escomatic NM 6 TWIN

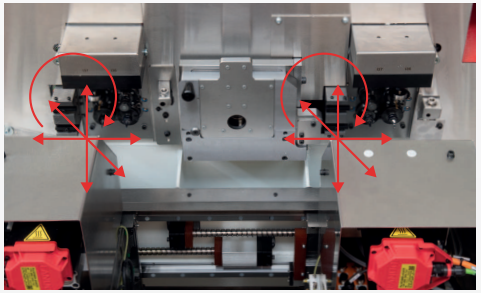
MORE FLEXIBLE, MORE VERSATILE, FASTER

The escomatic Concept

Unlike conventional lathes, escomatic lathes are based on a unique concept. The material, which is coil stock or bar, does not rotate. The cutting tools mounted onto the spinning tool head rotate around the material. This concept equally qualified for the manufacturing of small, medium and large lot size parts, contributes to the extremely high performance and cost savings achieved with escomatic machines.

More flexible, more versatile, faster

Thanks to the new design and to the use of two completely independent cross tables for the front and back machining units, the NM6 TWIN breaks the limits of flexibility and performance.



Secondary operations could be carried out with 2 identical units consisting of:

- 2 counter collet spindles with C-axis which are mounted on 2 independent tables with cross slides;
- 2 back machining units which are equipped with 4 axial fix toolholders or 4 axial spindles for drilling, tapping or threading and 1 cross spindle.

This configuration doubles the back machining operations and 3 parts are machined simultaneously.

Very high profitability thanks to:

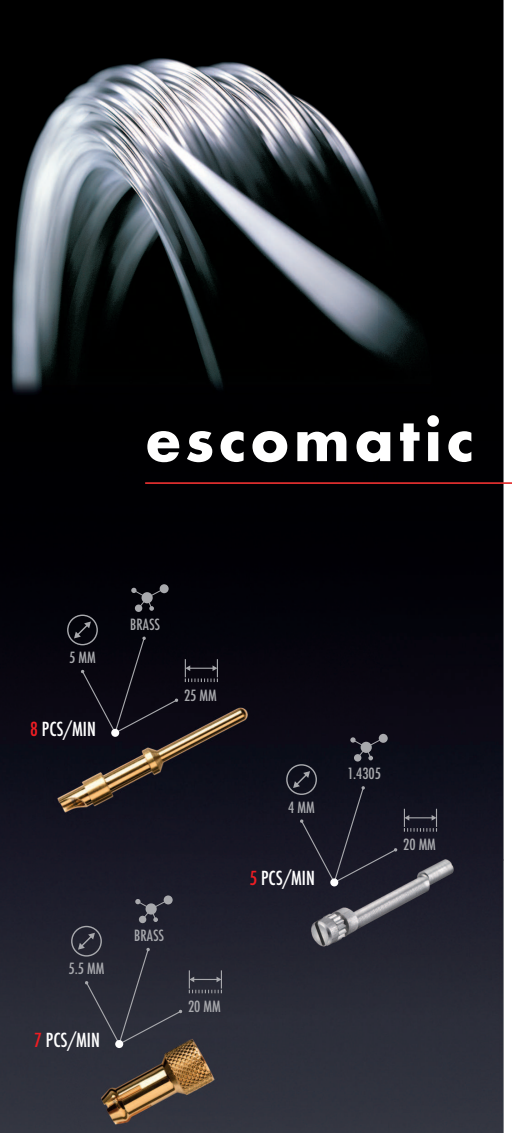
- Machining of 3 parts simultaneously
- Unrivaled productivity of the escomatic principle
- Very short turning times thanks to the proximity of tools
- 24 hours production facilitated by coil feeding
- No lost time due to bar loading
- Man-hour gain in material feeding
- Limited waist of material ends

TECHNICAL DATA

Turning		
Max. material diameter	6.50	mm
Work piece length standard	150	mm
Number of tools	4	
Max. toolhead speed	10'000 (12'000 option)	min^{-1}
Back machining unit (DUA)		
Number of fixed tools axial	4	
Max. drilling diameter	6	mm
Max. tapping capacity	M4	
Number of powered tools axial	4	
Number of powered tools lateral	2	
Max. drilling speed	15'000	min^{-1}
Max. drilling diameter	5	mm
Max. tapping capacity	M3	
Counter spindel (C-Axis)		
Max. speed of counter spindle	10'000	min^{-1}
Resolution/Increment	0.001	°
Numerical control		
CNC control FANUC	31iB	
Max. number of controlled axes	10	
Number of spindles	3	
Measuring system resolution	0.001	mm
Rapid feed	37	m/min
Technical features		
Coolant/cutting fluid	Oil	
Tank capacity	130	l
Flow rate of the pump	45	l/min
Max. system pressure	8	bar
Chips container capacity	70	l
Installed power	8	kVA
Compressed air consumption	11	m^3/h
Compressed air pressure	5	bar
Dimensions		
Length x Width x Hight	2'650 x 1'650 x 1'850	mm
L x W x H with coil reel	4'300 x 1'650 x 1'850	mm
Net weight	1'800	kg
Gross weigth	2'000	kg
Average sound pressure level	69.8	dB
Average sound power level	87.3	dB

Modifications reserved

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



TOURS AUTOMATIQUES esco

escomatic NM 6 TWIN

THE NEW GENERATION

TWIN MACHINING UNITS FOR UNMATCHED PRODUCTIVITY

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escomatic by ESCO SA

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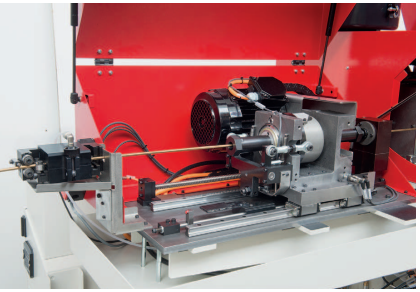
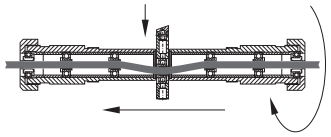


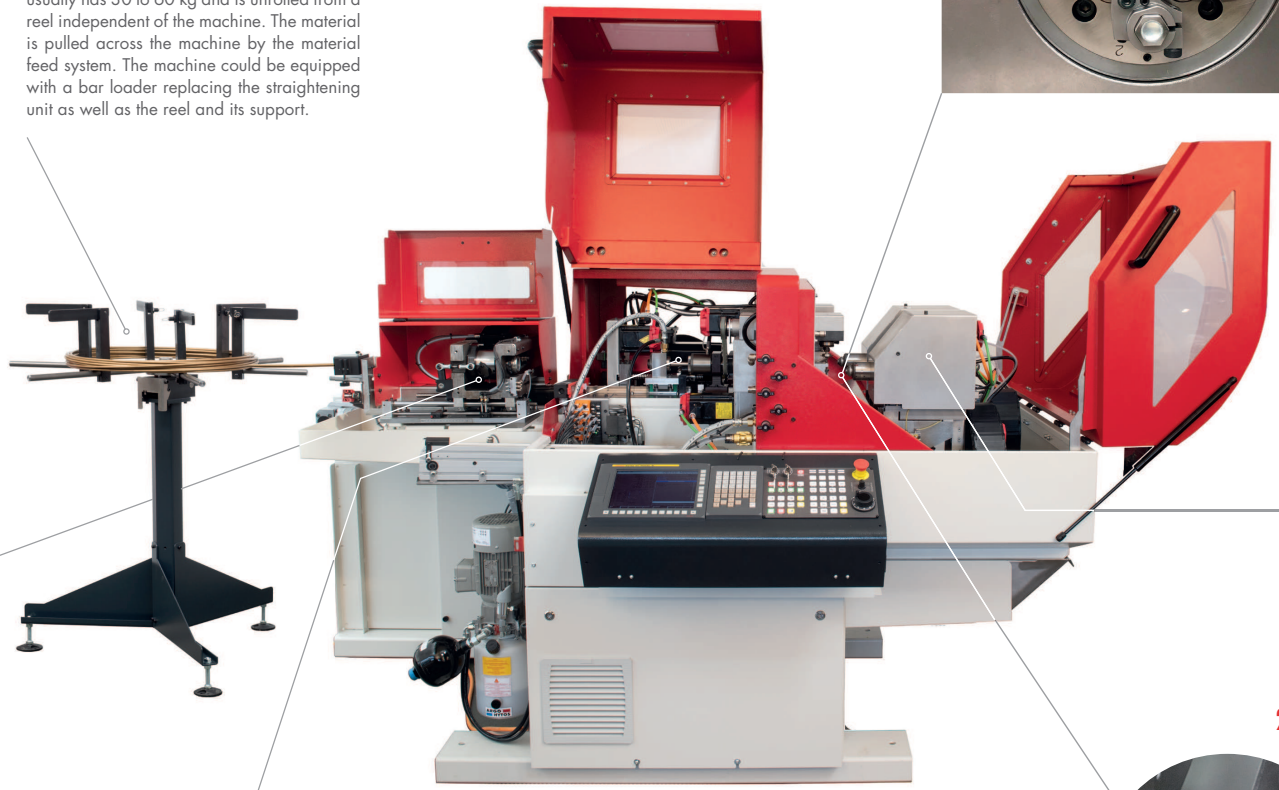
MATERIAL STRAIGHTENING

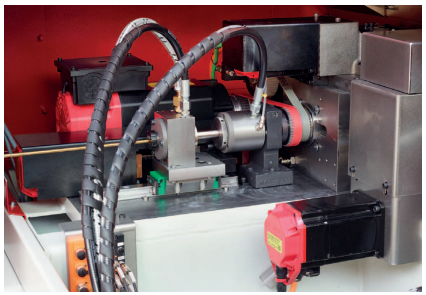
The material is fed into the machine from coil which becomes «bar stock» after the rotating straightening process. In the process the material is straightened during the recoil of the rotor of the straightening unit. It produces a bar with a straightness quality equivalent to standard bar stock. Thanks to the electric drive and the programming from the console, the quality of straightening is optimized.
Improved speed control and a better managed displacement provide a very fine precision of straightening.



MATERIAL FEED

The material is supplied into the machine from coil. A coil, depending on the type of material, usually has 30 to 60 kg and is unrolled from a reel independent of the machine. The material is pulled across the machine by the material feed system. The machine could be equipped with a bar loader replacing the straightening unit as well as the reel and its support.



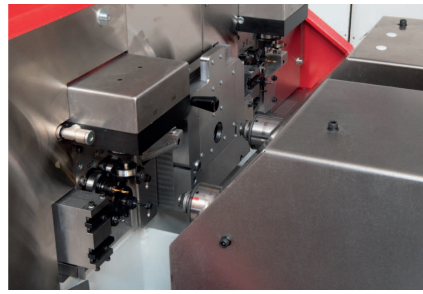


MATERIAL FEEDING

The material is fed and moved in the machine by the CNC controlled Z1-axis and the attached feed system.

TURNING

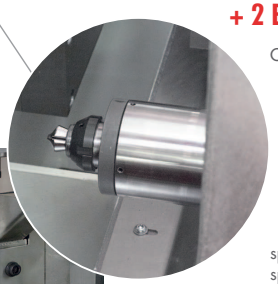
The material is fed through a guide bush into the rotating tool head. The turning and cutting is based on the unique escomatic principle in which four turning tools are rotating around the workpiece with up to 10'000 RPM (or 12'000 RPM optional). The cutting tools are either escomatic tools or inserts from other suppliers.



TWIN BACK MACHINING UNITS

The special configuration of the machine NM6 TWIN doubles the back machining operations and 3 parts are machined simultaneously. During machining of the first part in the tool head, the second and third part will be machined simultaneously on the 2 back machining units.

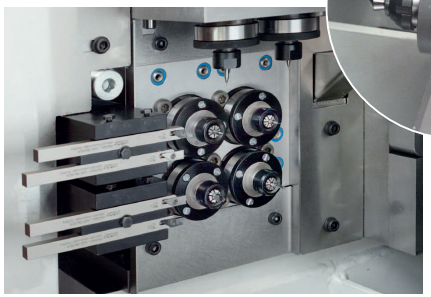
2 COUNTER COLLET SPINDLES + 2 BACK MACHINING UNITS



COUNTER COLLET SPINDLE UNIT

Fort the cut-off and the subsequent back machining after the turning operation, the parts will be clamped in a counter collet spindle with C-axis (10'000 min^{-1}).

The counter collet spindle permits to carry out all subsequent standard machining operations and allows specific positioning. By combining the speeds of the counter spindle and drilling spindles, the machining speeds can be increased.



BACK MACHINING UNITS

The 2 back machining units are identically equipped:

- 4 axial fix toolholders or 4 axial spindles for drilling and tapping/threading
- 2 cross drilling spindles by Y-axis (option)
- 4 toolholders for turning (option)