

TORNOS



*The solution that evolves
with your business strategy*

Swiss DT range

The solution that evolves with your business strategy

Customized for your productivity

Maximize your productivity: The machine's base was designed for just that purpose. This fully modular machining area can accommodate any type of tool holder; drilling, milling, thread whirling or even gear hobbing are just a few examples of the Swiss DT's incredible flexibility.

15-minute guide-bush conversion

Power your profitability

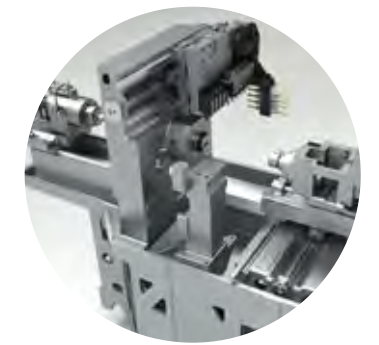
Gain precious seconds to outperform your competitors and tackle any material, due to the Swiss DT's extremely powerful spindles. Equipped with **ceramic bearings**, the 2 spindles benefit from the same **10.5 kW power***. Able to accelerate to 10,000 rpm in 0.3 seconds*, our spindle lets you benefit from **26 Nm (19.177 ft./lb.)*** of torque. Both spindles are liquid-cooled.

Tailored for you

Confidently conquer any machining challenge with Tornos' Swiss DT range, built for you and adapted to your needs. Get the agility to master any challenge, with the **plug-and-play B axis (option)**.

Enjoy the benefits of the most rigid machine in its class

Achieve better surface finishes and longer tool life, and get a quick return on your investment, thanks to this machine's sturdy, cast-iron base optimized by finite element analysis. The Swiss DT range can also accommodate water-based coolant.



3-meter bar feeder, 4,023 mm 158.38 in
12-foot bar feeder, 4,700 mm 186.22 in

C axes **2**

Linear axes **5**

Maximum number of tools **28**

Maximum number of rotating tools **14**

Built-in part extraction

2,230 mm 87.79 in

1,250 mm 49.21 in

1,730 mm 68.11 in

Improve and ensure self-sufficiency with Tornos' Active Chip Breaker Plus (ACB Plus) software
Improve and secure the autonomy of your process (option).

Chips with ACB Plus

Chips without ACB Plus



Discover more
tornos.com

* Swiss DT 26

Introducing the new Swiss DT range

Built on heritage since 1891

Meet your new partner: the latest-generation Swiss DT range. Exceed your own expectations, extend your competitive edge, and profit from a solution that evolves according to your business strategy.

The range consists of 6 S and HP machine configurations accommodating 13, 26, 32, and 38 mm diameter bars.

Swiss DT 13 HP
Swiss DT 13 S

Swiss DT 26 HP
Swiss DT 26 S

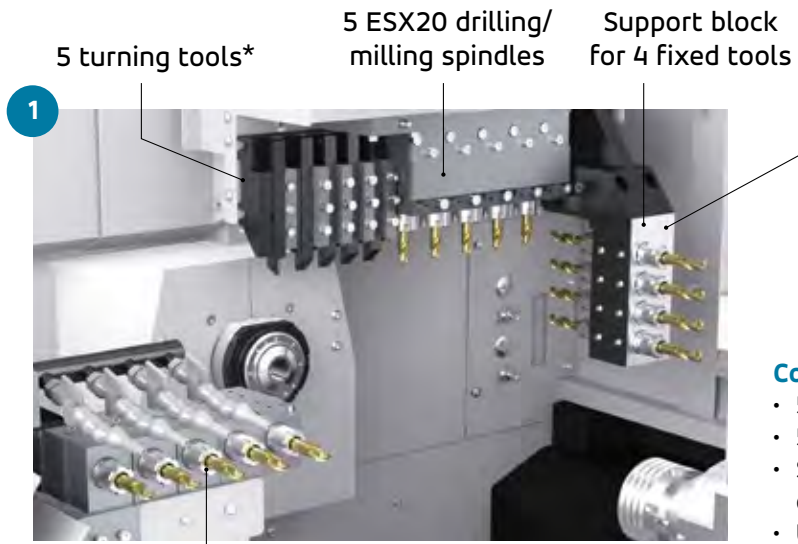
Swiss DT 32 HP

Swiss DT 38 HP



| | Swiss DT 13 HP | Swiss DT 13 S | Swiss DT 26 HP | Swiss DT 26 S | Swiss DT 32 HP | Swiss DT 38 HP |
|---|----------------|---------------|----------------|---------------|----------------|----------------|
| Diameter | 13 | 13 | 26 | 26 | 32 | 38 |
| Standard workpiece length with guide bush | 210 | 210 | 210 | 210 | 210 | 210 |
| Maximum number of tools | 28 | 28 | 28 | 28 | 28 | 28 |
| Maximum number of rotating tools | 14 | 14 | 14 | 14 | 14 | 14 |
| Plug-and-play B axis | Option | - | Option | - | Option | Option |
| Spindle power (S1/S6) | 4.0 (5.0) | 4.0 (5.0) | 8.2 (10.5 kW) | 8.2 (10.5 kW) | 8.2 (10.5 kW) | 8.2 (10.5 kW) |
| Counter spindle power (S1/S6) | 4.0 (5.0) | 4.0 (5.0) | 8.2 (10.5 kW) | 1.5 (2.2) | 8.2 (10.5 kW) | 8.2 (10.5 kW) |
| Direct-drive guide bush | Yes | No | Yes | No | Yes | Yes |

Increase your flexibility tenfold

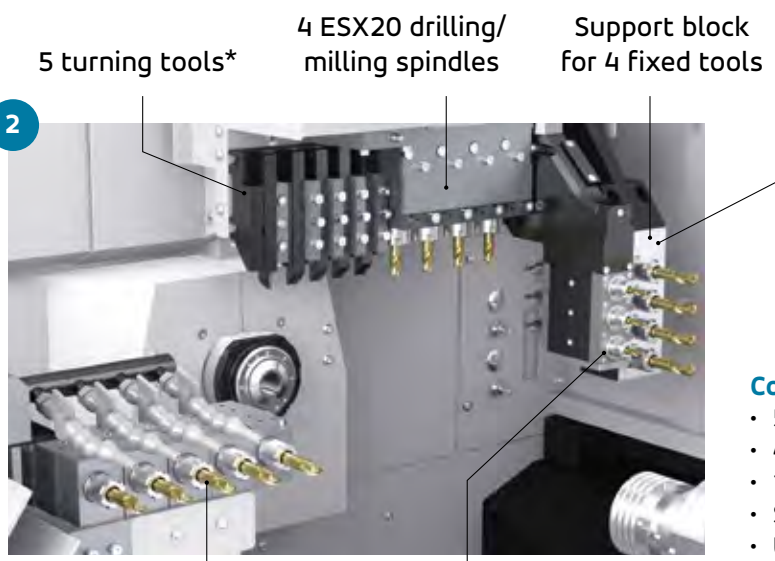


5 turning tools*
5 ESX20 drilling/milling spindles
Support block for 4 fixed tools

1

- Configuration 1**
- 5 turning tools (12 x 12 mm / 1/2 x 1/2 in)*
 - 5 ESX20 drilling/milling spindles
 - Support block for 4 fixed tools or support block for 5 fixed tools
 - Up to 5 tools in counter-operation

Up to 5 tools



5 turning tools*
4 ESX20 drilling/milling spindles
Support block for 4 fixed tools

2

- Configuration 2**
- 5 turning tools (12 x 12 mm / 1/2 x 1/2 in)*
 - 4 ESX20 drilling/milling spindles
 - 1 triple drilling/milling unit
 - Support block for 4 fixed tools
 - Up to 5 tools in counter-operation

Up to 5 tools

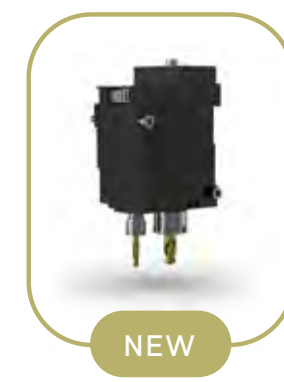
1 triple drilling/milling unit



5 turning tools*
6 ESX20 drilling/milling spindles

3

Up to 5 tools



Facing difficult material?
Try out our high torque rotating drilling/milling spindle (ref. 500-1644) with double the torque available!

- Configuration 3**
- 5 turning tools (12 x 12 mm / 1/2 x 1/2 in)*
 - 6 ESX20 drilling/milling spindles or 4 ESX20 drilling/milling spindles and 1 high torque rotating drilling/milling spindle (ESX20 + ESX11)
 - Up to 5 tools in counter-operation



High-torque rotating drilling/milling spindle

Configure your future



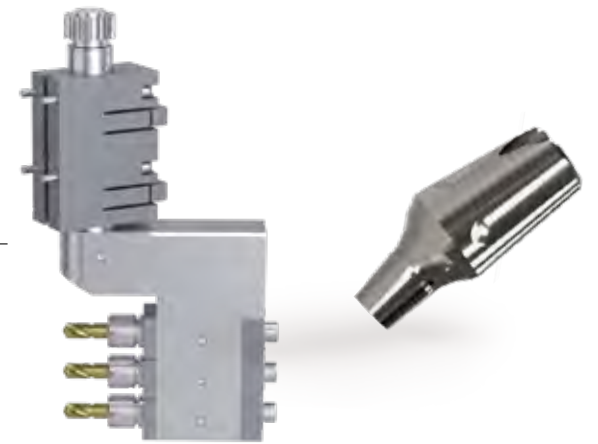
5 turning tools*
4 ESX20 drilling/milling spindles

4

Up to 5 tools

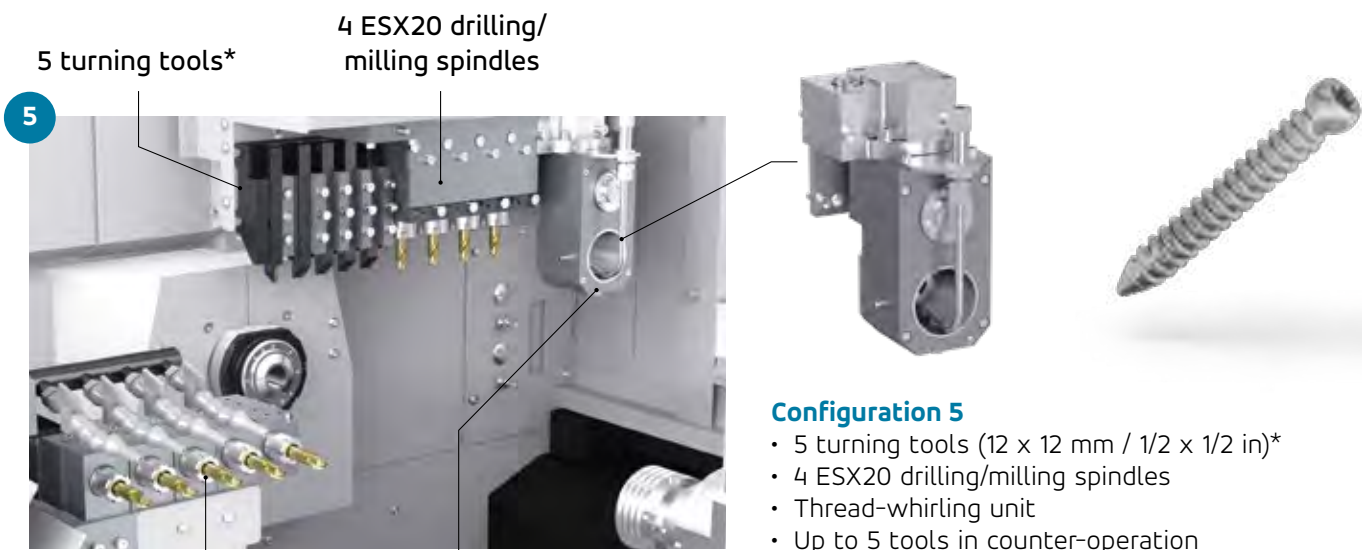
1 triple angular drilling/milling unit

- Configuration 4**
- 5 turning tools (12 x 12 mm / 1/2 x 1/2 in)*
 - 4 ESX20 drilling/milling spindles
 - 1 triple angular drilling/milling unit
 - Up to 5 tools in counter-operation



* Optional, and with the removal of one ESX20 drilling/milling spindle, the machine can be configured with six turning tool holders 12 x 12 mm / 1/2 x 1/2 in or five turning tool holders (16 x 16 mm / 5/8 x 5/8 in).

Plug-and-play B axis

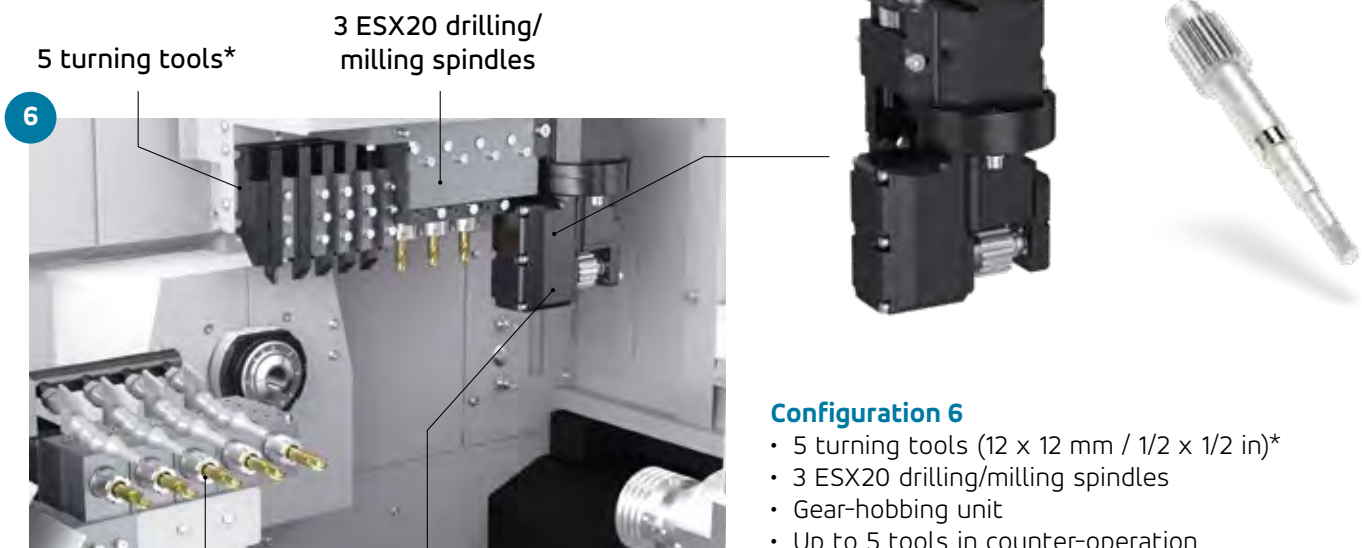


Configuration 5

- 5 turning tools (12 x 12 mm / 1/2 x 1/2 in)*
- 4 ESX20 drilling/milling spindles
- Thread-whirling unit
- Up to 5 tools in counter-operation

Up to 5 tools

Thread-whirling unit

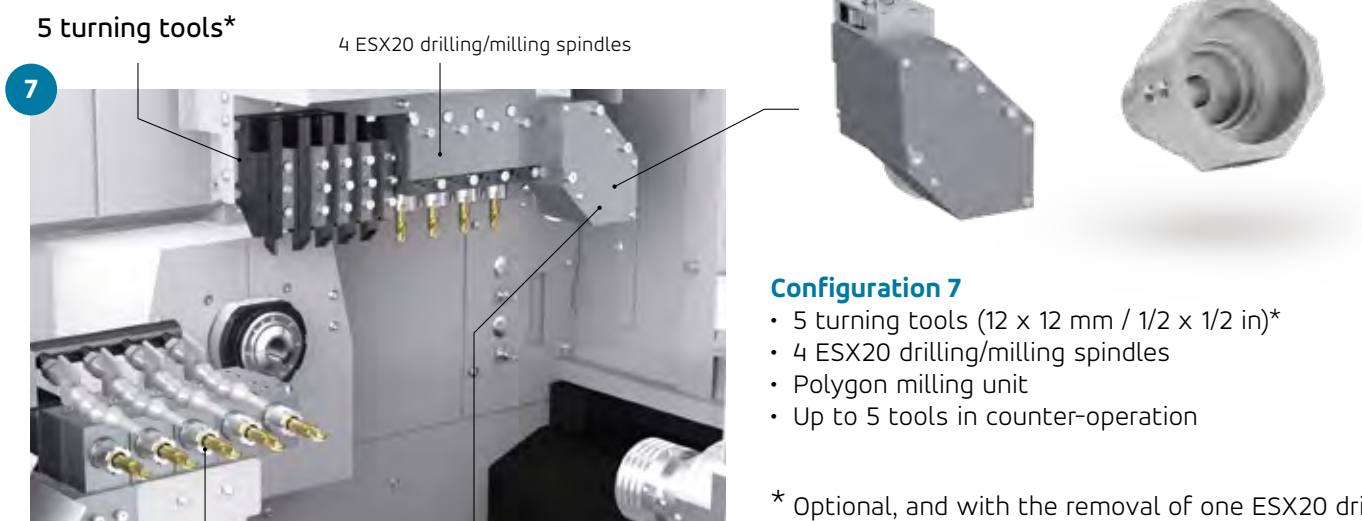


Configuration 6

- 5 turning tools (12 x 12 mm / 1/2 x 1/2 in)*
- 3 ESX20 drilling/milling spindles
- Gear-hobbing unit
- Up to 5 tools in counter-operation

Up to 5 tools

Gear-hobbing unit



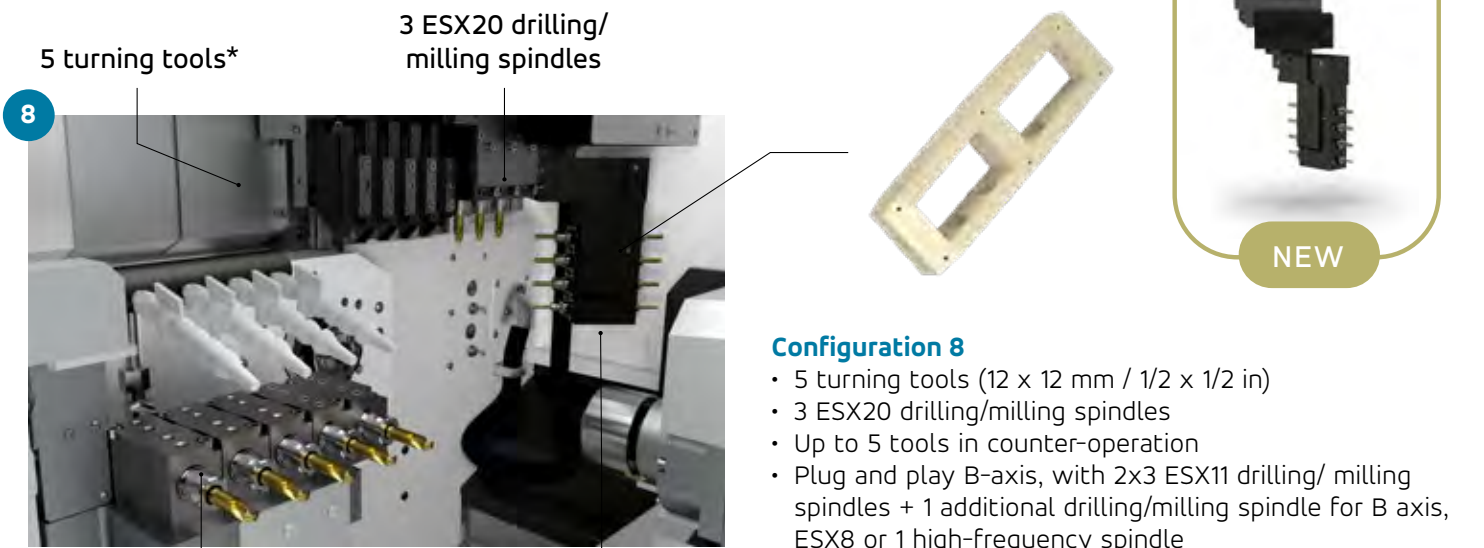
Configuration 7

- 5 turning tools (12 x 12 mm / 1/2 x 1/2 in)*
- 4 ESX20 drilling/milling spindles
- Polygon milling unit
- Up to 5 tools in counter-operation

Up to 5 tools

Polygon milling unit

* Optional, and with the removal of one ESX20 drilling/milling spindle, the machine can be configured with 6 turning tool holders 12 x 12 mm / 1/2 x 1/2 in or 5 turning tool holders (16 x 16 mm / 5/8 x 5/8 in).



8

5 turning tools*

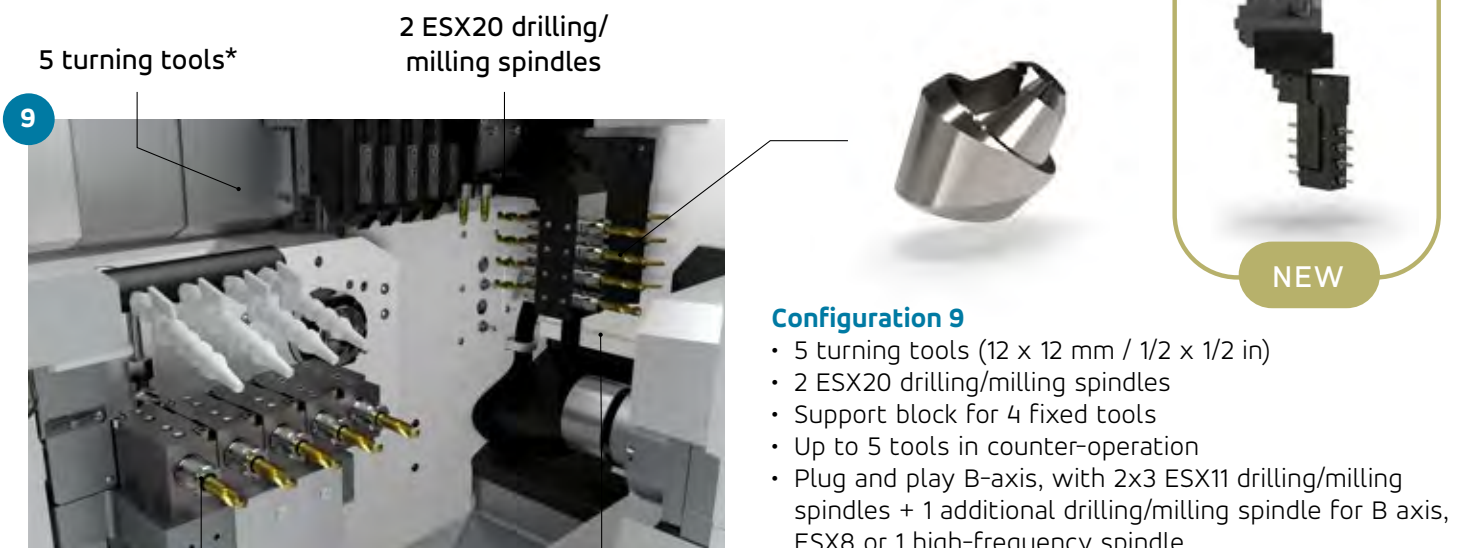
3 ESX20 drilling/milling spindles

Configuration 8

- 5 turning tools (12 x 12 mm / 1/2 x 1/2 in)
- 3 ESX20 drilling/milling spindles
- Up to 5 tools in counter-operation
- Plug and play B-axis, with 2x3 ESX11 drilling/milling spindles + 1 additional drilling/milling spindle for B axis, ESX8 or 1 high-frequency spindle

Up to 5 tools

Plug-and-play B axis, with 2x3 ESX11 drilling/milling spindles + 1 additional drilling/milling spindle for B axis, ESX8 or 1 high-frequency spindle



9

5 turning tools*

2 ESX20 drilling/milling spindles

Configuration 9

- 5 turning tools (12 x 12 mm / 1/2 x 1/2 in)
- 2 ESX20 drilling/milling spindles
- Support block for 4 fixed tools
- Up to 5 tools in counter-operation
- Plug and play B-axis, with 2x3 ESX11 drilling/milling spindles + 1 additional drilling/milling spindle for B axis, ESX8 or 1 high-frequency spindle

Up to 5 tools

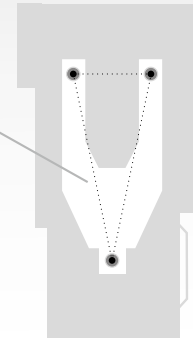
Plug-and-play B axis, with 2x3 ESX11 drilling/milling spindles + 1 additional drilling/milling spindle for B-axis, ESX8 or 1 high-frequency spindle

Plug and play B-axis

| | | |
|--|-------|----------------------|
| Number of rotating tool positions (main operation / counter-operation) | | 3 / 3 (4 / 4 option) |
| High-frequency spindle | | 1 (option) |
| Rotating tool speed of rotation | rpm | 8,000 |
| Rotating tool power | kW/hp | 1.0 / 1.33 |
| Max drilling diameter | mm/in | Ø5.2 / Ø0.20 |
| Max tapping diameter | | M3X0.5 |

Options

Ultra-stable rigid design.
The machine is supported on 3 feet.



Modular machining area

14 rotating tool positions

32 m/min feed rate

Large capacity chip tank, chip basket and filters

High rigidity

Liquid-cooled spindle, up to 10,000 rpm

Reliable and durable

The most rigid machine base in its class



Active Chip Breaker Plus (ACB Plus)

Extremely easy to use and can be actuated by just inserting a G code in the program. Various parameters can be used to change the oscillation amplitude and frequency to achieve a fine adjustment based on the specific workpiece requirements and thus avoid snarl chips.



B axis

The B axis extends the Swiss DT 26's capabilities substantially, allowing it to tackle almost any part. This modular position can incorporate either a 4th rotating drilling station or a high frequency spindle.

High-pressure pump

Benefit from a high-pressure-ready machine, and defeat the most difficult challenges with the Swiss DT 26! Whether you need a significant amount of coolant to "clean" the machining area, or more direct high-pressure coolant for thread whirling or high-pressure drilling, Tornos offers a range of pumps tailored to your requirements.



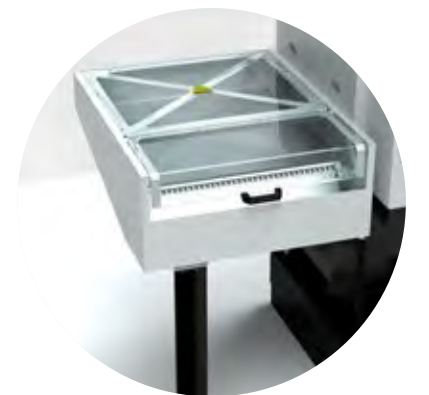
High-frequency spindles

High-frequency spindles, with rotation speeds of up to 60,000 rpm, enable the Swiss DT 26 to perform drilling, milling and slitting as well as eccentric drilling. Spindles can be installed in main operation and counter-operation in many variants.



Built-in part extraction

Long parts? Extract parts up to 500 mm, thanks to our optional long parts extraction system!





TISIS: Communicate with your machine

Programming

Able to manage up to 3 channels, the ISO editor automatically synchronizes the code between the channels. Programming your machine becomes very easy. You can see in real time the tool displacement and the cycle time of each operation. Furthermore you can easily optimize your program thanks to the patented Gant diagram provided by TISIS.

Selecting your tools

The TISIS database contains all of the tool resources; for example chisel holder plates, thread whirling tools, polygon tools or milling tools are all integrated. TISIS manages incompatibilities between the various tools and the user is guided intuitively.

Transfer

Transfer virtual programs to your bank of machines. Modify the program on the machine and transfer it again to your computer, maintaining full traceability.

Monitoring

Monitor your machine inventory in detail. See the status of the machines in the workshop and an overview of current production; the workpiece counter, remaining production time and the name and drawing of the workpiece are available at any time.



Discover the
TISIS video

Specifications

| Main spindle | | Swiss DT 13 HP | Swiss DT 13 S | Swiss DT 26 HP | Swiss DT 26 S | Swiss DT 32 HP | Swiss DT 38 HP |
|--|--------------|------------------------------|-----------------------------------|---------------------------------------|---------------------------------------|----------------------------|--|
| Max bar diameter | mm/in | 13 / 1/2 | 13 / 1/2 | 25.4 / 1 | 25.4 / 1 | 32 / 1 1/4 | 38 / 1 1/2 (w.o GB) / 32 / 1 1/4 (w. GB) |
| Standard workpiece length with guide bush | mm/in | 185 / 7.28 | 180 / 7.08 | 225 / 8.85 | 220 / 8.66 | 250 / 9.84 | 250 / 9.84 |
| Standard workpiece length bushless | mm/in | 30 / 1.18 | 30 / 1.18 | 55 / 2.16 | 55 / 2.16 | 80 / 3.15 | 80 / 3.15 |
| Spindle rotation speed | rpm | 15,000 | 13,000 (IKO GB) / 15,000 (w.o GB) | 0-10,000 | 0-10,000 | 0-8,000 | 0-7,000 |
| Spindle power (S1/S6) | kW/hp | 4.0 (5.0) / 5.36 (6.70) | 4.0 (5.0) / 5.36 (6.70) | 8.2 (10.5) / 10.99 (14.08) | 8.2 (10.5) / 10.99 (14.08) | 8.2 (10.5) / 10.99 (14.08) | 8.2 (10.5) / 10.99 (14.08) |
| Main-operation | | | | | | | |
| Max number of turning tools | | 6 (12x12 / 1/2) / 9 (8x8 mm) | 6 (12x12 / 1/2) / 9 (8x8 mm) | 6 (12x12mm / 1/2) / 5 (16x16mm tools) | 6 (12x12mm tools) / 5 (16x16mm tools) | 5 (16x16mm tools) | 5 (16x16mm tools) |
| Number of frontal tools (main-operation / counter-operation) | | 4/4 (5/5 option) | 4/4 (5/5 option) | 4/4 (5/5 option) | 4/4 (5/5 option) | 4/4 (5/5 option) | 4/4 (5/5 option) |
| Max front drilling diameter | mm/in | Ø10 / 3/8 | Ø7 / 0.276 | Ø12 / 1/2 | Ø10 / 0.393 | Ø12 / 0.472 | Ø12 / 0.472 |
| Max front tapping diameter | | M6xP1.0 | M6xP1.0 | M10xP1.5 | M10xP1.5 | M10xP1.5 | M10xP1.5 |
| Cross drilling / milling tools | | 6 (ESX20/ESX11) | 6 (ESX20/ESX11) | 6 (ESX20) | 6 (ESX20) | 6 (ESX20) | 6 (ESX20) |
| Max rotating tool speed | rpm | 8,000 | 8,000 | 6,000 | 6,000 | 6,000 / 3,800 (ESX25) | 6,000 / 3,800 (ESX25) |
| Rotating tool power | kW/hp | 1 / 1.34 | 1 / 1.34 | 1 / 1.34 | 1 / 1.34 | 2.2 / 2.95 | 2.2 / 2.95 |
| Max front drilling diameter rotating tools | mm/in | Ø6 / 0.23 | Ø6 / 0.23 | Ø6/Ø10 / 0.23-0.39 | Ø6/Ø10 / 0.23-0.39 | Ø10 / 0.39 | Ø10 / 0.39 |
| Max front tapping diameter rotating tools | | M5xP0.8 | M5xP0.8 | M5xP0.8/M6xP1.0 | M5xP0.8/M6xP1.0 | M8xP1.25 | M8xP1.2 |
| Plug and play B-axis | | | | | | | |
| Number of rotating tool positions (main operation / counter-operation) | | 2x3 / 2X4 (option) | - | 2x3 / 2X4 (option) | - | 2x3 / 2X4 (option) | 2x3 / 2X4 (option) |
| High-frequency spindle | | 1 (option) | - | 1 (option) | - | 1 (option) | 1 (option) |
| Rotating tool speed of rotation | rpm | 8,000 | - | 8,000 | - | 8,000 | 8,000 |
| Rotating tool power | kW/hp | 1.0 / 1.33 | - | 1.0 / 1.33 | - | 1.0 / 1.33 | 1.0 / 1.33 |
| Max drilling diameter | mm/in | Ø5.2 / Ø0.20 | - | Ø5.2 / Ø0.20 | - | Ø5.2 / Ø0.20 | Ø5.2 / Ø0.20 |
| Max tapping diameter | | M3x0.5 | - | M3x0.5 | - | M3x0.5 | M3x0.5 |
| Counter spindle | | | | | | | |
| Max bar diameter | mm/in | 13 / 1/2 | 13 / 1/2 | 25.4 / 1 | 25.4 / 1 | 32 / 1.25 | 38 / 1.50 |
| Max insertion length of workpiece into counter spindle | mm/in | 100 / 3.93 | 80 / 3.15 | 100 / 3.93 | 90 / 3.54 | 90 / 3.54 | 90 / 3.54 |
| Max standard length of workpiece | mm/in | 120 / 4.72 | 90 / 3.54 | 120 / 4.72 | 110 / 4.33 | 110 / 4.33 | 110 / 4.33 |
| Spindle rotation speed | rpm | 0-15,000 | 0-15,000 | 0-10,000 | 0-8,000 | 0-8,000 | 0-7,000 |
| Spindle power (S1/S6) | kW/hp | 4.0 (5.0) / 5.36 (6.70) | 4.0 (5.0) / 5.36 (6.70) | 8.2 (10.5) / 10.99 (14.08) | 1.5 (2.2) / 2.01 (2.95) | 8.2 (10.5) / 10.99 (14.08) | 8.2 (10.5) / 10.99 (14.08) |
| Max drilling diameter for the counter spindle | mm/in | Ø10 / 3/8 | Ø7 / 0.276 | Ø12 / 1/2 | Ø8 / 0.315 | Ø12 / 0.472 | Ø12 / 0.472 |
| Max tapping diameter for the counter spindle | mm/in | M6 x P1.0 | M6xP1.0 | M10xP1.5 | M6xP1.0 | M10xP1.5 | M10xP1.5 |
| Counter-operation | | | | | | | |
| Max number of tool positions | | 5 | 5 | 5 | 5 | 5 | 5 |
| Positions for rotating tools | | 4 | 4 | 4 | 4 | 4 | 4 |
| Max front drilling diameter for rotating tools | mm/in | Ø6 / 0.23 | Ø6 / 0.23 | Ø6 / 0.23-0.39 | Ø6 / 0.23-0.39 | Ø6 / 0.23-0.39 | Ø6 / 0.23-0.39 |
| Max tapping diameter for rotating tools | mm/in | M5xP0.8 | M5xP0.8 | M5xP0.8/M6xP1.0 | M5xP0.8/M6xP1.0 | M5xP0.8/M6xP1.0 | M5xP0.8/M6xP1.0 |
| Max rotating tool speed | rpm | 7,200 | 10,000 | 7,200 | 7,500 | 7,500 | 7,500 |
| Rotating tool power | kW/hp | 1 / 1.34 | 1 / 1.34 | 1 / 1.34 | 1 / 1.34 | 1 / 1.34 | 1 / 1.34 |
| Total number of tools | | 29 | 28 | 29 | 29 | 28 | 28 |
| Max. rapid feed rate | m/min | 32 (X1:30) | 32 (X1:30) | 32 (X1:30) | 32 (X1:30) | 32 (X1:30) | 32 (X1:30) |
| General specifications | | | | | | | |
| Max length | mm/in | 2,230 / 87.79 | 2,230 / 87.79 | 2,230 / 87.79 | 2,230 / 87.79 | 2,560 / 100.79 | 2,560 / 100.79 |
| Max width | mm/in | 1,250 / 49.21 | 1,088 / 42.83 | 1,250 / 49.21 | 1,088 / 42.83 | 1,285 / 50.59 | 1,285 / 50.59 |
| Height | mm/in | 1,730 / 68.11 | 1,730 / 68.11 | 1,730 / 68.11 | 1,730 / 68.11 | 2,080 / 81.89 | 2,080 / 81.89 |
| Weight | kg | 2,600 | 2,400 | 2,710 | 2,400 | 2,510 | 2,510 |
| Cutting oil tank capacity | l/gal | 200 / 52.8 | 210/55.47 | 200 / 52.8 | 210/55.47 | 210/55.47 | 210/55.47 |
| Installed power | kVA | 26 | 16 | 26 | 18 | 20 | 20 |

We keep you turning

tornos.com

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Tornos
throughout
the world



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