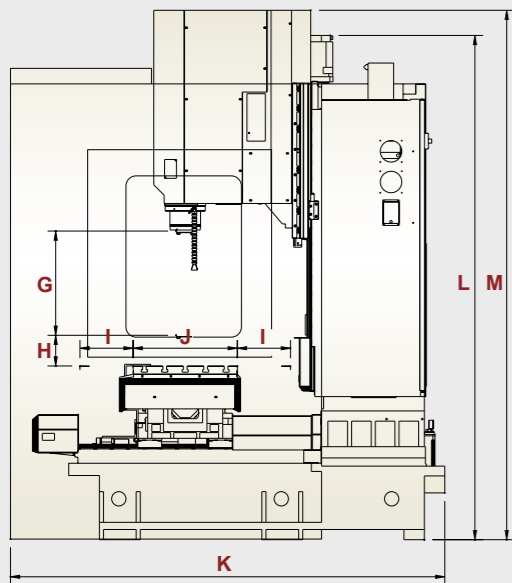
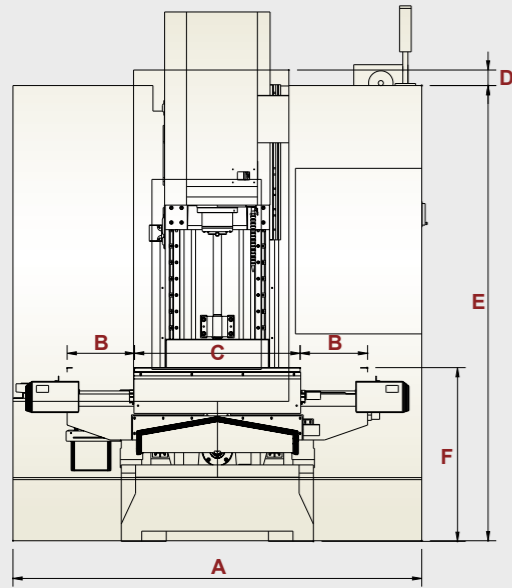


GENERAL SPECIFICATIONS



ITEM	QP2033	QP2040
A	95.6"(2430mm)	110"(2800mm)
B	16"(425mm)	20"(510mm)
C	39.4"(1000mm)	47"(1200mm)
D	3"(76mm)	
E	87.6"(2227mm)	
F	33.4"(850mm)	34.2"(870mm)
G	20"(510mm)	
H	5.9"(150mm)	5.1"(130mm)
I	10.4"(260mm)	
J	20"(510mm)	
K	83.6"(2115mm)	
L	97"(2467mm)	
M	102"(2590mm)	

※ Note: The manufacturer reserves the right to modify the design, specifications, mechanisms... etc. of the machine without prior notice. All the specifications shown above are just for reference.

CHEVALIER®

QP2033/2040

VERTICAL MACHINING CENTER (BOX WAYS)



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CAT: 2916-00036C00 / 20050831 / 1000 P1



Manual Grinders CNC Profile Grinders Automatic Grinders Molecular Decomposition Process (MDP) Grinder VMC (Various Sizes) VMC w. turntable Slant Bed CNC Lathes Teach-in Lathes

Grinder

VMC

Lathe

FALCON MACHINE TOOLS CO., LTD.
 No. 34, Hsing Kong Road, Shang Kang, Chang Hua
 TAIWAN 509
 TEL: 886-4-7991126 FAX: 886-4-7980011
<http://www.chevalier.com.tw>
 E-mail: overseas@chevalier.com.tw
 TA-YA Factory TEL: 886-4-25673266

U.S.A. OFFICE
CHEVALIER MACHINERY INC.
 9925 Tabor Place Santa Fe Springs, CA 90670 U.S.A.
 TEL: (562) 903-1929
 FAX: (562) 903-3959



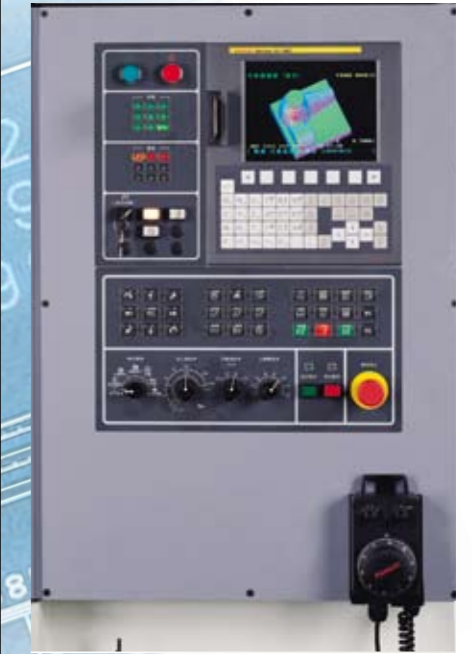
QP2033/2040 (BOXWAY)

HIGH PERFORMANCE VERTICAL MACHINING CENTER

- 25HP Dual Winding (Wye & Delta) spindle motor
- 4th axis prep
- Oil cooler prep
- 1,000psi coolant-thru-spindle prep
- FANUC OiM w/ manual guide Oi conversational control
- Absolute Encoder
- Alpha i Series motors
- Air purged spindle
- 8.4" color LCD
- 10,000rpm belt drive spindle (opt 12,000rpm)
- 24 tool arm type ATC
- Ring type coolant nozzles
- Rigid tapping
- Floating type tool release system
- Fully enclosed splash guard
- Remote MPG
- 945/945/787ipm XYZ rapids

FANUC Oi CONTROL FEATURES:

- Manual Guide Oi conversational programming
- Data server
- Graphic display
- AI Contour Control
- HRV3 (High Response Vector) servo control
- G-code & M-code assistance
- ISO part code programming
- Contour programming
- Front PCMCIA port for opt. memory card
- DNC operation with memory card
- Automatic override
- 40 blocks look ahead
- 640M (256KB)/400 maximum program capacity
- Programmable mirror image
- Coordinate rotation & scaling
- Tool life management
- Custom macro B
- High speed skip function
- G52-G59 workpiece coordinate system
- 48 pairs additional workpiece coordinate
- Interpolations: linear, circular, helical, cylindrical & polar coordinate
- Advanced canned cycles include circle & grid hole position, surfacing, circle & square pocketing and side cutting



FANUC OiM Control



QP2033/QP2040 : 84"

QP2033 : 96"
QP2040 : 110"

Note: Machine shown with optional accessories



Built-in Data Server 2.1GB

Ethernet jack for networking

FANUC α i high performance drivers & motors



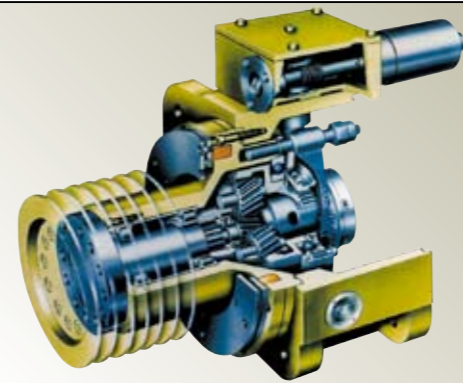
QP2033/2040 (BOX WAY)

HIGH PERFORMANCE VERTICAL MACHINING CENTER



1 Quick Release Floating Type Tool Discharge System

- Big diameter tool cylinder features a floating type tool unclamping system which eliminates the enormous unclamping pressure generated during each tool release. Benefits: longer tool life and longer-lasting spindle bearings.



ATC Mechanism

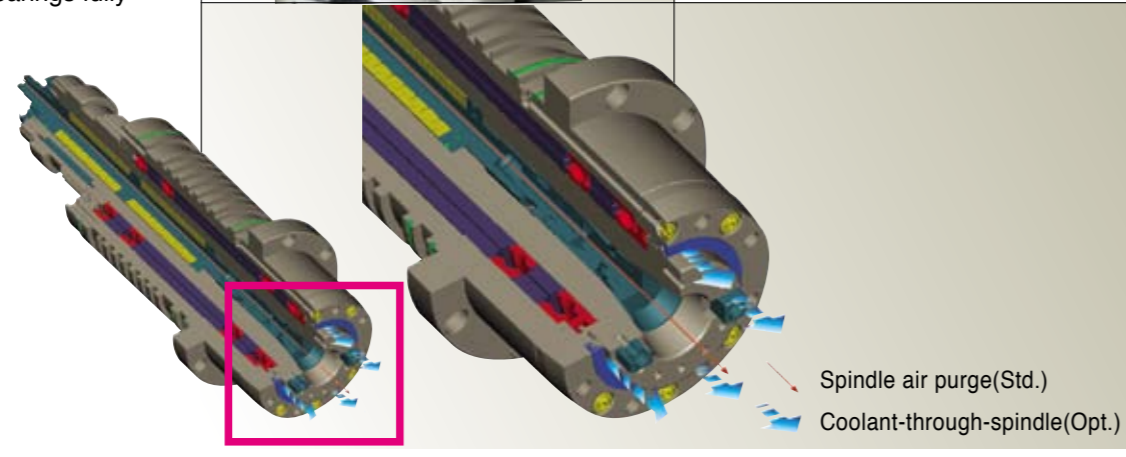
Tool Shank: CT40
 Tool Capacity: 24 opt 32
 Tool Selection: Random
 Tool Access: Bi-directional

Optional ZF gearbox

- Providing high torque in low rpm for heavy duty cutting, drilling & tapping.
- Max. 8000rpm, suitable for high speed machining.

2 Industry-proven Grinding Machine Spindle Technology

- Large spindle diameter design, Ø70mm front spindle bearing inner diameter, with ABEC Class 7 (P4) super high precision angular contact ball bearings fully support radius & axial thrust force.



Spindle air purge(Std.)
 Coolant-through-spindle(Opt.)

1,000 psi Coolant-Through-Spindle System(option)

- Belt drive: 10000rpm opt 12000rpm
- Gear drive: 12000rpm



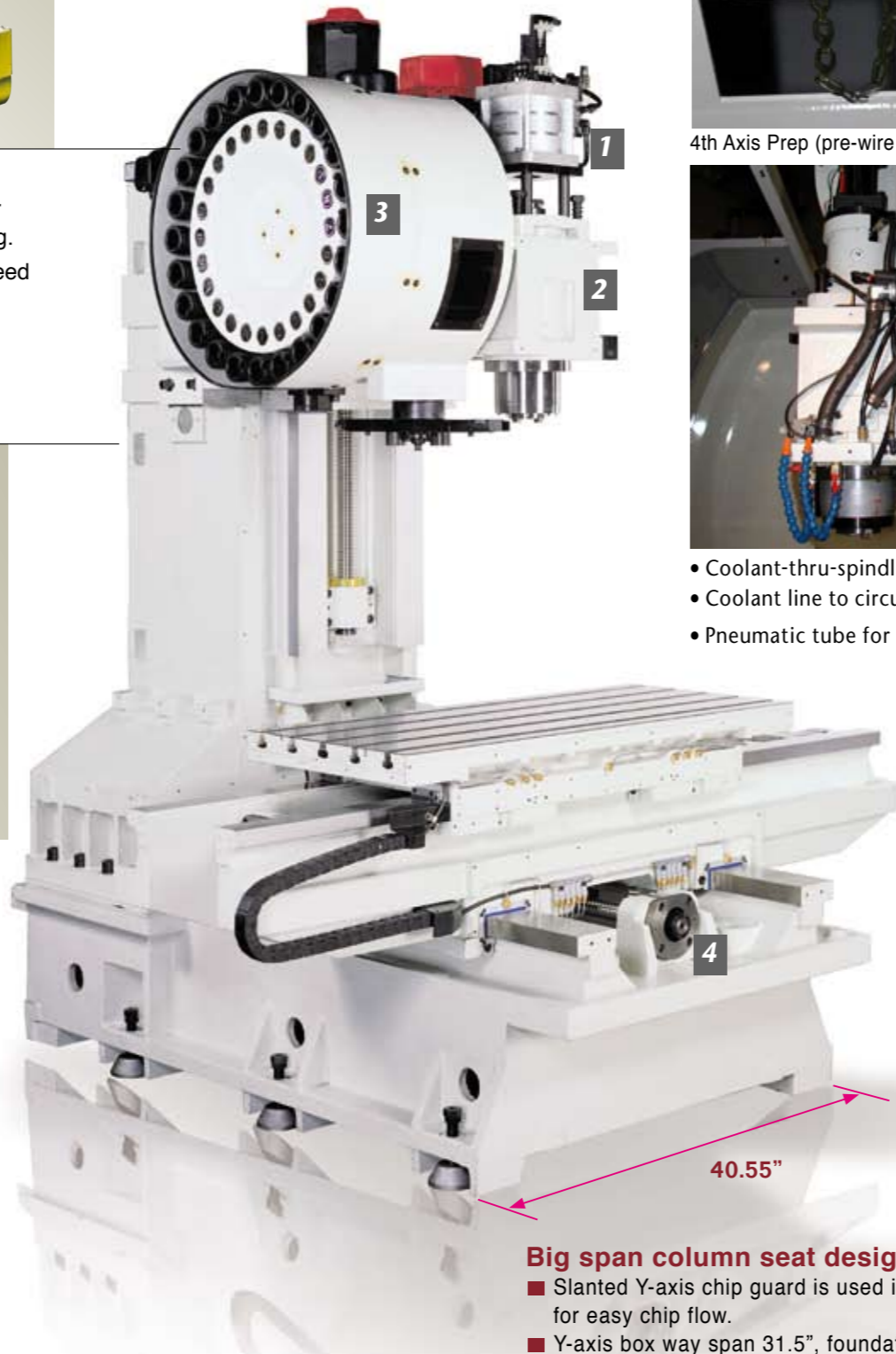
Optional direct drive spindle configuration means no power loss with less noise, less heat and less vibration.



10,000rpm coolant chilled, air-purged spindle with ring type coolant nozzle that provides a 'curtain' of coolant for both tool and workpiece.



Top guarding for the tool changer and spindle



40.55"

Big span column seat design

- Slanted Y-axis chip guard is used in the rear side of saddle for easy chip flow.
- Y-axis box way span 31.5", foundation bolts span 40.55"



4th Axis Prep (pre-wire only, excludes driver & motor)



- Coolant-thru-spindle prep incl all hoses & fittings
- Coolant line to circulate coolant in the 10000rpm spindle
- Pneumatic tube for air-purged spindle

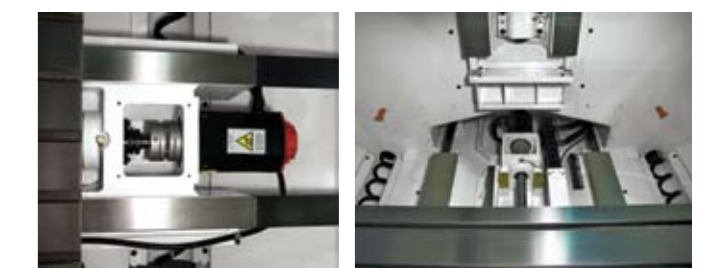
X/Y/Z Axis Box Ways

- Three axes box ways are hardened and precision ground, coated with Turcite-B and hand-scraped, allowing full lubrication on all way surfaces.
- Y axis stroke 20.5"
- Dual chip auger(option)



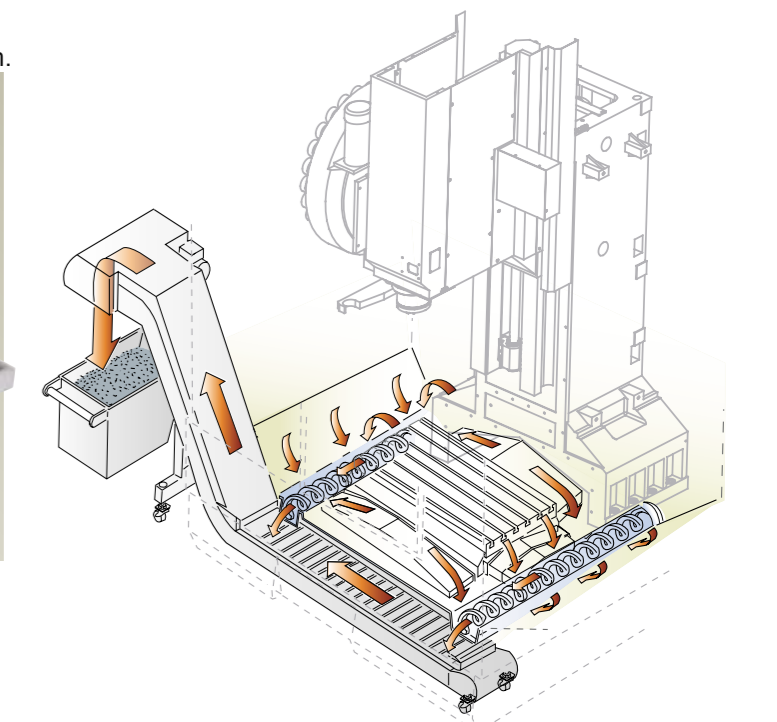
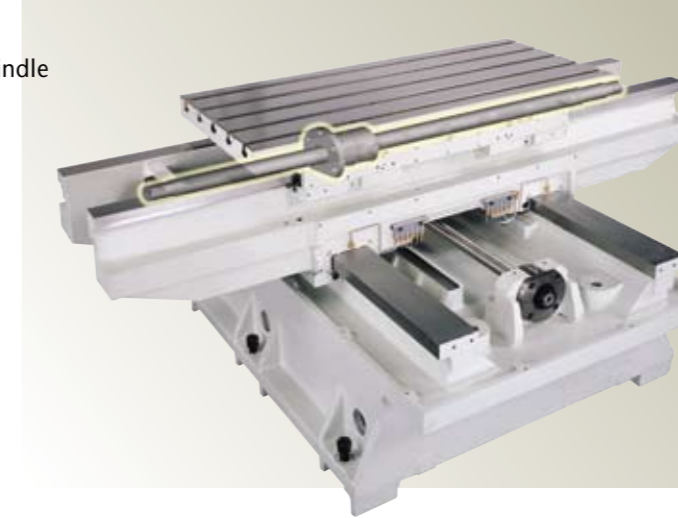
X/Y motor seat is cast with machine base & saddle

- The servo motor housing and thrust bearing are integrated into the casting for maximum rigidity.



4 Precision ground ballscrews

- Class C3 pretensioned ballscrew, Ø40mm X P10mm.



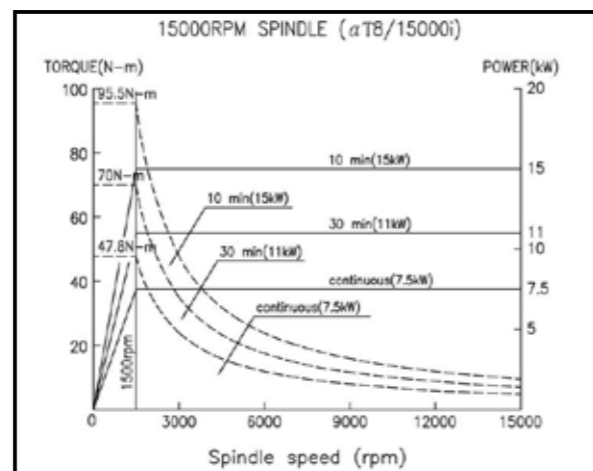
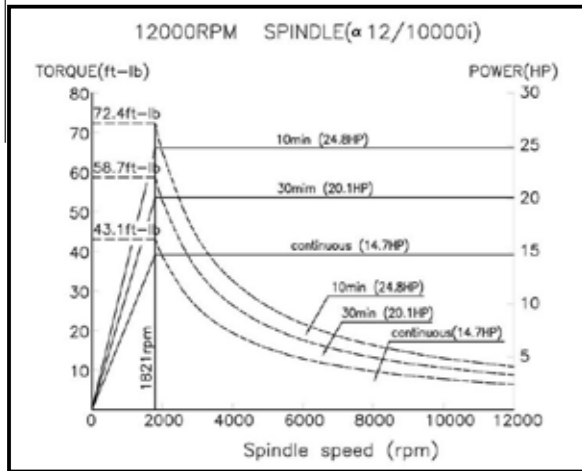
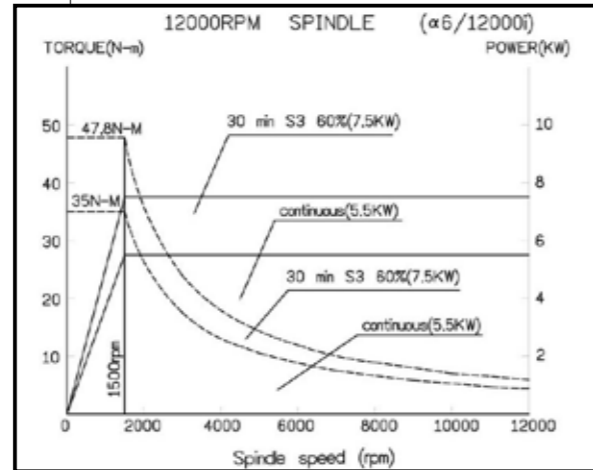
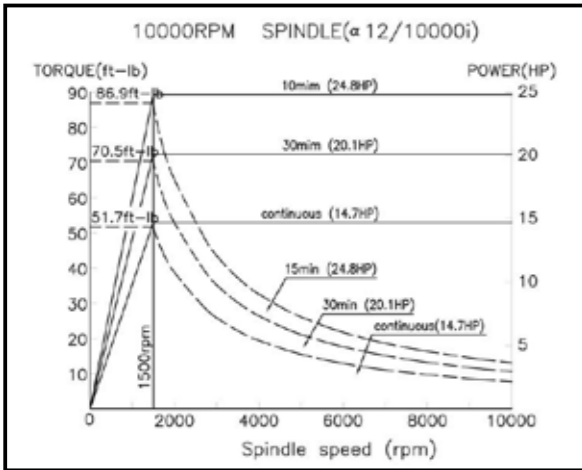
Easy chip flow splash guard design

- Slanted chip guard design for easy chip flow. Rear flood coolant nozzles are standard.

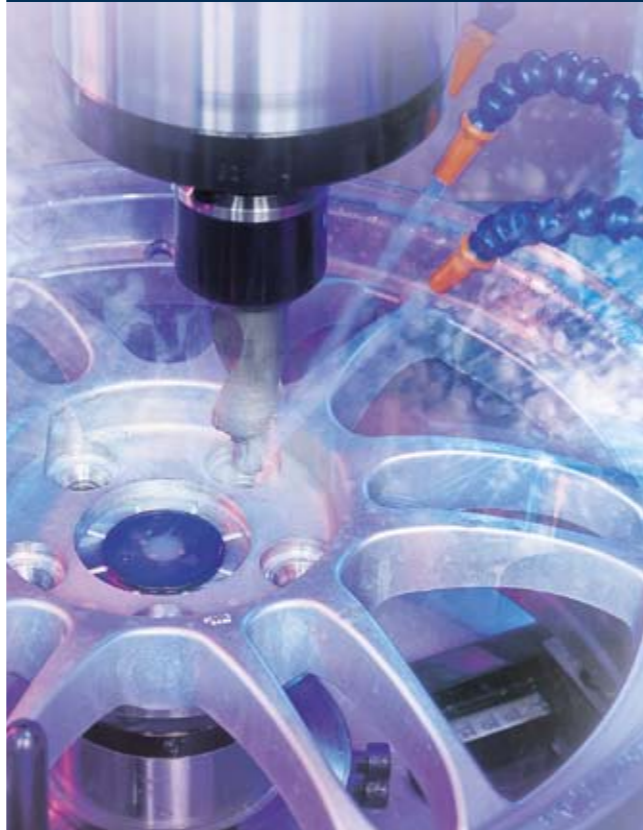


Oil Skimmer





EXAMPLE



Workpieces	Mouse-Shell	Pneumatic-Tool Mold	Detergent Container
Material	SKD-11	NAK-80	SKD-11
Hardness	HRC52	HRC-40	HRC52
Dimension	5.12"x3.54"x1.57"	.79"x.79"x5.90"	5.12"x3.54"x1.57"

Description	QP2033	QP2040
Table	1000x510mm(39.4"x20")	1200x510mm(47.2"x20")
Table Size	5x18mmx100mm (5x.71"x3.94")	
T-Slots(no. x W x dis.)	500kg (1100lbs)	600kg (1320lbs)
Table Load		
Travel		
X Travel	850mm(33.5")	1020mm(40.2")
Y Travel		530mm(20.9")
Z Travel		510mm (20")
Spindle		
Spindle Nose to Table		150~660mm (5.9"-26")
Spindle Center to Column		570mm(22.4")
Spindle Taper		#40
Spindle Speed		Belt: 10000opt. 12000rpm; Gear: 12000 opt 15000
Spindle Diameter		70mm (2.75")
Feed Rates		
Rapid on(X/Y/Z)Axes		24/24/20m/min (945/945/787ipm)
Cutting Feed Rate		1~10000mm/min (1-394ipm)
Diameter & Pitch of Ballscrew		40mm,P10
Accuracy		
Positioning		JIS B6338 ±0.00016"/12"
Repeatability		JIS B6338 ±0.0001"
Tool Changer		
Tool Capacity		24 (Opt. 32)
Changer Time		T-T 1.8 sec, C-C 3.45 sec
Tool Shank		CT40
Pull Stud		P40T-1
Max. Tool Diameter (With adjacent tool)		76mm (3")
Max. Tool Diameter (Without adjacent tool)		120mm (4.75")
Max. Tool Weight		7kg (15.4lbs)
Motor		
Spindle Motor		25HP (cont. 10min)
Drive Motor (X, Y, Z)		(S)3.3/3.3/3.5kW (H)3.5/3.5/5.7kW
Coolant Pump		1 HP
General		
Power Required		15KVA
Air Required		5.5kg/cm ² , 200L/min
Floor Space (WxDxH)	2430x2115x2590mm (94.4"x81"x101.6")	2800x2115x2590mm (108.2"x818"x101.6")
Machine Net Weight, approx	5300kg (11,660lbs)	6000kg (13,200lbs)

Standard Accessory

- 25HP dual winding motor
- Absolute encoder
- Air purged spindle
- 8.4" color LCD
- 24-tool arm type ATC
- 4th axis prep
- Coolant-thru spindle prep
- Oil cooler prep
- Ring type coolant nozzles
- Fully enclosed splash guard
- Automatic lubrication system
- Remote MPG
- Rigid tapping
- Pilot light
- Tools & tool box
- Leveling bolts and pads
- Operation manual & parts list

Optional Accessory

- CT40 pull studs
- Lift up chip conveyor w/ cart
- Dual screw type chip conveyor
- 32-station ATC
- CNC rotary table
- 12000rpm belt drive spindle
- 15000rpm gear drive spindle
- Spindle oil cooler
- Cutting air blast
- 1000psi Coolant-thru-spindle
- Automatic tool length measurement
- Heat exchanger for electric cabinet
- 4th axis with amplifier
- Oil skimmer
- Air gun
- Coolant gun
- Linear scales
- ZF gear box

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TOOL SHANK & PULL STUD

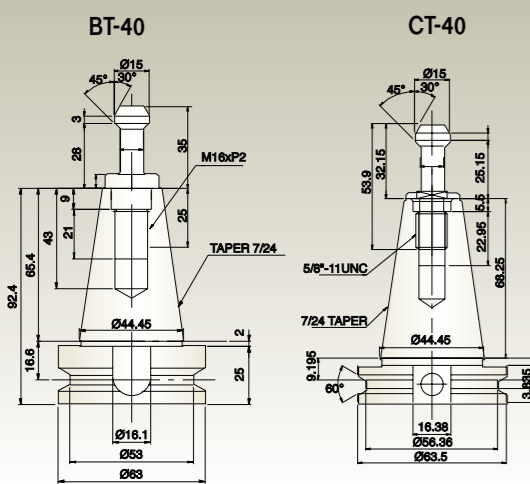
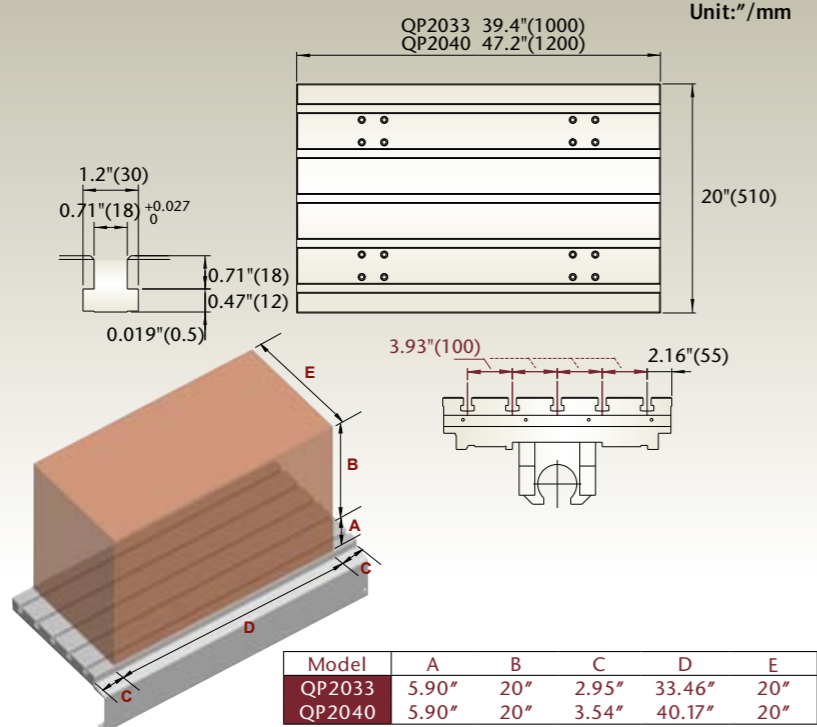


TABLE & T-SLOTS



INSPECTION



Laser Calibration

After assembly, all machines are measured and calibrated by the QC department's laser calibration equipment. This verifies precision and machine compensation, resulting in consistent accuracy and repeatability.

Ball Bar Testing

The machine is put through a series of circular movements in the X/Y plane, and 1/2 circle movements in the X/Z and Y/Z planes. Encoder data from the bar is fed into a computer which outputs a chart of machine accuracy. Any deviations in squareness or length show up as distorted circles that are very easy for a technician to spot. This chart assures that the machine is accurate and properly aligned.