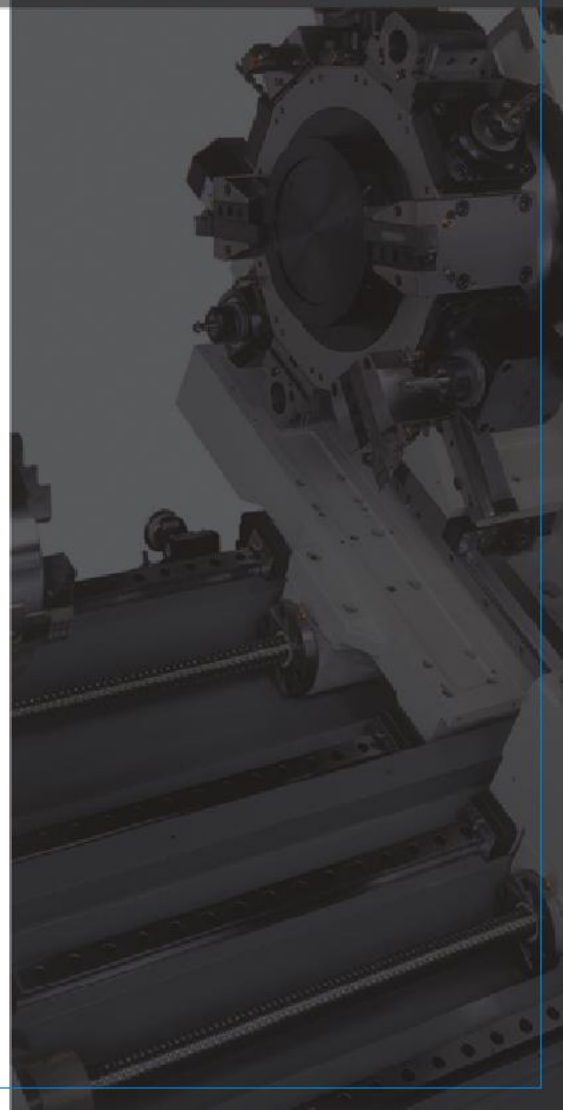




DUGARD EAGLE NL200Y

CNC Turning Milling Machine

**Dramatically Reduce Work
In Progress!**



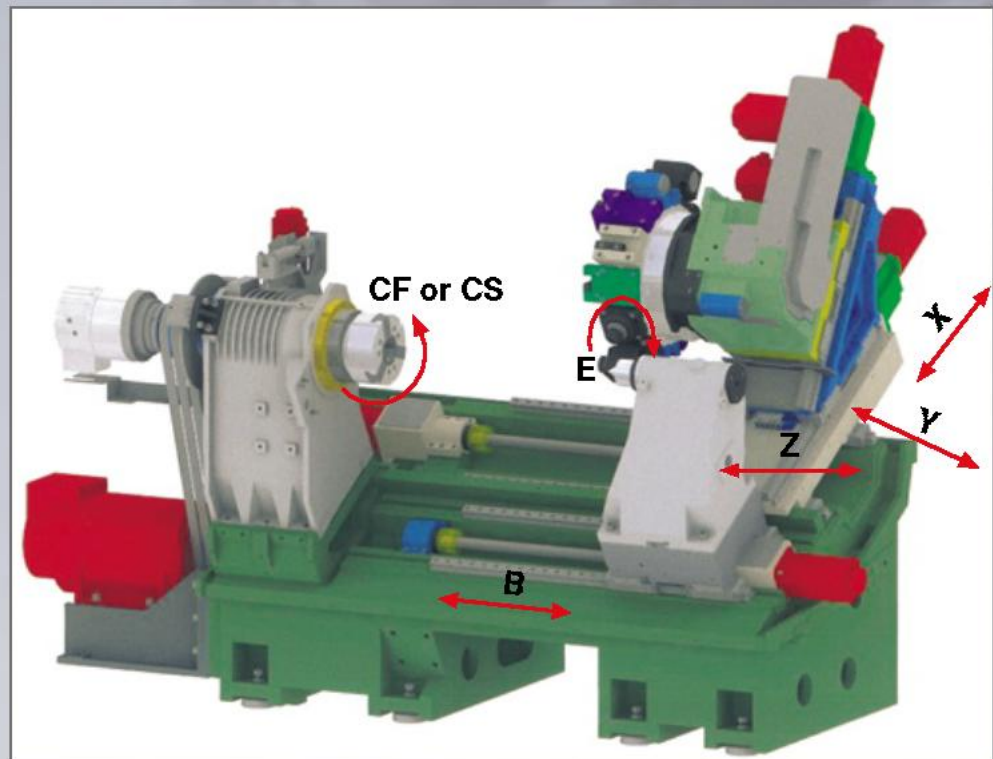
EAGLE NL200Y

**A Versatile Turning Machine
Helping To Boost Your**



Milling Machine Productivity

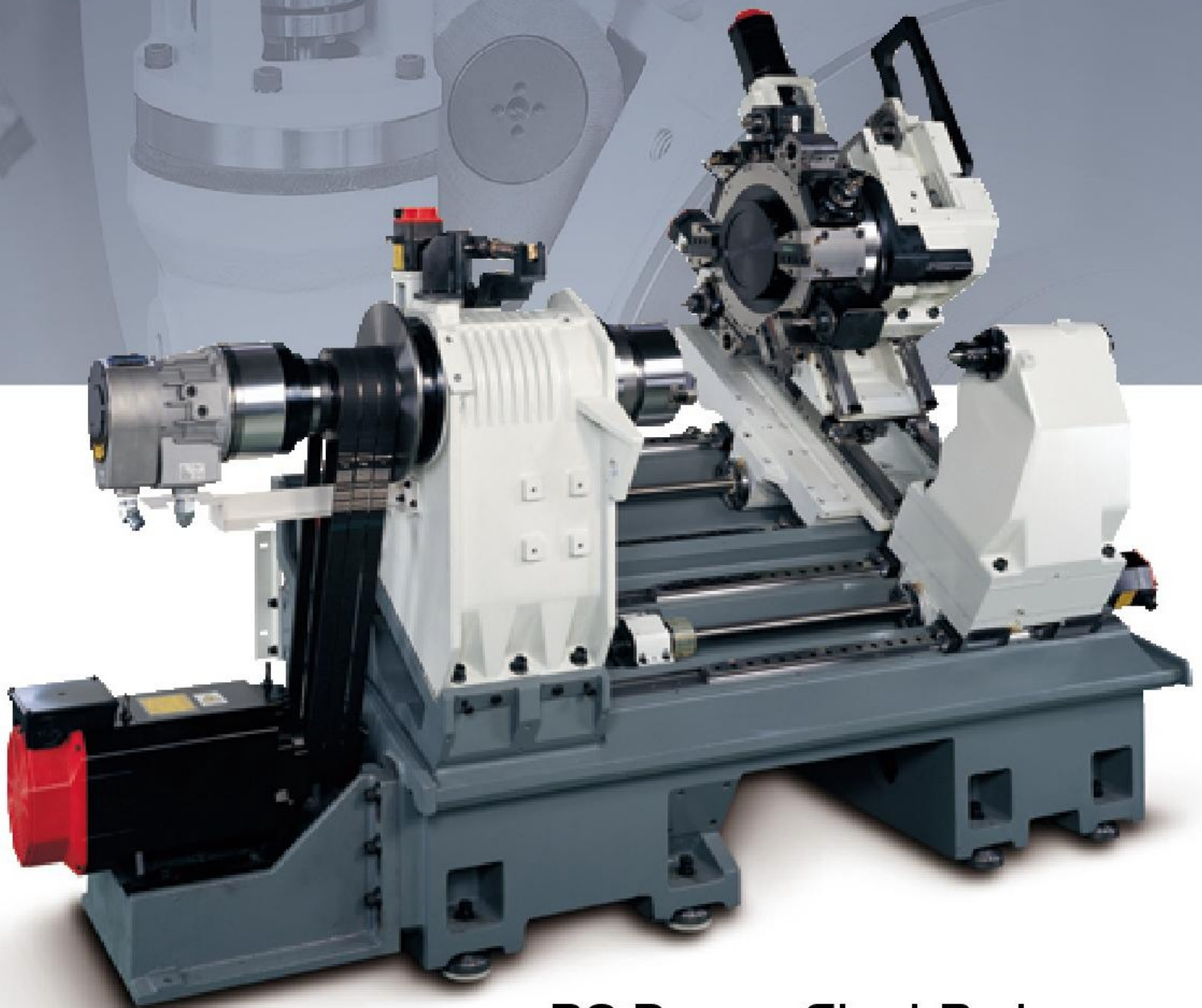
Axes Layout



The Eagle NL200Y CNC Turning Centre with Y and C axis is a highly technological machine for the complete production of complex parts which require turning, milling, drilling, tapping etc.

The Eagle NL200Y combines all the functions of a machining centre with a CNC Lathe to greatly improve downtime, thereby improving productivity.

Perfect Structural Design Machining Stability



30 Degree Slant Bed

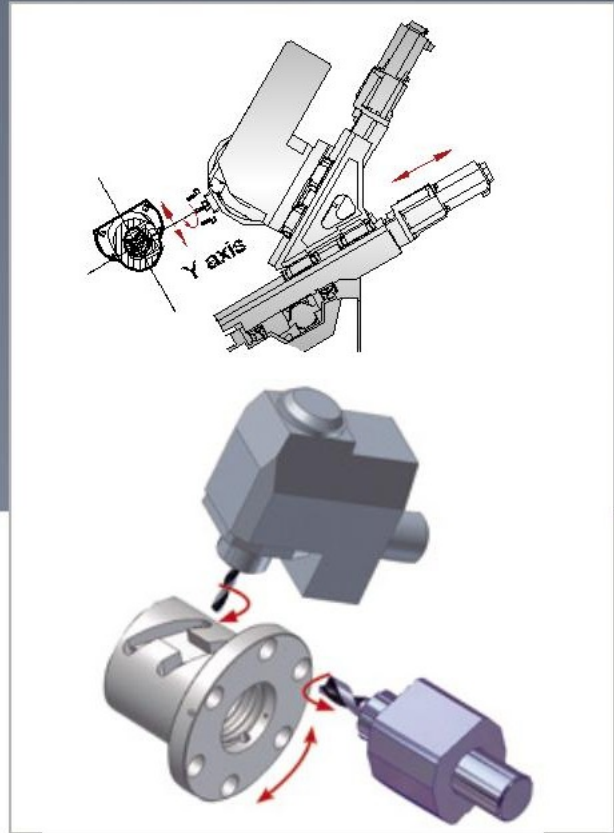
- The rigid construction of the 30 degree slant bed provides extra strong support for the headstock, tailstock and turret.
- The heavy duty bed and base construction feature maximum rigidity and stability for long term performance and accuracy.

Design To Guarantee And Accuracy



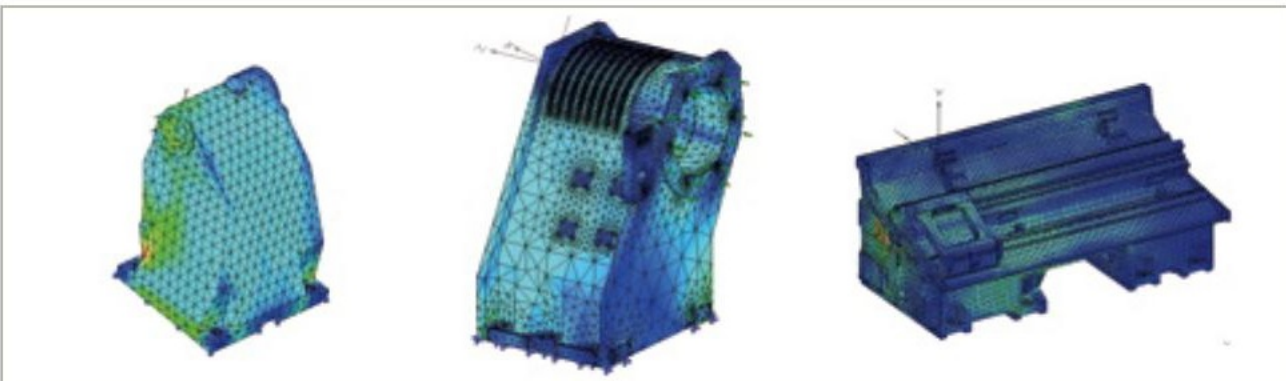
C-Axis System

The high torque output feature ensures maximum stability when the C-axis is performing dynamic milling functions.



Milling, Drilling, Tapping

With the use of C-axis and Y-axis the machine can perform face milling, helical milling, drilling and tapping functions.



Structural Analysis by FEA Software

To assure outstanding machine rigidity, stability and dampening capacity, all structural parts are designed with the use of Finite Element Analysis (FEA) software. The advanced design of the structure provides higher machining accuracy and fine surface finish.

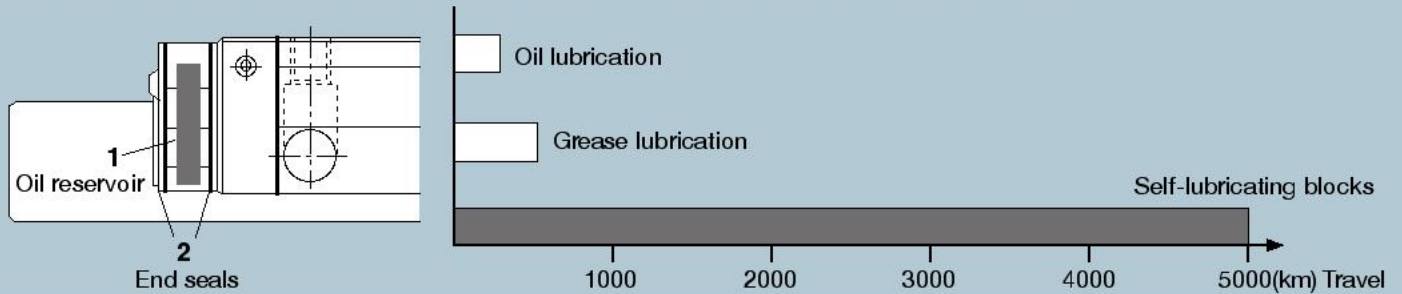


Linear Guideways from Rexroth in Germany

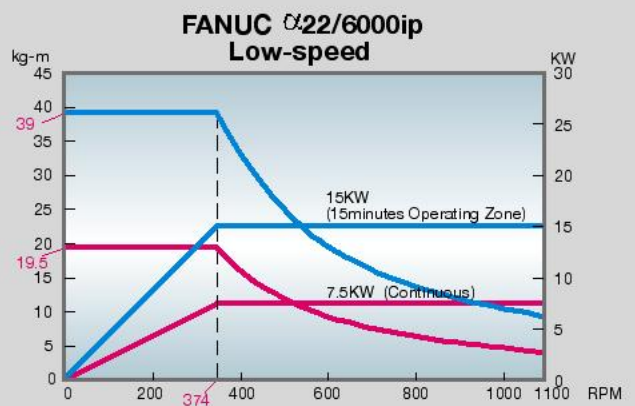
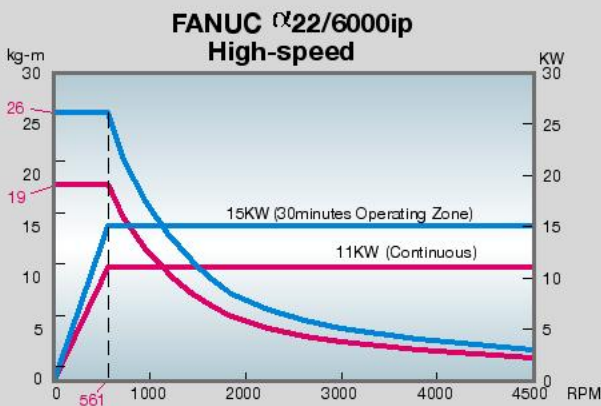
- The machine employs Rexroth (German) roller type linear guideways.
- The heavy duty type linear guideways feature exceptional rigidity and higher loading capability.

Self-lubricating Blocks

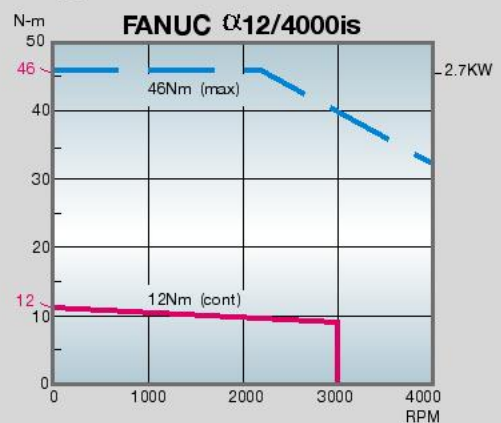
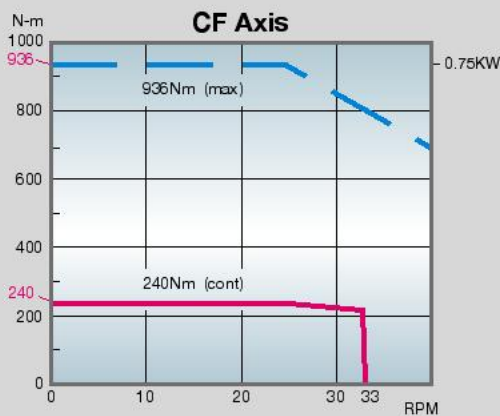
- The special self-lubricating blocks provide better lubrication than conventional oil or grease systems.
- Long service life and environmentally friendly due to non contamination of coolant.

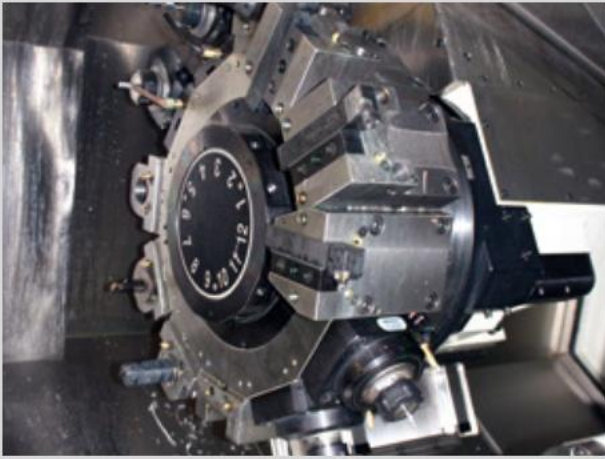


Spindle Torque Diagram



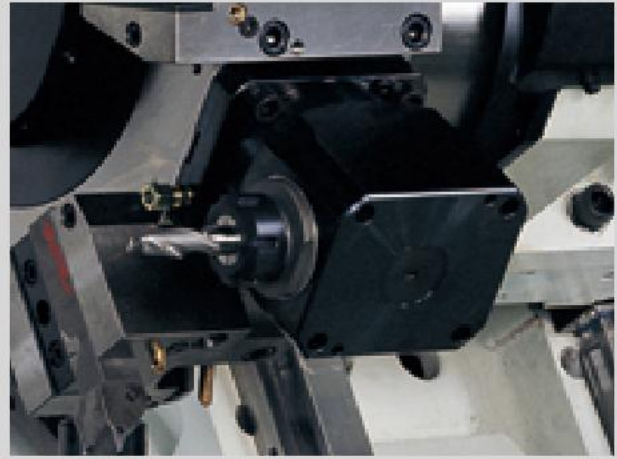
Power Turret Torque Diagram





12-position Power Turret

- The rigid new BMT power turret employs a substantial curvic coupling ensuring maximum stability of tool and high geometric accuracy of workpiece.



- Extremely fast tool change is accomplished in only 0.2 seconds tool to tool.

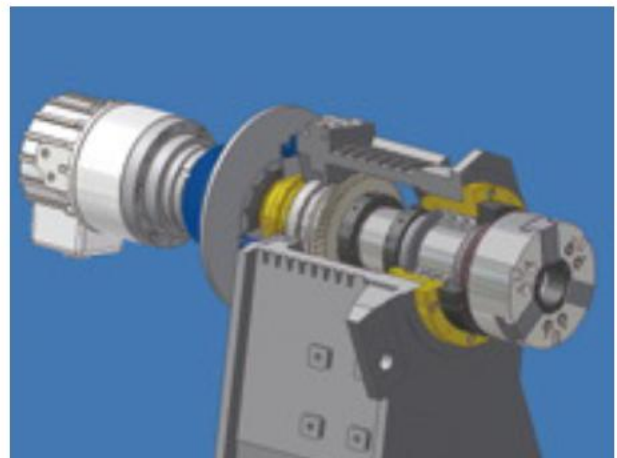


Spacious Work Area

The optimised modular design allows superb access to the working area and minimum interference between chuck, turret and guarding.

Servo Tailstock

- The tailstock is servo driven for high speed positioning.
- Digitally controlled thrust force setting. The quill thrust force can be set according to part length and diameter.
- The servo tailstock reduces machine down time while increasing efficiency due to its one touch, push button move and clamp operation.



4,500 RPM High Speed Spindle

- The high speed precision spindle is supported by angular contact ball bearings at front and roller bearings at rear to ensure superior running performance and cutting accuracy.
- $\varnothing 76\text{mm}$ extra large spindle bore allowing a bar capacity of $\varnothing 65\text{mm}$.

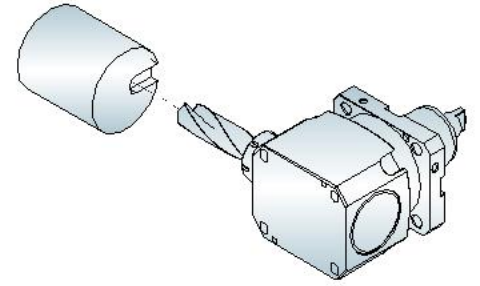
Power Tooling Cutting Capacity

Power milling

Material:S45C

Tool dia. $\phi 20 \times 4$ Flute

| Depth of cut (mm) | Tool speed S(rpm) | Feed rate F(mm/min) | Chip removal rate (cc/min) |
|-------------------|-------------------|---------------------|----------------------------|
| 10 | 400 | 120 | 24 |

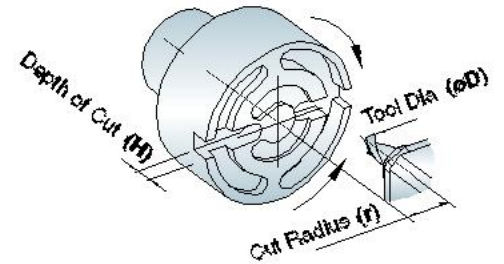


CF axis Dynamic milling

Material:S45C

Tool dia. $\phi 20 \times 4$ Flute

| Depth of cut (mm) | Cut radius R(mm) | Tool speed S(rpm) | Feed rate F(mm/min) | Chip removal rate M.R.R(cc/min) |
|-------------------|------------------|-------------------|---------------------|---------------------------------|
| 8 | 400 | 400 | 120 | 19.2 |



Power Drilling

Material:S45C

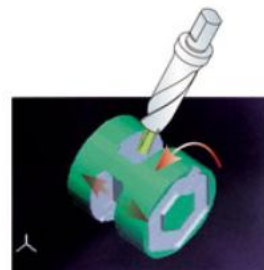
| Drill dia. (mm) | Tool speed S(rpm) | Feed rate F(mm/min) | Chip removal rate (cc/min) |
|-----------------|-------------------|---------------------|----------------------------|
| $\phi 20$ | 577 | 100 | 31.7 |

Power Tapping

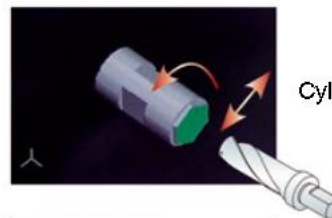
Material:S45C

| Tapping spec. | Tool speed S(rpm) |
|---------------|-------------------|
| M3 x P0.5 | 1200 |
| M20 x P2.5 | 160 |

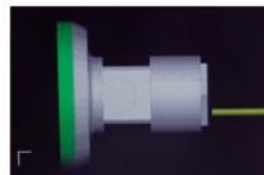
Fanuc I8i-TB CNC Control



Polar Coordinate Interpolation

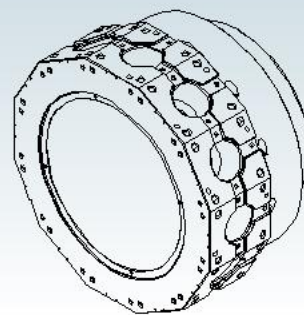
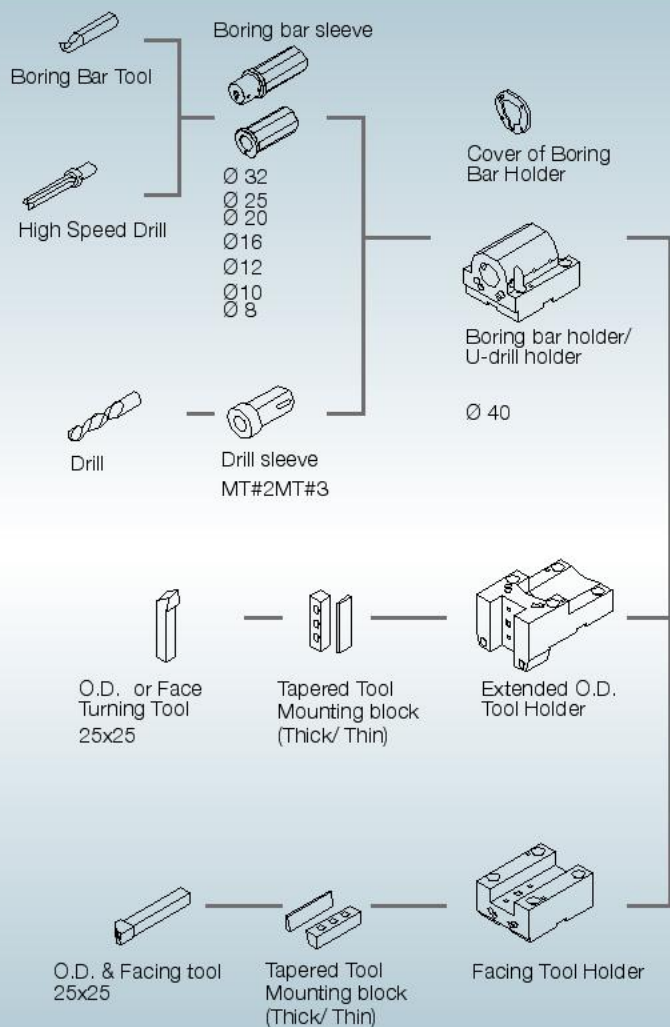


Cylindrical Interpolation

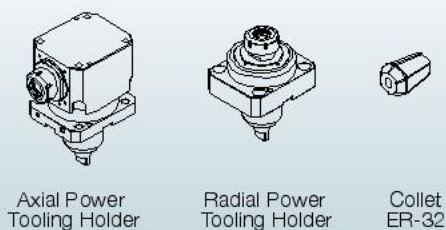


MANUAL GUIDE i
Conversational editing with 3D simulation function is available

Tooling System

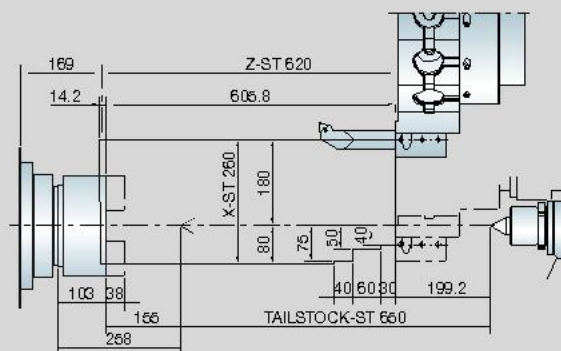
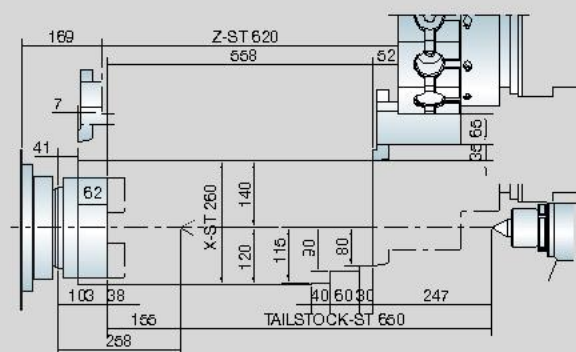
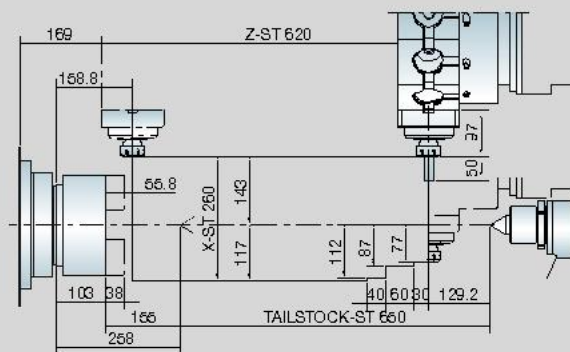
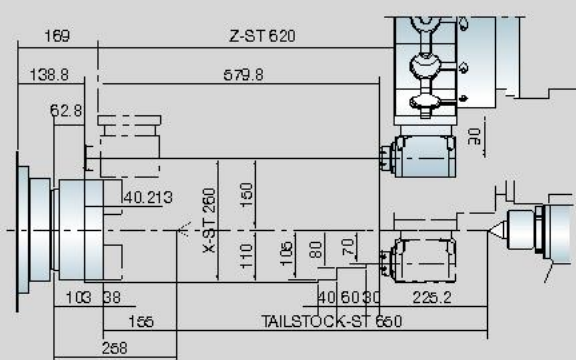


12 Position Tool Disc



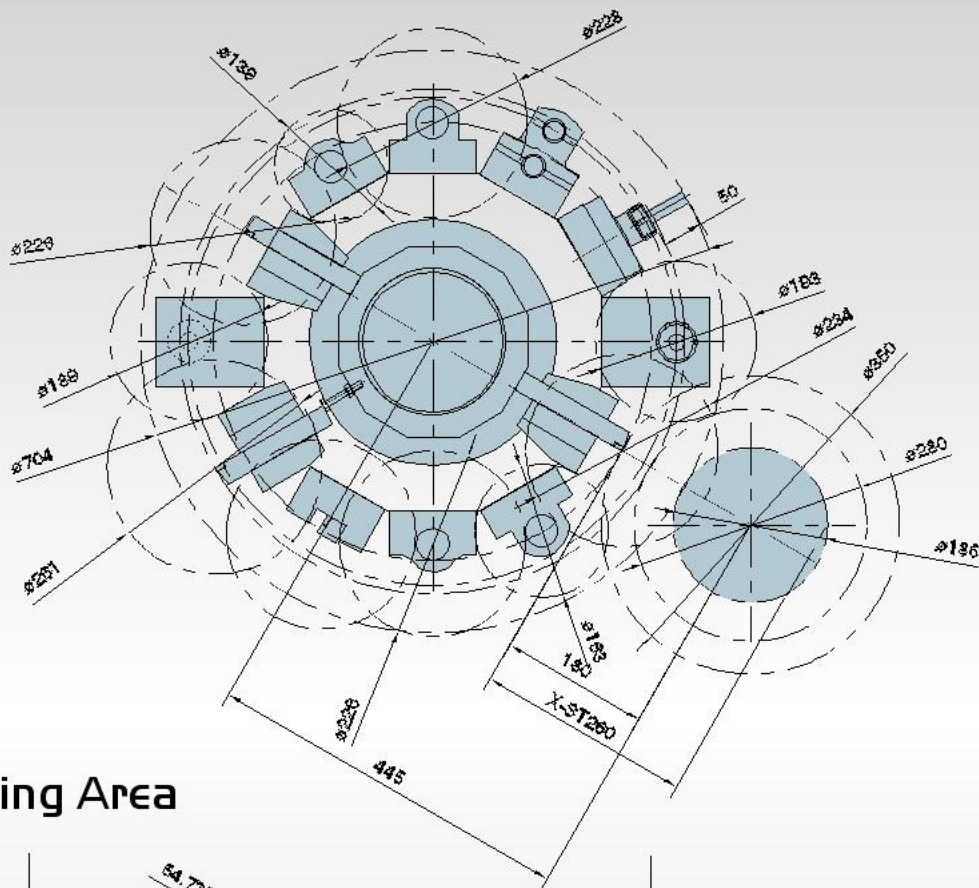
Machine Working Area

unit:mm

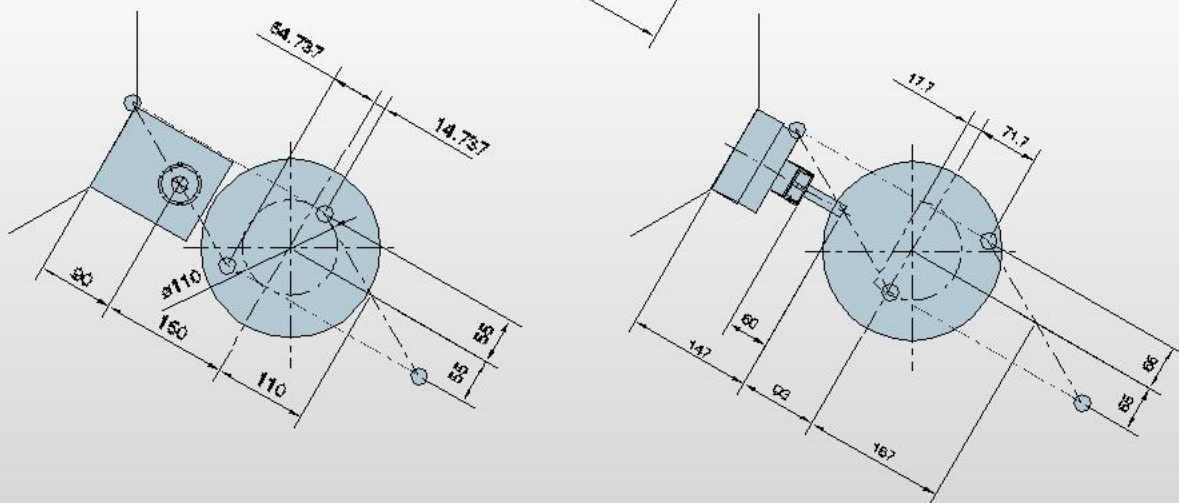


Tool Interference

unit:mm

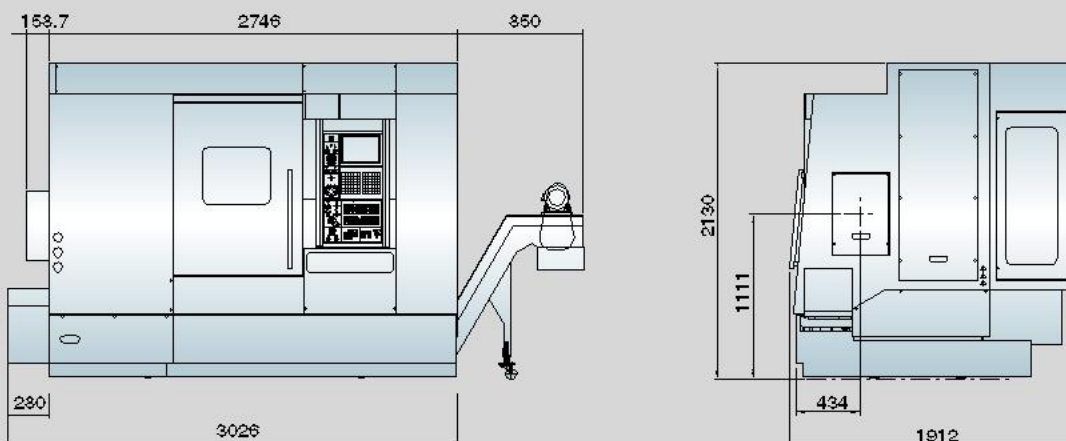


Y axis Milling Area



Dimensional Drawing

unit:mm



Specifications

| Model | | NL200Y |
|------------------------------|-------|--------------------|
| Control | | 18i-TB |
| Capacity | | |
| Swing Over Bed | mm | 600 |
| Max. Cutting Diameter | mm | 350 |
| Cutting Diameter | mm | 280 |
| Max. Cutting Length | mm | 558 |
| Bar Capacity | mm | ø65 |
| Spindle | | |
| Spindle Nose | ASA | A2-6 |
| Chuck Size | in/mm | 8"/210 op(10"/254) |
| Spindle Bore | mm | 77 |
| Spindle Speed | rpm | 4500 |
| Spindle Motor (Cont./30 min) | kw | 11/15(Ø.22i) |
| CS/CF Min Index Accuracy | | 0.001 |
| CS/CF Position Accuracy | | 0.005°/0.015° |
| Travel | | |
| X/Z-Axis Travel | mm | 260/600 |
| Y-Axis Travel | mm | ±55 |
| X/Z-Axis Rapid Traverse | m/min | 24/30 |
| Y-Axis Rapid Traverse | m/min | 10 |
| Turret | | |
| Number of Tools | | 12 |
| Turning Tool Size | mm | □ 25 |
| Boring Tool Size | mm | ø40 |
| Tool Sepcification | | BMT60 |
| Diameter of Power Tool | mm | ø20 |
| Speed of Power Tool | rpm | 4000 (6000 opt.) |
| Tool Change Time | sec | 0.2 |
| Tailstock | | |
| Tailstock Travel | mm | 650 |
| Tailstock Rapid Traverse | m/min | 7 |
| Quill Taper Hole | | MT4 (MT5 opt.) |
| Coolant Capacity | L | 200 |
| Voltage/Power | KVA | 40 |
| Machine Net Weight | kg | 5700 |

• The above specifications are subject to change without prior notice.

Standard Accessories:

1. Programmable Servo Tailstock
2. 8" Hydraulic Chuck (Including 1 set hard jaws and soft jaws)
3. Chip Conveyor and Bin
4. Facing Holder - 1 off
5. Boring Bar Holders - 5 off
6. Extended O.D. Tool Holders - 3 off
7. O.D. Tool Holders - 3 off
8. Boring Bar Sleeves (8-32) - 1 set
9. High Pressure Tailstock Coolant - 20 Bar
10. Live Centre
11. 3-Colour Status Light
12. Tool Kit
13. Fully CE Compliant

Optional Accessories

1. Parts Catcher
2. Manual Tool Setting Probe
3. Auto Tool Setting Probe
4. Hydraulic Chuck - 250mm
5. Oil Skimmer
6. Radial Power Tooling Holder
7. Axial Power Tooling Holder
8. Manual Guide i

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