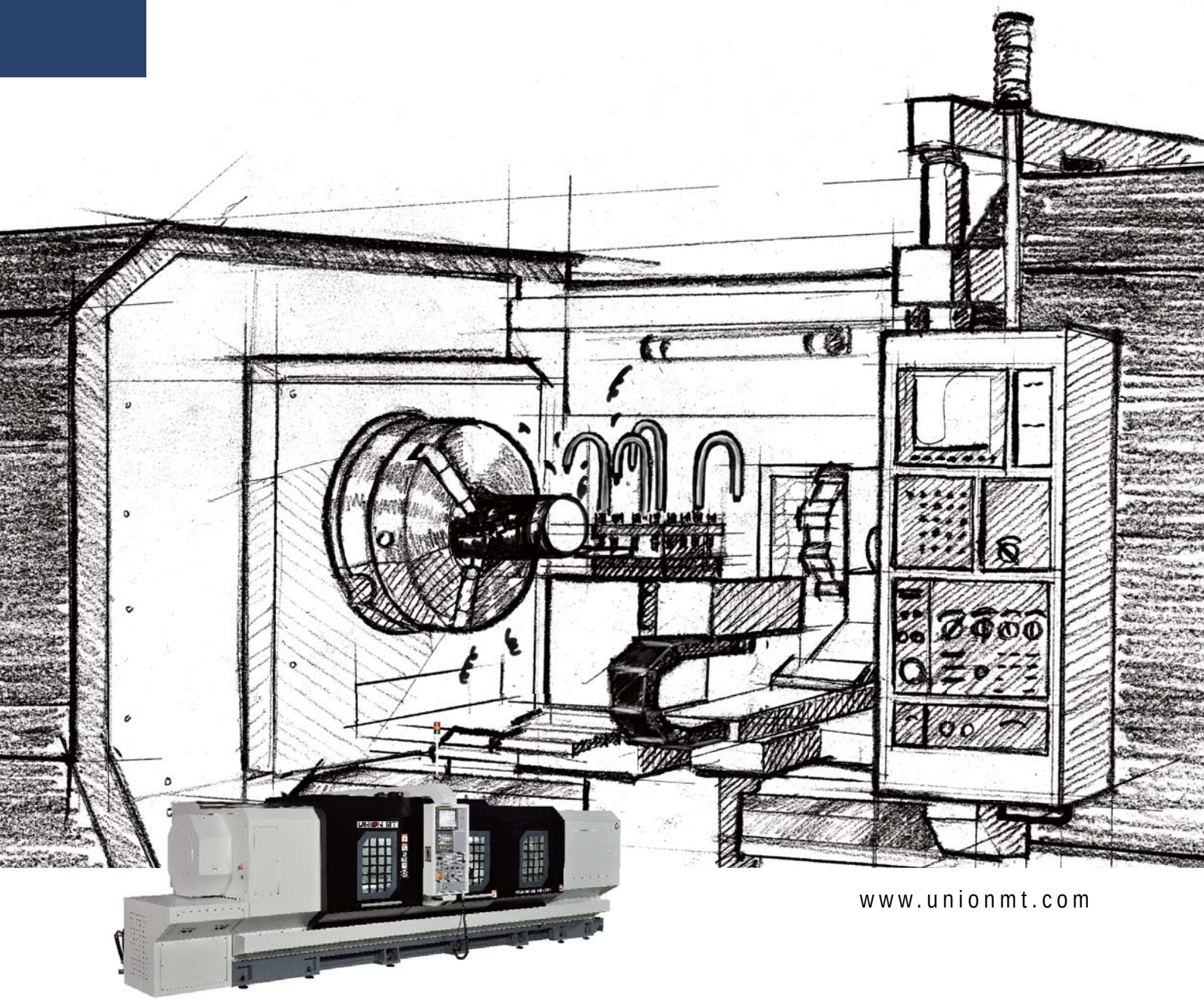
UNION MT

Your Choice Of Partner

Strategic Alliance
UNION MT
Union Mechatronic Inc.
SCHAUBLIN
MACHINES SA

HEAVY DUTY PRECISION CNC LATHE

TITAN CNC BIG BORE SERIES
TC 510/610/810



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Union Range of Heavy Duty Precision CNC Lathes

・Spindle bearings layout would be changed caused by spindle bores.

Large Spindle Bore

・Three sets of precision taper roller spindle bearings ensure rigidity and concentricity.
・Four range gearbox ensures best cutting performance.
・Range of spindle bores from 6”-16” for versatile cutting requirements.
TC510: 105mm std (160/230/318mm opt)
TC610: 153mm std (230/318/380mm opt)
TC810: 153mm std (230/318/380mm/410mm opt)

Rigid Headstock

・Symmetrical headstock & enhanced ribs increase rigidity and ensuring thermal stability and accuracy.
・Spindle, gears and shafts are made from carburized heat treatment for longevity.

Rigid Bed and Base

・Integrated one piece base and bed casting with reinforced rib design for maximum rigidity and superb dampening effect.
・Hardened and precision ground bed ways, and wider bed width to create a machine with maximum stability and long life.

Wide Carriage & Saddle

・Wide carriage and cross slide design increase the contact area for greater cutting stiffness and rigidity.

Please notice some specifications, accessories, pictures, appearances and etc. are optional accessories according to different model.

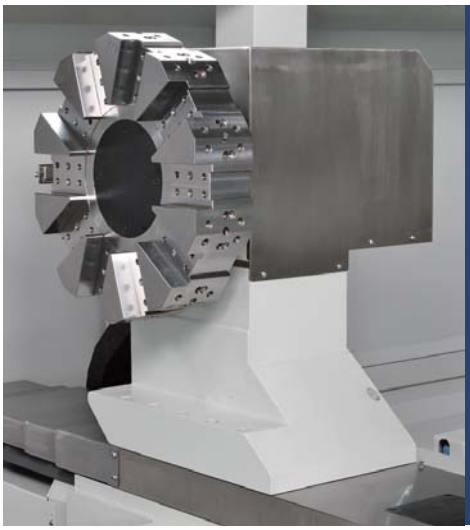
Hydraulic tailstock

Manual tailstock, quill motorized

Robust Tailstock

- Robust tailstock structure with MT#6 or MT#7 quill – provides heavy duty cutting and drilling capability
- Easy & smooth tailstock travel through rack mechanism.
- Live quill, hydraulic base lock are available options

V10 hydraulic turret (Option)



Turret Application

- E4 electronic turret, V8 hydraulic vertical turret, V10 hydraulic turret, V12 hydraulic turret, VDI 12 station live tooling turret; are all available for different machining applications.
- Robust boring bar attachment Ø100mm dia. Is available option to fulfill large drilling requirement.

Boring bar attachment

H4 hydraulic indexing turret

E4 Servo Turret

Cutting is Our Talent

- Big bore and large size parts applications for oil, energy, hydraulic and shipbuilding industries.
- Heavy duty cutting & efficiency chip removal capacity.

Model	Titan CNC 810	Titan CNC 610	Titan CNC 510
Material	JIS S45C	JIS S45C	JIS S45C
Part Size	∅ 292 x 200	∅ 273 x 200	∅ 200 x 200
Spindle Speed	173 rpm	119 rpm	270 rpm
Feed Rate	0.48 mm/rev	0.60 mm/rev	0.4 mm/rev
Cut Depth	10 mm	10 mm	8 mm
Machining Rate	761.8 mL/min	612.4 mL/min	542.9 mL/min

The cutting results indicated in this catalog are examples that would not be obtained due to in different cutting settings, environmental conditions, product configuration and measurement.

Quality is Our Culture

· Smart and complete inspection procedures bring you the consistency machine in trust!
· Spindle run-in procedures assure the smooth gear shifts, gear rotating, spindle running and stable temperature control.
· Dynamic balancing on machine inspection for extending spindle, bearings and gears longevity.

Precision is Our Nature

· Geometry accuracy aligning control within our own strict world class standard.
· Squareness accuracy between X and Z axis is within 0.01mm.
· Noise control guarantee to meet human health and comfortable.

No	Group	ITEM MODEL	860	960	1060
1	Capacity	Center Height	430mm 16.93"	480mm 18.90"	530mm 20.87"
2		Distance Between Centers	1.5 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 m		
3		Swing Over Bed	860mm 33.86"	960mm 37.80"	1060mm 41.73"
4		Swing Over Cross Slide	600mm 23.62"	700mm 27.56"	800mm 31.50"
5		Width of Bed	510mm 20.08"		
6		Width of Carriage	700mm 27.56"		
7		Width of Cross Slide	260mm 10.24"		
8		Bed way	3V Guideways		
9	Control	Control	Fanuc OiT-F (Simens 828D opt.)		
10		Spindle Motor	15/ 18.5/ 22kW (22/ 26/ 35kW, 30/ 37/ 45kW opt.)		
11		X axis and Z axis Motor	1.8kW (3kW opt.)/ 3kW (4kW opt.)		
12	Spindle	Spindle Bore	105mm	153mm	230mm / 318mm
13		Spindle Nose	A2-8	A2-11	A2-15 / A2-20
14		Spindle speeds	1200rpm	1000rpm	700rpm / 500rpm
15		Spindle Speed Range	Hydraulic 4 steps		
16	Feed Mechanism	X Axis Travel	430mm 16.93"	480mm 18.90"	530mm 20.87"
17		Z Axis Travel	1.2/ 1.7/ 2.7/ 3.7/ 4.7/ 5.7/ 6.7/ 7.7/ 8.7/ 9.7/ 10.7/ 11.7m *travel changed by chuck, turret or tailstock		
18		X & Z axis Rapid Traverse	6 m/min		
19		X axis Ball Screw	Ø32mm x P5		
20		Z axis Ball Screw	1.5-3m: Ø50mm x P10, 4m & above Ø50mm x P10		
21		X & Z axis Feed Range	6000mm/min		
22	Turret	Tool Post	E4 Electronic		
23		Turret (opt.)	H4 hydraulic, V10 hydraulic, VDI 12 live tooling		
24		Tool Size	Square shank 32X32mm, Round shank 40mm (Square shank 40X40mm, Round shank 60mm opt.)		
25	Tailstock	Quill Taper	MT #6		
26		Quill Diameter	100mm 3.94"		
27		Quill Travel	300mm 11.81"		
28		Body Movement	Travel by saddle		
29		Quill Movement	Motor (hydraulic opt.)		
30	Machine Dimension	Lubrication Pump	24W		
31		Coolant Pump	760W		
32		Hydraulic Pump	1HP		
33		Chip Removal	Coolant tank and chip pan (rear chip conveyor opt.)		
34		Guard	Front two doors and rear splash guard (fully enclosed splash guard opt.)		
35		Weight	8,750/ 9,150/ 9,950/ 10,750/ 11,550/ 12,350 add 800 kgs with one meter increase		
36		Length x Depth	4.43/ 4.93/ 5.93/ 6.93/ 7.93/ 8.93x 1.97m		

Please be aware the continuous performance improving policy, we have the rights to change specifications, data, options, apperance and etc. without prior notice.

TC "610" SERIES

1170	1270	1370
585mm 23.03"	635mm 25.00"	685mm 26.97"
2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 m		
1170mm 46.06"	1270mm 50.00"	1370mm 53.94"
800mm 31.50"	900mm 35.43"	1000mm 39.37"
610mm 24.02"		
900mm 34.43"		
345mm 13.58"		
3V Guideways + 1 support		
Fanuc OiT-F (Simens 828D opt.)		
22/ 26/ 35kW (30/ 37/ 45kW opt.)		
4kW (7kW opt.)/ 7kW		

153mm	230mm	318mm	380mm	410mm
A2-11	A2-15	A2-20	A2-20	A2-28
1000rpm	700rpm	500rpm	450rpm	300rpm
Hydraulic 4 steps				

585mm 23.03"	635mm 25.00"	685mm 26.97"
1.7/ 2.7/ 3.7/ 4.7/ 5.7/ 6.7/ 7.7/ 8.7/ 9.7/ 10.7/ 11.7m *travel changed by chuck, turret or tailstock		
6 m/min		
Ø36mm x P5		
1.5-3m: Ø50mm x P10, 4m & above Ø63mm x P10		
6000mm/min		
V8 Hydraulic		
V10 hydraulic, VDI 12 live tooling		
Square shank 32X32mm, Round shank 40mm (Square shank 40X40mm, Round shank 60mm opt.)		
MT #6 (MT#7 0ption)		
140mm 5.51"		
300mm 11.81"		
Travel by saddle		
Motor (hydraulic opt.)		
24W		
760W		
1HP		
Coolant tank and chip pan (rear chip conveyor opt.)		
Front two doors and rear splash guard (fully enclosed splash guard opt.)		
12,600/ 13,600/ 14,600/ 15,600/ 16,600/ 17,600kg add one ton with one meter increase		
5.33/ 6.33/ 7.33/ 8.33/ 9.33/10.33x 2.76m		

TC "810" SERIES

1400	1600	1800
700mm 27.56"	800mm 31.50"	900mm 35.43"
2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 m		
1400mm 49.12"	1600mm 62.99"	1800mm 70.87"
1000mm 39.37"	1200mm 47.24"	1400mm 51.12"
810mm 31.89"		
1000mm 39.37"		
385mm 15.16"		
3V Guideways + 1 support		
Fanuc OiT-F (Simens 828D opt.)		
30/ 37/ 45kW (37/ 45/ 55kW opt.)		
4kW (7kW opt.)/ 7kW		

153mm	230mm	318mm	380mm	410mm
A2-11	A2-15	A2-20	A2-20	A2-28
1000rpm	700rpm	500rpm	450rpm	300rpm
Hydraulic 4 steps				

700mm 27.56"	800mm 31.50"	900mm 35.43"
1.7/ 2.7/ 3.7/ 4.7/ 5.7/ 6.7/ 7.7/ 8.7/ 9.7/ 10.7/ 11.7m *travel changed by chuck, turret or tailstock		
6 m/min		
Ø40mm x P5		
1.5-3m: Ø63mm x P10, 4m & above Ø80mm x P10		
6000mm/min		
V8 Hydraulic		
V10 hydraulic, VDI 12 live tooling		
Square shank 32X32mm, Round shank 40mm (Square shank 40X40mm, Round shank 60mm opt.)		
MT #6 (MT#7 0ption)		
180mm 7.09"		
300mm 11.81"		
Travel by saddle		
Motor (hydraulic opt.)		
24W		
760W		
1HP		
Coolant tank and chip pan (rear chip conveyor opt.)		
Front two doors and rear splash guard (fully enclosed splash guard opt.)		
16,550/ 17,550/ 18,550/ 19,950/ 21,000/ 22,000kg add one ton with one meter increase		
5.58/ 6.58/ 7.58/ 8.58/ 9.58m/ 10.58x 2.99m		

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Union Mechatronic Inc.

國合科技股份有限公司

41262 台中市大里區國光路一段 206-12 號

TEL+886-4-2485-3708　FAX+886-4-2485-1500

E-mail union@unionmt.com

No.206-12, Sec. 1, Guoguang Rd., Dali Dist., Taichung City 41262, Taiwan

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