

Stainless Steel Injector Machining

Kira KN40Va Vertical CNC Production Center with Automatic Pallet Changer and Integrated Gantry System

Key Feature

- Unattended parts operation

Stainless Steel Injector



PRODUCTION CHALLENGE:

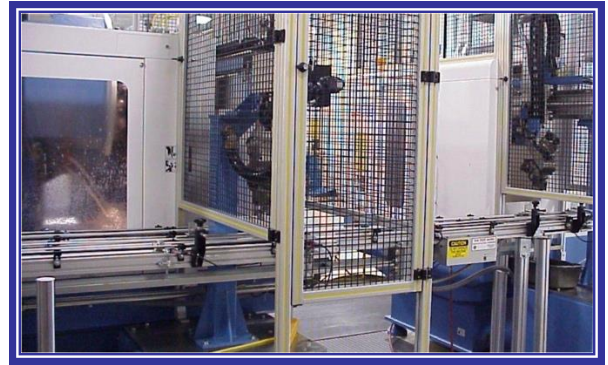
- To produce an expandable system that will produce stainless steel parts
- Feed parts into a central gauge
- One minute cycle time per part

SOLUTION:

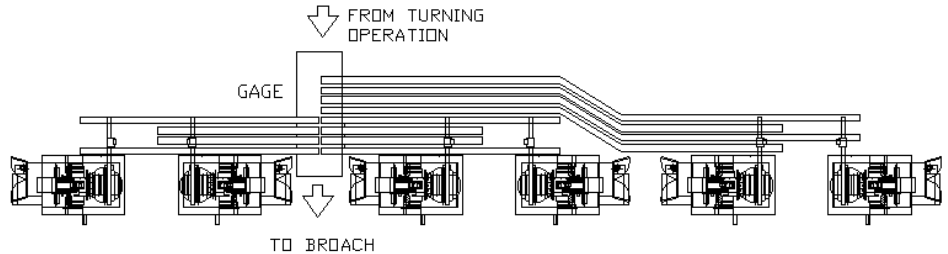
- Start with a Kira KN40Va-2APC vertical production center
- Add an integrated gantry system
- Add input/output conveyors

RESULTS:

- Cycle time achieved
- Totally integrated solution
- Additional machines added to keep up with production quantity requirements
- An automatic pallet changer allows the load/unload process to occur during machining cycle
- Quality, reliability, accuracy, flexibility and agility are all achieved affordably

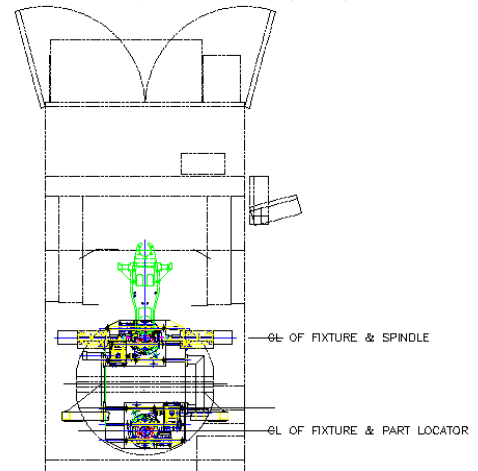


Input/Output Conveyors



Gantry Loader

Integrated Gantry Layout



MACHINE SPECIFICATION	Automatic Pallet Changer	
	KN 40Va-2APC	KN 40Vb-2APC

TRAVEL

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

SPINDLE POWER

Standard	6,000RPM - 10HP	8,000RPM - 10HP
Optional	n/a	8,000RPM - 15HP
Optional	10,000RPM - 7.5	12,000RPM - 10HP
Optional	n/a	12,000RPM - 15HP

AUTOMATIC PALLET CHANGER

Pallet dimensions (each pallet)	23.6"x13.8" (600mmX350mm)	23.6"x13.8" (600mmX350mm)
Pallet change time	4.0sec	4.0sec
Table load capacity (each pallet)	220 lbs (100kg)	220 lbs (100kg)
Rotation	180°	180°

FEED RATE

Rapid traverse

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

Cutting feed rate

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

THROAT DIMENSIONS

Spindle nose to table top	5.9"-21.7" (150mmX550mm)	5.9"-21.7" (150mmX550mm)
Cutting center line to column surface	16.9" (430mm)	16.9" (430mm)

TOOL SHANK

Standard	CT40	CT40
Optional	BT40	BT40
Optional	n/a	HSK

TOOL CHANGER

Number of tools	12	20
Optional	14	N/A
Tool selection	Random	Random
Tool change time (T-T)	1.6sec	1.2sec
Tool change time (C-C)	3.2sec	2.8sec
Maximum tool diameter	3.9" (100mm)	3.9" (100mm)
Maximum tool length	9.8" (250mm)	9.8" (250mm)
Maximum tool weight	8.8 lbs (4kg)	11 lbs (5.5kg)

ACCURACY

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

All specifications are subject to change without notice.



"Small Footprint"

