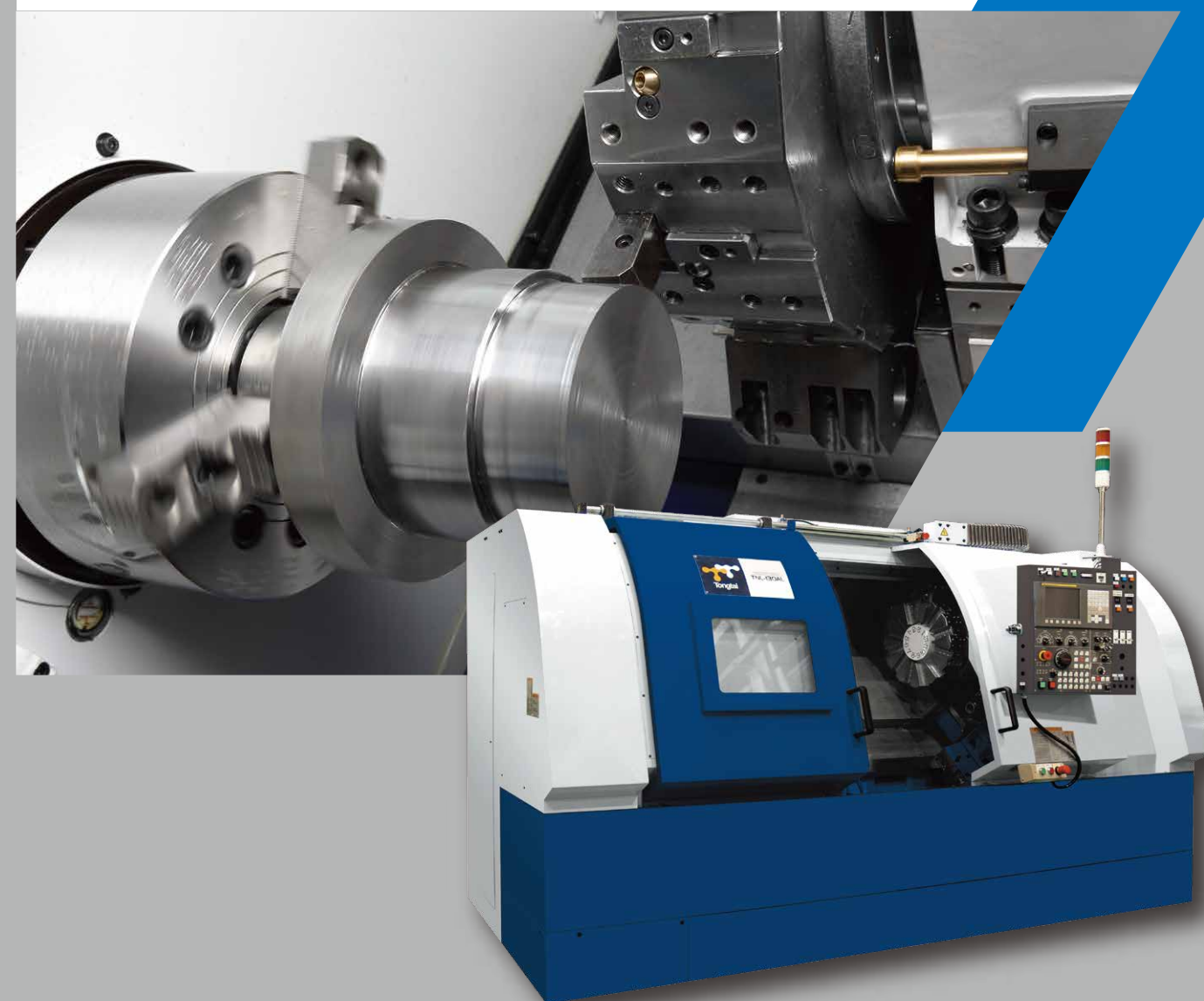


CNC Lathe

TNL-130AL/160A



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www.quicktech.com.tw

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TEL : 33-4-77426161

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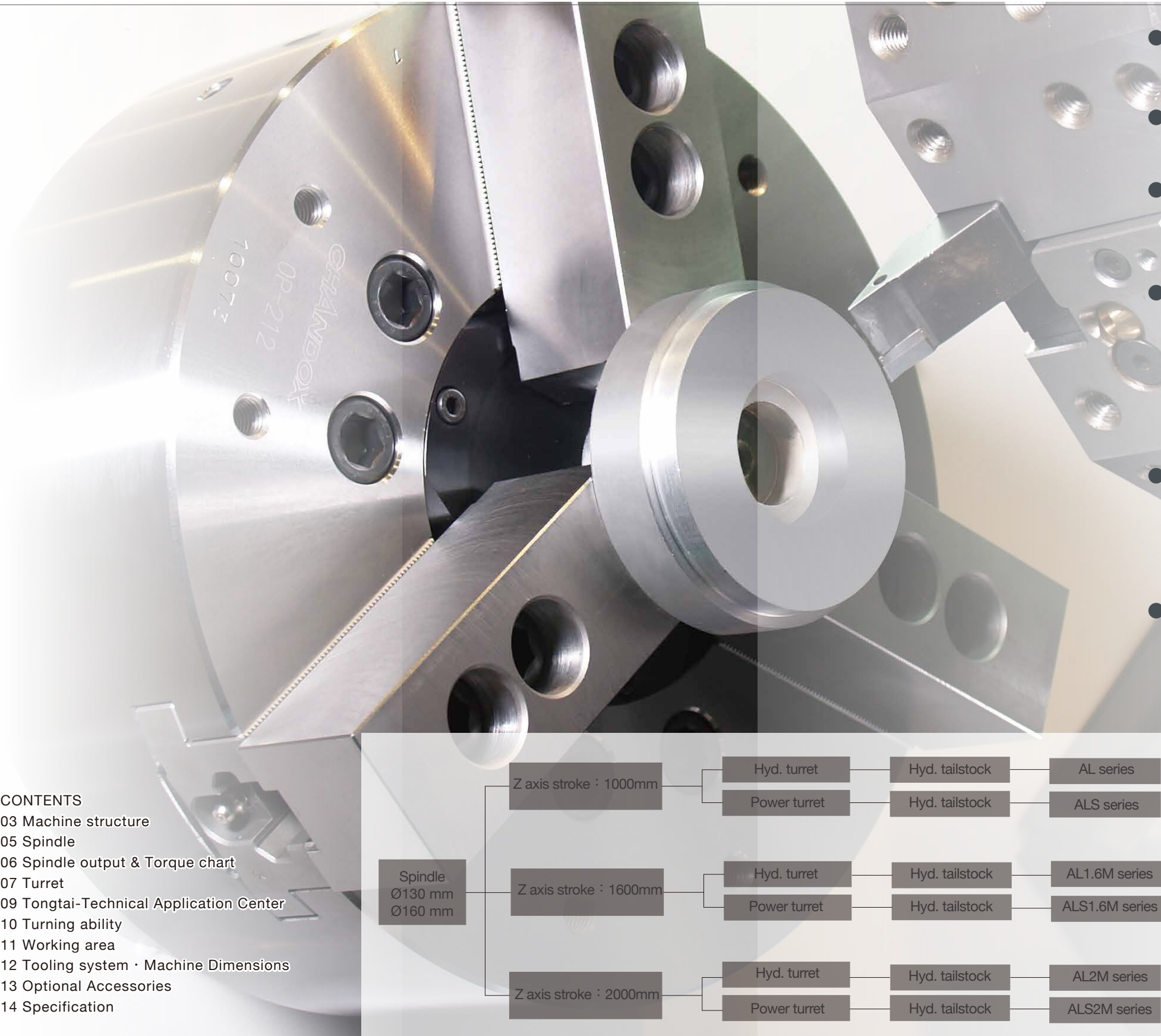
Wuhan Branch	TEL : 86-27-84586587	FAX : 86-27-84853595
Chongqing Branch	TEL : 86-23-67865925	FAX : 86-23-67867717
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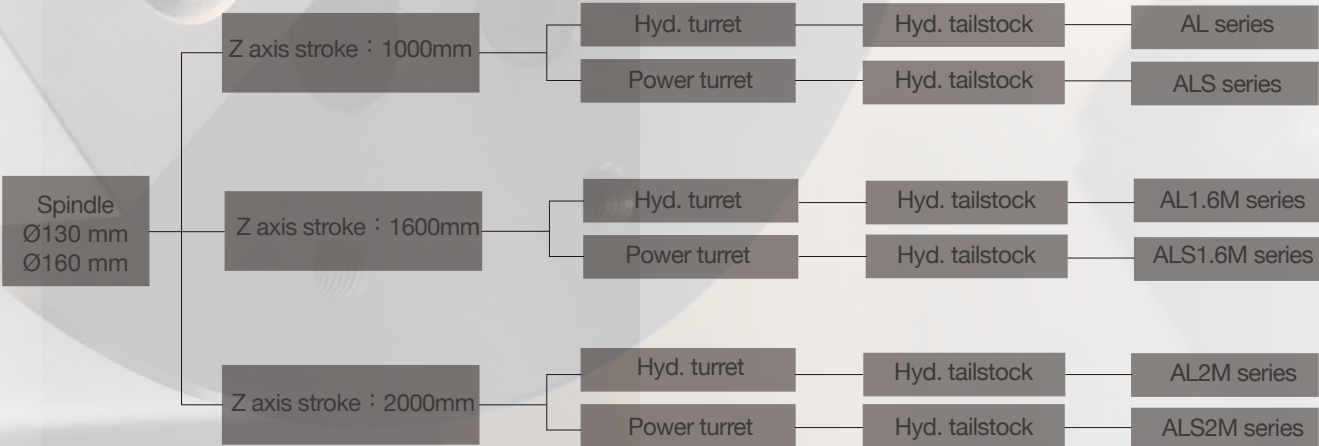
TNL-130AI/160A



- Excellent machine structure design with high-grade casted machine bed and fine ground box ways, provides stability and high dynamic rigidity. It's the basic and most crucial feature of high machine performance.
- High horsepower servo motor is driven directly through coupling for avoiding transmission deviation. Moreover, the rapid traverse in X and Z axis achieve 20m/min to enhance the machining efficiency.
- Powerful spindle is available for gear deceleration. The maximum torque reaches 705N.m(for 130AL series)and 991N.m(for 160A series). The maximum machining diameter is 410mm. The TNL-130AL/160A series provides outstanding precision performance for worldwide customers.
- The standard hydraulic turret's positioning is activated by a gear clutch with 210mm diameter for ensuring rigidity during heavy duty machining. Furthermore, the C axis and power turret (BMT-65) are available for achieving the multi- function in both turning and machining as well as maintaining the maximum machining diameter at 410mm.
The C axis adopts a circle encoder to provide excellent positioning and repetition accuracy. Moreover, the live tools are driven by a high horsepower motor. That makes the machining missions easy for TNL-130AL/160A.
- Depending on customers' needs, the TNL-130AL/160A series provides three different stroke selections for Z axis, including 1000mm, 1600mm, and 2000mm. Long workpieces can be fixed by steady rests (optional). Moreover, the programmable heavy loading tailstock uses a high pressure holding unit to ensure the holding power that keeps workpiece turning stability.
- It is especially designed for heavy duty turning. The full box-way design has a high rigidity spindle and high performance turret, the TNL-130AL/160A series is given a strong and stable machine structure to bring to you an exciting turning experience.

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- 03 Machine structure
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- 07 Turret
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- 13 Optional Accessories
- 14 Specification



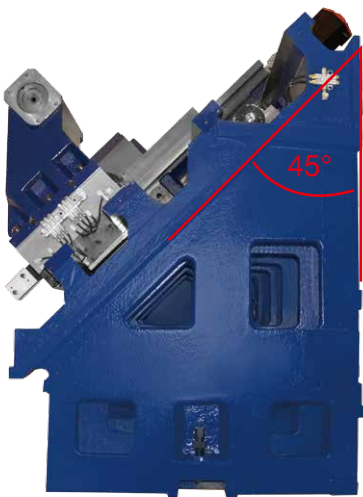
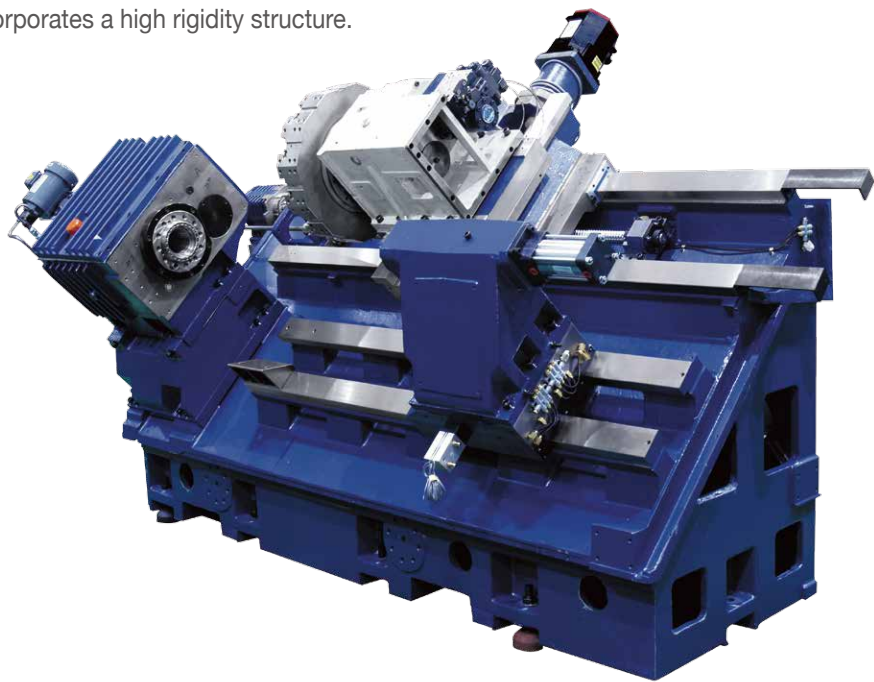
Machine structure

The whole series, with the box-way design, incorporates a high rigidity structure.

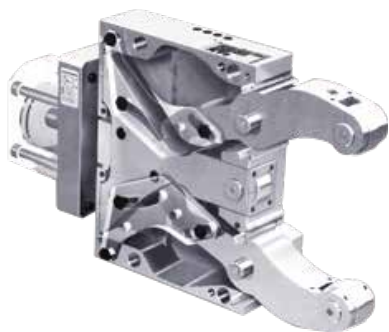
- X/Z axis stroke
TNL-130AL/AL1.6M/AL2M

X axis 245 mm
Z axis 1000/1600/2000 mm
- TNL-160A/AL1.6M/AL2M

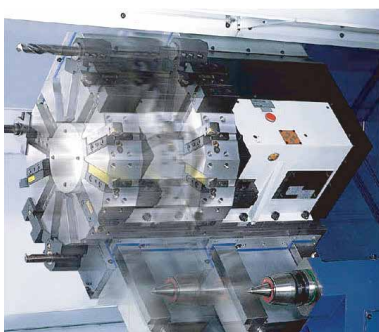
X axis 275 mm
Z axis 1000/1600/2000 mm



Slant machine bed design:
This special design for heavy duty turning. Integrates a machine bed with 45 degree slant that allows both high stable processing ability and easier chip removal.



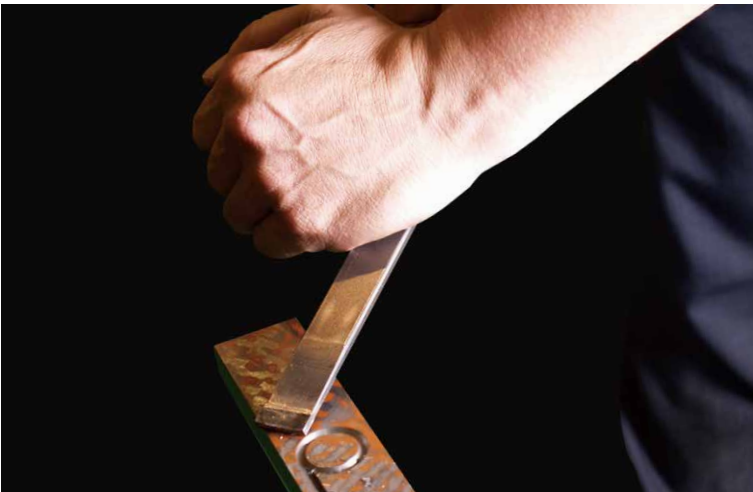
Depending on the customers' needs, the TNL-130AL/160A series provides three different strokes selections. With the steady rests (optional), the long workpiece will obtain a strong support in heavy duty turning and ensure stable turning precision.



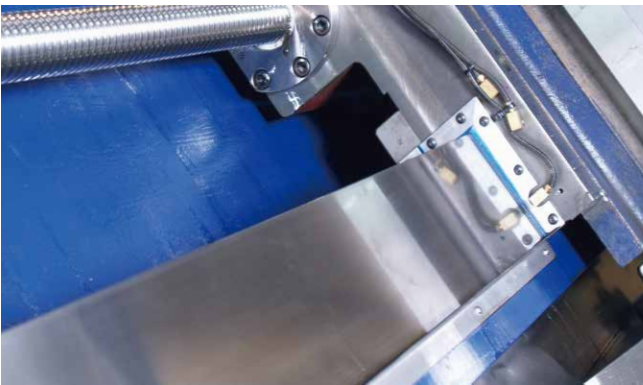
Heavy loading tailstock design:
Programmable tailstock is moved by the turret saddle. After positioning, the tailstock uses the high pressure holding unit to ensure the holding power that keeps work-piece turning stability.

Scraping

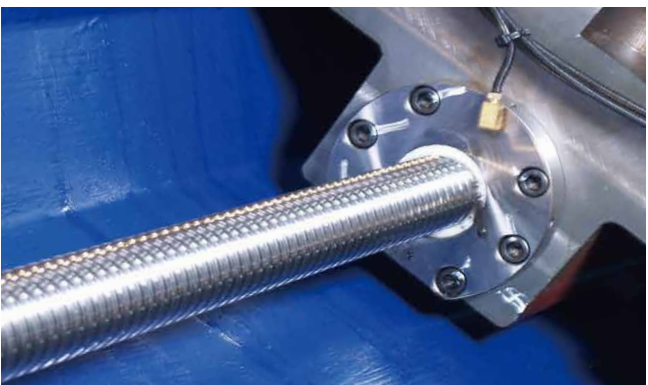
The finest scraping skill is engaged by experienced experts. They refine every artistic detail for ensuring the best lubrication effects in the box-way. By scraping, thermal distortion is avoided and turning accuracy for heavy cutting is maintained.



High precision slider design



X axis and Z axis adopt the box-way design and provide high rigidity in heavy duty turning and non-continuous turning.



The preloaded ball screw reduces thermal distortion and ensures the machine's performance and precision.

Ergonomic design

The ergonomic design facilitates the operator in monitoring the production process during program editing. It reduces mistakes and improves the working efficiency.



Spindle

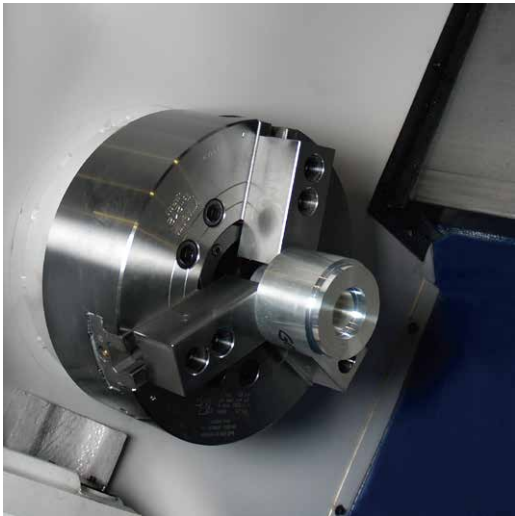
The spindle is equipped with preloaded angular bearings and dual-roller bearings in constant temperature environment. These bearings maintain a large contact with surface to ensure spindle keeps high processing stability in heavy duty turning.

TNL-130AL

Max. spindle speed **3500** rpm
Spindle H.P. (30 min.)
Standard : **18.5/15** kw
Option : **26/22** kw

TNL-160A

Max. spindle speed **2500** rpm
Spindle H.P. (30 min.)
Standard : **26/22** kw



Gear box type spindle

A two step deceleration unit with advanced machine design provides high torque performance in low speed. Moreover, it also provides excellent chip removal capacity for large diameter workpieces in heavy duty turning.



CS axis (Opt.)

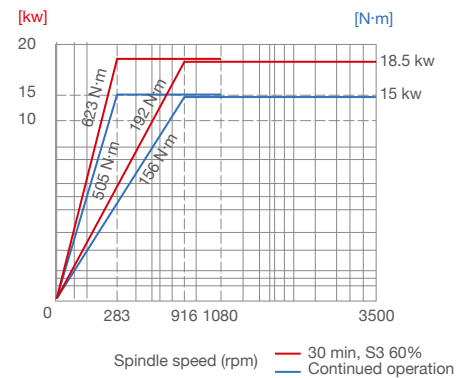
The CS axis is positioned by using a circular linear scale with multi-points positioning function. The minimum index position can be set to 0.001 degrees to satisfy various processing needs.



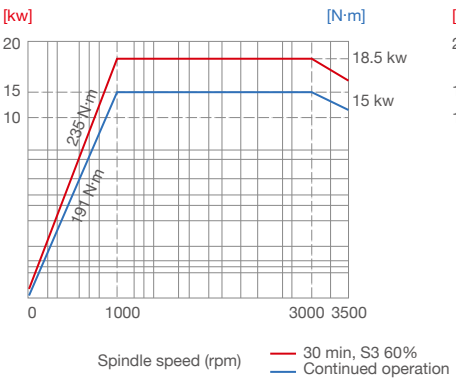
Spindle output & Torque chart

TNL-130AL series

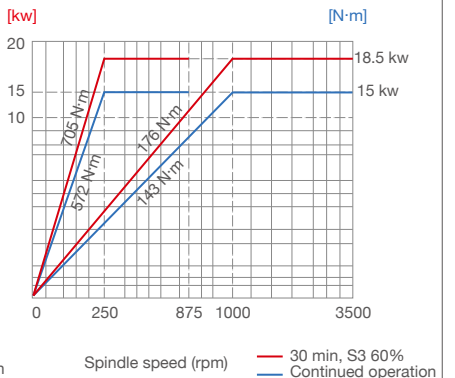
Standard α15 (With gear box)



Option α15 (Without gear box)

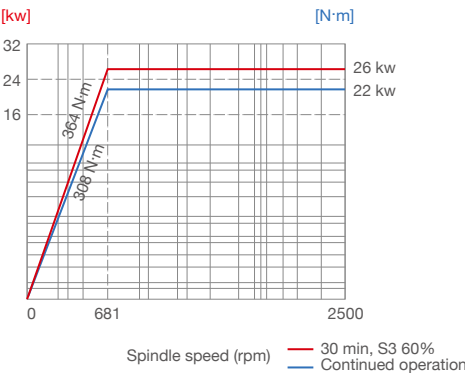


Option α15 (With outer deceleration unit)

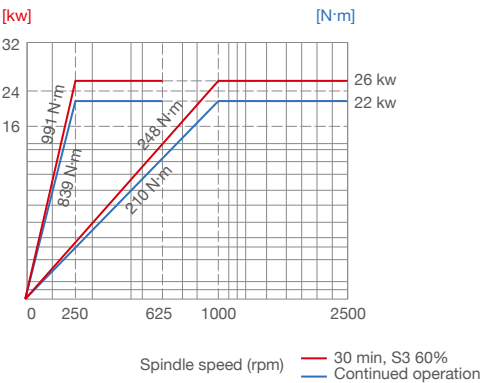


TNL-160A series

Standard α 22 (Without gear box)

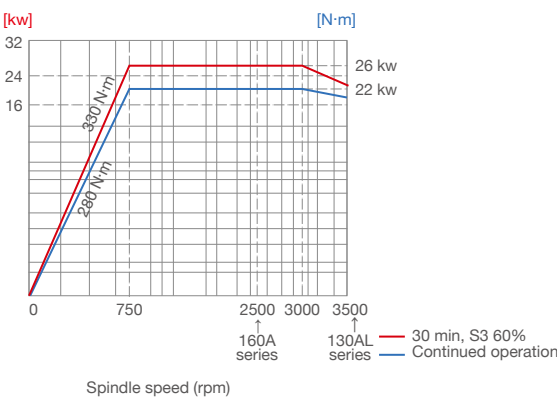


Option α 22 (With outer deceleration axis)

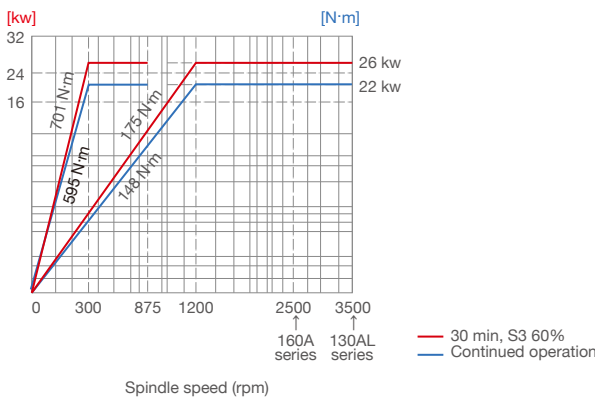


All series (Optional power live tools)

Standard α 22 (With CS axis)



Option α 22 (With outer deceleration unit+CS axis)



Turret

Hydraulic turret

Tool capacity **12** stations

Tool changing speed :

Adjacent tool changing **1.7** sec

Opposite tool changing **3.2** sec

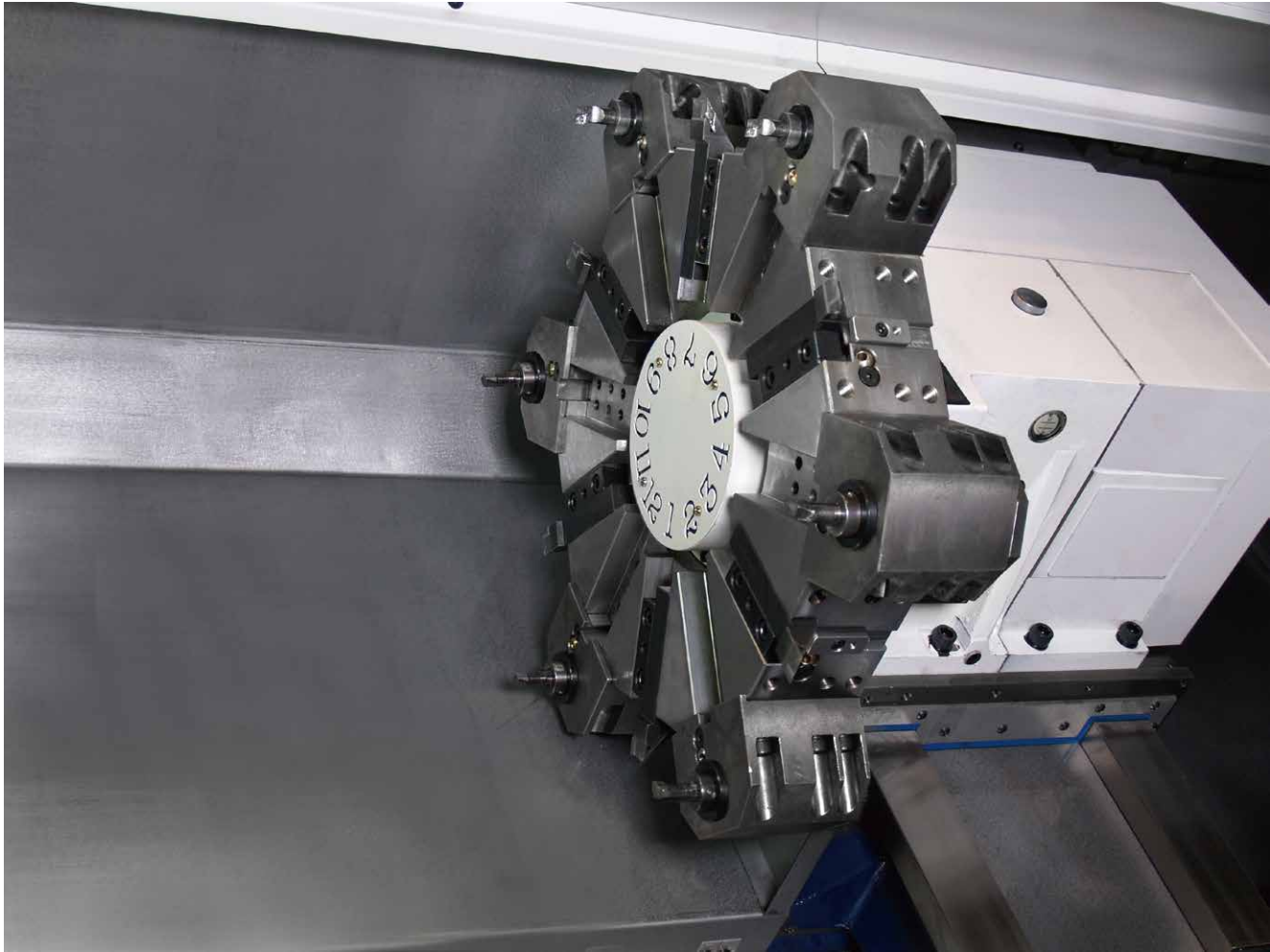
Power turret

Tool capacity **12** stations

Tool changing speed :

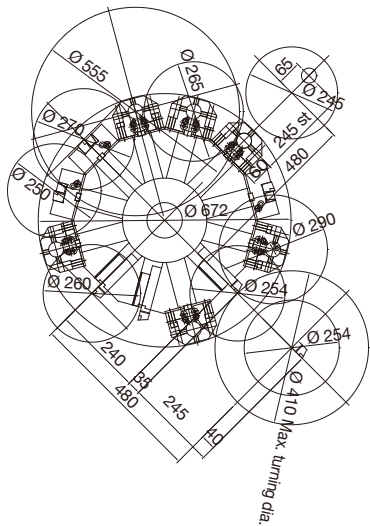
Adjacent tool changing **1.5** sec

Opposite tool changing **3.0** sec

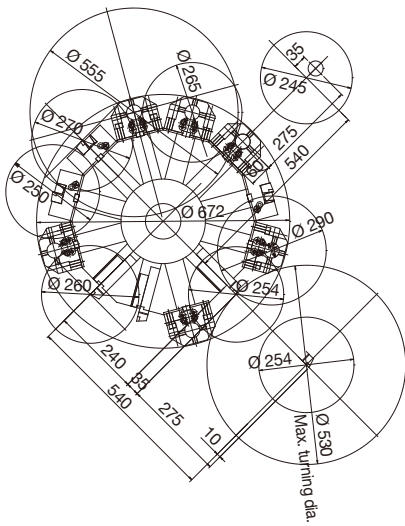


Hydraulic turret

TNL-130AL series



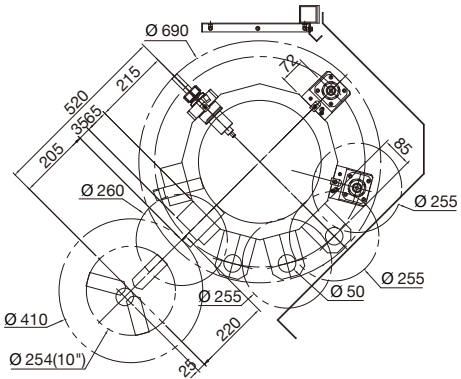
TNL-160A series



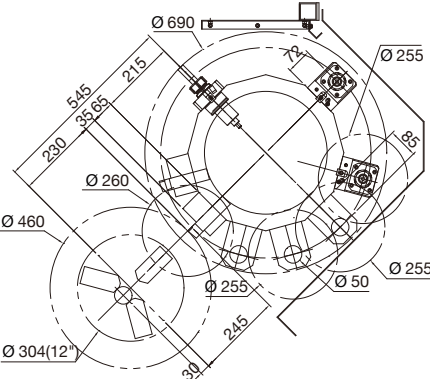
Unit : mm

Power turret

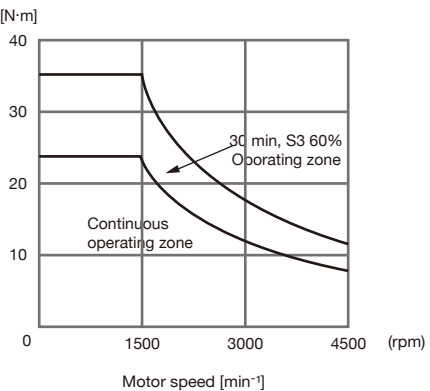
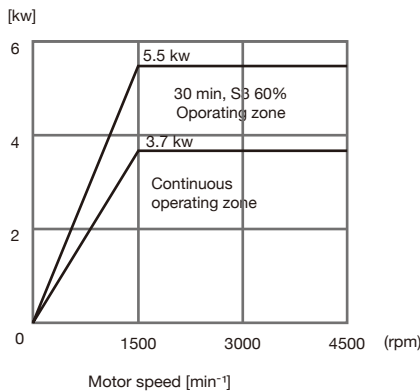
TNL-130ALS series



TNL-160AS series

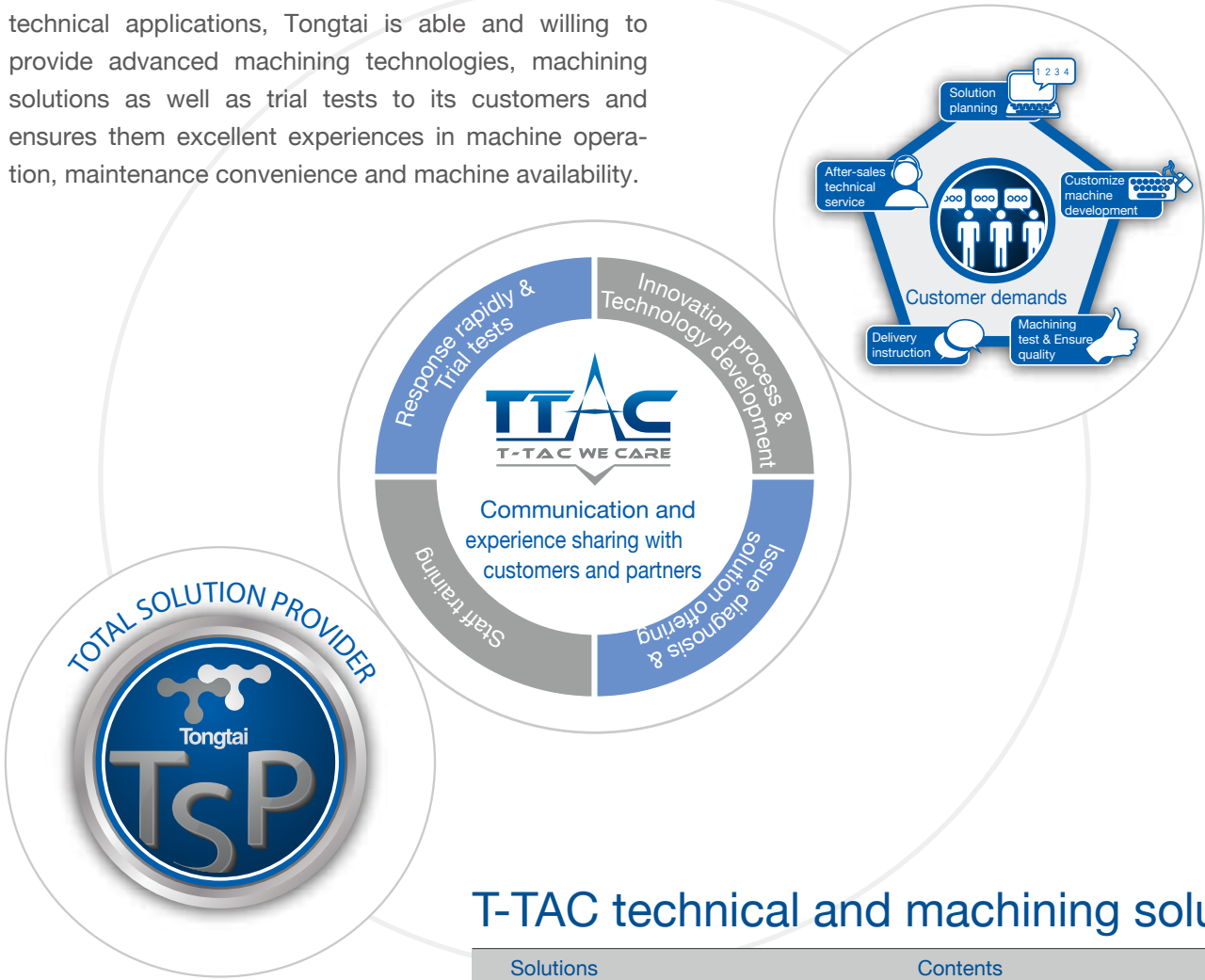


Live tool motor output & Torque chart



Tongtai-Technical Application Center

The purpose of T-TAC is to take care of customer’s machining solution actively. Based on the outstanding technical applications, Tongtai is able and willing to provide advanced machining technologies, machining solutions as well as trial tests to its customers and ensures them excellent experiences in machine operation, maintenance convenience and machine availability.



T-TAC technical and machining solutions

Solutions	Contents
Product manufacture test	Through the manufacturing progress and jig & fixture plans, Tongtai's skilled staff will manufacture the first piece for understanding the client's corresponding demands.
Machining technologies	By introducing innovative technologies and adding the extra functions,T-TAC is available to provide the brand-new solutions.
Machine technology	Our technical staff will test current problems, which clients have, in the same machine model for processing problem diagnosis and providing possible solutions. Furthermore, our skilled staff is able to provide the services at the client's factory.
Training	T-TAC is open to train current clients, potential customers, agents, teachers / students, and employees and to strengthen their abilities.
Technology exhibits	T-TAC is also an excellent platform to launch new products/technologies by cooperation with software/hardware suppliers. With presentation of highly reliable products/technologies, it's possible to provide higher efficiency and availability solutions than existing ones.

Turning ability

TNL-130AL / [TNL-160A] series

Max. swing diameter
Ø620 mm

Max. swing diameter over saddle
Ø410 mm

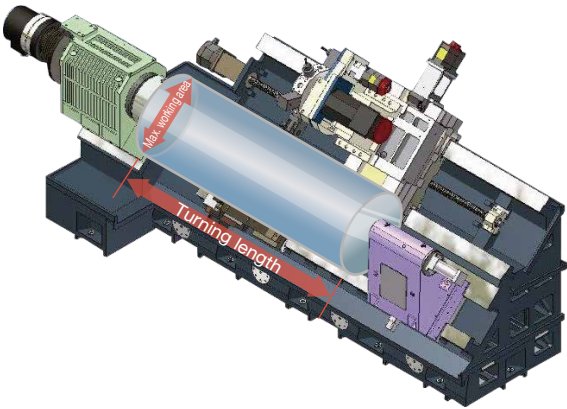
Max. turning diameter
Ø410/Ø530 mm



Max. turning length

TNL-130AL [1.6M/2M]
975[1575/1975] mm

TNL-160A [1.6M/2M]
975[1575/1975] mm



Turning ability (Material : S45C)

Item	TNL-130AL	TNL-160A	Unit
* O.D. turning	5×0.4	7×0.4	mm×mm / rev
* I.D. turning	5×0.3	7×0.3	mm×mm / rev
* Face milling	5×0.45	7×0.45	mm×mm / rev
O.D. grooving	8×0.1	8×0.1	mm×mm / rev
I.D. grooving	8×0.1	8×0.1	mm×mm / rev
Drilling	Ø40×0.3	Ø40×0.3	mm×mm / rev
Spindle H.P.	18.5/15 (Single axis type)	26/22 (Single axis type)	kw
Max. spindle speed	2500	2500	rpm

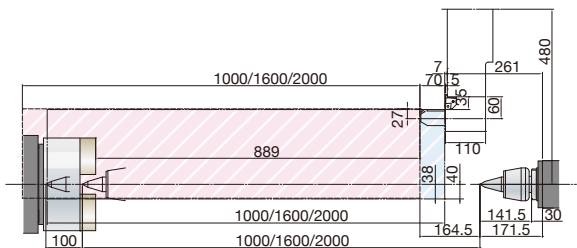
* Spindle's load arounds 110~120 %

Working area

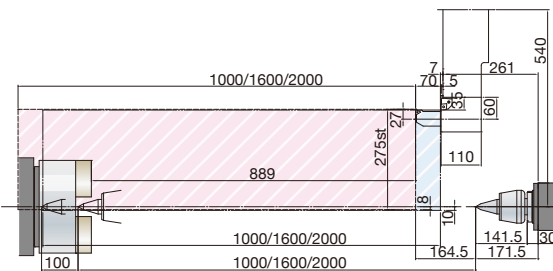
Hydraulic turret

Unit : mm

130AL/130AL1.6M/130AL2M



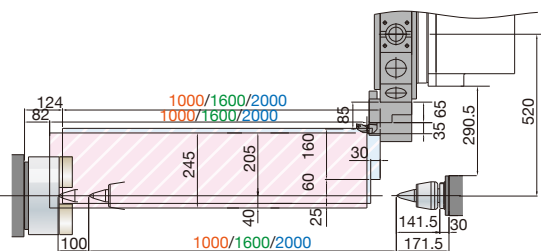
160A/160A1.6M/160A2M



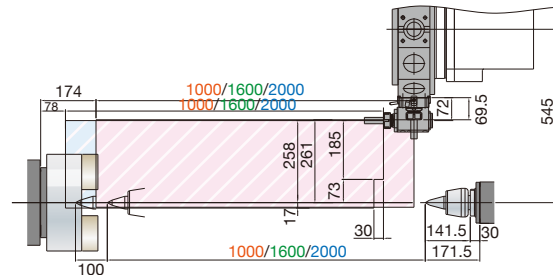
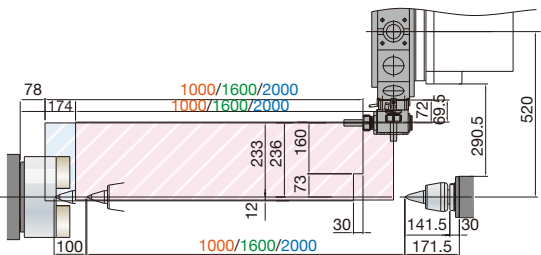
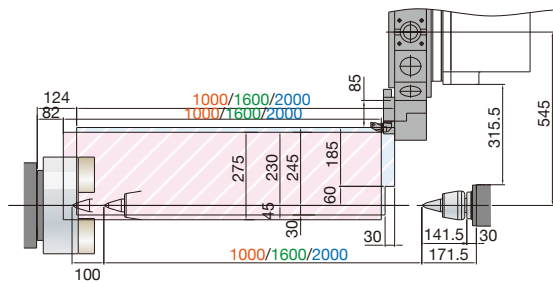
Power turret

Unit : mm

130ALS/130ALS1.6M/130ALS2M

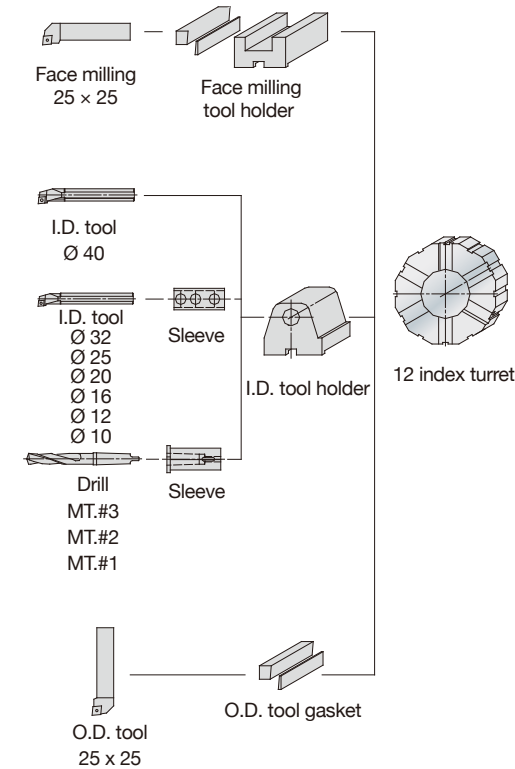


160AS/160AS1.6M/160AS2M



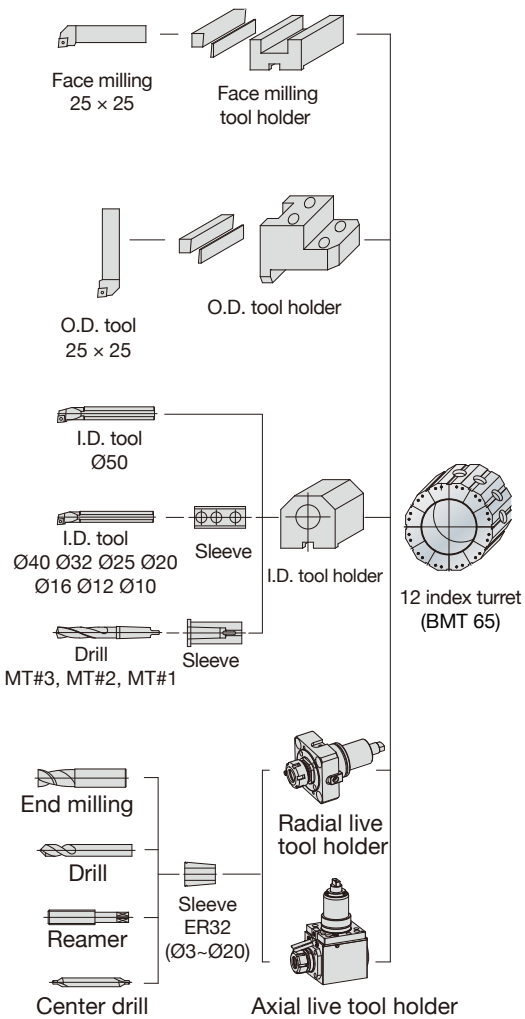
Tooling system · Machine Dimensions

Hydraulic turret



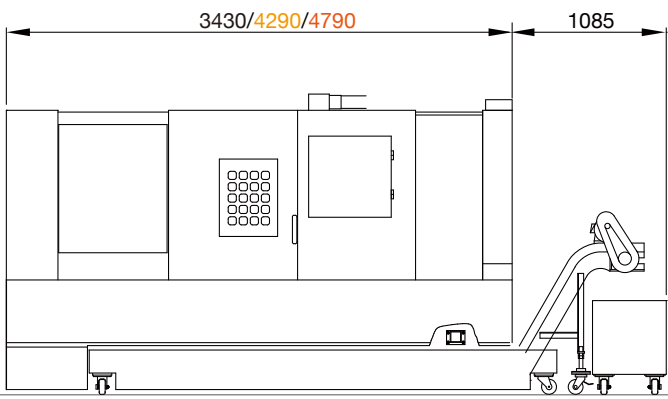
Power turret

Unit : mm

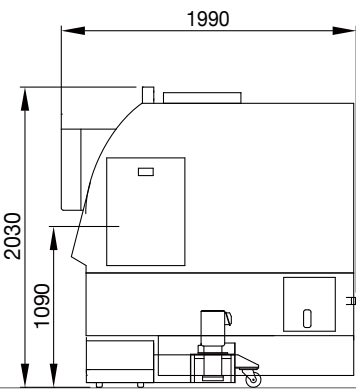


Machine Dimensions

■ TNL-130AL / 160A
■ TNL-130AL 1.6M / 160A 1.6M
■ TNL-130AL 2M / 160A 2M



Front view

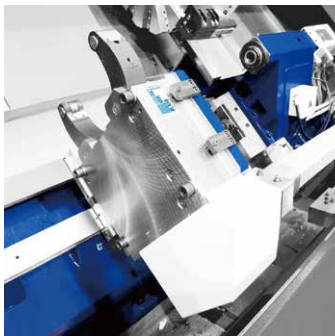


Side view

Optional Accessories

Specification

Steady rests



Tool presetter



Tri-color warning light



Oil mist collector



Transformer



Sub-operation box



Automatic door



A/C for electrical cabinet



Power turret



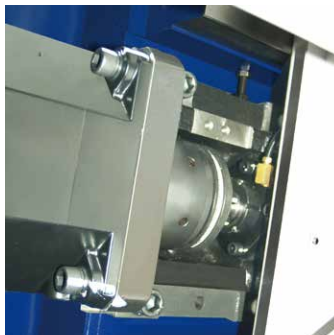
FANUC 31i controller



Oil skimmer



Torque clutch



Item	Specification	Unit	TNL-130AL[1.6M/2M]	TNL-160A[1.6M/2M]
Turning capacity	Max. swing diameter	mm	Ø620	
	Max. swing diameter over saddle	mm	Ø410	
	Max. turning diameter	mm	Ø410	
	Max. turning length	mm	975[1,580/1,980]	
Spindle	Spindle nose		A2-8	A2-11
	Spindle speed	rpm	3,500(Opt. 2,500 gear box type)	2,500
	Chuck O.D.	inch	10"(Opt. 12")	12"(Opt. 15")
	Through-spindle hole diameter	mm	Ø90	Ø105
	Bar capacity	mm	Ø75	Ø90
	Spindle bearing diameter	mm	Ø130 belt driven/gear box	Ø160 belt driven
Turret	Tool capacity	pc	12 (Opt. 10)	
	O.D. tool	mm	25×25 (Opt. 32×32)	
	I.D. tool	mm	Ø40 (Opt. 50)	
Power turret (Opt.)	Tool capacity	pc	12(BMT 65)	
	Motor	kw	5.5/3.7	
	O.D. tool	mm	25×25	
	I.D. tool	mm	Ø40	
	Max. speed	rpm	4,500	
Stroke	X/Z axis stroke	mm	245/1,000[1,600/2,000]	275/1,000[1,600/2,000]
Feed	X/Z axis rapid traverse	m/min	20/24	
	Cutting feedrate	mm/rev	0.01-500	
Tailstock	Tailstock/Hydraulic stroke	mm	1,000 [1,600/2,000](Programmable)/100	
	Tailstock taper		MT#5	
	Center diameter	mm	Ø90	
	Driving system		Carries by Z axis	
Hydraulic unit	Hydraulic tank capacity	L	40	
	Hydraulic motor	kw	2.5	
Coolant unit	Coolant tank capacity	L	200 [240/280]	
	Coolant motor	kw	1.1	
Motor	Spindle motor with gear box (50% ED)	kw	18.5/15	-
	Spindle motor (50% ED)	kw	-	26/22
	X/Z axis servo motor	kw	4.0/4.0/4.0	
	Controller		0i-TF	
Sound power level		LWA	76	
Machine size	L×W×H	mm	4,465[5,065/5,465]×1,835×2,145	
	Weight	kg	6,900[7,200/7,500]	7,600[7,900/8,200]

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