

DOOSAN



PUMA GT series

8, 10, 12 Inch Global Standard Turning Center

PUMA GT series

PUMA GT2100

PUMA GT2600

PUMA GT3100



**MACHINE
GREATNESS™**

Basic Information

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PUMA GT2600M

PUMA GT series

PUMA GT Series is an 8/10/12-inch grade turning center suggesting new global standards. The series is equipped with the most powerful spindle in its class and the tool post of the next-generation concept to guarantee powerful and precise cutting capability and exceptional productivity. The design of PUMA GT Series focuses on convenient operation and easy maintenance

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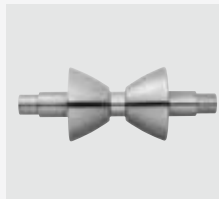
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PUMA GT3100M

Sample



Powerful/Precise Cutting Capability

PUMA GT Series realizes stable and powerful cutting capabilities by adopting the box guideway structure and the highest spindle power in its class.

Outstanding Productivity

Comparing to the previous models, faster reaped traverse and optimal control function ensure the highest productivity.

Improved Usability

Usability of PUMA GT Series is maximized with user-friendly operation panel, and simple maintenance functions.

Basic Structure

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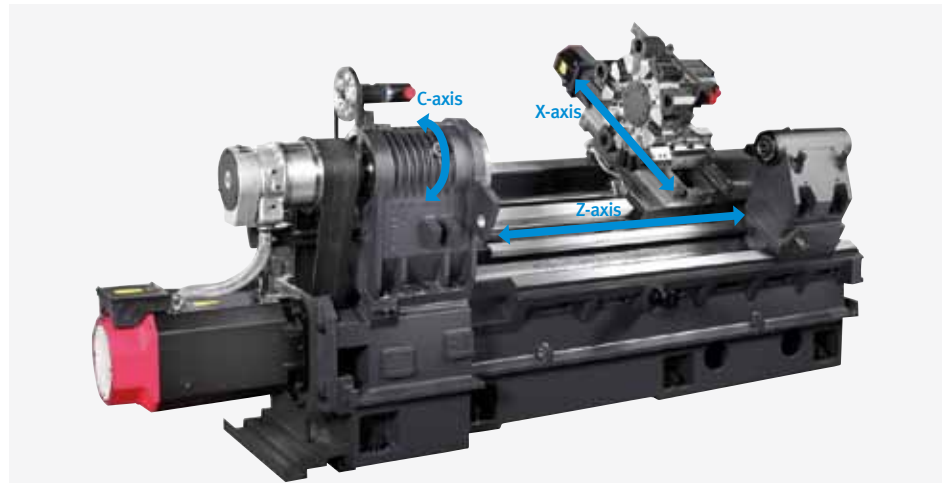
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Box guideways are applied to all axes to prevent vibration, secure dynamic rigidity, and ensure powerful and precise machining.

Diverse Line-up Fully Satisfying Demands of Customers

PUMA GT Series provides 20 line-ups, of which configuration varies depending on the standard chuck size, the length of machine, and operation of rotating tools.

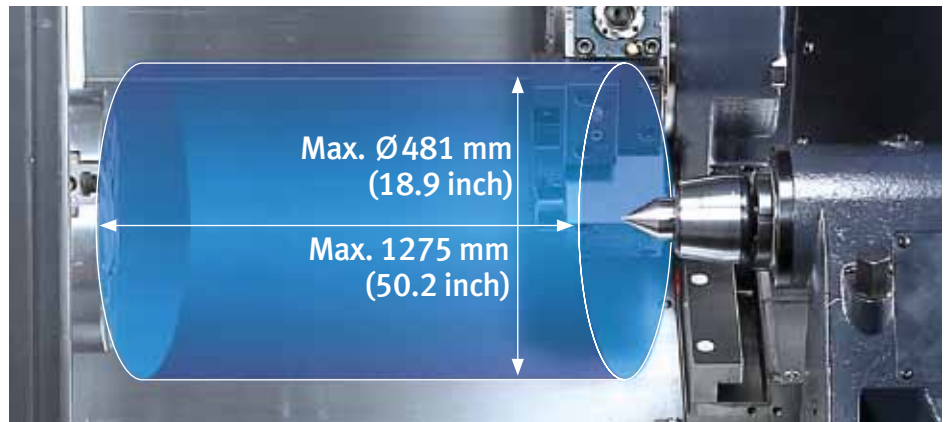


Model group	Standard chuck size(inch)	std.	L	XL	Function
PUMA GT2100	8	550 (21.7)	-	-	2 axis/M
PUMA GT2100B	10	550 (21.7)	-	-	
PUMA GT2600	10	650 (25.6)	1050 (41.3)	1600 (63.0)	
PUMA GT2600XLB	12	-	-	1600 (63.0)	
PUMA GT3100A	10	750 (29.5)	1250 (47.4)	-	
PUMA GT3100	12	750 (29.5)	1250 (47.4)	-	

Model group	Travel (mm (inch))		Rapid traverse rate (m/min (ipm))	
	X-Axis	Z-Axis	X-Axis	Z-Axis
PUMA GT2100	230 (9.1)	580 (22.8)	24 (945)	30 (1181)
PUMA GT2100B		680 (26.8)		
PUMA GT2600		1100 (43.3)		
PUMA GT2600L	265 (10.4)	1625 (64.0)		
PUMA GT2600XL/XLB		830 (32.7)		
PUMA GT3100/A	260 (10.2)	1350 (53.1)		
PUMA GT3100L/LA				

Machining Area

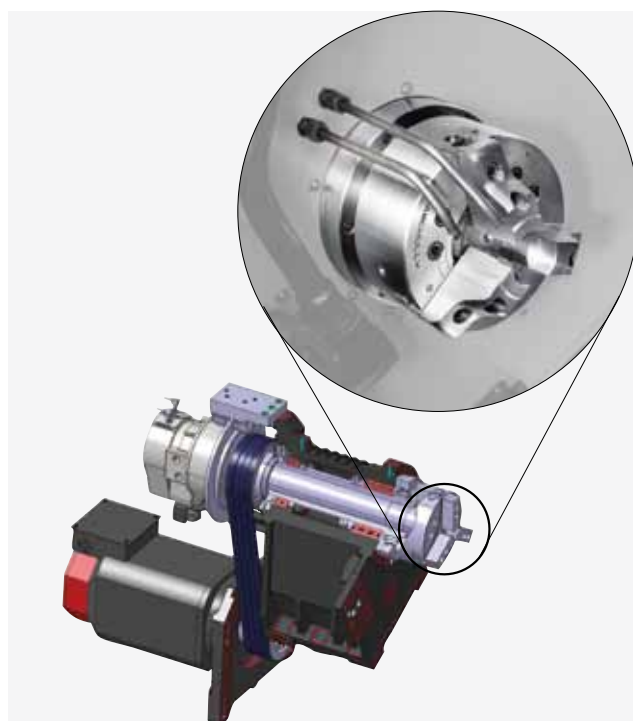
PUMA GT Series forms the largest machining area in its class to yield the maximum productivity with the minimum costs.



Model group (unit : mm (inch))	Max. turning dia. (2axis/M)	Bar working dia.	Max. turning length (2axis/M)
PUMA GT2100	390 / 300 (15.4 / 11.8)	65 (2.6)	562 / 513 (22.1 / 20.2)
PUMA GT2100B			550 / 501 (21.7 / 19.7)
PUMA GT2600		81 (3.2)	658 / 610 (25.9 / 24.0)
PUMA GT2600L	460 / 410 (18.1 / 16.1)		1078 / 1030 (42.4 / 40.6)
PUMA GT2600XL			1603 / 1555 (63.1 / 61.2)
PUMA GT2600XLB		102 (4.0)	1573 / 1525 (61.9 / 60.0)
PUMA GT3100A	481 / 376 (18.9 / 14.8)	81 (3.2)	790/760 (31.1 / 29.9)
PUMA GT3100LA			1310/1280 (51.6 / 50.4)
PUMA GT3100			755 / 725 (29.7 / 28.5)
PUMA GT3100L		102 (4.0)	1275 / 1245 (50.2 / 49.0)
PUMA GT3100L			

Spindle

Design of lowinertia spindle saves acceleration /deceleration time while improving productivity, and realizes powerful cutting with the motor of highest power in its



Max. spindle speed

3500 r/min

Max. spindle power

26 kW
(34.9 Hp)
(S6 25%)

Max. spindle torque

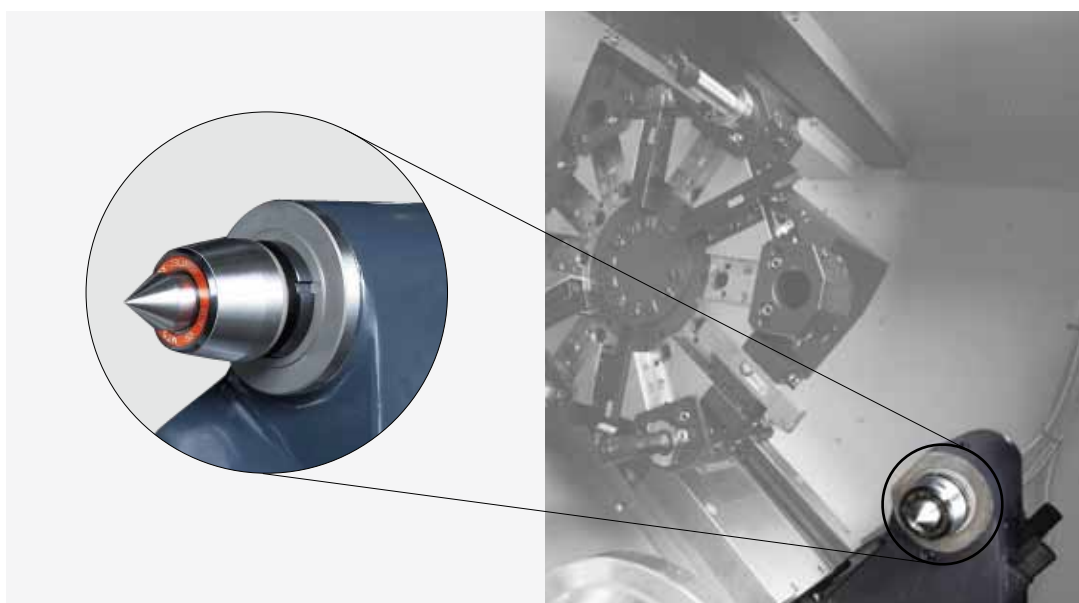
735 N·m
(542.4 lbf·ft)

* PUMA GT2600 specification

Model group	Spindle speed (r/min)	Power (kW (hp))		Torque (N·m (lbf ft))	Condition
PUMA GT2100	4500	18.5 / 15 / 15	(24.8 / 20.1 / 20.1)	313 (230)	S6 25% / S6 40% / S1 Cont.
PUMA GT2100B	3500	18.5 / 15 / 15	(24.8 / 20.1 / 20.1)	400 (295.2)	S6 25% / S6 40% / S1 Cont.
PUMA GT2600	3500	26 / 22 / 18.5	(34.9 / 29.5 / 24.8)	622 (459.0)	S6 25% / S6 60% / S1 Cont.
PUMA GT2600XLB	2500	LOW WINDING	22 / 13 (29.5 / 17.4)	992 (732.1)	S6 15% / S1 Cont.
		HIGH WINDING	26 / 22 / 18.5 (34.9 / 29.5 / 24.8)		S6 25% / S6 60% / S1 Cont.
PUMA GT3100A	3500	35 / 26 / 22	(46.9 / 34.9 / 29.5)	1122 (828.0)	S3 25%/S3 60%/ Cont.
PUMA GT3100MA	3500	22 / 18.5	(29.5 / 24.8)	622 (459.0)	S3 60%/ Cont.
PUMA GT3100	2800	35 / 26 / 22	(46.9 / 34.9 / 29.5)	1613 (1190.4)	S3 25% / 30min / Cont.
PUMA GT3100M	2800	22 / 18.5	(29.5 / 24.8)	1123 (828.8)	30min / Cont.

Tailstock

High-rigidity tailstock is mounted to stably support thin and long workpiece.



Model group (mm (inch))	Tailstock travel	Quill dia	Quill travel
PUMA GT2100/B	580 (22.8)	80 (3.1)	80 (3.1)
PUMA GT2600	680 (26.8)	100 (3.9)	100 (3.9)
PUMA GT2600L	1100 (43.3)		
PUMA GT2600XL	1625 (64.0)		
PUMA GT2600XLB	1595 (62.8)		
PUMA GT3100/A	830 (32.7)		
PUMA GT3100L/LA	1350 (53.1)		

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Rotation of the turret is controlled by the servo motor for prompt and correct selection of tools.

Servo indexing turret

The servo motor controls rotation of the turret for the purpose of guaranteeing rapid rotation and correct position. The milling turret including rotary tools features a BMT type of design for higher rigidity. In addition, the minimization of thermal error due to oil and air lubrication of the rotary tools delivers the best milling, drilling and tapping performance in its class.

2 axis turret

PUMA GT2100
- Number of tool stations :
12 st

PUMA GT2100B
PUMA GT2600
PUMA GT3100
- Number of tool stations :
10 st / 12 st option



BMT milling turret

PUMA GT2100M
PUMA GT2600M
- BMT 55P
- Number of tool stations : 12 st
- Rotary tool motor power :
5.5kW (7.4Hp)

PUMA GT3100M / LM
- BMT65P
- Number of tool stations :
12 st / 24 st option
- Rotary tool motor power :
7.5kW (10Hp)



Cutting Performance

Multi-functionality including end milling, face milling, drilling, tapping, etc. offers better machining performance while minimizing work setting.



OD turning				
	unit	PUMA GT2100	PUMA GT2600	PUMA GT3100
Chip removal rate	cm ³ /min (inch ³ /min)	551 (33.6)	693 (42.3)	1155 (70.5)
Cutting speed	m/min (ipm)	210 (8278)	210 (8278)	210 (8278)
Feedrate	mm/rev (ipr)	0.55 (0.02)	0.55 (0.02)	0.55 (0.02)
Spindle speed	r/min	965	338	207
Cutting depth	mm (inch)	4.5 (0.18)	6 (0.24)	10 (0.6)



ID turning (Rough cutting)				
	unit	PUMA GT2100	PUMA GT2600	PUMA GT3100
Cutting speed	m/min (ipm)	270 (10630)	270 (10630)	280 (11023.6)
Feedrate	mm/rev (ipr)	0.3 (0.01)	3 (0.1)	3 (0.1)
Spindle speed	r/min	1131	1131	849
Cutting depth	mm (inch)	3 (0.1)	3 (0.1)	3 (0.1)
Tool length	length / dia.	3.5D	3.5D	4.0D



U drilling (2axis)				
	unit	PUMA GT2100	PUMA GT2600	PUMA GT3100
Chip removal rate	cm ³ /min (inch ³ /min)	567 (34.6)	914 (55.8)	1040 (63.5)
Cutting speed	m/min (ipm)	200 (7874)	200 (7874)	200 (7874)
Feedrate	mm/rev (ipr)	0.18 (0.007)	0.29 (0.011)	0.26 (0.01)
Spindle speed	r/min	1011	1011	796
U drill dia.	mm (inch)	63 (2.5)	63 (2.5)	80 (3.1)



Face milling				
	unit	PUMA GT2100M	PUMA GT2600M	PUMA GT3100M
Chip removal rate	cm ³ /min (inch ³ /min)	47.9 (2.9)		68 (4.1)
Cutting speed	m/min (ipm)	120 (4724)		280 (11023.6)
Feedrate	m/min (ipm)	190 (7481)		558 (21968.5)
Spindle speed	r/min	606		1115
Cutting depth	mm (inch)	4 (0.2)		2 (0.1)
Face mill dia.	mm (inch)	63 (2.5)		80 (3.1)



End milling				
	unit	PUMA GT2100M	PUMA GT2600M	PUMA GT3100M
Chip removal rate	cm ³ /min (inch ³ /min)	90 (5.5)		133.8 (8.2)
Cutting speed	m/min (ipm)	60 (2362)		70 (2755.9)
Feedrate	m/min (ipm)	250 (9843)		223 (8779.5)
Spindle speed	r/min	1060		1115
Cutting depth	mm (inch)	20 (0.7)		30 (1.2)
End mill dia.	mm (inch)	18 (0.7)		20 (0.7)



Tapping				
	unit	PUMA GT2100M	PUMA GT2600M	PUMA GT3100M
Tap size	-	M20 x P2.5		
Cutting speed	m/min (ipm)	15 (591)		
Feedrate	m/min (ipm)	2.5 (98.4)		
Spindle speed	r/min	240		

* The results, indicated in this catalogue are provides as example. They may not be obtained due to differences in cutting conditions and environmental conditions during measurement.

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Standard / Optional Specifications

Diverse optional devices and features are available to meet specific customer requirements

● standard features ○ option △ Pre-discussion is required X Not available

NO.	Description	Features	PUMA GT2100 / M	PUMA GT2100B / MB
1	Chuck	8 inch	●	X
2		10 inch	○	●
3		12 inch	X	X
4		15 inch	X	X
5		No chuck	○	○
6	Jaw	Soft Jaw	○	○
7		Hard jaw	○	○
8	Chucking	DUAL PRESSURE CHUCKING	○	○
9	Option	CHUCK CLAMP CONFIRMATION	○	○
10	Steady rest	Hydraulic	△	△
11		Programmable	△	△
12		Manual	△	△
13	V stand	V stand for shaft workpiece	△	△
14	Tailstock	Manual	●	●
15		Programmable	○	○
16		Live center	●	●
17		Built-in dead center	○	○
18	Coolant Pump	1.5 bar	●	●
19		Increase Power (4.5/7/10/14.5/70 bar)	○	○
20	Additional coolant pump (for option)	4.5 bar	○	○
21	Coolant options	Oil skimmer	○	○
22		Coolant chiller	△	△
23		Coolant pressure switch	○	○
25		Chuck coolant	○	○
26		Coolant gun	○	○
27	Chip disposal options	Side type chip conveyor	○	○
28		Rear type chip conveyor	○	○
29		Chip bucket	○	○
30		Air blower	○	○
31		Mist collector interface	○	○
32	Measuring & automation	Integrated mist collector	○	○
33		Tool setter (Manual)	○	○
34		Tool setter (Automatic)	○	○
35		Part catcher with parts box	○	○
36		Part catcher with parts conveyor	△	△
37	Others	Auto door	○	○
38		Bar feeder interface	○	○
39		Tool load monitoring system	○	○
40		Linear scale (Xaxis /Zaxis)	○	○
41		Signal tower	○	○
42	Customized Special Option	Air gun	○	○
43		Automatic power off	○	○
44		Quick change tooling(CAPT0)	○	○
45		Sketch-turn S/W	○	○
46		V STAND FOR SHAFT WORKPIECE_ON TAILSTOCK	X	X
47	Customized Special Option	GUIDE WAY WIPER_FOR DRY CUTTING	X	X
48		TAILSTOCK DEDUCTION	X	X
49		MAIN/LEFT SPINDLE AIR CURTAIN	X	X
50		AUTOMATIC TOP DOOR	○	○
51		COOLANT TANK DIRECTION_REAR SIDE	X	X
52	Customized Special Option	MAIN/LEFT CHUCK SIZE_170 MM (6 INCH)	○	○
53		CHUCK PRESSURE SWITCH	○	○
54		COOLANT CHILLER	○	○
55		TOP PROTECTION COVER	X	X
56		SHOWER COOLANT	X	X
57	Customized Special Option	DOUBLE SAFETY EDGE FOR AUTO FRONT DOOR	X	X
58		COOLANT LEVEL SWITCH_FLOATING	○	○
59		AIR LIMIT SENSING ON CHUCK_PREPARATION	○	○
60		TSC FOR MAIN/LEFT SPINDLE_PREPARATION	○	○
61		AUTO. WORK MEASUREMENT_OLP40_RENISHAW	○	○
62	Customized Special Option	AUTO. WORK MEASUREMENT_RLP40_RENISHAW	○	○
63		COOLANT PUMP_4.0 KW_2.8 MPA	X	○
		Coolant level switch : Sensing level - Low	○	○

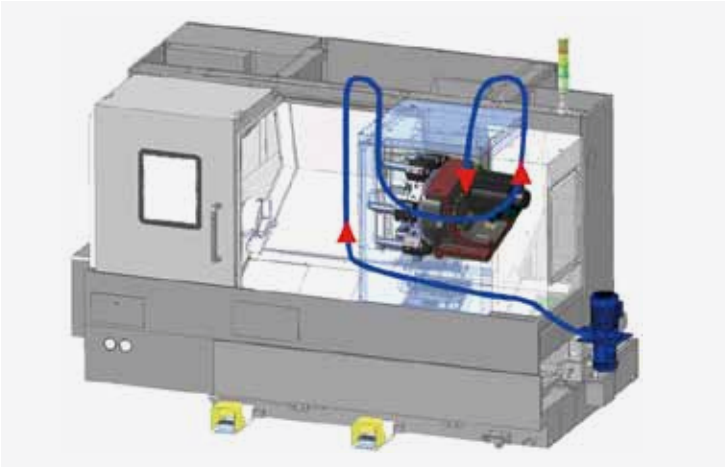
● standard features ○ option △ Pre-discussion is required X Not available

NO.	Description	Features	PUMA GT2600 / M	PUMA GT2600L / LM	PUMA 2600XL/XLM	PUMA 2600XLB/XLMB	PUMA GT3100A/ LA/MA/LMA	PUMA GT3100 / M	PUMA GT3100L / LM
1	Chuck	8 inch	X	X	X	X	X	X	X
2		10 inch	●	●	●	X	●	X	X
3		12 inch	○	○	X	●	○	●	●
4		15 inch	X	X	X	X	○	○	○
5		No chuck	○	○	○	○	○	○	○
6	Jaw	Soft jaw	○	○	○	○	○	○	○
7		Hard jaw	○	○	○	○	○	○	○
8	Chucking	DUAL PRESSURE CHUCKING	○	○	○	○	○	○	○
9	Option	CHUCK CLAMP CONFIRMATION	○	○	○	○	○	○	○
10	Steady rest	Hydraulic	△	△	○	○	○	○	○
11		Programmable	△	△	○	○	○	○	○
12		Manual	△	△	○	○	○	○	○
13	V stand	V stand for shaft workpiece	△	△	△	△	△	△	△
14	Tailstock	Manual	●	●	●	●	●	●	●
15		Programmable	○	○	○	○	○	○	○
16		Live center	●	●	●	●	●	●	●
17		Built-in dead center	○	○	○	○	○	○	○
18	Coolant Pump	1.5 bar	●	●	●	●	●	●	●
19		Increase Power (4.5/7/10/14.5/70 bar)	○	○	○	○	○	○	○
20	Additional coolant pump(for option)	4.5 bar	○	○	○	○	○	○	○
21	Coolant options	Oil skimmer	○	○	○	○	○	○	○
22		Coolant chiller	△	△	△	△	△	△	△
23		Coolant pressure switch	○	○	○	○	○	○	○
25		Chuck coolant	○	○	○	○	○	○	○
26		Coolant gun	○	○	○	○	○	○	○
27	Chip disposal options	Side type chip conveyor	○	○	○	○	○	○	○
28		Rear type chip conveyor	○	X	X	X	A/MA : △ LA/LMA : X	△	X
29		Chip bucket	○	○	○	○	○	○	○
30		Air blower	○	○	○	○	○	○	○
31		Mist collector interface	○	○	○	○	○	○	○
32		Integrated mist collector	○	○	○	○	○	○	○
33	Measuring & automation	Tool setter (Manual)	○	○	○	○	○	○	○
34		Tool setter (Automatic)	○	○	○	○	○	○	○
35		Part catcher with parts box	○	○	○	○	○	○	○
36		Part catcher with parts conveyor	△	△	○	○	○	○	○
37		Auto door	○	○	○	○	○	○	○
38		Bar feeder interface	○	○	○	○	○	○	○
39	Others	Tool load monitoring system	○	○	○	○	○	○	○
40		Linear scale (Xaxis /Zaxis)	○	○	○	○	○	○	○
41		Signal tower	○	○	○	○	○	○	○
42		Air gun	○	○	○	○	○	○	○
43		Automatic power off	○	○	○	○	○	○	○
44		Quick change tooling(CAPT0)	○	○	○	○	○	○	○
45		Sketch-turn S/W	○	○	○	○	○	○	○
45	Customized Special Option	V STAND FOR SHAFT WORKPIECE_ON TAILSTOCK	X	X	X	X	○	○	○
46		GUIDE WAY WIPER_FOR DRY CUTTING	X	X	X	X	○	○	○
47		TAILSTOCK DEDUCTION	X	X	X	X	○	○	○
48		MAIN/LEFT SPINDLE AIR CURTAIN	X	X	X	X	○	○	○
49		AUTOMATIC TOP DOOR	○	X	X	X	X	X	X
50		COOLANT TANK DIRECTION_REAR SIDE	○	○	X	X	X	X	X
51		MAIN/LEFT CHUCK SIZE_170 MM (6 INCH)	X	X	X	X	X	X	X
52		CHUCK PRESSURE SWITCH	X	X	X	X	X	X	X
53		COOLANT CHILLER	○	○	X	X	○	○	○
54		TOP PROTECTION COVER	X	X	X	X	○	○	○
55		SHOWER COOLANT	X	X	X	X	○	○	○
56		DOUBLE SAFETY EDGE FOR AUTO FRONT DOOR	X	X	X	X	○	○	○
57		COOLANT LEVEL SWITCH_FLOATING	○	○	X	X	X	X	X
58		AIR LIMIT SENSING ON CHUCK_PREPARATION	○	○	X	X	X	X	X
59		TSC FOR MAIN/LEFT SPINDLE_PREPARATION	○	○	X	X	X	X	X
60		AUTO. WORK MEASUREMENT_OLP40_RENISHAW	○	○	X	X	X	X	X
61		AUTO. WORK MEASUREMENT_RLP40_RENISHAW	○	○	○	○	X	X	X
62		COOLANT PUMP_4.0 KW_2.8 MPA	○	○	X	X	X	X	X
63		Coolant level switch : Sensing level - Low	○	○	○	○	○	○	○

★ Please contact DOOSAN to select detailed steady rest specifications.

Peripheral Equipments

Coolant system



Coolant pump	Output pressure (bar)		Filter	Std./Opt.
	60Hz	50Hz		
pump1	1.5	1	Screen filter	std.
pump2	4.5	3		opt.
pump3	7	5		
pump4	10	7		
pump5	14.5	10		
pump6	28	10.5		
pump7	70	-	Dual bag filter	
pump8	70	-	Paper filter	

Chip conveyor option 26

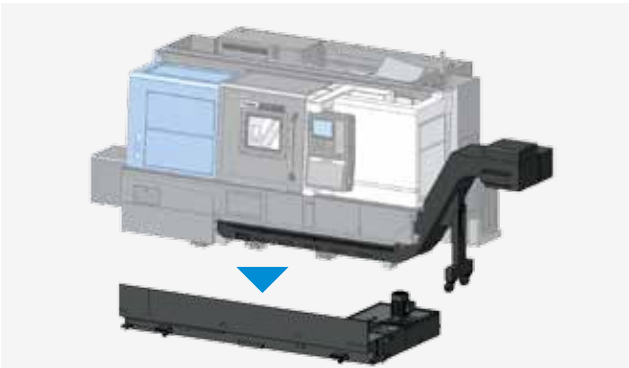
The conveyor provides a superior chip removal system and is designed with a stable structure for easy maintenance and reduced leakage. By selecting the correct type of conveyor, the efficiency of the machine working area is increased.



Chip conveyor type	Material	Description
Hinged belt	Steel	Most typical type of chip conveyor. Appropriate for steel materials generating chips of length of 30 mm or more.
Screw	Steel	Chip conveyor with smallest footprint. Demands 80% of footprint comparing to hinged belt.
Magnetic scrapper	Cast iron	Chip conveyor with magnet equipped : Appropriate for cast iron workpieces generating fine chips

Easy-to-clean coolant tank

The coolant tank can be dismantled without disassembling the chip conveyor. Operating convenience is significantly enhanced.



Model group	Coolant tank capacity (L (gallon))
PUMA GT2100 [B]	190 [190] (50.2 [50.2])
PUMA GT2600 [L] [XL]	220 [268] [358] (58.1 [70.8] [94.6])
PUMA GT3100 [L]	235 [275] (62.1 [72.7])

Quick change CAPTO option 44

The Quick Change Tool system simplifies tool change operation. Recommended for users who need to change tools frequently or reduce the set-up time.





1.
Axis - tool number display
(only for PUMA GT3100)

Axis and tool number display in machine ensures the selected axis just before turning MPG during handle mode and to make it easier to see the number of the tool at working position



2.
Tool setter
(Tool length measurement)
option 32, 33

The tool setter facilitates setting of tools, and fast and precise length compensation of abraded tool.



3.
Full sliding cover on tailstock guideway *

Application of a full cover is to prevent the heat of chips from being transferred to the bed and guideway. The tailstock guideway can be protected and chips can be removed easily.

* Exception models : PUMA GT2600XL / XLB / XLM / XLMB (enable to discuss with Doosan)

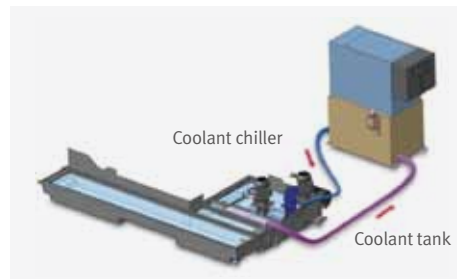
Oil skimmer **option 20**

The oil skimmer keeps coolant and lubricant isolated from each other for extending lifecycle of coolant.



Coolant chiller **option 21**

Detachable coolant chiller is recommended to keep thermal error minimal and get higher machining precision.



Part catcher **option 34**

The part catcher automatically accepts parts completed of machining, and ejects them out of the system.



Mist collector **option 31**

The mist collector absorbs airborne oil vapor and fine dusts in the system to improve working environment.



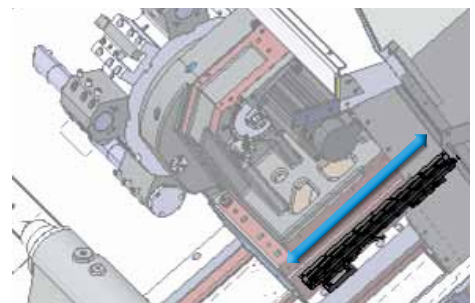
Collet chuck **option**

The collet chuck is ideal for loading workpiece of small diameter and light weight



Linear scale (X axis/Z axis) **option 39**

Linear scale is available to all axes for high accuracy.



DOOSAN Fanuc i Plus

DOOSAN Fanuc i Plus is optimized for maximizing customer productivity and convenience.

15 inch screen + New OP

DOOSAN Fanuc i Plus' operation panel enhances operating convenience by incorporating common-design buttons and layout, and features the Qwerty keyboard for fast and easy operation.

**DOOSAN Fanuc i Plus**

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

USB & PCMCIA card QWERTY keyboard

- EZ-guide i standard
- Ergonomic operator panel
- 2MB Memory
- Hot key

**iHMI Touch screen option**

- iHMI provides an intuitive interface that utilizes a touch screen for quick and easy operation

Variety of applications

- Providing various applications related to PLANNING, MACHINING, IMPROVEMENT, and UTILITY for customer convenience.

SKETCH-TURN option**DOOSAN Conversational programming software for PC**

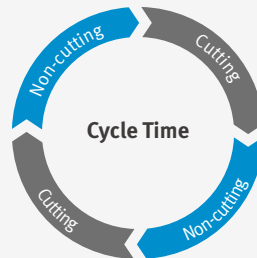
- Easy to learn for beginners
- Time savings in programming
- Reduce processing cycle time

Easy Operation Package

Doosan Easy Operation Package (EOP) supports the user with tool, help desk, operation, functionalities to maximize operational efficiency and user convenience.

Improve Productivity

Reduced non-cutting cycle time
10%



Non-cutting time during machining process is dramatically reduced to guarantee the highest productivity.

**Turret recovery help**

The software is to help users recover turret step by step from trouble situation where it does not work. It can quickly recover your valuable machine.

Operation / Maintenance**Tool load monitoring option**

During cutting operation, abnormal load caused by wear or damage of the tool is detected and an alarm is triggered to prevent further damage.

**Work management**

The function is capable of checking operation hours of the system, and quantity of finished workpieces.

SIEMENS CNC optimized for DOOSAN machine tools maximizes users' productivity.

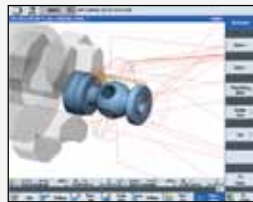
15.6 inch screen + New OP

The newly-designed operation panel enhances operating convenience by incorporating common-design buttons and layout, and features the Qwerty keyboard for fast and easy operation.



Conversational Convenient function

The machining monitoring function developed on the basis of the Shop Turn – an interactive machining support function of SIEMENS – provides users with cutting, servicing and maintenance screens for easy and convenient machine operation.



Cutting and operation support function

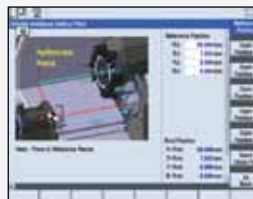
This function shows a cutting and tool path simulation of a cutting program on a real-time basis.



Tail stock function

Dialogic Screen will help easy setting and operating about CNC Tail stock.basis.

Shop-turn mode[various]
↓
[attachments]



Operation safety function

Spindle and Turret's interference could be checked before crash. So that it Protect operator's mistake.
[offset] [operating parameter]
[attachment setting] [Collision avoidance]

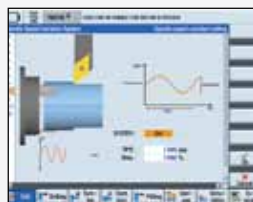
[offset]
↓
[operating parameter]
↓
[attachment setting]
↓
[Collision avoidance]



Maintenance and service convenience function

Maintenance and service of major units and peripheral devices, timer setting and parts counter setting can be easily carried out on a convenient screen.

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



Machining accuracy improvement

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

[various]
↓
[attachment]
↓
[DSSV]



Before applying the function

After applying the function

Basic Information

Basic Structure
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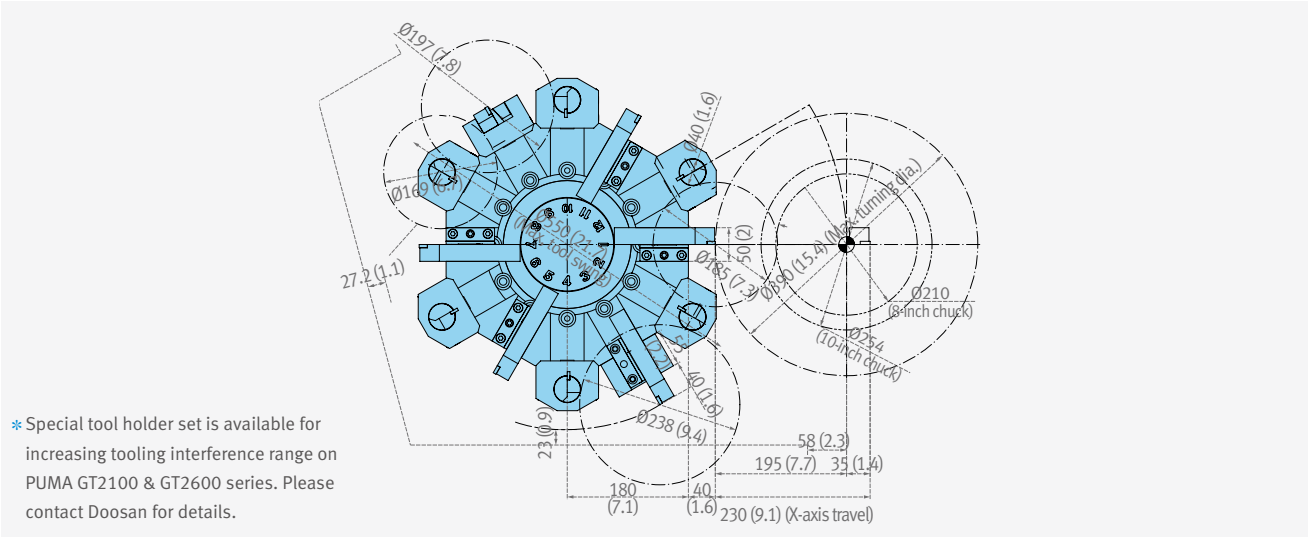
Options
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Customer Support Service

Tool Interference Diagram

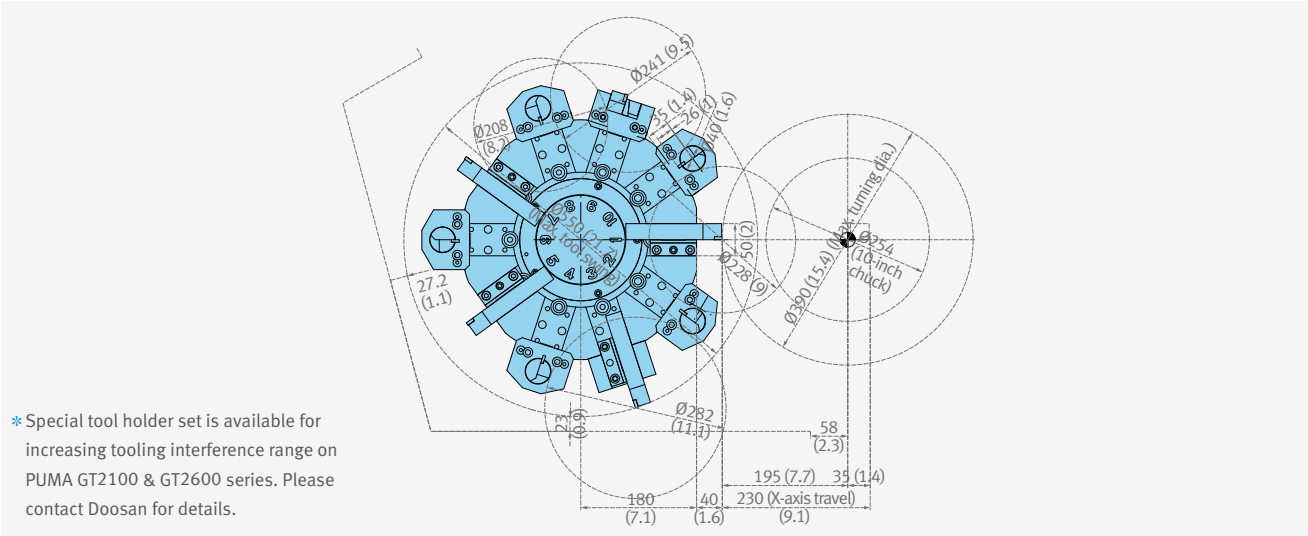
PUMA GT2100 (2axis, 12station)

Unit: mm (inch)



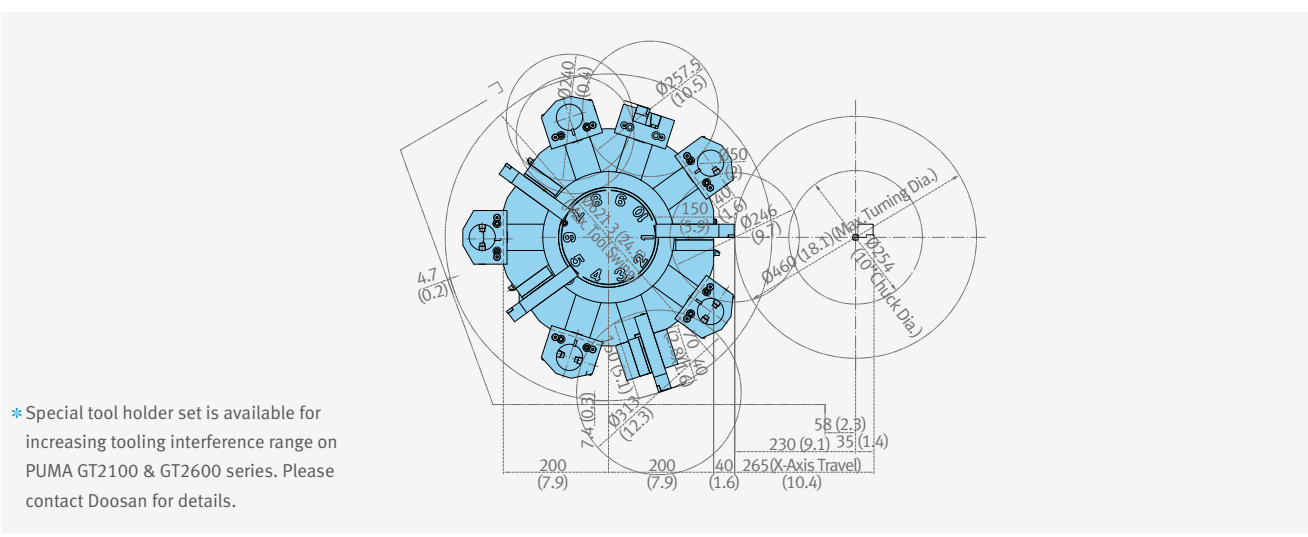
PUMA GT2100B (2axis, 10station)

Unit: mm (inch)



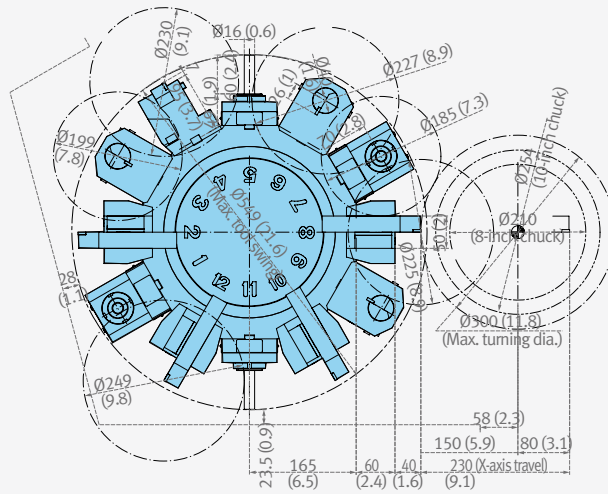
PUMA GT2600 (2axis, 10station)

Unit: mm (inch)



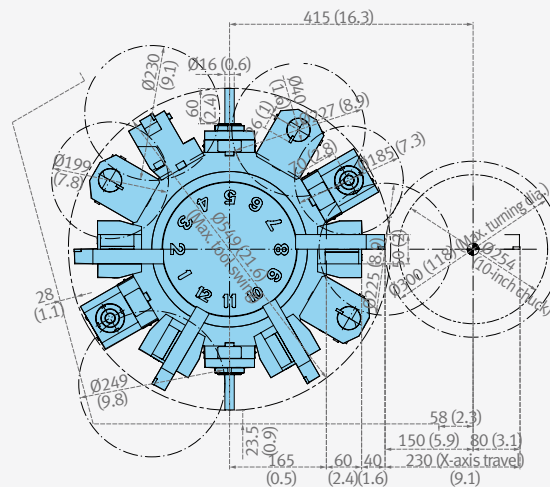
PUMA GT2100M (M, 12station, BMT55P)

Unit: mm (inch)



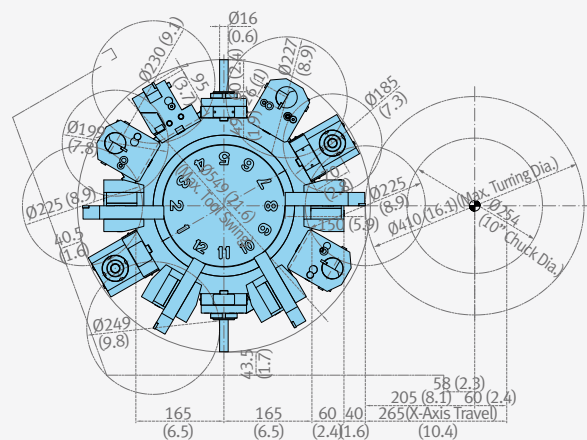
PUMA GT2100MB (M, 12station, BMT55P)

Unit: mm (inch)



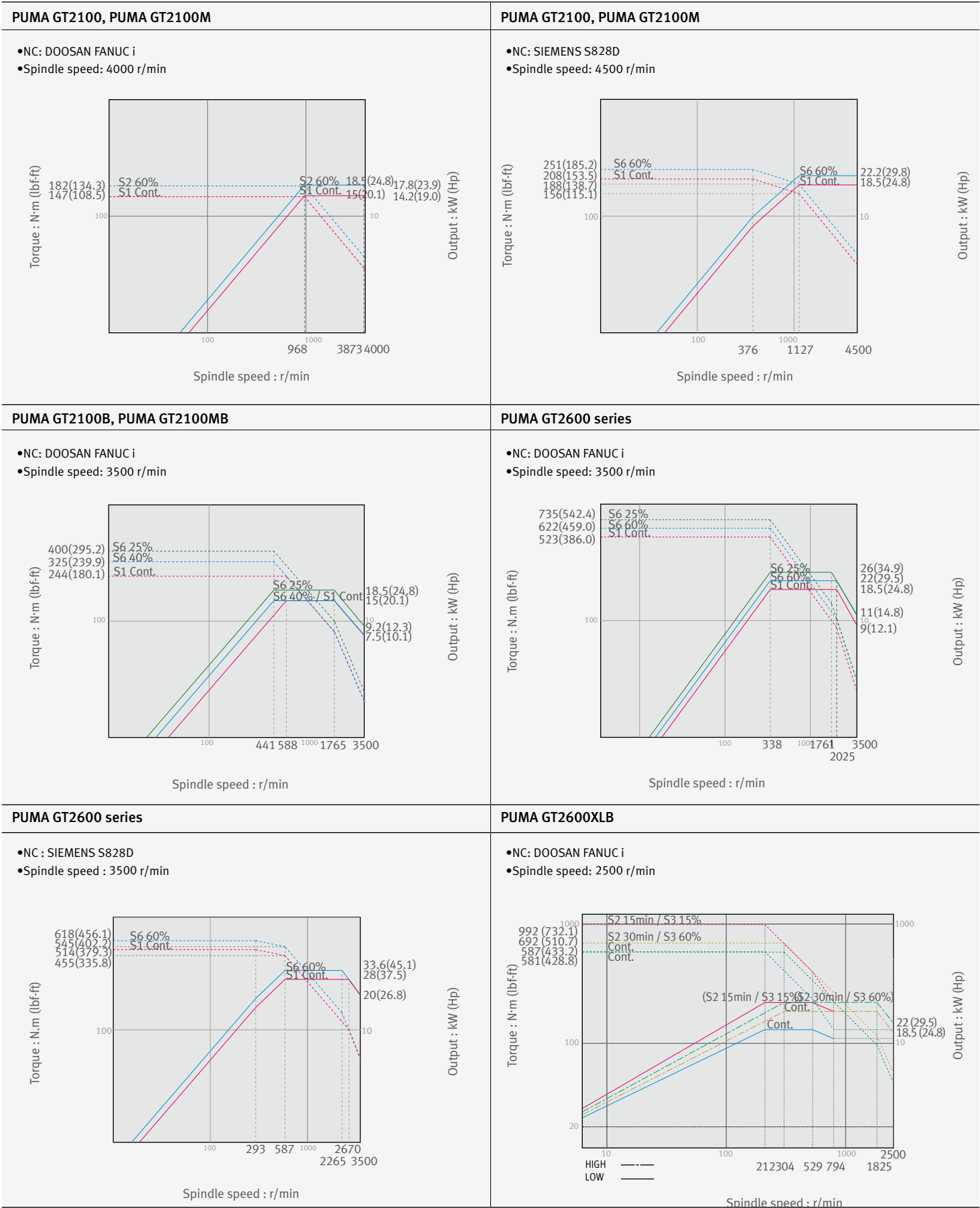
PUMA GT2600M (M, 12station, BMT55P)

Unit: mm (inch)



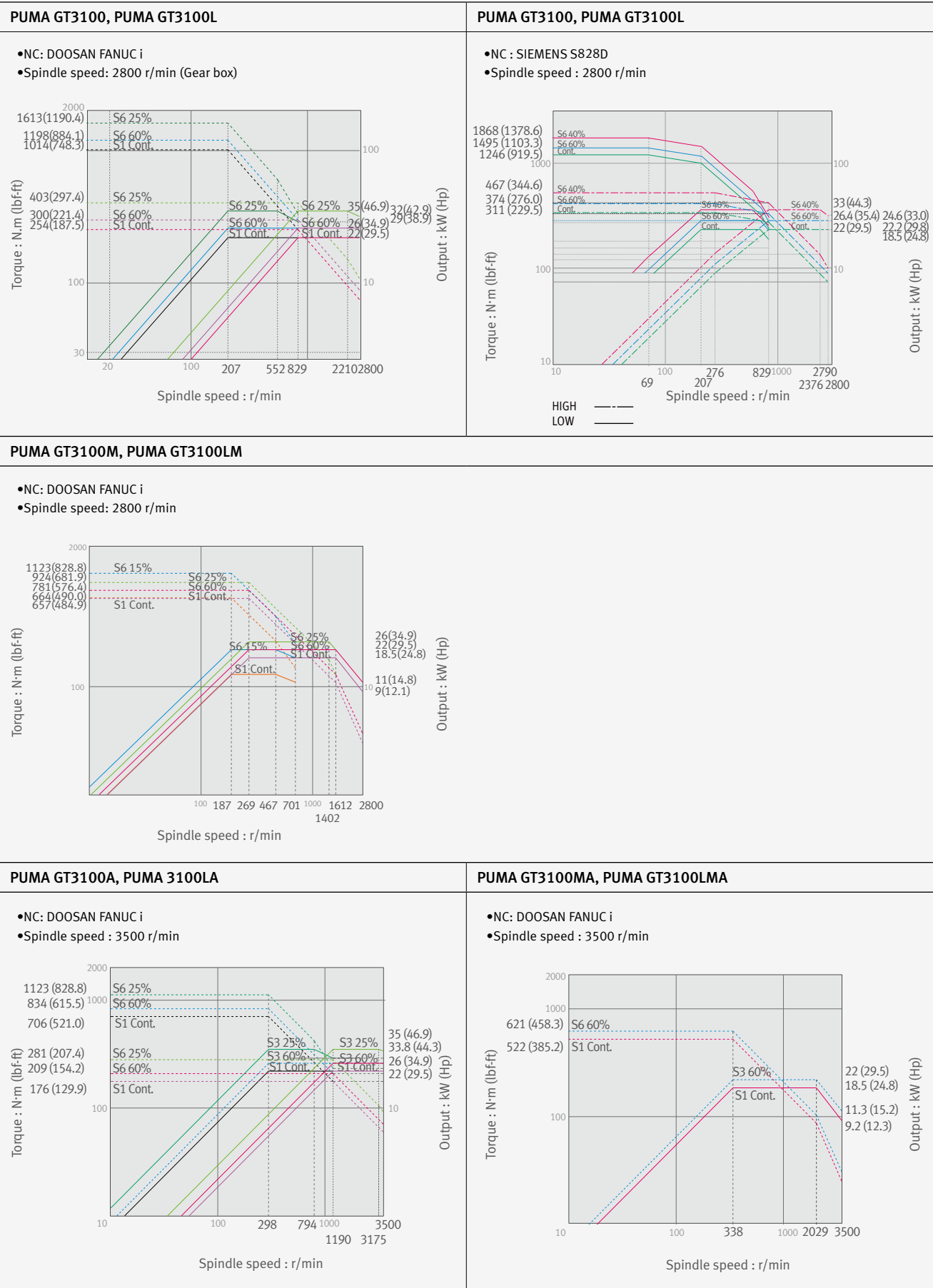
Spindle Power – Torque Diagram

Main Spindle



Spindle Power – Torque Diagram

Main Spindle



Rotary tool

PUMA GT2100M, PUMA GT2100MB PUMA GT2600M, PUMA GT2600LM •NC : DOOSAN FANUC i •Rotary tool speed : 5000 r/min •Rotary tool speed: 5000 r/min <td> PUMA GT2100M, PUMA GT2100MB PUMA GT2600M, PUMA GT2600LM •NC : SIEMENS S828D •Rotary tool speed : 5000 r/min </td>	PUMA GT2100M, PUMA GT2100MB PUMA GT2600M, PUMA GT2600LM •NC : SIEMENS S828D •Rotary tool speed : 5000 r/min
--	--

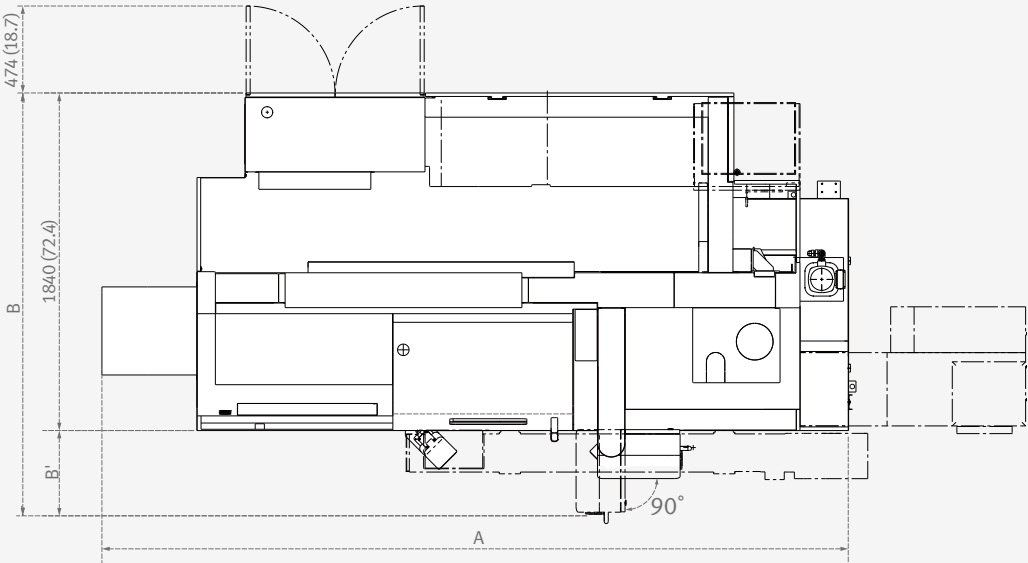
PUMA GT3100M, PUMA GT3100LM •NC : DOOSAN FANUC i •Rotary tool speed : 5000 r/min

External Dimensions

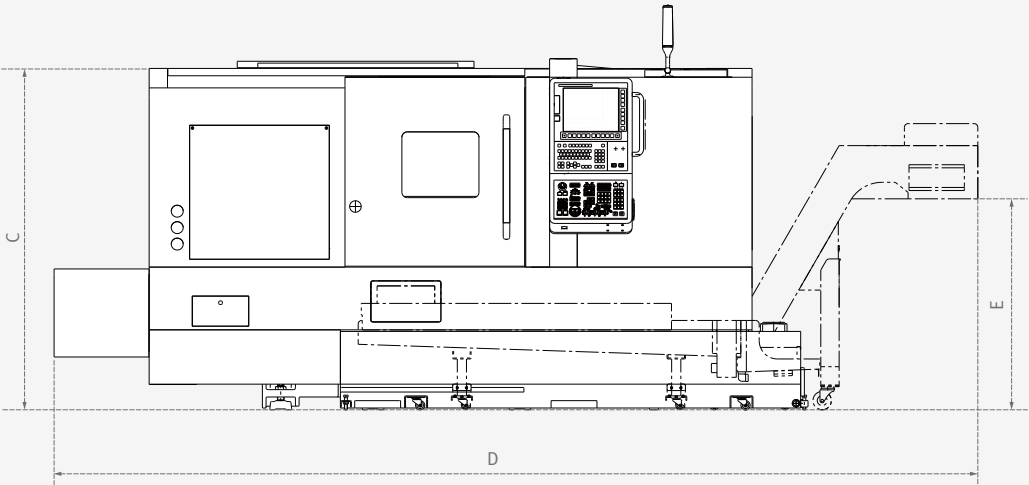
PUMA GT3100

Unit: mm (inch)

Top View



Front View



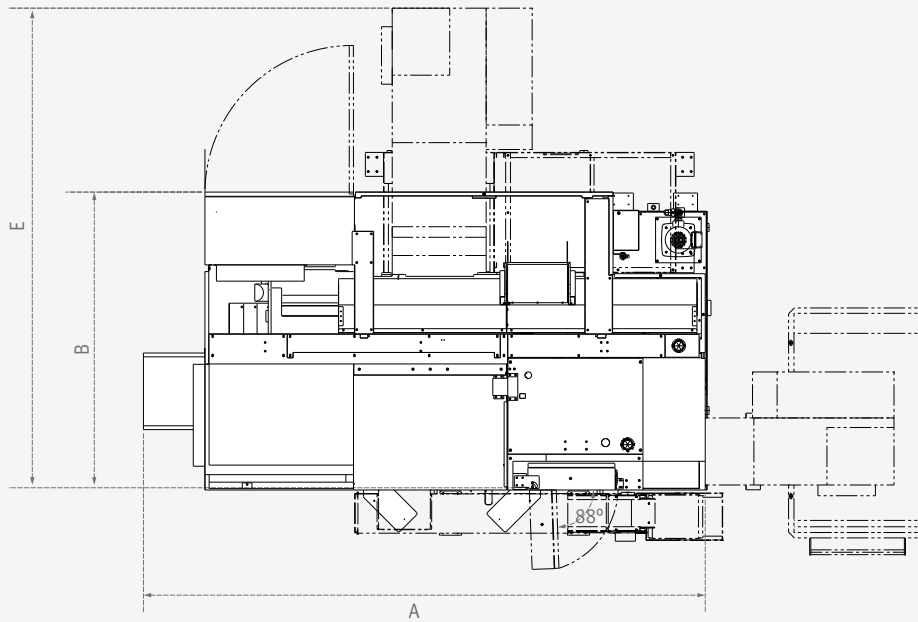
Model	A (Length)	B (Width)	B' (OP panel swivel range)	C (Height)	D (Length with side type chip conveyor)		E (Height of chip outlet)*		Width with rear type chip conveyor		
					Hinged belt	Screw	Hinged belt	Screw	Hinged belt	Screw	
PUMA GT3100/3100A	4068/3960 (160.2/155.9)	2102 (82.8)	445 (17.5)	1915 (75.4)	5033/4925 (198.1/193.9)	4574/4466 (180.1/175.8)	1150 (45.3)	624 (24.6)	Pre- discussion is required	(N/A)	
PUMA GT3100M/3100MA	3865/3800 (151.9/149.6)				4830/4765 (190.2/187.6)	4371/4306 (172.1/169.5)					
PUMA GT3100L/3100LA	4633/4525 (182.4/178.1)	2394 (94.3)	737 (29.0)	2110 (83.1)	5772/5604 (227.2/220.6)	(N/A)		(N/A)			(N/A)
PUMA GT3100LM/3100LMA	4465 (175.8)				5604 (220.6)						

* Some peripheral equipment can be placed in other places

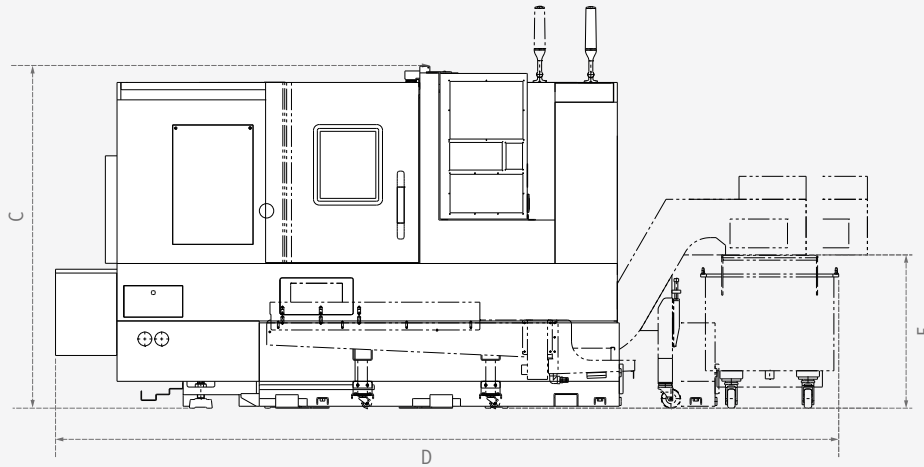
PUMA GT2100 / PUMA GT2600

Unit: mm (inch)

Top View



Front View



Model	A (Length)	B (Width)	C (Height)	D (Length with side type chip conveyor)		E (Width with rear type chip conveyor)		F (Height of chip outlet)**	
				Hinged belt	Screw	Hinged belt	Screw	Hinged belt	Screw
PUMA GT2100	2941 (115.8)	1632 (64.3)	1759 (69.3)	3895 (153.3)	3478 (136.9)	2588 (101.9)	2348 (92.4)	800 (31.5)	613 (24.1)
PUMA GT2100B	2991 (117.8)	1632 (64.3)	1759 (69.3)	3940 (155.1)	3523 (138.7)	2588 (101.9)	2348 (92.4)	800 (31.5)	613 (24.1)
PUMA GT2600	3396 (133.7)	1707 (67.2)	1779 (70.0)	4275 (168.3)	3847.5 (151.5)	2685 (105.7)	2348 (92.4)	800 (31.5)	628 (24.7)
PUMA GT2600L	3841 (151.2)	1707 (67.2)	1830 (72.0)	4965 (195.5)	4542 (178.8)	(N/A)	(N/A)	800 (31.5)	628 (24.7)
PUMA GT2600XLA	4855 (191.1)	2198 (86.5)	2030 (79.9)	5724 (225.4)	(N/A)	(N/A)	(N/A)	940 (37.0)	(N/A)
PUMA GT2600XLB	4960 (195.3)	2198 (86.5)	2030 (79.9)	5829 (229.5)	(N/A)	(N/A)	(N/A)	940 (37.0)	(N/A)

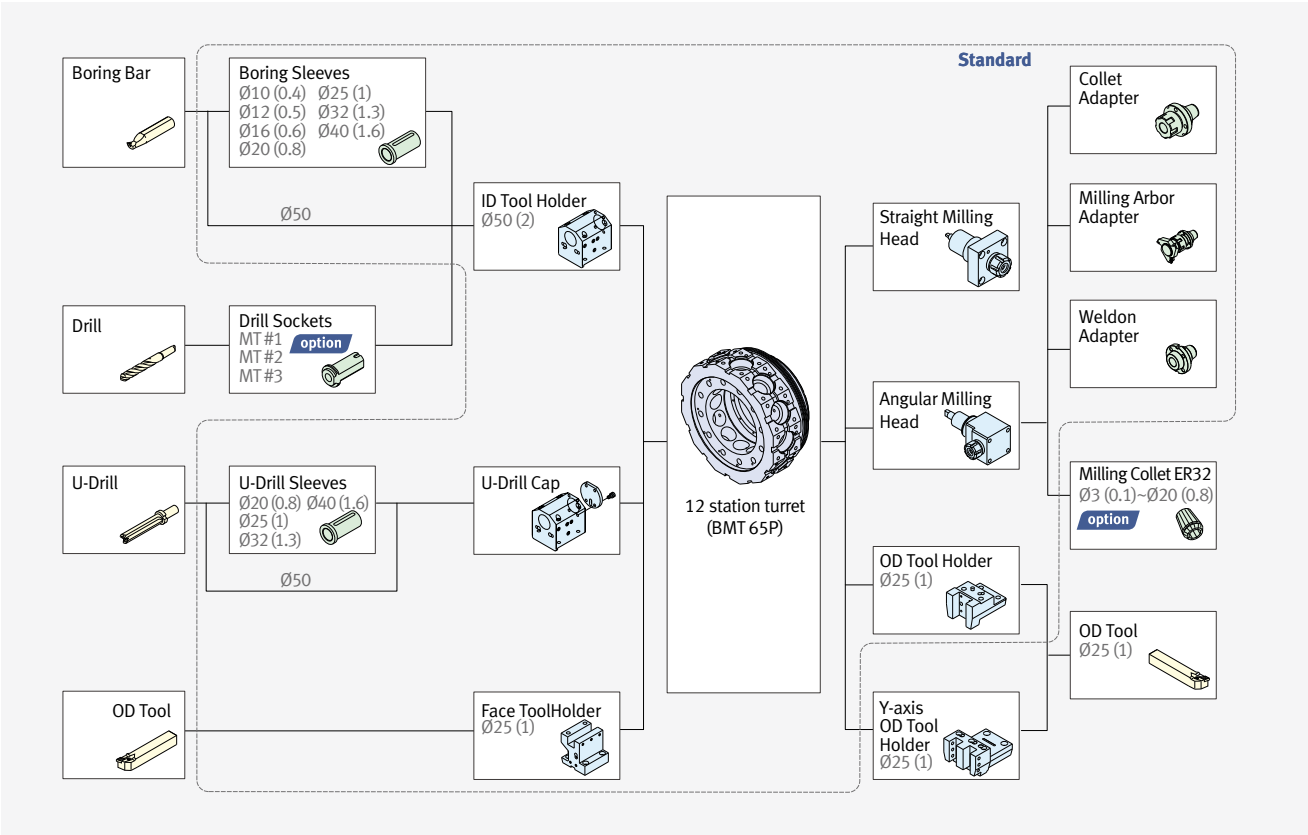
* Specification with rear type coolant tank

** Specification with side type chip conveyor

Tooling system

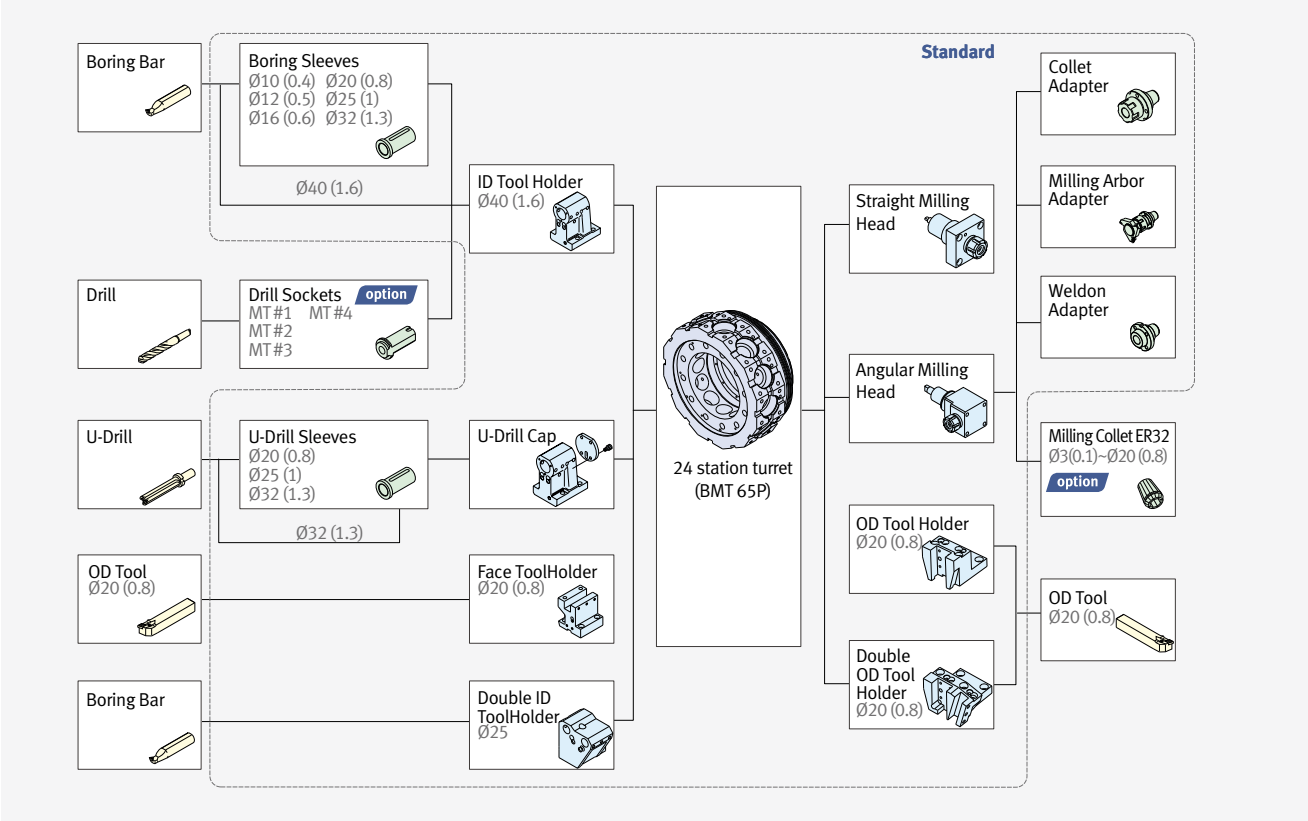
PUMA GT3100M / LM (12station, BMT65)

Unit: mm (inch)



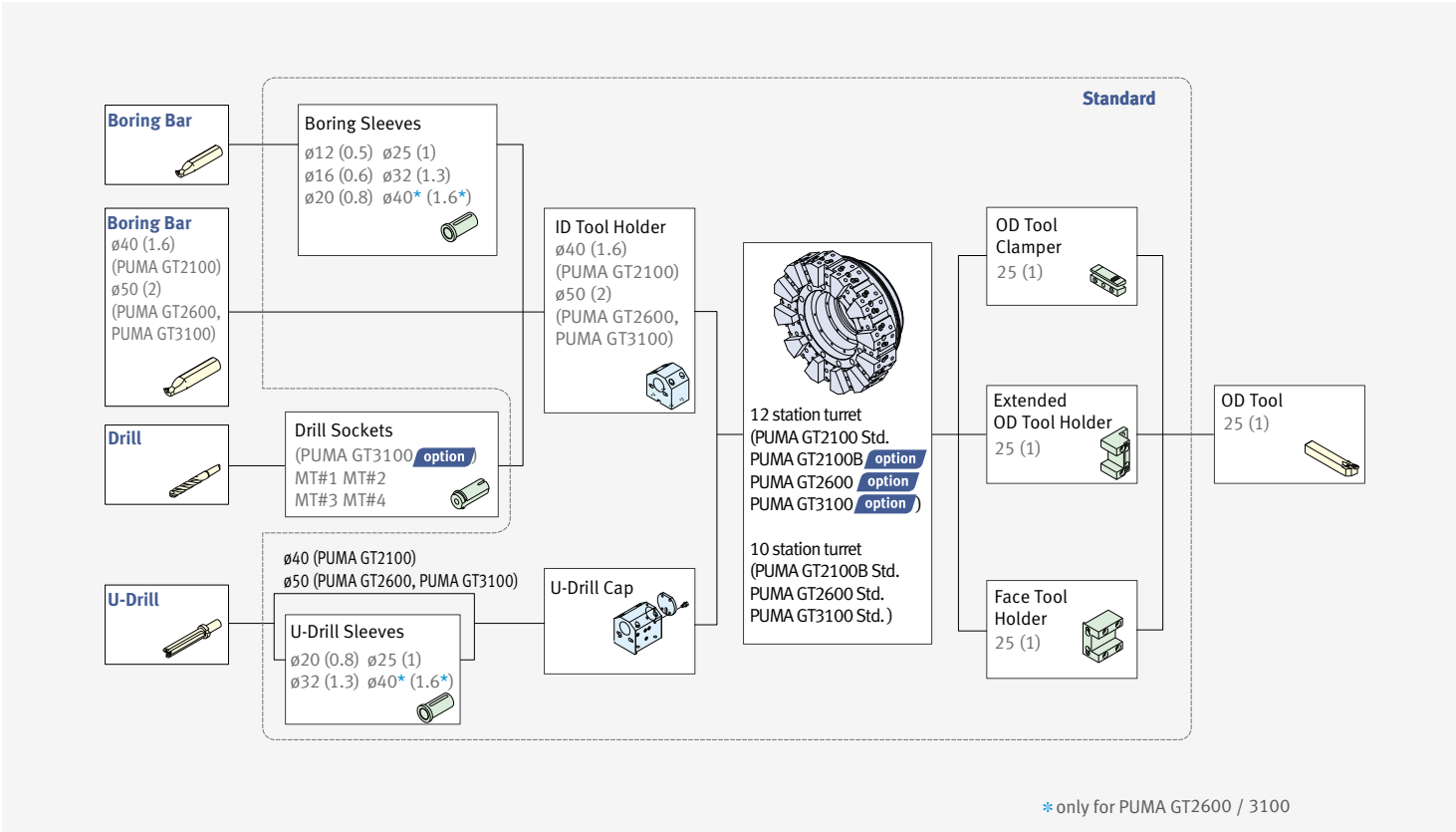
PUMA GT3100M/LM (24station, BMT65P) **option**

Unit: mm (inch)



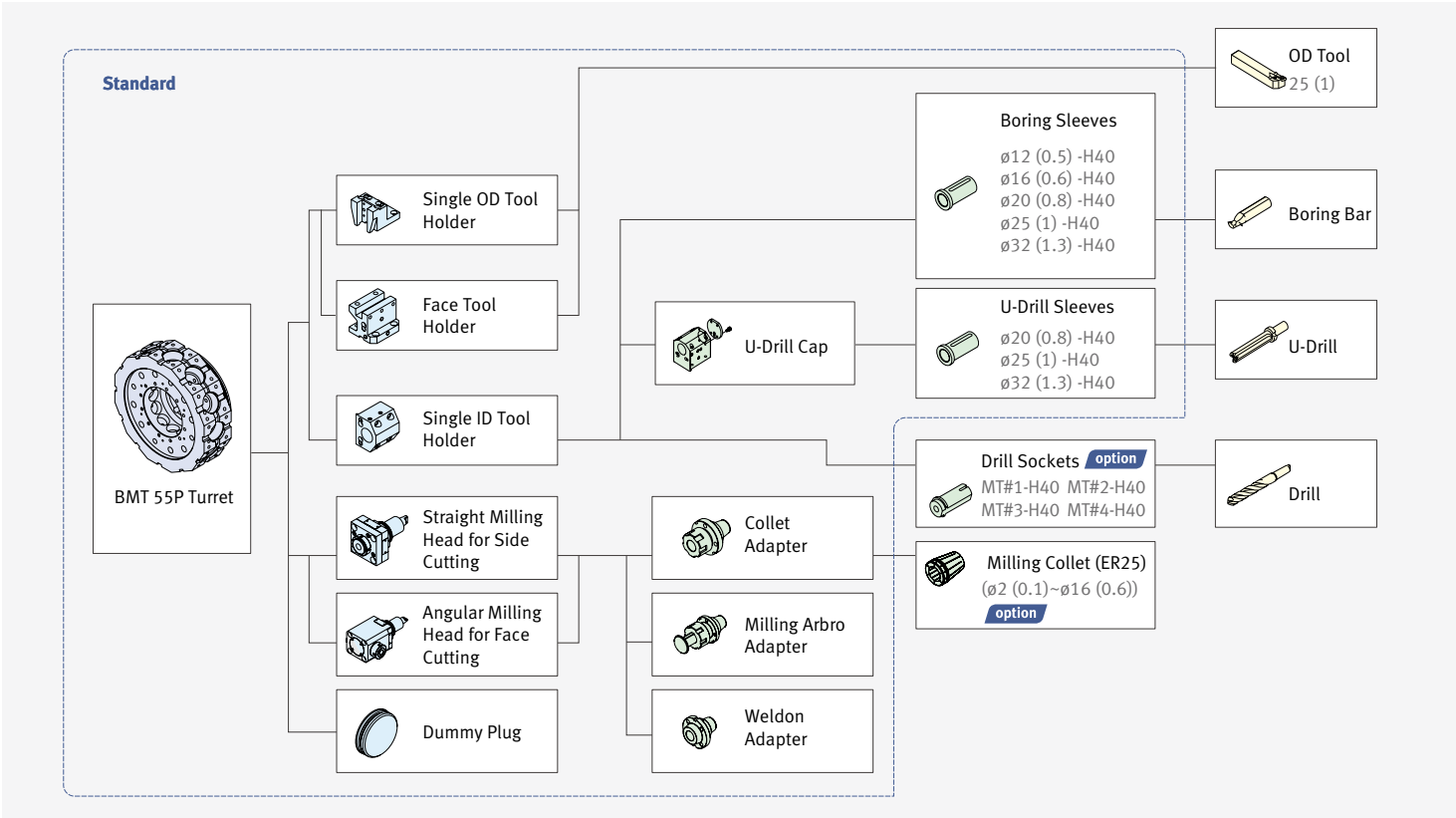
PUMA GT2100 / PUMA GT2600 / PUMA GT3100 (2axis, 10/12station)

Unit: mm (inch)



PUMA GT2100 / PUMA GT2600 (M, 12station, BMT55P)

Unit: mm (inch)



Working Range Diagram

Basic Information

Basic Structure
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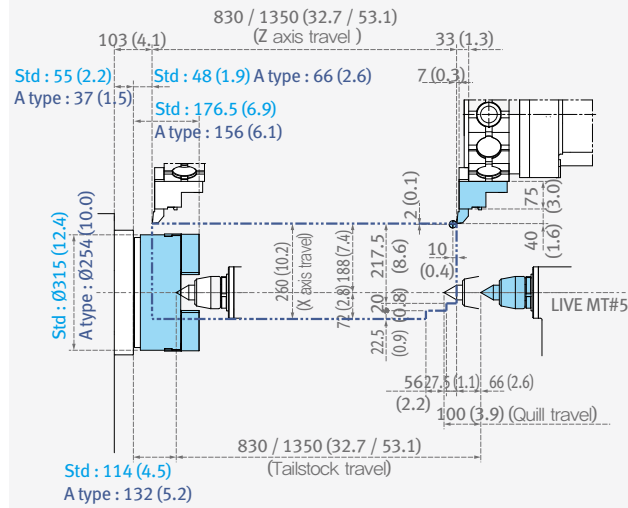
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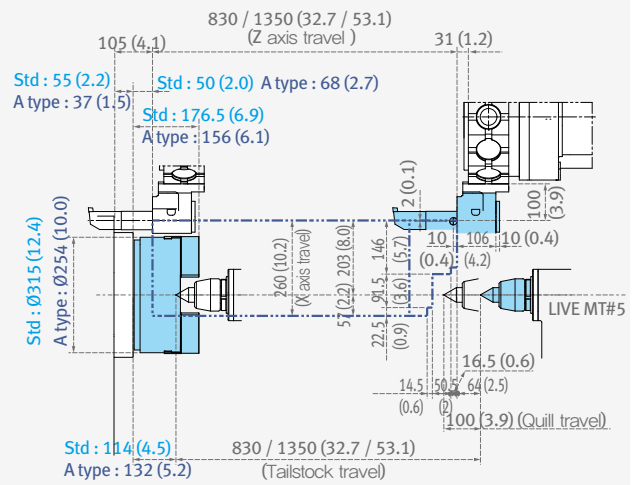
PUMA GT3100M / PUMA GT3100LM (M, BMT65P)

Unit: mm (inch)

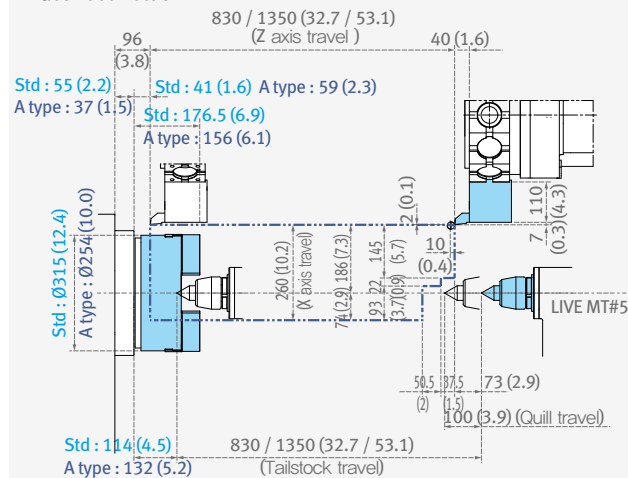
OD Holder



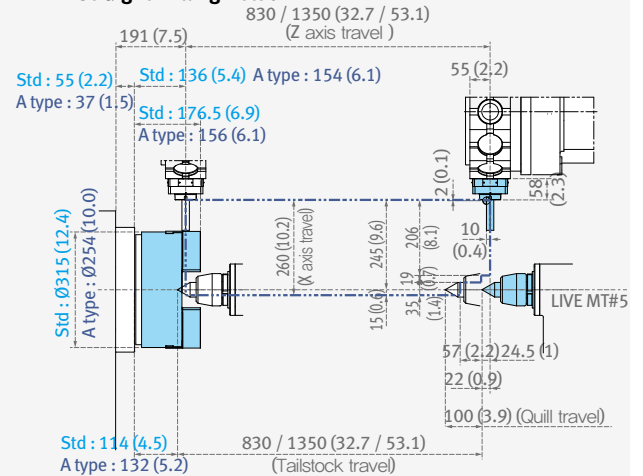
ID Holder



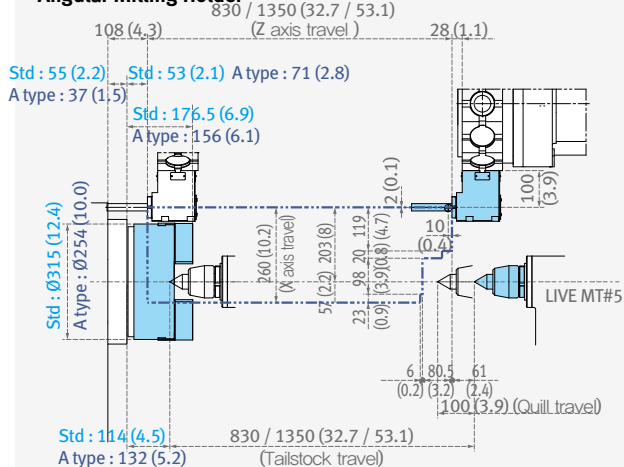
Face Tool Holder



Straight Milling Holder



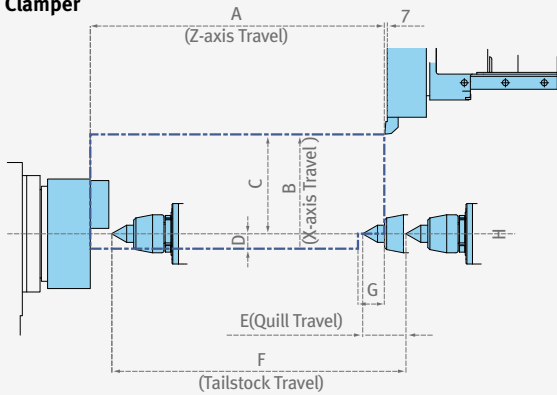
Angular Milling Holder



PUMA GT2100 / PUMA GT2600 (2axis)

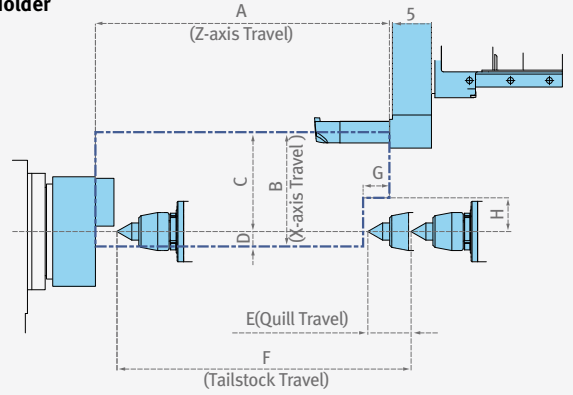
Unit: mm (inch)

OD Clamper



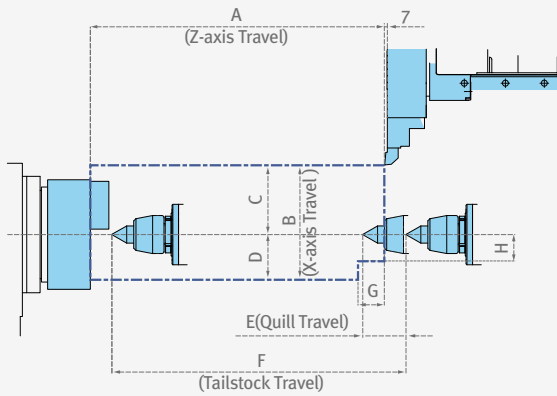
	A	B	C	D	E	F	G	H*
PUMA GT2100	580	230	195	35	80	580	63	-20
PUMA GT2100B	(22.8)	(9.1)	(7.7)	(1.4)	(3.1)	(22.8)	(2.5)	(0.8)
PUMA GT2600	680					680		
	(26.8)					(26.8)		
PUMA GT2600L	1100	265	230	35	100	1100	61	0
	(43.3)	(10.4)	(9.1)	(1.4)	(3.9)	(43.3)	(2.4)	
PUMA GT2600XL(B)	1625					1625		
	(64.0)					(64.0)		

ID Holder



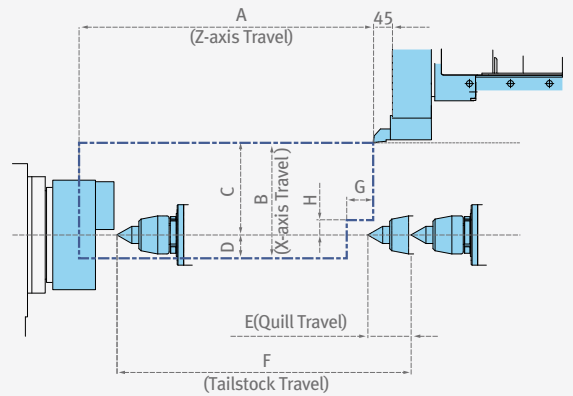
	A	B	C	D	E	F	G	H*
PUMA GT2100	580	230	200	30	80	580	63	-15
PUMA GT2100B	(22.8)	(9.1)	(7.9)	(1.2)	(3.1)	(22.8)	(2.5)	(0.6)
PUMA GT2600	680					680		
	(26.8)					(26.8)		
PUMA GT2600L	1100	265	230	35	100	1100	61	78
	(43.3)	(10.4)	(9.1)	(1.4)	(3.9)	(43.3)	(2.4)	(3.1)
PUMA GT2600XL(B)	1625					1625		
	(64.0)					(64.0)		

Extended OD Holder



	A	B	C	D	E	F	G	H*
PUMA GT2100	580	230	140	90	80	580	68	-75
PUMA GT2100B	(22.8)	(9.1)	(5.5)	(3.5)	(3.1)	(22.8)	(2.7)	(3.0)
PUMA GT2600	680					680		
	(26.8)					(26.8)		
PUMA GT2600L	1100	265	160	105	100	1100	61	-62
	(43.3)	(10.4)	(6.3)	(4.1)	(3.9)	(43.3)	(2.4)	(2.4)
PUMA GT2600XL(B)	1625					1625		
	(64.0)					(64.0)		

Face Tool Holder



	A	B	C	D	E	F	G	H*
PUMA GT2100	580	230	178	52	80	580	68	-37
PUMA GT2100B	(22.8)	(9.1)	(7.0)	(2.0)	(3.1)	(22.8)	(2.7)	(1.5)
PUMA GT2600	680					680		
	(26.8)					(26.8)		
PUMA GT2600L	1100	265	213	52	100	1100	61	35
	(43.3)	(10.4)	(8.4)	(2.0)	(3.9)	(43.3)	(2.4)	(1.4)
PUMA GT2600XL(B)	1625					1625		
	(64.0)					(64.0)		

* for H: (-) Downward direction of spindle center line / (+) Upward direction of spindle center line

Working Range Diagram

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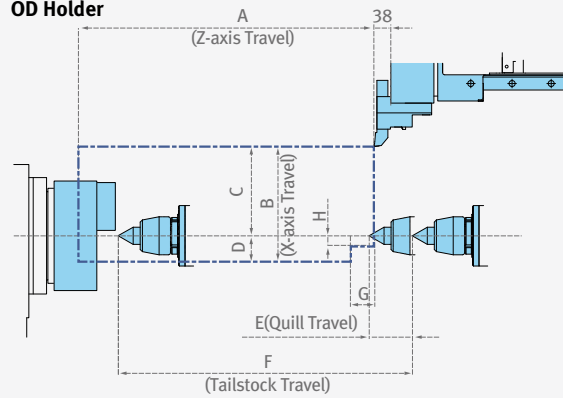
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PUMA GT2100M / PUMA GT2600M (M, BMT55P)

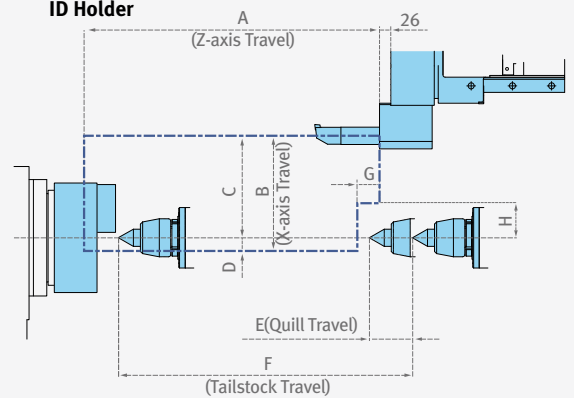
Unit: mm (inch)

OD Holder



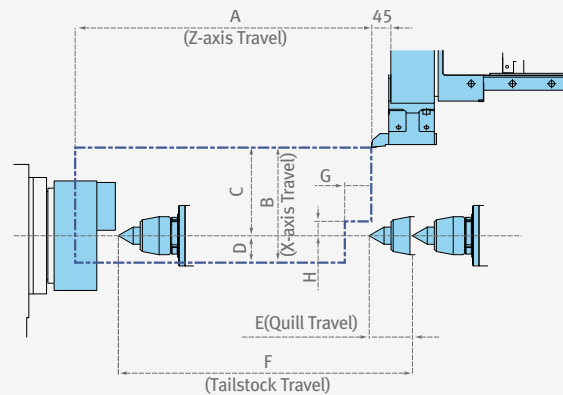
	A	B	C	D	E	F	G	H*
PUMA GT2100 M	580 (22.8)	230 (9.1)	150 (5.9)	80 (3.1)	80 (3.1)	580 (22.8)	77 (3.0)	-60 (2.4)
PUMA GT2100MB								
PUMA GT2600M	680 (26.8)					680 (26.8)	53 (2.1)	
PUMA GT2600LM	1100 (43.3)	265 (10.4)	205 (8.1)	60 (2.4)	100 (3.9)	1100 (43.3)		-25 (1.0)
PUMA GT2600XL(B)	1625 (64.0)					1625 (64.0)	46 (1.8)	

ID Holder



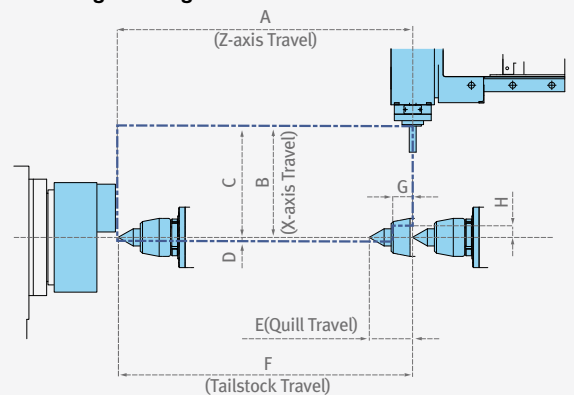
	A	B	C	D	E	F	G	H*
PUMA GT2100 M	580 (22.8)	230 (9.1)	180 (7.1)	50 (2.0)	80 (3.1)	580 (22.8)	77 (3.0)	-30 (-1.2)
PUMA GT2100MB								
PUMA GT2600M	680 (26.8)					680 (26.8)		
PUMA GT2600LM	1100 (43.3)	265 (10.4)	235 (9.3)	30 (1.2)	100 (3.9)	1100 (43.3)	51 (2.0)	80 (3.1)
PUMA GT2600XL(B)	1625 (64.0)					1625 (64.0)		

Face Tool Holder



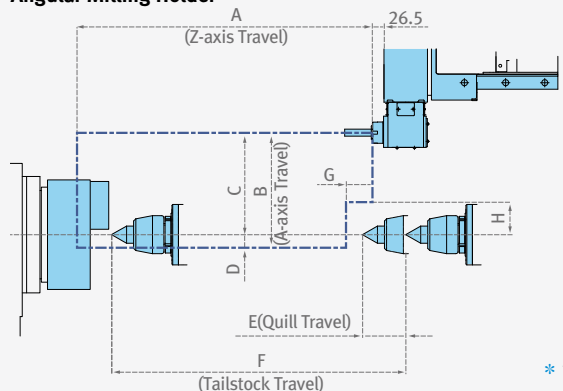
	A	B	C	D	E	F	G	H*
PUMA GT2100 M	580 (22.8)	230 (9.1)	148 (5.8)	82 (3.2)	80 (3.1)	580 (22.8)	77 (3.0)	-65 (-2.6)
PUMA GT2100MB								
PUMA GT2600M	680 (26.8)					680 (26.8)		
PUMA GT2600LM	1100 (43.3)	265 (10.4)	203 (8.0)	62 (2.4)	100 (3.9)	1100 (43.3)	61 (2.4)	33 (1.3)
PUMA GT2600XL(B)	1625 (64.0)					1625 (64.0)		

Straight Milling Holder



	A	B	C	D	E	F	G	H*
PUMA GT2100 M	580 (22.8)	230 (9.1)	201 (7.9)	29 (1.1)	80 (3.1)	580 (22.8)	77 (3.0)	-9 (-0.4)
PUMA GT2100MB								
PUMA GT2600M	680 (26.8)					680 (26.8)		
PUMA GT2600LM	1100 (43.3)	265 (10.4)	256 (10.1)	9 (0.4)	100 (3.9)	1100 (43.3)	46 (1.8)	26 (1.0)
PUMA GT2600XL(B)	1625 (64.0)					1625 (64.0)		

Angular Milling Holder

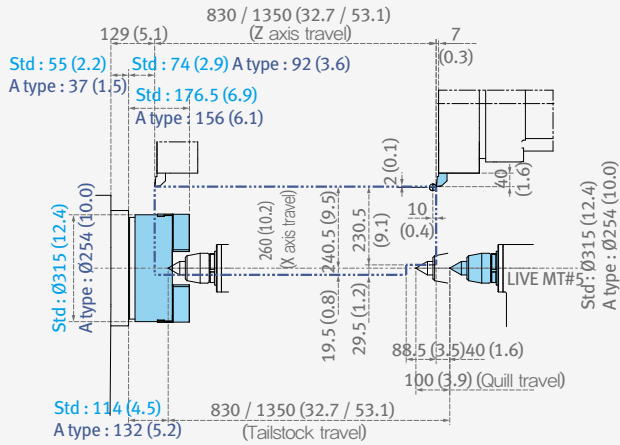


	A	B	C	D	E	F	G	H*
PUMA GT2100 M	580 (22.8)	230 (9.1)	180 (7.1)	50 (2.0)	80 (3.1)	580 (22.8)	77 (3.0)	-33 (-1.3)
PUMA GT2100MB								
PUMA GT2600M	680 (26.8)					680 (26.8)		
PUMA GT2600LM	1100 (43.3)	265 (10.4)	235 (9.3)	30 (1.2)	100 (3.9)	1100 (43.3)	61 (2.4)	75 (3.0)
PUMA GT2600XL(B)	1625 (64.0)					1625 (64.0)		

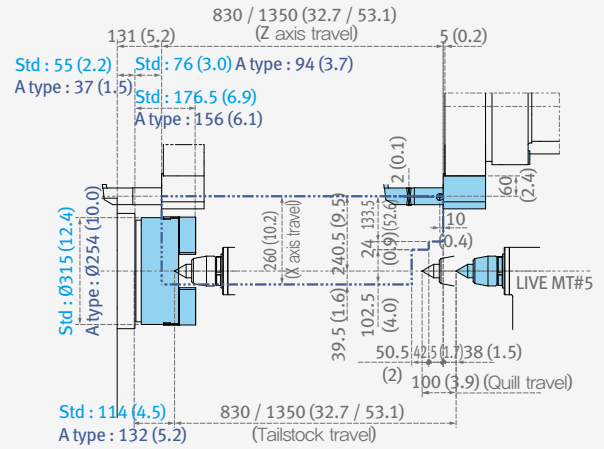
PUMA GT3100 / PUMA GT3100L (2axis)

Unit: mm (inch)

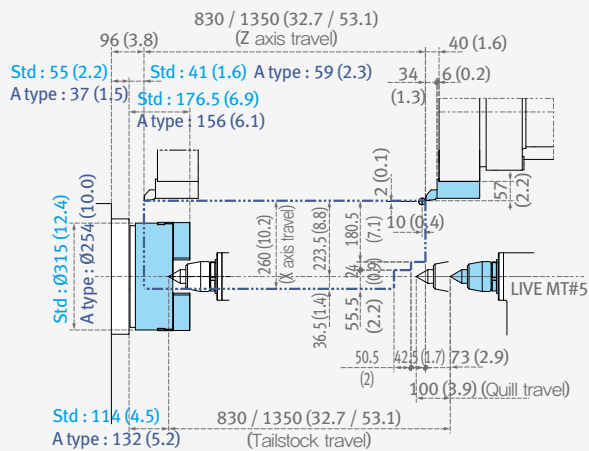
OD Holder



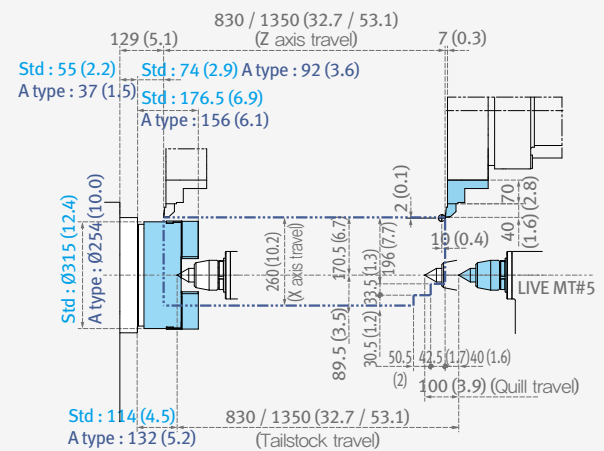
ID Holder



Face Tool Holder



Extended OD Holder



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Machine Specifications



Description		mm (inch)	PUMA GT2100	PUMA GT2100M
Capacity	Swing over bed	mm (inch)	600 (23.6)	
	Swing over saddle	mm (inch)	390 (15.4)	
	Recommanded turning dia.	mm (inch)	210 (8.3)	
	Max. turning dia.	mm (inch)	390 (15.4)	300 (11.8)
	Max turning length	mm (inch)	562 [312] (22.1 [12.3])	513 [263] (20.2 [10.4])
	Chuck size	inch	8 {10}*	
	Bar working dia.	mm (inch)	65 (2.6)	
Travels	Travel distance	X-axis	mm (inch)	230 (9.1)
		Z-axis	mm (inch)	580 (22.8)
Feedrates	Rapid Traverse Rate	X-axis	m/min (ipm)	24 (945)
		Z-axis	m/min (ipm)	30 (1181)
Main spindle	Max. Spindle speed	r/min	4500	
	Main spindle motor power	kW (Hp)	18.5 / 15 / 15 (24.8 / 20.1 / 20.1) (S6 25% / S6 40% / S1 Cont.)	
	Max. Spindle torque	N-m (lbf-ft)	313 (231)	
	Spindle nose	ASA	A2-6	
	Spindle bearing diameter (Front)	mm (inch)	110 (4.3)	
	Spindle through hole	mm (inch)	76 (3.0)	
	Min. spindle Indexing angle (C-axis)	deg	-	0.001
Turret	No. of tool stations	ea	12	12
	OD tool size	mm (inch)	25 x 25 (1 x 1)	
	Max. boring bar size	mm (inch)	40 (1.6)	
	Turret Indexing time (1 station swivel)	s	0.15	
	Max. Rotary tool speed	r/min	-	5000
	Rotary tool motor power	kW (Hp)	-	5.5 (7.4)
Tailstock	Tailstock travel	mm (inch)	580 (22.8)	
	Quill diameter	mm (inch)	80 (3.1)	
	Quill travel	mm (inch)	80 (3.1)	
	Quill bore taper	MT	MT#4 {#3 (Dead)}*	
Power source	Electric power supply (rated capacity)	kVA	29.04	
Machine Dimensions	Length	mm (inch)	2941 (115.8)	
	Width	mm (inch)	1632 (64.3)	
	Height	mm (inch)	1759 (69.3)	
	Weight	kg (lbf)	3700 (8157)	3800 (8377.4)
Control	NC system			

PUMA GT2100B	PUMA GT2100MB	PUMA GT2600 [L]	PUMA GT2600M [LM]	PUMA GT2600XL[XLB]	PUMA G T2600XLM[XLMB]	PUMA GT3100A[LA]	PUMA GT3100MA[LMA]	PUMA GT3100 [L]	PUMA GT3100M [LM]
600 (23.6)		630 (24.8)		630 (24.8)		720 (28.3)			
390 (15.4)		460 (18.1)		460 (18.1)		590 (23.2)			
255 (10.0)		255 (10.0)		255 (10.0)		255 (10.0)		315(12.0)	
390 (15.4)	300 (11.8)	460 (18.1)	410 (16.1)	460 (18.1)	410 (16.1)	481 (18.9)	376 (14.8)	481 (18.9)	376 (14.8)
550 (21.7)	501 (2.9)	658 [1078] (25.9 [42.4])	610 [1030] (24.0 [40.6])	1603 [1573]	1555 [1525]	799[1310] (31.1[51.6])	760 [1280] (29.9[50.4])	755 [1275] (2.9 [50.2])	725 [1245] (28.5 [49.0])
10 {12}*		10 {12}*		10 [12]		10		12	
81 (3.2)		81 (3.2)		81 [102] (3.2 [4.0])		81 (3.2)		102 (4.0)	
230 (9.1)		265 (10.4)		265 (10.4)		260 (10.2)			
580 (22.8)		680 [1100] (26.8 [43.3])		1625 (26.8)		830 [1350] (32.7 [53.1])			
24 (945)		24 (945)		24 (945)		24 (945)			
30 (1181)		30 (1181)		30 (1181)		30 (1181)			
3500		3500		3500 [2500]	3500 [2500]	3500		2800	
18.5 / 15 / 15 (24.8 / 20.1 / 20.1) (S6 25% / S6 40% / S1 Cont.)		26 / 22 / 18.5 (34.9 / 29.5 / 24.8) (S6 25% / S6 60% / S1 Cont.)		26 / 22 / 18.5 (34.9 / 29.5 / 24.8) (S6 25% / S6 60% / S1 Cont.) [LOW WINDING 22 / 13 (S6 15% / S1 Cont.)] [HIGH WINDING 26 / 22 / 18.5 (S6 25% / S6 60% / S1 Cont.)]		35 / 26 / 22 (46.9 / 34.9 / 29.5) (S6 25% / S6 60% / S1 Cont.)	26 / 22 / 18.5 (34.9 / 29.5 / 24.8) (S6 25% / S6 60% / S1 Cont.)	35 / 26 / 22 (46.9 / 34.9 / 29.5) (S6 25% / S6 60% / S1 Cont.)	26 / 22 / 18.5 (34.9 / 29.5 / 24.8) (S6 25% / S6 60% / S1 Cont.)
400 (295.2)		735 (542.4)		735 [992] (542.4 [732.1])		622 (459.0)		1613 (1190.4)	1123 (828.8)
A2-8		A2-8		A2-8 [A2-11]		A2-8		A2-11	
140 (5.5)		140 (5.5)		140 [160] (5.5 [6.3])		140 (5.5)		160 (6.3)	
91 (3.6)		91 (3.6)		91 [115] (3.6 [4.5])		91(3.6)		115 (4.5)	
-	0.001	-	0.001	-	0.001	-	0.001	-	0.001
10 {12}	12	10 {12}*	12	10 {12}*	12	10 {12}*	12 {24}*	10 {12}	12 {24 position index}*
25 x 25 (1 x 1)		25 x 25 (1 x 1)		25 x 25 (1 x 1)		25 x 25 (1 x 1)		25 x 25 (1 x 1)	
40 (1.6)		50 (2.0)	40 (1.6)	50 (2.0)	40 (1.6)	50 (2.0)			
0.15		0.15		0.15		0.15			
-	5000	-	5000	-	5000	-	5000	-	5000
-	5.5 (7.4)	-	5.5 (7.4)	-	5.5 (7.4)	-	7.5 (10.1)	-	7.5 (10.1)
580 (22.8)		680 [1100] (26.8 [43.3])		1625 [1595]		830 [1350] (26.8 [45.3])			
80 (3.1)		100 (3.9)		100 (3.9)		100 (3.9)			
80 (3.1)		100 (3.9)		100 (3.9)		100 (3.9)			
MT#4 {#3 (Dead)}*		MT#5 {#4 (Dead)}*		MT#5 {#4 (Dead)}*		MT#5 {#4 (Dead)}*			
29.04		34.58				36	34	36	34
2991 (117.8)		3396 [3841] (133.7 [151.2])		4855 [4960] (191.1 [195.3])		3960[4525] (155.9[178.1])	3800[4465] (149.6[175.8])	4068[4633] (160.2[182.4])	3865[4465] (152.2[175.8])
1632 (64.3)		1707 (67.2)		2198 (86.5)		2102 [2394] (82.8 [94.3])			
1759 (69.3)		1779 [1830] (70.0 [72.0])		2030 (79.9)		1915 [2110] (75.4 [83.1])			
3800 (8377.4)	3900 (8597.9)	4300[4900] (9479.7 [10802.5])	4350[4950] (9590 [10912.7])	5900 [6050] (13007.1 [13337.8])	5950 [6100] (13117.3 [13448.0])	5450 [6850] (12015.0 [15101.4])	5600 [7000] (2345.7 [15432.1])	5500 [6900] (12125.2 [15211.7])	5650 [7050] (222.4 [277.6])

DOOSAN Fanuc i Plus, SIEMENS S828D

* { } : option

*** The specifications and information above-mentioned may be changed without prior notice. For more details, please contact Doosan

NC Unit Specifications

● standard features ○ option X Not available

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FANUC

No.	Item	Specification	DOOSAN Fanuc i Plus	
			2-Axis	M
1	Controlled axis	Controlled axes	2 (X, Z)	3 (X, Z, C)
2		Simultaneously controlled axes	2 axes	3 axes
3		Cs contouring control	X	●
4		Torque control	●	●
5		HRV2 control	●	●
6		Inch/metric conversion	●	●
7		Stored stroke check 1		●
8		Stored stroke check 2,3	●	●
9		Stored limit check before move	●	●
10		Chamfering on/off	●	●
11		Unexpected disturbance torque detection function	●	●
12		Position switch	●	●
13	Operation	DNC operation	Included in RS232C interface.	●
14		DNC operation with memory card		●
15		Wrong operation prevention		●
16		Dry run		●
17		Single block		●
18		Reference position shift		●
19		Handle interruption	○	○
20		Incremental feed	x1,x10,x100	●
21		Manual handle retrace		○
22	Interpolation functions	Nano interpolation		●
23		Linear interpolation		●
24		Circular interpolation		●
25		Polar coordinate interpolation	X	●
26		Cylindrical interpolation	X	●
27		Helical interpolation	X	○
28		Thread cutting, synchronous cutting		●
29		Multi threading		●
30		Thread cutting retract		●
31		Continuous threading		●
32		Variable lead thread cutting		●
33		Polygon machining with two spindles	X	●
34		High-speed skip	Input signal is 8 points.	○
35		2nd reference position return	G30	●
36		3rd/4th reference position return		●
37	Feed function	Override cancel		●
38		AI contour control I		○
39		AI contour control II		○
40		Rapid traverse block overlap		●
41	Program input	Optional block skip	9 pieces	●
42		Absolute/incremental programming	Combined use in the same block	●
43		Diameter/Radius programming		●
44		Automatic coordinate system setting		●
45		Workpiece coordinate system	G52 - G59	●

● standard features ○ option X Not available

No.	Item		Specification	DOOSAN Fanuc i Plus	
				2-Axis	M
46	Program input	Workpiece coordinate system preset		●	●
47		Direct drawing dimension programming		●	●
48		G code system	A	●	●
49		G code system	B/C	●	●
50		Chamfering/Corner R		●	●
51		Custom macro		●	●
52		Addition of custom macro common variables	#100 - #199, #500 - #999	●	●
53		Interruption type custom macro		●	●
54		Canned cycle		●	●
55		Multiple repetitive cycles	G70~G76	●	●
56		Multiple repetitive cycles II	Pocket profile	●	●
57		Canned cycle for drilling		●	●
58		Coordinate system shift		●	●
59		Direct input of coordinate system shift		●	●
60		Pattern data input		●	●
61	Operation Guidance Function	EZ Guidei (Conversational Programming Solution)		●*1)	●*1)
62		iHMI with Machining Cycle		○*2)	○*2)
63		EZ Operation package		●	●
64	Auxiliary/Spindle speed function	Constant surface speed control		●	●
65		Spindle override	0 - 150%	●	●
66		Spindle orientation		●	●
67		Rigid tap		●	●
68		Arbitrary speed threading		○	○
69	Tool function/ Tool compensation	Tool offset pairs	128-pairs	●	●
70		Tool offset pairs	200-pairs	○	○
71		Tool offset		●	●
72		Tool radius/Tool nose radius compensation		●	●
73		Tool geometry/wear compensation		●	●
74		Automatic tool offset	G36/G37	●	●
75		Direct input of offset value measured B		●	●
76		Tool life management		●	●
77	Accuracy compensation function	Backlash compensation for each rapid traverse and cutting feed		●	●
78		Stored pitch error compensation		○	○
79	Editing operation	Part program storage size & Number of registerable programs	1280M(512KB)_400 programs	X	X
80		Part program storage size & Number of registerable programs	5120M(2MB)_400 programs	X	X
81		Program protect		●	●
82		Password function		●	●
83		Playback		●	●
84	Data input/output	Fast data server		○	○
85		External data input		●	●
86		Memory card input/output		●	●
87		USB memory input/output		●	●
88		Automatic data backup		●	●
89	Data input/output	Embedded Ethernet		●	●
90		Fast Ethernet		○	○
91	Others	Display unit	15" color LCD	●	●
			15" color LCD with Touch Panel	○	○
93		Robot interface	Robot interface with PMC I/O module	○	○
93			Robot interface with PROFIBUS-DP	○	○

*1) Only with 15" LCD standard *2) Only with 15" Touch LCD standard

CNC Specifications

● Standard ○ Optional X Not applicable

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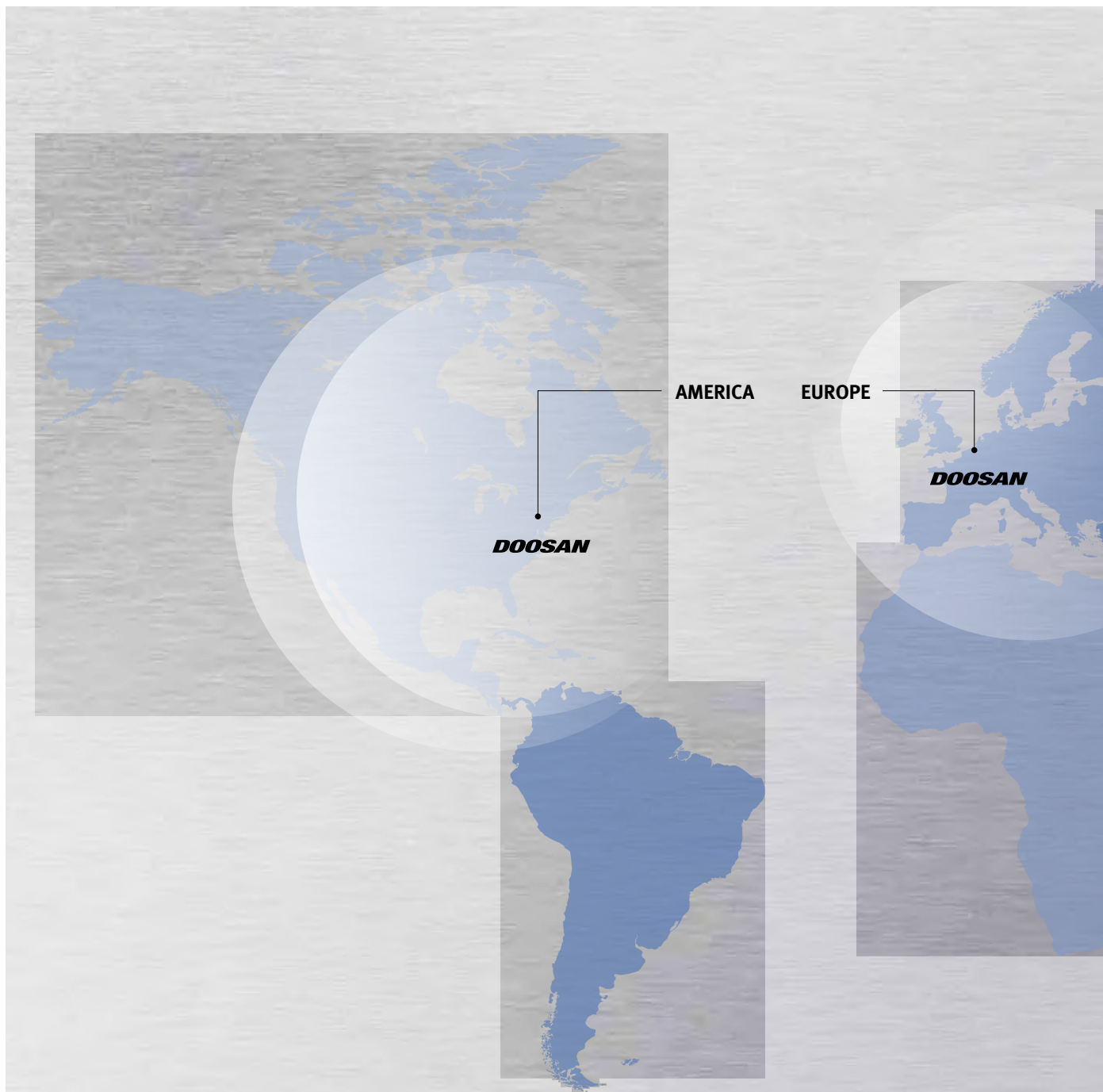
SIEMENS

No.	ITEM		Spec.	S828D
1	Axes control	Controlled axes	2 axis	X, Z, SP
2		R: Milling spindle	M-type	X, Z, C, R
3		Simultaneously controlled axes	Positioning(G00)/Linear interpolation(G01) : 3 axes Circular interpolation(G02, G03) : 2 axes	●
4		Backlash compensation		●
5		Leadscrew error compensation		●
6		Measuring system error compensation		●
7		Feedforward control	velocity-dependent	●
8		Follow up mode		●
9		Programmable acceleration		●
10		Emergency stop / overtravel		●
11		Least command increment	0.001mm (0.0001 inch)	●
12		Least input increment	0.001mm (0.0001 inch)	●
13		Maximum commandable value	±99999.999mm (±3937 inch)	●
14		Machine lock (PRT)		●
15		Absolute encoder		●
16	Interpolation & Feed function	Dry run		●
17		Feedrate/Rapid override	0 - 120 %	●
18		Reference point return	G75 FP=1	●
19		2nd reference point return	G75 FP=2	●
20		3rd / 4th reference return	G75 FP=3, 4	●
21		Linear interpolation	Max. 4	●
22		Circular interpolation	G02, G03	●
23		Inverse time feedrate	G93	●
24		Helical interpolation		●
25		Universal interpolator NURBS		●
26		Spline interpolation (A, B and C splines)		○
27		Dwell	G04	●
28		Separate path feed for corners and chamfers		●
29		Reposition		●
30		Acceleration with Jerklimitation		●
31		Positioning	G00	●
32		Cartesian point-to-point (PTP) travel		●
33		TRANSMIT/cylinder surface transformation	Not available for 2-axis type	●
34		Inclined axis	If machine attached inclind Y axis	●
35		Inclined axis TRAANG after TRANSMIT/ TRACYL	If machine attached inclind Y axis	●
36	Spindle & M code function	Couplings	CP-Basic(If machine attached milling spindle)	●
37			CP-Comfort	○
38		Spindle speed, digital setpoint		●
39		Spindle speed, max. programmable value range	106 ... 0.0001 (display: ± 999999999.9999)	●
40		Spindle override	50 - 120 %	●
41		Automatic gear state selection		●
42		Oriented spindle stop		●
43		Spindle speed limitation min./max.		●
44		Constant cutting rate		●
45		Spindle control via PLC (Positioning, oscillation)		●
46		Changeover to axis mode		●
47		Tapping with compensating chuck/rigid tapping		●
48		Retraction for rigid tapping		●
49	Tool function	Tool radius compensations in plane		●
50		• With approach and retract strategies		●
51		• With transition circle/ellipse on outer edges		●
52		Number of tools/cutting edges in tool list	PPU.4 for S828D SW261 (2 axis/M-type)	256/512
53			PPU.4 for S828D SW281 (S/MS/Y/SY-type)	768/1536
54		Tool length compensation		●
55		Operation with tool management		●
56		Tool list		●
57		Tool offset selection via T and D numbers		●
58		Replacement tools for tool management	Include tool load monitoring option	○
59		Monitoring of tool life and workpiece count		●
60		Manual measurement of tool offset		●
61		Magazine list		●
62		Loading and unloading of tools		●
63	Programming & Editing function	Number of subroutine passes <= 9999		●
64		Number of levels for skip blocks 1		●
65		Number of levels for skip blocks 8		○
66		Polar coordinates		●
67		1/2/3-point contours		●
68		Dimensions metric/inch, changeover manually or via program		●

● Standard ○ Optional X Not applicable

No.	ITEM	Spec.	S828D
69	Program functions		
70	• Dynamic preprocessing memory FIFO		●
71	• Look ahead number of blocks	In 840D, If machine attached milling spindle	1
72	• Frame concept		●
73	• Inclined-surface machining with swivel cycle		●
74	• Axis/spindle replacement		●
75	• Geometry axes, switchable online in the CNC program		●
76	• Program preprocessing		●
77	Online ISO dialect interpreter		●
78	Program/workpiece management		
73	• Parts programs on NCU, max. number		750
74	• Workpieces on NCU, max. number		250
75	• On USB storage medium (e.g. disk drive, USB stick)		●
76	• On network drive		○
77	Settable offsets, max. number	G54, G55, G56 ...	100
78	Program editor		
79	• Programming support for cycles program(Program Guide)		●
80	• CNC editor with editing functions: Marking, copying, deleting		●
81	• Programming graphics/free contour input (contour calculator)		●
82	• Support for parameter input Animated Elements		●
83	• ShopTurn/ShopMill Machining step programming		●
84	Technology cycles for drilling/milling		●
85	Pocket milling free contour and islands stock removal cycle		●
86	Residual material detection		●
87	Access protection for cycles		●
88	Programming support can be extended,e.g. customer cycles		●
89	2D simulation		●
90	3D simulation, finished part		●
91	Simultaneous recording		●
92	JOG		
93	• Handwheel selection		●
94	• Switchover: inch/metric		●
95	• Manual measurement of zero/work offset		●
96	• Manual measurement of tool offset		●
97	• Automatic tool/workpiece measurement		●
98	• Reference point approach, automatic/via CNC program		●
99	Automatic		
100	• Execution from USB or CF card interface on operator panel front		●
101	• Execution from HMI memory on NCU CF card	In 840D, If machine attached milling spindle	X
102	• Execution from network drive		○
103	Operating software languages		
104	• Ch _S,Ch _T, En, Fr, Gr, It, Kr, Pt, Sp		●
105	• Additional languages, use of language extensions		●
106	Working area limitation		●
107	Limit switch monitoring		●
108	Software and hardware limit switches		●
109	Position monitoring		●
110	Standstill (zero-speed) monitoring		●
111	Clamping monitoring		●
112	2D/3D protection zones		●
113	Contour monitoring		●
114	Axis limitation from the PLC		●
115	Alarms and messages		●
116	Action log can be activated for diagnostic purposes		●
117	PLC status		●
118	Remote Control System (RCS) remote diagnostics		
119	• RCS Host remote diagnostics function		○
120	• RCS Commander (viewer function)	RCS Commander for PC/PG on CD-ROM	●
121	Integrated service planner for the monitoring of service intervals		●
122	Measuring, Measuring stage 1 Two probes (switching) with/without deletion of distance-to-go	Measurement prove & receiver is needed	●
123	Measuring cycles for drilling/milling and turning • Calibrating workpiece probes • Workpiece measurement • Tool measuring	Measurement prove & receiver is needed (included in MDynamics 3-axis & 5-axis) In 840D, If machine attached milling spindle	○
124	Easy Extend		●
125	Contour handwheel		●
126	Integrate screens in SINUMERIK Operate with SINUMERIK Integrate Run MyScreens		●
127	Cross-mode actions (ASUPs and synchronized actions in all operating modes)		○

Responding to Customers Anytime, Anywhere



Global Sales and Service Support Network

Corporations

4

Dealer Networks

164

Technical Centers

51

Service Post

198

Factories

3

Technical Center: Sales Support, Service Support, Parts Support

Doosan Machine Tools' Global Network, Responding to Customer's Needs nearby, Anytime, Anywhere

Doosan machine tools provides a system-based professional support service before and after the machine tool sale by responding quickly and efficiently to customers' demands.

By supplying spare parts, product training, field service and technical support, we can provide top class support to our customers around the world.



Customer Support Service

We help customers to achieve success by providing a variety of professional services from pre-sales consultancy to post-sales support.

Supplying Parts



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

Field Services



- On site service
- Machine installation and testing
- Scheduled preventive maintenance
- Machine repair

Technical Support



- Supports machining methods and technology
- Responds to technical queries
- Provides technical consultancy

Training



- Programming / machine setup and operation
- Electrical and mechanical maintenance
- Applications engineering

Major Specifications

PUMA GT series



Description	Unit	PUMA GT2100	PUMA GT2600	PUMA GT3100
Max. turning dia.	mm (inch)	390 (15.4)	460 (18.1)	481 (18.9)
Max. turning length	mm (inch)	562 (22.1)	658 (25.9)	755 (29.7)
Standard chuck size	inch	8	10	12
Bar working dia.	mm (inch)	65 (2.6)	81 (3.2)	102 (4.0)
Max. spindle speed	r/min	4500	3500	2800
Max spindle power	kW (Hp)	18.5 (24.8)	26 (34.9)	35 (46.9)

* Standard machine specification

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**Fire Safety
Precautions**

There is a high risk of fire when using non-water-soluble cutting fluids, processing flammable materials, neglecting use coolants and modifying the machine without the consent of the manufacturer. Please check the SAFETY GUIDANCE carefully before using the machine.

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