

FRYER
MACHINE SYSTEMS

The Toolroom Company



5X Series

5-Axis Rotating Spindle

The Fryer 5X Series features the Kessler tilting/rotary head which provides 360° of rotation and 200° of spindle tilt. This flexible spindle solution is perfect for the aerospace, automotive and oil field industries where rotating the part is not practical. Available in travel sizes of 60" to 160" and featuring full 5 axis Siemens 840D or Fanuc 31i B5 CNC controls.

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5X-60

- 40 tool high speed, twin arm ATC
- Full machine enclosure with side door access
- Excellent accessibility for crane loading
- Kessler German-made Kessler 2-axis head
- 5 arc second accuracy
- High torque 55 HP, 15,000 HP spindle
- Disc brake for A and C axis
- High capacity spindle refrigeration unit
- 5 axis remote electronic handwheel
- Siemens 840D SL CNC
- Fanuc 31i B5 CNC

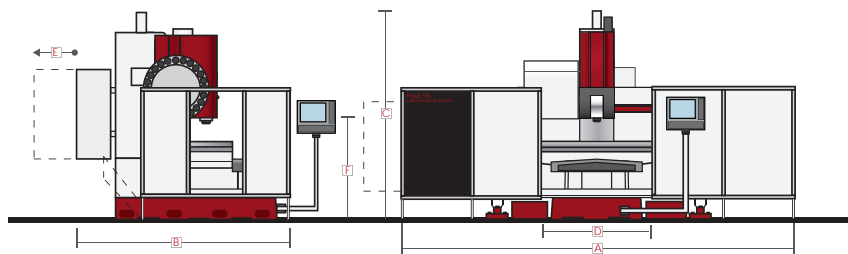


The Kessler heavy duty head is designed for cutting steel and tough alloys. It features a 55 HP spindle motor with 15,000 RPM and HSK-63 tool interface. Utilizing high power torque motors and Heidenhain glass scale feedback for incredible 5 arc second positioning accuracy and 3 arc second repeatability. It also comes standard with dual action disc brakes for both A and C axis.



The Fryer 5X series features high precision rugged construction. C3 grade double nut ballscrews and pre-tensioned for added rigidity and accuracy. Certified Meehanite castings have hardened and ground box ways and Turcite liners for low friction and high rigidity. Heidenhain glass scales are available for the ultimate in positioning accuracy.

5X SERIES SPECIFICATIONS		5X-60	5X-100	5X-120	5X-160
MACHINE CAPACITY	X Travel	60"	100"	120"	160"
	Y Travel	30"	35"	50"	50"
	Z Travel	35"	34"	40"	40"
	A Travel	+/- 95°	+/- 95°	+/- 105°	+/- 105°
	C Travel	+/- 200°	+/- 200°	+/- 200°	+/- 200°
	Table Load (Evenly Distributed)	5,000 lbs.	5,000 lbs.	7,500 lbs.	8,500 lbs.
	Table Size	24" x 67"	30" x 112"	40" x 126"	40" x 165"
	Way Type	Linear	Box Ways	Box Ways	Box Ways
	T-Slots (No./Width)	5 / 0.709"	5 / 0.709"	5 / 0.709"	5 / 0.709"
	Table Top to Floor	32"	35"	38"	38"
SPINDLE	Motor HP (Peak)	35.0 HP	35.0 HP	55.0 HP	55.0 HP
	Spindle Speed (RPM)	200 - 12,000 RPM	200 - 12,000 RPM	200 - 15,000 RPM	200 - 15,000 RPM
	Spindle Torque (max)	40 ft/lbs. @ 1,000 RPM	40 ft/lbs. @ 1,000 RPM	90 ft/lbs. @ 2,000 RPM	90 ft/lbs. @ 2,000 RPM
	Tool Type/Taper	HSK-63A			
	Spindle Nose to Center of Rotation	11"			
	Spindle Nose to Table - Vertical	0 - 30"	0 - 30"	0 - 32.5"	0 - 32.5"
	Spindle Nose to Table - Horizontal	5" - 40"	5" - 39"	4" - 43"	4" - 43"
	Spindle Center to Column	30"	36"	51"	51"
ATC	Tool Storage Capacity	40-Station Arm Type (60-Tool optional)			
	Tool Change Time	3 Seconds			
	Max. Tool Diameter (full)	3.0"			
	Max. Tool Diameter (adjacent empty)	5.9"			
	Max. Tool Weight	15.0 lbs.			
	Max. Tool Length	13"			
PERFORMANCE	Positioning Accuracy X, Y, Z	+/- 0.0002"			
	Positioning Repeatability X, Y, Z	+/- 0.0001"			
	Positioning Accuracy A, C	5 Seconds			
	Position Repeatability A, C	3 Seconds			
	Rapid Traverse	1,200 IPM X, Y, Z	800 IPM X, Y, Z	800 IPM X, Y, Z	800 IPM X, Y, Z
	Cutting Feed Rate	0.001 - 800 IPM X, Y, Z; 100 IPM A, C			
	Servo Type	AC Digital Brushless			
	Axis Thrust (Peak)	4,500 lbs.	4,500 lbs.	10,800 lbs.	10,800 lbs.
GENERAL INFO	Air Pressure Requirements	90 PSI; 5 CFM			
	Coolant Capacity	100 Gallons			
	Coolant Flow	9 Gal/Min			
	Power Requirements	150 AMP; 380-500 VAC 3 PHASE			
	Shipping Dimensions* (WxDxH)	161" x 89" x 93"	120" x 94" x 96"	140" x 105" x 105"	180" x 105" x 105"
	Operating Dimensions (WxDxH)	161" x 112" x 112"	240" x 110" x 110"	285" x 135" x 126"	300" x 135" x 126"
	Machine Weight	20,000 lbs.	25,500 lbs.	34,000 lbs.	37,000 lbs.



	5x-60	5x-100	5x-120	5x-160
Overall Width (A)	161"	240"	285"	300"
Overall Depth (B)	112"	110"	135"	135"
Maximum Height (C)	112"	110"	126"	126"
Door Opening Width (D)	62"	100"	120"	160"
Electrical Cabinet Swing (E)	32"	36"	25"	25"
Console Height (F)	62"	62"	62"	62"

* Requires some disassembly to meet these minimum dimensions. Contact factory for more information.

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Specifications subject to change without prior notice.