### STANDARD FEATURES

**Axis Control**
- Digital Servo Function
- 1 Controlled Path
- 3 (up to maximum of 4) Simultaneously Controllable Axes (J801) (J803)
- Serial Encoder Interface
- Axis Names Selected from X,Y,Z,U,V,W,A,B,C
- Least Input Increment of 0.001mm, 0.0001", 0.001deg
- Inch/Metric Conversion (J876)
- Interlock per Axis
- Machine Lock
- Emergency Stop
- Overtravel Signal
- Stored Stroke Check 1
- Mirror Image
- Follow-up Function
- Servo Off
- Mechanical Handle Feed
- Backlash Compensation
- Stored Pitch Error Compensation (J841)

**Operation**
- Memory Operation
- DNC Operation
- MDI Operation
- Program Number Search
- Sequence Number Search
- Buffer Register
- Dry Run Mode
- Single Block Mode
- Manual Feed Mode (Jog)
- Manual Reference Point Return
- Manual Handle Feed (J835) *(requires MPG)*
- Incremental Feed

**Interpolation**
- Positioning (G00)
- Exact Stop Mode (G61)
- Exact Stop (G09)
- Linear Interpolation
- Circular Interpolation
- Dwell (G04)
- Helical Interpolation (J819)
- Skip Function (G31)
- Automatic Reference Point Return (G28, G29)
- Reference Point Return Check (G27)
- 2nd Reference Point Return (G30)
### Feed Function

- **Rapid Traverse Feedrate**: 240m/min (100m/min @ 0.0001mm increment)
- **Rapid Traverse Feedrate Override**: (preset value, 25%, 50%, 100% settings)
- **Feed per Minute**
- **Tangential Speed Control**
- **Cutting Feedrate Clamp**
- **Automatic Acceleration/Deceleration**: (Rapid Traverse: Linear; Cutting Feed: Linear or Exponential)
- **Rapid Traverse Bell-Shaped Acceleration/Deceleration**
- **Feedrate Override**: 0-254%
- **Jog Override**: 0-655.34 %
- **Override Cancel**

### Programming

- **EIA/ISO Automatic Identification**
- **Label Skip**
- **Parity Check**
- **Control In/Out**
- **Optional Block Skip**
- **Maximum Programmable Value**: 8 digits
- **Program Number**: O with 4 digits
- **Sequence Number**: N with 5 digits
- **Absolute or Incremental Command**
- **Programmable Data Input (G10)**
- **Decimal Point Input**
- **10 Times Input Unit**
- **Plane Selection (G17, G18, G19)**
- **Rotary Axis Setting**
- **Rotary Axis Rollover**
- **Coordinate System Setting (G92)**
- **Automatic Coordinate System Setting**
- **Manual Absolute On/Off**
- **Subprogram Calling**
- **Canned Drilling Cycles (G73, G74, G76, G80-G89, G98, G99) (J890)**
- **Specifying the Radius of an Arc**

### Auxiliary and Spindle Functions

- **Miscellaneous Function**: M with 8 digits
- **Miscellaneous Function Lock**
- **High Speed M/S/T Interface**
- **Multiple Commands of Miscellaneous Functions** (up to 3)
- **Spindle Function**: S with 5 digits
- **Serial Spindle Interface (J850)**
- **Spindle Override**: 0-254%

### Tool Functions and Tool Compensation

- **Tool Function**: T with 8 digits
- **32 Tool Offsets**
- **Tool Length Compensation (G43, G44, G49)**
- **Tool Radius/Tool Nose Radius Compensation (J930)**
## Series 31i-B CNC for Milling

### Part Program Storage & Editing
- 256KB Part Program Storage (J945)
- 63 Stored Part Programs
- Part Program Editing
- Part Program Protection
- Multi Part Program Editing (J956)
- Extended Part Program Editing

### Display
- Status Display
- Clock Function
- Current Position Display
- Program Display
- Parameter Setting Display
- Self Diagnosis
- Alarm Display
- Alarm History Display
- Help Function
- Run Time/Part Count Display (J971)
- Actual Cutting Speed Display
- Servo Adjustment Screen
- System Configuration Display
- English Language
- Data Protection Key

### Data Input/Output and Communications
- I/O Link or I/O Link i Interface
- Punch Panel with 2m Cable
- Reader/Punch Interface 1 (RS-232) (J900)
- External Workpiece Number Search
- External Data Input (J913) includes External Tool Offset, External Message, External Machine Origin Shift, External Program Number Search
- Status Output Signal

### Other
- CD-ROM containing Product Manuals included in the BOM of the Root CNC
- Operation and Maintenance Handbook B-64487EN FS30/31i/32i-Model B Oper and Maint Handbook
- Qty 1 A02B-0120-K324 CONNECTOR AND PINS
- Miscellaneous conn: Qty 2 A02B-0120-K301 HONDA CONNECTOR Qty 1 A02B-0120-K323 CONNECTOR AND PINS
- Spare Fuses A02B-0236-K100 LCD or A02B-0265-K100 Stand Alone
- Cable Clamps A02B-0303-K001 8 CABLE CLAMPS
- Grounding Bar 44B295864-001 GROUNDING BAR 11 SLOT
### SERIES 31i-B PACKAGE CHOICES

<table>
<thead>
<tr>
<th>Package A</th>
<th>Package B</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Axes</td>
<td>3 Axes</td>
</tr>
<tr>
<td>2 Slot Rack</td>
<td>2 Slot Stand Alone</td>
</tr>
<tr>
<td>LCD Mount</td>
<td>Embedded Ethernet</td>
</tr>
<tr>
<td>Embedded Ethernet</td>
<td>Embedded Ethernet</td>
</tr>
<tr>
<td>10.4&quot; LCD A Color</td>
<td>2 Slot Stand Alone</td>
</tr>
<tr>
<td>PMC 24K Steps</td>
<td>PMC 24K Steps</td>
</tr>
<tr>
<td>Serial Spindle</td>
<td>Serial Spindle</td>
</tr>
<tr>
<td>CPU Card B2</td>
<td>CPU Card B2</td>
</tr>
<tr>
<td>Basic Function G401</td>
<td>Basic Function G401</td>
</tr>
<tr>
<td>Sep Vert Type MDI</td>
<td>Axis Card B11</td>
</tr>
<tr>
<td>Axis Card B11</td>
<td>10.4&quot; LCD A Color</td>
</tr>
<tr>
<td></td>
<td>2 Slot Stand Alone</td>
</tr>
<tr>
<td></td>
<td>Embedded Ethernet</td>
</tr>
<tr>
<td></td>
<td>Embedded Ethernet</td>
</tr>
<tr>
<td></td>
<td>2 Slot Stand Alone</td>
</tr>
</tbody>
</table>

**This Form assumes the use of HRV2. If HRV3, HRV4 or additional servo motors are required, please complete this form as close as possible to your desired configuration, then e-mail the form and your requested changes to: cnc_express@fanucamerica.com**

**CNC Express will modify the form per your request and return the form to you.**

**G401 => Supports 2 Paths, 12 axes (12 per path), 4 spindles (4 per path)**

=>  

A02B-0323-C128 or equivalent

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### PACKAGE DEPENDENT OPTIONS

- Automatic Data Back-up, 3 Sets of Back-up Data, SRAM + PPS
- PROFIBUS DP Master
- PROFIBUS DP Slave
- HSSB
- Fast Ethernet
- Data Server
- 2nd Fast Ethernet Brd
- PROFINET II Master
- PROFINET II Slave
- PROFINET II Slave
- Fast Ethernet
- Data Server
- Remove HSSB
- 10.4" LCD A Color Tch
- 15.0" LCD Col w/ Tch
- CNC HSSB Card
- Sep MDI
- 2nd Fast Ethernet Brd

*USB Memory I/O is available on LCD Mount CNCs & the LCD for S.A.*

*shading indicates restrictions, see Package Options for details*
### Package A Options

<table>
<thead>
<tr>
<th>Option Name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROFIBUS DP Master Board (J311, J731, J562#6552)</td>
<td></td>
</tr>
<tr>
<td>PROFIBUS DP Slave Board (J313, J732, J563#655C)</td>
<td></td>
</tr>
<tr>
<td>PROFIBUS Application Software, J535#655B, required for all PROFIBUS</td>
<td></td>
</tr>
<tr>
<td>HSSB Board (High Speed Serial Bus) (J202) (includes Extended D/L Function,10m F/O cbl)</td>
<td></td>
</tr>
<tr>
<td>1st Fast Ethernet Board (J147) Requires Communication Option Below:</td>
<td></td>
</tr>
<tr>
<td>Fast Ethernet Function (S707) (Uses FOCAS Protocol)</td>
<td></td>
</tr>
<tr>
<td>Data Server Function (S737,R953) (req's ATA Flash Mem Card) (Uses FTP for data transfer)</td>
<td></td>
</tr>
<tr>
<td>Ethernet/IP Adapter Function (R967), Data Server requires a separate Ethernet Board</td>
<td></td>
</tr>
<tr>
<td>Ethernet/IP Scanner Function (R966), Data Server requires a separate Ethernet Board</td>
<td></td>
</tr>
<tr>
<td>2nd Fast Ethernet Board (J147) (Add'l Enet Port) Requires 2 of 3 (S707 or S737,R966,R967).</td>
<td></td>
</tr>
</tbody>
</table>

### Package B Options

<table>
<thead>
<tr>
<th>Option Name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROFIBUS DP Master Board (J311, J731, J562#6552)</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### Package A Options

- PROFIBUS DP Master Board (J311, J731, J562#6552)
- PROFIBUS DP Slave Board (J313, J732, J563#655C)
- PROFIBUS Application Software, J535#655B, required for all PROFIBUS
- HSSB Board (High Speed Serial Bus) (J202) (includes Extended D/L Function,10m F/O cbl)
- 1st Fast Ethernet Board (J147) Requires Communication Option Below:
  - Fast Ethernet Function (S707) (Uses FOCAS Protocol)
  - Data Server Function (S737,R953) (req's ATA Flash Mem Card) (Uses FTP for data transfer)
  - Ethernet/IP Adapter Function (R967), Data Server requires a separate Ethernet Board
  - Ethernet/IP Scanner Function (R966), Data Server requires a separate Ethernet Board
- 2nd Fast Ethernet Board (J147) (Add'l Enet Port) Requires 2 of 3 (S707 or S737,R966,R967).

### Package B Options

- PROFIBUS DP Master Board (J311, J731, J562#6552)
- PROFIBUS DP Slave Board (J313, J732, J563#655C)
- PROFIBUS Application Software, J535#655B, required for all PROFIBUS
- 1st Fast Ethernet Board (J147) Requires Communication Option Below:
  - Fast Ethernet Function (S707) (Uses FOCAS Protocol)
  - Data Server Function (S737,R953) (req's ATA Flash Mem Card) (Uses FTP for data transfer)
  - Ethernet/IP Adapter Function (R967), Data Server requires a separate Ethernet Board
  - Ethernet/IP Scanner Function (R966), Data Server requires a separate Ethernet Board
- 2nd Fast Ethernet Board (J147) (Add'l Enet Port) Requires 2 of 3 (S707 or S737,R966,R967).

### Manual Guide i in Package A - Requires Custom Macro (J873) for full functionality.

- Manual Guide i (S790) 10.4" Color LCD Type A - Large Screen Animation not supported.
- Manual Guide i Multi Path function (S786) - to use on 2nd Path

### Manual Guide i in Package B - Requires Custom Macro (J873) for full functionality.

- Manual Guide i (S790)
- Manual Guide i Multi Path function (S786) - to use on 2nd Path

### High Speed Serial Bus (HSSB) includes:
- Extended D/L Function J900 & 10m F/O Cable

---

*Only one LCD*

**Req MDI below.**

**Do not use HSSB from Package B. (Removes A02B-0207-J900). For LCD or Ethernet Display.**

**Without Standard CNC Display Unit - HSSB (J389) to Panel i or PC side HSSB, 10m F/O cbl.**

**Without Standard CNC Display Unit - Embedded Ethernet (J390) connects to iPendant only.**

**Ethernet Display Function (R950 & J573#658N) Embedded Ethernet to PC, not for iPendant.**

**Sep Type MDI (Vert PC Type) (qwerty) (290x160mm) A02B-0323-C128 or equivalent**

**Sep Type MDI (qwerty type B) (400x145mm) No 10.4" LCD A02B-0303-C129 or equivalent**

**Sep Type MDI (ong type) (vertical) (290x220mm) A02B-0319-C126#M or equivalent**

**Sep Type MDI (ong type) (horizontal) (230x220mm) A02B-0323-C125#M or equivalent**

**High Speed Serial Bus (HSSB):** Includes:

- Extended D/L Function J900 & 10m F/O Cable

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*31i-BM 2/11/2016 Page 5*
## SERIES 31i-B MILLING OPTIONS

### The following options may be ordered for Packages A or B

#### Basic Function
- G411 Basic S/W for up to 4 paths, 20 controlled axes, 12 per path, and 6 spindles, 4 per path

#### Number of Paths
- **Two Control Paths**
  - Minimum of 6 Axes
- **Three Control Paths, requires G411 Basic Function**
  - Minimum of 9 Axes
- **Four Control Paths, requires G411 Basic Function**
  - Minimum of 12 Axes

#### Axis Control: up to 20 axes and 6 spindles are possible.
- 4th Axis
- 5th Axis
- 6th Axis
- 7th Axis changes to B12 Servo Card, 1 FSSB Servo Line
- 8th Axis
- 9th Axis
- 10th Axis
- 11th Axis
- 12th Axis
- 13th Axis, Requires G411 Basic SW, changes to B13 Servo Card, 1 FSSB Servo Line
- 14th Axis
- 15th Axis
- 16th Axis
- 17th Axis
- 18th Axis
- 19th Axis changes to B24 Servo Card, 2 FSSB Servo Lines
- 20th Axis

#### Number of Serial Spindles (default is one). >1 Spindle per path requires Multi Spindle Control.
- 2 Spindles
- 3 Spindles
- 4 Spindles
- 5 Spindles, Requires G411 Basic SW.
- 6 Spindles
- Multi Spindle Control. Required if more that one spindle is used per path.

#### Analog Spindle.
- Analog Spindle (J860) replaces Serial Spindle (J850). Having Serial Spindle requires R584.

#### Serial/Analog Spindle Control - includes Multi Spindle Control.
- 1 Serial Spindle and 1 Analog Spindle (R584, J850, J860)
- 2 Serial Spindles and 1 Analog Spindle
- 3 Serial Spindles and 1 Analog Spindle
- 4 Serial Spindles and 1 Analog Spindle, Requires G411 Basic SW.
- 5 Serial Spindles and 1 Analog Spindle
### Series 31i-B CNC for Milling

#### Axis Control Options
- Axis Control by PMC (up to 16 axes) (J804)
- Synchronous Axis Control (up to 6 pairs axes) (J843)
- Controlled Axis Detach (J807)
- Chopping Function (J707)
- Least Input Increment of 0.0001 mm, 0.00001", 0.0001 deg (J805)
- Dual Position Feedback (J704)
- Stroke Limit External Setting (J845)
- Stored Stroke Check 2 (J840)
- Stored Limit Check Before Move (J749)
- Interpolation type pitch error compensation (S644)
- Bi-directional pitch error compensation (S656)
- Straightness Compensation (J747) (4 points)
- Interpolation Type Straightness Compensation (S639) (128 points)
- Position Switch (J846)
- Rotary Axis Control (J743)

#### Tool Center Point Features
- Smooth TCP (R639) includes (S677) Tool Center Point Control
- Tool Center Point Control (S677)
- Tilted Working Plane Indexing Command (R522)
- 3-Dimensional Cutter Compensation (S667)
- Workpiece Setting Error Compensation (S993)
- 3-dimensional manual feed (S679)

#### Operation
- Program Restart (J838)
- Tool Retract & Recover (J823)
- Retrace (J730)
- Manual Handle Retrace (J998)
- Manual Handle Feed 2/3 Units (J836)
- Manual Handle Interruption (J837)
- Change Active Offset Value with Manual Move (S825)

#### Interpolation
- Unidirectional Positioning (G60) (J812)
- Polar Coordinate Interpolation (J815)
- Cylindrical Interpolation (J816)
- Thread Cutting and Feed per Revolution (J824) *(requires Spindle Encoder)*
- High Speed Skip (J848)
- Multi Step Skip (J849)
- 3rd, 4th Reference Point Return (J830)
- Normal Direction Control (J813)
- Index Table Indexing (J822) *(requires 4th Axis)*
- Linear Scale I/F w/ absolute address reference mark (J670). Requires Separate Detector I/F.
## Series 31i-B CNC for Milling

### Feed Function
- Bell Shaped Acc/Dec After Interpolation for Cutting Feed (J829)
- 2nd Feedrate Override (J810)
- Inverse Time Feed (J715)
- AI Contour Control I (30 Block Look Ahead) (S807)  
  - Simultaneously Commanded Paths for AICC I, one path (S807#1)
  - Simultaneously Commanded Paths for AICC I (Max. two paths) (S807#2)
  - Simultaneously Commanded Paths for AICC I (Max. four paths) (S807#4)
- AI Contour Control II (200 Block Look Ahead) (S808)
- Machining Condition Selecting Function (S637) Requires AICC I or AICC II.

### Grinding Options
- Canned Cycles for Grinding (S974)

### Programming
- Optional Block Skip (total 9) (J955)
- Polar Coordinate Command (J818)
- Workpiece Coordinate System (G52-G59) (J894)
  - Additional Work Coordinate System, 48 Pairs (J895)
- Workpiece Coordinate System Preset (J917)
- Optional Angle Chamfering/Corner Rounding (S615)
- Custom Macro (J873)
  - Additional Custom Macro Common Variables (J887), 100 + 500 = 600 Total  
    Only One.
  - Additional Custom Macro Common Variables 1000 (R887), 100 + 1000 = 1100 Total
- Interruption for Custom Macro (J874)
- Pattern Data Input (J884)
- Peck Drilling Cycle for Small Hole (J896)
- Scaling (J892)  
  Choose only one

### Additional Features
- Automatic Corner Override (J891)
- Coordinate System Rotation (J893)
- Programmable Mirror Image (J880)
- Series 15 Tape Format (J882)
- Macro Executor (J888) 96K Reserved for System S/W.  
  Choose only one Macro
- Macro Executor + C-language Executor (J734) 700K Reserved for System S/W.
- FANUC PICTURE Executor (R644) 2M Reserved for System S/W.  
  Available with J888/J734.

### Custom Software Sizes
- Custom Software Size 512KB (J738#512K)  
  Not with J734 or R644.
- Custom Software Size 2MB (J738#2M)  
  Not with R644.
- Custom Software Size 4MB (J738#4M)  
  Choose only one Custom Software Size.
- Custom Software Size 6MB (J738#6M)
- Custom Software Size 8MB (J738#8M)
- Custom Software Size 12MB (J738#12M)
### PMC Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMC with 32K Steps (H990#32K)</td>
<td></td>
</tr>
<tr>
<td>PMC with 64K Steps (H990#64K)</td>
<td></td>
</tr>
<tr>
<td>PMC with 100K Steps (H990#100K)</td>
<td>24,000 Steps Standard, choose only One upgrade.</td>
</tr>
<tr>
<td>PMC with 300K Steps (H990#300K)</td>
<td></td>
</tr>
<tr>
<td>Multi-path PMC function (3 paths) (R855#3)</td>
<td>One PMC Path Standard.</td>
</tr>
<tr>
<td>Multi-path PMC function (5 paths) (R855#5)</td>
<td>Choose Only One.</td>
</tr>
<tr>
<td>PMC symbol, comment, and message capacity expansion (512KB) (R856#512K)</td>
<td>Only One.</td>
</tr>
<tr>
<td>PMC symbol, comment, and message capacity expansion (1MB) (R856#1M)</td>
<td></td>
</tr>
<tr>
<td>PMC symbol, comment, and message capacity expansion (2MB) (R856#2M)</td>
<td></td>
</tr>
<tr>
<td>Function Block Function (R852)</td>
<td></td>
</tr>
<tr>
<td>I/O Link expansion 2nd Channel w/ A20B-1007-0680 and 1m cable.</td>
<td></td>
</tr>
<tr>
<td>I/O Link expansion 2nd/3rd Channel w/ A20B-1008-0360 and 1m cable.</td>
<td></td>
</tr>
<tr>
<td>Dual Check Safety (S661) Req's I/O Link i, I/O Link 3rd Channel or PROFIBUS Master.</td>
<td>Check here: 1</td>
</tr>
<tr>
<td>Multi-path PMC function (3 paths) (R855#3)</td>
<td></td>
</tr>
<tr>
<td>Multi-path PMC function (5 paths) (R855#5)</td>
<td></td>
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<tr>
<td>PMC symbol, comment, and message capacity expansion (512KB) (R856#512K)</td>
<td>Only One.</td>
</tr>
<tr>
<td>PMC symbol, comment, and message capacity expansion (1MB) (R856#1M)</td>
<td></td>
</tr>
<tr>
<td>PMC symbol, comment, and message capacity expansion (2MB) (R856#2M)</td>
<td></td>
</tr>
<tr>
<td>Function Block Function (R852)</td>
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</tr>
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<td>I/O Link expansion 2nd Channel w/ A20B-1007-0680 and 1m cable.</td>
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</tbody>
</table>

### Auxiliary and Spindle Functions

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Spindle Orientation (J853) (Applies to 1st Spindle per Path)</td>
<td>(req's Serial Spindle)</td>
</tr>
<tr>
<td>Constant Surface Speed Control (J855)</td>
<td>(requires Spindle Encoder)</td>
</tr>
<tr>
<td>2nd Miscellaneous Function (B8-digit binary)</td>
<td>(Analog Spindle req's Spindle Encoder.)</td>
</tr>
<tr>
<td>Rigid Tapping (J828)</td>
<td></td>
</tr>
<tr>
<td>Retraction for Rigid Tapping (J664)</td>
<td></td>
</tr>
<tr>
<td>See Drives Tab for Spindle Separately Mounted Position Encoder.</td>
<td></td>
</tr>
</tbody>
</table>

### Tool Functions and Tool Compensation

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>64 Tool Offset items (J925)</td>
<td>Assignable by parameter per path.</td>
</tr>
<tr>
<td>99 Tool Offset items (J926)</td>
<td></td>
</tr>
<tr>
<td>200 Tool Offset items (J927)</td>
<td>Choose only one if more that 32 offsets needed.</td>
</tr>
<tr>
<td>Tool Offset Memory C (D/H code, Geometry/Wear)</td>
<td></td>
</tr>
<tr>
<td>Tool Life Management (J935)</td>
<td></td>
</tr>
<tr>
<td>Automatic Tool Length Measurement (S618)</td>
<td></td>
</tr>
</tbody>
</table>

### Part Program Storage & Editing  Total PPS in the system, available to all paths.

<table>
<thead>
<tr>
<th>Storage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>512KB Part Program Storage (J946)</td>
<td>(Approx 1280m)</td>
</tr>
<tr>
<td>1MB Part Program Storage (J947)</td>
<td>(Approx 2560m)</td>
</tr>
<tr>
<td>2MB Part Program Storage + 1000 Stored Part Programs (J948) (J953)</td>
<td>(Approx 5120m)</td>
</tr>
<tr>
<td>4MB Part Program Storage + 1000 Stored Part Programs (J949) (J953)</td>
<td>(Approx 10240m)</td>
</tr>
<tr>
<td>8MB Part Program Storage + 1000 Stored Part Programs (J959) (J953)</td>
<td>(Approx 20480m)</td>
</tr>
<tr>
<td>Playback (J879)</td>
<td></td>
</tr>
<tr>
<td>Machine Time Stamp (J964)</td>
<td></td>
</tr>
</tbody>
</table>

### FANUC Picture

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
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<tbody>
<tr>
<td>FANUC Picture Function (S879) Req's LCD w/ Tch Pnl, deletes J682, not w/ J734/J888/R644</td>
<td></td>
</tr>
<tr>
<td>FANUC Picture Function for non-Touch panel display (S944)</td>
<td>Not w/ J734, J888 or R644</td>
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</tbody>
</table>
## Series 31i-B CNC for Milling

### Ethernet or HSSB Options

**Use Embedded Ethernet for BOP2 or Ladder Edit Function**
- Basic Operation Package (BOP2) Function (J816) & CD  *(Also works w/ embedded Ethernet)*
- CNC Screen Display Function (J858)
- CNC Screen Dual Display Function (S884)
- 19" Panel i (R624)
- Enlarged CNC Screen Display for 19" Panel i (R673)
- CNC Web Server Function (R728) Req's Std LCD Disp, No CNC Scrn Disp, No simul iPndnt.
- Ladder Edit Function (J820)  *(Also works w/ embedded Ethernet)*

### Display

**Requires LCD or CNC Screen Display Function**
- Graphic Display (J972)
- Software Operator Panel (J960)
- Software Operator Panel General Purpose Switch (J961)
- Selection of Five Optional Language (R521)

### Data Input/Output and Communications

**You may overwrite the QTY fields for qty >1**

<table>
<thead>
<tr>
<th>Compact Flash Card 128MB, Card Adapter B</th>
<th>Qty</th>
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</thead>
<tbody>
<tr>
<td>Compact Flash Card 1GB <em>(suggested for use with Data Server)</em>, 2 Card Adapters</td>
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</tr>
<tr>
<td>2nd Reader/Punch Interface (RS-232)</td>
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</table>

### Parallel Axis Tracking

Parallel Axis Tracking (S895) is the tracking of the W/Z Zero position when W and Z axis are parallel axes. Activated by G-Code. Applicable to popular Horizontal Boring Machines. Requires J888, J738#256K, J894, J917 & at least 4 axes. Includes DVD and Manual.

**i AdaptS**
- i AdaptS (S898) maintains a constant load during part processing by modifying the feedrate override. This allows for the fastest possible cycle time based on the condition of the tool, part geometry and material variation. By maintaining the manufacturer's recommended load on the tool, tool life can also be extended. i AdaptS works on the first serial spindle in the first path only. Req's J873, J810, J738#2M, J734.
- Each MTB/Retrofitter must purchase a DVD once.
- i AdaptS S/W DVD D75F-0102-PB00

### Cables

Optional: Replace 10m cable for LCD ordered with Package B with one of the following:
- Fiber optic Cable, CNC to LCD, 20m
- Fiber optic Cable, CNC to LCD, 30m
- Fiber optic Cable, CNC to LCD, 40m
- Fiber optic Cable, CNC to LCD, 50m

### Different MDI's

- Separate Type MDI (ONG) (Vertical)  *Replaces Vertical QWERTY in Pkg A*
  - A02B-0323-C126#M or equivalent 290x220mm  *(Do not order with Pkg B)*
- Separate Type MDI (ONG) (Horizontal)  *Replaces Vertical QWERTY in Pkg A*
  - A02B-0323-C125#M or equivalent 230x220mm  *(Do not order with Pkg B)*
<table>
<thead>
<tr>
<th>Product Manuals</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Series 30i/31i/32i-B Descriptions, B-64482EN</td>
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<tr>
<td>Series 30i/31i/32i-Model B Connection Manual Hardware, B-64483EN</td>
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<td>Series 30i/31i/32i-Model B Connection Manual (Function), B-64483EN-1</td>
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<tr>
<td>Series 30i/31i/32i-Model B Parameter Manual *, B-64490EN</td>
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<tr>
<td>Series 30i/31i/32i-B User's Manual Common, Machining Center *, B-64484EN &amp; -2</td>
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<tr>
<td>Series 30i/31i/32i FAST Ethernet/Data Server Operator's Manual, B-64014EN</td>
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</table>

These Manuals are NOT included on the complimentary product-specific CD. A complimentary copy is shipped with the CNC. Extra hard-copy manuals, if required, may be ordered here.

Check here if no I/O is needed.

Check here if I/O has already been purchased