Seal part numbering system description

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Tech tip

SKF developed and patented its seal part numbering system as a support tool for its customers. The part number identifies the approximate shaft size for the seal it is designed to fit on. Here is how they work:

Small Diameter Oil Seals – the approximate shaft size is indicated by inserting a decimal point to the left of the last four digits in the number. For example, 20425 (2.0425) indicates a 2.040" shaft. Metric shaft sizes are cataloged by their INCH equivalents in the inch size listing section. A complete size listing of metric seals arranged by metric shaft, bore and widths can be found in the Metric-Complete size listing section of the Seal Handbook (457010).

Large Diameter Oil Seals (over 10") – the approximate shaft size is indicated by inserting a decimal point to the left of the last five digits. For example, 1600560 (16.00560) indicates a 16" shaft. Large Diameter and split seals under 10.000" (254 mm), as well as all axial clamp type seals, are listed under the assigned 500,000 series part numbers which do not relate to shaft size.

Speedi-Sleeves – the approximate shaft size is indicated by inserting a decimal point to the left of the last two digits in the number. For example, 99300 (993.00) indicates a 3.00" shaft.

V-Rings – the shaft size is indicated in metric dimensions within the stock number. Locate the fifth digit from the left to determine the approximate shaft size. For example, 400180 (400180) indicates a 18MM shaft and 401800 (4**01800**) indicates a 180MM shaft size.

When a counterperson is looking for a seal by dimension, it is simply a matter of going to the proper shaft size location in the Oil seal specifications manual, or checking the shelf in the proper numerical sequence location.

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What are polyacrylate and nitrile seals?

Tech tip

Polyacrylate seals

Polyacrylates are elastomers that are compatible with higher operating temperatures, as well as extreme pressure (EP) lubricants. They are available in most general purpose designs.

Advantages of polyacrylate seals:

- Good compatibility with most oils, including EP lubricants
- High resistance to oxidation and ozone
- Better compatibility with higher operating temperatures than nitrile
- Operating range from -40 degrees F to 300 degrees F

Disadvantages of polyacrylate seals:

- Low compatibility with water and some industrial fluids
- Poor compression set characteristics

Polyacrylates are generally black with the same appearance as nitrile. Nitrile, silicone or fluoroelastomers can be used as substitute materials.

What are polyacrylate and nitrile seals?-cont.

Nitrile seals

Nitrile is the most popular material for the major applications of today's automotive seals. It is actually a mixture of two basic synthetic rubbers, Buna and Acrylonitrile polymers. Synthetic lip materials are bonded to the metal shell (case) to prevent leakage between the sealing lip and the shell; this provides a longer lasting, more effective seal. Different properties are obtained by changing the percentage of each polymer used in the mixture.

Nitrile seals have advantages and disadvantages – these should be reviewed and understood for your specific application choice.

Advantages of nitrile seals:

- Good oil/grease compatibility
- Abrasion resistance
- Good low temperature and swell characteristics
- Good manufacturing qualities
- Relatively low in cost

Disadvantages of nitrile seals:

- Lacks compatibility with synthetic oils
- Not recommended with EP lubes at elevated temperatures