

## 2.2 Coordination

Machining centers use the right-hand co-ordinate system to describe the relationship of the axes. This relationship is in accordance with E.I.A. RS-267-A and I.S.O. R841 Axis and Motion Nomenclature. The right-hand co-ordinate system also establishes the direction of cutter motion with respect to the workpiece. The programming exercise depends on the programmer visualizing the workpiece to be fixed, and that the cutter does all the moving, (theoretical cutter motion). It is also essential that the programmer view the workpiece from the normal operator position, looking through the tool from the machine spindle. A theoretical cutter motions to the back of current position in the Y axis origin which is created by a similar movement of the table to the front of current position.

X axis: Table travel left in "+" direction and travel right in "-" direction.

Y axis: Table travel forward in "+" direction (approach the operator's door) and travel backward in "-" direction (leave the operator's door).

Z axis: Spindle carrier travel up in "+" direction and travel down in "-" direction.

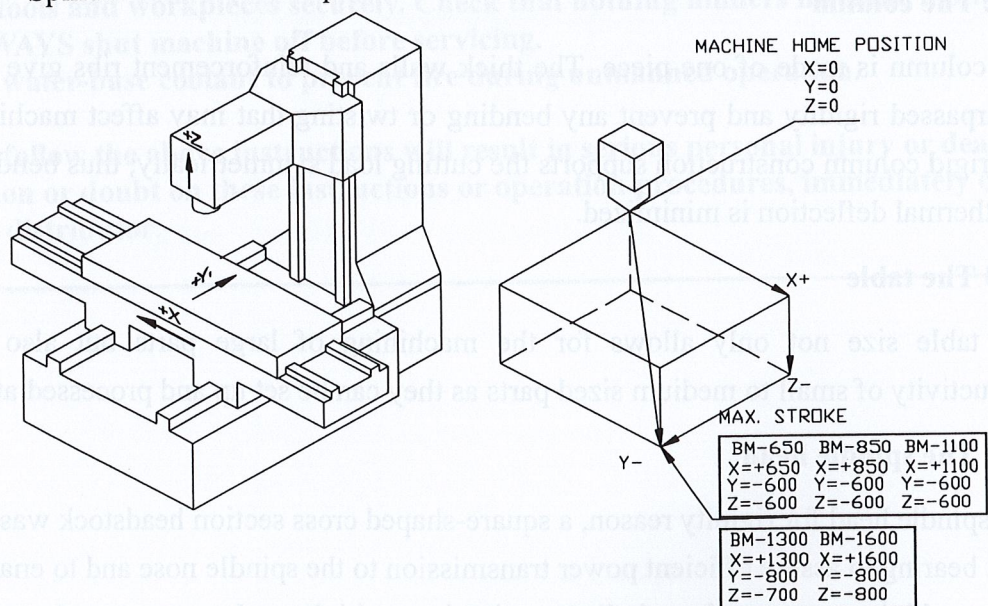


Figure 2-1 Machine Axis Orientation

When the origin Point of this coordinate system agree with the mechanical 0-0-0 reference point of the machine, all coordinate dimensions will be as mentioned above drawing, (from center of spindle) The maximum of all axial stroke shown as mentioned below:

| Axis / Model | AF-610 | AF-1000 | AV-610 | AV-1000 |
|--------------|--------|---------|--------|---------|
| X axis       | 610    | 1020    | 610    | 1020    |
| Y axis       | - 420  | - 550   | - 420  | - 550   |
| Z axis       | - 450  | - 635   | - 450  | - 635   |

| Axis / Model | BM-850 | BM-1020 | BM-1100 | BM-1200 | BM-1300 | BM-1600 |
|--------------|--------|---------|---------|---------|---------|---------|
| X axis       | 850    | 1020    | 1100    | 1200    | 1300    | 1600    |
| Y axis       | - 600  | -600    | - 600   | -600    | - 800   | - 800   |
| Z axis       | - 600  | -600    | - 600   | -600    | - 700   | - 800   |

## 2.3 Specifications

### 2.3.1 Technical Data

| Specification                   | Unit   | AF-610         | AF-1000        |
|---------------------------------|--------|----------------|----------------|
| X axis travel                   | mm     | 610            | 1020           |
| Y axis travel                   | mm     | 420            | 550            |
| Z axis travel                   | mm     | 450            | 635            |
| Table size                      | mm     | 700x450        | 1200x500       |
| T slot size                     | mm     | 4x14           | 5x18           |
| Table top to floor              | mm     | 800            | 800            |
| Table load                      | mm     | 450            | 500            |
| X、Y Rapid feed-rate             | mm/min | 36000          | 36000          |
| Z Rapid feed-rate               | mm/min | 24000          | 24000          |
| Cutting feed-rate               | mm/min | 10000          | 10000          |
| Spindle nose to table top       | mm     | 150-600        | 100-735        |
| Spindle center to column        | mm     | 480            | 640            |
| Axial motor                     | HP/kW  | 2.5/2          | 2.5/2          |
| Spindle motor<br>(cont./30min.) | HP     | 10/15          | 10/15          |
| Spindle speed                   | rpm    | 8000           | 8000           |
| Spindle taper                   | ISO    | 40             | 40             |
| ATC type                        |        | Drum type      | Drum type      |
| Tool magazine capacity          | EA     | 20             | 20             |
| Max. tool diameter/adjacent     | mm     | 100/150        | 90/150         |
| Max. tool length                | mm     | 250            | 300            |
| Max. tool weight                | mm     | 7              | 8              |
| Power requirement               | KVA    | 20             | 30             |
| Machine weight                  | kg     | 3500           | 7000           |
| Space requirement               | mm     | 2600X2150X2500 | 3430X2050X2360 |

Product specifications and accessories are subject to change without notice