

CNC Control Specs

■ CNC system type

O: Std. △: Opt. -: Nil

Type	Model	HT-30 Series	HT-40/60/80/100 A,B,C,D,E
Fanuc 0i-TD			○
Fanuc 31i-B			△
Siemens 840D (572.5)			△
Siemens 840D (573.5)			△
Siemens 828D (PPU281)			△

■ Fanuc specifications

O: Std. △: Opt. -: Nil

	Item	Specifications	0iTD	31i-B	
Display unit	8.4" color LCD		○	-	
	10.4" color LCD		△	○	
Function	Data Server with 2GB CF card		△	△	
	NC program memory	1280M (512KB)	○	○	
	Conversational programming with graphic function	Manual guide 0i	0iTD	○	-
		Manual guide i	31i-B / 0iTD (10.4" LCD)	△	○
	No. of tool offset sets		64	99	
	No. of variable command sets		500	500	
Work coordinate system	G54~G59		○	○	

■ Siemens specifications

O: Std. △: Opt. -: Nil

	Item	Specifications	828D	840D
Operator Panel	10.4" color LCD		○	○
	15.1" color LCD		-	△
	Machine panel MCP483C		○	○
	TCU without hard disk	CF card	○	○
Function	Network/disk drive management		○	○
	PCU 50 with hard disk	Include HD & Ethernet	-	△
	ShopTurn programming (copy licence)		△	△
	Automatic residual material detection		△	△
	Transmit / Peripheral surface transformation		△	○
	Measuring cycles for drilling/milling and turning		△	△



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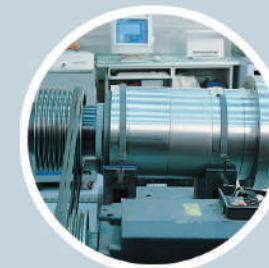
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High Quality Turning Centers



HT-40/60/80/100 A,B,C,D,E Multiaxial Series
HT-30 Multiaxial Series

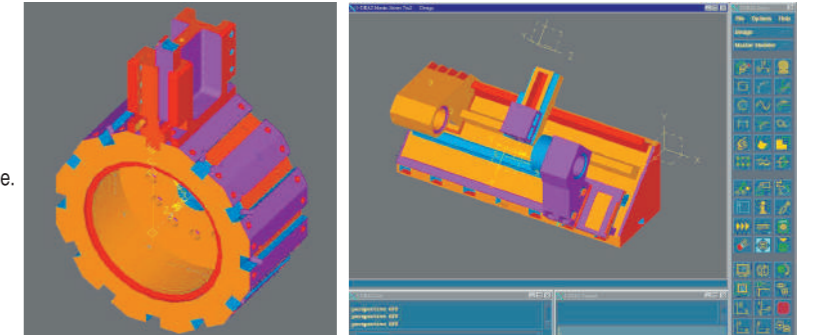
High Quality Turning Centers



Reliable Design

IDEAS advanced engineering software is utilized to optimize the design of the HT Series. It is used to calculate the physical and material properties of the components used, ensuring no weakness in the machine.

ANSYS Finite Element Analysis (FEA) software is employed to analyze all components of the HT series to determine the optimal machine structure.



Twin Spindles / Twin Turrets

The JOHN FORD HT Series High Quality Turning Centers are designed out of the ordinary to meet what you need not only today, but also in the future.

The HT Series starts with a time proven slant bed design for rigidity, chip flow, accessibility, and space-saving characteristics.



Twin Turrets with Tailstock

These machines are built for outstanding performance in medium and large lot production runs.

These machines always deliver the precision and efficiency which are far beyond the ordinary.

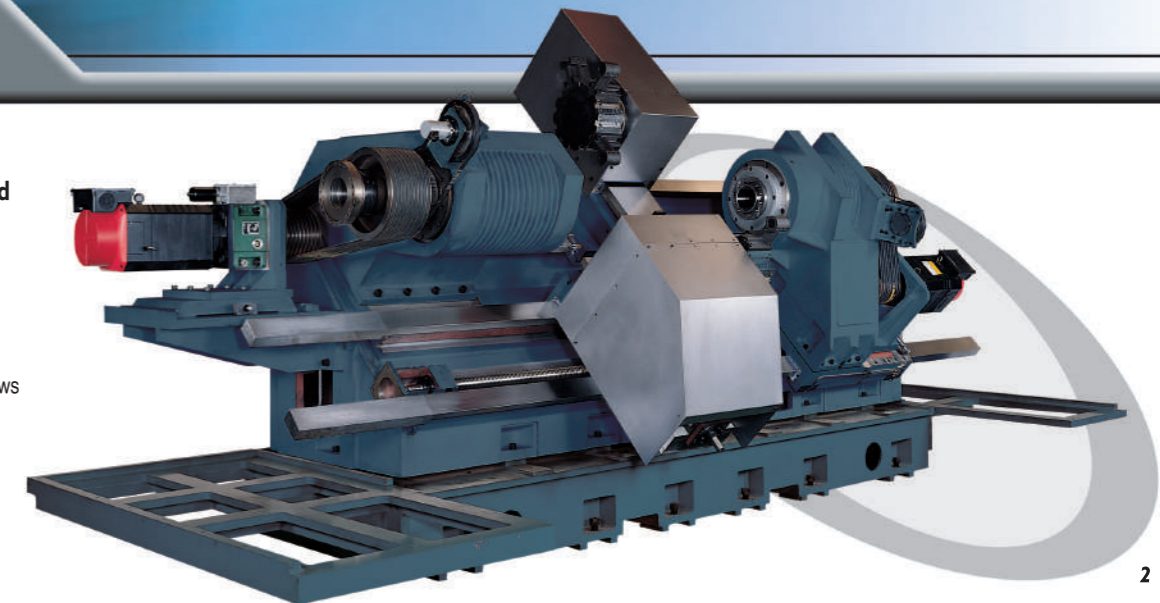
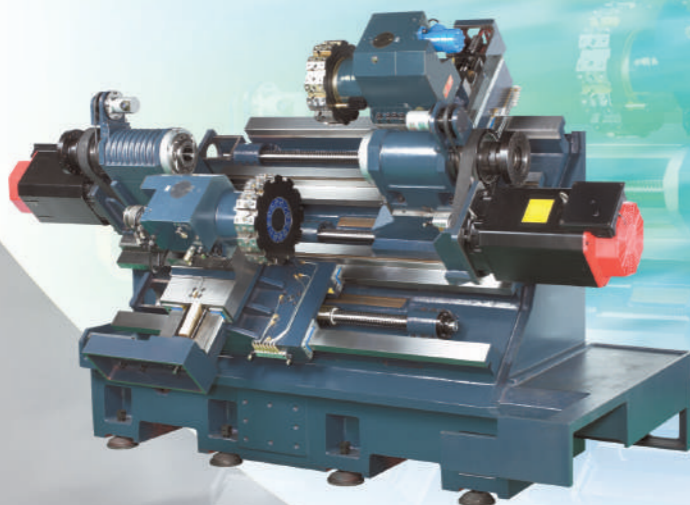


A New Machine for the New Millennium

HT-30A-2SD / HT-40A-2SD / HT-40A-2D

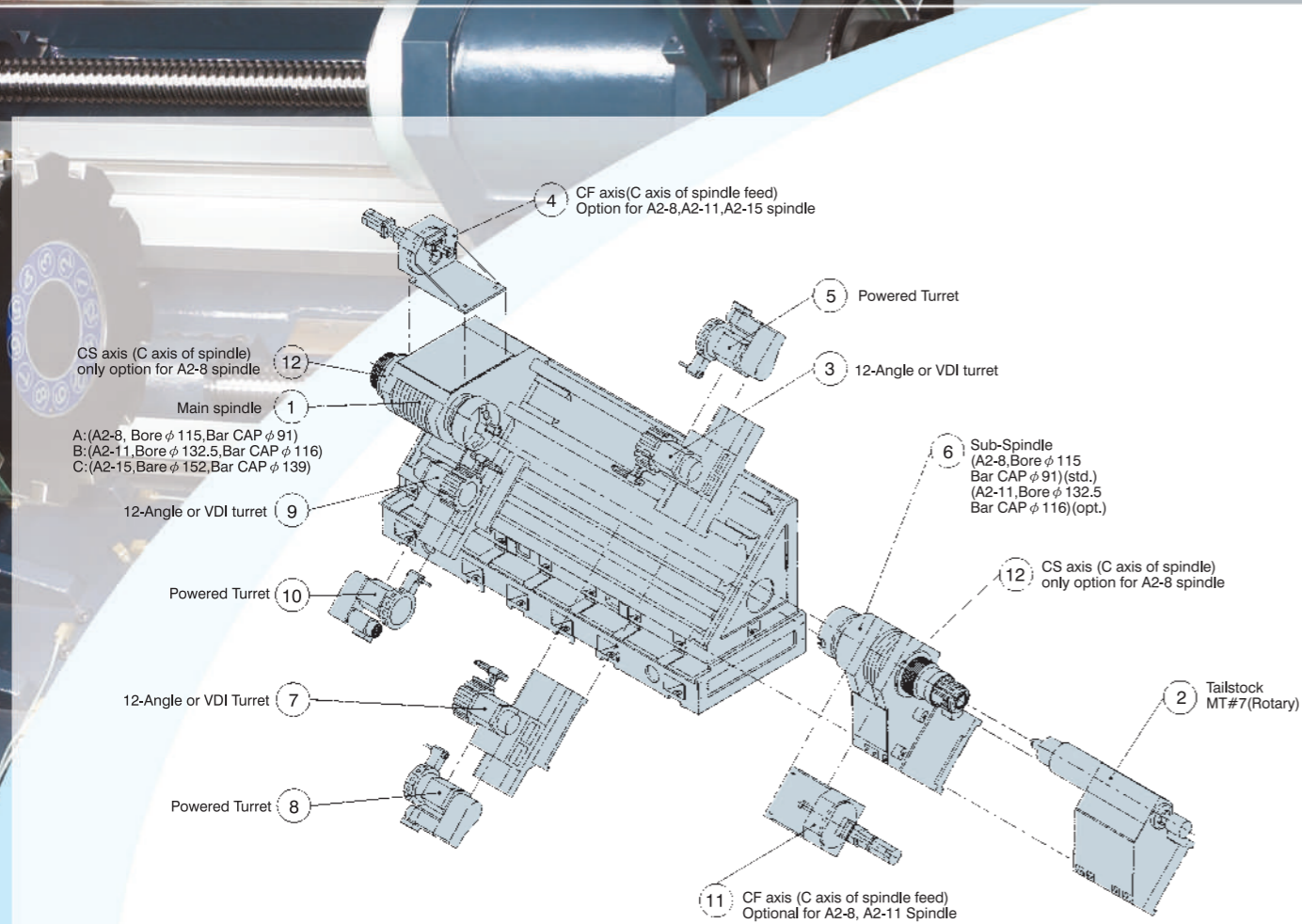
Advanced Engineering and Solid Construction

- Meehanite cast iron
- Torque tube bed
- Rigid box ways
- Large diameter pretensioned ballscrews
- Direct coupled ballscrews



Multiple Construction to Meet Your Need

High Performance Spindles



High Performance Belt-type Spindles



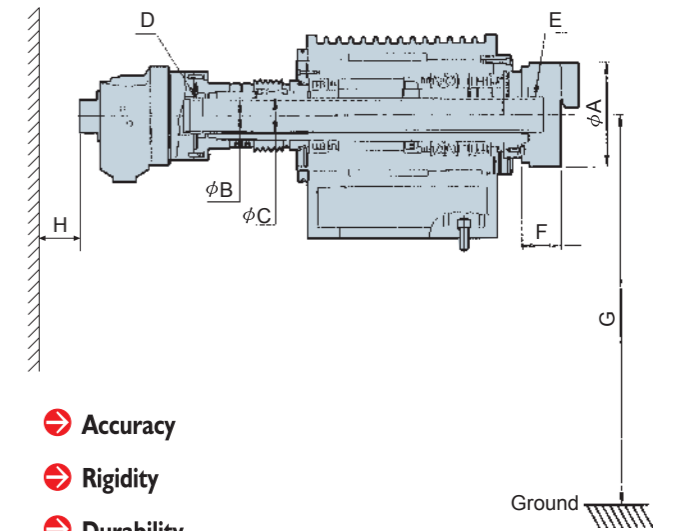
Spindle

The spindle is mounted on precision double-row roller bearings in conjunction with angular contact ball bearings, providing highest rigidity and accuracy.

The spindle is manufactured from alloy steel, heat treated and precision ground for maximum uniformity and durability.

The quill inner and outer lining is precision ground for fit with the spindle, thus ensuring extreme concentricity and accuracy of turned parts, and spindle service life is greatly extended.

Dimensions of Head



➔ Accuracy

➔ Rigidity

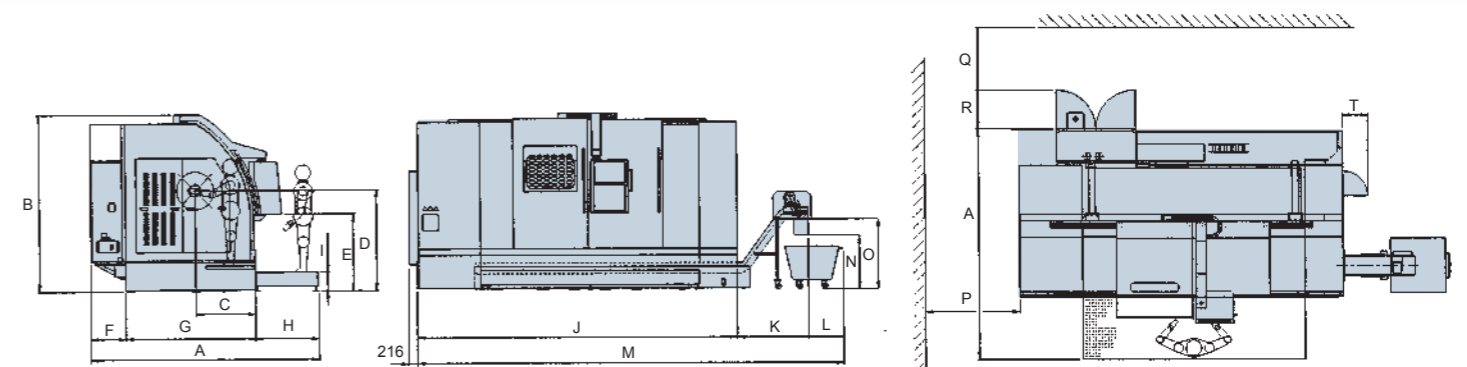
➔ Durability

➔ Efficiency

Unit: mm

Model	Dimension	A	B	C	D	E	F	G	H
HT-30/35 Series	Std.	φ 210 (8")	φ 51	φ 65	M60 x P2.0	M60 x P2.0	103	1210	345
HT-40/60/80/100, A	Std.	φ 315 (12")	φ 91	φ 115	M100 x P2.0	M100 x P2.0	122	1595	380
	Opt.	φ 381 (15")					160		345
HT-40/60/80/100, B	Std.	φ 381 (15")	φ 116	φ 132.5	M130 x P2.0	M130 x P2.0	149	1595	345
	Opt.	φ 450 (18")					149		345
HT-40/60/80/100, C	Std.	φ 510 (20")	φ 139	φ 152	M175 x P3.0	M150 x P2.0	144	1605	270
	Opt.	φ 610 (24")					180		270
HT-40/60/80/100, D	Std.	φ 508 (20")	φ 165	φ 185	M175 x P3.0	M175 x P3.0	155	1605	270
	Opt.	φ 610 (24")					183		270
HT-40/60/80/100, E	Std.	φ 610 (24")	φ 204	φ 236	M215 x P3.0	M215 x P3.0	183	1605	310

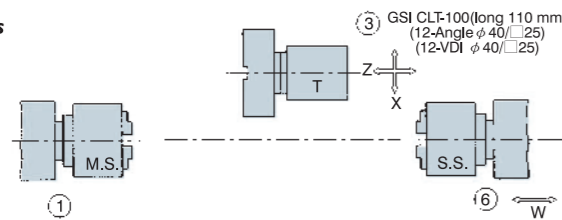
Dimensions



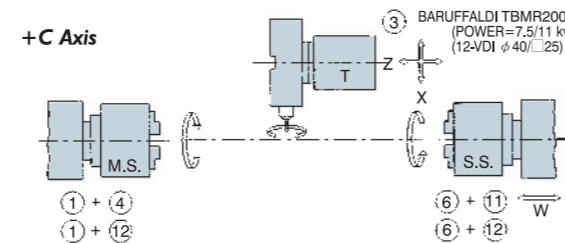
Unit: mm

Model	Item	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	T
HT-30 Series		2250	2085	615	1210	1050	540	1350	-	-	3175	815	545	4535	975	1085	1000	1000	550	-
HT-35 Series		2250	2310	640	1275	1182	560	1420	-	-	3850	1080	660	5395	780	1030	1000	1000	550	-
HT-40 A/B/C/D/E		3615	2870	965	1595	1220	460	2130	1025	300	5140	1145	560	6845	850	1110	1500	1000	660	730
HT-60 A/B/C/D/E		3615	2870	965	1595	1220	460	2130	1025	300	5640	1145	560	7345	850	1110	1500	1000	660	730
HT-80 A/B/C/D/E		3615	2870	965	1595	1220	460	2130	1025	300	6140	1145	560	7845	850	1110	1500	1000	660	730
HT-100 A/B/C/D/E		3615	2940	983	1605	1255	460	2130	1025	300	6600	1250	560	8410	850	1110	1500	1000	660	730

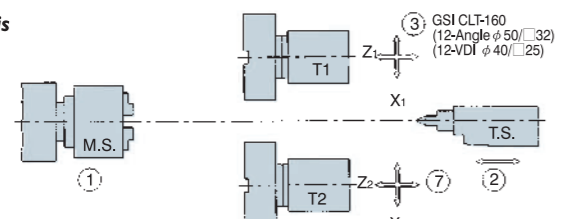
3 Axis



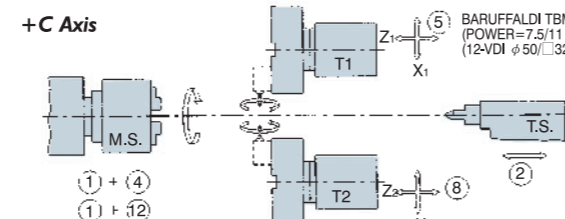
+C Axis



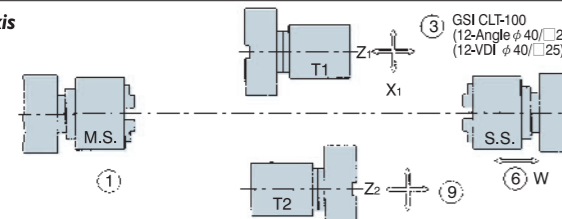
4 Axis



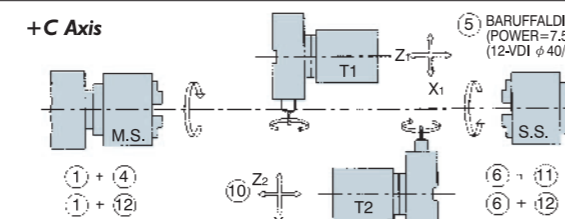
+C Axis



5 Axis

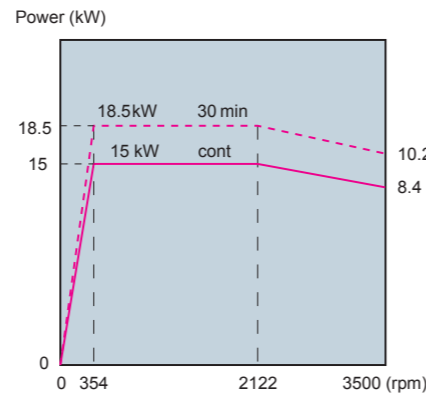
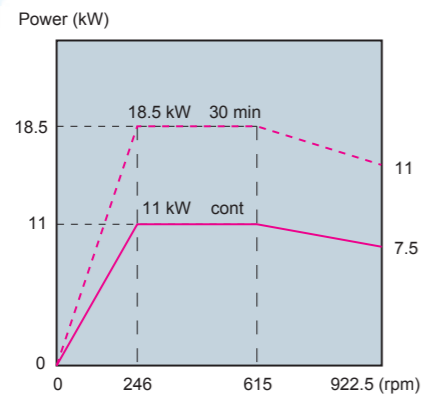
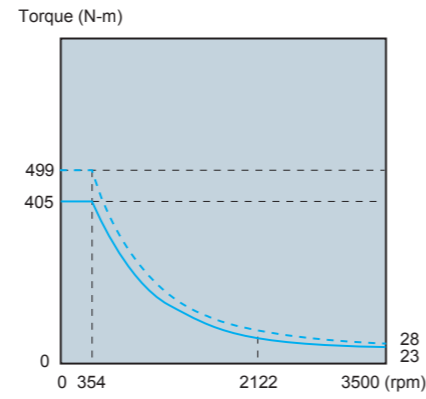
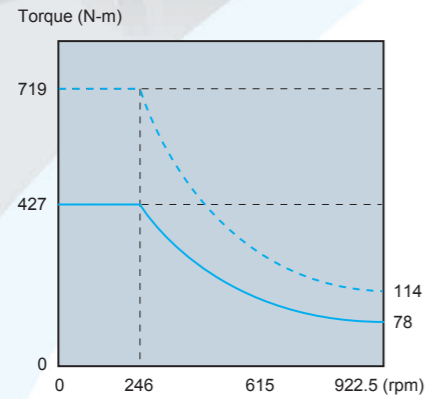


+C Axis

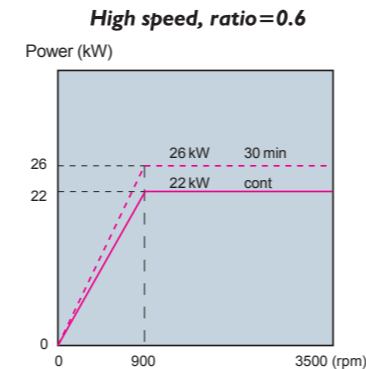
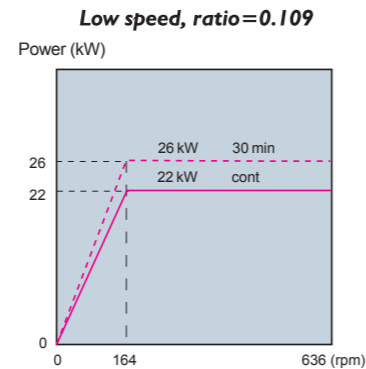
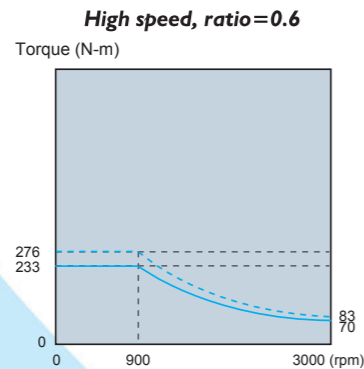
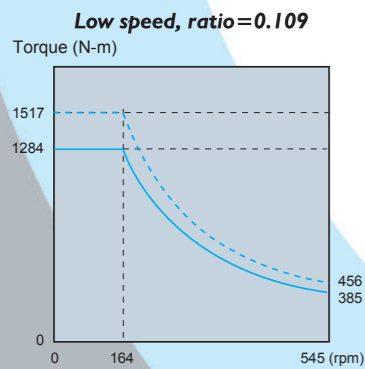


Spindle Power & Torque Chart

HT-30/35 Series FANUC AC α P30

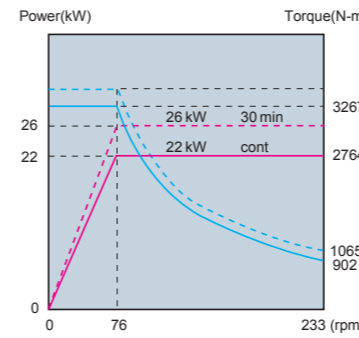


HT-A Series with ZF gear box

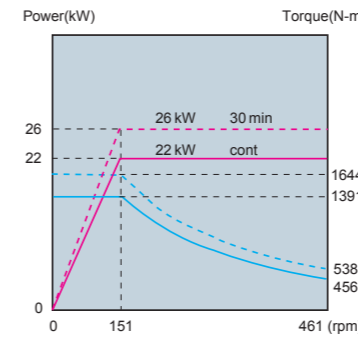


HT-B Series with Auto 4-speed gear box

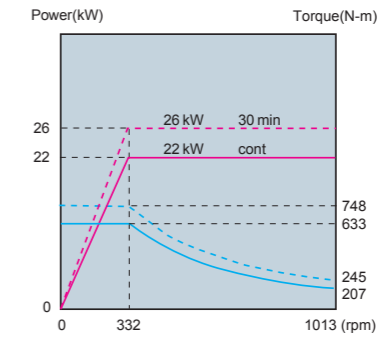
Low speed S1, ratio=0.051095



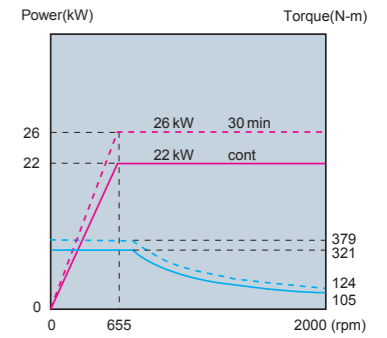
Low speed S2, ratio=0.100805



High speed S3, ratio=0.221463

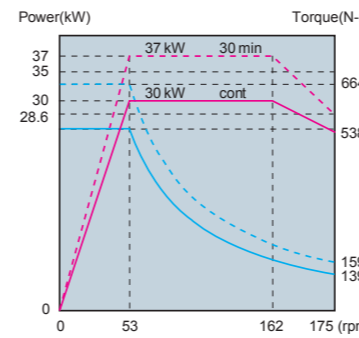


High speed S4, ratio=0.436928

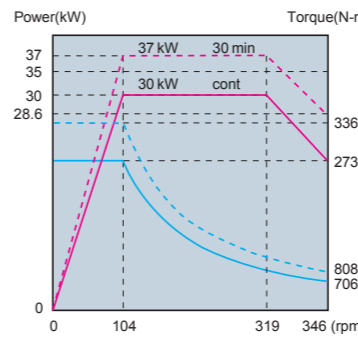


HT-C Series with Auto 4-speed gear box

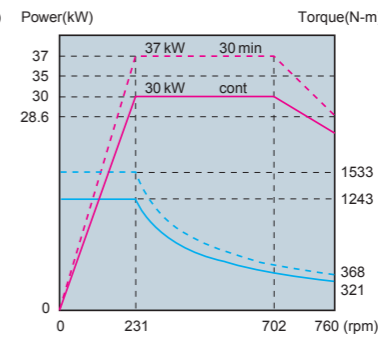
Low speed S1, ratio=0.046254



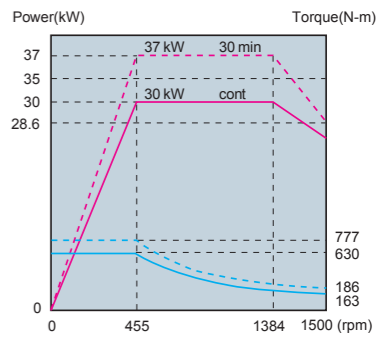
Low speed S2, ratio=0.091255



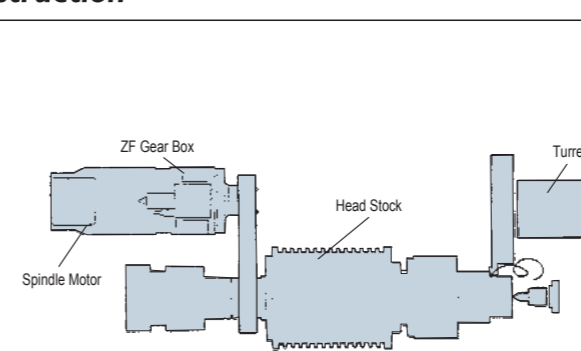
High speed S3, ratio=0.200483



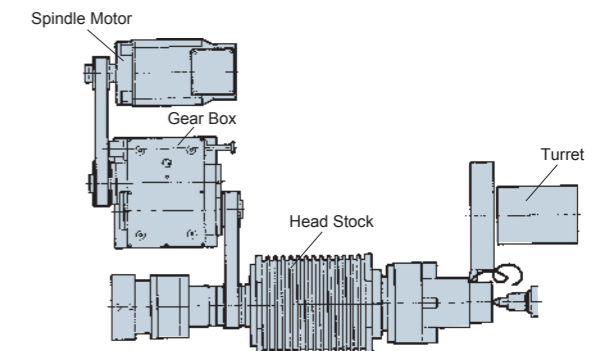
High speed S4, ratio=0.395535



Construction



With ZF gear box drive

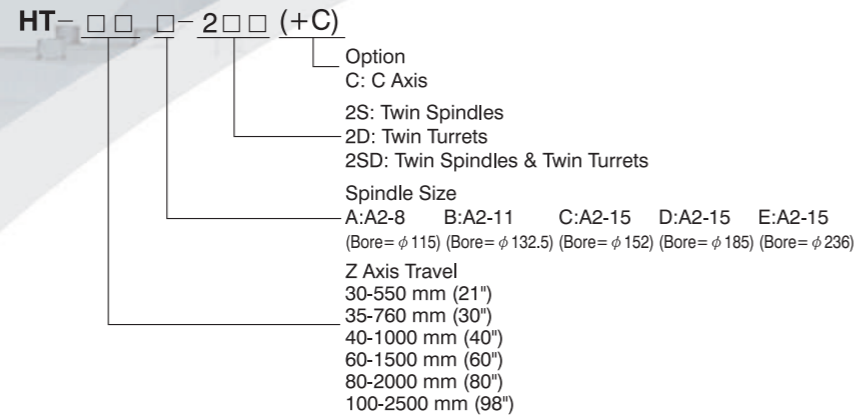


With Auto 4-speed drive

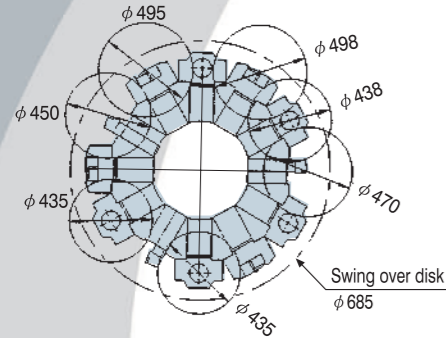
Turret Working Capacity / Range

Powered Turret + C-Axis Function

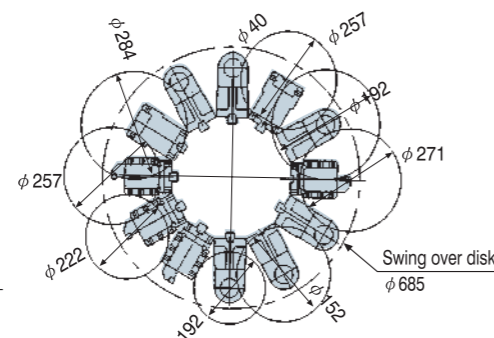
Modal Number Definition



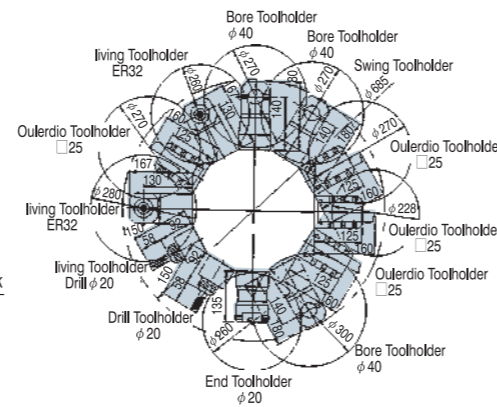
Machining Capacity



4 Axis Series
Direct Mount Type

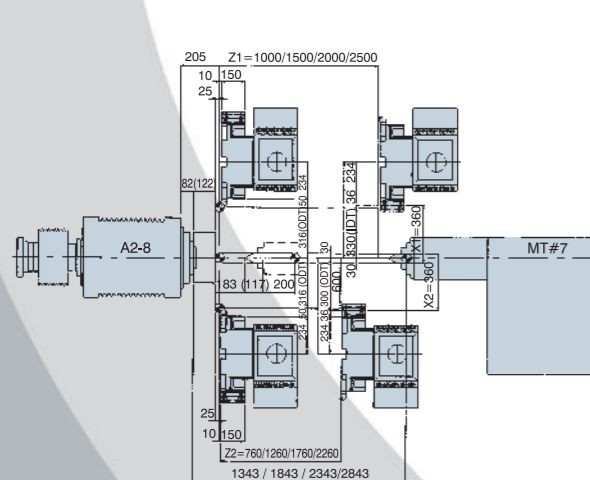


3/5 Axis Series
Direct Mount Type

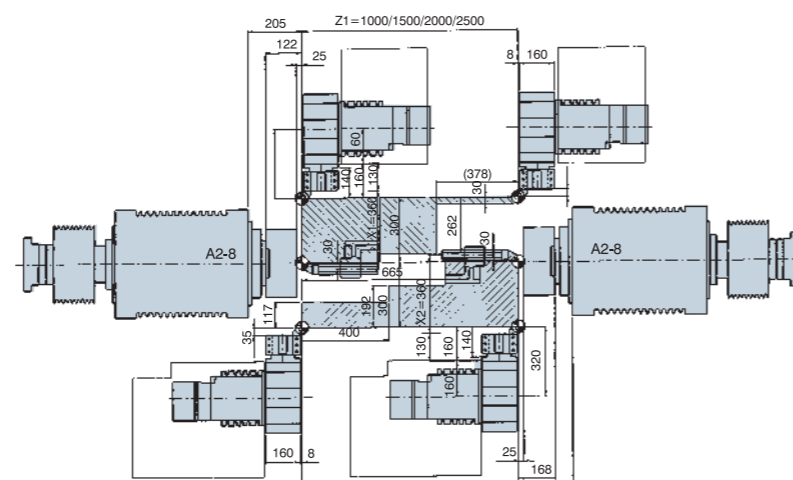


3/5 Axis Series + C axis
Living Tool

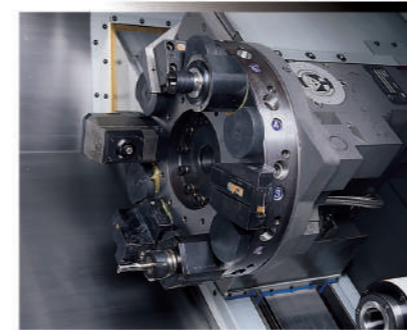
Machining Range



4 Axis Series



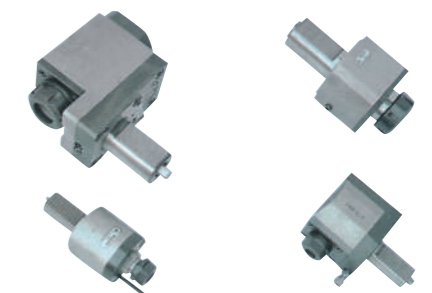
3/5 Axis Series



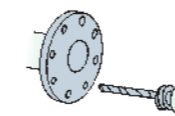
C-axis provides flexible turning performance for handling cam or special profiled parts that need milling / drilling / tapping operations. 0.001 degree indexing allows accurate circular positioning.

Item	Power Turret Model	TBMR 200	TBMA 250
Max. speed of turret		3800 rpm	3276 rpm
Twist drilling	$d \times a$ (mm)x(mm/μ)	20 x 0.20	22 x 0.20
Slot milling	$d \times P \times a$ (mm)x(mm)x(mm/min)	25 x 14 x 40	25 x 20 x 40
Tapping	$d \times p$ (mm)x(mm)	M16 x 2	M18 x 2
Toolholder shaft size		VDI 40	VDI 50
Motor horsepower		AC 3.7 / 5.5 kW	AC 3.7 / 5.5 kW

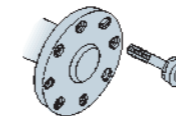
Live Tooling



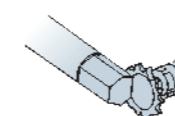
Examples for Machining with Live Tools



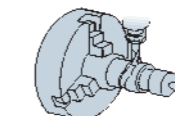
Drilling



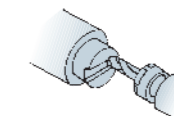
Thread cutting



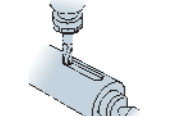
Face cutting



Cam cutting

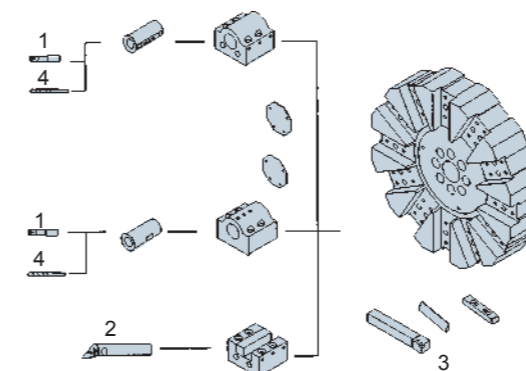


Slot cutting

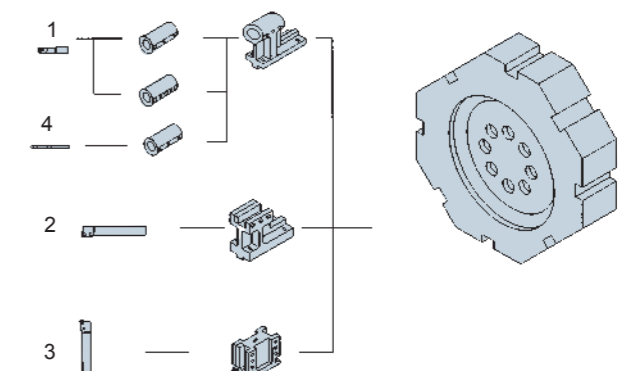


Key way cutting

Tool System



4 Axis Series



3/5 Axis Series

No.	Model Tool Type	HT-30 / 35 / 40 / 60 / 80 / 100 (4 Axis)	
		Metric System (mm)	Imperial System
1	Bore	φ 12, φ 16, φ 20, φ 25 φ 32, φ 32, φ 40, φ 50	φ 1/2", φ 5/8", φ 3/4", φ 1" φ 1-1/4", φ 1-1/2", φ 2"
2	End	□ 32	□ 1-1/4"
3	Outerdia	□ 32	□ 1-1/4"
4	Drill	MT#2, #3, #4, #5	

No.	Model Tool Type	HT-30 / 35 / 40 / 60 / 80 / 100 (3/5 Axis)	
		Metric System (mm)	Imperial System
1	Bore	φ 8, φ 10, φ 12, φ 16 φ 20, φ 25, φ 32, φ 40	φ 1/4", φ 1/2", φ 5/8", φ 3/4" φ 1", φ 1-1/4", φ 1-1/2"
2	End	□ 25	□ 1"
3	Outerdia	□ 25	□ 1"
4	Drill	MT#2, #3, #4	

