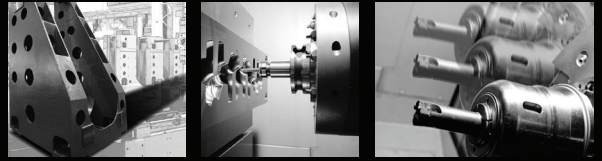
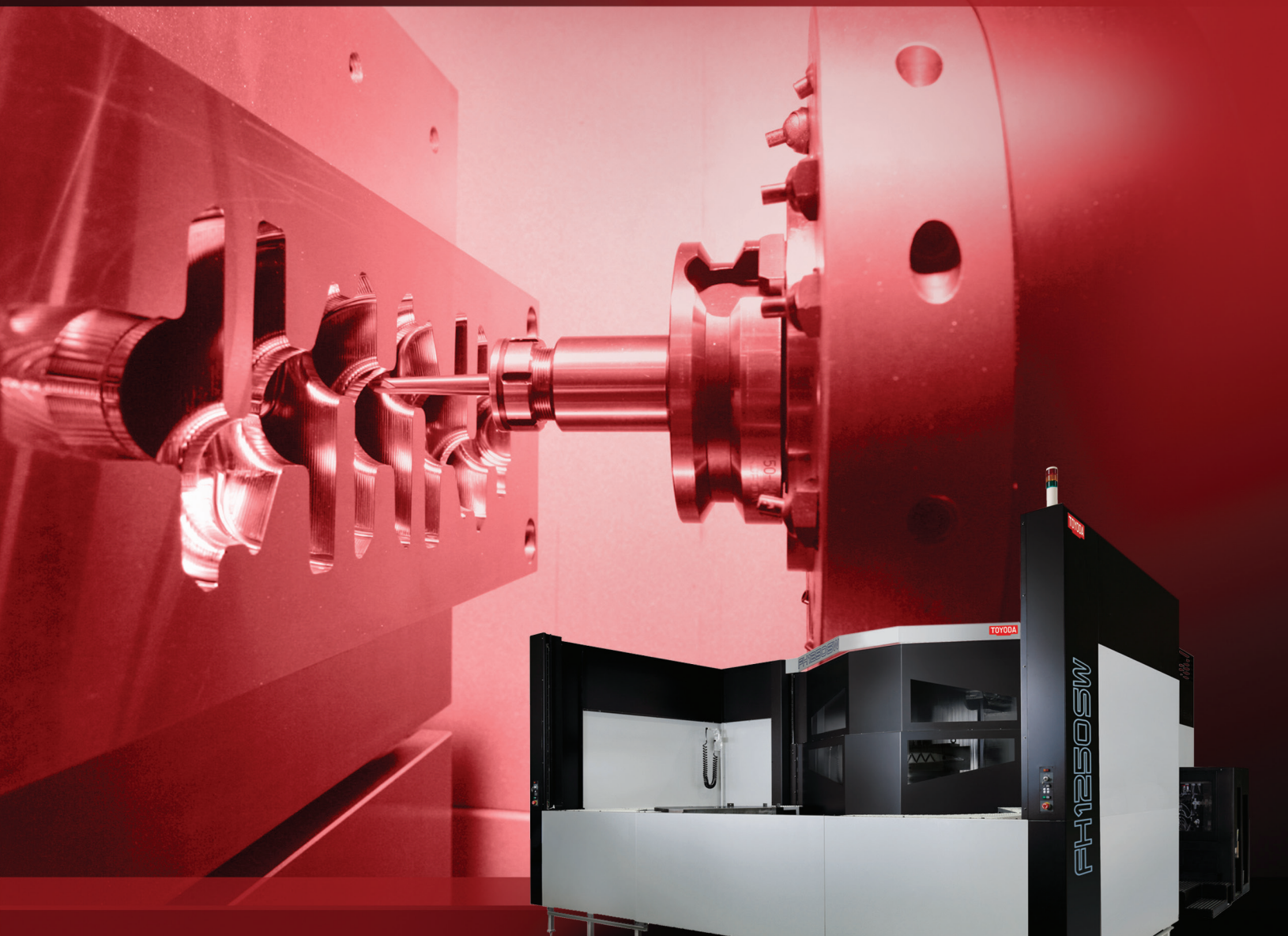


TOYODA



HORIZONTAL MACHINING CENTER

Product Range



JTEKT

Koyo | **TOYODA**

HORIZONTAL MACHINING CENTERS

Toyota's horizontal machining centers are on the leading edge of metalcutting technology. Toyota offers a full line of machines for rapid processing of small-to-medium size parts, and highly precise machining for large workpieces. Choose from a range of sizes and options to match the machining center to your quality, size and volume requirements.

FH-J & FH-S SERIES

Designed for speed, the J and S series offer quick acceleration, fast traverse rates, and rapid tool change time resulting in reduced cycle times.

FH-SX & SX-i SERIES

Toyota's SX Series is fast and powerful, enabling heavy cuts with the best speed and performance in its class. These machines feature powerful spindles and dual ballscrews on the Y and Z axes.

FA SERIES: BOX GUIDEWAYS

Specializing in heavy-duty cutting applications, the FA Series features box guideways and powerful spindles for heavy-duty cutting.

FH-SW QUILL SPINDLE

The FH1250SW is designed to efficiently handle large workpieces requiring long reach for drilling and boring applications through the use of a quill spindle.

FIVE-AXIS SERIES

Toyota five-axis machining centers are ideal for complex, prismatic workpieces.

MULTITASKING SERIES

Gear cutting processes (turning, milling, drilling) have been integrated into one horizontal machining center equipped with gear skiving functionality.

400 mm Pallet



Specification / Model	Unit	FH400J	FH450S
Pallet Size	in (mm)	15.75 x 15.75 (400 x 400)	17.72 x 17.72 (450 x 450)
X-axis Travel (column)	in (mm)	23.62 (600)	
Y-axis Travel (spindle head)	in (mm)	22.05 (560)	23.62 (600)
Z-axis Travel (work table)	in (mm)	24.80 (630)	23.62 (600)
Max. Workpiece Swing (diameter)	in (mm)	24.80 (630)	
Max. Workpiece Height	in (mm)	35.43 (900)	29.53 (750)
Max. Load on Pallet	lb (kg)	880 (400)	
Spindle Drive Motor for 15 min./ cont.	kW (HP)	30 / 25 (22 / 18.5)	
Spindle Torque	ft-lb (Nm)	123 (167)	
Spindle Speed	RPM	15,000	
Spindle Taper	-	CAT40	
Rapid Feedrate (X,Y and Z)	ipm (m/min)	2,362 (60)	1,968 (50)
Tool Storage Capacity	number	60 Standard (Opt. 119)	60 Standard (Opt. 120)
Standard Foot Print with Standard Magazine, Spindle, Coolant Tank and Chip Conveyor (L x W x H)	in (mm)	163 x 99 x 108 (4,122 x 2,500 x 2,733)	243 x 100 x 125 (6,159 x 2,520 x 3,160)

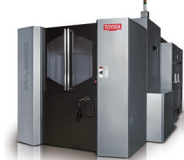
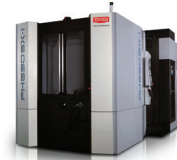
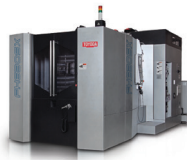
500 mm Pallet



Specification / Model	Unit	FH500J	FH550S	FH550SX
Pallet Size	in (mm)	19.68 X 19.68 (500 X 500)	21.65 x 21.65 (550 x 550)	
X-axis Travel (column)	in (mm)	28.74 (730)	29.52 (750)	
Y-axis Travel (spindle head)	in (mm)	28.74 (730)	31.50 (800)	
Z-axis Travel (work table)	in (mm)	33.46 (850)		
Max. Workpiece Swing (diameter)	in (mm)	31.50 (800)	33.46 (850)	
Max. Workpiece Height	in (mm)	31.5 x 39.4 (1,000)	45.0 (1,143)	
Maximum Load on Pallet	lb (kg)	1,540 (700)	1,760 (800)	
Spindle Drive Motor for 15 min./ cont.	HP (kW)	30 / 25 (22 / 18.5)		40 / 30 (30 / 22)
Spindle Torque	ft-lb (Nm)	123 (167)		442 (600)
Spindle Speed	RPM	15,000		6,000
Spindle Taper	-	CAT40	CAT40 / CAT50	CAT50
Rapid Feedrate (X,Y and Z)	ipm (m/min)	2,362 (60)		
Tool Storage Capacity	number	60 Standard (Opt. 119)	60 Standard (Opt. 121, 200)	60 Standard (Opt. 121)
Standard Foot Print with Standard Magazine, Spindle, Coolant Tank and Chip Conveyor (L x W x H)	in (mm)	186 x 104 x 113 (4,710 X 2,635 X 2,868)	283 x 126 x 126 (7,197 x 3,182 x 3,180)	284 x 131 x 126 (7,207 x 3,312 x 3,180)

Specifications subject to change without notice

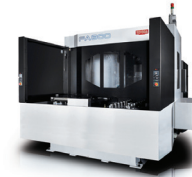
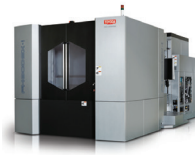
630 mm Pallet



Specification / Model	Unit	FH630SX	FH630SX-i	FA630S
Pallet Size	in (mm)	24.80 x 24.80 (630 x 630)		
X-axis Travel (column)	in (mm)	39.37 (1,000)	41.34 (1,050)	39.37 (1,000)
Y-axis Travel (spindle head)	in (mm)	31.50 (800)	35.43 (900)	33.46 (850)
Z-axis Travel (work table)	in (mm)	33.46 (850)	41.34 (1,050)	29.52 (750)
Max. Workpiece Swing (diameter)	in (mm)	39.37 (1,000)	46.06 (1,170)	39.37 (1,000)
Max. Workpiece Height	in (mm)	45.0 (1,143)	49.21 (1,250)	39.37 (1,000)
Maximum Load on Pallet	lb (kg)	2,640 (1,200)	2,646 (1,200)	2,860 (1,300)
Spindle Drive Motor for 15 min./ cont.	HP (kW)	40 / 30 (30 / 22)		
Spindle Torque	ft-lb (Nm)	442 (600)		
Spindle Speed	RPM	6,000		
Spindle Taper	-	CAT50		
Rapid Feedrate (X,Y and Z)	ipm (m/min)	2,362 (60)		1,417 (36)
Tool Storage Capacity	number	60 Standard (Opt. 121, 200)		60 Standard (Opt. 120,190,240)
Standard Foot Print with Standard Magazine, Spindle, Coolant Tank and Chip Conveyor (L x W x H)	in (mm)	281 x 141 x 126 (7,127 x 3,576 x 3,180)	*271 x 142 x 126 (*6,884 x 3,600 x 3,208)	232 x 172 x 142 (5,894 x 4,353 X 3,561)

* Does not include coolant tank in measurement.

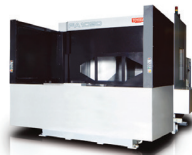
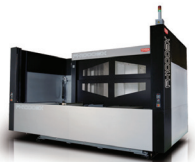
800 mm Pallet



Specification / Model	Unit	FH800SX-i	FA800S
Pallet Size	in (mm)	31.50 x 31.50 (800 x 800)	
X-axis Travel (column)	in (mm)	57.09 (1,450)	53.15 (1,350)
Y-axis Travel (spindle head)	in (mm)	49.21 (1,250)	45.27 (1,150)
Z-axis Travel (work table)	in (mm)	61.02 (1,550)	45.27 (1,150)
Max. Workpiece Swing (diameter)	in (mm)	59.05 (1,500)	62.99 (1,600)
Max. Workpiece Height	in (mm)	59.05 (1,500)	51.18 (1,300)
Maximum Load on Pallet	lb (kg)	5,511 (2,500)	5,500 (2,500)
Spindle Drive Motor for 15 min./ cont.	HP (kW)	40 / 30 (30 / 22)	
Spindle Torque	ft-lb (Nm)	442 (600)	
Spindle Speed	RPM	6,000	
Spindle Taper	-	CAT50	
Rapid Feedrate (X,Y and Z)	ipm (m/min)	2,127 (54)	945 (24)
Tool Storage Capacity	number	60 Standard (Opt. 121)	60 Standard (Opt. 120,190,240)
Standard Foot Print with Standard Magazine, Spindle, Coolant Tank and Chip Conveyor (L x W x H)	in (mm)	382 x 185 x 145 (9,680 x 4,680 x 3,680)	291 x 192 x 166 (7,369 x 4,860 x 4,210)

Specifications subject to change without notice

1,000 mm Pallet



Specification / Model	Unit	FH1000SX	FA1050S
Pallet Size	in (mm)	39.37 x 39.37 (1,000 x 1,000)	41.33 x 41.33 (1,050 x 1,050)
X-axis Travel (column)	in (mm)	62.99 (1,600)	
Y-axis Travel (spindle head)	in (mm)	55.11 (1,400)	
Z-axis Travel (work table)	in (mm)	72.83 (1,850)	45.2 (1,150)
Max. Workpiece Swing (diameter)	in (mm)	70.86 (1,800)	72.83 (1,850)
Max. Workpiece Height	in (mm)	62.99 (1,600)	61.02 (1,550)
Maximum Load on Pallet	lb (kg)	6,600 (3,000)	
Spindle Drive Motor for 15 min./ cont.	HP (kW)	40 / 30 (30 / 22)	
Spindle Torque	ft-lb (Nm)	442 (600)	
Spindle Speed	RPM	6,000	
Spindle Taper	-	CAT50	
Rapid Feedrate (X,Y and Z)	ipm (m/min)	2,126 (54)	945 (24)
Tool Storage Capacity	number	60 Standard (Opt. 121)	60 Standard (Opt. 120,190,240)
Standard Foot Print with Standard Magazine, Spindle, Coolant Tank and Chip Conveyor (L x W x H)	in (mm)	369 x 249 x 159 (9,350 x 6,305 x 4,037)	321 x 213 x 161 (8,140 x 5,400 x 4,090)

1,250 - 1600 mm Pallet



Specification / Model	Unit	FH1250SX	FH1250SX 5-axis	FH1250SW Quill Spindle	FH1600SW-i
Pallet Size	in (mm)	49.21 x 49.21 (1,250 x 1,250)			63 x 49 (1,600 x 1,250)
X-axis Travel (column)	in (mm)	86.61 (2,200)			118 (3,000)
Y-axis Travel (spindle head)	in (mm)	62.99 (1,600)		59.01 (1,500)	75 (1,900)
Z-axis Travel (work table)	in (mm)	72.83 (1,850)			83 (2,100)
W-axis Travel (quill spindle)	in (mm)	-		21.6 (550)	29.5 (750)
Max. Workpiece Swing (diameter)	in (mm)	94.49 (2,400)			126 (3,200)
Max. Workpiece Height	in (mm)	70.87 (1,800)			83 (2,100)
Maximum Load on Pallet	lb (kg)	11,000 (5,000)			17,636 (8,000)
A-axis (tilting spindle index)	degree	-	-45° ~ +100°	-	-
B-axis (NC table)	positions	-	360,000	-	-
Quill Diameter	in (mm)	-			5.9 (150)
Spindle Drive Motor for 15 min./ cont.	HP (kW)	40 / 30 (30 / 22)	40 / 33 (30 / 25)	60 / 50 (45 / 37)	74 / 50 (55 / 37)
Spindle Torque	ft-lb (Nm)	442 (600)	195 (263)	972 (1,313)	1,560 (2,115)
Spindle Speed	RPM	6,000	10,000	3,000	4,000
Spindle Taper	-	CAT50			CAT50
Rapid Feedrate (X)	ipm (m/min)	1,654 (42)		1,260 (32)	1,378 (35)
Rapid Feedrate (Y)	ipm (m/min)	1,654 (42)		1,260 (32)	1,575 (40)
Rapid Feedrate (Z)	ipm (m/min)	1,654 (42)			1,575 (40)
Tool Storage Capacity	number	60 Standard (Opt. 121)			60 Standard (Opt. 120)
Standard Foot Print with Standard Magazine, Spindle, Coolant Tank and Chip Conveyor (L x W x H)	in (mm)	382 x 258 x 178 (9,688 x 6,533 x 4,520)		382 x 302 x 178 (9,688 x 7,652 x 4,520)	574 x 397 x 218 (14,600 x 10,100 x 5,540)

Specifications subject to change without notice



Multitasking Horizontal Machining Center

Specification / Model	Unit	GS300H4	GS300H5	GS700H
X, Y, Z Travel	in (mm)	28.7, 25.6, 33.5 (730, 650, 850)		35.4, 33.5, 35.4(900, 850, 900)
Rapid Feedrate	m/min	60		20 (X), 36 (Y, Z)
Y-axis Travel (spindle head)	in (mm)	62.99 (1,600)		59.01 (1,500)
Tilt axis (A axis) Swivel Angle	degree	-	-	100 (+5 ~ -95)
Tilt Axis (A axis) Rotating Speed	min ⁻¹	-	-	6
Spindle Nose Shape	-	BT No.40	BT No.50	BT No.50 (Opt. HSK-A100)
Spindle Speed	min ⁻¹	12,000	6,000	50 ~ 6,000
Spindle Drive Motor (short / cont.)	HP (kW)	22 / 18.5	30 / 25	30 / 22
B-axis (swivel table indexing angle)	degree	0.001° NC		-
Rotating Speed (workpiece axis)	min ⁻¹	3,000		1,000
Rated Output (workpiece axis)	HP (kW)	45 / 38 (33.5 / 28.3)		67 / 23 (50 / 17.5)
Torque max. / cont.(workpiece axis)	ft-lb (Nm)	118 / 66 (160 / 90)		1,106 / 708 (1,500 / 960)
Max. Workpiece Diameter	in (mm)	8.66 (220)		27.56 (700)
Max Workpiece Width	in (mm)	5.91 (150)		19.68 (500)
Max Workpiece Mass	lb (kg)	-	-	1,212 (550: chuck-200, workpiece-350)
Tool Mass	lb (kg)	17.64 (8)	59.52 (27)	59.52 (27)
Tool Storage Capacity	number	40 Standard		40 Standard (Opt. 60, 120)
Floor Space (L x W)	in (mm)	86 x 172 (2,200 x 4,375)	108 x 177 (2,745 x 4,510)	204 x 244 (5,200 x 6,200)

Specifications subject to change without notice



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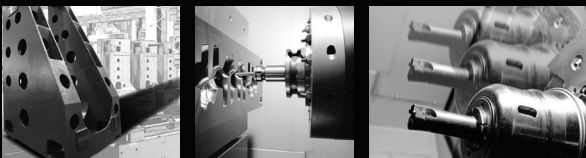
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