

**TLT-210**  
**SMART**  
DD TILTING  
ROTARY TABLE

TEAM



DIRECT-DRIVE MOTION TECHNOLOGY

MOTION TECHNOLOGY

# TLT-210 SMART DD TILTING ROTARY TABLE

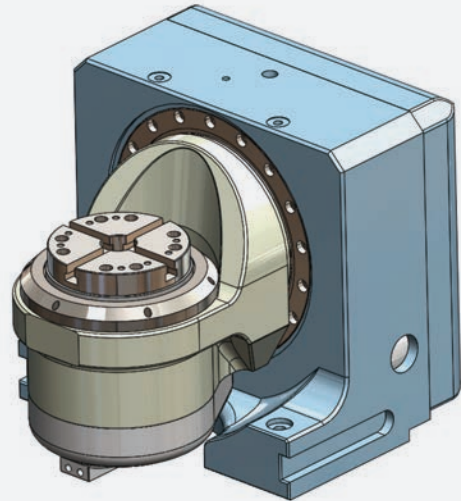
Technai Team S.p.A. was established in 1993 upon a sound basis of both mechanical and electromagnetic engineering skills. Today is widely regarded as one of the major specialists in Direct Drive technology applied to Machine Tool and Industrial Automation.

Its product range is divided into two main categories:

Components, that is torque motors elements, and Systems like milling heads, rotary and tilting tables, rotary actuators and individual dedicated function's modules.

## PRODUCT OVERVIEW

The 2-axis table TLT-210 SMART is designed as accessory for realizing the 4th and 5th axis on small/medium size vertical milling machining centres.



The table is made of two modules, each one equipped with torque motor, bearing, encoder and clamping device. The customer is left only the connection of the utilities (electrical and pneumatic) and of water cooling system, if present.



## TECHNICAL SPECIFICATIONS

TECHNICAL DATA	ROTATING AXIS	TILTING AXIS
Maximum speed	200 rpm	150 rpm
Nominal torque S1-100% air cooling	8.5 Nm	27 Nm
Nominal torque S1-100% water cooling	19 Nm	68 Nm
Peak torque	38 Nm	135 Nm
Clamping torque (Hydraulic clamp pneumatic actuated)	550 Nm (@5.5 bar)	1100 Nm (@5.5 bar)
Rotation angle	Continuous	+/-140 °
Feedback encoder	ERA 4800C incremental	ECN 225 absolute
Class of angular accuracy	+/- 5"	± 10"



## APPLICATION FIELDS

TLT-210 SMART allows to produce complex parts orienting the workpiece in space, for realizing both prismatic machining (3 + 2) and more complex surfaces with full 5-axis machining paths.

Among possible applications we can mention:

- General Mechanics
- Medical
- Luxury
- Low/Medium hardness material machining
- Complex parts high precision machining

In a category where traditional mechanical transmission is still predominant, Technai has won the challenge of developing a competitive product with superior class performance, exploiting the benefits of Direct Drive technology.

## MAJOR INNOVATIONS AND BENEFITS

The "SMART concept unfolded around precise specifications and presents a number of advantages:

Integrated Direct Drive technology

Compact layout that minimizes the footprint on the host table, allowing usage on small size milling machines

Ease of loading/unloading, even with robotic arm, thanks to open frontage

High structural stiffness (without a second support) due to the large bearing on tilting axis

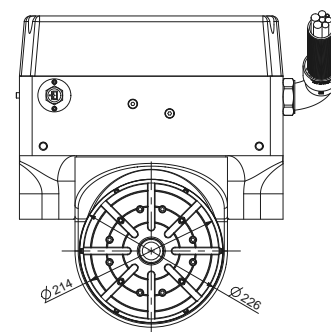
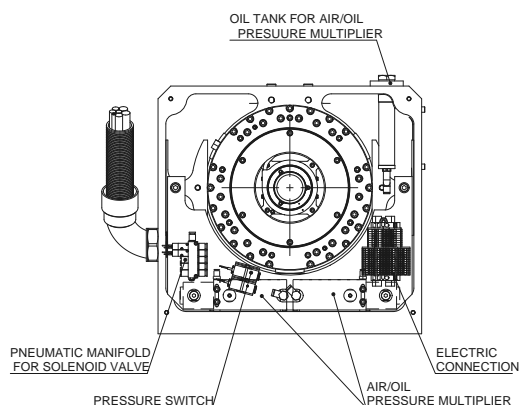
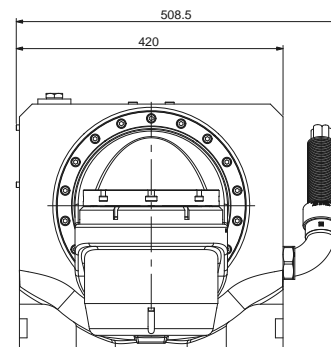
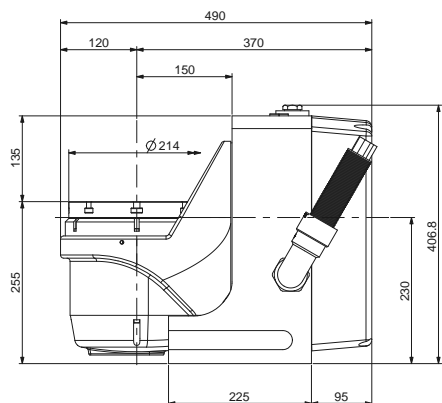
Optimal 3+2 machining with powerful hydraulic clamps feed by pneumatic pressure multiplier

Simplicity and speed of installation

Maintenance free

Superior dynamic performance

High degree of positioning accuracy



## CONFIGURATION OPTIONS under request

- Torque motors water cooling to enhance 5-axis mode machining
- Zero point device integration for automatic pallet change
- On board digital servo drive axis controller to enable stand alone operation



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