ISO 6626-1:2024-07 (E)

Internal combustion engines - Piston rings - Part 1: Coil spring loaded oil control rings made of cast iron

Contents

Page

Foreword v

Introduction vi

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 1

4 Overview 1

5 Piston ring types and designation 2
5.1 Types DSF-C, DSF-CNP, SSF, GSF, DSF, DSF-NG and SSF-L -- General features and dimensions 2
5.2 Type DSF-C Coil-spring loaded bevelled edge oil control ring, chromium plated and profile ground 2
5.2.1 General features and dimensions 2
5.2.2 Example designation of a type DSF-C piston ring in accordance with this document 3
5.3 Type DSF-CNP Coil-spring loaded bevelled edge oil control ring, chromium plated not profile ground 3
5.3.1 General features and dimensions 3
5.3.2 Example designation of a type DSF-CNP piston ring in accordance with this document 4
5.4 Type SSF Coil-spring loaded slotted oil control ring 4
5.4.1 General features and dimensions 4
5.4.2 Example designation of a type SSF piston ring in accordance with this document 5
5.5 Type GSF Coil-spring loaded double bevelled oil control ring 5
5.5.1 General features and dimensions 5
5.5.2 Example designation of a type GSF piston ring in accordance with this document 6
5.6 Type DSF Coil-spring loaded bevelled edge oil control ring 6
5.6.1 General features and dimensions 6
5.6.2 Example designation of a type DSF piston ring in accordance with this document 7
5.7 Type DSF-NG Coil-spring loaded bevelled edge oil control ring (face geometry similar to type DSF-C or type DSF-CNP) 7
5.7.1 General features and dimensions 7
5.7.2 Example designation of a type DSF-NG piston ring in accordance with this document 8
5.8 Type SSF-L Coil-spring loaded slotted oil control ring with h1 = 4,75 mm (3/16 in) ring width and 0,6 mm nominal land width 8
5.8.1 General features and dimensions 8
5.8.2 Example designation of a type SSF-L piston ring in accordance with this document 9

6 Common features 9
6.1 Oil drainage by slots or holes 9
6.1.1 Arrangement of slots 9
6.1.2 Slot length 11
6.1.3 Arrangement of holes 11
6.1.4 Diameter and number of holes 11
6.2 Plating thickness -- DSF-C and DSF-CNP Coil-spring loaded oil control rings 11
6.3 Peripheral edges at gap of chromium plated oil control rings 12
6.4 Spring groove and land offsets 12

7 Coil springs 12
7.1 Types of coil spring 12
7.2 Latch pin and location of small pitch in the coil spring 14
7.3 Coil spring excursion (extended gap) 14
7.4 Position of coil spring gap and fixing 15

7.5 Material 15

8 Tangential force and nominal contact pressure 15
8.1 Tangential force, Ft 15
8.1.1 Force factors 15
8.1.2 General tangential force, Ft 16
8.1.3 Actual tangential force, Ft, and tolerance 16
8.1.4 Normalized tangential force, FN 16
8.2 Nominal contact pressure, po 16

9 Dimensions 16

Annex A (informative) Historical classes of nominal contact pressure, po 78

Bibliography 80