

UT400/UT750/UT750DT CNC MACHINE CATALOGUE

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UTEC Completed turn-key CNC Seal Manufacturing Systems

UTEC Sealing Solutions offers you the latest technology in CNC machining systems, state-of-the-art computer technology and seal production software as well as complete sealed semi-finished materials (Polyurethanes/Rubber/PTFE/POM/PA,etc)-the modern seal production up to 750mm OD.

UTEC CNC lathes are custom-made sealing production features, scientific and compact equipment design, for the instant production of various seals used in hydraulic and pneumatic rotary seal applications, as well as engineered plastic parts.

Advanced and stable machine, scientific and rigorous sealing processing software, high quality semi-finished sealing materials and a variety of supporting tools are precisely guarantee efficient machining and top-quality processing performance.

UT750DT is suitable for turning, drilling, milling, tapping and other complex machining of various rotary parts, which can achieve high-precision C-axis indexing function and milling processing.

Lathe-cut seals occupies an important position in today's sealing industry and are widely accepted and praised in OEM and MRO applications. As a leader in CNC lathe sealing processing technology, UTEC is committed to continuously improving process technology to make it more widely and efficiently serve the world manufacturing industry.

Main Technical Data

- Completed CNC Seal Manufacturing Systems, for seals up to 400mm OD and 750mm OD.
- DUPLOMATIC 12-station tool turret with VDI20 clamping system.
- Latest FANUC Oi-TF drive and control system.
- PC with UTOSEAL software.
- Chip cutter & suction unit.
- Material clamping system.
- Cutting tools and holders.
- Accu-Finish tool lapping machine.



First-class quality assurance

UT400、UT750、UT750DT are customized machine completely according to the characteristics of sealing processing, optimized and modified lathes can be more suitable for processing a variety of sealing products and engineering plastic components products.

All machines are equipped with high-end mechanical and electronic components. The high precision guides, disc turret, bearing, drive systems and control unit are without exception produced by world-wide, well-known brands who define the standards of modern CNC machining technology.

These top-quality components in combination with a sturdy machine design guarantee a long service life of UTEC Seal Manufacturing Systems.

In order to guarantee the smooth operation of your UTEC CNC lathe, UTEC provides two training opportunities: installation and commissioning training at UTEC factory and user factory.



Machine Components

Control & Drive System
UTEC machines are equipped with the latest technology of FANUC, the world-wide leader of control systems for machine tools. The FANUC Oi-T* 2-axis control and the iServo-Drive System offer a state-of-the-art, high precision machine control system with high efficiency and reliability.

Tool Turret System
DUPLOMATIC "FAST" servo-motor turret with bi-directional logic, with hydraulic locking device reduces tool change and positioning time. The turret disc with VDI clamping system for 12 tools guarantees fast tool changing and highest processing efficiency.

Tools & Holders
The quality of cutting tools is of highest importance in the production of lathe-cut seals. A complete set of high-precision cutting tools made of fine-grain carbide is supplied with every UTEC machine. In order to cover the complex, complete range of existing seal profiles, most tools have a special geometrical shape and are custom made for seal production.

Semi-finished Materials Clamping System
The special high-precision steel chuck connection device is matched with 3-jaw high-precision aluminum chuck, which is suitable for fast and firm loading of semi-finished sealing materials of different specifications.

Chip cutter & Suction Unit
A well-functioning chip cutter and suction unit have an important impact on the machining quality of the seal, especially the surface finish and the machinability of the sealing material. The chip cutter is made of high-precision aluminum material, using HSS tool to hack up the chips, and the powerful suction unit ensures that the swarf is immediately removed to prevent buildup around the tools.

Tool Lapping Machine
UTEC offers the Accu-Finish tool lapping machine and a microscope with excellent grinding function to ensure optimal tool sharpness, which in turn assures good surface quality of your end product.

Other accessories, such as measuring devices, band saws, bevelling shears etc can be supplied on request.

UTOSEAL Seal parameter design platform

As the pioneer of China's CNC machine sealing processing technology, UTEC has always focused on providing customers with efficient and practical sealing overall solutions. The UTOSEAL parametric design platform independently developed by UTEC has been newly upgraded with more than 200 standard seal sections for mature applications, while adapting to customized design requirements. Through parametric design, users can easily adjust the size and characteristics of seals, quickly generate a design solution that meets the requirements, reduce development cycles and improve efficiency.

The platform not only supports materials editing and tools track simulation functions, but also realizes one-click transmission with the machine, greatly reducing the process time from design to processing. The tools track simulation function can accurately plan the machining path, help users avoid trial and error problems in production, and improve the accuracy and consistency of the finished product. Through visual integration, the platform can be used without complex setup and additional training.

Model selection
Built in 200 kinds of commonly used sealing cross-section perfect size coverage of mature engineering application experience.

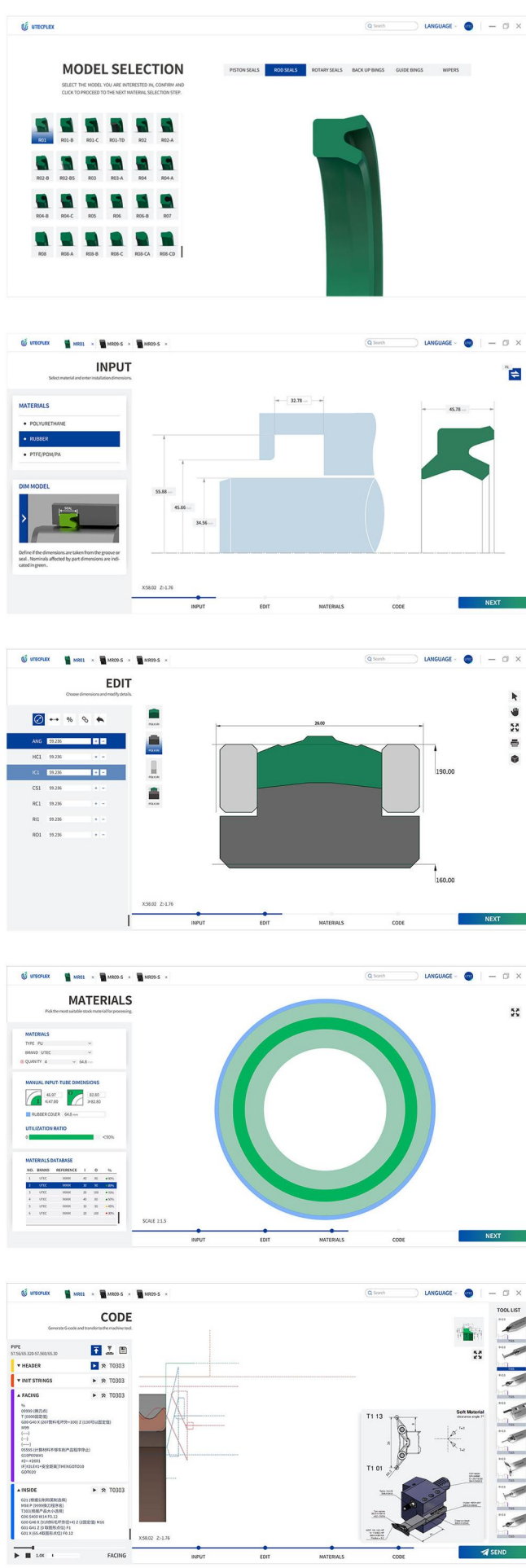
Sealing desing
Automatically adjusts the amount of compression according to the selected material, Groove mode and ontology mode switch freely, Visual installation dimensions, One click switch to Inch Metric Mode.

Customized design
Two kinds of editing diagram, 1:1 visual size modification, Convenient switch between component drawings and parts drawings, One click to generate drawings.

Materials selection
User defined materials size, material utilization, Sort by recommended values for the UTEC material database, Schematic diagram of the 1:1 ratio of sealing parts and materials, Design progress visualization, Direct target interface.

Simulate toolpath
Automatically generate CNC code, Comprehensive optimization of processing logic, user-defined CNC code modification, Tools track simulation player, Complete tools path simulation, Segmented tools path simulation, According to the CNC code, real-time 2D cutting simulation of different parts of the color differentiation, One-click transfer machine.

Set up two machine transfer modes
Network port transmission & Serial Port transmission



Technical Data			
Machine Dimensions	UT400	UT750	UT750DT
Land area(L*W*H) [m]	2.10x1.60x1.60	2.60x1.80x1.85	2.60x1.80x1.85
weight(excl.suction unit)[kg]	4000	4500	4500
Suction unit Dimensions			
Land area(W*L*H) [m]	0.65x1.25x1.60	0.65x1.25x1.60	0.65x1.25x1.60
weight(excl.suction)[kg]	185	185	185
Machining Dimension			
Max. outer diamete[mm]	400/430	750/780	750/780
Max.travel X-axis/Z-axis[mm]	280/518	450/650	450/650
Max.billet length[mm]	310/155	460/230	460/230
Main Spindle standard			
Shaft end DIN 55026	A5	A6	A6
Axle diameter[mm]	80	100	100
Through-hole[mm]	45	65	65
Power			
Main voltage[V] +/-5%	400	400	400
Frequency[Hz] +/-10%	50/60	50/60	50/60
Max.preliminary fuse[A]	42 time delayed	42 time delayed	42 time delayed
Spindle drive			
Power(S1/S3)[kW]	11/15	11/15	11/15
Max.speed(limited)[min-1]	5000	5000	5000
Max.current [A]	63	63	63
Axis drive			
Max.pos./Nm[pm]	2.65/5.50	2.65/5.50	2.65/5.50
Fast.feed X-/Z-axis[m/min]	12/20	12/20	12/20
Cutting.feed speed of each shaft	0.001-1000mm/rev	0.001-1000mm/rev	0.001-1000mm/rev
Couple axle	XZ	XZ	XYZ
Repositioning Accuracy	X/Z:0.0025mm/0.004mm	X/Z:0.0025mm/0.004mm	XYZ:C:0.0025mm/0.004mm/0.004mm/0.004mm/0.004mm
lubrication			
Main Spindle	Grease	Grease	Grease
Working Table	Central oiling	Central oiling	Central oiling
Cooling system			
Cooling tank volume[l]	120	120	120
Coolant regulator	Nozzle governing	Nozzle governing	Nozzle governing
Tool Turret System			
Tools number	12	12	12
Holder VDI	UTEc specific/VDI20	UTEc specific/VDI20	UTEc specific/VDI20
Max.speed/indexing time 30[s]	0.08/0.21	0.08/0.21	0.08/0.21
Pos.accuracy/repeatability[mm]	0.002/0.0008	0.002/0.0008	0.002/0.0008
Material clamping System			
3jaw Manual connector DIN 6350[mm]	250	250	250
Multi-functional jaw series[sets]	4	8	8
Vacuum unit			
Swarf capacity[l]	100	100	100
Vacuum motor[MW]/Max.air-flow[l/min]	4/8600	4/8600	4/8600
Noise			
Normal/Maximum[dB]	78/82	78/82	78/82

UTEC:Your reliable partner in the sealing field

UTEC, as a leader in sealing technology, offers high quality hydraulic and pneumatic seals, engineering plastic components, high performance sealing materials and turn-key seal manufacturing technology.

With our extensive experience in sealing technology and the market, UTEC is able to provide you with the most professional services including sealing product design sample production testing and installation.

UTEC can meet your specific needs, including providing standard seals in bulk and customized sealing products in the shortest delivery time.

Our Mission

UTEC is a strong global partner for our customers and suppliers. We build long-term partnership by providing leading technology and excellent service. Complete turn-key CNC sealing machining systems and extensive material inventory guarantee our fast and economical solutions.

Our future

We deeply understand that only by constantly improving ourselves can we adapt to the ever-changing market requirements. Our continuous improvement, bringing to the forefront of the industry customer requirements are our guarantees for not only being at the forefront of the fully today but also in the future.

