

Transmission Case & Bell Housing Deflash

Kira KPC30a Vertical CNC Production Center

Key Features

- The Kira 30 taper production center offers more productivity than a 40 taper
- 30 tapers use less energy and take up less floor space than 40 taper machines

Transmission Case & Bell Housing



PRODUCTION CHALLENGE:

- Eliminate manual deflashing operation – 18 people, 2 shifts, bottle neck in process
- Improve deflashing and deburring quality and consistency
- Reduce reject frequency due to improper flash removal
- Eliminate trim press by milling out lugs
- Drill numerous fluid passages
- Drill and ream construction holes
- Total system to be unmanned

SOLUTION:

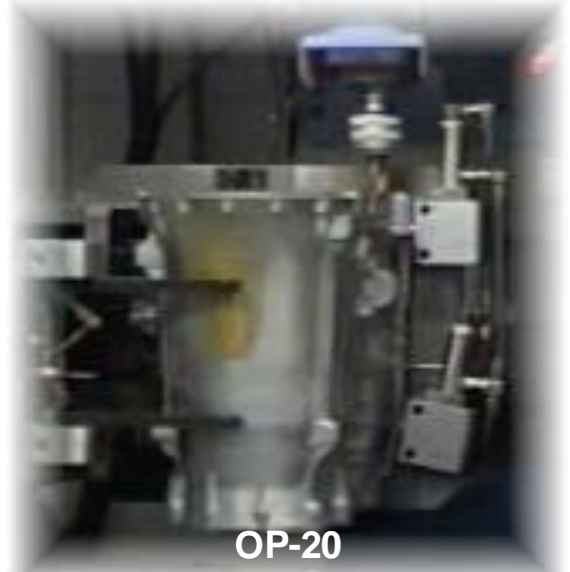
- Bring together the combined talents of Automated System and Design, Midstates Industrial Group and Kira America
- Automated System & Design:
 - > System & concept design
 - > All automation to and from cells
 - > All robotics
- Midstates Industrial Group:
 - > Fixture design & build
 - > Machine modifications
 - > Machine logic
 - > Part programming
 - > Tool design
- Kira America
 - > CNC High Speed Production Center KPC30a – 15,000RPM spindles

RESULTS:

- Consistent quality & output
- Unmanned operation
- Reduced inventory (W.I.P.)
- Bottle neck removed

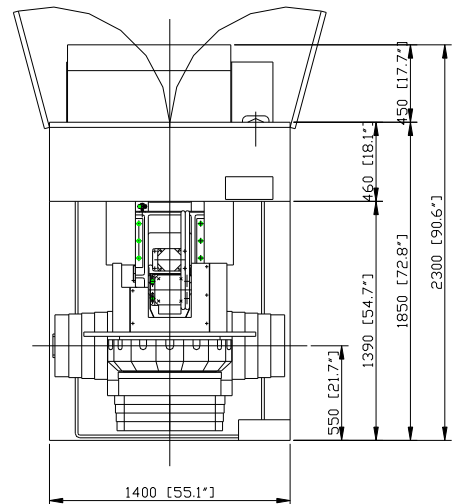


"Part is located over inside cast diameters utilizing an expanding mandrel fixture"



"Automatic clamping internal as well as over the top"

"Small Footprint"



Kira USA Headquarters

21299 Suite A Carlo Drive
Clinton Twp, Michigan 48038

Phone: 262-835-9272 Fax: 262-835-9273

www.midstatesintl.com

Midstates International Technical Center:

21299 Carlo Dr.

Clinton Township, Michigan 48038

Phone: 586-307-3414 Fax: 586-307-3719

MACHINE SPECIFICATION	KPC 30a	KPC 30b	KPC 30a Extended	KPC 30b Extended
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TRAVEL

X axis stroke	19.7" (500mm)	19.7" (500mm)	25.2" (640mm)	25.2" (640mm)
Y axis stroke	15.0" (380mm)	15.0" (380mm)	15.0" (380mm)	15.0" (380mm)
Z axis stroke	11.8" (300mm)	11.8" (300mm)	11.8" (300mm)	11.8" (300mm)

SPINDLE POWER

Standard	7,500RPM - 5HP	8,000RPM - 5HP	7,500RPM - 5HP	8,000RPM - 5HP
Optional	15,000RPM - 5HP	15,000RPM - 5HP	15,000RPM - 5HP	15,000RPM - 5HP

TABLE

Working area	25.6"x15" (650mmX380mm)	25.6"x15" (650mmX380mm)	27.6"x15.7" (700mmX400mm)	27.6"x15.7" (700mmX400mm)
Maximum table load capacity	440 lbs (200kg)	440 lbs (200kg)	440 lbs (200kg)	440 lbs (200kg)

FEED RATE

Rapid traverse

X axis	2205 IPM (56,000mm)	2205 IPM (56,000mm)	1889 IPM (48,000mm)	1889 IPM (48,000mm)
Y axis	2205 IPM (56,000mm)	2205 IPM (56,000mm)	1889 IPM (48,000mm)	1889 IPM (48,000mm)
Z axis	2205 IPM (56,000mm)	2205 IPM (56,000mm)	2205 IPM (56,000mm)	2205 IPM (56,000mm)

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)

THROAT DIMENSIONS

Spindle nose to table top	7.9"-19.7" (200mm-500mm)	7.9"-19.7" (200mm-500mm)	7.9"-19.7" (200mm-500mm)	7.9"-19.7" (200mm-500mm)
Cutting center line to column surface	16.9" (430mm)	16.9" (430mm)	16.9" (430mm)	16.9" (430mm)

TOOL SHANK

Standard	BT30	BT30	BT30	BT30
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TOOL CHANGER

Number of tools	14	20	14	20
Number of tools (Optional)	n/a	30	n/a	30
Tool selection	Random	Random	Random	Random
Tool change time (T-T)	1.1sec	0.7sec	1.1sec	0.7sec
Tool change time (C-C)	1.9sec	1.7sec	1.9sec	1.7sec
Maximum tool diameter	3.1" (80mm)	3.1" (80mm)	3.1" (80mm)	3.1" (80mm)
Maximum tool length	7.9" (200mm)	7.9" (200mm)	7.9" (200mm)	7.9" (200mm)
Maximum tool weight	6.6 lbs (3kg)	6.6 lbs (3kg)	6.6 lbs (3kg)	6.6 lbs (3kg)

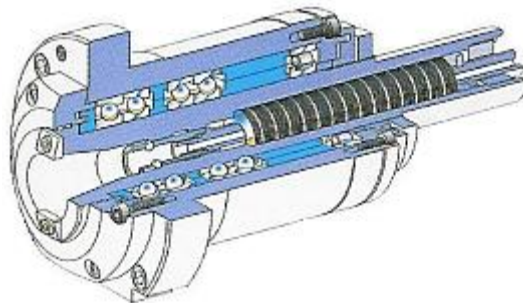
ACCURACY

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)

All specifications are subject to change without notice.



"Kira's unique spindle cartridge design provides 15,000RPM's for high speed drilling & tapping as well as the capability for heavy milling"



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