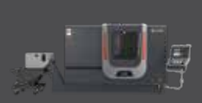
DENER®
MACHINE TOOLS

"The Future Is Here"

5 Axis
Milling Center

Double Column
Milling Center



CNC Vertical
Milling Machine

CNC
Lathe

NC Grinding
Machine

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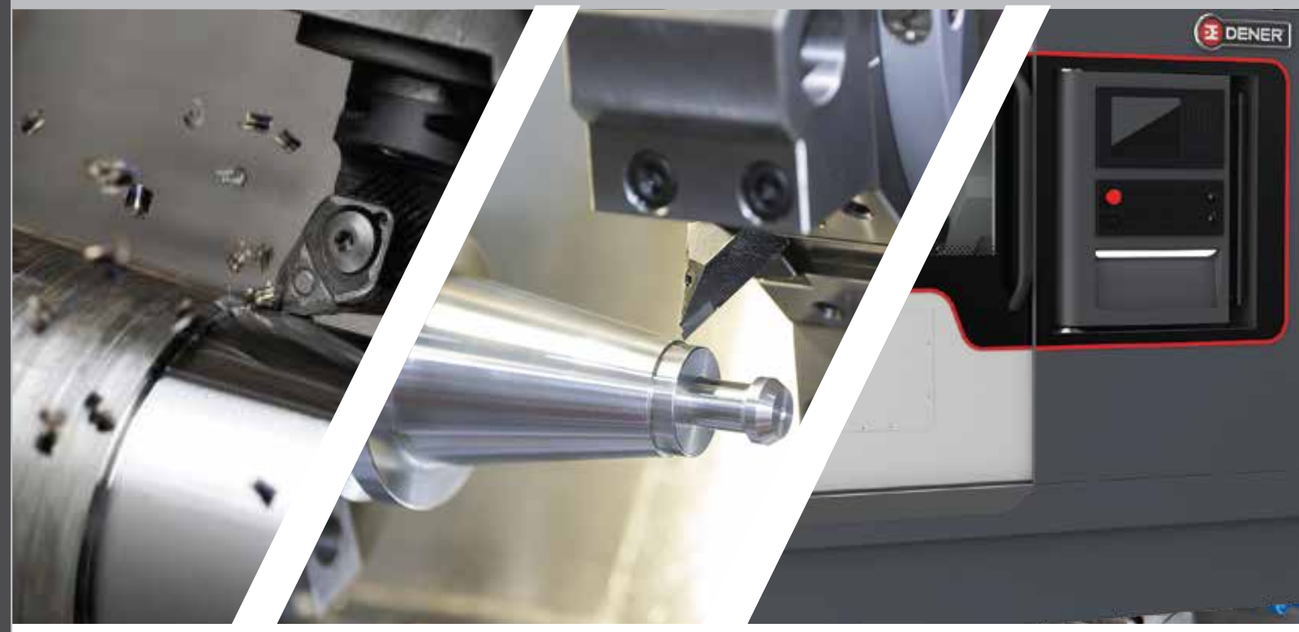

CNC LATHE

FAST MACHINING > PRECISE TURNING > HIGH PRODUCTIVITY

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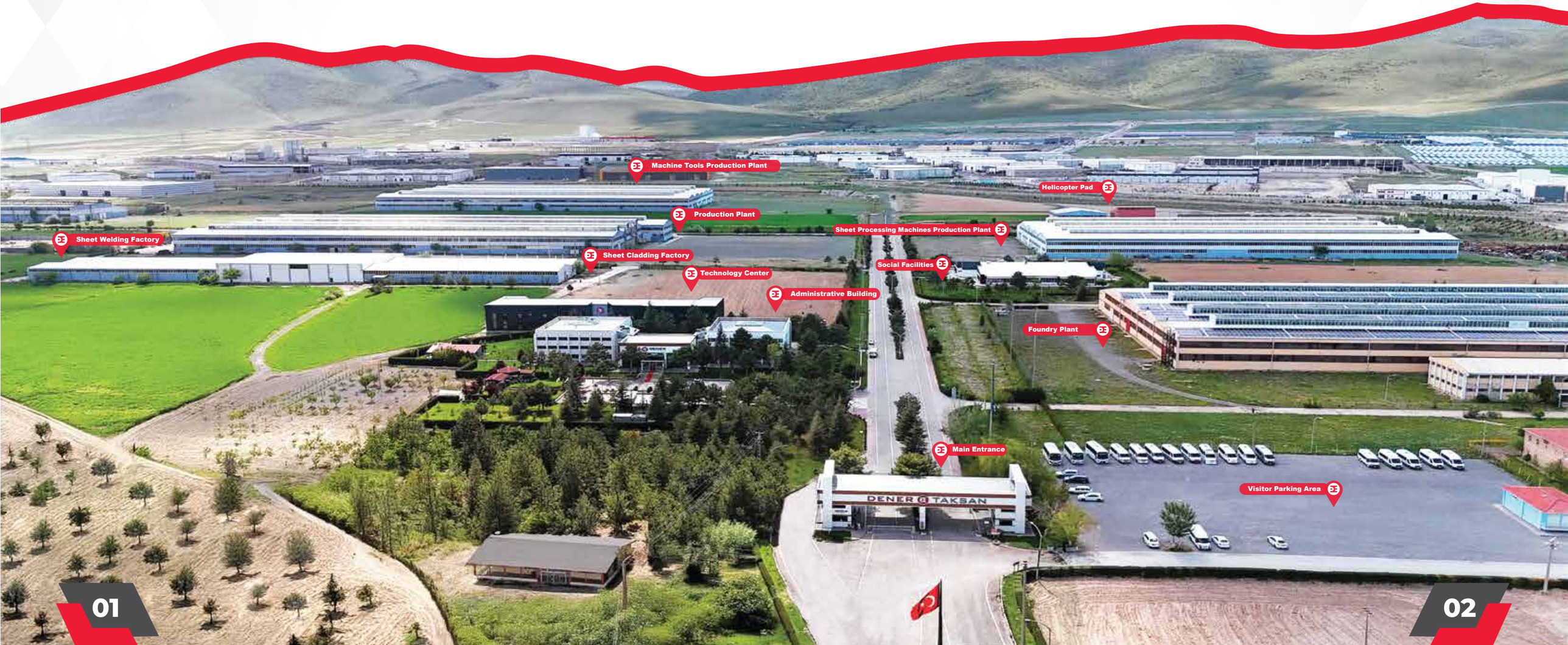
ABOUT

Dener Makina was established in 1974 in the Kayseri Old Industrial Zone. Since 2000, the company has focused on the production of CNC Sheet Metal Processing Machines, manufacturing a wide range of products including Guillotine Shears, Hydraulic Press Brakes, Ball Screw Press Brakes, Servo-Electric Press Brakes, Plasma Cutting Machines, and Fiber Laser Cutting Machines.

In 2016, the company made a major investment by expanding its facilities to include 155,000 m² of factory buildings and 27,000 m² of social facilities on a 1,300,000 m² site within the İncesu Organized Industrial Zone (O.S.B). In this new phase, Dener Makina began the production of CNC Metal Processing Machines such as Taksan Integrated Systems, Double Column Machining Centers, 5-Axis Simultaneous Machining Centers, Vertical Machining Centers, Lathes, and Grinding Machines.

With its extensive production range, over half a century of experience, skilled workforce, and multinational R&D center, Dener Makina holds a leading position globally by providing high-value industrial investment products in the fields of CNC Sheet Metal Processing and CNC Metal Processing Machines.



TTC - TTH SERIES CNC LATHE

Overview

Dener horizantal CNC Lathe offers high precision inner and outer diameter workpiece operation such as chamfering, forming, inner and outer screw - cuttings and grooving based on desired shapes and size. Moreover, the C axis feature provides the finest facing operation.

- C1 - C3 class custom made screws with no backlash
- Powerful, faster and smooth automatic turret
- High rigidity shafts estabilished on the extraordinary precise ball bearing
- Linear guideway with multi-point roller type bed provides steady cross travelling
- Excellent accuracy of positioning and high precision for repetitiveness
- 45° slant-bed, solid cast iron for the monoblock body
- Free of charge in installation and training in domestic market
- On-time service with spare parts and delivery

DENER MACHINE TOOLS

Standard Equipments

- Fanuc 0i TFP
- Roller linear motion guide
- C1–C3 high precision ball-screws
- BMT / slot type powerful turret
- Full guarding
- Steel-belt type chip conveyor
- Automatic volumetric oil distributor system
- Coolant supply equipment
- Oil skimmer
- Transformer 380/200V 3 phase 50/60Hz
- Foot pedal
- Front door safety switch
- Hydraulic power unit
- 6"–12" powerful hydraulic chuck and the soft-hard jaws
- Tool holders
- Led worklight and program lights
- Heat exchanger for electrical cabinet
- Remote handwheel
- Leveling bolts screw and plates
- Tailstock
- Air and coolant gun
- Toolbox & Tools
- CE

Optional Equipments

- Mitsubishi M80A-8A
- C Axis
- Tool measurement
- Workpiece measurement
- Automatic bar feeder
- Air conditioner for electrical cabinet
- Automatic door
- Chip bucket
- Oil mist collector unit
- Linear encoder
- Programmable tailstock
- Parts catcher

TTC - TTH SERIES CNC LATHE

Body Structure

- High Speed
- Precision
- Longevity
- High Resistance
- Vibration Damping

Woking Field

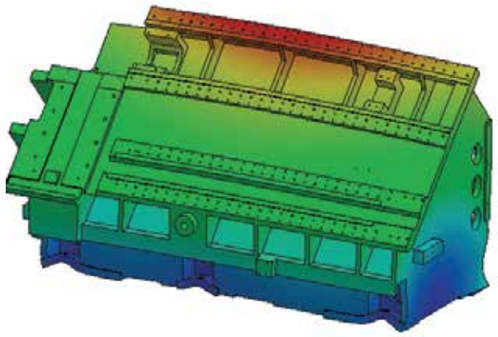
Stroke	X	Z	
TTC-6	190	450	mm
TTC-8	190	450	mm
TTH-8	300	760	mm
TTH-10	300	760	mm
TTH-12	300	760	mm

Rigid Structure

Effective damping of cutting force while working with 45° angle due to massive main body structure

Finite Element Method

By using the finite element method, optimum body structure is obtained.



DENER MACHINE TOOLS

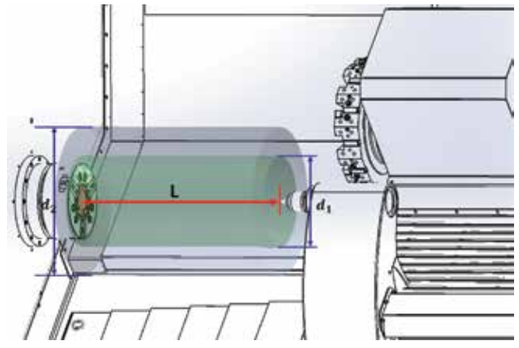
Work Piece Loading Capacity

Door Opening Width		
TTC-6	690	mm
TTC-8	690	mm
TTH-8	740	mm
TTH-10	740	mm
TTH-12	745	mm

Operating Capacity

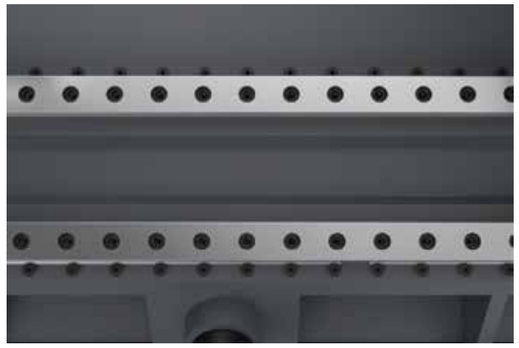
Capacity	Ø d	Ø d_1	Ø d_2	L	
TTC-6	170	305	560	433	mm
TTC-8	210	305	560	406	mm
TTH-8	210	528	700	680	mm
TTH-10	254	528	700	660	mm
TTH-12	304	488	700	614	mm

Ø d Recommended turning diameter
Ø d_1 Max turning diameter
Ø d_2 Swing over bed
L Max turning length



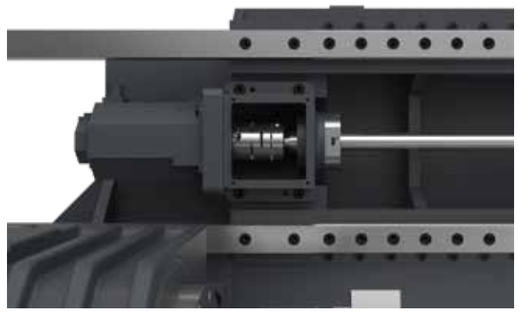
Extremely Precise Linear Equipment

Precise positioning, repeatability, minimum friction, rigid linear way and extremely precise, grinded, front loading and without back-lash ball-screw and linear way tools in order to operate with less noise.



Direct Drive Servo Motors

Direct drive connection between motor and ball-screw shaft without back-lash and precise motion performance.



TTC - TTH SERIES CNC LATHE

Turret

Fast tool changer, high working performance, precise positioning and powerful hydraulic locking with 12 tool storage electro-mechanic servo controlled slot type turret.

Turret with C Axis (Opt.)

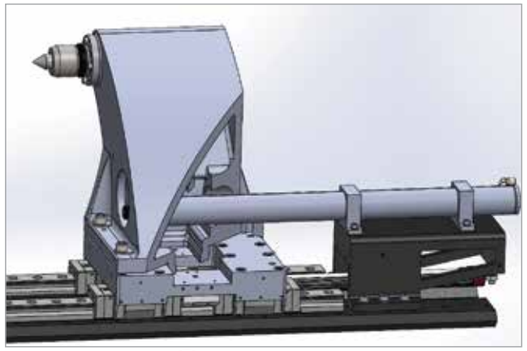
C axis working capability, fast tool changer, high working performance, precise positioning and powerful hydraulic locking with new generation BMT type 12 tool storage (12 of them lively) electro-mechanic servo turret.

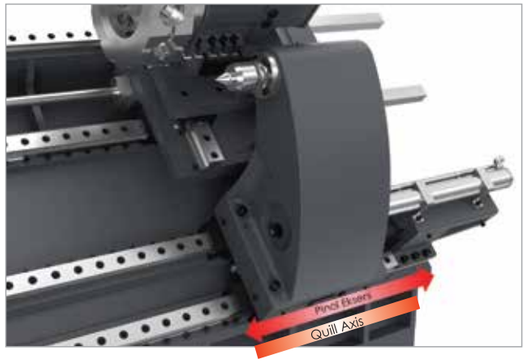
Spindle

Enhanced with roller linear, with high heat distribution performance, low vibration and less noise with high resistance.

Movable Body Tailstock

Easy positioning and powerful braking with independent turret from hydraulic controlled axis movement.





DENER MACHINE TOOLS

Chip Conveyor

Very flexible, it allows easy transportation of (metal, fiber, teflon, delrin (POM) etc.) chips.

Coolant Tank

140–200 lt. capacity, self-filtered and functional tank design provides optimum cooling and easy maintenance.

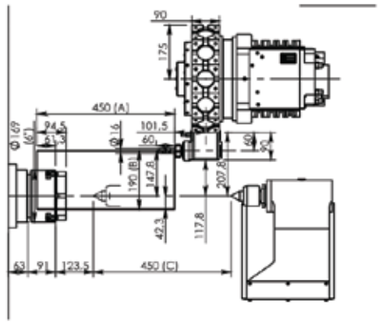
Chip Bucket (Opt.)

Convertible and braking features provides easy storage and discharge of any kinds of chips.

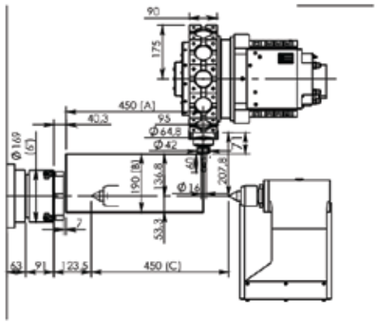
Control Unit

User Friendly interface with latest technology and ergonomic design.

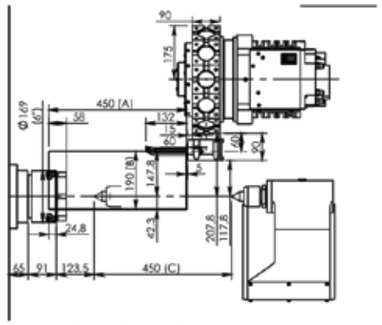
TTC SERIES WORKING RANGE



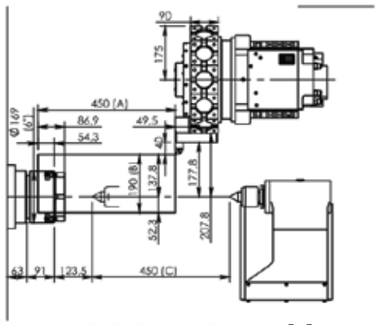
TTC 6 Opt. Angular Miling Holder



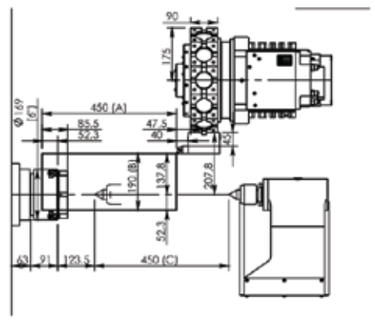
TTC 6 C Opt. Straight Milling Holder



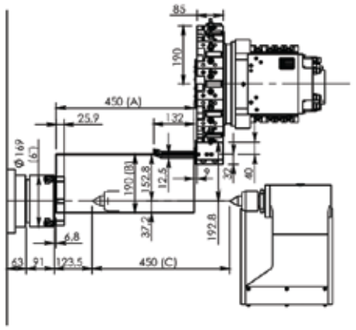
TTC 6 Opt. ID Holder



TTC 6 C Opt. OD Holder



TTC 6 Opt. Face Tool Holder



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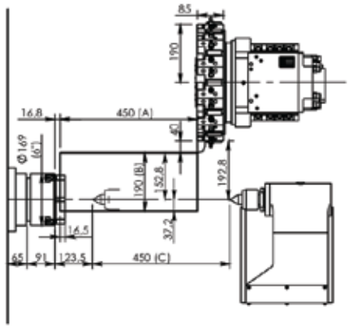

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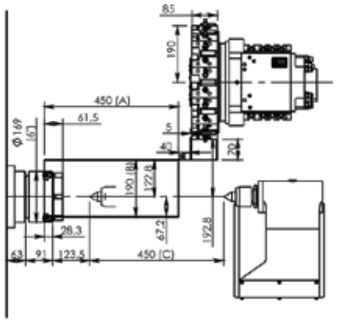
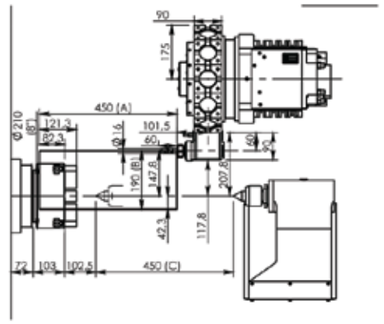
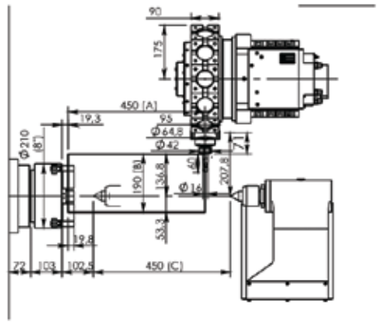


TTC 6 Std. Face Tool Holder



TTC 8 C Opt. Angular Milling Holder



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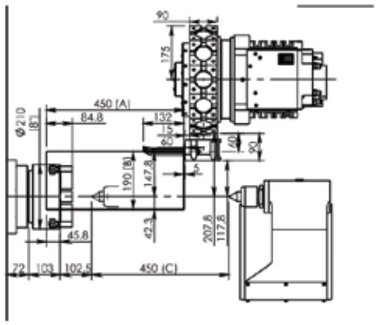

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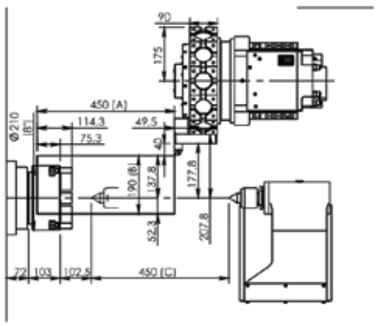

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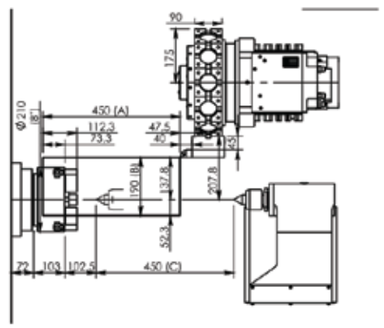

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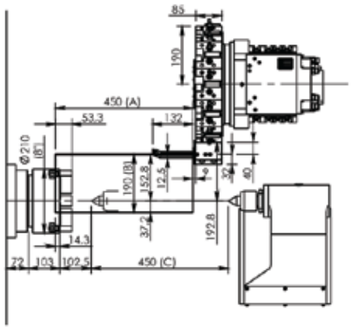

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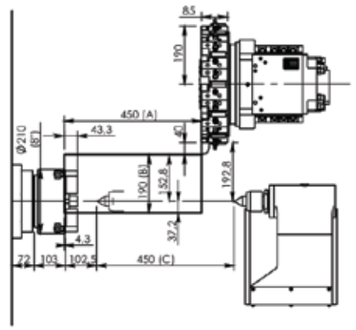

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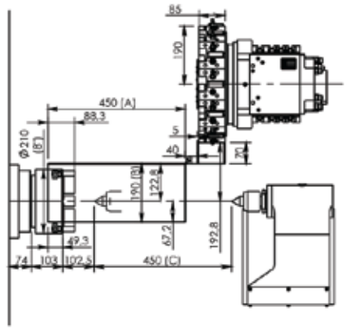
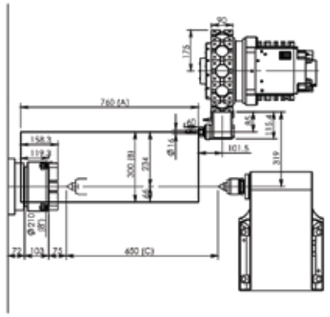


TTC 8 Std. Face Tool Holde

A: Z Axis Travel B: X Axis Travel C: Tailstock Travel

TTH SERIES WORKING RANGE



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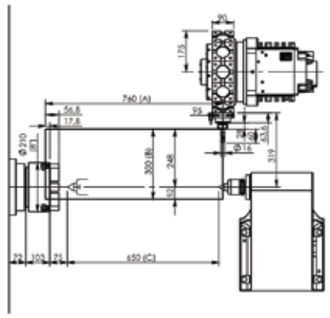

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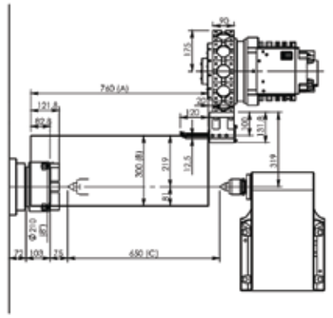

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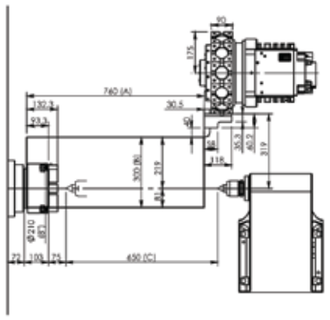

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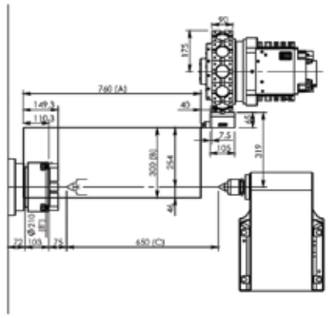

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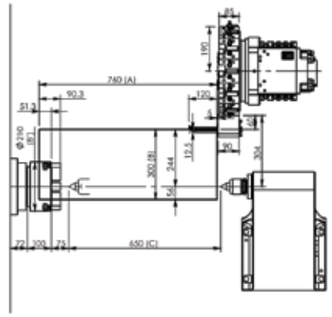

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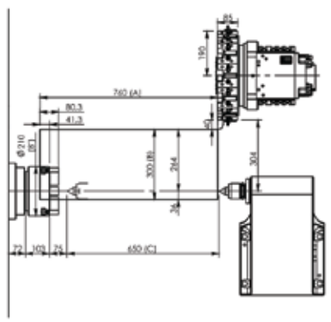

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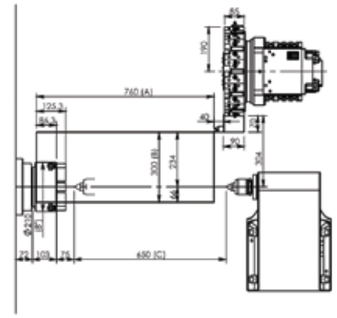

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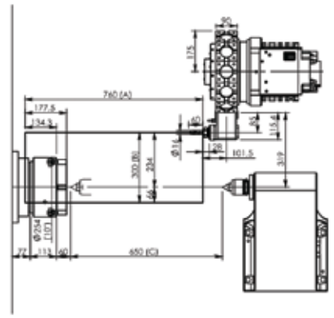
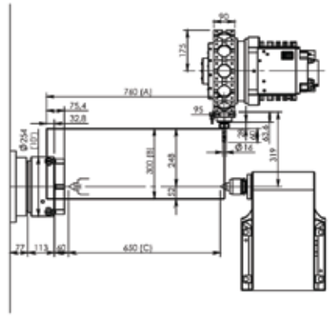


TTH 10 C Opt. Angular Milling Holder



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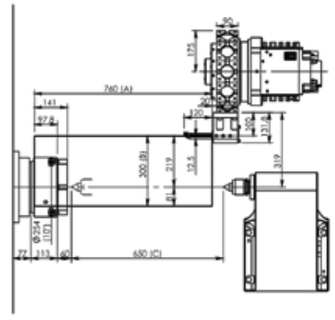

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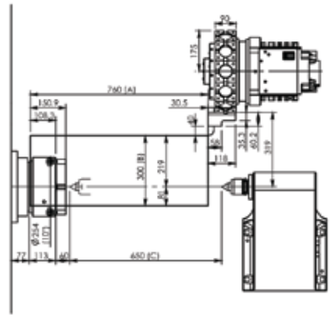

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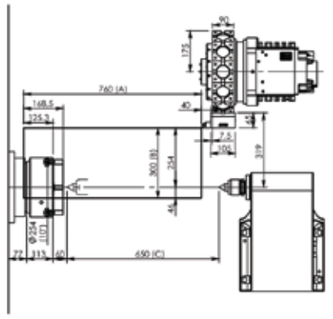

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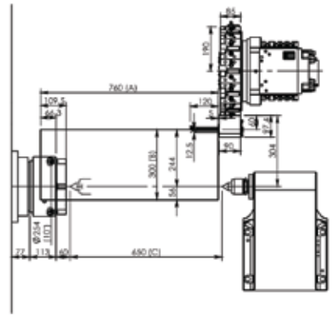

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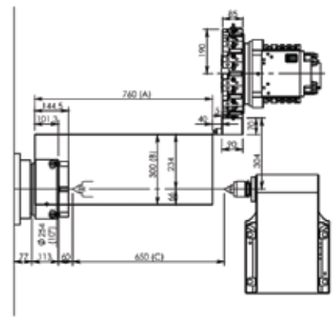
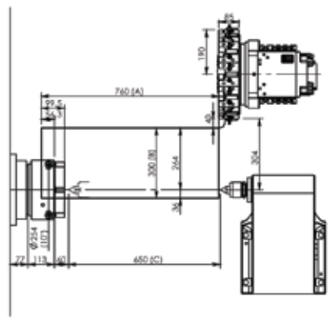


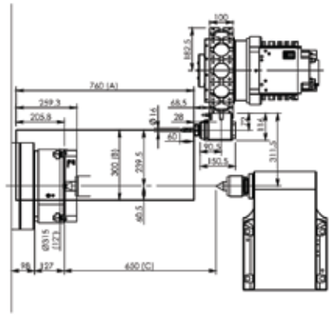
TTH 10 Std. Face Tool Holder



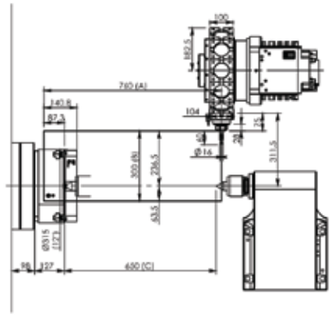
TTH 10 Std. OD Holder

A: Z Axis Travel B: X Axis Travel C: Tailstock Travel

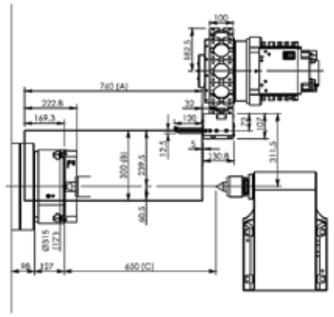
TTH SERIES WORKING RANGE



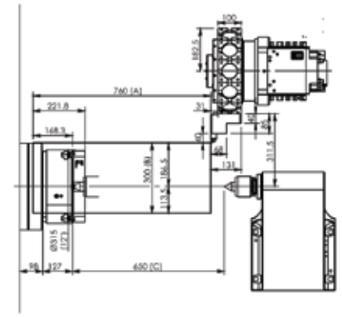
TTH 12 C Opt. Angular Milling Holder



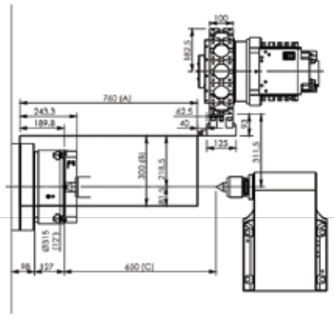
TTH 12 C Opt. Straight Milling Holder



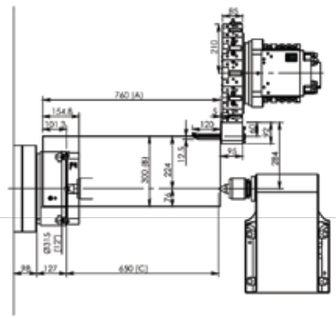
TTH 12 C Opt. ID Holder



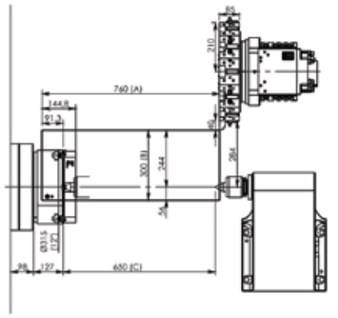
TTH 12 C Opt. OD Holder



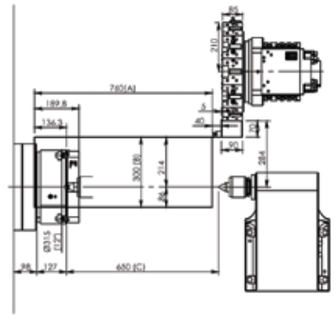
TTH 12 C Opt. Face Tool Holder



TTH 12 Std. ID Holder



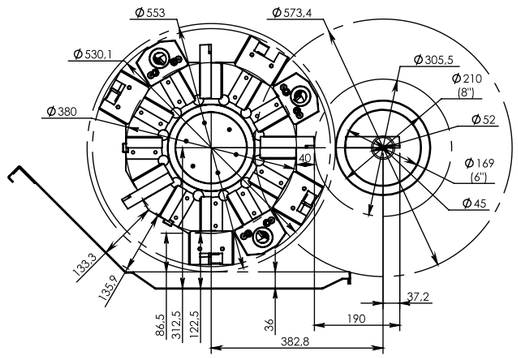
TTH 12 Std. OD Holder



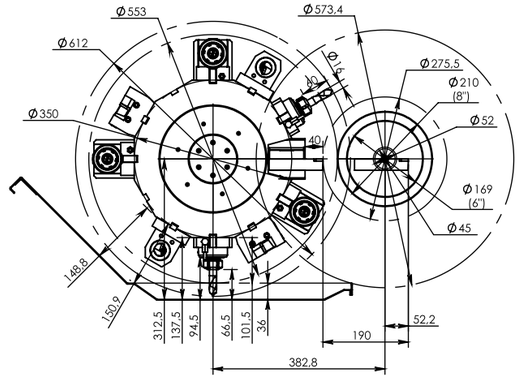
TTH 12 Std. Face Tool Holder

DENER MACHINE TOOLS

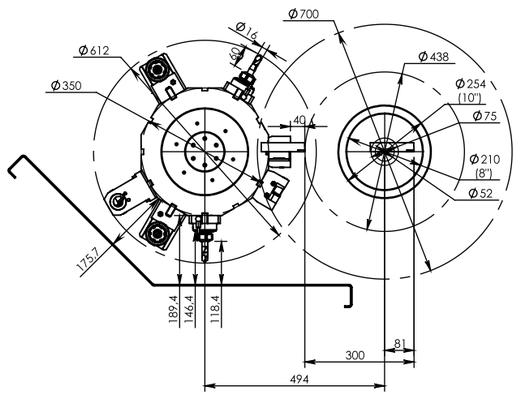
TTC - TTH SERIES TOOL INTERFACE



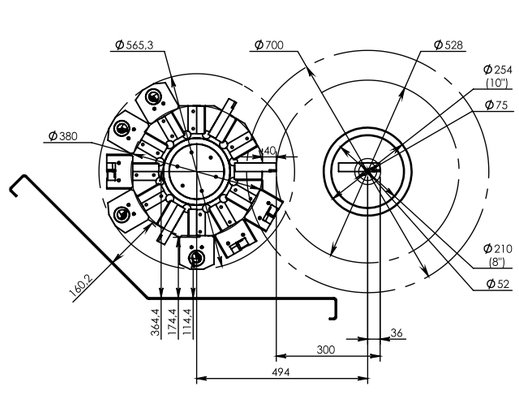
TTC 6 - 8 Std. Tool Interface



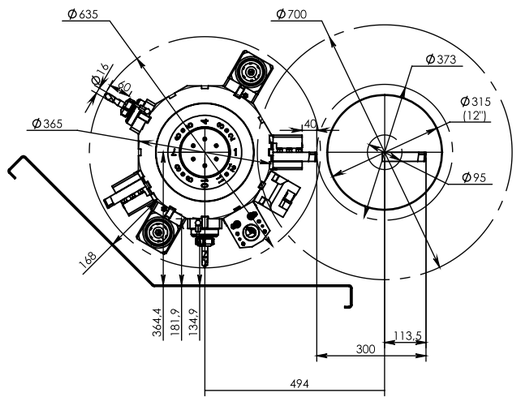
TTC 6 - 8 C Tool Interface



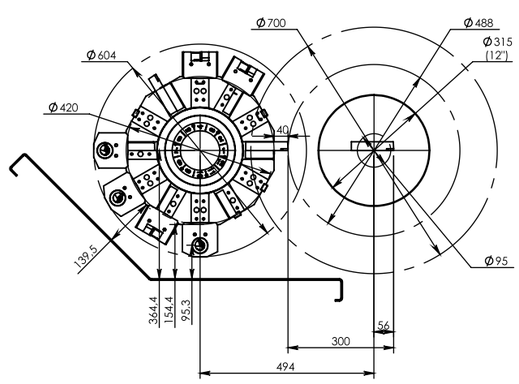
TTH 8 - 10 C Opt. Tool Interface



TTH 8 - 10 Std. Tool Interface



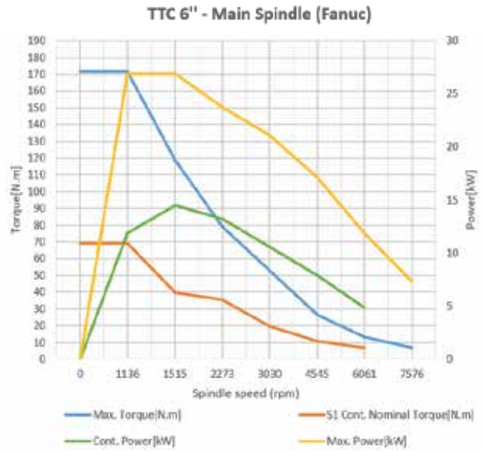
TTH 12 C Opt. Tool Interface

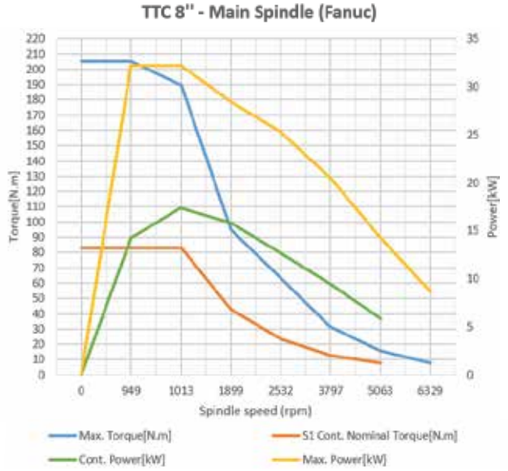


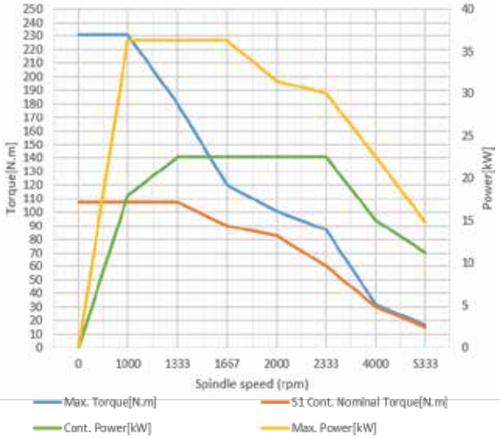
TTH 12 Std. Tool Interface

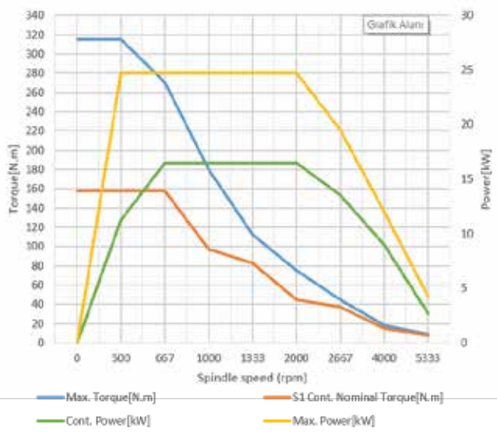
TTC - TTH SERIES POWER I TORQUE

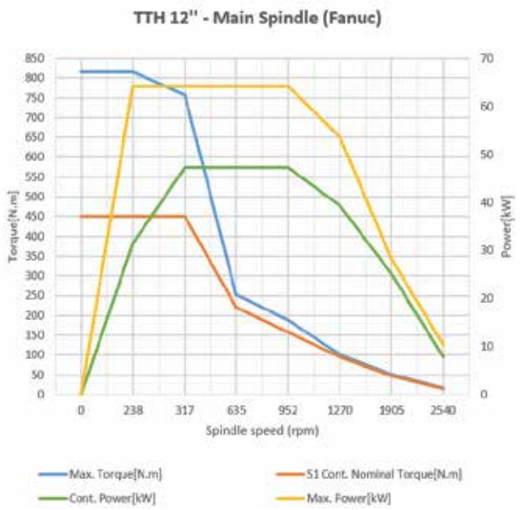
FANUC







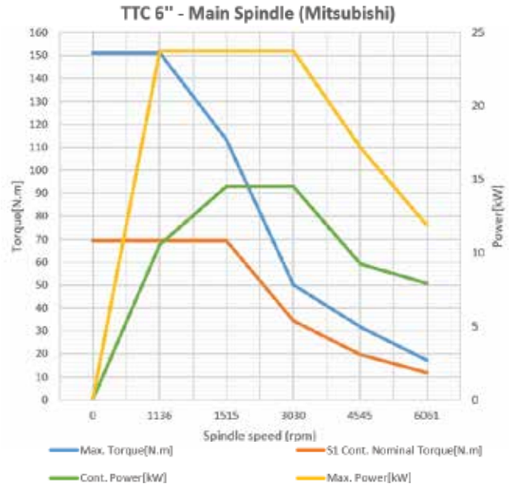


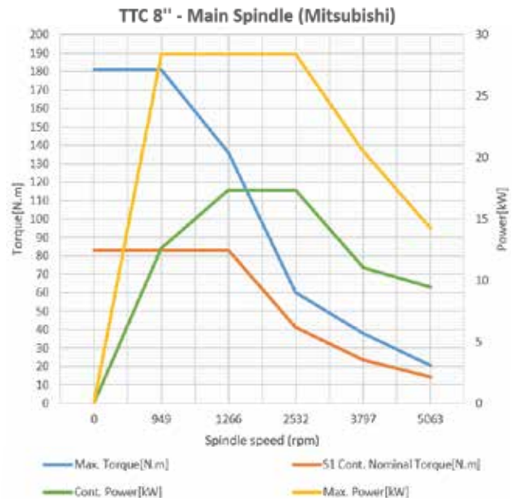


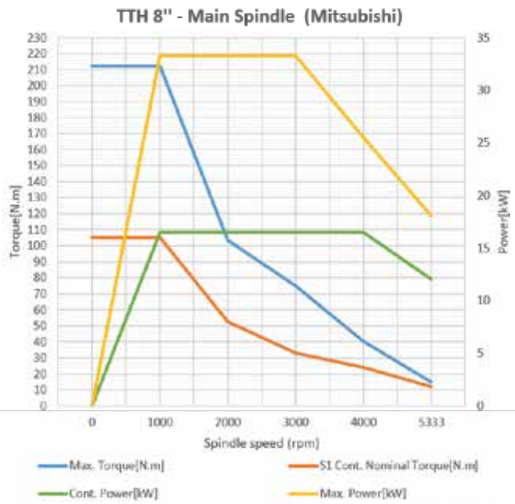
DENER MACHINE TOOLS

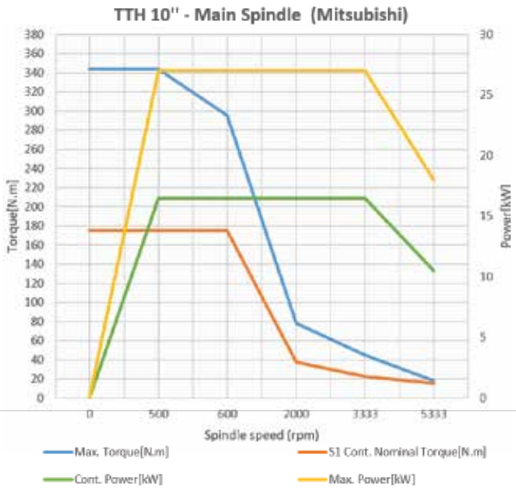
TTC - TTH SERIES POWER I TORQUE

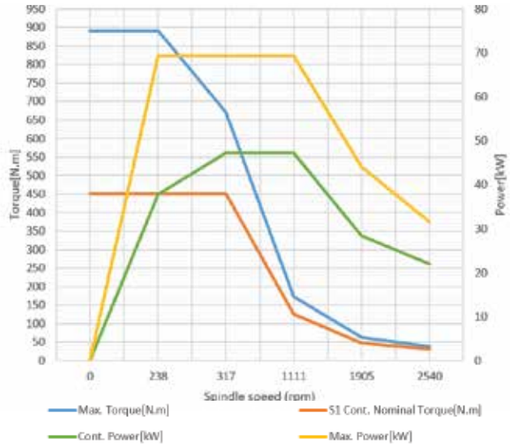
MITSUBISHI



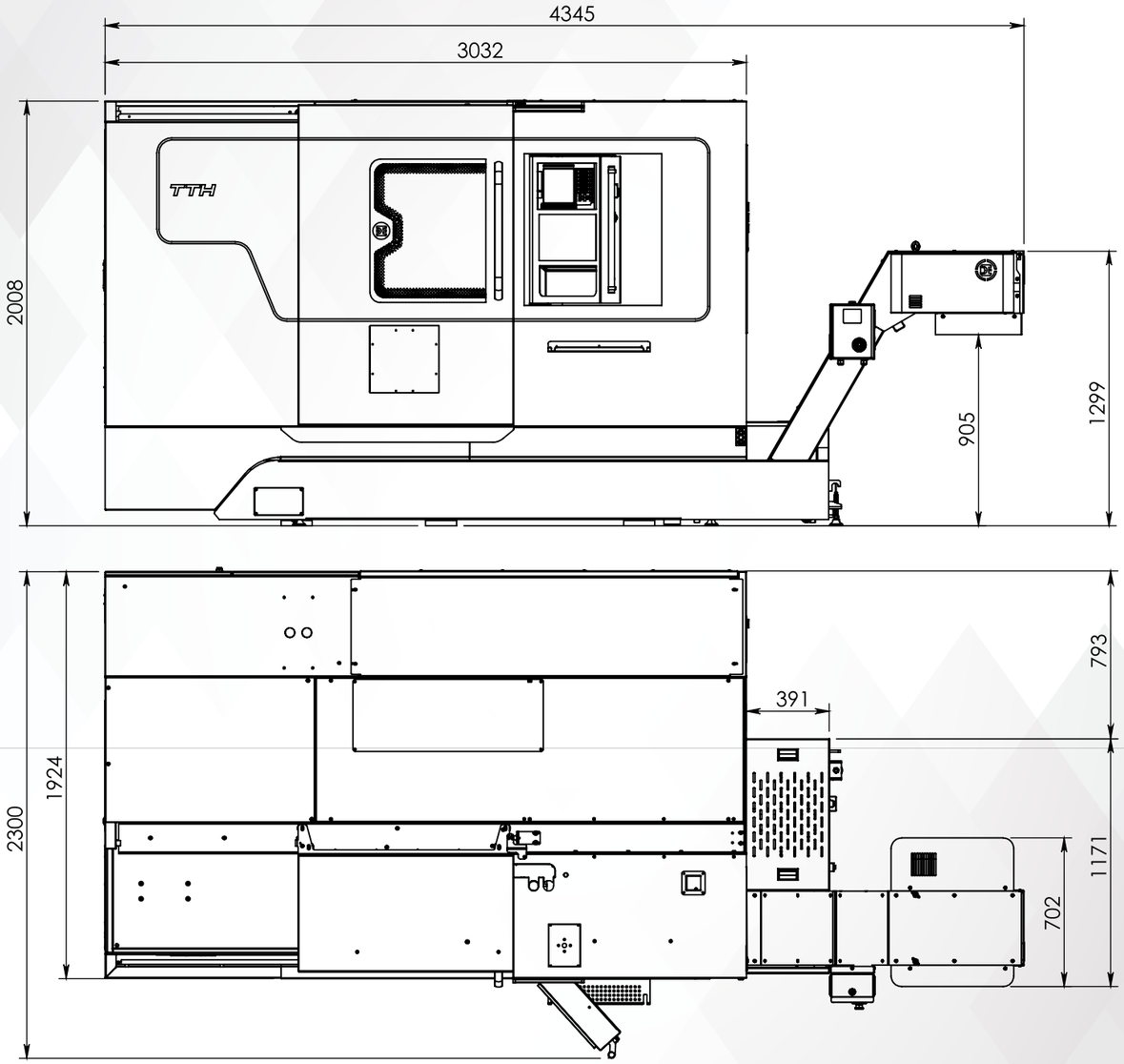




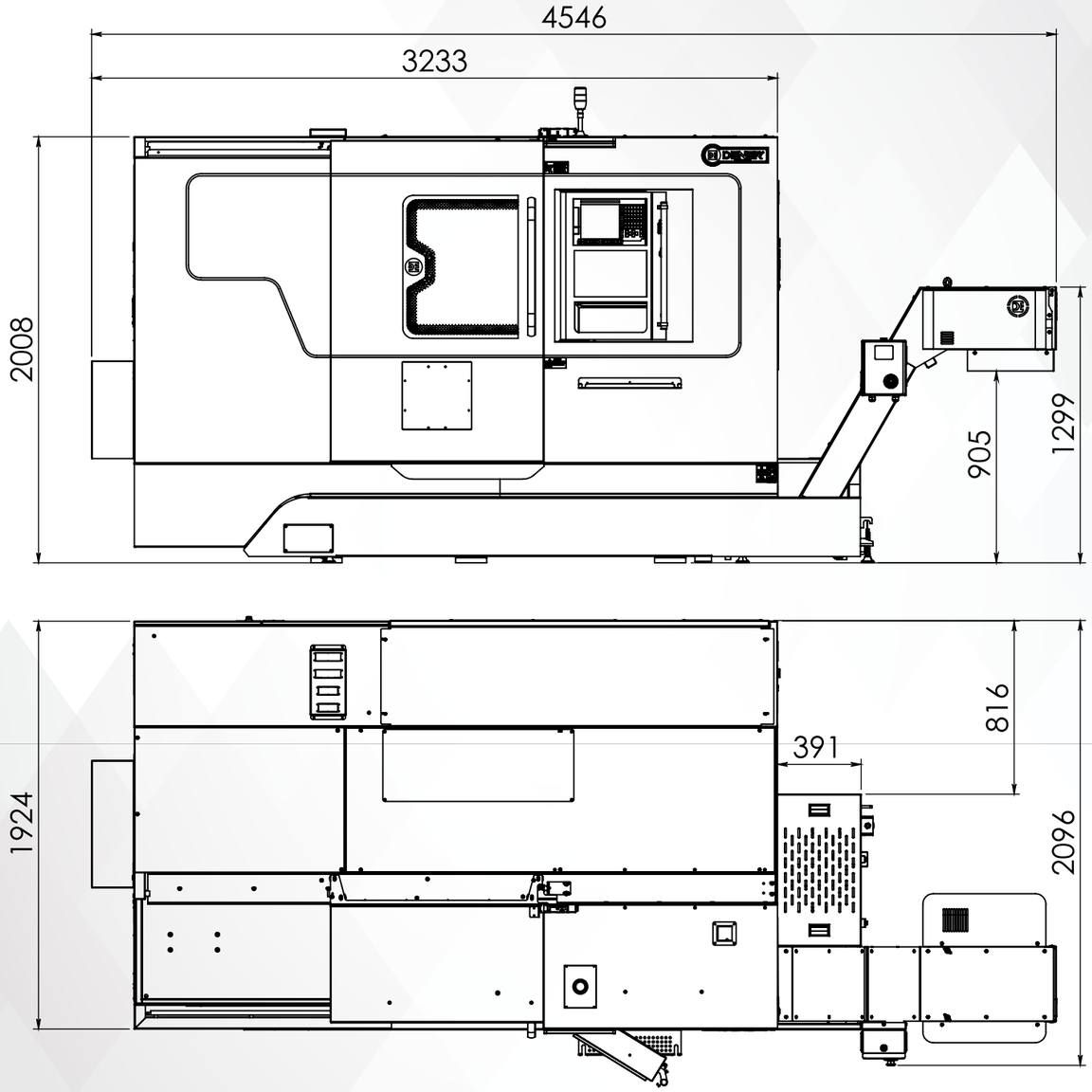




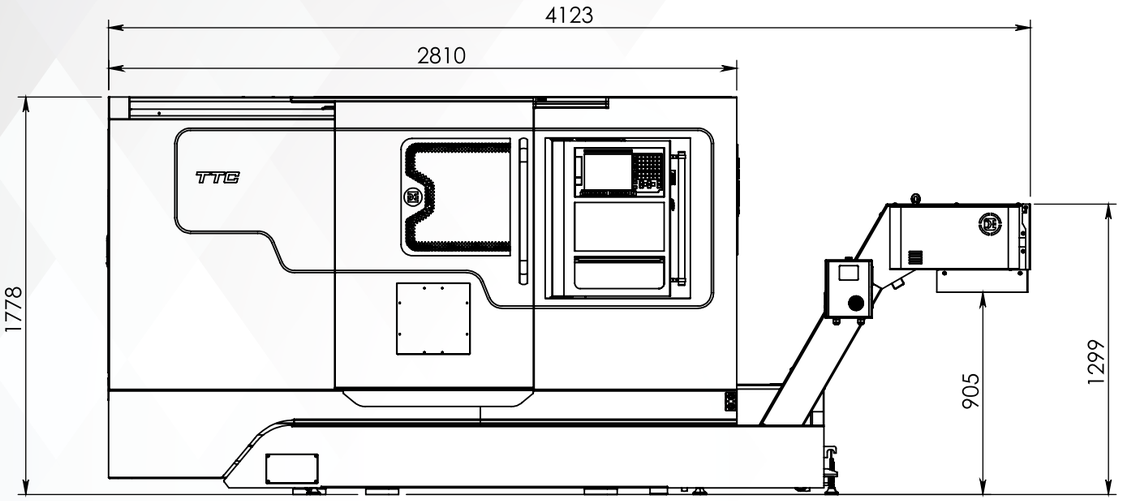
TTH-8 and TTH-10 Layout

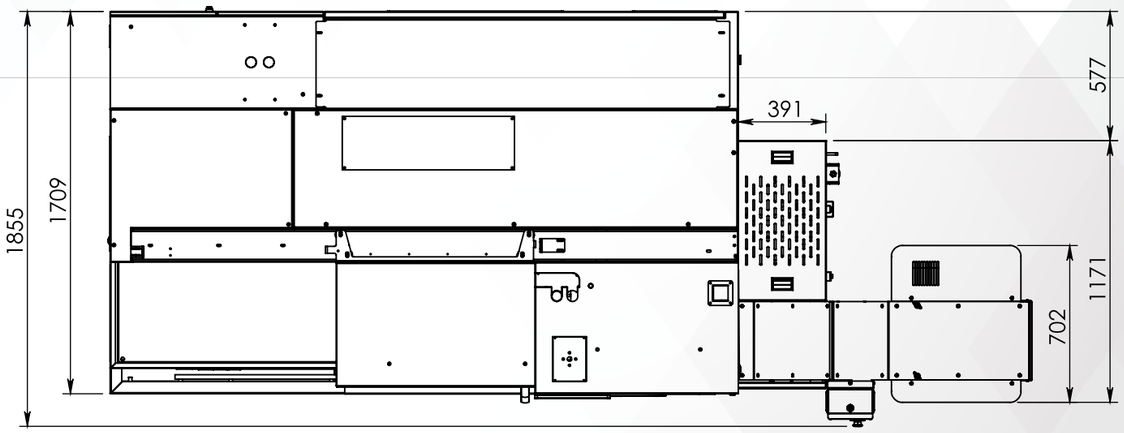


TTH-12 Layout



TTC-6 and TTC-8 Layout





Our Product

Sheet Metal Machines

Hydraulic
Press Brake

Hybrid
Press Brake

Servo Electrical
Press Brake

Ball - Screw
Press Brake

Panel
Bender

CNC Hydraulic
Shear

NC Hydraulic
Shear

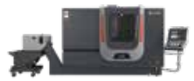
Gantry Fiber
Laser Cutting Machine

Tube Profile Fiber
Laser Cutting Machine

Milling Machines

5 Axis
Milling Center

Double Column
Milling Center



CNC Vertical
Milling Machine

CNC
Lathe

NC Grinding
Machine

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TTC - TTH SERIES CNC LATHE

					FANUC CONTROL UNIT (Std.)						MITSUBISHI CONTROL UNIT (Opt.)				
					TTC-6	TTC-8		TTH-8	TTH-10	TTH-12	TTC-6	TTC-8	TTH-8	TTH-10	TTH-12
Axis Travels	Travel Distance	X Axis	mm		190	190		300	300	300	190	190	300	300	300
		Z Axis	mm		450	450		760	760	760	450	450	760	760	760
Axis Motors	Feed Motor Power	X Axis	kW		1,8	1,8		3	3	3	2,2	2,2	3	3	3
		Z Axis	kW		1,8	1,8		1,8	1,8	1,8	2,2	2,2	2,2	2,2	2,2
	Feed Motor Torque (Continually/Max.)	X Axis	N-m		11/27	11/27		20/45	20/45	20/45	12/32	12/32	22,5/64	22,5/64	22,5/64
		Z Axis	N-m		11/27	11/27		11/27	11/27	11/27	12/32	12/32	12/32	12/32	12/32
Main Spindle	Max. Spindle Speed		rpm		6000	4500		4500	3500	2450	6000	4500	4500	3500	2450
	Main Spindle Motor Power (Continually/Max.)		kW		11/20,4	11/20,4		15/24,2	11/16,5	15/20,4	11/18	11/18	11/22,2	11/18	15/22,2
	Max. Spindle Torque		N-m		171,6	195		231	315	815,9	151,3	171,9	212	343,8	890,5
	Spindle Motor Torque (Continually/Max.)		N-m		52,5/130	52,5/130		71,6/154	105/210	143/259	52,5/114,6	52,5/114,6	70/141,3	116,7/229,2	143,2/282,7
	Spindle Nose		ASA		A2-5	A2-6		A2-6	A2-8	A2-11	A2-5	A2-6	A2-6	A2-8	A2-11
	Spindle Bearing Diameter (front) in/out		mm		80/125	100/150		100/150	130/200	160/240	80/125	100/150	100/150	130/200	160/240
	Spindle Through Hole		mm		56	66		66	92	118	56	66	66	92	118
Turret	No of Tool Stations		ea		12	12		12	12	12	12	12	12	12	12
	OD Tool Size		mm		25x25	25x25		25x25	25x25	25x25	25x25	25x25	25x25	25x25	25x25
	Max. Boring Bar Size		mm		40	40		40	40	40	40	40	40	40	40
	Type				Slot Tip	Slot Tip		Slot Tip	Slot Tip	Slot Tip	Slot Tip	Slot Tip	Slot Tip	Slot Tip	Slot Tip
	Turret Indexing Time (30°)		s		0,20~0,34	0,20~0,34		0,20~0,34	0,20~0,34	0,20~0,34	0,20~0,34	0,20~0,34	0,20~0,34	0,20~0,34	0,20~0,34
	Turret Driven Type				Servo Mech.	Servo Mech.		Servo Mech.	Servo Mech.	Servo Mech.	Servo Mech.	Servo Mech.	Servo Mech.	Servo Mech.	Servo Mech.
Control System	CNC Control System				FANUC 0*i*-TFP	FANUC 0*i*-TFP		FANUC 0*i*-TFP	FANUC 0*i*-TFP	FANUC 0*i*-TFP	M80(FCA80H-8A)	M80(FCA80H-8A)	M80(FCA80H-8A)	M80(FCA80H-8A)	M80(FCA80H-8A)
	Screen Colour LCD				10,4"	10,4"		10,4"	10,4"	10,4"	10,4"	10,4"	10,4"	10,4"	10,4"
Capacity	Swing Over Bed		mm		560	560		700	700	700	560	560	700	700	700
	Recommanded Turning Diameter		mm		170	210		210	254	315	170	210	210	254	315
	Max. Turning Diameter		mm		305	305		528	528	488	305	305	528	528	488
	Max. Turning Length		mm		433	406		680	660	614	433	406	680	660	614
	Chuck Size		inch		6	8		8	10	12	6	8	8	10	12
	Bar Working Diameter		mm		45	52		52	75	95	45	52	52	75	95
	Bed Slant Angle		degree		45	45		45	45	45	45	45	45	45	45
	Ball-Screw Class	X Axis	mm		C1	C1		C1	C1	C1	C1	C1	C1	C1	C1
		Z Axis	mm		C3	C3		C3	C3	C3	C3	C3	C3	C3	C3
	Guideway Size	X Axis	mm		30	30		45	45	45	30	30	45	45	45
		Z Axis	mm		35	35		45	45	45	35	35	45	45	45
		Tailstock	mm		30	30		45	45	45	30	30	45	45	45
	Guideway Type [Linear]				Roller Type	Roller Type		Roller Type	Roller Type	Roller Type	Roller Type	Roller Type	Roller Type	Roller Type	Roller Type
Axis Feedrates	Rapid Traverse Rate	X Axis	m/min		30	30		30	30	30	30	30	30	30	30
		Z Axis	m/min		30	30		30	30	30	30	30	30	30	30
	Cutting Feedrate	X Axis	m/min		1~5	1~5		1~10	1~10	1~10	1~5	1~5	1~10	1~10	1~10
		Z Axis	m/min		1~5	1~5		1~10	1~10	1~10	1~5	1~5	1~10	1~10	1~10
Accuracy	Positioning Accuracy (X/Z)		mm		0,008/0,004	0,008/0,004		0,008/0,004	0,008/0,004	0,008/0,004	0,008/0,004	0,008/0,004	0,008/0,004	0,008/0,004	0,008/0,004
	Repeatability (X/Z)		mm		0,004/0,002	0,004/0,002		0,004/0,002	0,004/0,002	0,004/0,002	0,004/0,002	0,004/0,002	0,004/0,002	0,004/0,002	0,004/0,002
Tailstock	Tailstock Travel		mm		450	450		650	650	650	450	450	650	650	650
	Quill Diameter		mm		Ø68	Ø68		Ø68	Ø68	Ø68	Ø68	Ø68	Ø68	Ø68	Ø68
	Quill Bore Taper		MK		4	4		4	4	5	4	4	4	4	5
Power Source	Electric Power Supply (Rated Capacity)		kVA		25	25		32	25	32	32	32	32	32	32
Coolant Capacity Motor - Pressure - Volume	Coolant Pump		kW-(bar)		0,75 (4)	0,75 (4)		0,75 (4)	0,75 (4)	0,75 (4)	0,75 (4)	0,75 (4)	0,75 (4)	0,75 (4)	0,75 (4)
	Coolant Tank Capacity		liter		140	140		160	160	160	140	140	160	160	160
Machine Dimensions	Length		mm		4123	4123		4345	4345	4545	4118	4123	4346	4346	4546
	Width		mm		1709	1709		1924	1924	2073	1709	1709	2073	2073	1924
	Height		mm		1778	1778		2008	2008	2008	1778	1778	2008	2008	2008
	Weight		~kg		3260	3306		5389	5439	5886	3260	3306	5389	5439	5886
C-Axis (Opt.)	Max.Rotary Tool Speed		rpm		6000	6000		6000	6000	5000	6000	6000	6000	6000	5000
	Rotary Tool Motor Power (Continually/Max.)		kW		3,7/8,3	3,7/8,3		3,7/8,3	3,7/8,3	3,7/8,3	3,7/6,6	3,7/6,6	3,7/6,6	3,7/6,6	3,7/6,6
	Rotary Tool Motor Torque (Continually/Max.)		N-m		17,7/52,5	17,7/52,5		17,7/52,5	17,7/52,5	17,7/52,5	23,6/42	23,6/42	23,6/42	23,6/42	23,6/42
	Turret Type				BMT55	BMT55		BMT55	BMT55	BMT65	BMT55	BMT55	BMT55	BMT55	BMT65
	Max. Turning Diameter		mm		275	275		438	438	373	275	275	438	438	373
	Max. Turning Length		mm		362	335		627	607	537	362	335	627	607	537

- Capacity information is according to outer diameter tool. Request working lengths.
- The values in the table may change in case of a machine update.