



THINK PARTS THINK TORNOS



Swiss DT 26 / Swiss DT 13

Take your production a step further.

SWISS DT 26 / SWISS DT 13

The Swiss DT range of Swiss-type lathes is designed to meet the various requirements of typical long and short turned parts. Designed to machine bars of up to 13 and 25.4 mm in diameter, these simple and easy-to-use machines allow you to achieve measurable production improvements. Thanks to advanced technical features and its efficient five-axis kinematics, the DT range is perfect for all your turning and milling tasks.

The machine interface and TISIS NC editor ensure the machine is easy to program and use.

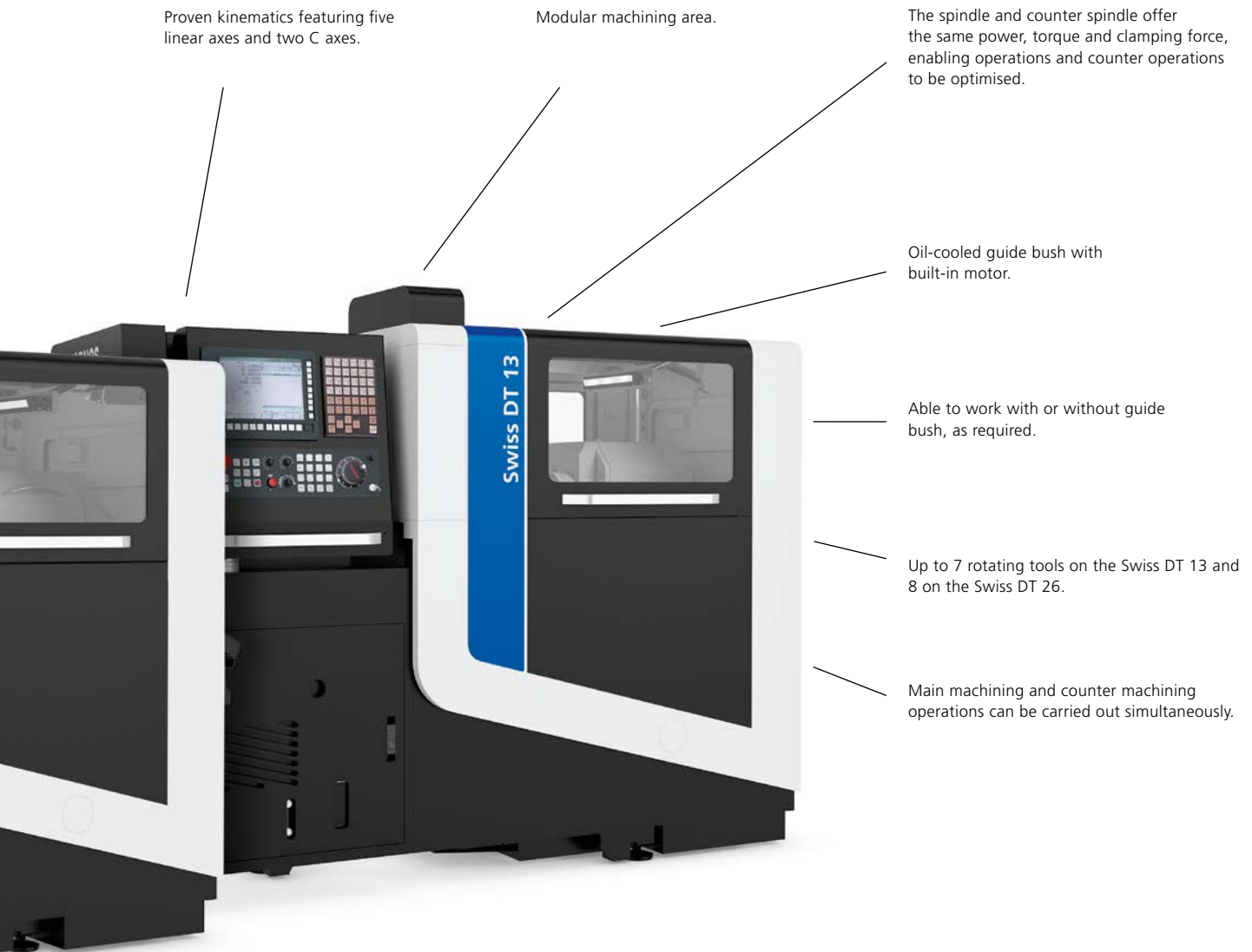
The machine offers a high level of autonomy. Different options are available to increase this autonomy when needed (chip conveyors, oil mist extractor, part reception devices and bar feeders).



Swiss DT 26

- Maximum diameter: 23 (25.4) mm
- Linear axes: 5
- C axes: 2
- Maximum number of tools: 22
- Maximum number of rotating tools: 8

SWISS DT 26 / SWISS DT 13



Proven kinematics featuring five linear axes and two C axes.

Modular machining area.

The spindle and counter spindle offer the same power, torque and clamping force, enabling operations and counter operations to be optimised.

Oil-cooled guide bush with built-in motor.

Able to work with or without guide bush, as required.

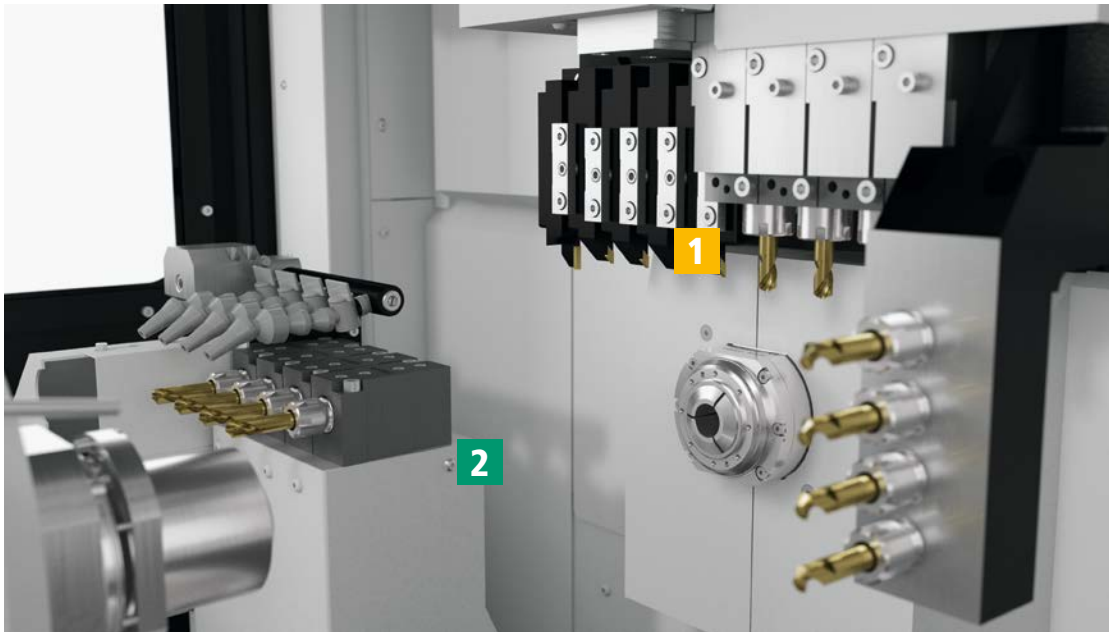
Up to 7 rotating tools on the Swiss DT 13 and 8 on the Swiss DT 26.

Main machining and counter machining operations can be carried out simultaneously.

Swiss DT 13

- Maximum diameter: 10 (13) mm
- Linear axes: 5
- C axes: 2
- Maximum number of tools: 21
- Maximum number of rotating tools: 7

SWISS DT 26 / SWISS DT 13



Swiss DT 26

The versatility to face any challenge

Both machines feature modular tooling positions that put you on the fast track to advanced operations.

The Swiss DT 13 and Swiss DT 26 both have a modular 4-position counter operation station. The Swiss DT 26 takes this even further with 4 modular positions also available for main operations, enabling you to take on advanced tasks such as polygon turning or thread-whirling processes.

1

Your leading-edge tooling answers for main operations



Polygon unit with maximum speed of 5000 rpm
Polygon tool \varnothing 80 mm

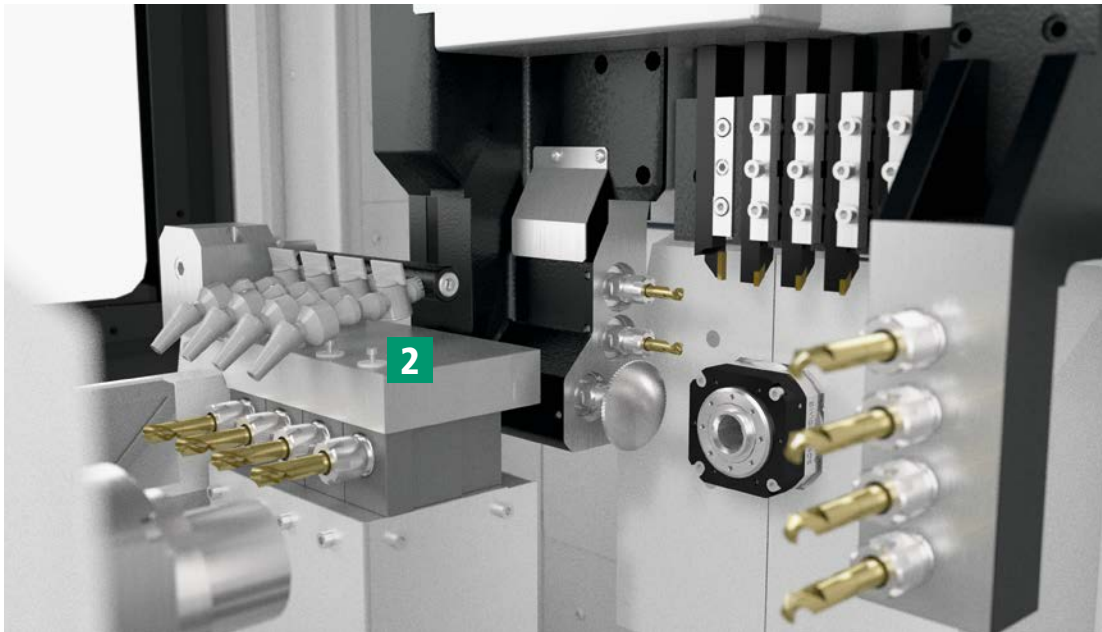


ESX20 drilling/milling spindle (offset 15 mm)



Rotating spindle for milling

SWISS DT 26 / SWISS DT 13



Swiss DT 13



Thread-whirling unit
Maximum 5,000 rpm
Angle $\pm 15^\circ$ \varnothing max. 10 mm

Your leading-edge
tooling answers for
counter operations



1 **2** ESX20 drilling/milling spindle
(offset 6 mm)



Double drilling/milling unit



2 Slotting unit

SWISS DT 26 / SWISS DT 13

Step up your flexibility

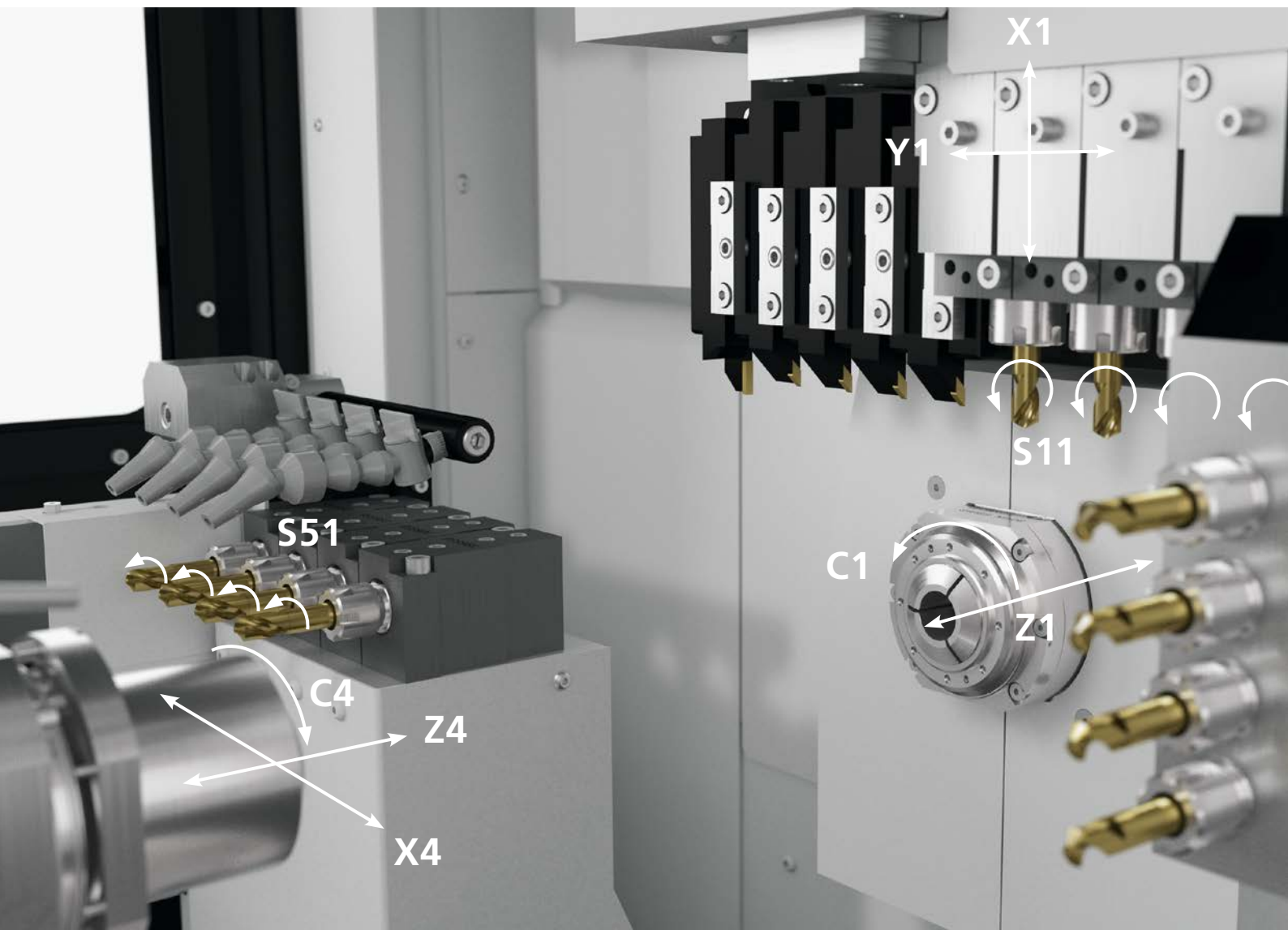
The more flexible your production tool, the more responsive your business can be both to existing customer demands and to any new opportunities which may arise. The kinematics of Swiss DT machines provides the perfect basis for this challenge, with a simple, tried and tested design. Exemplary reliability is a given with these machines, and their renowned kinematics reduces the learning curve for your operators and ensures good tool accessibility for easy adjustments. The design of the kinematics paves the way to highly precise machining. While each machine features rotating tools for main operations, flexibility can be boosted by adding four extra rotating tools for back operations, taking the machine to a whole new level of performance.

To adapt the machine to your production needs, the guide bush can be removed to give a maximum workpiece length of 29 mm on the Swiss DT 13 and 45 mm on the Swiss DT 26. This conversion makes it possible to work with high-quality elongated bars, and significantly reduces the amount of material wasted. It takes just 15 minutes to convert the machine in either direction.

There is no other machine on the market that can boast such as quick turnaround.

Tornos is renowned for offering machines fine-tuned to your needs, and the Swiss DT range is no exception. This machine can be equipped with high-frequency spindles featuring rotational speeds of up to 60,000 rpm, enabling the machine to perform very fine drilling or milling tasks as main or counter operations.

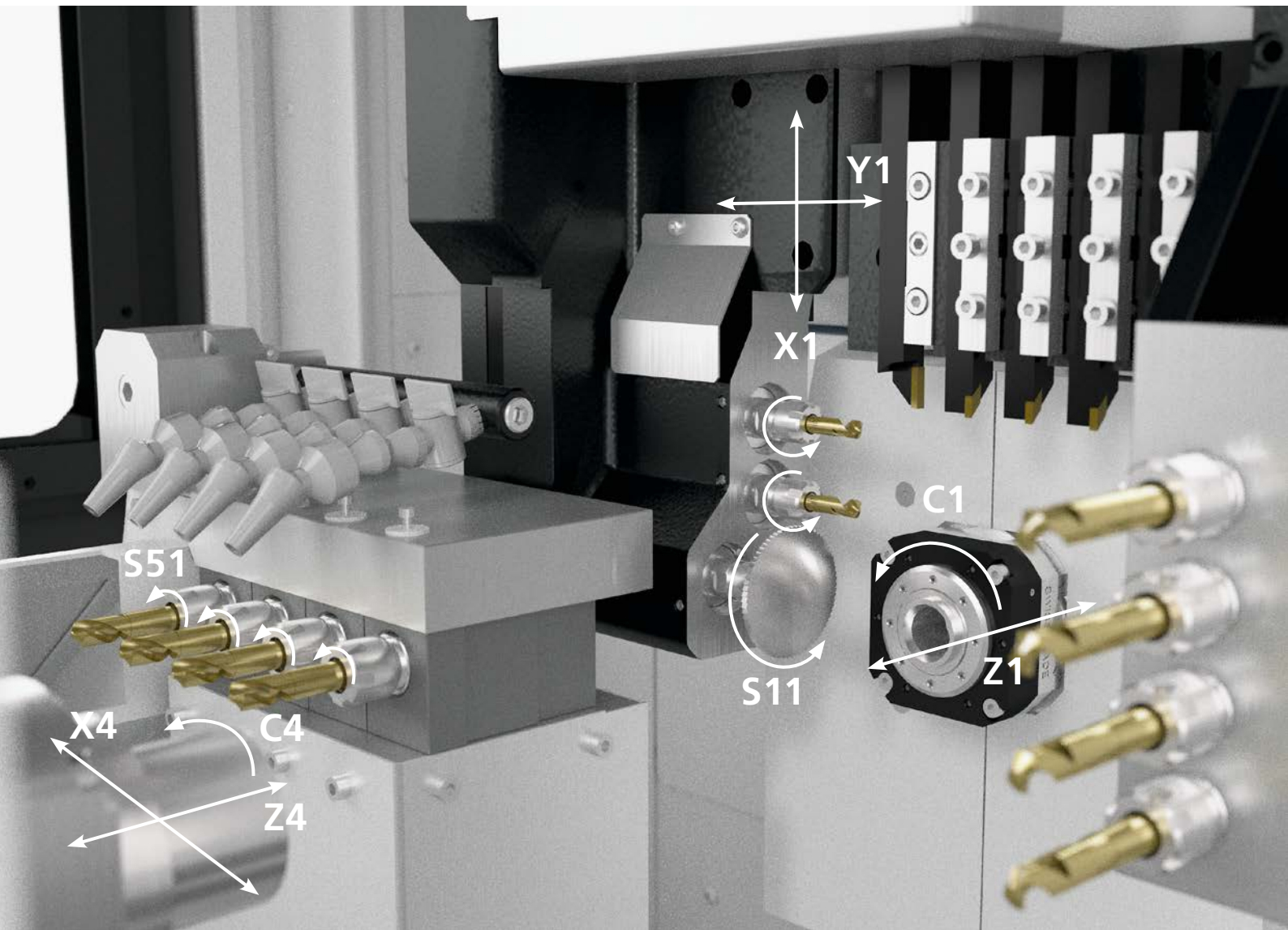
SWISS DT 26



Up to 22 tools, including 8 rotating tools

The Swiss DT 26, just like the Swiss DT 13, is equipped with two motors which can drive numerous rotating tools. In addition to the modular counter-operation position, the Swiss DT 26 has 4 modular positions for main operations enabling users to install thread whirling or polygon turning units, for example.

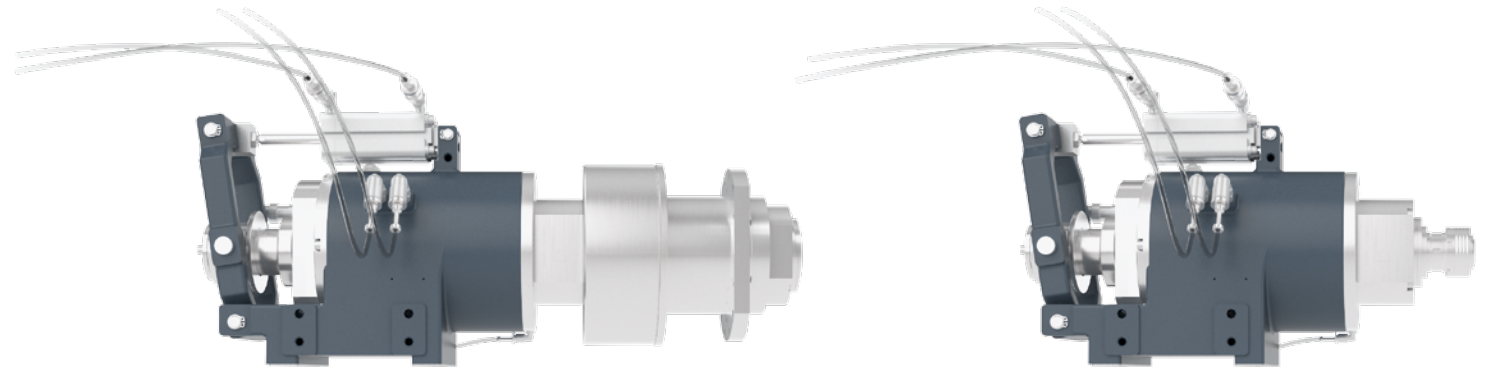
SWISS DT 13



Up to 21 tools, including 7 rotating tools

The Swiss DT 13 is equipped with two motors which can drive numerous rotating tools. The 4 positions on the counter-operation block are modular, enabling advanced tooling to be added.

SWISS DT 26 / SWISS DT 13



Conquer new markets and new materials thanks to the flexibility and performance offered by Swiss DT. Take advantage of the quickest guide bush conversion on the market!

Accelerate your efficiency

The liquid-cooled spindles on the Swiss DT 13 and Swiss DT 26 ensure exemplary stability during machining and bring you exceptional precision.

At the same time, our spindles allow you to gain precious seconds. The spindle performance is supported by a direct drive guide bush; this allows the top speeds of the spindles to be exploited (15,000 rpm for the Swiss DT 13, and 10,000 rpm for the Swiss DT 26) for excellent surface finishes and a reduced cycle time on long parts.

The main spindle and counter spindle offer the same power, so you don't have to worry about balancing main and counter operations. Large amounts of swarf can be removed whenever – and wherever – you want. The kinematics of the Swiss DT 13 is geared towards dynamic performance, requiring minimal movement of tools and feed speeds of up to 35 m/min. The Swiss DT 26, however, adopts completely different kinematics: while speed remains at the heart of the design, it is rigidity and swarf removal which are the key features on a machine of this diameter.

In parallel, you experience lower maintenance costs. For example, the swarf container allows the machine to run for long periods.

The visual checks are easy to conduct and the numerical control reminds you when the fluid levels are too low. The CNC's location on a swivel arm means the operator has a great view of the machine and its interior during setup. This makes tasks quicker and safer. Another element designed to increase your efficiency is the conveyor belt that transports your machined parts. These benefits are further increased by the machine's central lubrication system and the toolbox integrated under the CNC.

APPLICATIONS



Stainless steel
External diameter: Ø 3.5 mm
Workpiece length: 7.9 mm



Stainless steel
External diameter: Ø 16 mm
Workpiece length: 25 mm



Stainless steel
External diameter: Ø 7.5 mm
Workpiece length: 10.9 mm



Stainless steel
External diameter: Ø 5.5 mm
Workpiece length: 2.9 mm



Aluminium
External diameter: Ø 5.5 mm
Workpiece length: 89.1 mm



Brass
External diameter: Ø 1.6 mm
Workpiece length: 35 mm



Stainless steel
External diameter: Ø 8 mm
Workpiece length: 110 mm



Stainless steel
External diameter: Ø 12.7 mm
Workpiece length: 88 mm



Bronze
External diameter: Ø 8.7 mm
Workpiece length: 40.9 mm

SWISS DT 26 / SWISS DT 13

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS		Swiss DT 26	Swiss DT 13
		5 linear axes + 2 C axes	5 linear axes + 2 C axes
		2 independent tool systems	2 independent tool systems
Main spindle			
Max. bar capacity	mm	23 (25.4)	10 (13)
Standard workpiece length with guide bush	mm	195	180
Spindle rotation speed	rpm	0-10,000	0-15,000
Spindle power	kW	8.2 (10.5)	4.0 (8.0)
Torque	Nm	26	12
Main operation			
Max number of turning tools		6 / 5 (option)	6
Turning tool section		12 x 12 / 16 x 16 (option)	12 x 12
Number of frontal tools (op/cop)		4 / 4	4 / 4
Cross rotating tools (S11)		4 x ESX20	3 x ESX12
Max rotating tool speed	rpm	5000	10,000 / 6660
Rotating tool power (S11)	kW	1	1
Counter spindle			
Max. bar capacity	mm	25.4	13
Max. insertion length of workpiece into counter spindle	mm	100	80
Max standard length of workpiece	mm	110	90
Spindle rotation speed	rpm	0-10,000	0-15,000
Spindle power	kW	8.2 (10.5)	4.0 (8.0)
Torque	Nm	26	12
Counter operation			
Number of tool positions		4	4
Positions for rotating tools		max 4 (option)	max 4 (option)
Rotating tool speed	rpm	7500	10,000
Rotating tool power	kW	0.75	0.75
Total number of tools			
		22	21
Operation / counter-operation tool distribution		14 / 8	13 / 8

SWISS DT 26 / SWISS DT 13

TECHNICAL SPECIFICATIONS

BASIC MACHINE EQUIPMENT	Swiss DT 26	Swiss DT 13
Rotating guide bush with integrated motor	X	X
Machining without guide bush	X	X
S11 cross rotating tool motor for main operation	X	X
S51 end rotating tool motor for counter operation	Option	Option
C1 + C4 axes	X	X
Interpolation in polar coordinates	Option	Option
Pneumatic workpiece ejector + air cleaning of collet	–	X
Pneumatic workpiece ejector + oil cleaning of collet	X	–
Automatic centralised lubrication cycle	X	X
Stack light (4 colours)	X	X
20-bar coolant pump	X	–
Bar feeder interface	X	X
Fire extinguisher interface	X	X
TISIS programming software	Option	Option

NUMERICAL CONTROL

Control type	Fanuc 31i-B	Fanuc 31i-B
Axis motor encoders	Absolute	Absolute
Motor type (axes and guide bush)	Synchronous	Synchronous
Motor type (spindles)	Asynchronous	Asynchronous
Colour screen 10,4" and mobile operator console		

PROGRAMMING SOFTWARE

ISO code C language		
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GENERAL SPECIFICATIONS		Swiss DT 26	Swiss DT 13
Max. length	mm	2166	2122
Max. width	mm	1300	870
Height	mm	1720	1720
Weight	kg	2400	2300
Cutting oil tank capacity	l	200	170
Coolant pump power	kW	0.44	0.44
Colours RAL 9006 grey, RAL 9011 black			
CE / CEM certified			

TISIS: PROGRAMMING AND COMMUNICATING WITH YOUR SWISS DT MACHINE

Experience programming intelligence

In today's competitive global marketplace, there's not a moment to waste in meeting customers' demands. Our available TISIS communication and programming software puts you on the fast track to truly effortless programming and real-time process monitoring. TISIS knows your Tornos machine fleet and can help you decide which machine to use for a specific part. But that's not all: TISIS enables you to assess each machine's options, reduces the risk of collisions and the resulting stoppages, and improves your production efficiency. TISIS is a smart and advanced ISO code editor that does the thinking for you. It knows your Tornos machine fleet, can help you write your code, and points out any coding errors. It puts the code in colour and can display your program in an easy-to-read Gantt diagram, making it easy for you to see the critical path and react quickly to optimise the process.

Industry 4.0

At the same time, TISIS takes the complexity out of process monitoring, enabling you to take your first steps into the Industry 4.0 universe. Even from a remote location, you can keep an eye on the details of the machining process from your smartphone or tablet. The software also enables you to quickly transfer your programs, either by USB key, or directly onto the machine via your company network. Your parts designs in various stages of completion can be stored with your program. These can then be easily found in the database using a search function.



TORNOS SERVICE

Tornos Service

Backed by both geographical proximity to customers and a keen understanding of their processes, applications and market challenges, Tornos Service delivers an unparalleled continuum of support: start-up assistance, expert training and coaching, free hotline, on-site operations support and preventive maintenance, original spare parts seamlessly delivered worldwide, complete overhauls to extend the service life of Tornos machines, and a range of operations and X-change modules to expand customers' application capabilities and profitability. Buying a Tornos machine is much more than a business transaction. It is your investment in the future. Tornos Service thrives worldwide on securing the predictably high production capability of products carrying the Tornos name. Situated close to its customers, as demonstrated by the 12 Tornos Service Centers strategically located across Europe, Asia, and the Americas, Tornos Service offers a full continuum of authoritative support for Tornos machines, and encompasses the innovation, reliability and attention to detail expected of a premier Swiss brand. And it is all backed by a 100-year legacy of expertise and in-depth understanding of customers' processes, applications and challenges across a wide range of industrial segments, including automotive, medical, electronics and connectivity, and micromechanics.

Start-up assistance

From the first feasibility tests prior to purchase, you are in good hands with Tornos Service. In our state-of-the-art Techno Centers, expert application engineers support you with tests to gauge the feasibility of machining processes and applications. With start-up assistance, you are secure in the knowledge that you will never be left alone to deal with a brand new machine.

Expert training and coaching

Engineered for intuitive and easy use, Tornos machines offer a vast range of options and enable myriad processes. Expert training and coaching help your employees become specialists proficient in programming, handling and maintenance, adding more value to your processes, applications and products.

Free Hotline support

Wherever you are in the world, highly qualified specialists who speak your language and understand your processes are just a phone call away to quickly support you with handling and programming solutions.



TORNOS SERVICE



On-site support

Fast, efficient on-site operations and preventive maintenance ensure the continuous high performance of your Tornos machines. Regular scheduled preventive maintenance can help you avoid 70 percent of machine breakdowns and keep you on the path to productivity.

Certified original spare parts

Rapid, reliable, worldwide delivery of certified original spare parts is a specialty of Tornos Service. Regardless of the age of the your Tornos machine, we stock the essential certified spare parts to keep the machine running at peak performance.

Machine overhauls

Tornos machines inspire confidence. It's no surprise, therefore, that many customers turn to Tornos for a complete overhaul of their machines. The Tornos overhaul service returns the machines in good-as-new condition, appreciably extending their service life.

Options, upgrades and X-change Modules

To help you achieve your manufacturing, productivity and quality objectives, our experts collaborate with you to manage complex machining processes, develop software features for machining complex shapes, design special equipment, and tailor peripherals to your needs. Tornos' X-change Modules expand your application capabilities and profitability.

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