

escomatic D5-D6 TWIN

THREE TURNING TOOLS FOR MORE PRODUCTIVITY AND FLEXIBILITY

The escomatic D5-D6 TWIN has been designed to revolutionise production. The rotating toolhead, rotating at 12,000 rpm, has 2 or 3 cutting tools that can be controlled separately, depending on your requirements, for greater flexibility and simplification of the process. The cut part can be machined simultaneously on 2 counter operations (DUAL double machining system). The 2 counter-spindles equipped with a C axis are each mounted on a table equipped with separate CNC axes with a travel of 40m/minute. The rear of the part can be machined by 3 axial spindles and 1 transverse spindle at a speed of 18,000 rpm, for high-performance secondary machining operations. All this is supported by a new 3-channel Pegasus/Beckhoff CNC control dedicated specifically to the machine, for greater flexibility and ease of use.

Technical specifications

- Parts turned and machined on one side only, requiring very short cycle times
- Maximum number of operations on a single machine
- Material diameter 0,3 - 4 mm
- Machining from coils with real work 24-hour continuous

Features

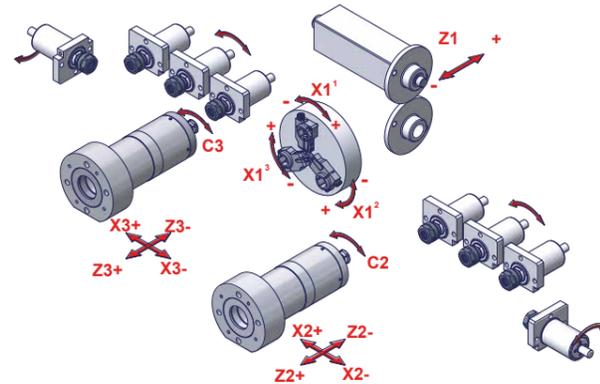
- Unrivaled productivity of the escomatic principle supported by CNC control
- Choice of escomatic cutting tools or inserts from all tool makers
- Use of escomatic type guide bushes or commercially available guide bushes.
- The maximum speed of the tool head is 12'000 rpm
- Very fast cycle times and reduced machining time with improved accuracy.
- Best price/performance ratio to produce parts with small diameters
- Improved parts quality, both in meeting tolerances and in surface finish
- Low electrical consumption
- Savings in floor space and manpower due to compact
- Higher quality and accuracy of parts
- High accessibility of all adjustable elements

Energy efficiency

The energy efficiency of machine tools is an essential element in reducing your company's operating costs and environmental footprint. Our machines are designed to maximise energy efficiency. Investing in our products will not only save you money in the long term, it will also help protect the environment. Discover our solutions today for more sustainable and profitable production.

ESCO SA
CH 2206 Les Geneveys-sur-Coffrane
Phone +41 32 858 12 12
info@escomatic.ch
www.escomatic.ch

Kinematics



TECHNICAL DATA

Turning

Maximum part diameter	4	mm
Standard workpiece length	80	mm
Number of cutting tools	2/3	
Max. tool head speed	12'000	rpm
D2 tooling can be used		
Material feed rate (Z1)	8	m/min

Straightening

Maximum straightening length	80	mm
Rotation speed of straightening unit	603 - 3'400	rpm

Counter Spindel

Over gripping counter collet	yes	
C-axis	yes	
C-axis speed	10'000	rpm

Back machining units

Axial powered spindles	3	
Maximum drilling speed	18'000	rpm
Drilling diameter	3.5	mm
Drilling length	20	mm
Tapping/threading diameter	M3	
Radial powered spindles	1	
Maximum speed	18'000	rpm
Drilling diameter	3.5	mm

Technical features

Coolant/cutting fluid	Oil	
Tank capacity	100	l
Flow rate of the pump	30	l/min
Max. system pressure	10	bar
Chips container capacity	40	l
Compressed air consumption	7	m ³ /h
Compressed air pressure	5	bar
Installed power	4	kVA
Average power consumption	1.85	kW

Dimensions & weight

Length x Width x Height	2'150 x 1'050 x 1'580	mm
L x W x H with coil reel	2'750 x 1'050 x 1'580	mm
Net weight	1'150	kg
Gross weight	1'250	kg

Modifications reserved

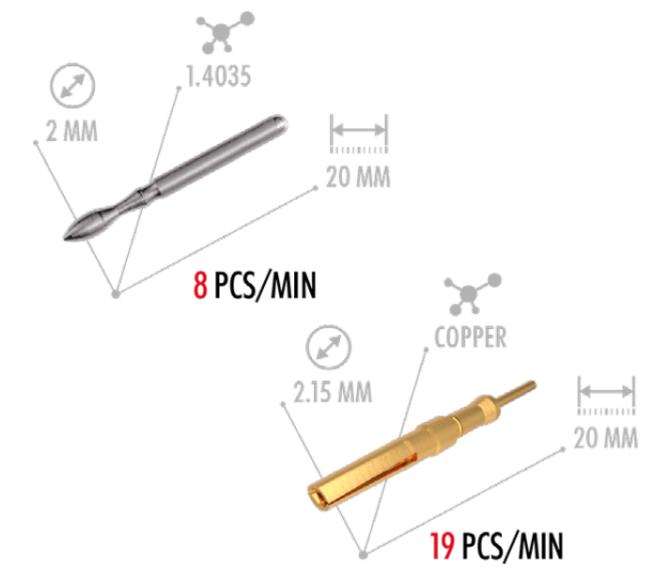
EN - 02.2024



escomatic D5-D6 TWIN

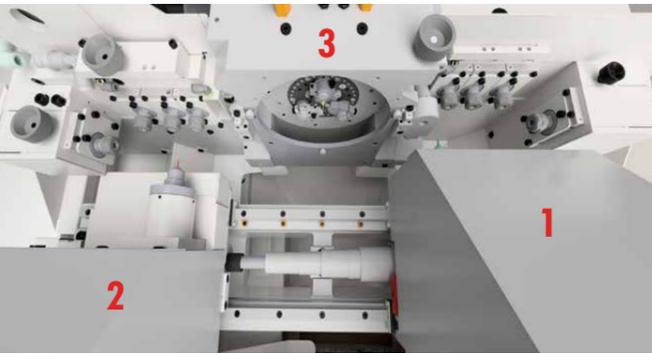


the evolution
created for
the revolution
of production



escomatic D5-D6 TWIN

THREE TURNING TOOLS FOR MORE PRODUCTIVITY AND FLEXIBILITY

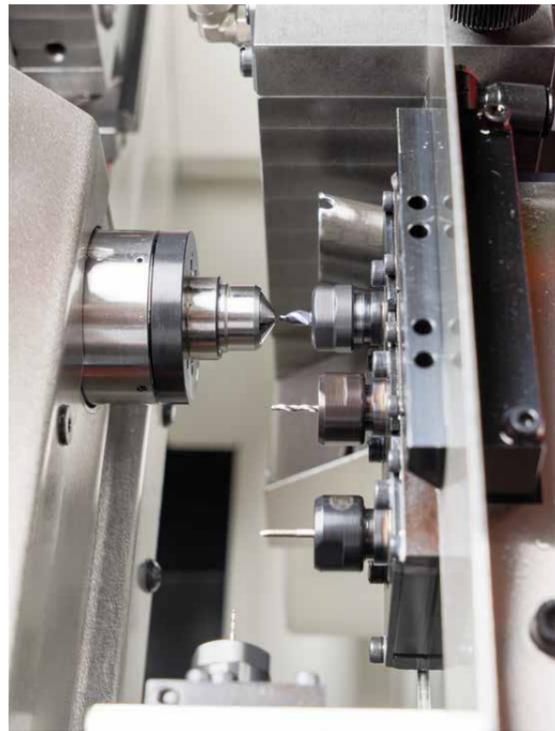


THREE PARTS MACHINED SIMULTANEOUSLY

The D5-D6 TWIN is equipped with two counter-spindles, enabling it to process three workpieces simultaneously. The first part, turned after being gripped in the counter-spindle and cut, is machined in unit 1. The second part, turned and cut off, is machined in parallel in unit 2. The third part of the cycle is in the turning position on the chuck. Please note that no front-end machining can be carried out in this configuration.

WORKPIECE PICK-UP SYSTEM

For the pick-up of the finished turned parts a counter collet unit or optionally a counter spindle with C-axis (10'000^{rpm}) is available. This unit is mounted on its own two axis CNC cross slide with a translation speed of 40 m/minute.



DOUBLE BACK MACHINING UNIT (DUAL)

On the rear side, for counter-operation, a DUAL with three axial spindle and 1 cross spindle are supplied as standard. As an option, one of the axial spindles can be replaced by a vertical spindle for milling.

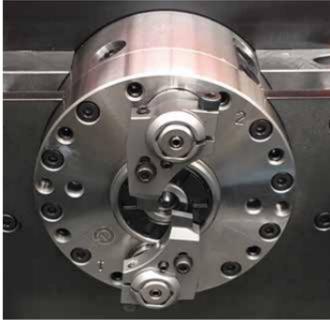
escomatic by ESCO SA

TURNING

While the material is held by a guide bush, the turning and chip removal is performed by the unique escomatic principle. This consists in having the cutting tools rotating around the material with a speed up to 12'000^{rpm}. When cutting off, the counter collet holds the machined part for a perfect flatness and a cutoff tip free end.

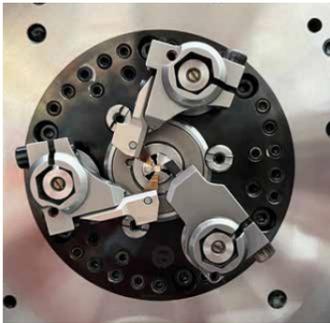
D5 TWIN

Ideal for simple, high-volume parts, the rotating toolhead chuck has been around for a long time and has proved its worth.



D6 TWIN

Each tool in the new rotating toolhead is called separately. In addition to a third tool, this rotating toolhead has improved rigidity and allows the use of several types of guide bush. The tool holders are identical for the entire range of D machines.



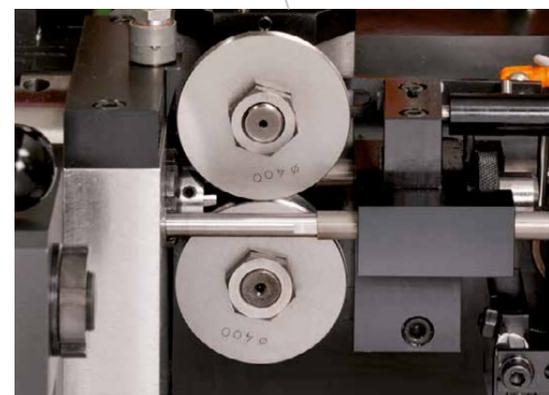
MATERIAL FEED

The material is supplied into the machine from coil. A coil, depending on the type of material, usually has 30 kg and is unrolled from a reel supported by the machine. The material is pulled across the machine by the material feed system. It saves you a lot of money, time, and space compared to bar work.



MATERIAL FEEDING

The material is clamped between a set of grooved rollers and their rotation controls the feeding. The clamping pressure is adjustable and the grooves have the shape of the wire. With this principle and the closeness of the guide bush, very small wire can be machined without bending or whipping (down to 0.30 mm).



MATERIAL STRAIGHTENING

The material is fed into the machine from a coil which becomes bar stock after the straightening process. It produces a bar with a straightness quality equivalent to standard bar stock.