

Automotive Wheel Machining

Kira KN40Va Vertical CNC Production Center with Special Application Fixture

Key Features

- Ability to drill, spot-face and back spot-face valve stem hole.

Automotive Wheel



PRODUCTION CHALLENGE:

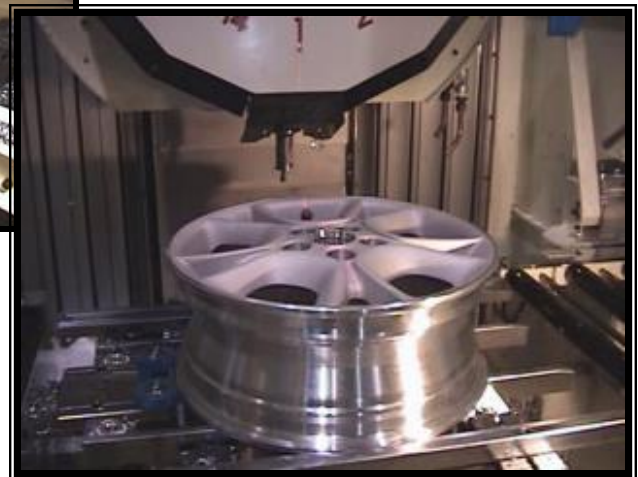
- Drill, chamfer and contour bore (4) four, (5) five and (6) six hole lug patterns and drill, spot-face and back spot-face a family of aluminum wheels.

SOLUTION:

- Kira traveling column CNC production center equipped with a tilt / rotary table to provide access to both sides of the valve stem hole and to (5) five accent holes around the perimeter of the wheel.

RESULTS:

- Kira's automated load and unload system feeds a variety of wheels through the Kira (5) five axis CNC platform continually in an unattended operation.

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MACHINE SPECIFICATIONS	KN40Va-500S	KN40Vb-500S	KN40Va-500S-2APC	KN40Vb-500S-2APC
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TRAVEL

X axis stroke	19.7" (500mm)	19.7" (500mm)	19.7" (500mm)	19.7" (500mm)
Y axis stroke	13.8" (350mm)	13.8" (350mm)	13.8" (350mm)	13.8" (350mm)
Z axis stroke	15.8" (400mm)	15.8" (400mm)	15.8" (400mm)	15.8" (400mm)

SPINDLE POWER

Standard	6,000RPM-10HP	8,000RPM-10HP	6,000RPM-10HP	8,000RPM-10HP
Optional	10,000RPM-10HP	12,000RPM-15HP	10,000RPM-10HP	12,000RPM-15HP

TABLE / PALLET CHANGER

	Fixed Table	Fixed Table	Each Pallet	Each Pallet
Working area	27.6"x15.8"	27.6"x15.8"	23.6"x13.8"	23.6"x13.8"
Pallet change time	n/a	n/a	3sec	3sec
Maximum table load capacity	1100 lbs.	1100 lbs.	220 lbs.	220 lbs.
Pallet Rotation	n/a	n/a	180°	180°

FEED RATE

Rapid traverse

X axis	1889 IPM (48,000mm)	1889 IPM (48,000mm)	1889 IPM (48,000mm)	1889 IPM (48,000mm)
Y axis	1889 IPM (48,000mm)	1889 IPM (48,000mm)	1889 IPM (48,000mm)	1889 IPM (48,000mm)
Z axis	1417 IPM (36,000mm)	1889 IPM (48,000mm)	1417 IPM (36,000mm)	1889 IPM (48,000mm)

Cutting feed rate

X axis	394 IPM (10,000mm)	394 IPM (10,000mm)	394 IPM (10,000mm)	394 IPM (10,000mm)
Y axis	394 IPM (10,000mm)	394 IPM (10,000mm)	394 IPM (10,000mm)	394 IPM (10,000mm)
Z axis	394 IPM (10,000mm)	394 IPM (10,000mm)	394 IPM (10,000mm)	394 IPM (10,000mm)

Machine Dimensions

Length x Height x Width	118.1x70.0x102.8	118.1x68.9x99.8	135.5x70.0x102.8	135.8x68.0x99.8
Weight	6,000 lbs.	6,000 lbs.	8,000 lbs.	8,000 lbs.

TOOL SHANK

Standard	CT40	CT40	CT40	CT40
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TOOL CHANGER

Number of tools	12	20	12	20
Tool selection	Random	Random	Random	Random
Tool change time (T-T)	1.6sec	1.2sec	1.6sec	1.2sec
Tool change time (C-C)	3.2sec	2.8sec	3.2sec	2.8sec
Maximum tool diameter	3.9" (100mm)	3.9" (100mm)	3.9" (100mm)	3.9" (100mm)
Maximum tool length	9.8" (250mm)	9.8" (250mm)	9.8" (250mm)	9.8" (250mm)
Maximum tool weight	8.8 lbs (4kg)	8.8 lbs (4kg)	8.8 lbs (4kg)	8.8 lbs (4kg)

ACCURACY

Positioning accuracy (X, Y & Z axis)	0.0002" (0.005mm)	0.0002" (0.005mm)	0.0002" (0.005mm)	0.0002" (0.005mm)
Positioning repeatability (X, Y & Z axis)	±0.0001" (0.003mm)	±0.0001" (0.003mm)	±0.0001" (0.003mm)	±0.0001" (0.003mm)

