DN SOLUTIONS

LARGE HORIZONTAL TURNING CENTERS WITH
2-AXIS TO Y-AXIS MACHINING CAPABILITIES

PUMA 600·700·800Ⅱ

PUMA 600/L/XL/LM/XLM/LY/XLY Ⅱ
PUMA 700/L/XL/LM/XLM/XLY Ⅱ
PUMA 800/L/XL/LM/XLM/XLY/B/LB Ⅱ

PUMA 600·700·800II

PUMA 600/700/800 II machines are large horizontal turning centers ideal for machining pipes, valves and flanges used in oil and gas industry, hydraulic parts used in construction equipment, and also complex parts used in the aircraft and ship building industries. Maximum turning diameters and lengths are Ø900mm (35.4inch) and 5050mm (198.8inch) respectively, which are the highest in their class. The slant bed design allows easy chip disposal.

CONTENTS

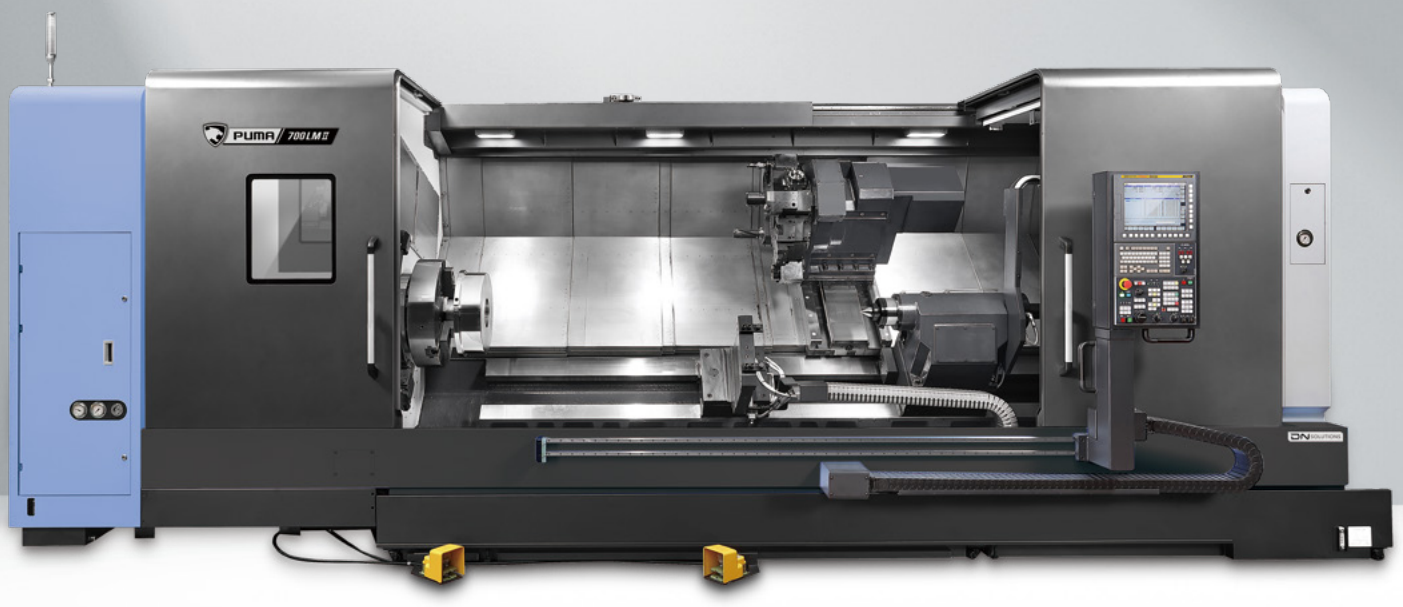
SINGLE SETUP FOR MACHINING LARGE COMPLEX PARTS

- Maximum productivity can be achieved with the machines' 200mm (7.9inch) (±100mm (3.9inch)) orthogonal Y-axis structure, which allows users to machine a wide range of large and complex parts.

THE LARGEST MACHINING AREA AND TOP PERFORMANCE IN ITS CLASS

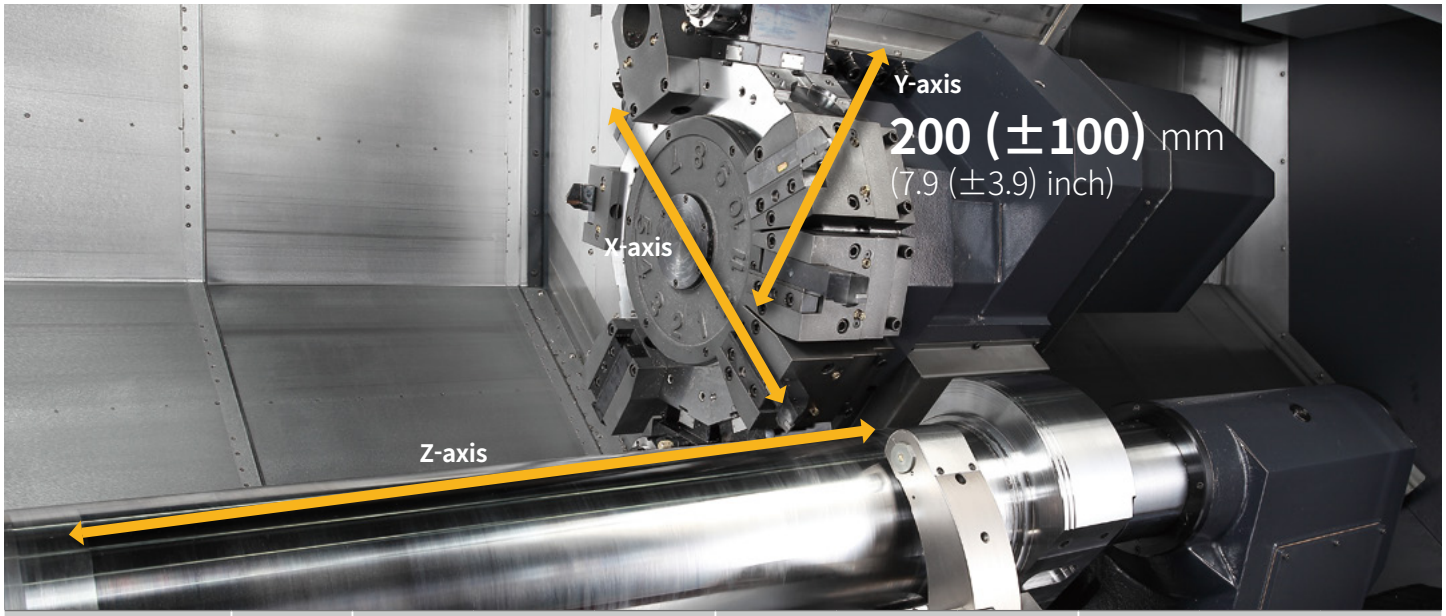
- With 5m maximum turning length, Ø900mm (35.4inch) maximum turning diameter and 11004N·m (8121.0ft-lbs) of Torque, the machines are ideal for the heavy-duty cutting of large parts used in many different industries.
- CAPTO type ATC(Auto Tool Changer) increases the number of tooling options, reduces setup times and is suitable for machining hard-to-cut materials (Titanium, Inconel etc.). OPTION
- Ø375mm (14.8inch) maximum spindle through hole diameter makes the machines ideal for turning large diameter pipes.
- The machines take the machining of high-accuracy and perfomance-critical threads in their stride.

THE SOLUTION FOR MACHINING A WIDE RANGE OF PIPES



BASIC STRUCTURE

Machine capabilities range from 2-axis to Y-axis, which enables large diameter parts to be set up and machined in a single operation.



Series	Chuck* Size (inch)	1600 mm (63 inch)_Std.			3200 mm (126 inch)_L			5050 mm (199 inch)_XL		
		2-axis	M	Y	2-axis	M	Y	2-axis	M	Y
PUMA 600 II	18	○	○	-	○	○	○	○	○	○
PUMA 700 II	24	○	○	-	○	○	○	○	○	○
PUMA 800 II	32	○	○	-	○	○	○	○	○	○
PUMA 800B II	Order made	○	-	-	○	-	-	-	-	-

** Chuck and chuck cylinder are optional features.*

SPINDLE

The gearbox design allows the PUMA 600/700/800 II spindles to have unparalleled power and torque, which boosts productivity and delivers extreme heavy-duty cutting capability.

Max. spindle speed

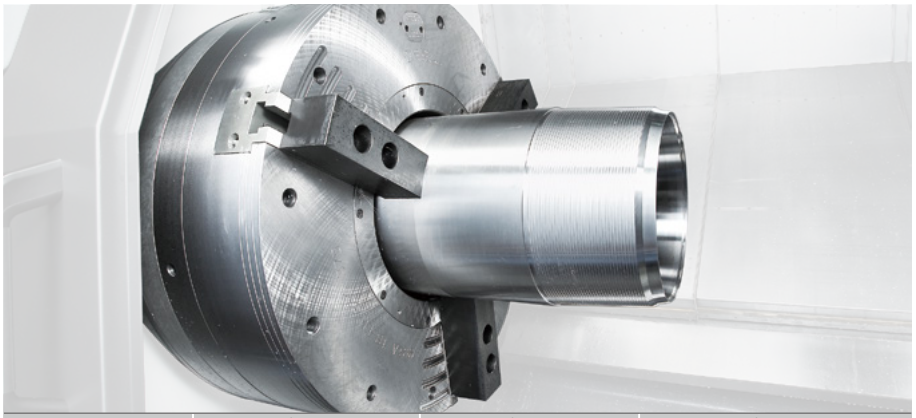
750 r/min

Max. spindle power

55 {75 OPTION} kW
(73.8 {100.1} Hp)

Max. spindle torque

8076 {11013 OPTION} N·m
(5960.1 {8127.6} ft-lbs)

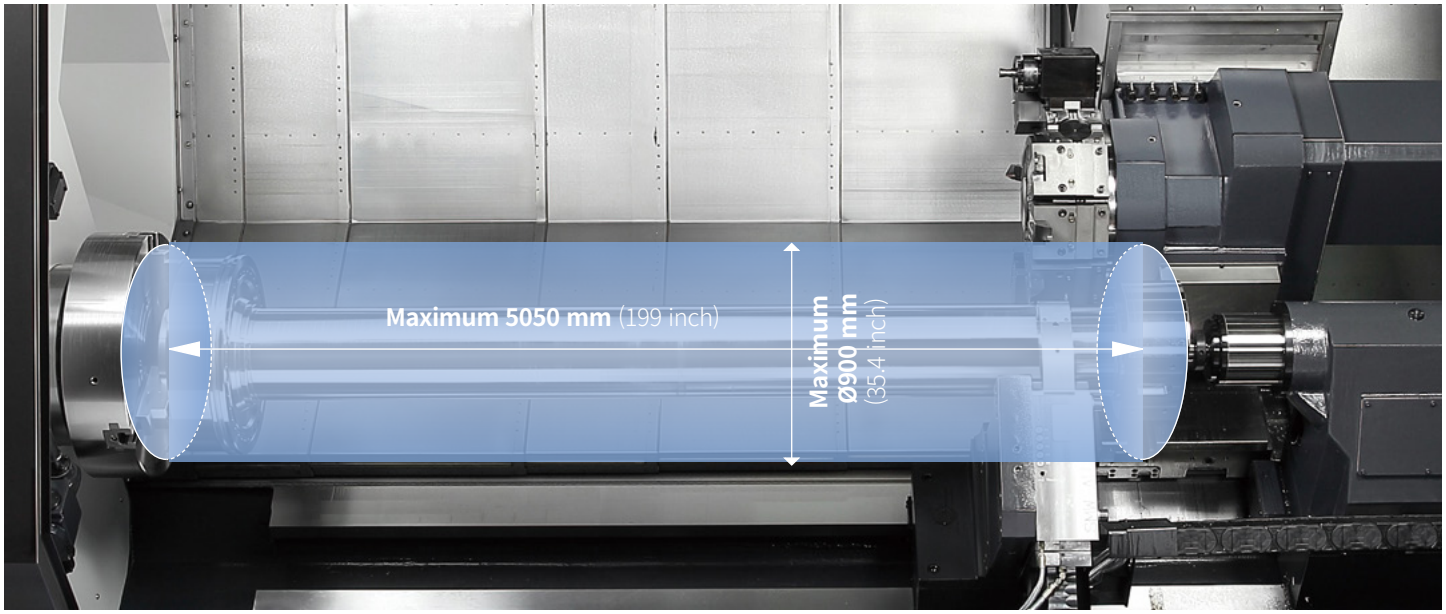


Series	Max. spindle speed (r/min)	Max. spindle power (kW (Hp))	Max. spindle torque (N·m (ft-lbs))
PUMA 600 II	1800	55 {75} (73.8 {100.6})	6622 {9030} (4887.0 {6664.1})
PUMA 700 II	1500		8076 {11013} (5960.1 {8127.6})
PUMA 800 II	750		
PUMA 800B II	500		

** { } : option*

MACHINING AREA

The largest work envelope in their class with a maximum turning diameter of Ø900mm(35.4inch) and maximum turning length of 5m.



Unit : mm (inch)

Max. turning diameter

Ø900 mm (35.4 inch)

Max. turning length

5050 mm (199 inch)

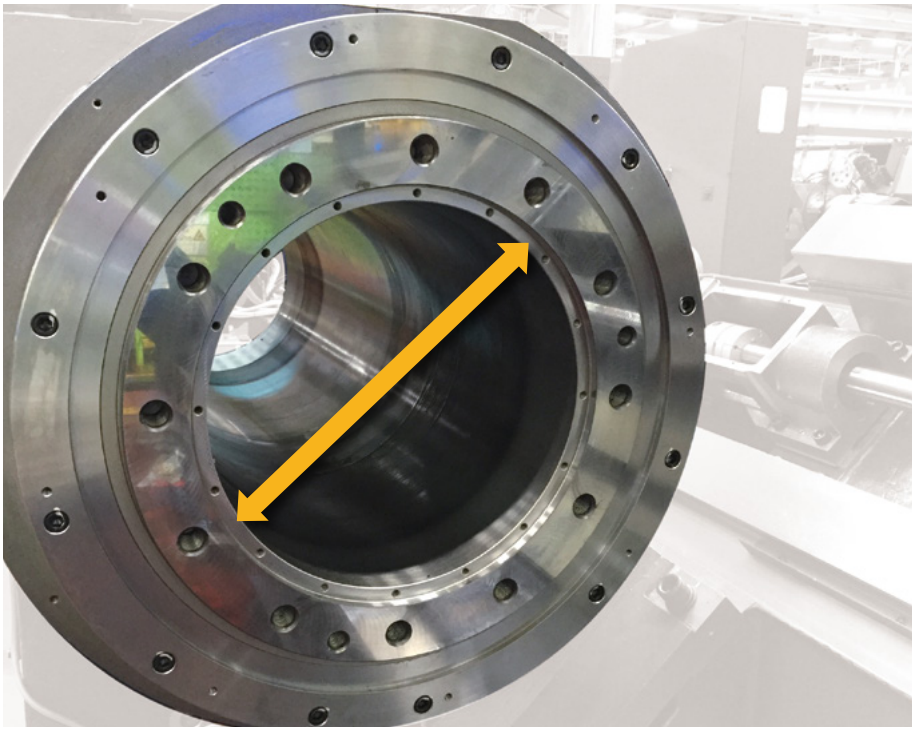
	Series	Max. turning diameter	Max. turning length
2-axis	PUMA 600 /700/800/800B Ⅱ	900 (35.4)	1600 (63)
	PUMA 600L/700L/800L/800LB Ⅱ		3200 (126)
	PUMA 600XL/700XL/800XL Ⅱ		5050 (199)
M	PUMA 600M/700M/800M Ⅱ		1600 (63)
	PUMA 600LM/700LM/800LM Ⅱ		3200 (126)
	PUMA 600XLM/700XLM/800XLM Ⅱ		5050 (199)
Y	PUMA 600LY/700LY/800LY Ⅱ	750 (29.5)	3250 (128)
	PUMA 600XLY/700XLY/800XLY Ⅱ		5050 (199)

Machines are available with various spindle-through-hole sizes to provide the optimum machining solutions for different sized pipes.

Series	Max. spindle through hole diameter (mm (inch))
PUMA 600 Ⅱ	152 (6.0)
PUMA 700 Ⅱ	181 (7.1)
PUMA 800 Ⅱ	320 (12.6)
PUMA 800B Ⅱ	375 (14.8)

Max. spindle through hole diameter

Ø375 mm (14.8 inch)



TAILSTOCK

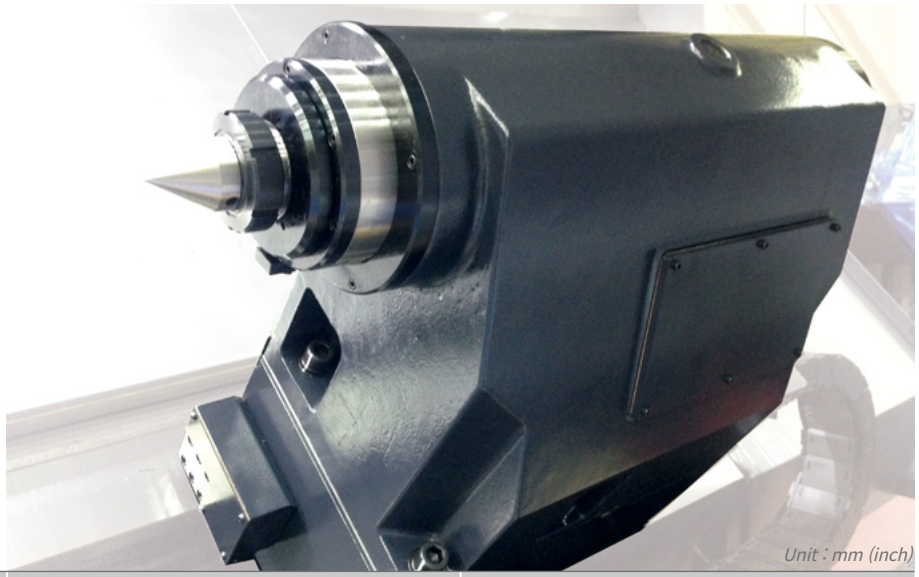
The standard programmable tailstock is easy to position and adjust thereby helping to reduce set up times.

Tailstock travel

1550 mm (61 inch)

3135 mm* (L) (123 inch)

4885 mm (XL) (192 inch)



Unit : mm (inch)

Series	Quill diameter	Quill travel
PUMA 600/M/L/LM Ⅱ	160 (6.3)	150 (5.9)
PUMA 700/M/L/LM Ⅱ		
PUMA 800/M/L/LM Ⅱ		
PUMA 600LY/XL/XLM/XLY Ⅱ	180 (7.1)	150 (5.9)
PUMA 700LY/XL/XLM/XLY Ⅱ		
PUMA 800LY/XL/XLM/XLY Ⅱ		
PUMA 800B/LB Ⅱ	160 (6.3)	150 (5.9)

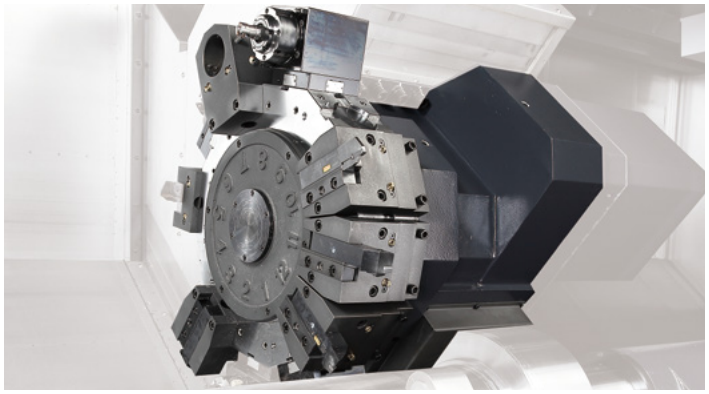
TURRET

DN Solutions's uniquely-designed BMT85P turret is used on M- and Y-Axis models to boost heavy-duty cutting performance.

2-axis model

No. of tool stations

12 ea



M/Y Model

BMT85P

No. of tool stations

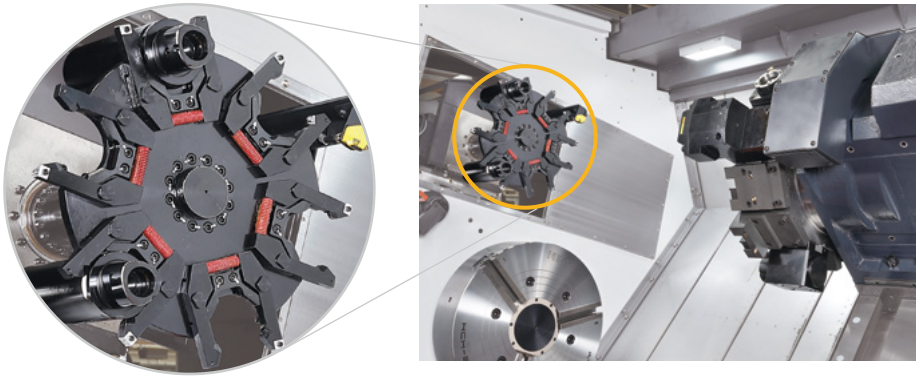
12 ea

AUTOMATIC TOOL CHANGER OPTION

Capto Tools in the ATC deliver higher productivity when machining difficult to cut materials.

Description		Spec.*
MAGAZINE & ATC	Tool shank	CAPTO C8
	Tool storage capa.	6 ea
	Max. tool diameter	Ø80 mm
	Max. tool length	320mm (400mm*) (12.6 (15.7inch*))
	Max. tool weight	10 kg (22.0lb)
	Magazine motor	Servo

** This specification is one of specifications for Puma 600 series and may vary depending on the applicable model.*

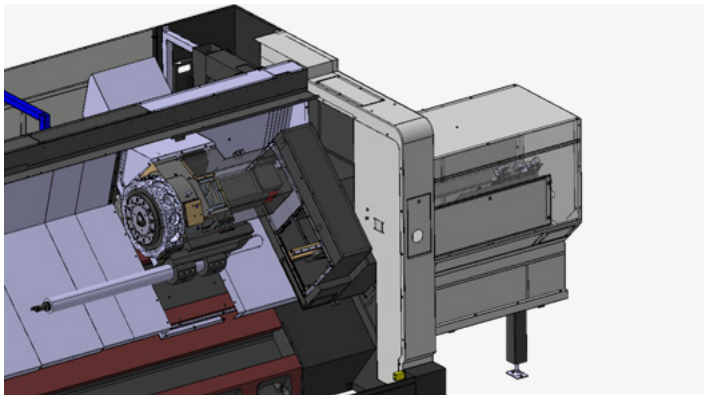


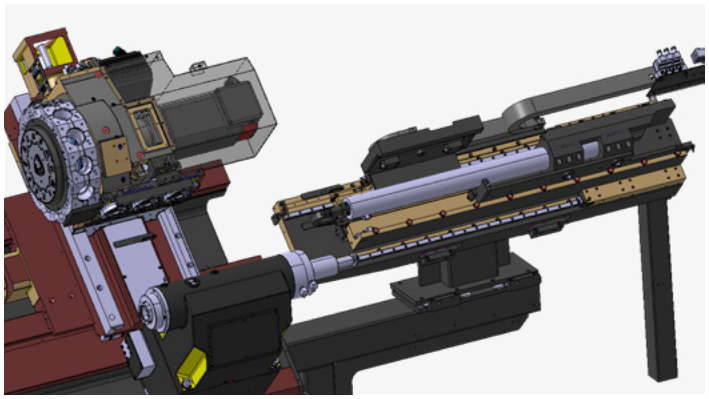
LONG BORING BAR AUTO CHANGE

Turret indexing is possible with LBB automatic exchange.

LBB auto changer

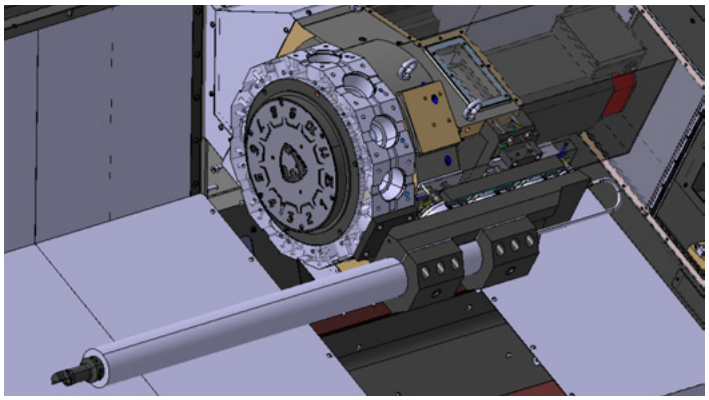
Slant bed type : Automated Long Boring Bar Attachment/Detachment

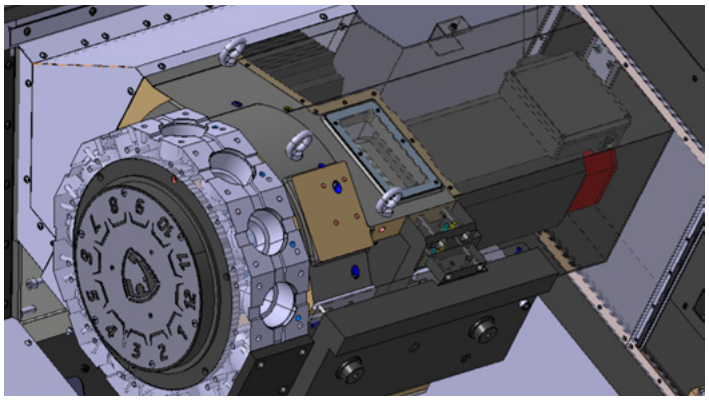




Tool post lower side clamping

Suitable for heavy-duty cutting





** Available : PUMA600/L/LM, PUMA700/L/LM, PUMA800/L/LM*
** Not Available : PUMA600XL/XLM/LY/XLY, PUMA700XL/XLM/LY/XLY, PUMA800XL/XLM/LY/XLY*

STANDARD | OPTIONAL SPECIFICATIONS

Diverse optional features are available for customer-specific work applications.

Description	Features			PUMA 600 Ⅱ series		PUMA 700 Ⅱ series		PUMA 800 Ⅱ series		
				2-axis / M	Y	2-axis / M	Y	2-axis / M	Y	Big bore (B/LB)
Chuck	None			●	●	●	●	●	●	●
	18 inch			○	○	X	X	X	X	X
	21 inch			○	○	X	X	X	X	X
	24 inch			X	X	○	○	X	X	X
	32 inch			X	X	X	X	○	○	X
	32INCH (OUT DIAMETER Ø800)			○	○	○	○	X	X	X
	40INCH (OUT DIAMETER Ø1000)			X	X	○ (XL/XLM)	○	○ (XL/XLM)	○	X
Jaw	Soft Jaws			○	○	○	○	○	○	○
	Hardened & ground hard jaws			○	○	○	○	○	○	○
Chucking option	Single pressure chucking			●	●	●	●	●	●	●
	Dual pressure chucking			○	○	○	○	○	○	○
	Chuck clamp confirmation			●	●	●	●	●	●	●
Steady rest	Specification	MANUAL STEADY REST	Ø35 ~ Ø330 mm	○	○	○	○	○	○	○
			Ø300 ~ Ø450 mm	○	○	○	○	○	○	○
			Ø380 ~ Ø720 mm	○	○	○	○	○	○	○
		PROGRAMMABLE STEADY REST	STA-4(Ø30- Ø 245 mm)	○	○	○	○	○	○	○
			SLU-4(Ø30-Ø245 mm)	○	○	○	○	○	○	○
			STA-5(Ø 45- Ø 310 mm)	○	○	○	○	○	○	○
			STA-5.1(Ø 85- Ø 350 mm)	○	○	○	○	○	○	○
			SLU-5 (Ø45 ~ Ø310 mm)	○	○	○	○	○	○	○
			SLU-5.1 (Ø85 ~ Ø350 mm)	○	○	○	○	○	○	○
			K-5 (Ø80 ~ Ø390 mm)	○	○	○	○	○	○	○
			K-5.1 (Ø100 ~ Ø410 mm)	○	○	○	○	○	○	○
			RX-6 (Ø100 ~ Ø520 mm)	○	○	○	○	○	○	○
			AX-6E(Ø30-Ø255 mm)	○	○	○	○	○	○	○
			AX-7E (Ø45 ~ Ø320 mm)	○	○	○	○	○	○	○
			AX-8E (Ø85 ~ Ø360 mm)	○	○	○	○	○	○	○
			AX-8.5I (Ø100 ~ Ø430 mm)	○	○	○	○	○	○	○
			AX-9I (Ø100 ~ Ø510 mm)	○	○	○	○	○	○	○
	Type	Single		○	○	○	○	○	○	○
		Twin		○	○	○	○	○	○	○
		Double		○	○	○	○	○	○	○
Tailstock	Programmable type			●	●	●	●	●	●	●
	Live center			●	●	●	●	●	●	●
	Built-in dead center			○	○	○	○	○	○	○
Coolant pump (60/50Hz)	4.5/3.0 bar			●	●	●	●	●	●	●
	7/5, 10/7, 14.5/10, 20/20, 70/70 bar			○	○	○	○	○	○	○
	Coolant level switch : Sensing level - Low			○	○	○	○	○	○	○
Coolant options	Oil skimmer			○	○	○	○	○	○	○
	Water soluble Coolant Chiller**			○	○	○	○	○	○	○
	Coolant pressure switch			○	○	○	○	○	○	○
	Coolant gun			○	○	○	○	○	○	○
Chip disposal	Chip conveyor (Right side)			○	○	○	○	○	○	○
	Chip bucket			○	○	○	○	○	○	○
	Air blower for chuck			○	○	○	○	○	○	○
	Mist collector interface (Duct only)			○	○	○	○	○	○	○
	Integrated mist collector			○	○	○	○	○	○	○
Measurement & Automation	Tool setter		Manual	○	○	○	○	○	○	○
			Automatic	○	○	○	○	X	X	X
	Auto door			○	○	○	○	○	○	○
Others	DN Solutions Tool load monitoring system			●	●	●	●	●	●	●
	Signal tower			○	○	○	○	○	○	○
	Air gun			○	○	○	○	○	○	○
	Automatic power off			○	○	○	○	○	○	○
	Air unit for air chuck		Single	X	X	X	X	○	○	○
			Twin	X	X	X	X	○	○	○
	Quick change tooling(CAPTO)			○	○	○	○	○	○	○
	Auto Tool Changer(ATC)			△	△	△	△	X	X	X
	TOOL ID			○	○	○	○	X	X	X
	Sketch-turn S/W			○	○	○	○	○	○	○
Standard Accessories	FOUNDATION BOLT FOR ANCHORING			● (L/LM/XL/XLM)	● (LY/XLY)	● (L/LM/XL/XLM)	● (LY/XLY)	● (L/LM/XL/XLM)	● (LY/XLY)	● (LB)

※ Please contact your DN Solutions representative for detailed machine information.
** When using a semi-synthetic type or synthetic type, contact our sales representative or service center in advance.*
*** Technical consultation is mandatory for the chilling of non-water soluble coolant*

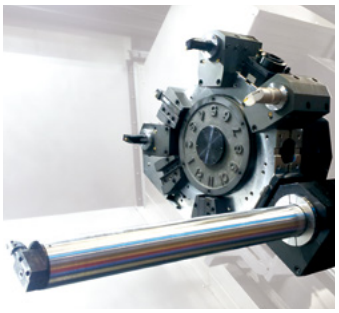
● *Standard* ○ *Optional* *X N/A*

Fire Safety Precautions There is a high risk of fire when using non-water-soluble cutting fluids, processing flammable materials, neglecting the controlled and careful use of coolants and modifying the machine without the consent of the manufacturer. Always check the SAFETY GUIDELINES carefully before using the machine.

PERIPHERAL EQUIPMENT

Long boring bar OPTION

The long boring bar option allows customers to easily machine deep holes and reduce cycle time. Please consult with DN Solutions for more details.

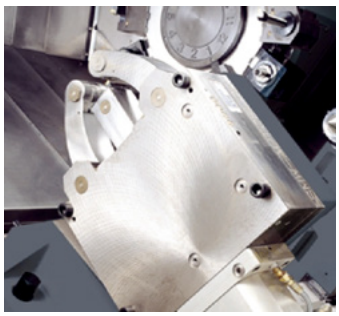


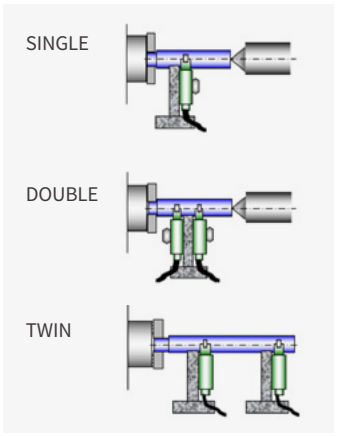
Twin chucking OPTION

For more stable pipe threading processing, the twin chucking option (manual or pneumatic) is available. Please consult with DN Solutions for details.

Steady rest OPTION

For turning long parts, various types of hydraulic steady rests(Single, Double or Twin type) are available.





Quick change CAPTO OPTION

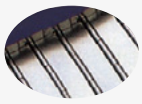
The Quick Change Tool system simplifies tool change operations. It is recommended for users who a) need to change tools frequently or b) reduce set-up times.

Coolant tank

DN Solutions's ergonomic roller coolant tank design, allows users to easily replace and refill coolant. The roller mechanism on the coolant tank allows users to simply take it out and put it back in the machine similar to a drawer.

Standard bed : 470L
L: 570L (LY: 600L)
XL: 770L

Chip conveyor (Right side) OPTION



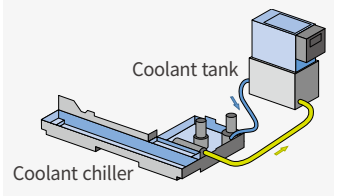
Hinged belt

Magnetic scraper

Chip conveyor type	Material	Description
Hinged belt	Steel	Hinged belt chip conveyor, which is most commonly used for steel work(for cleaning chips longer than 30mm), is available as an option.
Magnetic scraper	Cast Iron	Magnetic scraper type chip conveyor, which is ideal for diecasting work(for cleaning small chips), is available as an option.

Coolant chiller (recommended) OPTION

A coolant chiller is recommended to help prevent temperature rises and to reduce thermal deformation when using a water-insoluble coolant or high-pressure coolant system (i.e., power over 1.5kW).



Tool ID system OPTION

Tool ID is available with the Capto ATC option. The small chip that is inserted into the Capto tool memorizes tool data like Tool No., Tool offset, Tool life etc. The customer can access the tool data via RFID(Radio Frequency IDentification). Through this function, the customer is able to check the changing time of tool and reduce the potential for human error in calculating the tool offset.

DN SOLUTIONS FANUC i PLUS

DN Solutions Fanuc i Plus maximizes customer productivity and convenience.

15" Screen + New OP

DN Solutions Fanuc i Plus' operation panel enhances operating convenience by incorporating common-design buttons and layout. It features a Qwerty keyboard for fast and easy data input and operation.

DN Solutions Fanuc i Plus

- 15-inch color display
- Intuitive and user-friendly design

USB and PCMCIA card QWERTY keyboard

- EZ-Guide i standard
- Ergonimic operator panel
- 2MB Memory
- Hot keys

iHMI touchscreen OPTION

iHMI provides an intuitive interface that uses a touchscreen for quick and easy operation.

Range of applications

Providing various applications related to planning, machining, improvement and utility, for customer convenience.

SKETCH-TURN OPTION

DN Solutions Conversational programming software for PC

- Easy to learn for beginners
- Time savings in programming
- Reduce processing cycle time

NUMERIC CONTROL SPECIFICATIONS

FANUC

Division	Item	Specifications	2-Axis DN Solutions Fanuc i Plus	M DN Solutions Fanuc i Plus	Y DN Solutions Fanuc i Plus
Controlled axis	Controlled axes		2(X,Z)	3(X,Z,C)	4(X,Z,C,Y)
	Simultaneously controlled axes		2 axes	3 axes	4 axes
Data input/output	Fast data server		○	○	○
	Memory card input/output		●	●	●
	USB memory input/output		●	●	●
	Larger capacity memory_2GB	Note *2) Available Option only with 15" Touch LCD (iHMI Only)	○ *2)	○ *2)	○ *2)
Interface function	Embedded Ethernet		●	●	●
	Fast Ethernet		○	○	○
	Enhanced Embedded Ethernet function		●	●	●
Operation	DNC operation	Included in RS232C interface.	●	●	●
	DNC operation with memory card		●	●	●
Program input	Workpiece coordinate system	G52 - G59	●	●	●
Feed function	AI contour control I	G5.1 Q_, 40 Blocks	○	○	●
	AI contour control II	G5.1 Q_, 200 Blocks	○	○	○
Operation Guidance Function	EZ Guidei (Conversational Programming Solution)		●	●	●
	iHMI with Machining Cycle	Note *1) Only with 15" Touch LCD standard	○ *1)	○ *1)	○ *1)
	EZ Operation package		●	●	●
Setting and display	CNC screen dual display function		●	●	●
Network	FANUC MTConnect		✪	✪	✪
	FANUC OPC UA		✪	✪	✪
Others	Display unit	15" color LCD	●	●	●
		15" color LCD with Touch Panel	○	○	○
	Part program storage size & Number of registerable programs	640M(256KB)_500 programs	X	X	X
		5120M(2MB)_1000 programs	●	●	●

Network: FANUC MTConnect and FANUC OPC UA available.

● *Standard* ○ *Optional* *X N/A* ✪ *Available*

CONVENIENT OPERATION

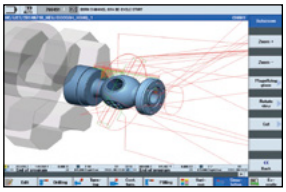
Siemens S828D

15.6 inch display + New OP

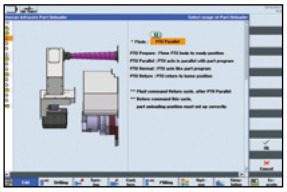
Siemens 828D' operation panel enhances operating convenience by incorporating common-design buttons and layout. It features a Qwerty keyboard for fast and easy data input and operation.

- 15.6 inch display
- USB (standard)
- QWERTY keyboard

Convenient conversational functionality



Cutting and operation support function
This function shows a cutting and tool path simulation in real-time.

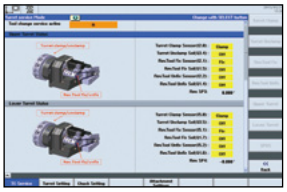


Shop-turn mode
[various]
↓
[attachments]

The automation elements (parts catcher, parts unloader etc.), can be easily controlled via interactive screens.

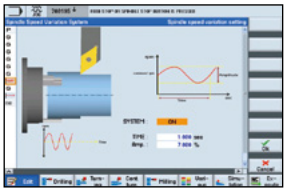
[Custom]
↓
[Protection zones]

Operation safety function
Protection Zone Synchronized Actions checks the interference between the turret and the spindle to prevent collisions caused by operator error.



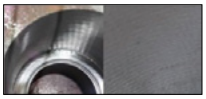
[offset]
↓
[operating parameter]
↓
[TC service]

Maintenance and service convenience function
Maintenance and service of major equipment and peripheral devices, including the timer and parts counter settings can be easily undertaken.

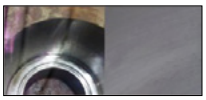


[various]
↓
[attachment]
↓
[DSSV]

Machining accuracy improvement
The NC controls spindle speed at an optimal level for precision threading and turning, making it possible to automatically improve surface roughness.



Before applying the functi



After applying the function

NUMERIC CONTROL SPECIFICATIONS

SIEMENS

Division	Item	Specifications	2-Axis S828D	M S828D	S S828D	MS S828D	Y S828D	SY S828D
Controlled axis	Controlled axes		X,Z,C1	X,Z,C1,C2	X,Z,C1,C3,B	X,Z,C1,C2,C3,B	X,Z,C1,C2,Y	X,Z,C1,C2,Y,C3,B
	Simultaneously controlled axes		4 axes	4 axes	4 axes	4 axes	4 axes	4 axes
Data input/output	Memory card input/output		X	X	X	X	X	X
	USB memory input/output		●	●	●	●	●	●
Interface function	Ethernet	(X130)	●	●	●	●	●	●
Operation	On network drive	(without EES option, Extcall)	●	●	●	●	●	●
	On USB storage medium, e.g. memory stick	(without EES option, Extcall)	●	●	●	●	●	●
Program input	Workpiece coordinate system	G54 - G59, G507 - G599	●	●	●	●	●	●
Feed function	Advanced surface		X	X	X	X	X	X
	Top surface		X	X	X	X	X	X
	Look ahead number of block		1	1	1	1	1	1
Programming & Editing function	3D simulation, finished part		●	●	●	●	●	●
	Simultaneous recording		●	●	●	●	●	●
	DXF Reader for PC integrated in SINUMERIK Operate		○	○	○	○	○	○
Operation Guidance Function	Shopturn		●	●	●	●	●	●
Setting and display	Operation via a VNC viewer		●	●	●	●	●	●
Network	MTConnect		✪	✪	✪	✪	✪	✪
	OPCUA		○	○	○	○	○	○
Others	Display unit	15.6" color display with touch screen	●	●	●	●	●	●
	Part program storage size	CNC user memory 5MB	●	●	●	●	●	●
		CNC user memory 100 MB	○	○	○	○	○	○
		CNC user memory 6GB	X	X	X	X	X	X
		CNC user memory 40GB (with PCU or IPC)	X	X	X	X	X	X
		CNC user memory without limit(Execution from extenal storage devices)(EES / Using by USB or Network)	○	○	○	○	○	○
		HMI user memory for CNC part program 6GB	X	X	X	X	X	X

● *Standard* ○ *Optional* *X N/A* ✪ *Available*

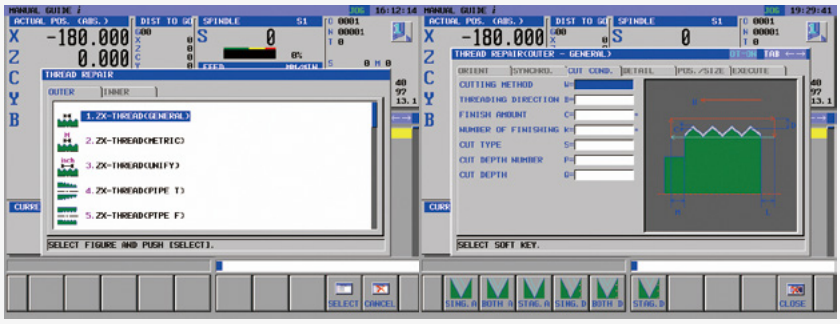
STABLE THREADING PERFORMANCE

All PUMA 600/700/800 II series (2-Axis* to Y-Axis) are capable of threading work.

** In order to re-machine threads or perform arbitrary speed threading on a 2-Axis machine, additional optional devices have to be selected.*

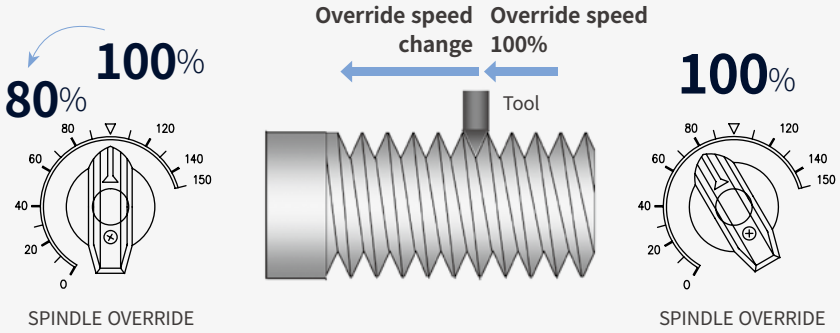
Threading repair function

This function allows users to repair threads even when the original program is not available. This is a standard Fanuc NC function.



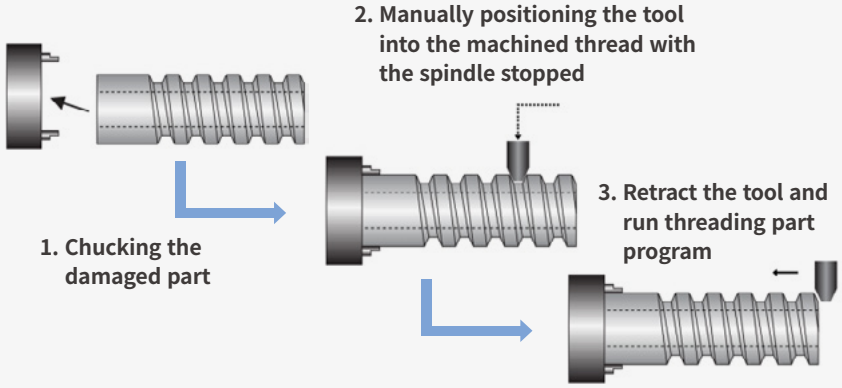
Arbitrary speed threading OPTION

This function allows users to control and override spindle speeds in order to set them to produce/ replicate the best thread quality.



Re-machining function OPTION

This function is included in the arbitrary speed threading. It allows users to re-machine damaged threads using the existing program.

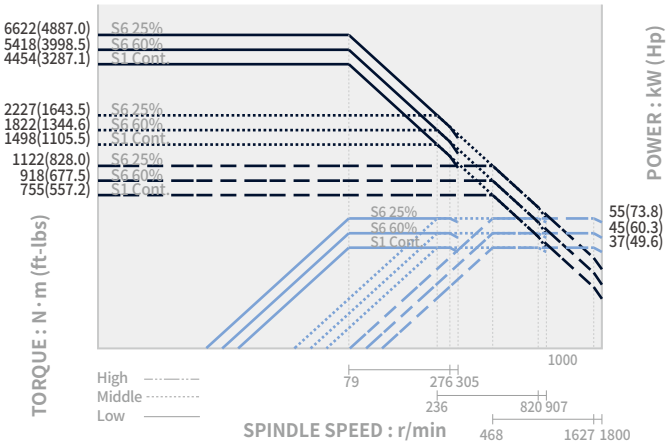


POWER | TORQUE

FANUC

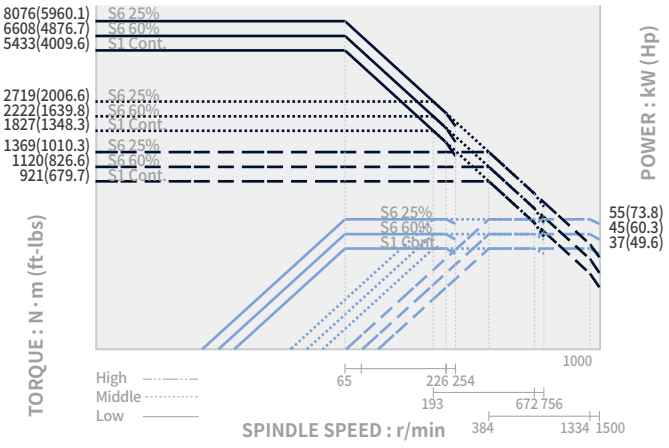
PUMA 600 II series

Max. spindle speed 1800 r/min
Max. spindle power 55 kW (73.8 Hp)
Max. Spindle torque 6622 N·m (4887.0 ft-lbs)



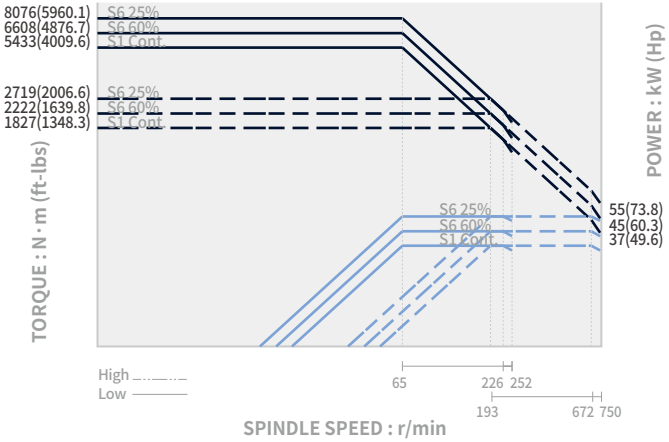
PUMA 700 II series

Max. spindle speed 1500 r/min
Max. spindle power 55 kW (73.8 Hp)
Max. Spindle torque 8076 N·m (5960.1 ft-lbs)



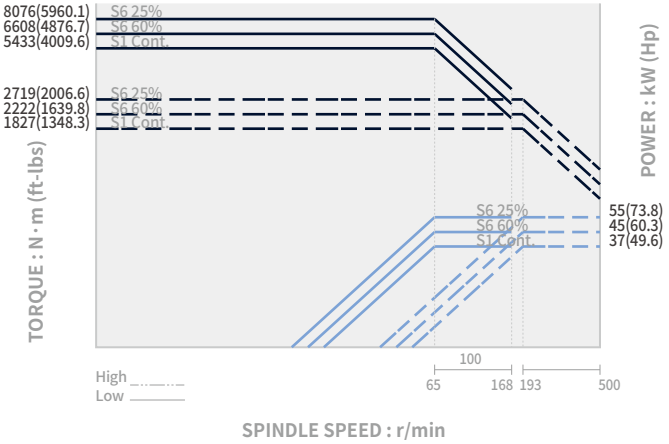
PUMA 800 II series

Max. spindle speed 750 r/min
Max. spindle power 55 kW (73.8 Hp)
Max. Spindle torque 8076 N·m (5960.1 ft-lbs)



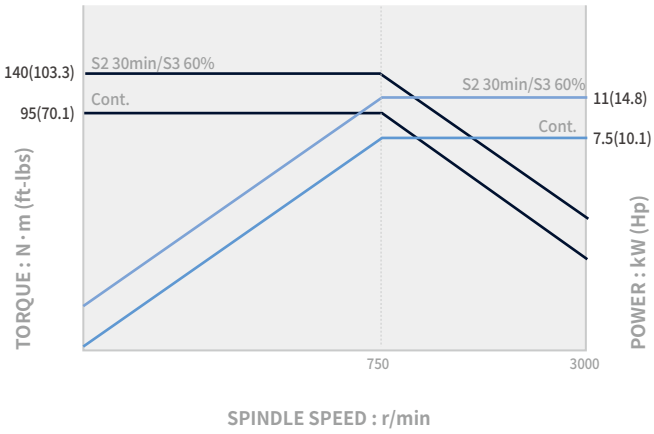
PUMA 800B/LB II series

Max. spindle speed 500 r/min
Max. spindle power 55 kW ((73.8 Hp)
Max. Spindle torque 8076 N·m (5960.1 ft-lbs)



Rotary tool

Max. spindle speed 3000 r/min
Max. spindle power 11 kW (14.8 Hp)
Max. Spindle torque 140 N·m (103.3 ft-lbs)

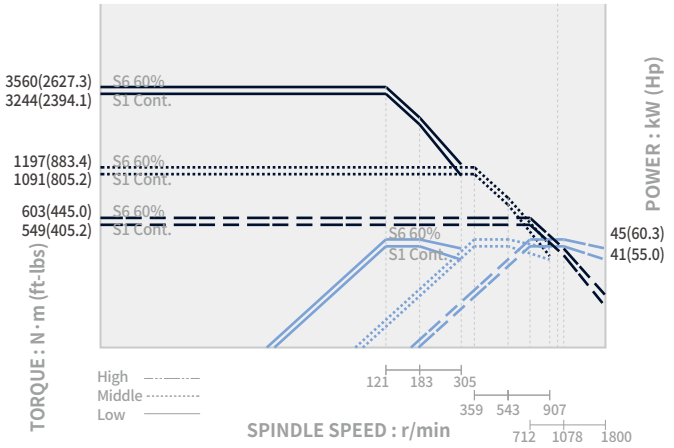


POWER | TORQUE

SIEMENS

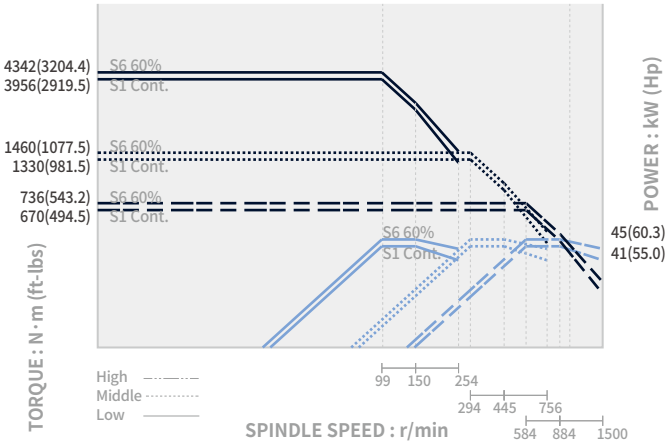
PUMA 600 II series

Max. spindle speed 1800 r/min
Max. spindle power 45 kW (60.3 Hp)
Max. Spindle torque 3560 N·m (2627.3 ft-lbs)



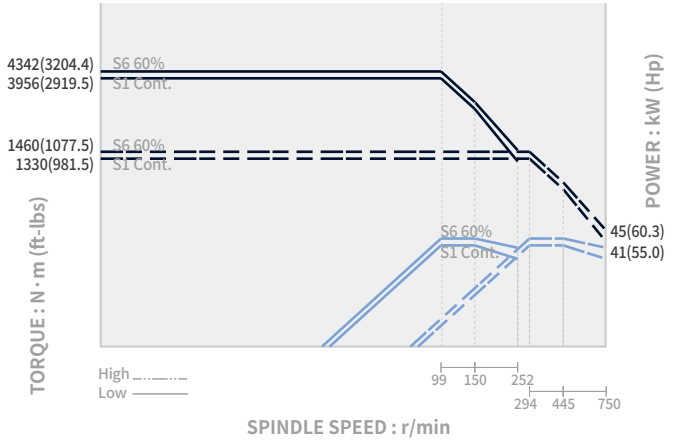
PUMA 700 II series

Max. spindle speed 1500 r/min
Max. spindle power 45 kW (60.3 Hp)
Max. Spindle torque 4342 N·m (3204.4 ft-lbs)



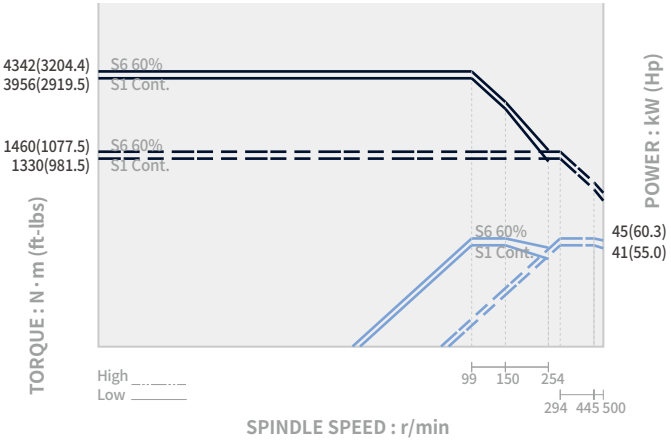
PUMA 800 II series

Max. spindle speed 750 r/min
Max. spindle power 45 kW (60.3Hp)
Max. Spindle torque 4342 N·m (3204.4 ft-lbs)



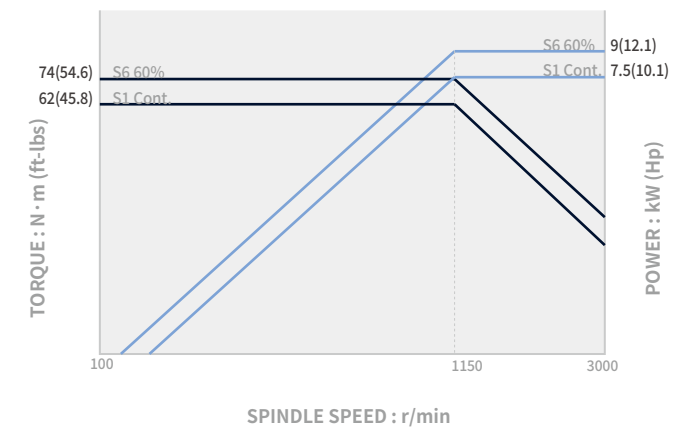
PUMA 800B/LB II series

Max. spindle speed 500 r/min
Max. spindle power 45 kW (60.3 Hp)
Max. Spindle torque 4342 N·m (3204.4 ft-lbs)



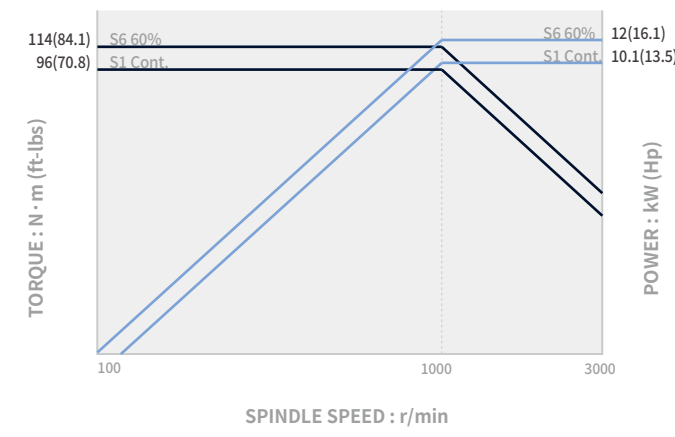
Rotary tool M / LM / XLM

Max. spindle speed 3000 r/min
Max. spindle power 9 kW (12.1 Hp)
Max. Spindle torque 74 N·m (54.6 ft-lbs)



Rotary tool LY / XLY

Max. spindle speed 3000 r/min
Max. spindle power 12 kW (16.1 Hp)
Max. Spindle torque 114 N·m (84.1 ft-lbs)



POWER | TORQUE

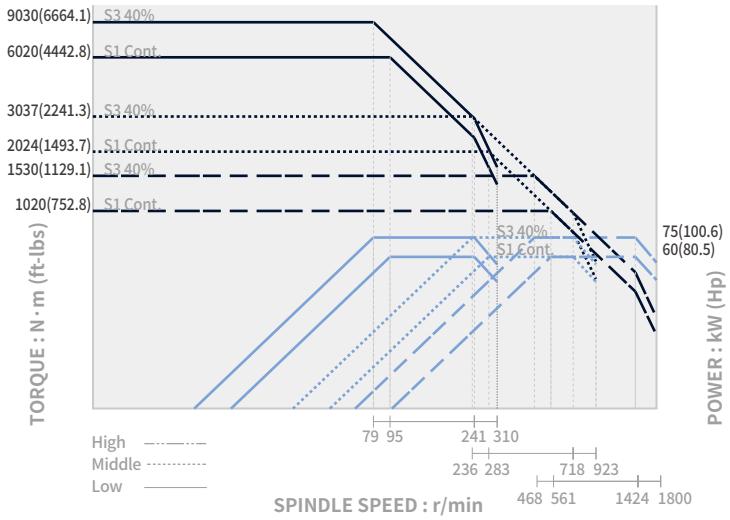
FANUC OPTION

PUMA 600 II series

Max. spindle speed
1800 r/min

Max. spindle power
75 kW (100.6 Hp)

Max. Spindle torque
9030 N·m (6664.1 ft-lbs)

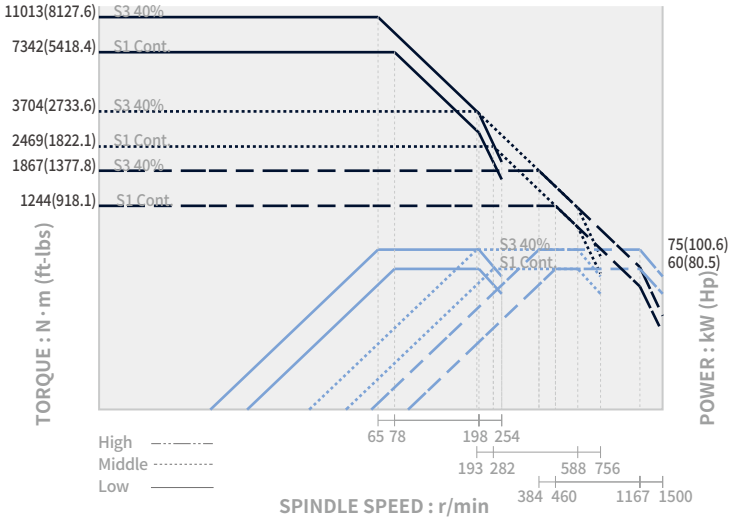


PUMA 700 II series

Max. spindle speed
1500 r/min

Max. spindle power
75 kW (100.6 Hp)

Max. Spindle torque
11013 N·m (8127.6 ft-lbs)

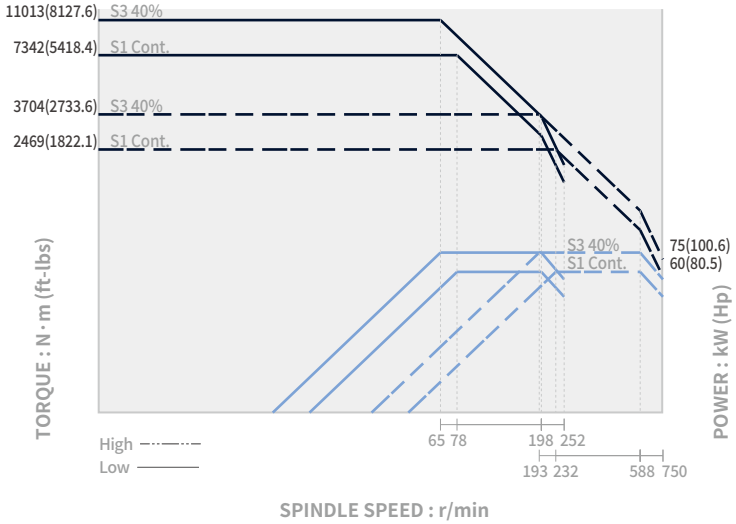


PUMA 800 II series

Max. spindle speed
750 r/min

Max. spindle power
75 kW (100.6 Hp)

Max. Spindle torque
11013 N·m (8127.6 ft-lbs)

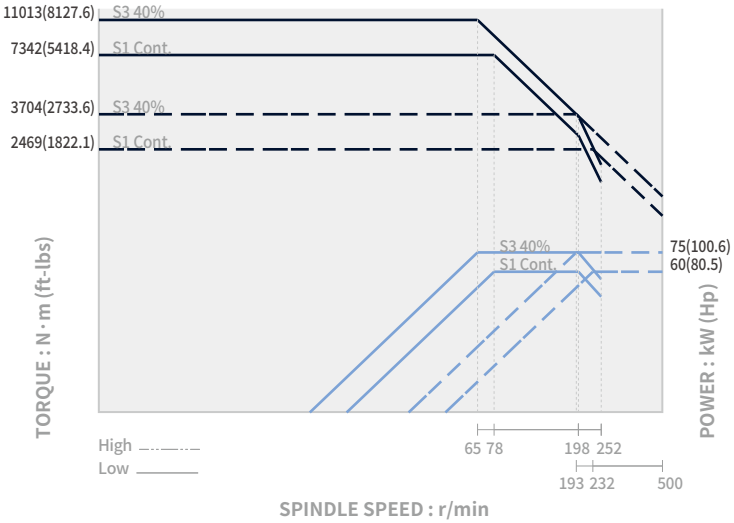


PUMA 800B/LB II series

Max. spindle speed
500 r/min

Max. spindle power
75 kW (100.6 Hp)

Max. Spindle torque
11013 N·m (8127.6 ft-lbs)



POWER | TORQUE

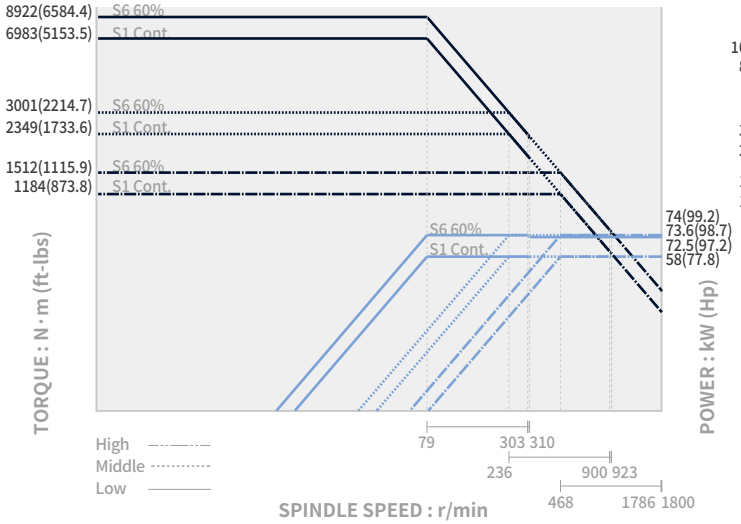
SIEMENS OPTION

PUMA 600 II series

Max. spindle speed
1800 r/min

Max. spindle power
74 kW (99.2 Hp)

Max. Spindle torque
8922 N·m (6584.4 ft-lbs)

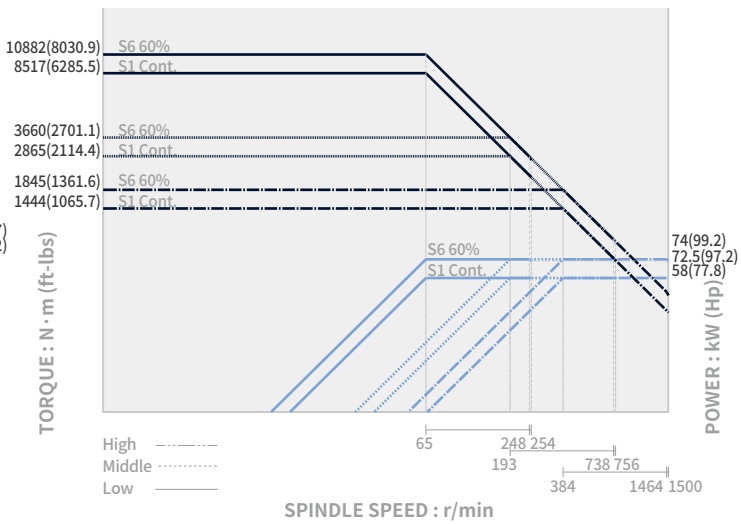


PUMA 700 II series

Max. spindle speed
1500 r/min

Max. spindle power
74 kW (99.2 Hp)

Max. Spindle torque
10882 N·m (8030.9 ft-lbs)

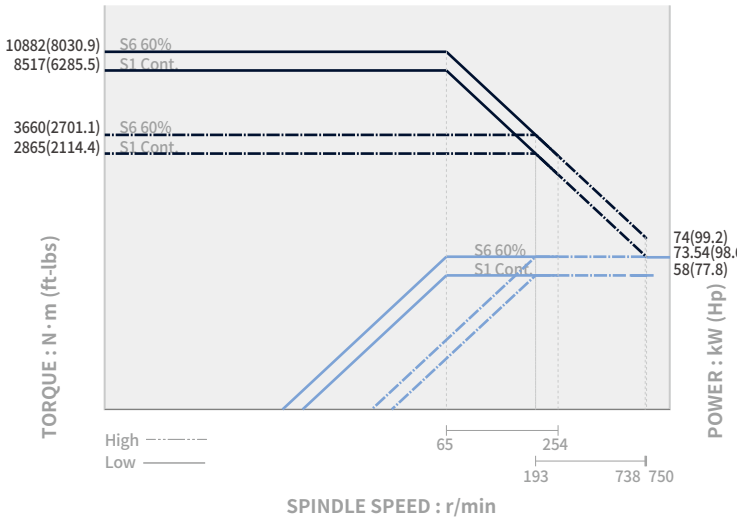


PUMA 800 II series

Max. spindle speed
750 r/min

Max. spindle power
74 kW (99.2 Hp)

Max. Spindle torque
10882 N·m (8030.9 ft-lbs)

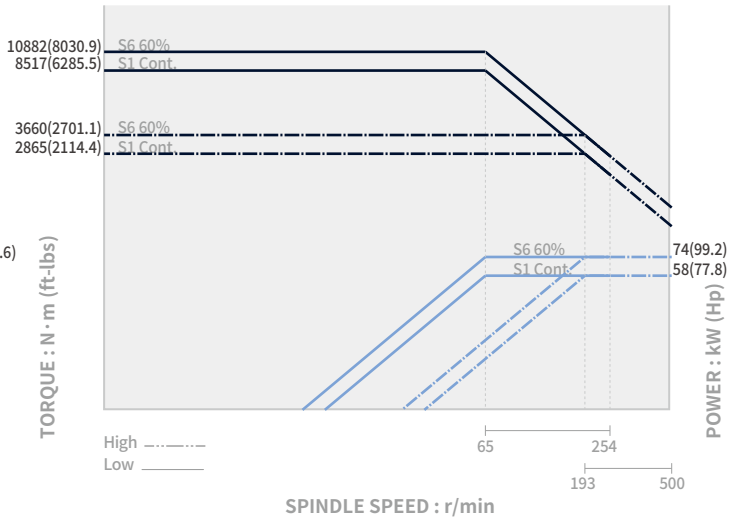


PUMA 800B/LB II series

Max. spindle speed
500 r/min

Max. spindle power
74 kW (99.2 Hp)

Max. Spindle torque
10882 N·m (8030.9 ft-lbs)

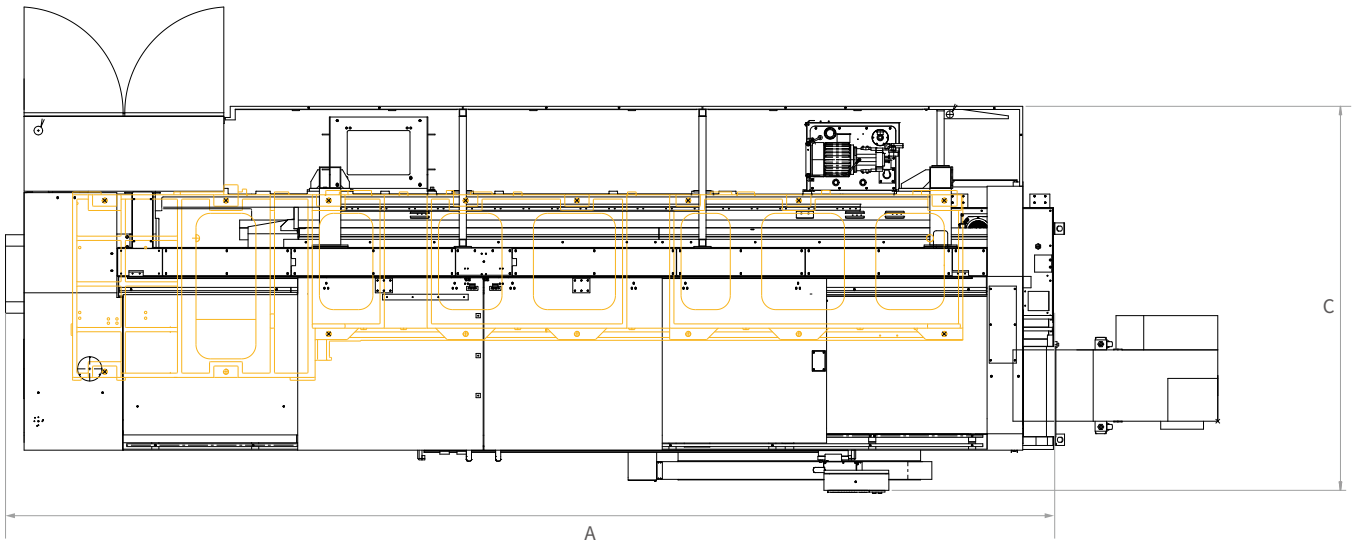


EXTERNAL DIMENSIONS

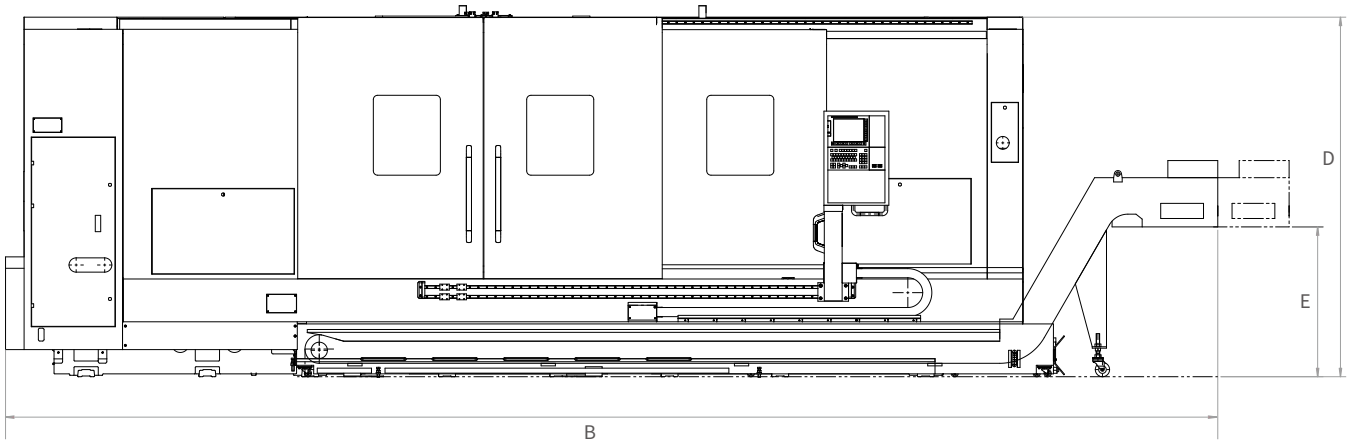
PUMA 600/700/800 II series

Unit : mm (inch)

TOP



FRONT



Model	A (Length)	B* (Length with chip conveyor)	C (Width)	D (Height)	E (Height with chip conveyor)
PUMA 600/700/800 II [M]	5756 (226.6)	6911 (272.1)	3160 (124.4)	2800 (110.2)	1020 (40.2)
PUMA 600L/700L/800L II [M]	7354 (289.5)	8510 (355.0)	2713.5 (106.8)	2590 (102.0)	1020 (40.2)
PUMA 600LY/700LY/800LY II	7443 (293.0)	8592 (338.3)	3031 (119.3)	2855 (112.4)	1005 (39.6)
PUMA 600XL/700XL/800XL II [M]	9904 (389.9)	11010 (433.5)	2955 (116.3)	2855 (112.4)	1020 (40.2)
PUMA 600XLY/700XLY/800XLY II	9904 (389.9)	11112 (437.5)	2955 (116.3)	2855 (112.4)	1005 (39.6)
PUMA 800B II	5756 (226.6)	6911 (272.1)	3160 (124.4)	2800 (110.2)	1020 (40.2)
PUMA 800LB II	7354 (289.5)	8510 (355.0)	2713.5 (106.8)	2590 (102.0)	1020 (40.2)

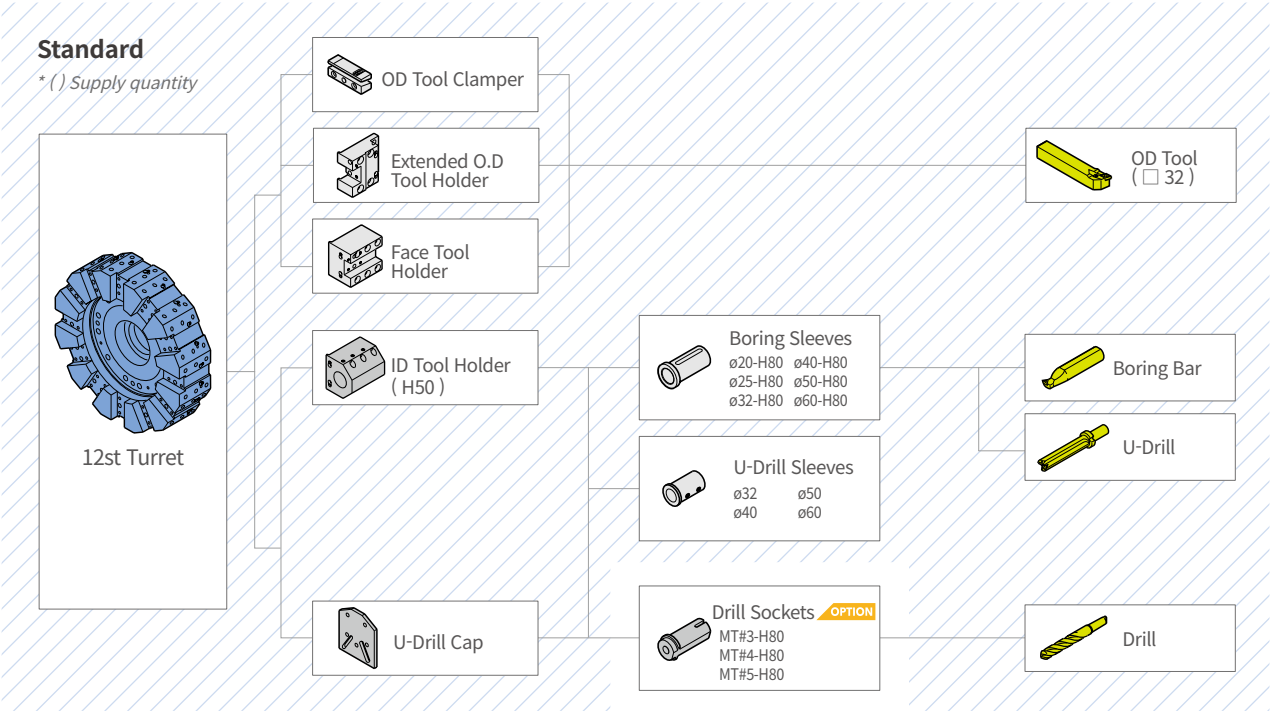
** 500mm of a space is required to the right of the machine in order to install and remove chip conveyor.*
** Machine foundation : Anchoring is recommened to maintain accuracy over a long period of time, The anchor bolts and other related parts of foundation work are supplied ad tandard items. Please consult with DN Solutions and sales technicians regarding ground and operating conditions.*

** Some peripheral equipment can be placed in other places.*

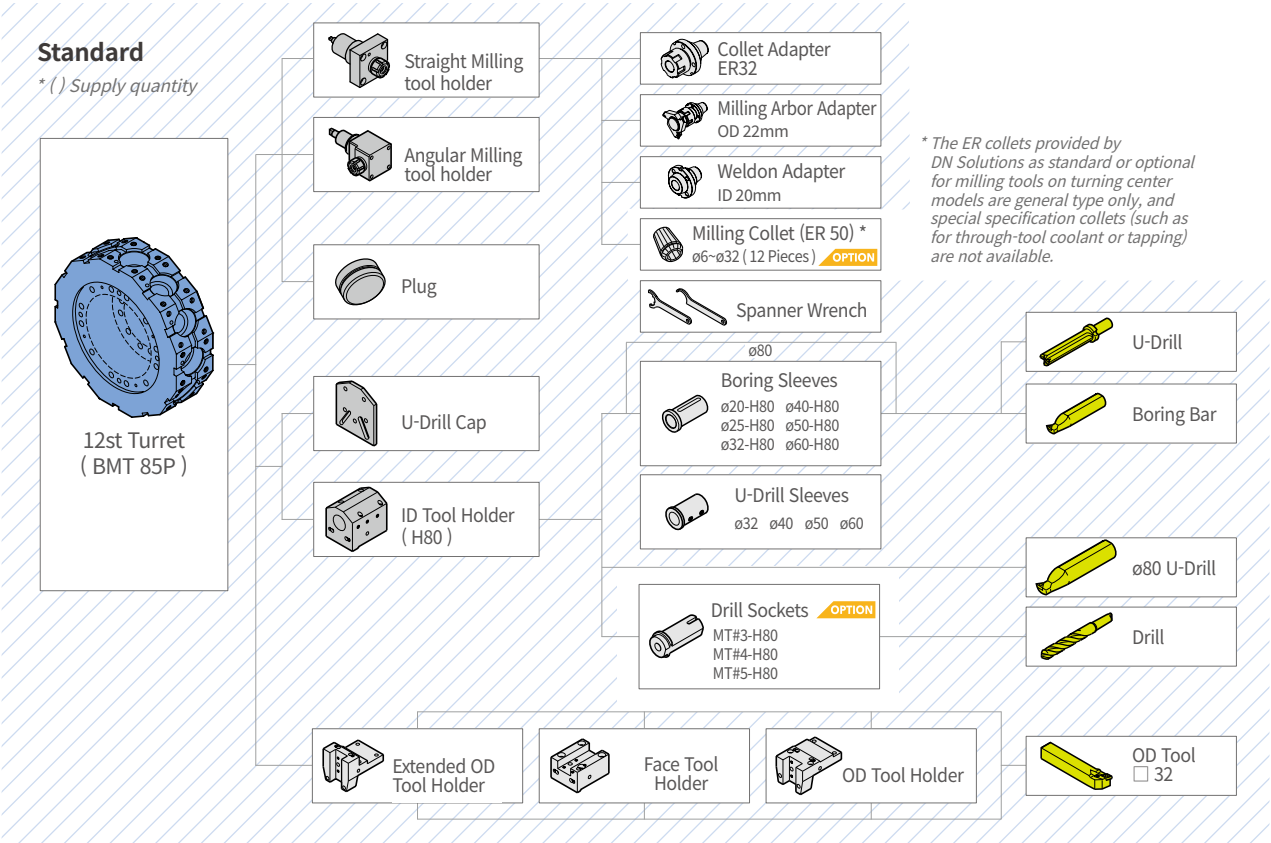
TOOLING SYSTEM

PUMA 600/700/800 II [L/XL], PUMA 800B/LB II

Unit : mm (inch)



PUMA 600M/700M/800M II [LM/LY/XLM/XLY]

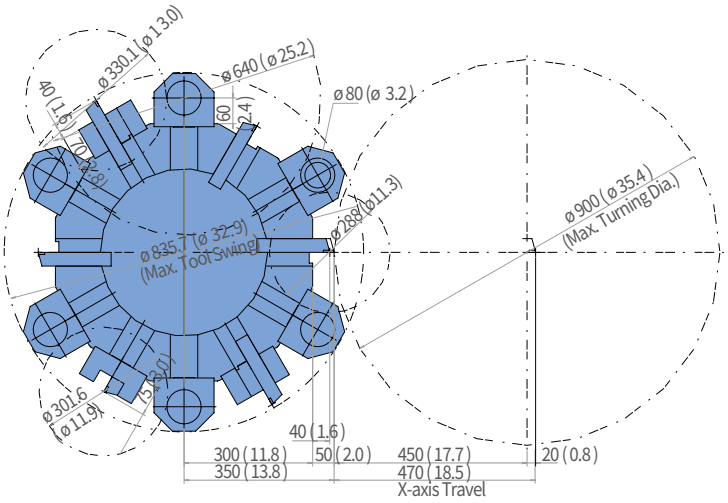


** The ER collets provided by DN Solutions as standard or optional for milling tools on turning center models are general type only, and special specification collets (such as for through-tool coolant or tapping) are not available.*

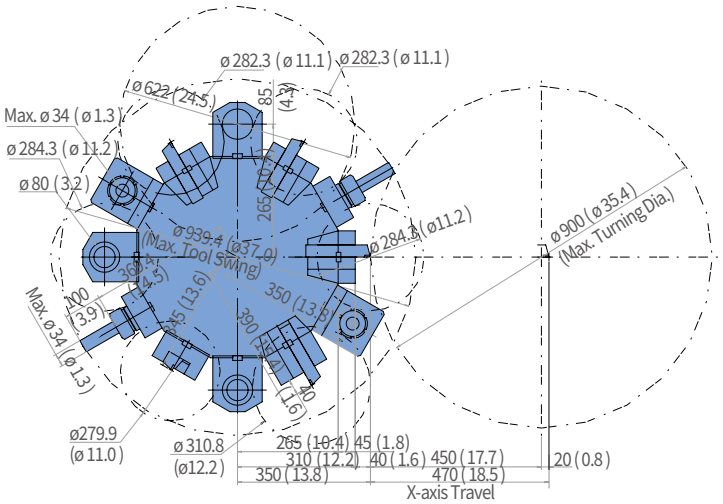
TOOL INTERFACE

PUMA 600/700/800 II [L/XL], PUMA 800B/LB II

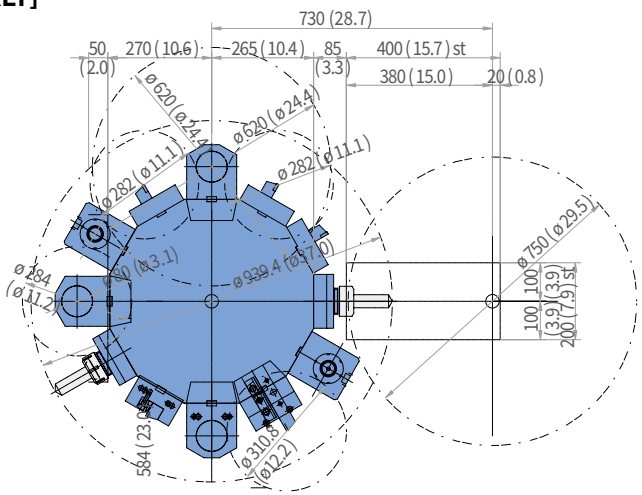
Unit : mm (inch)



PUMA 600M/700M/800M II [LM/XLM]



PUMA 600M/700M/800M II [XLY]

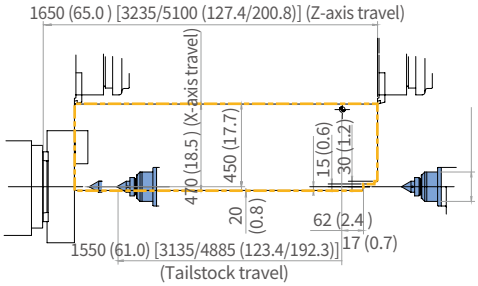


WORKING RANGE

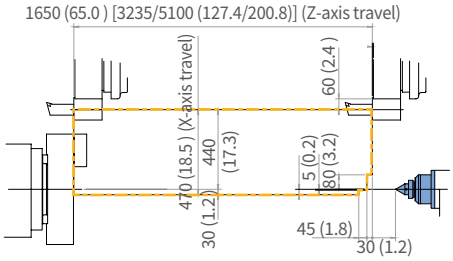
PUMA 600/700/800 II [L/XL], PUMA 800B II [LB]

Unit : mm (inch)

OD TOOL HOLDER

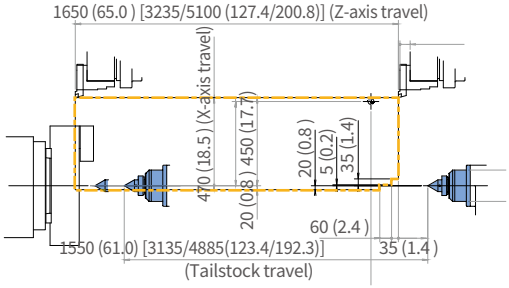


ID TOOL HOLDER

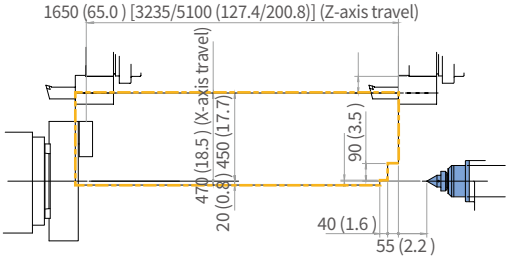


PUMA 600/700/800 II [LM/XLM]

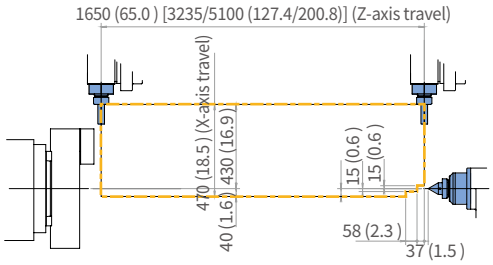
OD TOOL HOLDER



ID TOOL HOLDER



STRAIGHT MILLING TOOL HOLDER



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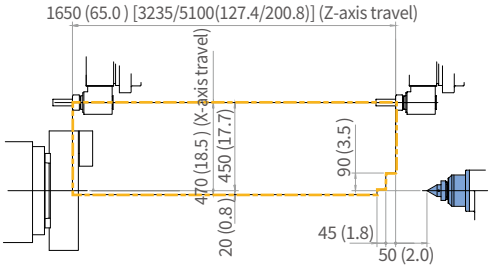
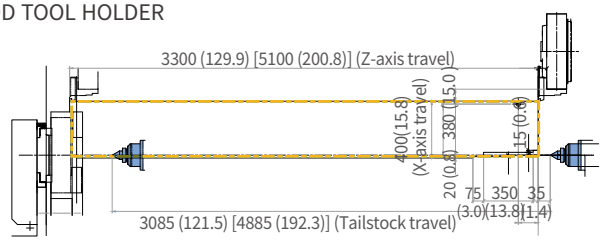


PUMA 600/700/800 II [XLY]

OD TOOL HOLDER



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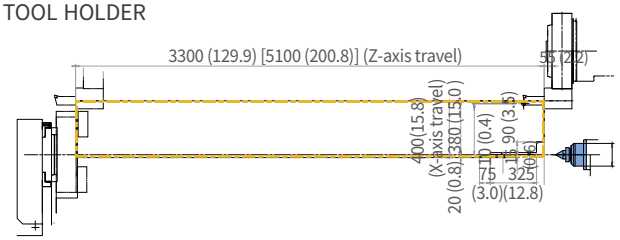

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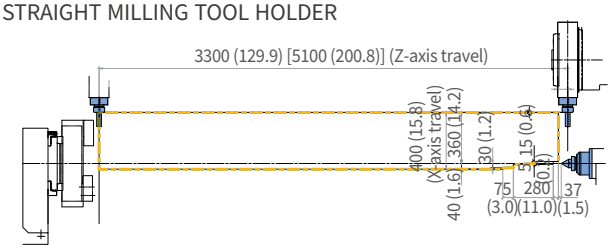

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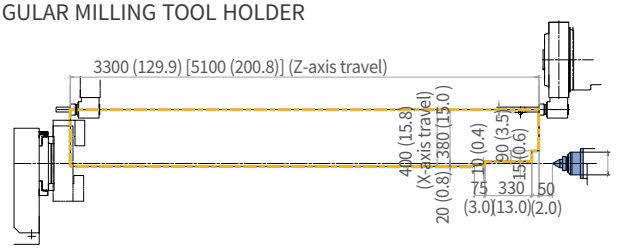

MACHINE SPECIFICATIONS

PUMA 600/700/800 II series

Description			Unit	PUMA 600 II [L/XL]	PUMA 600M II [LM/XLM]	PUMA 600LY II [XLY]
Capacity	Swing over bed		mm(inch)	1030 (40.6) [1000 (39.4)/1140 (44.9)]		1140 (44.9)
	Swing over saddle		mm(inch)	800 (31.5) [800 (31.5)/1000 (39.4)]		1000 (39.4)
	Recom. turning diameter		mm(inch)	600 (23.6)		700 (27.6)
	Max. turning diameter		mm(inch)	900 (35.4)		750 (29.5)
	Max. turning length		mm(inch)	1600 (63) [3200 (126)/5050 (199)]		3250(128) [5050 (199)]
	Chuck size		inch	18		
	Bar working diameter		mm(inch)	117(4.6)		
Travels	Travel distance	X-axis	mm(inch)	470 (18.5)		400 (15.7)
		Y-axis	mm(inch)	-		200 (7.9)
		Z-axis	mm(inch)	1650 (65) [3235 (127)/5100 (201)]		3300 (130) [5100 (201)]
Feedrates	Rapid traverse rate	X-axis	m/min(ipm)	12 (472.4)		
		Y-axis	m/min(ipm)	-		6 (236.2)
		Z-axis	m/min(ipm)	16 (630.0) [10 (393.7)/10 (393.7)]		10 (393.7)
Main Spindle	Max. spindle speed		r/min	1800		
	Main spindle motor power	FANUC (S6 25% / S6 60% / S1 Cont.)	kW(Hp)	55/45/37 (73.8/60.3/49.6) {75/60 (100.1/80.5) (S3 60% / S1 Cont.)}*		
		SIEMENS (S6 60% / S1 Cont.)		45/41 {74/58}* (60.3/55.0 {99.2/77.8}) (S6 60% / S1 Cont.)		
	Max. spindle torque	FANUC	N·m(lbf·ft)	6622 {9030}* (4887.0{6664.1})		
		SIEMENS		3560 {8922}* (2627.3 {6584.4})		
	Spindle nose		ASA	A2-15		
	Spindle bearing diameter (Front)		mm(inch)	200 (7.9)		
	Spindle through hole diameter		mm(inch)	152 (6.0)		
	Min. spindle indexing angle (C-axis)		deg	-	0.001	
Turret	No. of tool stations		ea	12		
	OD tool size		mm(inch)	32 x 32 (1.3 x 1.3)		
	Max. boring bar size		mm(inch)	80 (3.1)		
	Turret indexing time (1 station swivel)		s	0.25		
	Max. rotary tool speed		r/min	-	3000	
	Rotary tool motor power	FANUC (30min)	kW(hp)	-	11 (14.8)	
		SIEMENS (S6 60%)	-	-	9 (12.1)	12 (16.1)
Tailstock	Tailstock travel		mm(inch)	1550 (61) [3135 (123)/4885 (192)]		3085 (121) [4885 (192)]
	Quill diameter		mm(inch)	160 (6.3) [160 (6.3)/180 (7.1)]		180 (7.1)
	Quill travel		mm(inch)	150 (5.9)		150 (5.9)
	Quill bore taper		MT	#6 {#6(Dead)}*		
Power Source	Electric power supply (rated capacity)		kVA	64.44	68.60	69.90
Machine Dimensions	Length		mm(inch)	5756 (226.6) [7354 (289.5) /9904 (389.9)]		7443 (293.0) [9904 (389.9)]
	Width		mm(inch)	3160 (124.4) [2713 (106.8) /2955 (116.3)]		3031 (119.3) [2955 (116.3)]
	Height		mm(inch)	2800 (110.2) [2590 (102.0) /2855 (112.4)]		2855 (112.4)
	Weight		kg(lb)	16500 (36375.7) [22000 (48501.0)/26000 (57319.3)]		23000 (50706) [26000 (57320)]
Control	NC system		-	DN Solutions Fanuc i Plus / SIEMENS S828D		

*{ } : Option

MACHINE SPECIFICATIONS

PUMA 600/700/800 II series

Description			Unit	PUMA 700 II [L/XL]	PUMA 700M II [LM/XLM]	PUMA 700LY II [XLY]	PUMA 800 II [L/XL]	PUMA 800M II [LM/XLM]	PUMA 800LY II [XLY]	PUMA 800B II [LB]
Capacity	Swing over bed		mm (inch)	1030 (40.6) [1000 (39.4)/1140 (44.9)]		1140 (44.9)	1030 (40.6) [1000 (39.4)/1140 (44.9)]		1140 (44.9)	1030 (40.6) [1000 (39.4)]
	Swing over saddle		mm (inch)	800 (31.5) [800 (31.5)/1000 (39.4)]		1000 (39.4)	800 (31.5) [800(31.5)/1000 (39.4)]		1000 (39.4)	800 (31.5)
	Recom. turning diameter		mm (inch)	700 (27.6)			800 (31.5)		700 (27.6)	800 (31.5)
	Max. turning diameter		mm (inch)	900 (35.4)		750 (29.5)	900(35.4)		750 (29.5)	900 (35.4)
	Max. turning length		mm (inch)	1600 (63) [3200 (126)/5050 (199)]		3250 (128) [5050 (199)]	1600 (63) [3200 (126)/5050 (199)]		3250 (128) [5050 (199)]	1600 (63) [3200 (126)]
	Chuck size		inch	24			32			Order made
	Bar working diameter		mm (inch)	164(6.5)			Depending on chuck spec.			
Travels	Travel distance	X-axis	mm (inch)	470 (18.5)		400 (15.7)	470 (18.5)		400 (15.7)	470 (18.5)
		Y-axis	mm (inch)	-		200 (7.9)	-		200 (7.9)	-
		Z-axis	mm (inch)	1650 (65) [3235 (127)/5100 (201)]		3300 (130) [5100 (201)]	1650 (65) [3235 (127)/5100 (201)]		3300 (130) [5100 (201)]	1650 (65) [3235 (127)]
Feedrates	Rapid traverse rate	X-axis	m/min (ipm)	12 (472.4)			12 (472.4)			
		Y-axis	m/min (ipm)	-		6 (236.2)	-		6 (236.2)	-
		Z-axis	m/min (ipm)	16 (630.0) [10 (393.7)/10 (393.7)]		10 (393.7)	16 (630.0) [10(393.7)/10 (393.7)]		10 (393.7)	16 (630.0) [10 (393.7)]
Main Spindle	Max. spindle speed		r/min	1500			750			500
	Main spindle motor power	FANUC (S6 25%/ S6 60% / S1 Cont.)	kW (Hp)	55/45/37 (73.8/60.3/49.6) {75/60 (100.1/80.5) (S3 60% / S1 Cont.)}*			55/45/37 (73.8/60.3/49.6) 75/60 (100.1/80.5) (S3 60% / S1 Cont.)}*			
		SIEMENS (S6 60% / S1 Cont.)		45/41 {74/58}* (60.3/55.0 {99.2/77.8})			45/41{74/58}* (60.3/55.0 {99.2/77.8}) (S6 60% / S1 Cont.)			
	Max. spindle torque	FANUC	N·m (lbf·ft)	8076(5960.1) {11013(8127.6)}*			8076(5960.1) {11013(8127.6)}*			
		SIEMENS		4342 {10882}* (3204.4 {8030.9})			4342 {10882}* (3204.4 {8030.9})			
	Spindle nose		ASA	A1-15			A1-20			ISO 702-4 NO.20
	Spindle bearing diameter (Front)		mm (inch)	240 (9.4)			400 (15.7)			440 (17.3)
	Spindle through hole diameter		mm (inch)	181 (7.1)			320 (12.6)			375 (14.8)
	Min. spindle indexing angle (C-axis)		deg	-	0.001		-	0.001 {1}	0.001	-
Turret	No. of tool stations		ea	12			12			
	OD tool size		mm (inch)	32 x 32 (1.3 x 1.3)			32 x 32 (1.3 x 1.3)			
	Max. boring bar size		mm (inch)	80 (3.1)			80 (3.1)			
	Turret indexing time (1 station swivel)		s	0.25			0.25			
	Max. rotary tool speed		r/min	-	3000		-	3000		-
	Rotary tool motor power	FANUC (30min)	kW (hp)	-	11 (14.8)		-	11 (14.8)		-
		SIEMENS (S6 60%)	-	-	9 (12.1)	12 (16.1)	-	9 (12.1)	12 (16.1)	-
Tailstock	Tailstock travel		mm (inch)	1550 (61) [3135 (123)/4885 (192)]		3085 (121) [4885 (192)]	1550 (61) [3135 (123)/4885 (192)]		3085 (121) [4885 (192)]	1550 (61) [3135 (123)]
	Quill diameter		mm (inch)	160 (6.3) [160 (6.3)/180 (7.1)]		180 (7.1)	160 (6.3) [160 (6.3)/180 (7.1)]		180 (7.1)	160 (6.3)
	Quill travel		mm (inch)	150 (5.9)		150 (5.9)	150 (5.9)			150 (5.9)
	Quill bore taper		MT	#6 {#6(Dead)}*			#6 {#6(Dead)}*			
Power Source	Electric power supply (rated capacity)		kVA	64.44	68.60	69.90	64.44	68.60	69.90	64.44
Machine Dimensions	Length		mm (inch)	5756 (226.6) [7354/9904 (289.5/389.9)]		7443 (293.0) [9904(389.9)]	5756 (226.6) [7354/9904 (289.5/389.9)]		7443(293.0) [9904(389.9)]	5756 (226.6) [7354 (289.5)]
	Width		mm (inch)	3160 (124.4) [2713 (106.8) /2955 (116.3)]		3031 (119.3) [2955 (116.3)]	3160 (124.4) [2713 (106.8)/2955 (116.3)]		3031 (119.3) [2955 (116.3)]	3160 (124.4) [2713 (106.8)]
	Height		mm (inch)	2800 (110.2) [2590 (102.0) /2855 (112.4)]		2855 (112.4)	2800 (110.2) [2590 (102.0) /2855 (112.4)]		2855 (112.4)	2800 (110.2) [2590 (102.0)]
	Weight		kg(lb)	16500 (36375.7) [22000 (48501.0)/ 26000 (57319.3)]		23000 (50706) [26000 (57320)]	16500 (36375.7)[22000 (48501.0)/ 26000 (57319.3)]		23000 (50705.6) [26000 (57319.3)]	16500 (36375.7) [22000 (48501.0)
Control	NC system		-	DN Solutions Fanuc i Plus / SIEMENS S828D						

*{ } : option

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66 COUNTRIES | **140** + SALES NETWORKS | **3** FACTORIES | **6** REGIONAL HQS

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- On-site service
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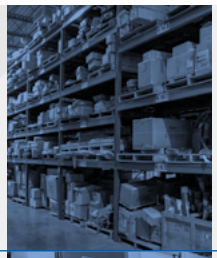

PARTS SUPPLY

- Supplying a wide range of original DN Solutions spare parts
- Parts repair service

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