

CAM OPERATED AUTOMATIC TOOL CHANGER WITH ROTARY MAGAZINE CTM 10 – CTM 20



- ◆ Movements quickness and noiseless
- ◆ Drives with three-phase asynchronous self-braking motors
- ◆ Movements accuracy and repeatability
- ◆ Rapid and silent cam movements
- ◆ Limited dimension.
- ◆ Reliability.
- ◆ "LONG-LIFE" lubrication
- ◆ Fully autonomous unit.
- ◆ Available for 20, 30 tools.

CAM OPERATED HANDLING SYSTEMS

Strada Comunale di None, 25 I - 10092 BEINASCO (TO) - ITALY - Tel.011-3972211- Telefax 011-3497863
E-mail : cofilto@tin.it - internet <http://www.cofil.it>

GENERAL

This tool changer is particularly suitable for installation on small horizontal and vertical NC work centers for small parts machining (watches, jewellery, glasses) and for plastic material machining (glasses frame).

Standard versions are as follows:

- CTM 10 suitable for cones BAG SKI16 - HSK25 with max. tool weight of 1.2 kg
- CTM 20 suitable for cones ISO20 - ISO25 - HSK25 - HSK32 with max. tool weight of 2.5 kg.

Standard tool magazine with capacity of 20 or 30 tools is envisaged for each version of tool changer.

Tool changer type CTM consists of:

"Colombo Filippetti" cam operated changer type MAN which, actuated by a single self-braking gear motor, performs whole mechanically synchronised movement of coupling, withdrawal, exchange and simultaneous insertion of tools on spindle and in magazine.

Characteristics of movement, cam drive feature are extremely soft, as well as quick, accurate and silent.

Quick-release gripper arm type BP 21 with full mechanical drive.

Circular tool magazine consisting of indexing table actuated by "Colombo Filippetti" intermitter type CF3, driven by three-phase asynchronous self-braking motor. Table carries a disc supporting hinged tool holder bushings.

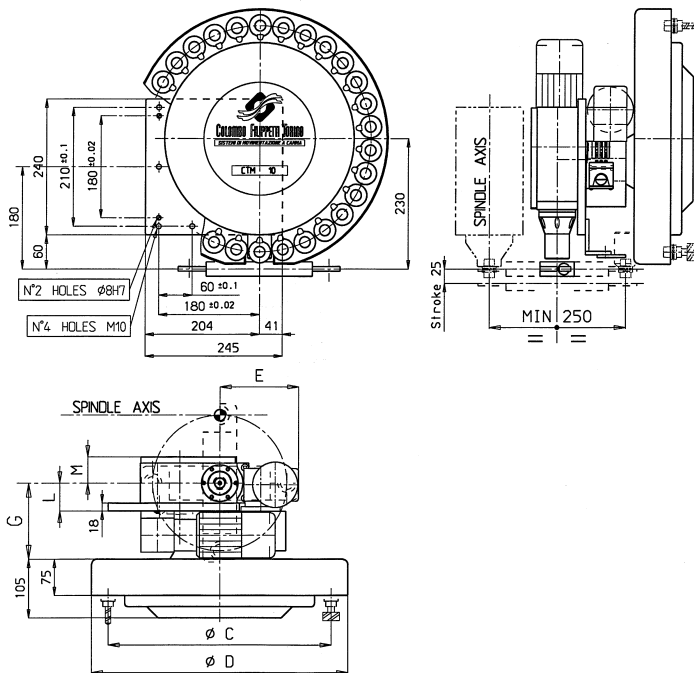
In pick-up station, bushing with selected tool is tilted by 90 degrees by pneumatic device, in order to be out of clearance and permit tool pick-up by means of gripper arm.

Binary code reading system with parity micro ensures selected tool identification.

Standard management is "Random". "Fixed place" management is also allowed with possible changes, but with consequences for exchange time.

CTM, thanks to its lightness (almost completely manufactured with light alloy and plastic materials), may be directly mounted on machine upright.

Tool change time, which depends on tool weight and exchange center distance above all, is within 0.8 to 2 seconds in "Random" management.



No. tools	C	D
20	300	360
30	400	460

Magazine	E	L	M
CTM 10	61,5	47,5	150
CTM 20	70	70	170

Center distance	G
250	137,5
300	162,5
350	187,5
400	212,5

TECHNICAL FEATURES

		CTM 10	CTM 20		CTM 10	CTM 20	
Max. tool weight	Kg	1,2	2,5	Magazine rotation times (for each tool)	s	0,43	0,43
Overall max. tool weight:				Max. tool search time:			
Magazine, 20 tools	Kg	25	30	Magazine, 20 tools	s	3,9	3,9
Magazine, 30 tools	Kg	35	40	Magazine, 30 tools	s	6	6
Max. tool diameter	mm	40	40	Magazine motor power	Kw	0,063	0,063
Max. tool diameter with empty adjacent places	mm	80	80	Changer motor power	Kw	0,063	0,063
Min. exchange center distance	mm	250	300	Tilting pneumatic cylinder: tool holder cell			
Max. exchange center distance	mm	400	500	Diameter	mm	25	25
Min. change time	s	0,8	1	Stroke	mm	36	36
				Feed pressure	bar	5	5

Accessories:

- Tools extractor
- Electric terminal-board
- Pneumatic system

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We reserve the right of event partial modification, due to constant technical development of our products.



Colombo Filippetti Torino Srl