

Twinhorn[®]

tüv
CERT **CE**
DIN EN ISO 9002

TS-814

CNC TURNING CENTER



CNC TURNING



SUPERIORITY....

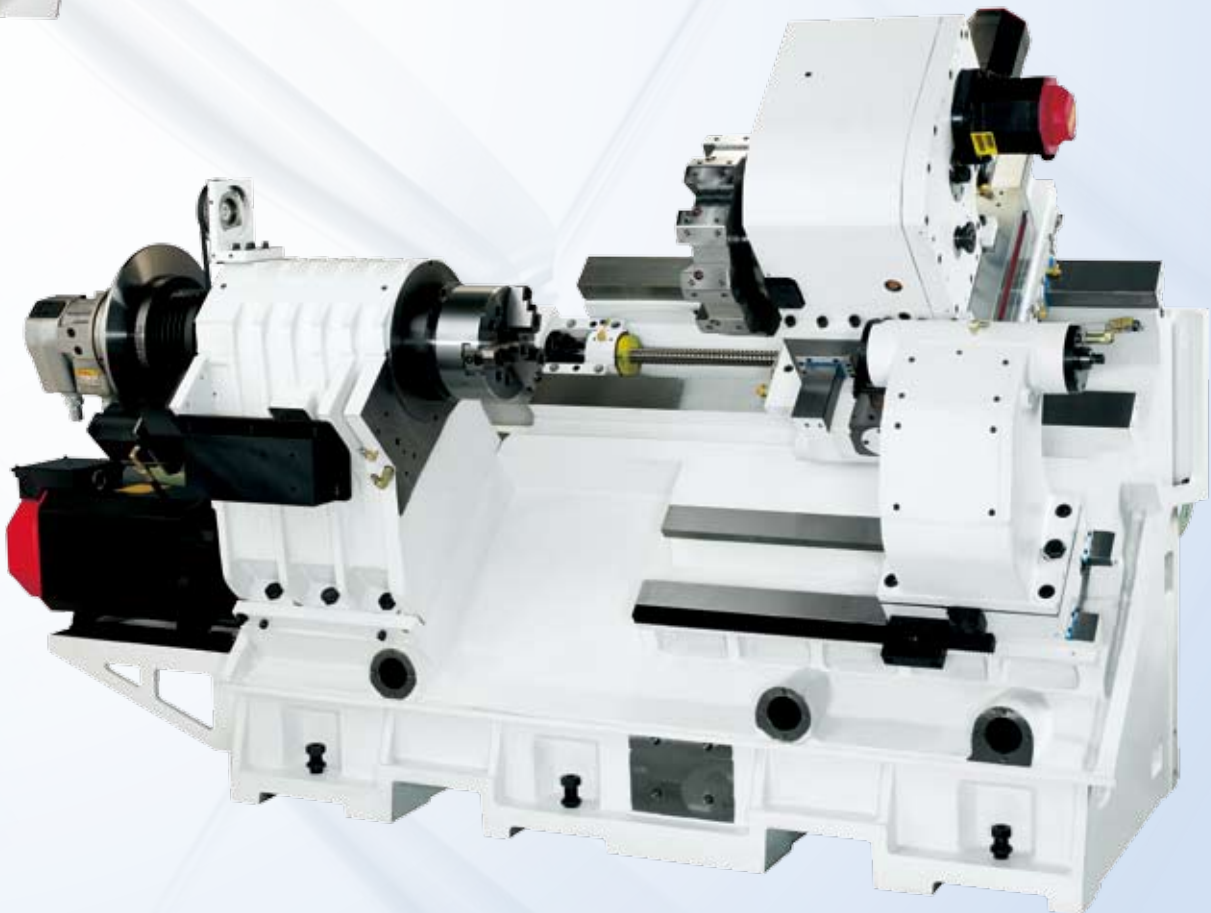
EXQUISITE DESIGN....

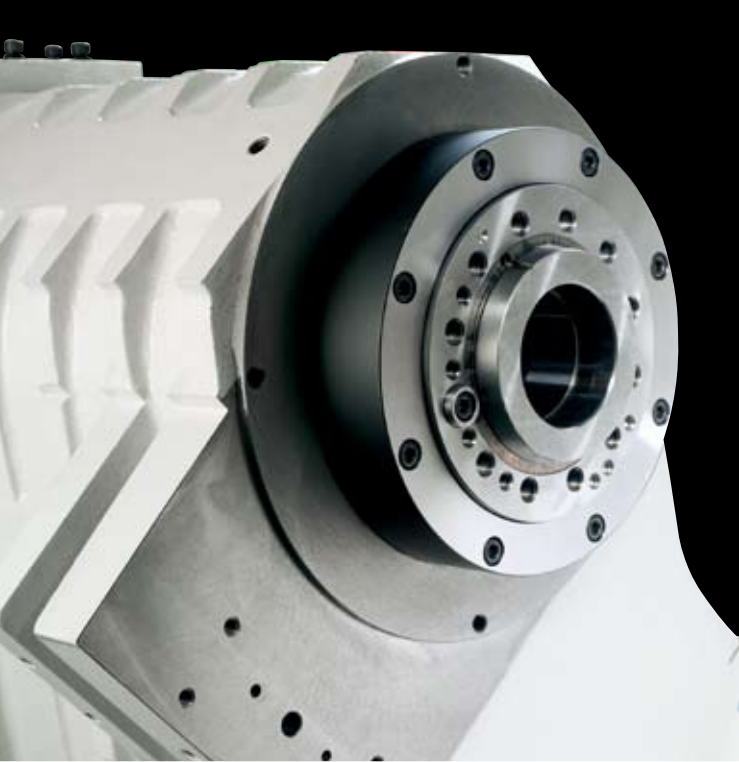
PERFECT PRESENTATION....

CENTER

HIGH TENSILE MECHANICAL STRUCTURE DESIGN

- *45° slant bed single piece body design provides best stability, vibration absorb capability and smooth chip collecting.*
- *Enhanced triangular boxing body structure build with all Meehanite cast iron.*
- *Heat-treated and precisely ground box way design on both X and Z-axis provide best cutting capability.*



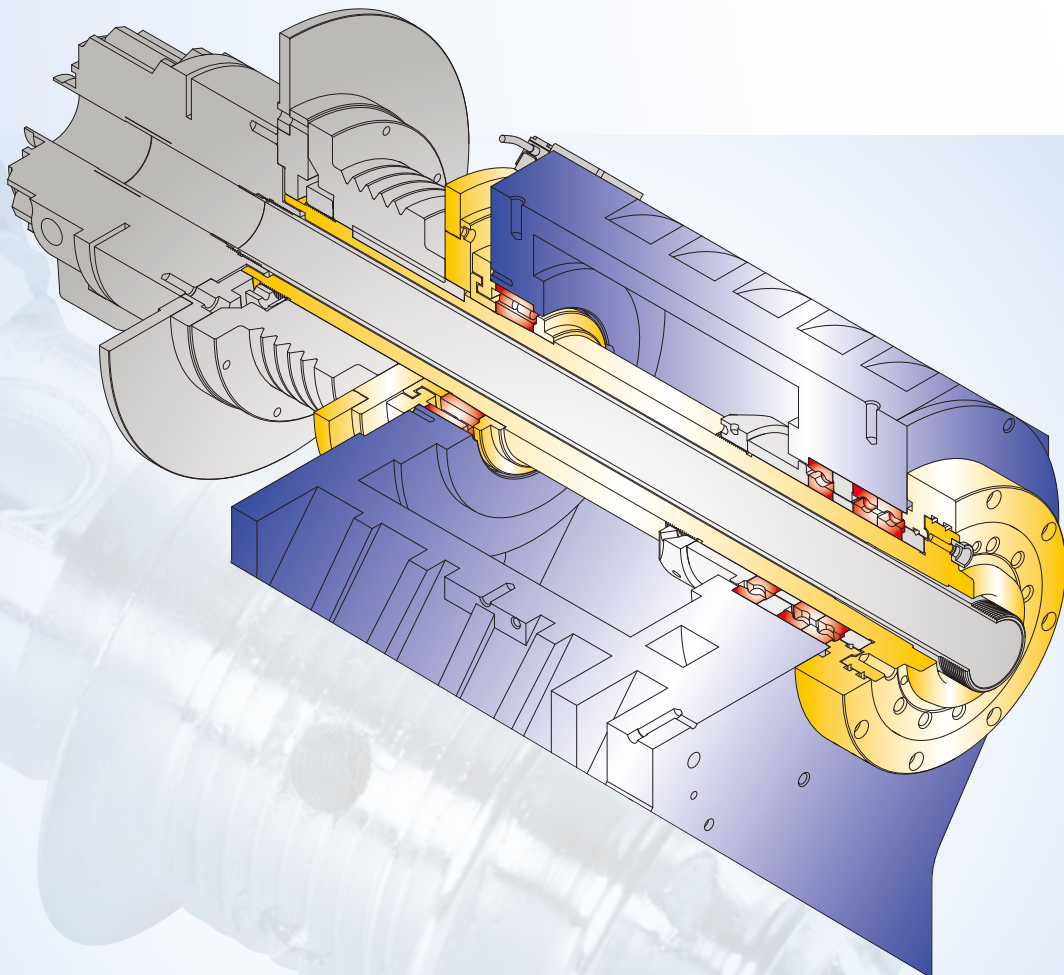


SUPER STRONG SPINDLE DESIGN

- *The rugged spindle housing with heat sink rib design provides best thermal control and mechanical balance with machine base.*

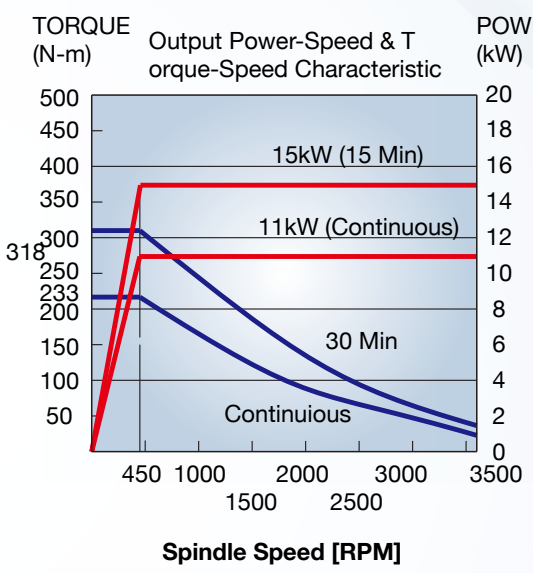
SPINDLE PROFILE

- *The spindle is built with chromium-molybdenum alloy steel with hardness to HRC 58° and precisely ground.*
- *Employs NNK high precision bearings with special bearing support design provides best rigidity and accuracy.*

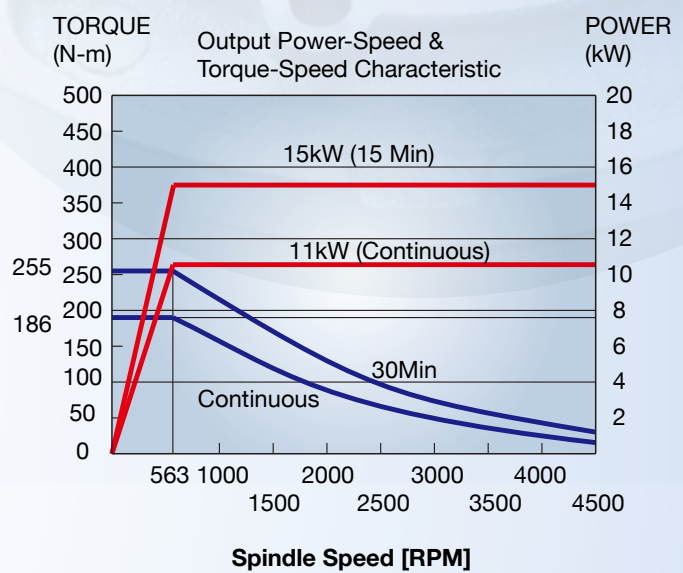


SPINDLE MOTOR TORQUE CHART

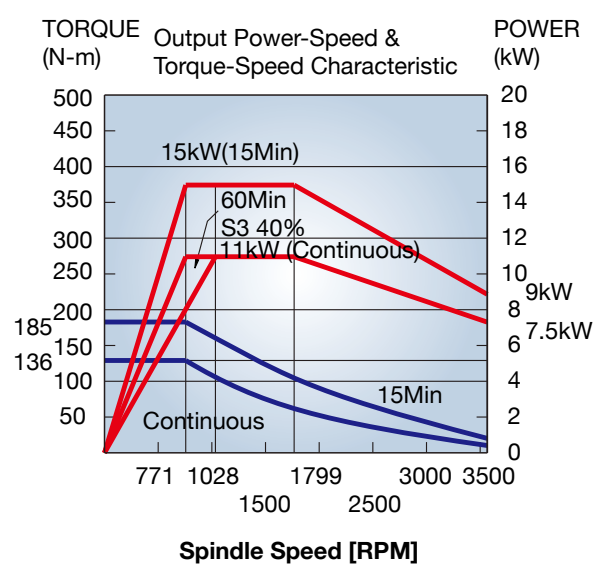
FANUC α 22i 3500rpm



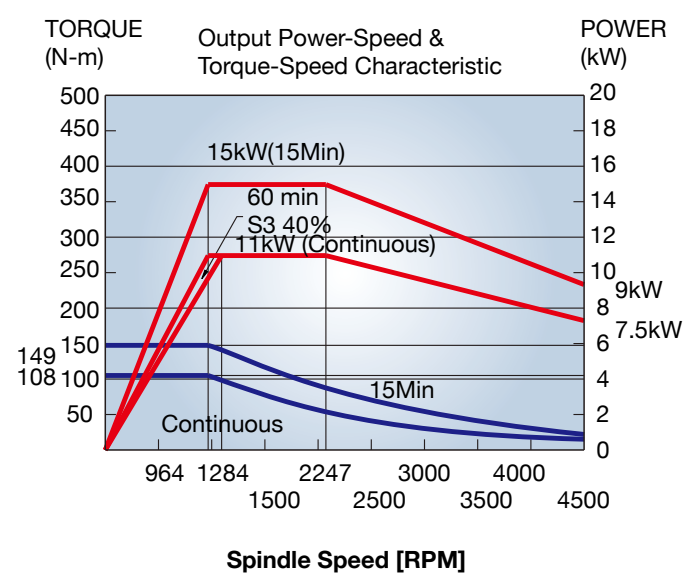
FANUC α 22i 4500rpm



FANUC β 12i 3500rpm



FANUC β 12i 4500rpm



PRECISE SCRAPING

- All slide way contact areas were cover with precisely scrapped TURCITE B plus automatic lubrication system to ensure longer machine accuracy.



PRECISE BALLSCREW SYSTEM

- Both X and Z-axis equipped with pre-tensed C3 class high precision ball screw to ensure machine accuracy during operation.

Cutting Capability

Spindle motor	15Kw (20HP)
Material	S45C
Drawtube diameter	Ø78 mm
Cutting depth	5 mm
Rapid per round	0.4 mm
Spindle speed	816 rpm



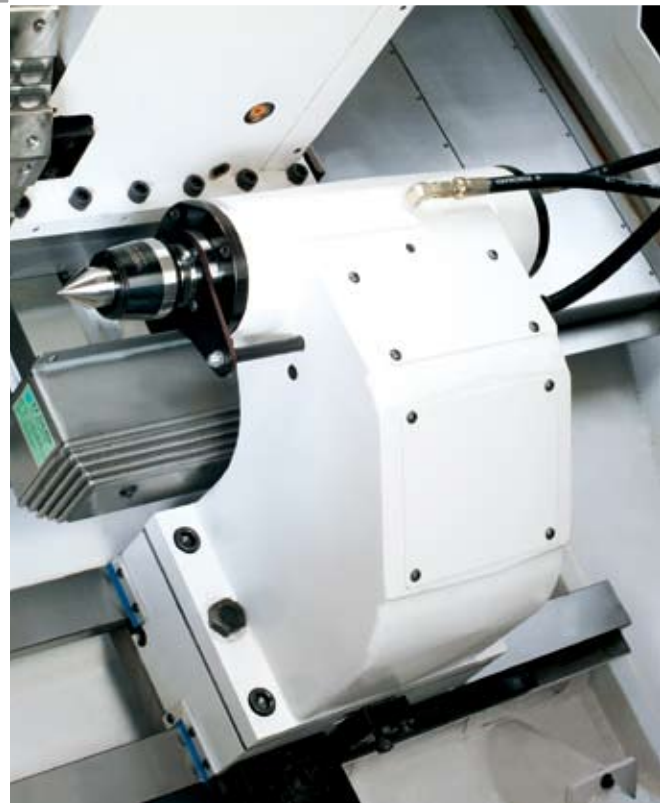


HIGH SPEED PRECISE SERVO TURRET SYSTEM (STANDARD)

- *With special designed curve clutch system and servo motor driven power enhanced index accuracy and fast tool change up to 0.15 sec. for adjacent tool.*

MANUAL HYDRAULIC TAILSTOCK (STANDARD)

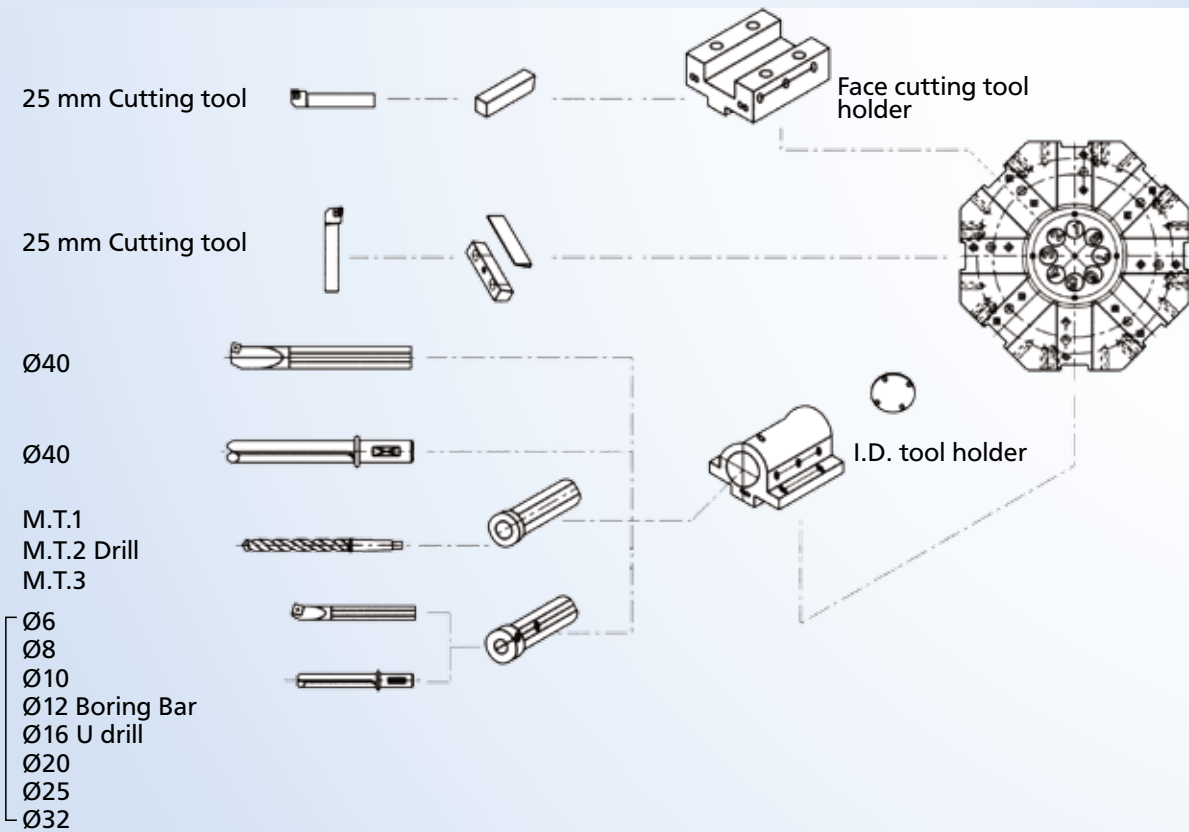
- *The manual tail-stock with hydraulic system is standard equipment.*



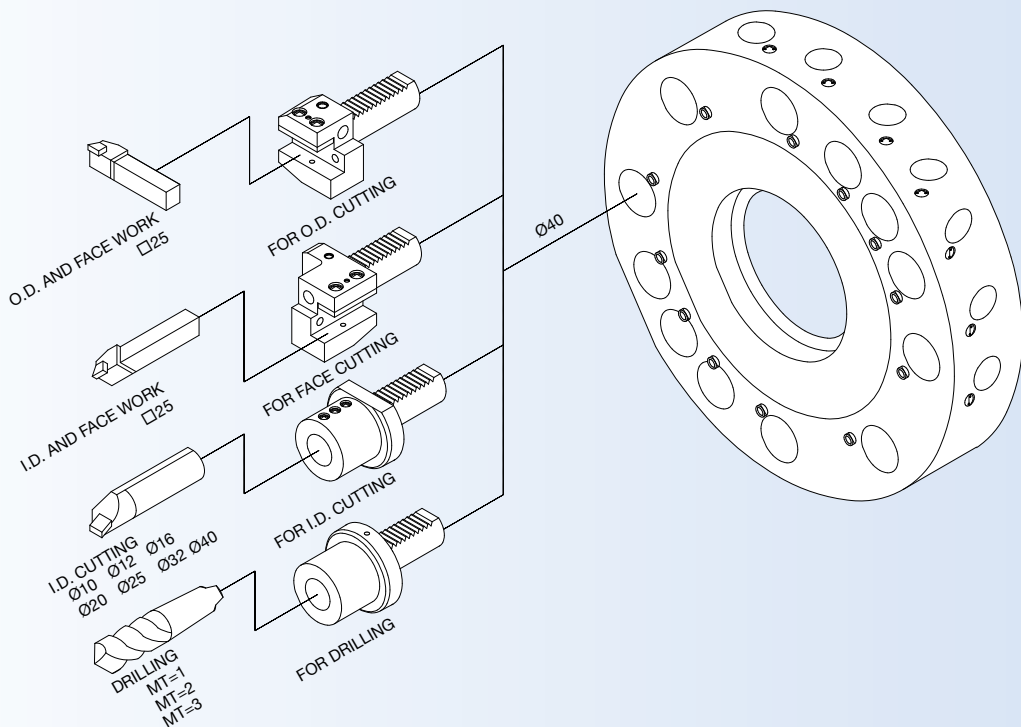
LIVE TOOLING SYSTEM (OPTIONAL)

- *Provide you most complete machining ability and make your production more efficient.*

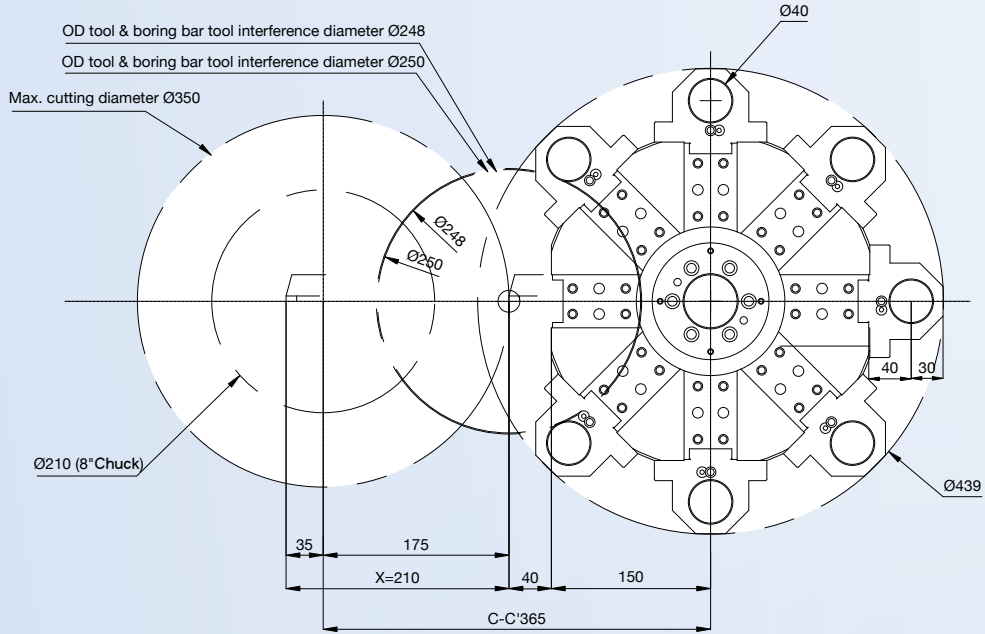
8 STATION TOOLING SYSTEM



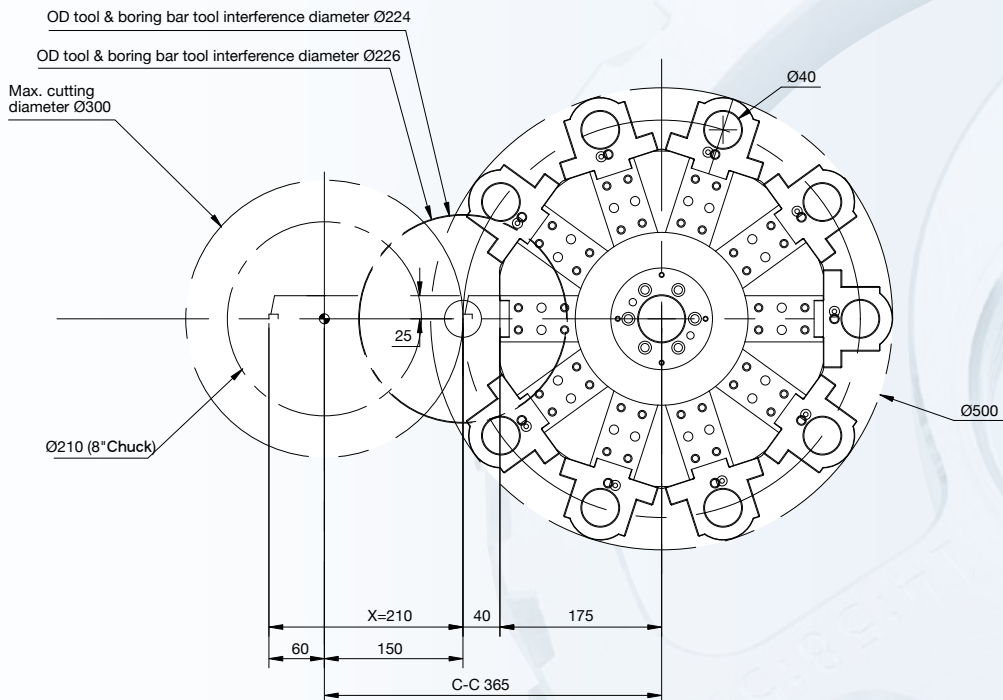
12 VDI TOOLING SYSTEM



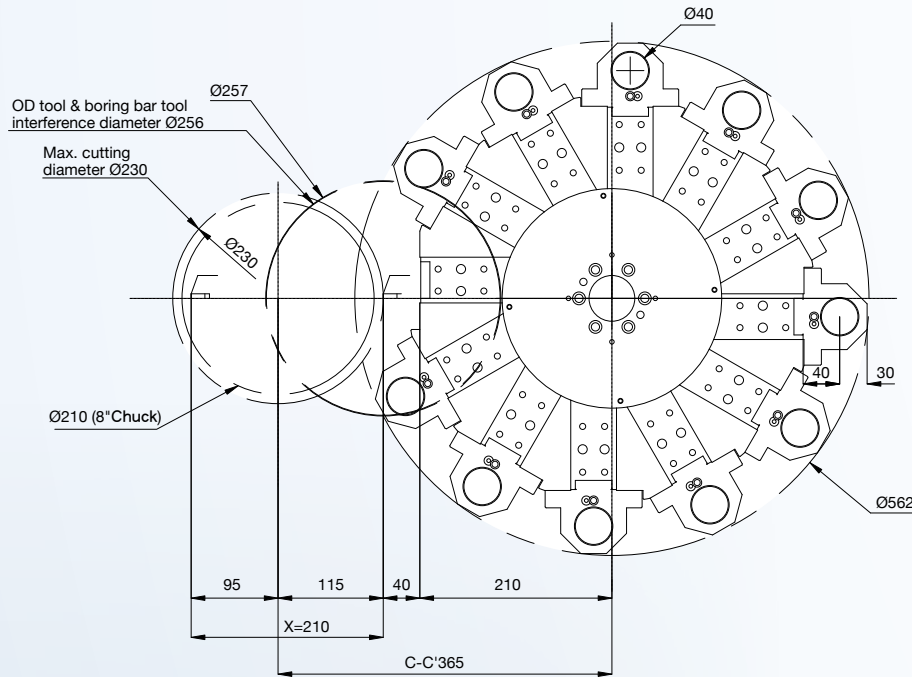
8 STATION TURRET INTERFERENCE DIAGRAM



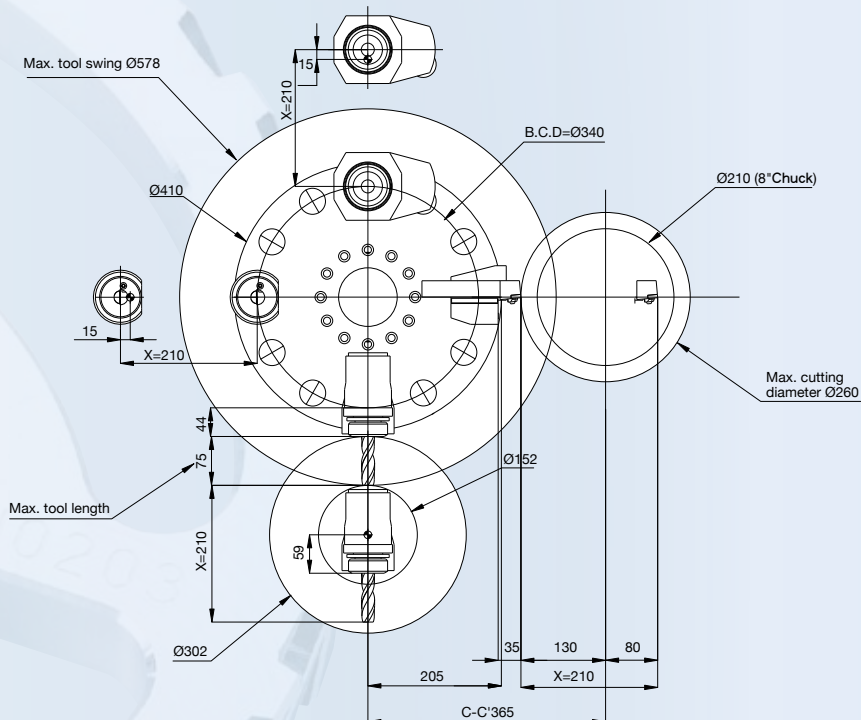
10 STATION TURRET INTERFERENCE DIAGRAM



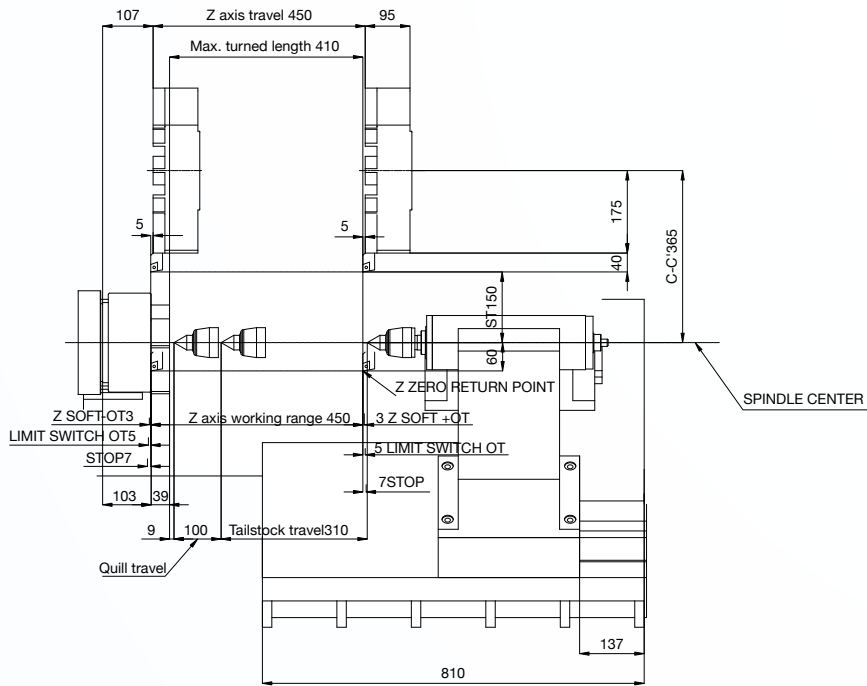
12 STATION TURRET INTERFERENCE DIAGRAM



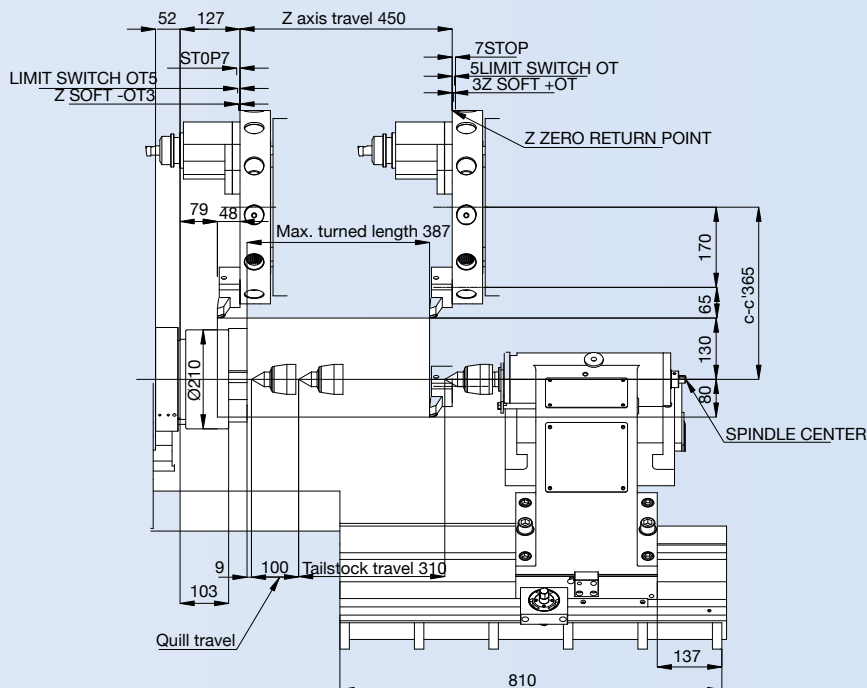
12 VDI LIVE TOOLING INTERFERENCE DIAGRAM



Z AXIS MOVING RANGE DIAGRAM



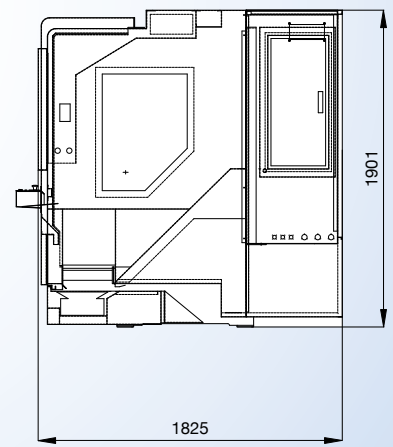
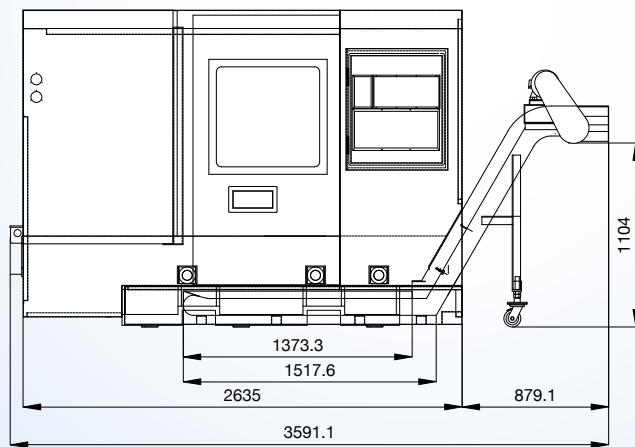
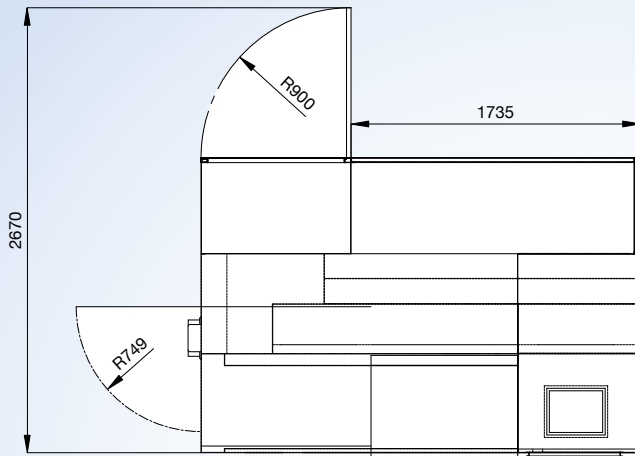
LIVE TOOLING SYSTEM Z AXIS MOVING RANGE DIAGRAM





CNC TURNING CENTER

OUTLINE DRAWING



SPECIFICATION

ITEM	TS-814
TRAVEL	
Max. swing	Ø600 mm
Swing over carriage cover	Ø370 mm
Max. turned diameter	Ø250 mm (VDI) / Ø350 mm (8 Station turret) / Ø300 mm (10 Station turret)
X axis travel	210 mm
Z axis travel	450 mm (410 mm)
Carriage inclination	45°
SPINDLE	
Spindle center height (from floor)	920 mm
SPINDLE NOSE	
Power chuck system	Hydraulic
Power chuck diameter	Ø210 mm (8")
Spindle bore	Ø62 mm
Drawtube (bar) capacity	Ø52 mm
Spindle front bearing (internal diameter)	Ø100 mm
Max. spindle speed	3500/4500 rpm (OPT)
Spindle motor (Con./30Min)	11 kw/15 kw
Min. spindle speed for full motor power	771 rpm
AXIS	
X and Z axis rapid traverse rate	20 and 20 m/min
X and Z axis slide way configuration	Box way
TURRET SYSTEM	
Tool change	Servo motor driven
Turret disc diameter	Ø410 mm (VDI) / Ø300 mm (8 Station turret) / Ø350 mm (10 Station turret)
Type	VDI 3425/40 / Large housing
Number of tool stations	12 (VDI) / 8 (8 Station turret) / 10 (10 Station turret)
Turning tool shank dimensions	25 x 25 mm
Max. boring bar diameter	Ø40 mm
Tool travel below center line	80 mm (VDI) / 35 mm (8 Station turret) / 60 mm (10 Station turret)
TAILSTOCK	
Tailstock quill taper	MT.4
Quill diameter and travel	Ø75 x 100 mm
Max. quill thrust	550 kg (18kg/cm ²)
GENERAL INFORMATION	
Slide way lubrication system	Central lubrication
Coolant tank capacity	120 Liter
Approximate machine footprint	1830 x 3600 x 1900 mm
Approximate machine weight	4600 kg

Product specifications, accessories, and machine appearance are subject to change without prior notice.

Standard Accessories

Foot switch for chuck operation
Automatic lubrication system
Coolant System
Through hole hydraulic chuck
Hard jaw 1 set
Soft jaw 3 set
Working Lamp
Adjustment Tools
Operation Manual
Heat Exchanger
Manual Tailstock
8 Turret included accessories
Chip conveyor and Cart
FANUC Controller

8 Station Turret Accessories

Ø6,8,10,12,16,30,25,32 / per each
Drilling sleeve MT3, MT2, MT1 / per each
F.D. cutting holder 1 pc
I.D. cutting holder 3 pc
Deep hole drilling holder 1 pc

Optional Accessories

Bar feeder
Transformer
Collet chucks
Auto tool presetter
CE Mark
VDI 12 Turret
Parts catcher
Live tooling
10 Station Turret
12 Station Turret
αp wide range motor
SIEMENS Controller



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