

SKF SEAL JET 200 PRO

A full package allowing CNC-trained operators to produce seals on-site

SKF SEAL JET 200 PRO is a compact turning machine, enabling SKF partners to custom-machine industrial seals up to 200 mm outside diameter. The new model can produce over 180 different seal profiles – within a few minutes – for hydraulic, pneumatic, static and rotary applications.

The full package includes the necessary machining tools and advanced materials to produce customized seals on demand, according to specific needs. This reduces the need to stock standard seals – while allowing fast replacement of non-standard sizes.

SEAL JET 200 PRO acts as a link between the SEAL JET DD – which is easy to operate – and more sophisticated models, which require an experienced CNC operator.

SKF builds on a network of long-term SEAL JET 200 PRO partners, including existing users of other SEAL JET models. While SKF supplies the machinery and materials, the partners will provide customized seals to their customers.

Machined SKF seals available on-site

The SEAL JET 200 PRO produces a wide range of seal profiles using proprietary polymeric materials. A semi-finished tube of one of 26 'standard' materials can be machined into a desired seal design by the unit's high-precision cutting tools. More than 70 'customized' materials are also available on demand.



The SKF SEAL JET 200 PRO system

The SEAL JET 200 PRO uses Computer Numerical Control (CNC) to machine seals on a just-in-time basis. The unit features proprietary software and high-precision cutting tools.

The system produces a wide range of SKF sealing solutions and profiles. Thanks to technical and sales support, distributors and end-users have access to the full portfolio of customized and standard sealing solutions from SKF.

The package also includes training on the SEAL JET 200 PRO machine and software, sealing and material technology, and industrial seal products from SKF.

Benefits

A special CNC lathe is used to turn the elastomeric materials. The unit occupies less than 1 m² of floor space, making it highly compact and easy to move and install.

- Can produce more than 180 designs of seal/profile
- Wide range of materials, industry specific available on demand
- Availability of standard seals in non-standard dimensions
- Reduced stock and order handling costs – with no need to stock single/low volume seals
- Seals produced in minutes – and available on-site within an hour
- CNC control unit with free programming enables full customization of every seal design
- Compact design – for easy movement/installation – requiring less than 1 m² of floor space
- Different options for users/operators possible (purchasing, leasing, renting)
- Extensive SKF sales and technical support
- Extend service level toward your customers

The right seal profile and high-end materials

Proprietary materials

Materials are of three main types: thermoplastic polyurethane (TPU) elastomers; other elastomers, such as rubbers; and thermoplastics such as PTFE. (In addition, there are also thermosets and special materials.)

TPUs

ECOPUR, a TPU, is a standard grade of the SKF machined seals range for seal-



ing applications in mineral oil. It has excellent mechanical properties such as abrasion resistance, tear strength and low compression set. Typical products made from it are U-cup seals, lip seals, wipers or chevron packings, as well as customized shapes for dampers or machine parts. There are many variants: H-ECOPUR is hydrolysis-resistant and approved for many food regulations, while T-ECOPUR has an extended minimum service temperature down to -50°C .

Elastomers

There are also many elastomer grades. SKF Ecorubber-1, based on acryloni-

trile-butadiene rubber (NBR), is used for U-cup seals, chevron packings, special seals and other components. SKF Ecorubber-2, used in similar applications, is based on fluoro-rubber (FKM). It has high resistance to heat, weathering, ozone and other chemicals. SKF Ecoflas is a fluoro-elastomer based on an alternating copolymer. It has a higher tensile strength than fluoro-rubber – as well as a good resistance to radiation.

Thermoplastics

SKF Ecoflon 1 is a thermoplastic based on virgin PTFE, used for back-up rings, slide rings, chevron packings, rotary seals and gaskets. It has superior chemical resistance, is only susceptible to attack by molten alkali metals and elementary fluorine at high temperature. However, with PTFE seals, creep occurs at relatively low loads. SKF Ecoflon 2, also PTFE, incorporates 15% glass fibre + 5% MoS₂ for improved compression strength and sliding properties, while SKF Ecoflon 3 (PTFE + 40% bronze) further extends thermal conductivity.

Toolbox



The tool case contains all necessary holders, cutting inserts and tools, which are state-of-the-art and required for perfect operation of the system.

SKF SEAL JET 200 PRO machine specifications

Main dimensions	1130 × 890 × 1900 mm (length × width × height) 1270 × 1280 × 1900 mm (with mounted display)
Weight	800 kg
Machining area	
Max. clamping diameter	200 mm
Travel x-axis	550 mm
Travel z-axis	200 mm
Max. tube length	160 mm
Main spindle drive	Three-phase asynchronous motor with combined ventilation 3 kW
Spindle speed	0 - 4 000 r/min
Noise level	75 dB (A)
Tool system	SKF-specific automatic tool changing system
Number of tool fixtures	10
Clamping system	Three jaw ring chucks
Lubrication system	Maintenance-free lifetime greasing
Cooling air system	Minimum quantity lubrication unit with nozzles (capacity 3 l)
Swarf suction unit internally	Drive 1.5 kW with 90 l chip container
Requirements	
Power supply	3 × 400 V +PE; 5 kVA
Air supply	Min. inlet pressure 6 bar max. inlet pressure 10 bar

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