



SLOVENSKI STANDARD

SIST ISO 6743-3:2006

01-september-2006

**Maziva, industrijska olja in sorodni proizvodi (skupina L) – Klasifikacija – 3. del:
Podskupina D (kompresorji)**

Lubricants, industrial oils and related products (class L) -- Classification -- Part 3: Family D (Compressors)

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Lubrifiants, huiles industrielles et produits connexes (classe L) -- Classification -- Partie 3: Famille D (Compresseurs)

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Maziva

Lubricants, industrial oils and related products

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INTERNATIONAL STANDARD

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6743-3

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2003-10-15

Lubricants, industrial oils and related products (class L) — Classification —

Part 3: Family D (Compressors)

*Lubrifiants, huiles industrielles et produits connexes (classe L) —
Classification —*

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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 6743-3 was prepared by Technical Committee ISO/TC 28, *Petroleum products and lubricants*, Subcommittee SC 4, *Classifications and specifications*.

This first edition combines, cancels and replaces the first editions of ISO 6743-3A:1987 and ISO 6743-3B:1988, which have been technically revised.

ISO 6743 consists of the following parts, under the general title *Lubricants, industrial oils and related products (class L) — Classification*:

- Part 1: Family A (*Total loss systems*)
- Part 2: Family F (*Spindle bearings, bearings and associated clutches*)
- Part 3: Family D (*Compressors*)
- Part 4: Family H (*Hydraulic systems*)
- Part 5: Family T (*Turbines*)
- Part 6: Family C (*Gears*)
- Part 7: Family M (*Metalworking*)
- Part 8: Family R (*Temporary protection against corrosion*)
- Part 9: Family X (*Greases*)
- Part 10: Family Y (*Miscellaneous*)
- Part 11: Family P (*Pneumatic tools*)
- Part 12: Family Q (*Heat transfer fluids*)
- Part 13: Family G (*Slideways*)
- Part 14: Family U (*Heat treatment*)

ISO 6743-3:2003(E)

- *Part 15: Family E (Internal combustion engine oils)*
- *Part 99: General*

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Lubricants, industrial oils and related products (class L) — Classification —

Part 3: Family D (Compressors)

1 Scope

This part of ISO 6743 establishes the detailed classification of lubricants for use in family D, air compressors, gas compressors and refrigeration compressors.

The intention of this part of ISO 6743 is to provide a rationalized range of the most commonly used internationally available lubricants for air, gas and refrigeration compressors, without resorting to unnecessary restriction by specifications or products description.

The primary intention of this classification is to describe and promote the use of the type of lubricant which is best suited for the particular application, specifically with stationary air compressors, with the aim of reducing as far as possible the risks of fire and explosion. Relevant safety rules are given in ISO 5388.

ISO 5388 as published in 1991 should be revised to reflect the change from light, medium and heavy duty cycles to normal and severe duty cycles as described in this edition of ISO 6743-3.

This part of ISO 6743 should be read in conjunction with ISO 6743-99¹⁾.

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 3448:1992, *Industrial liquid lubricants — ISO viscosity classification*

ISO 5388, *Stationary air compressors — Safety rules and code of practice*

ISO 8681:1986, *Petroleum products and lubricants — Method of classification — Definition of classes*

1) ISO 6743-99:2002, *Lubricants, industrial oils and related products (class L) — Classification — Part 99: General*

ISO 6743-3:2003(E)

3 Explanation of systems used

3.1 The detailed classification of family D has been established by defining the categories of products required for the main applications of this family.

3.2 Each category is designated by a symbol consisting of a group of letters, which together constitute a code.

NOTE The first letter of the code "D" identifies the family of the product considered but the second and third letters taken separately have no significance of their own.

The designation of each category may be supplemented by the addition of viscosity grades according to ISO 3448.

3.3 In this classification system, products are designated in a uniform manner in accordance with ISO 8681. For example, a particular product may be designated in a complete form, e.g., ISO-L-DAB 68, or in an abbreviated form, e.g., L-DAB 68, the number indicating the viscosity grade according to ISO 3448.

Table 1 — Classification of lubricants for air compressors

Code letter	General application	Particular application	More specific application	Product type and/or performance requirements	Symbol ISO-L	Typical applications	Remarks
D	Air compressors	Positive displacement air compressors with oil-lubricated compression chambers	Reciprocating crosshead and trunk pistons or Rotary drip feed (vane)	Normally highly refined mineral oils, may be semi-synthetic or full synthetic fluids	DAA	Normal duty	See Annex A
				Normally specially formulated semi-synthetic or fully synthetic fluids, may be specially formulated highly refined mineral oils	DAB	Severe duty	
			Rotary oil-flooded (vane and screw compressors)	Mineral oils, may be highly refined mineral oils	DAG	Lubricant drain cycles of $\leq 2\ 000$ h	
				Normally specially formulated highly refined mineral oils or semi-synthetic fluids	DAH	Lubricant drain cycles of $> 2\ 000$ h and $\leq 4\ 000$ h	
			Normally specially formulated semi-synthetic or fully synthetic fluids	DAJ	Lubricant drain cycles of $> 4\ 000$ h		
		Positive displacement air compressors with oil-free compression chambers	Liquid-ring compressors and water-flooded vane and screw compressors Reciprocating oil-free compressors Rotary oil-free compressors				Lubricants suitable for gears, bearings and transmissions

Table 1 (continued)

Code letter	General application	Particular application	More specific application	Product type and/or performance requirements	Symbol ISO-L	Typical applications	Remarks
		Dynamic compressors	Radial and axial turbo-compressors				Lubricants suitable for bearings and gears
	Vacuum pumps	Positive displacement vacuum pumps with oil-lubricated compression chambers	Reciprocating and rotary drip feed Rotary oil-flooded (vane and screw)		DVA	Low vacuum for non-aggressive gas	Low vacuum is 10^2 to 10^{-1} kPa (10^3 to 1 mbar)
				DVB	Low vacuum for aggressive gas		
			Oil-sealed vacuum pumps (sliding vane, rotary and rotary plunger)		DVC	Medium vacuum for non-aggressive gas	Medium vacuum is 10^{-1} to 10^{-4} kPa (1 to 10^{-3} mbar)
				DVD	Medium vacuum for aggressive gas		
				DVE	High vacuum for non-aggressive gas	High vacuum is 10^{-4} to 10^{-8} kPa (10^{-3} to 10^{-7} mbar)	
	DVF	High vacuum for aggressive gas					

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