 6 or 7 for dimensions and forces.

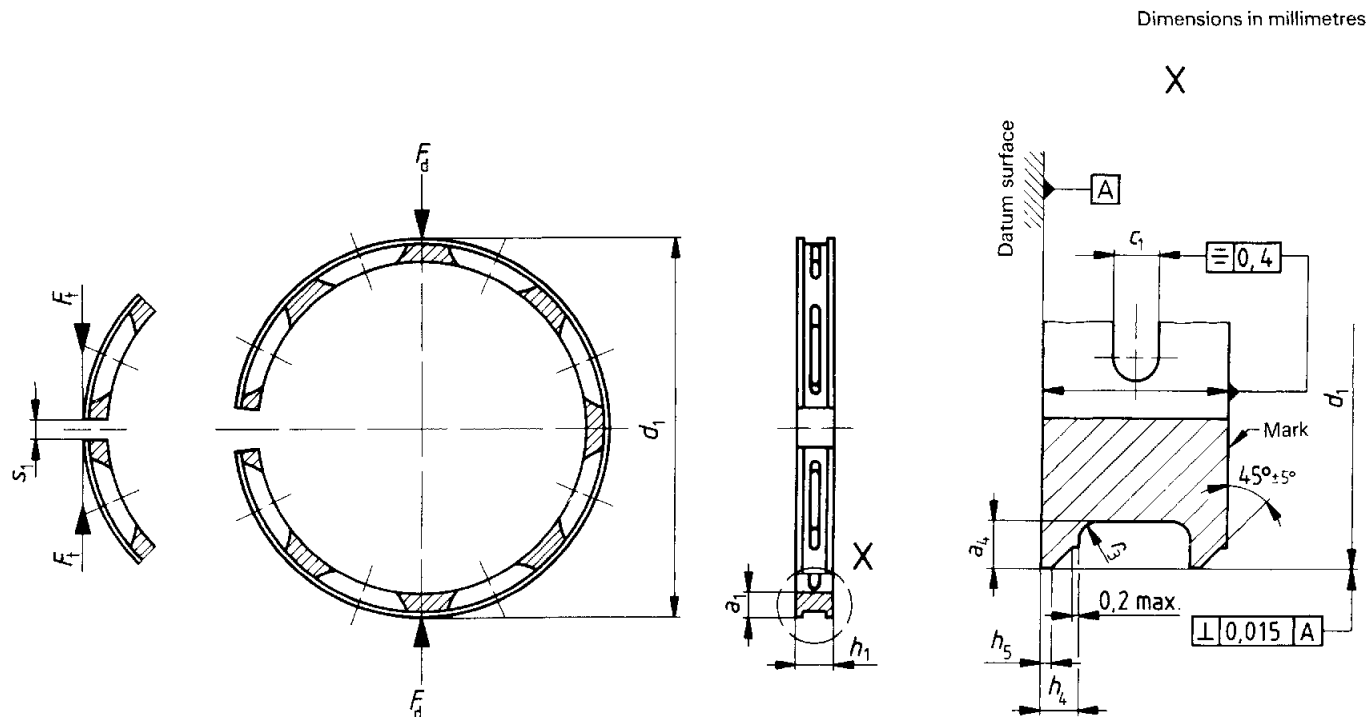


Figure 2 – Type G

#### 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, non-heat-treated (material subclass 12), general features as shown in figure 2, and phosphated all over:

**Piston ring ISO 6625 - G - 90 × 4 - MC12 PO**

### 3.3 Type D – Bevelled-edge oil control ring

#### 3.3.1 General features

NOTE – See table 6 or 7 for dimensions and forces.

Dimensions in millimetres

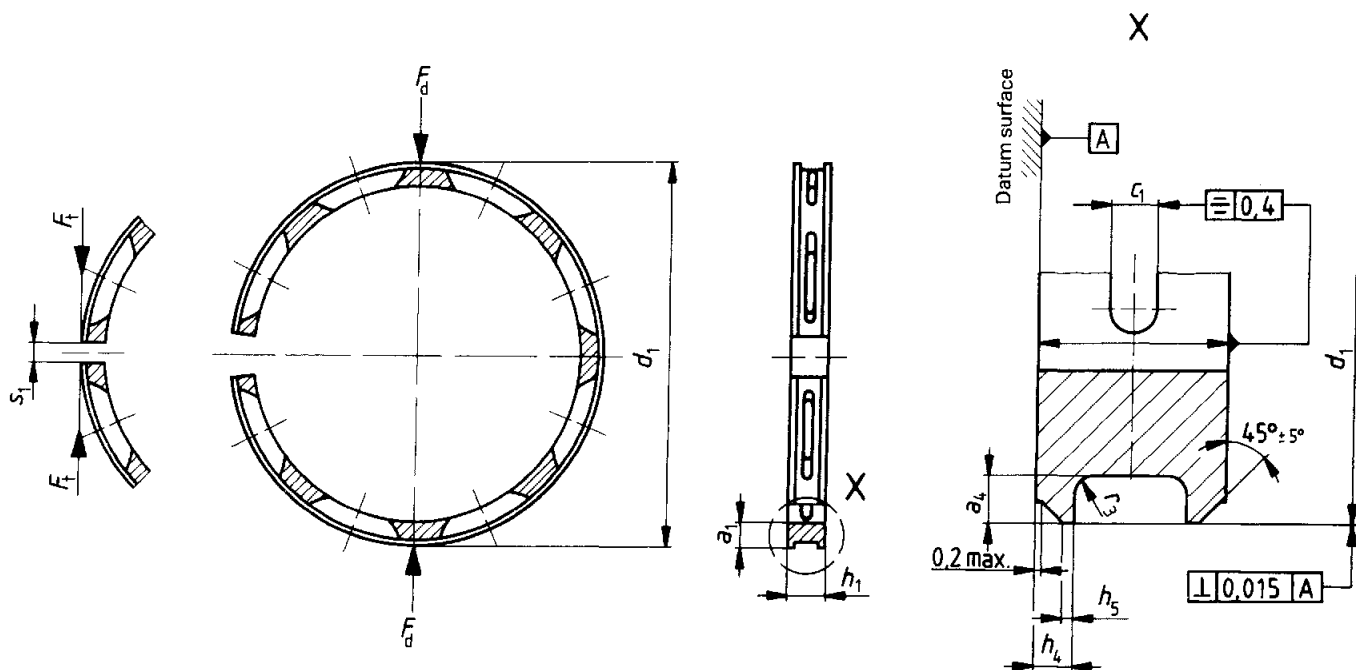


Figure 3 – Type D

#### 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, non-heat-treated (material subclass 12), general features as shown in figure 3:

**Piston ring ISO 6625 - D - 90 × 4 - MC12**

### 3.4 Type DV – Bevelled-edge V-groove oil control ring (only for ring widths $h_1 \geq 4$ mm)

#### 3.4.1 General features

NOTE – See table 6 or 7 for dimensions and forces.

Dimensions in millimetres

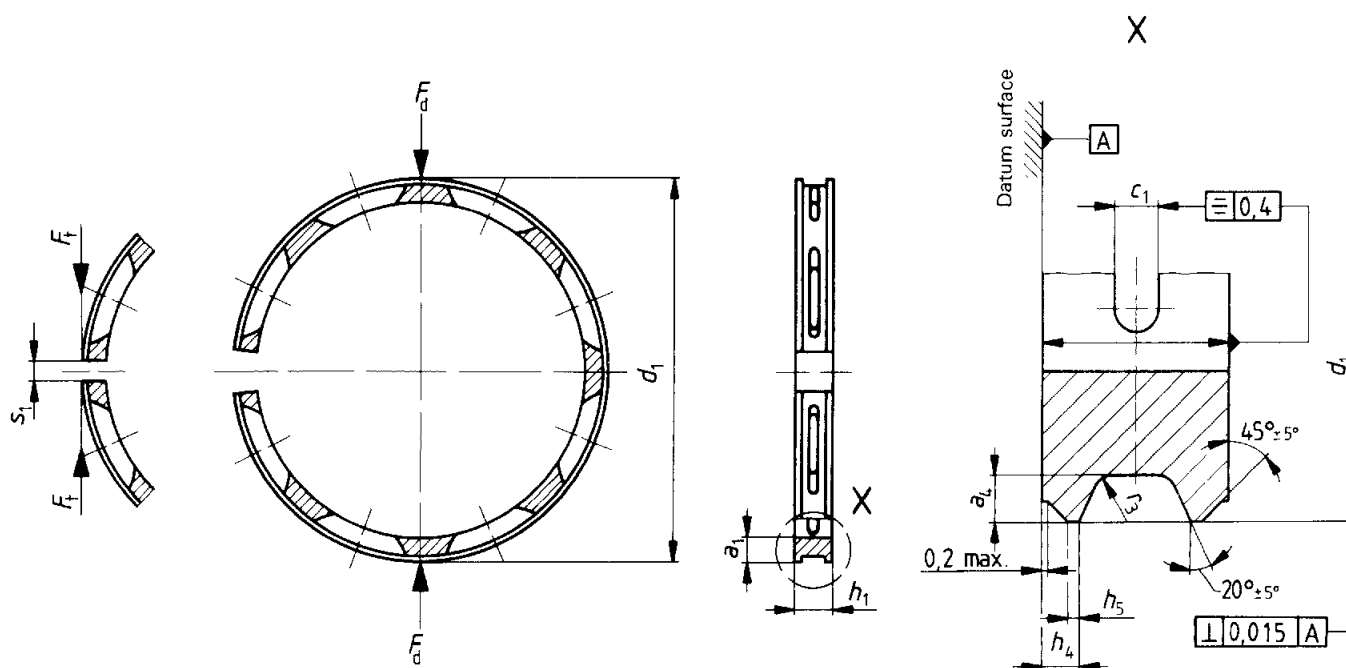


Figure 4 – Type DV

#### 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, non-heat-treated (material subclass 12), general features as shown in figure 4:

**Piston ring ISO 6625 - DV - 90 × 4,5 - MC12**

## 4 Common features

### 4:1 S-, G-, D- and DV-rings – Arrangement of slots

Dimensions in millimetres

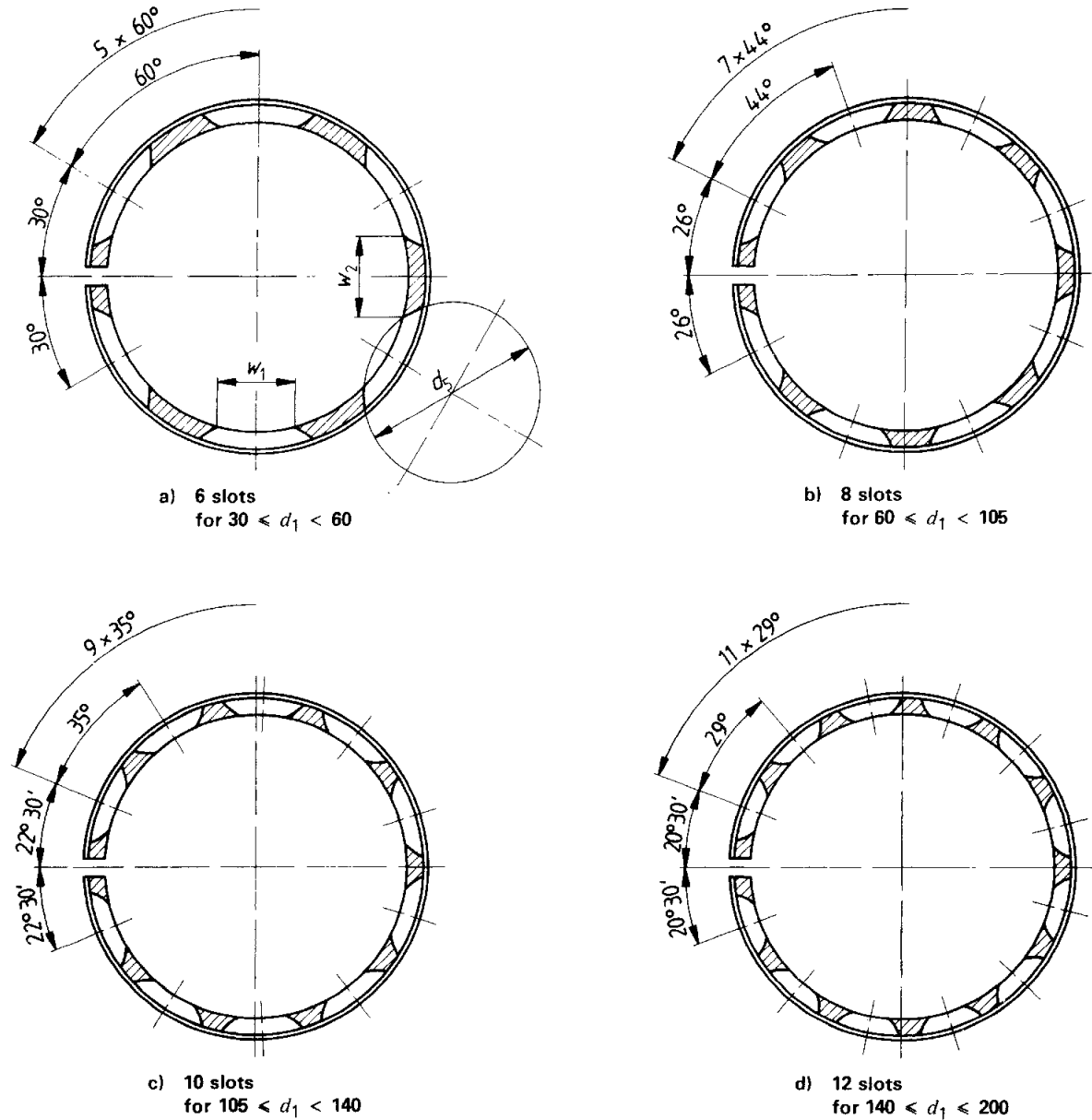


Figure 5 – Arrangement of slots

Table 1 – Cutter diameter

Dimensions in millimetres

$d_1$	Cutter diameter $d_5$ max.
$30 < d_1 < 50$	55
$50 < d_1 < 170$	60
$170 < d_1 < 200$	75

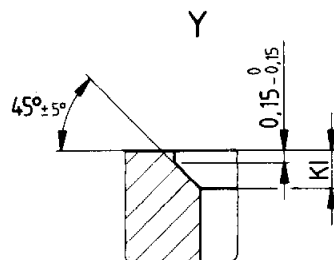
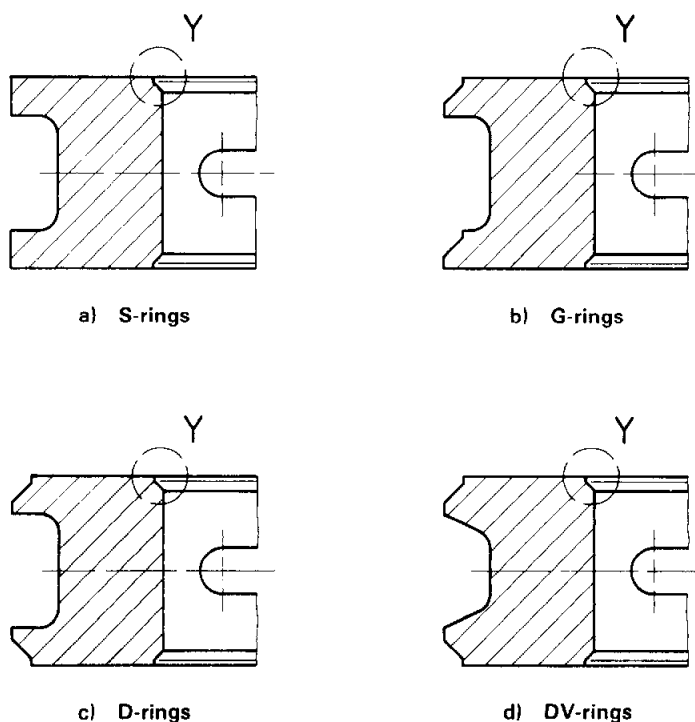
Table 2 – Slot length

Dimensions in millimetres

$d_1$	Slot length		Permissible difference between $w_1$ and $w_2$
	$w_1$	Tolerance	
$30 < d_1 < 36$	5	$\pm 2$	–
$36 < d_1 < 40$	6	$\pm 2$	–
$40 < d_1 < 50$	8	$\pm 2$	–
$50 < d_1 < 170$	$w_1 = w_2$	–	2
$170 < d_1 < 200$	$w_1 = w_2$	–	4

4.2 S-, G-, D- and DV-rings – Inside chamfered edges (KI)

Dimensions in millimetres



Nominal KI > 0,3

Figure 6 – Inside chamfered edges

Table 3 – KI dimensions

Dimensions in millimetres

$d_1$	KI
$30 < d_1 < 125$	$0,3 \pm 0,15$
$125 < d_1 < 175$	$0,4 \pm 0,15$
$175 < d_1 < 200$	$0,6 \pm 0,2$