

SKF SEAL JET

NG 040 / NG 060 machines



The SKF SEAL JET system

The SKF SEAL JET system for machining seals on demand is based on proprietary software and customized tools developed by SKF. The SKF SEAL JET NG machines produce seals up to 630 mm in diameter as one piece in low and high quantities.

All-in-one

The SKF SEAL JET manufacturing system consists of a complete production unit including a computer numerical control (CNC) machine with special machining tools optimized for high performance polymeric sealing materials.

State-of-the-art software

The SKF SEAL JET NG machines and their simple-to-use software quickly and easily produce seals from 0 to 460 mm (NG 040) or 0 to 630 mm (NG 060). The software includes 163 standard seal profiles which can be customized to meet individual application requirements.

High-tech polymeric materials

SKF has developed a broad range of machinable sealing materials for industrial applications: thermoplastic polyurethanes (TPU), elastomers or rubber and thermoplastics.

Thermoplastic polyurethanes – e.g. ECOPUR – have outstanding mechanical and chemical properties and outperform many other elastomeric sealing materials.

SKF Ecorubber-1/2/3/H, SKF Ecosil and SKF Ecoflas are ideal for applications requiring excellent chemical resistance.

A wide range of thermoplastics like SKF Ecotal, SKF Ecoflon 1/2/3/3F/4, SKF Ecomid, SKF Ecowear are also available. For applications requiring high performance thermoplastics, SKF also supplies PVDF, PSU, PEI, PI, SKF Ecopaek (PEEK) or PPS materials.

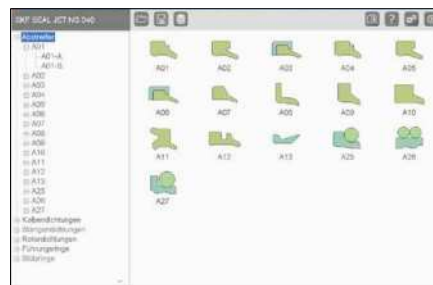
Producing machined seals in one hour

The steps below show the manufacturing time to process 10 piston seals – K01 profile in H-ECOPUR – with a NG 060 machine.

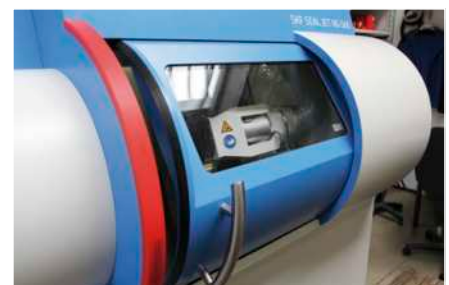
Step 1: Select a semi-finished tube (Start)



Step 2: Select profile (15 min)



Step 3: Prepare for turning process (30 min)





SKF SEAL JET NG 040 (same housing for NG 060)

- Simple to use
- Integrated software
- Adjustable preload and geometry settings
- Profile simulation prior to production
- Short cycle times
- Broad variety of high-precision cutting tools
- High rpm drive system
- Optimized disc turret
- Optimized shredder and chip suction unit

Machined seals concept

The machined seals concept provides a fast, flexible alternative to moulded seal production. With a unique combination of capabilities, we can deliver polymer seals in a very short time, in virtually any dimension and any design, for virtually any industrial application.

The machined seals concept combines several SKF strengths, including extensive application engineering support, a wide selection of seal profiles and materials, and the SKF SEAL JET manufacturing system. Together, these capabilities enable on-demand manufacturing for everything from a single seal to a low volume series, for fluid power, fluid handling and power transmission applications.

Step 4: Machining process (45 min)



Finished customized machined seals (1 h)



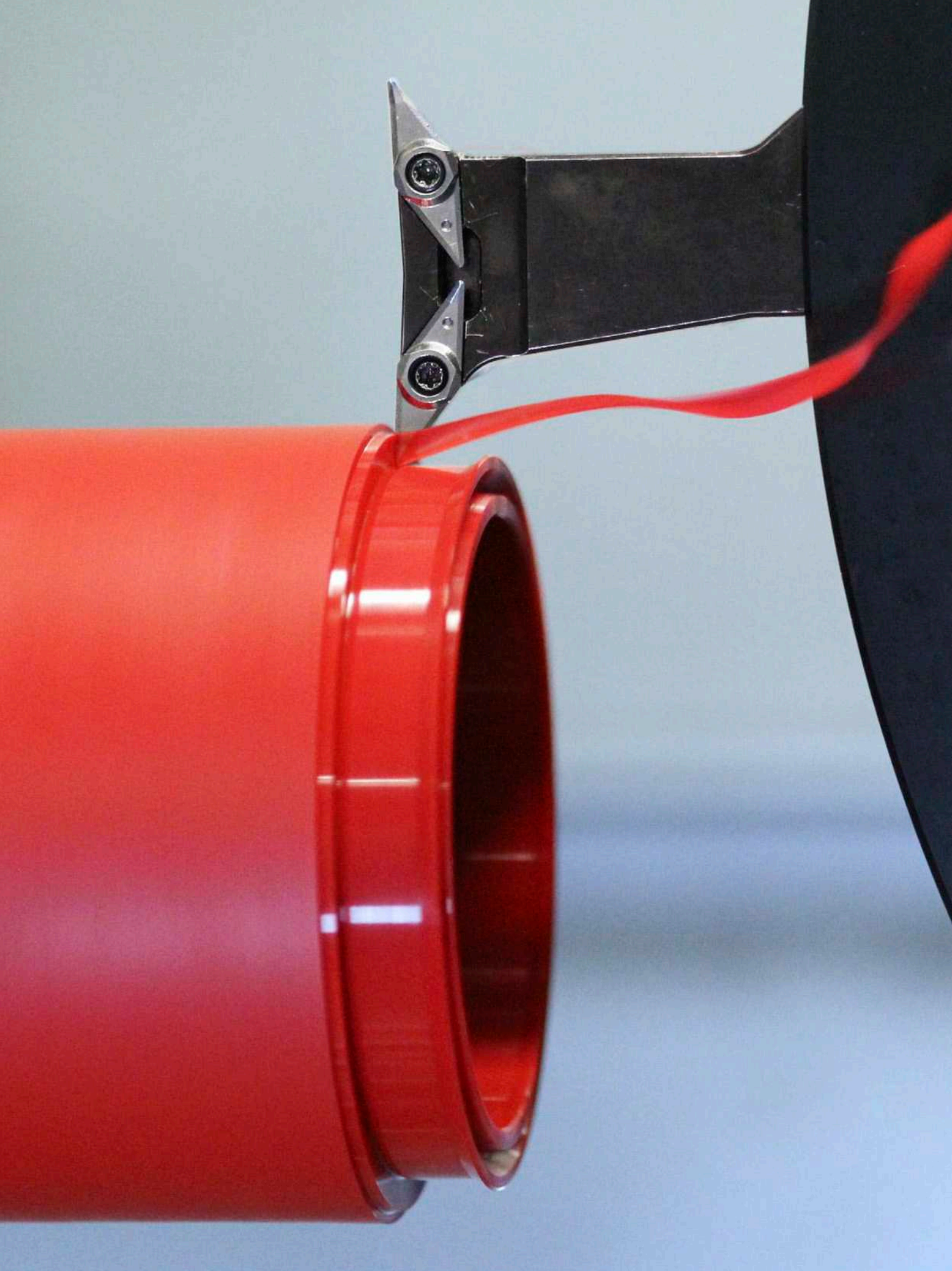
Tools	
Standard range	35 tools
Expanded range	10 tools (to be used with the software upgrade)
Long worktools	tools for special machined parts up to 120 mm
Clamping device	Chuck for drilling up to 10 mm diameter

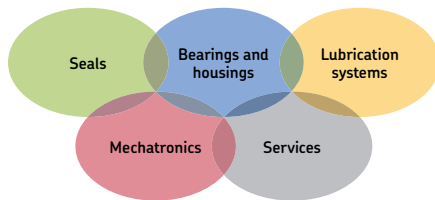
Software	
Seal profiles	163 profiles
System requirements	Windows 7 – Windows 10

Technical data	NG 040	NG 060
	Machine dimensions W x D x H	1 900 x 1 300 x 2 120 mm
Weight	2 100 kg	
Electrical power supply	3 x 400 V + N + PE	
Connected rating	12,5 KVA	
Control unit	Siemens SINUMERIK 840D sl blackline	
Cutting diameter	≤ 460 mm	≤ 630 mm
Clamping system	19 sets aluminium clamping jaws	19 sets aluminium clamping jaws vacuum-disc 610 mm
Tool-clamping systems	8-tool turret	

Operating panel for NG 040 and NG 060 machines







The Power of Knowledge Engineering

Combining products, people, and application-specific knowledge, SKF delivers innovative solutions to equipment manufacturers and production facilities in every major industry worldwide. Having expertise in multiple competence areas supports SKF Life Cycle Management, a proven approach to improving equipment reliability, optimizing operational and energy efficiency and reducing total cost of ownership.

These competence areas include bearings and units, seals, lubrication systems, mechatronics, and a wide range of services, from 3-D computer modelling to cloud-based condition monitoring and asset management services.

SKF's global footprint provides SKF customers with uniform quality standards and worldwide product availability. Our local presence provides direct access to the experience, knowledge and ingenuity of SKF people.

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