

# **FEED YOUR TURNING NEED!!**



**Peace of mind guaranteed !  
Repeat orders from happy customers !  
Our machines are working in more than 50 countries worldwide !**

## LC Series 35/40/45/50

Flat-Bed CNC lathes are designed primarily for heavy duty turning operations with dramatic productivity. The high quality casting construction assures optimum rigidity and stability for years of reliable, trouble free operation. Great horsepower motor provides high torque in low output speed which is excellent for heavy cutting. Each machine is manufactured to the highest quality standards.

wide range of flat bed CNC lathes gives you a flexible choice. No matter which model you select, you get a lathe that can increase productivity and profits for your parts turning.



### Outstanding Features :

- ✓ One piece bed, floor type casting.
- ✓ Alloy steel spindle with opposed taper roller bearings.
- ✓ All gears in the headstock are hardened and precisely ground.
- ✓ 4 automatic ranges through pneumatic shifting.
- ✓ Spindle speed ranges are automatically changed by M code.
- ✓ Infinitely variable speed are commanded by S code.
- ✓ Tool change are commanded by T code.

- ✓ Auto lubrication system is equipped for headstock and carriage, cross-slide.
- ✓ Precision tapered roller bearings are equipped on the spindle and the quill.
- ✓ The quill is heat treated and precisely ground.
- ✓ Inner taper of quill can suit MT#6 dead center or live center.
- ✓ Turcite B lining is applied on cross slide and carriage for reducing friction.
- ✓ X & Z axes ballscrews are protected by cover to prevent rusting and chip damage.

### Standard Accessories :

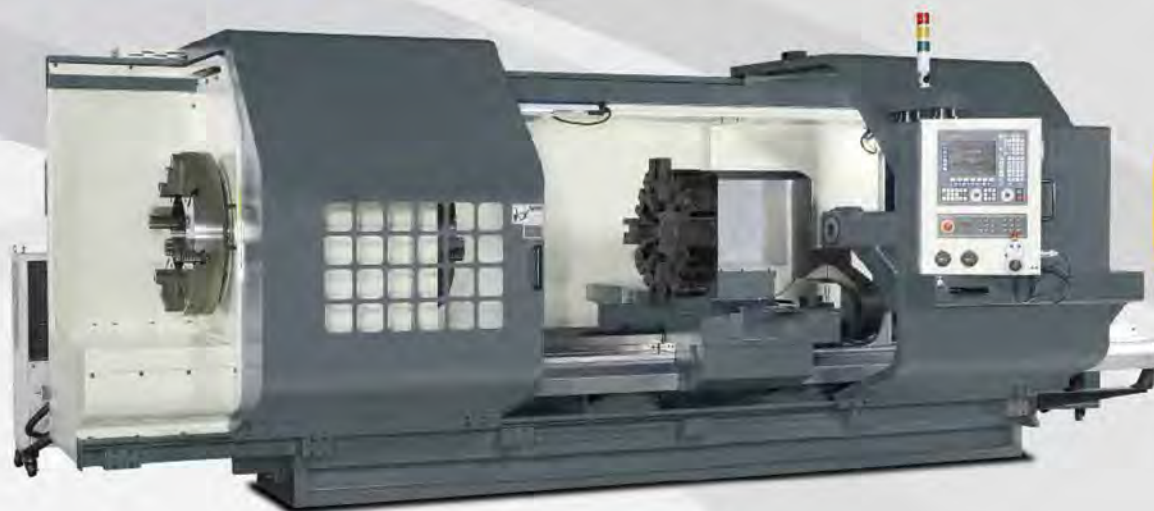
- ✓ Hydraulic H4 turret
- ✓ Rotatory tailstock quill with 235mm diameter
- ✓ Motorized tailstock body and quill movement
- ✓ FANUC Oi-TD built-in manual guide
- ✓ Bed width : 560mm
- ✓ Front and rear chip conveyor

### Optional Accessories:

- ✓ Please see page:17,18

| LC SERIES               | LC-35                                 | LC-40   | LC-45   | LC-50   |
|-------------------------|---------------------------------------|---------|---------|---------|
| Swing over bed          | 880 mm                                | 1010 mm | 1135 mm | 1275 mm |
| Swing over cross slide  | 510 mm                                | 630 mm  | 760 mm  | 900 mm  |
| Distance Between centre | 1500 mm to 12000 mm in 40" increments |         |         |         |
| Spindle Nose            | A2 -11 ~ A2-32                        |         |         |         |
| Spindle Bore            | 6" – 22"                              |         |         |         |
| Controller              | <b>FANUC/FAGOR/SIEMENS</b>            |         |         |         |
| Spindle Motor           | Standard 30HP   Optional – 40HP,50HP  |         |         |         |

## LD Series 35/40/45/50



LD Model is specially designed to fit inside a 40ft container saves a considerable cost in Shipping.

### Outstanding Features :

- ✓ One piece bed, floor type casting.
- ✓ Alloy steel spindle with opposed taper roller bearings.
- ✓ All gears in the headstock are hardened and precisely ground.
- ✓ 4 automatic ranges through pneumatic shifting.
- ✓ Spindle speed ranges are automatically changed by M code.
- ✓ Infinitely variable speed are commanded by S code.

- ✓ Tool change are commanded by T code.
- ✓ Auto lubrication system is equipped for headstock and carriage, cross-slide.
- ✓ Precision tapered roller bearings are equipped on the spindle and the quill.
- ✓ The quill is heat treated and precisely ground.
- ✓ Inner taper of quill can suit MT#6 dead center or live center.
- ✓ Turcite B lining is applied on cross slide and carriage for reducing friction.
- ✓ X & Z axes ballscrews are protected by cover to prevent rusting and chip damage.

| LD SERIES               | LD-35                                             | LD-40   | LD-45   | LD-50   |
|-------------------------|---------------------------------------------------|---------|---------|---------|
| Swing over bed          | 880 mm                                            | 1010 mm | 1135 mm | 1275 mm |
| Swing over cross slide  | 510 mm                                            | 630 mm  | 760 mm  | 900 mm  |
| Distance Between centre | 1000 / 1500 / 2000 / 3000 / 4000 / 5000 / 6000 mm |         |         |         |
| Spindle Nose            | A2 -11 ~ A2-32                                    |         |         |         |
| Spindle Bore            | 6" – 22"                                          |         |         |         |
| Controller              | <b>FANUC/FAGOR/SIEMENS</b>                        |         |         |         |
| Spindle Motor           | Standard 30HP   Optional – 40HP,50HP              |         |         |         |

### Standard Accessories :

- ✓ Hydraulic H4 turret
- ✓ Dead tailstock quill with 145mm diameter
- ✓ Carriage driven tailstock body and manual quill movement
- ✓ FANUC 0i-TD built-in manual guide
- ✓ Bed width : 560mm
- ✓ Rear conveyor

### Optional Accessories:

- ✓ Please see page:17.18

## BN Series 45/50/60/70



### Outstanding Features :

- ✓ One piece bed, floor type casting.
- ✓ Alloy steel spindle with opposed taper roller bearings.
- ✓ All gears in the headstock are hardened and precisely ground.
- ✓ 4 automatic ranges through pneumatic shifting.
- ✓ Spindle speed ranges are automatically changed by M code.
- ✓ Infinitely variable speed are commanded by S code.
- ✓ Tool change are commanded by T code.

- ✓ Auto lubrication system is equipped for headstock and carriage, cross-slide.
- ✓ Precision tapered roller bearings are equipped on the spindle and the quill.
- ✓ The quill is heat treated and precisely ground.
- ✓ Inner taper of quill can suit MT#6 dead center or live center.
- ✓ Turcire B lining is applied on cross slide and carriage for reducing friction.
- ✓ X & Z axes ballscrews are protected by cover to prevent rusting and chip damage.

### Standard Accessories :

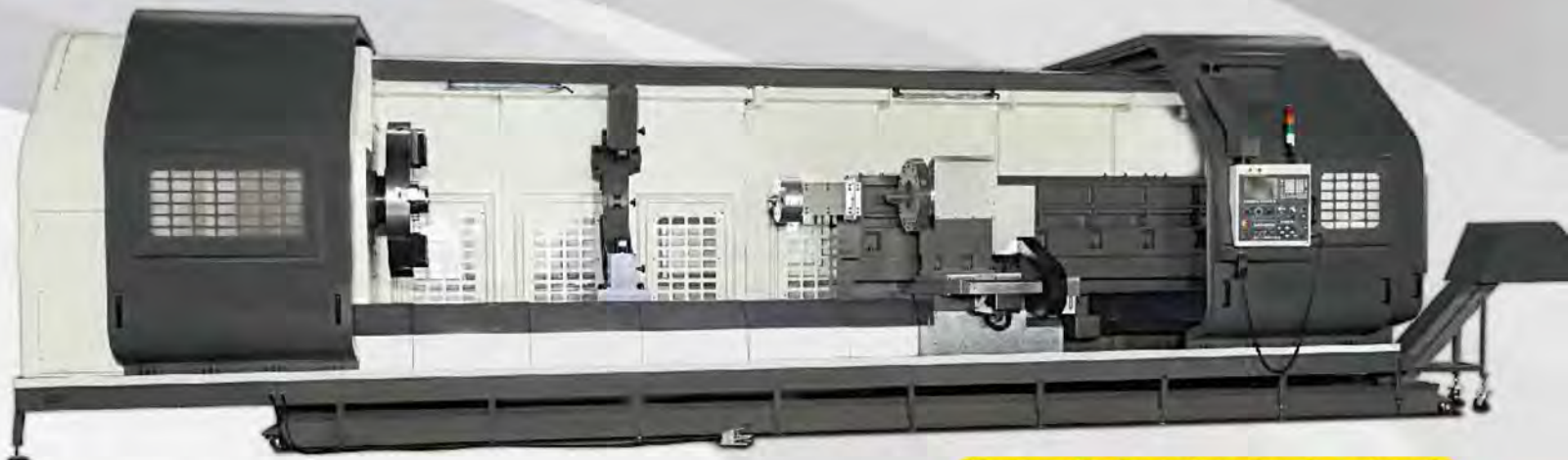
- ✓ Hydraulic H4 turret
- ✓ Rotatory tailstock quill with 235mm diameter
- ✓ Motorized tailstock body and quill movement
- ✓ FANUC Oi-TD built-in manual guide
- ✓ Bed width : 715mm
- ✓ Front and rear chip conveyor

### Optional Accessories:

- ✓ Please see page:17.18

| BN SERIES               | BN-45                                 | BN-50   | BN-60   | BN-70   |
|-------------------------|---------------------------------------|---------|---------|---------|
| Swing over bed          | 1155 mm                               | 1275 mm | 1525 mm | 1775 mm |
| Swing over cross slide  | 720 mm                                | 840 mm  | 1090 mm | 1340 mm |
| Distance Between centre | 1500 mm to 12000 mm in 40" increments |         |         |         |
| Spindle Nose            | A2 -11 ~ A2-40                        |         |         |         |
| Spindle Bore            | 6" – 30"                              |         |         |         |
| Controller              | <b>FANUC/FAGOR/SIEMENS</b>            |         |         |         |
| Spindle Motor           | Standard 30HP   Optional – 40HP, 50HP |         |         |         |

## BNC Series 60/70/80



Boring attachment system is optional.

### Outstanding Features :

- ✓ One piece bed, floor type casting.
- ✓ Alloy steel spindle with opposed taper roller bearings.
- ✓ All gears in the headstock are hardened and precisely ground.
- ✓ 4 automatic ranges through pneumatic shifting.
- ✓ Spindle speed ranges are automatically changed by M code.
- ✓ Infinitely variable speed are commanded by S code.

| BNC SERIES              | BNC-60                                | BNC-70  | BNC-80  |
|-------------------------|---------------------------------------|---------|---------|
| Swing over bed          | 1550 mm                               | 1800 mm | 2050 mm |
| Swing over cross slide  | 1070 mm                               | 1320 mm | 1570 mm |
| Distance Between centre | 1500 mm to 12000 mm in 40" increments |         |         |
| Spindle Nose            | A2 -15 ~ A2-40                        |         |         |
| Spindle Bore            | 7" – 32"                              |         |         |
| Controller              | <b>FANUC/FAGOR/SIEMENS</b>            |         |         |
| Spindle Motor           | Standard 30HP   Optional – 40HP, 50HP |         |         |

- ✓ Tool change are commanded by T code.
- ✓ Auto lubrication system is equipped for headstock and carriage, cross-slide.
- ✓ Precision tapered roller bearings are equipped on the spindle and the quill.
- ✓ The quill is heat treated and precisely ground.
- ✓ Inner taper of quill can suit MT#6 dead center or live center.
- ✓ Turcire B lining is applied on cross slide and carriage for reducing friction.
- ✓ X & Z axes ballscrews are protected by cover to prevent rusting and chip damage.

### Standard Accessories :

- ✓ Hydraulic H4 turret
- ✓ Rotatory tailstock quill with 235mm diameter
- ✓ Motorized tailstock body and quill movement
- ✓ FANUC 0i-TD built-in manual guide
- ✓ Bed width : 920mm
- ✓ Front and rear chip conveyor

### Optional Accessories:

- ✓ Please see page:17.18

## CN Series 50/60/70/80



Second carriage and Hydraulic is optional.

### Outstanding Features :

- ✓ One piece bed, floor type casting.
- ✓ Alloy steel spindle with opposed taper roller bearings.
- ✓ All gears in the headstock are hardened and precisely ground.
- ✓ 4 automatic ranges through pneumatic shifting.
- ✓ Spindle speed ranges are automatically changed by M code.
- ✓ Infinitely variable speed are commanded by S code.
- ✓ Tool change are commanded by T code.

- ✓ Auto lubrication system is equipped for headstock and carriage, cross-slide.
- ✓ Precision tapered roller bearings are equipped on the spindle and the quill.
- ✓ The quill is heat treated and precisely ground.
- ✓ Inner taper of quill can suit MT#6 dead center or live center.
- ✓ Turcire B lining is applied on cross slide and carriage for reducing friction.
- ✓ X & Z axes ballscrews are protected by cover to prevent rusting and chip damage.

### Standard Accessories :

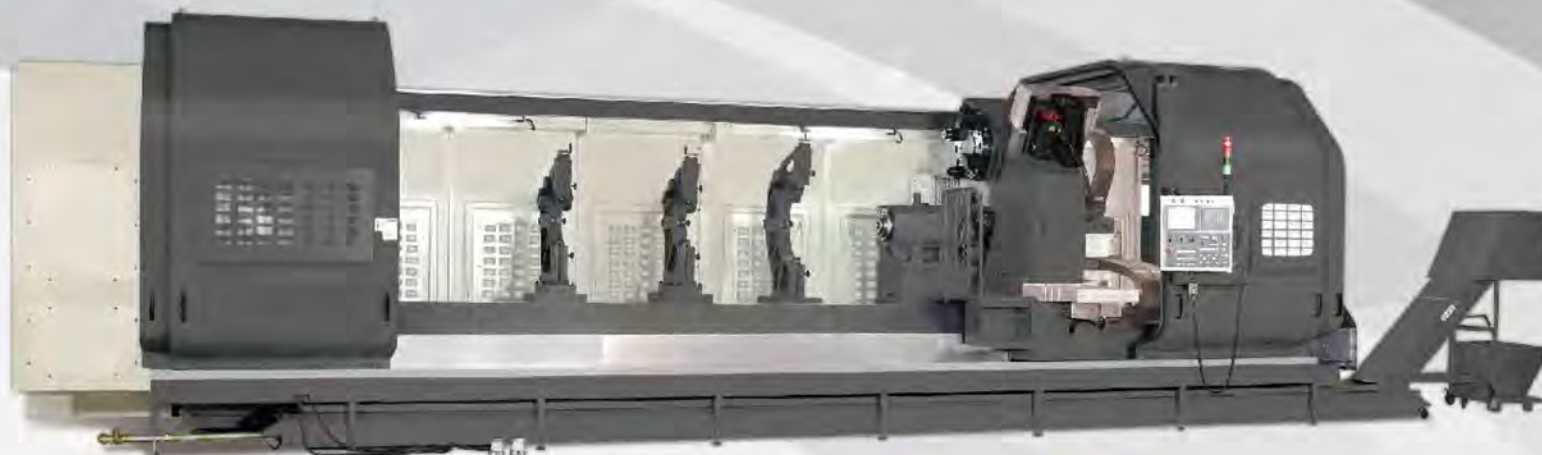
- ✓ Hydraulic H4 turret
- ✓ Rotatory tailstock quill with 235mm diameter
- ✓ Motorized tailstock body and quill movement
- ✓ FANUC Oi-TD built-in manual guide
- ✓ Bed width : 1100mm
- ✓ Front and rear chip conveyor

### Optional Accessories:

- ✓ Please see page:17.18

| CN SERIES               | CN-50                                      | CN-60   | CN-70   | CN-80   |
|-------------------------|--------------------------------------------|---------|---------|---------|
| Swing over bed          | 1300 mm                                    | 1550 mm | 1800 mm | 2040 mm |
| Swing over cross slide  | 940 mm                                     | 1190 mm | 1440 mm | 1340 mm |
| Distance Between centre | 3000 mm to 12000 mm in 40 " increments     |         |         |         |
| Spindle Nose            | A2 -15 ~ A2-40                             |         |         |         |
| Spindle Bore            | 7" – 32"                                   |         |         |         |
| Controller              | <b>FANUC/FAGOR/SIEMENS</b>                 |         |         |         |
| Spindle Motor           | Standard 50HP   Optional – 60HP,75HP,100HP |         |         |         |

# KAN Series 80/90/100/120



Y-axis is optional.

## Outstanding Features :

- ✓ One piece bed, floor type casting.
- ✓ Alloy steel spindle with opposed taper roller bearings.
- ✓ All gears in the headstock are hardened and precisely ground.
- ✓ 4 automatic ranges through pneumatic shifting.
- ✓ Spindle speed ranges are automatically changed by M code.
- ✓ Infinitely variable speed are commanded by S code.

- ✓ Tool change are commanded by T code.
- ✓ Auto lubrication system is equipped for headstock and carriage, cross-slide.
- ✓ Precision tapered roller bearings are equipped on the spindle and the quill.
- ✓ The quill is heat treated and precisely ground.
- ✓ Inner taper of quill can suit MT#6 dead center or live center.
- ✓ Turcite B lining is applied on cross slide and carriage for reducing friction.
- ✓ X & Z axes ballscrews are protected by cover to prevent rusting and chip damage.

| KAN SERIES              | KAN-80                                     | KAN-90  | KAN-100 | KAN-120 |
|-------------------------|--------------------------------------------|---------|---------|---------|
| Swing over bed          | 2050 mm                                    | 2300 mm | 2550 mm | 2800 mm |
| Swing over cross slide  | 1620 mm                                    | 1870 mm | 2120 mm | 2370 mm |
| Distance Between centre | 3000 mm to 12000 mm in 40 " increments     |         |         |         |
| Spindle Nose            | A2 -15 ~ A2-40                             |         |         |         |
| Spindle Bore            | 9" - 32"                                   |         |         |         |
| Controller              | <b>FANUC/FAGOR/SIEMENS</b>                 |         |         |         |
| Spindle Motor           | Standard 50HP   Optional - 60HP,75HP,100HP |         |         |         |

## Standard Accessories :

- ✓ Hydraulic H4 turret
- ✓ Rotatory tailstock quill with 235mm diameter
- ✓ Motorized tailstock body and quill movement
- ✓ FANUC 0i-TD built-in manual guide
- ✓ Bed width : 1350mm
- ✓ Front and rear chip conveyor

## Optional Accessories:

- ✓ Please see page:17.18

# KBN Series 90/100/120/140



Tailstock with chuck & center device for heavy parts cutting. (optional)

## Outstanding Features :

- ✓ One piece bed, floor type casting.
- ✓ Alloy steel spindle with opposed taper roller bearings.
- ✓ All gears in the headstock are hardened and precisely ground.
- ✓ 4 automatic ranges through pneumatic shifting.
- ✓ Spindle speed ranges are automatically changed by M code.
- ✓ Infinitely variable speed are commanded by S code.
- ✓ Tool change are commanded by T code.
- ✓ Auto lubrication system is equipped for headstock and carriage, cross-slide.
- ✓ Precision tapered roller bearings are equipped on the spindle and the quill.
- ✓ The quill is heat treated and precisely ground.
- ✓ Inner taper of quill can suit MT#6 dead center or live center.
- ✓ Turcite B lining is applied on cross slide and carriage for reducing friction.
- ✓ X & Z axes ballscrews are protected by cover to prevent rusting and chip damage.

## Standard Accessories :

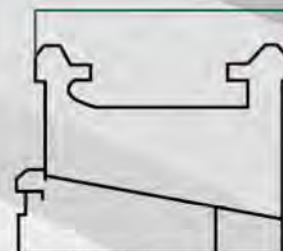
- ✓ Hydraulic H4 turret
- ✓ Rotatory tailstock quill with 235mm diameter
- ✓ Motorized tailstock body and quill movement
- ✓ FANUC Oi-TD built-in manual guide
- ✓ Bed width : 1680mm
- ✓ Front and rear chip conveyor

## Optional Accessories:

- ✓ Please see page: 17, 18

| KBN SERIES              | KBN-90                                       | KBN-100 | KBN-120 | KBN-140 |
|-------------------------|----------------------------------------------|---------|---------|---------|
| Swing over bed          | 2300 mm                                      | 2550 mm | 3050 mm | 3550 mm |
| Swing over cross slide  | 1800 mm                                      | 2050 mm | 2550 mm | 3050 mm |
| Distance Between centre | 3000 mm to 12000 mm in 40 " increments       |         |         |         |
| Spindle Nose            | A2 -15 ~ A2-40                               |         |         |         |
| Spindle Bore            | 9" – 32"                                     |         |         |         |
| Controller              | <b>FANUC/FAGOR/SIEMENS</b>                   |         |         |         |
| Spindle Motor           | Standard 50HP   Optional – 60HP, 75HP, 100HP |         |         |         |

# LC / LD BN / BNC SERIES 2 SHEAR BED WAY



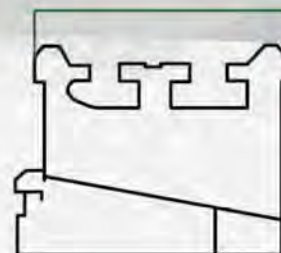
LC / LD 560mm (22.04")  
BN 715mm (28.14")  
BNC 920mm (36.22")

| SPECIFICATIONS |                             |                  |                                                                                                                                    |              |              |              |                                           |              |              |              |                                   |              |              |              |                                   |              |              |  |
|----------------|-----------------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|--------------|-------------------------------------------|--------------|--------------|--------------|-----------------------------------|--------------|--------------|--------------|-----------------------------------|--------------|--------------|--|
| ITEM           |                             | UNIT             | LD-35                                                                                                                              | LD-40        | LD-45        | LD-50        | LC-35                                     | LC-40        | LC-45        | LC-50        | BN-45                             | BN-50        | BN-60        | BN-70        | BNC-60                            | BNC-70       | BNC-80       |  |
| CAPACITY       | Center height               | mm.(in.)         | 445 (17.51)                                                                                                                        | 510 (20.07)  | 575 (22.63)  | 645 (25.39)  | 445 (17.51)                               | 510 (20.07)  | 575 (22.63)  | 645 (25.39)  | 590 (23.22)                       | 650 (25.59)  | 775 (30.51)  | 900 (35.43)  | 805 (31.69)                       | 930 (36.61)  | 1055 (41.53) |  |
|                | Swing over bed              | mm.(in.)         | 880 (34.64)                                                                                                                        | 1010 (39.76) | 1135 (44.68) | 1275 (50.19) | 880 (34.64)                               | 1010 (39.76) | 1135 (44.68) | 1275 (50.19) | 1155 (45.47)                      | 1275 (50.19) | 1525 (60.03) | 1775 (69.88) | 1550 (61.02)                      | 1800 (70.86) | 2050 (80.7)  |  |
|                | Swing over cross slide      | mm.(in.)         | 510 (20.07)                                                                                                                        | 630 (24.8)   | 760 (29.92)  | 900 (35.43)  | 510 (20.07)                               | 630 (24.8)   | 760 (29.92)  | 900 (35.43)  | 720 (28.34)                       | 840 (33.07)  | 1090 (42.91) | 1340 (52.75) | 1070 (42.12)                      | 1320 (51.96) | 1570 (61.81) |  |
|                | Distance between centers    | mm.(in.)         | 1500(60), 2000(80),3000(120), 4000(160), 5000(200), 6000(240), 7000(280), 8000(320), 9000(360), 10000(400), 11000(440), 12000(480) |              |              |              |                                           |              |              |              |                                   |              |              |              |                                   |              |              |  |
| BED            | Width                       | mm.(in.)         | 560 (22.04)                                                                                                                        |              |              |              | 560 (22.04)                               |              |              |              | 715 (28.14)                       |              |              |              | 920 (36.22)                       |              |              |  |
| CARRIAGE       | Width of cross slide        | mm.(in.)         | 350 (17.77)                                                                                                                        |              |              |              | 350 (17.77)                               |              |              |              | 400 (15.74)                       |              |              |              | 500 (19.68)                       |              |              |  |
| TURRET         | Standard tool post          |                  | Auto 4-way or Polygon Disc or VDI Disc                                                                                             |              |              |              |                                           |              |              |              |                                   |              |              |              |                                   |              |              |  |
|                | No. of tool stations        |                  | H4,H6 or 12 or 8 or 12                                                                                                             |              |              |              |                                           |              |              |              |                                   |              |              |              |                                   |              |              |  |
|                | Tool shank cross section    | mm.(in.)         | 32 x 32 (1.25)                                                                                                                     |              |              |              |                                           |              |              |              |                                   |              |              |              |                                   |              |              |  |
|                | Tool Shank diameter         | mm.(in.)         | 60 (2.36)                                                                                                                          |              |              |              |                                           |              |              |              |                                   |              |              |              |                                   |              |              |  |
| TRAVEL         | Cross slide(X-axis) travel  | mm.(in.)         | 630 (24.8)                                                                                                                         |              |              |              | 630 (24.8)                                |              |              |              | 950 (37.4)                        |              |              |              | 1070 (42.12)                      |              |              |  |
|                | Longitudinal(Z-axis) travel | mm.(in.)         | 1500(60), 2000(80),3000(120), 4000(160), 5000(200), 6000(240), 7000(280), 8000(320), 9000(360), 10000(400), 11000(440), 12000(480) |              |              |              |                                           |              |              |              |                                   |              |              |              |                                   |              |              |  |
|                | Cutting feed rate           | mm./rev(in.rev)  | X-axis: 0.001~250(0.00004~9.84) Z-axis: 0.001~400(0.00004~15.75)                                                                   |              |              |              |                                           |              |              |              |                                   |              |              |              |                                   |              |              |  |
|                | Rapid travel                | M./min.(Ft.min.) | X-axis: 6(19.68) Z-axis: 10(32.7)                                                                                                  |              |              |              |                                           |              |              |              |                                   |              |              |              |                                   |              |              |  |
|                | Ball screw diameter         | mm.(in.)         | X-axis: 50(1.96) Z-axis: 80(3.14)                                                                                                  |              |              |              |                                           |              |              |              | X-axis: 40(1.57) Z-axis: 80(3.15) |              |              |              | X-axis: 63(2.48) Z-axis: 80(3.15) |              |              |  |
| TAILSTOCK      | Quill type                  |                  | Built - in type, Dead tailstock quill                                                                                              |              |              |              | Built - in type, Rotating tailstock quill |              |              |              |                                   |              |              |              |                                   |              |              |  |
|                | Quill diameter              | mm.(in.)         | 145 (5.7)                                                                                                                          |              |              |              | 235 (9.25)                                |              |              |              |                                   |              |              |              |                                   |              |              |  |
|                | Quill travel                | mm.(in.)         | 200 (7.87)                                                                                                                         |              |              |              | 200 (7.87)                                |              |              |              |                                   |              |              |              |                                   |              |              |  |
|                | Inner taper of quill        |                  | MT#6                                                                                                                               |              |              |              |                                           |              |              |              |                                   |              |              |              |                                   |              |              |  |
| MOTOR          | Headstock oil refrigerator  |                  | 18,000 BTU / 4,500 K cal                                                                                                           |              |              |              |                                           |              |              |              |                                   |              |              |              |                                   |              |              |  |
|                | Main spindle motor          | KW(HP)           | 30/37(40/50)-STD. 37.5/45(50/60)-OPT.                                                                                              |              |              |              |                                           |              |              |              |                                   |              |              |              |                                   |              |              |  |
|                | Axis servo motor            | KW(HP)           | X-axis: 7(9.387) Z-axis: 7(9.387)                                                                                                  |              |              |              |                                           |              |              |              |                                   |              |              |              |                                   |              |              |  |
|                | Hydraulic pump motor        | KW(HP)           | 3.7 (5)                                                                                                                            |              |              |              |                                           |              |              |              |                                   |              |              |              |                                   |              |              |  |
|                | Coolant pump motor          | KW(HP)           | 1.05 (1.4)                                                                                                                         |              |              |              |                                           |              |              |              |                                   |              |              |              |                                   |              |              |  |
| Controller     |                             |                  | FANUC 0i-T series-STD. FANUC 31i series,Other required-OPT.                                                                        |              |              |              |                                           |              |              |              |                                   |              |              |              |                                   |              |              |  |

- (1) X and Z axes actual cutting diameter will change when equipped with different turrets
- (2) Specifications cations are subject to change without notice for improvement

# CN KAN / KBN SERIES

## 3 SHEAR BED WAY, 4 WAY GUIDE



CN 1100mm (43.31")  
KAN 1350mm (53.14")  
KBN 1680mm (66.14")

### SPECIFICATIONS

| ITEM       |                             | UNIT            | CN-50                                                                                                           | CN-60        | CN-70        | CN-80        | KAN-80                             | KAN-90       | KAN-100       | KAN-120       | KBN-90                             | KBN-100       | KBN-120       | KBN-140       |
|------------|-----------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------|--------------|--------------|--------------|------------------------------------|--------------|---------------|---------------|------------------------------------|---------------|---------------|---------------|
| CAPACITY   | Center height               | mm.(in.)        | 650 (25.59)                                                                                                     | 775 (30.51)  | 900 (35.43)  | 1020 (40.15) | 1025 (40.35)                       | 1150 (45.27) | 1275 (50.19)  | 1400 (55.11)  | 1150 (45.27)                       | 1275 (50.19)  | 1525 (60.03)  | 1775 (69.88)  |
|            | Swing over bed              | mm.(in.)        | 1300 (51.18)                                                                                                    | 1550 (61.02) | 1800 (70.86) | 2040 (80.31) | 2050 (80.7)                        | 2300 (90.55) | 2550 (100.39) | 2800 (110.23) | 2300 (90.55)                       | 2550 (100.39) | 3050 (120.07) | 3550 (139.76) |
|            | Swing over cross slide      | mm.(in.)        | 940 (37)                                                                                                        | 1190 (46.85) | 1440 (56.69) | 1690 (66.53) | 1620 (63.77)                       | 1870 (73.62) | 2120 (83.46)  | 2370 (93.3)   | 1800 (70.86)                       | 2050 (80.7)   | 2550 (100.39) | 3050 (120.07) |
|            | Distance between centers    | mm.(in.)        | 3000(120), 4000(160), 5000(200), 6000(240), 7000(280), 8000(320), 9000(360), 10000(400), 11000(440), 12000(480) |              |              |              |                                    |              |               |               |                                    |               |               |               |
| BED        | Width                       | mm.(in.)        | 1100 (43.31)                                                                                                    |              |              |              | 1350 (53.14)                       |              |               |               | 1680 (66.14)                       |               |               |               |
| CARRIAGE   | Width of cross slide        | mm.(in.)        | 600 (23.62)                                                                                                     |              |              |              | 600 (63.62)                        |              |               |               | 900 (35.43)                        |               |               |               |
| TURRET     | Standard tool post          |                 | Auto 4-way or Polygon Disc or VDI Disc                                                                          |              |              |              |                                    |              |               |               |                                    |               |               |               |
|            | No. of tool stations        |                 | H4,H6 or 12 or 8 or 12                                                                                          |              |              |              |                                    |              |               |               |                                    |               |               |               |
|            | Tool shank cross section    | mm.(in.)        | 32 x 32 (1.25)                                                                                                  |              |              |              |                                    |              |               |               |                                    |               |               |               |
|            | Tool Shank diameter         | mm.(in.)        | 60 (2.5)                                                                                                        |              |              |              |                                    |              |               |               |                                    |               |               |               |
| TRAVEL     | Cross slide(X-axis) travel  | mm.(in.)        | 700 (27.55)                                                                                                     |              |              |              | 875 (34.44)                        |              |               |               | 875 (34.44)                        |               |               |               |
|            | Longitudinal(Z-axis) travel | mm.(in.)        | 3000(120), 4000(160), 5000(200), 6000(240), 7000(280), 8000(320), 9000(360), 10000(400), 11000(440), 12000(480) |              |              |              |                                    |              |               |               |                                    |               |               |               |
|            | Cutting feed rate           | mm/rev(in.rev)  | X-axis: 0.001~250(0.00004~9.84) Z-axis: 0.001~400(0.00004~15.75)                                                |              |              |              |                                    |              |               |               |                                    |               |               |               |
|            | Rapid travel                | M/min.(Ft.min.) | X-axis: 6(19.68) Z-axis: 10(32.7)                                                                               |              |              |              |                                    |              |               |               |                                    |               |               |               |
|            | Ball screw diameter         | mm.(in.)        | X-axis: 50(1.96) Z-axis: 80(3.15)                                                                               |              |              |              | X-axis: 63(2.48) Z-axis: 120(4.72) |              |               |               | X-axis: 80(3.14) Z-axis: 120(4.72) |               |               |               |
| TAILSTOCK  | Quill type                  |                 | Built - in type, Rotating tailstock quill                                                                       |              |              |              |                                    |              |               |               |                                    |               |               |               |
|            | Quill diameter              | mm.(in.)        | 235 (9.25)                                                                                                      |              |              |              |                                    |              |               |               |                                    |               |               |               |
|            | Quill travel                | mm.(in.)        | 200 (7.87)                                                                                                      |              |              |              |                                    |              |               |               |                                    |               |               |               |
|            | Inner taper of quill        |                 | MT#6                                                                                                            |              |              |              |                                    |              |               |               |                                    |               |               |               |
| MOTOR      | Headstock oil refrigerator  |                 | 18,000 BTU / 4,500 K cal                                                                                        |              |              |              |                                    |              |               |               |                                    |               |               |               |
|            | Main spindle motor          | KW(HP)          | 30/37(40/50)-STD. 37.5/45(50/60)-OPT.                                                                           |              |              |              |                                    |              |               |               |                                    |               |               |               |
|            | Axis servo motor            | KW(HP)          | X-axis: 7(9.387) Z-axis: 7(9.387)                                                                               |              |              |              |                                    |              |               |               |                                    |               |               |               |
|            | Hydraulic pump motor        | KW(HP)          | 3.7 (5)                                                                                                         |              |              |              |                                    |              |               |               |                                    |               |               |               |
|            | Coolant pump motor          | KW(HP)          | 1.05 (1.4)                                                                                                      |              |              |              |                                    |              |               |               |                                    |               |               |               |
| Controller |                             |                 | FANUC 0i-T series-STD. FANUC 31i series,Other required-OPT.                                                     |              |              |              |                                    |              |               |               |                                    |               |               |               |

- (1) X and Z axes actual cutting diameter will change when equipped with different turrets  
(2) Specifications cations are subject to change without notice for improvement

## SA Series 40/45/50



Slat-Bed CNC lathes are designed primarily for heavy duty turning operations with dramatic productivity. The high quality casting construction assures optimum rigidity and stability for years of reliable, trouble free operation. Great horsepower motor provides high torque in low output speed which is excellent for heavy cutting. Each machine is manufactured to the highest quality standards.

wide range of Slat bed CNC lathes gives you a flexible choice. No matter which model you select, you get a lathe that can increase productivity and profits for your parts turning.

### Outstanding Features :

- ✓ One piece bed, 60° slant bed construction ensures maximum stability and convenient chip disposal.
- ✓ Alloy steel spindle with opposed taper roller bearings.
- ✓ All gears in the headstock are hardened and precisely ground.
- ✓ 4 automatic ranges through pneumatic shifting.
- ✓ Spindle speed ranges are automatically changed by M code.

- ✓ Infinitely variable speed are commanded by S code.
- ✓ Tool change are commanded by T code.
- ✓ Auto lubrication system is equipped for headstock and carriage, cross-slide.
- ✓ Precision tapered roller bearings are equipped on the spindle and the quill.
- ✓ The quill is heat treated and precisely ground.
- ✓ Inner taper of quill can suit MT#6 dead center or live center.
- ✓ Turcire B lining is applied on cross slide and carriage for reducing friction.
- ✓ X & Z axes ballscrews are protected by cover to prevent rusting and chip damage.

| SA SERIES               | SA-40                                                                       | SA-45   | SA-50   |
|-------------------------|-----------------------------------------------------------------------------|---------|---------|
| Swing over bed          | 940 mm                                                                      | 1010 mm | 1095 mm |
| Swing over cross slide  | 870 mm                                                                      | 940 mm  | 1025 mm |
| Distance Between centre | 700 mm to 1700 mm in 20" increments<br>2200 mm to 5200 mm in 40" increments |         |         |
| Spindle Nose            | A2 -11 ~ A2-32                                                              |         |         |
| Spindle Bore            | 6" – 24"                                                                    |         |         |
| Controller              | <b>FANUC/FAGOR/SIEMENS</b>                                                  |         |         |
| Spindle Motor           | Standard 40HP   Optional – 50HP                                             |         |         |

### Standard Accessories :

- ✓ V12 turret
- ✓ Rotatory tailstock quill with 235mm diameter
- ✓ Motorized tailstock body and quill movement
- ✓ FANUC Oi-TD built-in manual guide
- ✓ Bed width : 1,580mm
- ✓ Front chip conveyor

### Optional Accessories:

- ✓ Please see page:17,18

## SB Series 50/55/60



Tool presetter and Hydraulic is optional.

### Outstanding Features :

- ✓ One piece bed, 60° slant bed construction ensures maximum stability and convenient chip disposal.
- ✓ Alloy steel spindle with opposed taper roller bearings.
- ✓ All gears in the headstock are hardened and precisely ground.
- ✓ 4 automatic ranges through pneumatic shifting.
- ✓ Spindle speed ranges are automatically changed by M code.
- ✓ Infinitely variable speed are commanded by S code.
- ✓ Tool change are commanded by T code.
- ✓ Auto lubrication system is equipped for headstock and carriage, cross-slide.
- ✓ Precision tapered roller bearings are equipped on the spindle and the quill.
- ✓ The quill is heat treated and precisely ground.
- ✓ Inner taper of quill can suit MT#6 dead center or live center.
- ✓ Turcire B lining is applied on cross slide and carriage for reducing friction.
- ✓ X & Z axes ballscrews are protected by cover to prevent rusting and chip damage.

### Standard Accessories :

- ✓ V12 turret
- ✓ Rotatory tailstock quill with 235mm diameter
- ✓ Motorized tailstock body and quill movement
- ✓ FANUC Oi-TD built-in manual guide
- ✓ Bed width : 1,730mm
- ✓ Front chip conveyor

### Optional Accessories:

- ✓ Please see page:17.18

| SB SERIES               | SB-50                                                                       | SB-55   | SB-60   |
|-------------------------|-----------------------------------------------------------------------------|---------|---------|
| Swing over bed          | 1095 mm                                                                     | 1180 mm | 1265 mm |
| Swing over cross slide  | 1025 mm                                                                     | 1110 mm | 1195 mm |
| Distance Between centre | 700 mm to 1700 mm in 20" increments<br>2200 mm to 5200 mm in 40" increments |         |         |
| Spindle Nose            | A2 -15 ~ A2-40                                                              |         |         |
| Spindle Bore            | 9" – 30"                                                                    |         |         |
| Controller              | <b>FANUC/FAGOR/SIEMENS</b>                                                  |         |         |
| Spindle Motor           | Standard 40HP   Optional – 50HP                                             |         |         |

## SS Series 31/35



SS Model is specially designed to fit inside a 40ft container saves a considerable cost in Shipping.

### Outstanding Features :

- ✓ One piece bed, 45° slant bed construction ensures maximum stability and convenient chip disposal.
- ✓ Alloy steel spindle with opposed taper roller bearings.
- ✓ All gears in the headstock are hardened and precisely ground.
- ✓ 4 automatic ranges through pneumatic shifting.
- ✓ Spindle speed ranges are automatically changed by M code.

| SS SERIES               | SS-31                                                                       | SS-35  |
|-------------------------|-----------------------------------------------------------------------------|--------|
| Swing over bed          | 750 mm                                                                      | 850 mm |
| Swing over cross slide  | 670 mm                                                                      | 770 mm |
| Distance Between centre | 700 mm to 1700 mm in 20" increments<br>2200 mm to 5200 mm in 40" increments |        |
| Spindle Nose            | A2 -11 ~ A2-28                                                              |        |
| Spindle Bore            | 6" – 18"                                                                    |        |
| Controller              | <b>FANUC/FAGOR/SIEMENS</b>                                                  |        |
| Spindle Motor           | Standard 30HP   Optional – 40HP                                             |        |

- ✓ Infinitely variable speed are commanded by S code.
- ✓ Tool change are commanded by T code.
- ✓ Auto lubrication system is equipped for headstock and carriage, cross-slide.
- ✓ Precision tapered roller bearings are equipped on the spindle and the quill.
- ✓ The quill is heat treated and precisely ground.
- ✓ Inner taper of quill can suit MT#5 dead center or live center.
- ✓ Turcire B lining is applied on cross slide and carriage for reducing friction.
- ✓ X & Z axes ballscrews are protected by cover to prevent rusting and chip damage.

### Standard Accessories :

- ✓ V12 turret
- ✓ Rotatory tailstock quill with 160mm diameter
- ✓ Motorized tailstock body and quill movement
- ✓ FANUC Oi-TD built-in manual guide
- ✓ Bed width : 1,145mm
- ✓ Front chip conveyor

### Optional Accessories:

- ✓ Please see page:17.18

# SA / SB /SS SERIES SLANT BED 45° / 60°

## SPECIFICATIONS

| ITEM       |                             | UNIT             | SA-40                                                                  | SA-45        | SA-50        | SB-50             | SB-55        | SB-60        | SS-31             | SS-35       |
|------------|-----------------------------|------------------|------------------------------------------------------------------------|--------------|--------------|-------------------|--------------|--------------|-------------------|-------------|
| CAPACITY   | Center height               | mm.(in.)         | 605 (23.81)                                                            | 675 (26.57)  | 760 (29.92)  | 765 (30.11)       | 845 (33.26)  | 925 (36.41)  | 505 (19.88)       | 555 (21.85) |
|            | Swing over bed              | mm.(in.)         | 940 (37)                                                               | 1010 (39.76) | 1095 (43.11) | 1095 (43.11)      | 1180 (46.45) | 1265 (49.8)  | 750 (29.52)       | 850 (33.46) |
|            | Swing over cross slide      | mm.(in.)         | 870 (34.25)                                                            | 940 (37)     | 1025 (40.35) | 1025 (40.35)      | 1110 (43.7)  | 1195 (47.04) | 670 (26.37)       | 770 (30.31) |
|            | Distance between centers    | mm.(in.)         | 700(27), 1200(47), 1700(67), 2200(86), 3200(126), 4200(166), 5200(206) |              |              |                   |              |              |                   |             |
| BED        | Width / Slant angle         | mm.(in.)/deg     | 1580(62.20) / 60°                                                      |              |              | 1730(68.11) / 60° |              |              | 1145(45.07) / 45° |             |
| CARRIAGE   | Width of cross slide        | mm.(in.)         | 600 (23.62)                                                            |              |              | 600 (23.62)       |              |              | 500 (19.68)       |             |
| TURRET     | Standard turret model       |                  | Baruffaldi TB400                                                       |              |              | Baruffaldi TB400  |              |              | Baruffaldi TB320  |             |
|            | Disc shape                  |                  | Polygon Disc or VDI Disc                                               |              |              |                   |              |              |                   |             |
|            | No. of tool stations        |                  | 12 or 8 or 12                                                          |              |              |                   |              |              |                   |             |
|            | Tool shank cross section    | mm.(in.)         | 32 x 32 (1.25)                                                         |              |              |                   |              |              |                   |             |
|            | Tool shank diameter max.    | mm.(in.)         | 102 (4.01)                                                             |              |              |                   |              |              | 60 (2.36)         |             |
| TRAVEL     | Cross slide(X-axis) travel  | mm.(in.)         | 555 (21.85)                                                            |              |              | 630 (24.8)        |              |              | 420 (16.53)       |             |
|            | Longitudinal(Z-axis) travel | mm.(in.)         | 700(27), 1200(47), 1700(67), 2200(86), 3200(126), 4200(166), 5200(206) |              |              |                   |              |              |                   |             |
|            | Cutting feed rate           | mm./rev(in.rev)  | X-axis: 0.001~250(0.00004~9.84) Z-axis: 0.001~400(0.00004~15.75)       |              |              |                   |              |              |                   |             |
|            | Rapid travel                | M./min.(Ft.min.) | X-axis: 6(19.68) Z-axis: 10(32.7)                                      |              |              |                   |              |              |                   |             |
|            | Ball screw diameter         | mm.(in.)         | X-axis: 50(1.97) Z-axis: 80(3.15)                                      |              |              |                   |              |              |                   |             |
| TAILSTOCK  | Quill type                  |                  | Built - in type, Rotating tailstock quill                              |              |              |                   |              |              |                   |             |
|            | Quill diameter              | mm.(in.)         | 235(9.25)                                                              |              |              |                   |              |              | 160 (6.29)        |             |
|            | Quill travel                | mm.(in.)         | 200 (7.87)                                                             |              |              |                   |              |              |                   |             |
|            | Inner taper of quill        |                  | MT#6                                                                   |              |              |                   |              |              | MT#5              |             |
| MOTOR      | Headstock oil refrigerator  |                  | 18,000 BTU / 4,500 K cal                                               |              |              |                   |              |              |                   |             |
|            | Main spindle motor          | KW(HP)           | 30/37(40/50)-STD. 37.5/45(50/60)-OPT.                                  |              |              |                   |              |              |                   |             |
|            | Axis servo motor            | KW(HP)           | X-axis: 7(9.387) Z-axis: 7(9.387)                                      |              |              |                   |              |              |                   |             |
|            | Hydraulic pump motor        | KW(HP)           | 3.7 (5)                                                                |              |              |                   |              |              |                   |             |
|            | Coolant pump motor          | KW(HP)           | 1.05 (1.4)                                                             |              |              |                   |              |              |                   |             |
| Controller |                             |                  | FANUC 0i-T series-STD. FANUC 31i series.Other required-OPT.            |              |              |                   |              |              |                   |             |

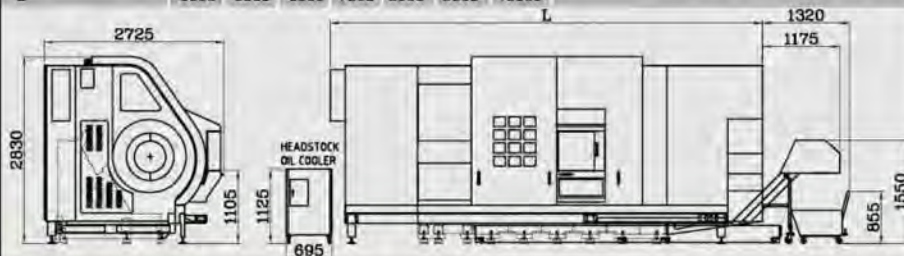
(1) X and Z axes actual cutting diameter will change when equipped with different turrets (2) Specifications cations are subject to change without notice for improvement

### SA Series

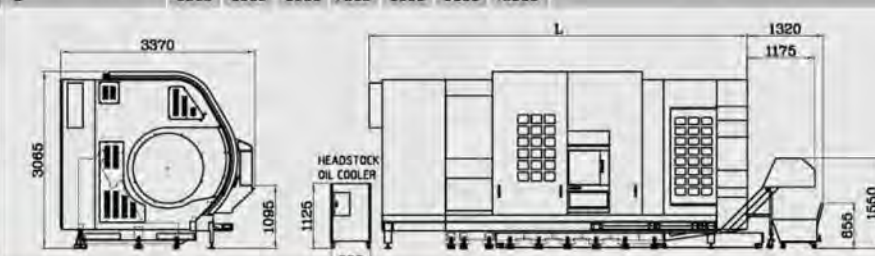
### FOUNDATION

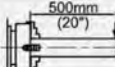
### SB Series

| Center Distance | 700  | 1200 | 1700 | 2200 | 3200 | 4200 | 5200  |
|-----------------|------|------|------|------|------|------|-------|
| L               | 5565 | 6065 | 6565 | 7065 | 8065 | 9065 | 10065 |



| Center Distance | 700  | 1200 | 1700 | 2200 | 3200 | 4200 | 5200  |
|-----------------|------|------|------|------|------|------|-------|
| L               | 5565 | 6065 | 6565 | 7065 | 8065 | 9065 | 10065 |



| MODEL                                      | LC/LD                                                                             | BN                     | BNC                     | CN                       | KAN                      | KBN                      |
|--------------------------------------------|-----------------------------------------------------------------------------------|------------------------|-------------------------|--------------------------|--------------------------|--------------------------|
| SUPPORT METHOD                             | 6" SPINDLE BORE                                                                   |                        |                         | 9" SPINDLE BORE          |                          |                          |
| LOAD BETWEEN CENTERS WITHOUT STEADY REST   |  | 3500 kgs<br>(7700 Lbs) | 5000 kgs<br>(11000 Lbs) | 9000 kgs<br>(19800 Lbs)  | 9000 kgs<br>(19800 Lbs)  | 15000 kgs<br>(33000 Lbs) |
| LOAD BETWEEN CENTERS WITH ONE STEADY REST  |  | 4500 kgs<br>(9900 Lbs) | 8000 kgs<br>(13200 Lbs) | 10000 kgs<br>(22000 Lbs) | 15000 kgs<br>(33000 Lbs) | 17000 kgs<br>(37400 Lbs) |
| CLAMP CAPACITY STEEL BODY TYPE 4-JAW CHUCK |  | 2300 kgs<br>(5060 Lbs) | 2900 kgs<br>(6380 Lbs)  | 5000 kgs<br>(11000 Lbs)  | 8000 kgs<br>(17600 Lbs)  | 10000 kgs<br>(22000 Lbs) |

|                     |         | Spindle Speed |        |        |        |         |         |         |         |         |         |         |         |         |         |         |         |
|---------------------|---------|---------------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Spindle nose        | ASA     | A2-11         |        | A2-15  |        |         | A2-20   |         | A2-28   |         |         | A2-32   |         | A2-34   | A2-36   | A2-40   |         |
| Spindle bore        | mm(in.) | 154(6)        | 179(7) | 205(8) | 235(9) | 255(10) | 318(12) | 360(14) | 420(16) | 470(18) | 535(21) | 585(22) | 610(24) | 635(25) | 715(28) | 765(30) | 815(32) |
| LC & LD & BN series | r/min   | 700           | 550    | 500    |        |         | 400     | 350     | 300     | 260     | 220     | 210     | 200     | 190     | 180     | 170     | N/A     |
| BNC & CN series     | r/min   | N/A           | 400    |        |        |         | 350     | 300     | 270     | 240     | 200     | 180     | 170     | 160     | 150     | 150     | 140     |
| KAN & KBN series    | r/min   | N/A           |        |        | 300    | 280     | 270     | 250     | 230     | 210     | 170     | 160     | 150     | 140     | 130     | 130     | 120     |
| SS series           | r/min   | 700           | 550    | 500    |        |         | 400     | 350     | 300     | 260     | N/A     |         |         |         |         |         |         |
| SA series           | r/min   | 700           | 550    | 500    |        |         | 400     | 350     | 300     | 260     | 220     | 210     | 200     | N/A     |         |         |         |
| SB series           | r/min   | N/A           |        |        | 300    | 280     | 270     | 250     | 230     | 210     | 170     | 160     | 150     | 140     | 130     | 130     | N/A     |

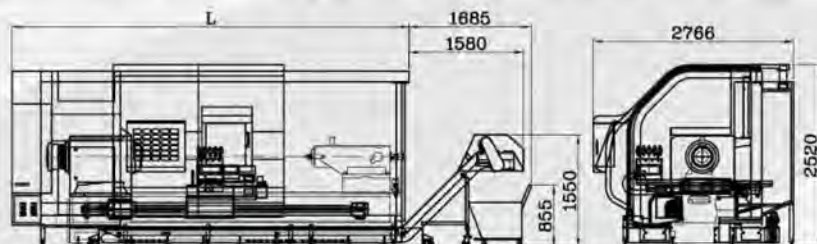
LC/LD/BN base on 6" spindle bore and standard tailstock quill  
BNC/CN/KAN/KBN base on 9" spindle bore and standard tailstock quill

| Spindle nose | ASA     | A2-11  | A2-15  |        |        |         | A2-20   |         | A2-28   |         |         | A2-32   |         | A2-34   | A2-36   | A2-40   |         |
|--------------|---------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Spindle bore | mm(in.) | 154(6) | 179(7) | 205(8) | 235(9) | 255(10) | 318(12) | 360(14) | 410(16) | 470(18) | 535(21) | 565(22) | 610(24) | 635(25) | 715(28) | 765(30) | 815(32) |
| LC-35        |         | ★      | ★      | ★      | ★      | ★       | ★       | ★       | —       | —       | —       | —       | —       | —       | —       | —       | —       |
| LC-40        |         | ★      | ★      | ★      | ★      | ★       | ★       | ★       | —       | —       | —       | —       | —       | —       | —       | —       | —       |
| LC-45        |         | ★      | ★      | ★      | ★      | ★       | ★       | ★       | ★       | ★       | —       | —       | —       | —       | —       | —       | —       |
| LC-50        |         | ★      | ★      | ★      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | —       | —       | —       | —       | —       |
| LD-35        |         | ★      | ★      | ★      | ★      | ★       | ★       | ★       | —       | —       | —       | —       | —       | —       | —       | —       | —       |
| LD-40        |         | ★      | ★      | ★      | ★      | ★       | ★       | ★       | —       | —       | —       | —       | —       | —       | —       | —       | —       |
| LD-45        |         | ★      | ★      | ★      | ★      | ★       | ★       | ★       | ★       | ★       | —       | —       | —       | —       | —       | —       | —       |
| LD-50        |         | ★      | ★      | ★      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | —       | —       | —       | —       | —       |
| BN-45        |         | ★      | ★      | ★      | ★      | ★       | ★       | ★       | ★       | ★       | —       | —       | —       | —       | —       | —       | —       |
| BN-50        |         | ★      | ★      | ★      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | —       | —       | —       | —       |
| BN-60        |         | —      | ★      | ★      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | —       |
| BN-70        |         | —      | ★      | ★      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | —       |
| BNC-60       |         | —      | ★      | ★      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | —       |
| BNC-70       |         | —      | —      | —      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       |
| BNC-80       |         | —      | —      | —      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       |
| CN-50        |         | —      | ★      | ★      | ★      | ★       | ★       | ★       | ★       | ★       | —       | —       | —       | —       | —       | —       | —       |
| CN-60        |         | —      | ★      | ★      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | —       |
| CN-70        |         | —      | —      | —      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       |
| CN-80        |         | —      | —      | —      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       |
| KAN-80       |         | —      | —      | —      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       |
| KAN-90       |         | —      | —      | —      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       |
| KAN-100      |         | —      | —      | —      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       |
| KAN-120      |         | —      | —      | —      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       |
| KBN-90       |         | —      | —      | —      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       |
| KBN-100      |         | —      | —      | —      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       |
| KBN-120      |         | —      | —      | —      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       |
| KBN-140      |         | —      | —      | —      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       |
| SA-40        |         | ★      | ★      | ★      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | —       | —       | —       | —       |
| SA-45        |         | ★      | ★      | ★      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | —       | —       | —       | —       |
| SA-50        |         | ★      | ★      | ★      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | —       | —       | —       | —       |
| SB-50        |         | —      | —      | —      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | —       | —       | —       |
| SB-55        |         | —      | —      | —      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | —       | —       |
| SB-60        |         | —      | —      | —      | ★      | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | ★       | —       |
| SS-31        |         | ★      | ★      | ★      | ★      | ★       | ★       | ★       | ★       | ★       | —       | —       | —       | —       | —       | —       | —       |
| SS-35        |         | ★      | ★      | ★      | ★      | ★       | ★       | ★       | ★       | ★       | —       | —       | —       | —       | —       | —       | —       |

# FOUNDATION

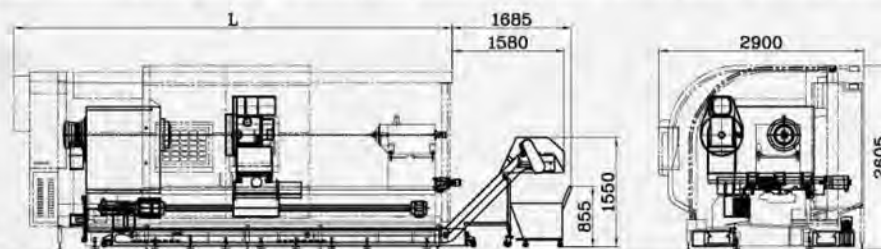
## LC Series

| Center Distance | 1500 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000  | 8000  | 9000  | 10000 | 11000 | 12000 |
|-----------------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| L               | 5220 | 5720 | 6720 | 7720 | 8720 | 9720 | 10720 | 11720 | 12720 | 13720 | 14720 | 15720 |



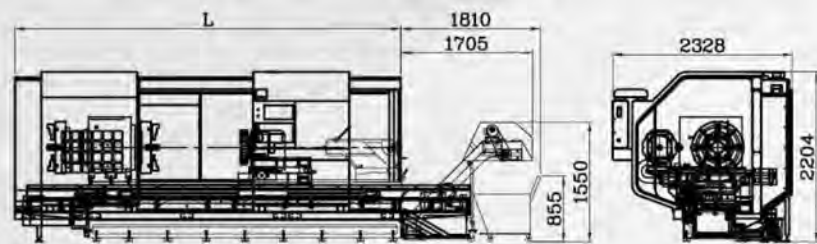
## BNC Series

| Center Distance | 1500 | 2000 | 3000 | 4000 | 5000 | 6000  | 7000  | 8000  | 9000  | 10000 | 11000 | 12000 |
|-----------------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| L               | 5710 | 6210 | 7210 | 8210 | 9210 | 10210 | 11210 | 12210 | 13210 | 14210 | 15210 | 16210 |



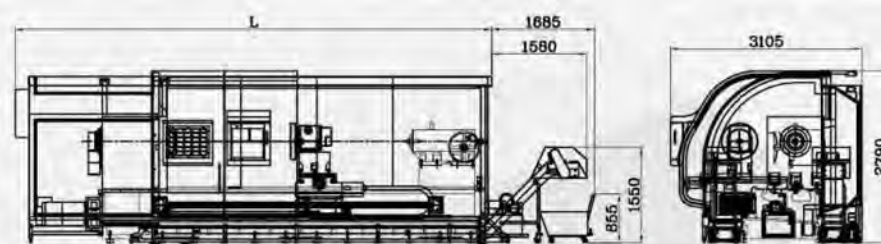
## LD Series

| Center Distance | 1000 | 1500 | 2000 | 3000 | 4000 | 5000 | 6000 |
|-----------------|------|------|------|------|------|------|------|
| L               | 4235 | 4735 | 5235 | 6235 | 7235 | 8235 | 9235 |



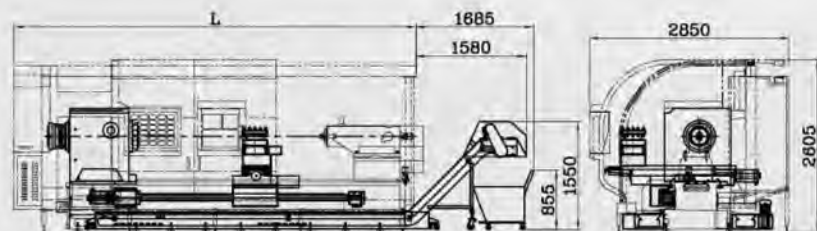
## CN Series

| Center Distance | 3000 | 4000 | 5000 | 6000 | 7000  | 8000  | 9000  | 10000 | 11000 | 12000 |
|-----------------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| L               | 6725 | 7725 | 8725 | 9725 | 11725 | 12725 | 13725 | 14725 | 15725 | 16725 |



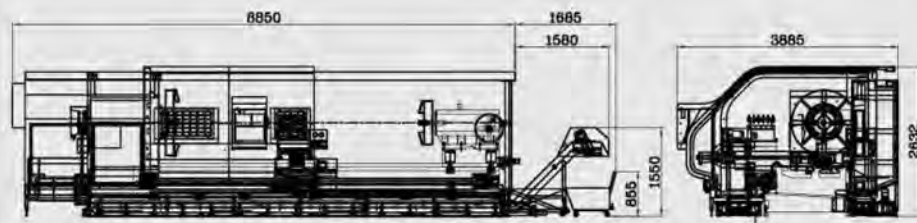
## BN Series

| Center Distance | 1500 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000  | 8000  | 9000  | 10000 | 11000 | 12000 |
|-----------------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| L               | 5490 | 5990 | 6990 | 7990 | 8990 | 9990 | 10990 | 11990 | 12990 | 13990 | 14990 | 15990 |



## KAN Series

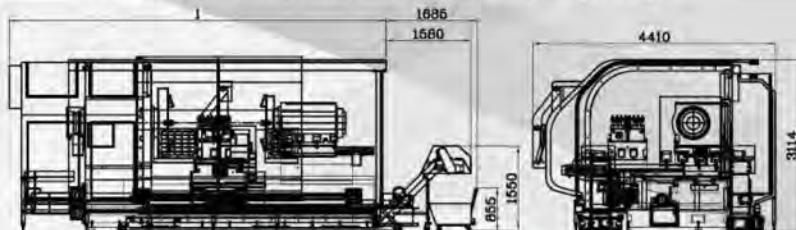
| Center Distance | 3000 | 4000 | 5000 | 6000  | 7000  | 8000  | 9000  | 10000 | 11000 | 12000 |
|-----------------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| L               | 7850 | 8850 | 9850 | 10850 | 11850 | 12850 | 13850 | 14850 | 15850 | 16850 |



# FOUNDATION

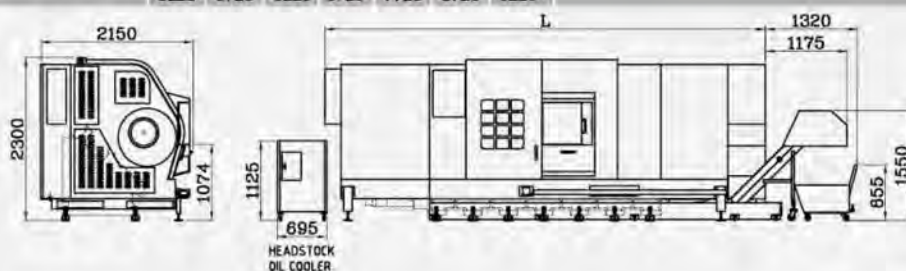
## KBN Series

| Center Distance | 3000 | 4000 | 5000 | 6000 | 7000  | 8000  | 9000  | 10000 | 11000 | 12000 |
|-----------------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| L               | 6850 | 7850 | 8850 | 9850 | 10850 | 12850 | 13850 | 14850 | 15850 | 16850 |



## SS Series

| Center Distance | 700  | 1200 | 1700 | 2200 | 3200 | 4200 | 5200 |
|-----------------|------|------|------|------|------|------|------|
| L               | 5225 | 5725 | 6225 | 6725 | 7725 | 8725 | 9225 |



## CONTROLLER

### FANUC



### FAGOR



| Item                                                                                                                                     | 311-B STD                                | 311-B C-axis | DI-110           |
|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|--------------|------------------|
| PMC ladder function                                                                                                                      | ○ 32000 steps                            |              | ○ 24000 steps    |
| HRV3 control                                                                                                                             | ○                                        |              | ○                |
| Dual position feedback                                                                                                                   | ○                                        |              | ○                |
| Macro executor + C language executor                                                                                                     | ○                                        |              | ○                |
| Custom software (Total amount of each path)                                                                                              | ○ 2MByte                                 |              | ○                |
| Controllable axes expansion (each path)<br>(Including PMC axes and Cs axes)                                                              | ○                                        |              | ○                |
| (Max. control axes<br>(Machine controlled axes + Loader controlled axes)<br>(Machine controlled axes are including Cs axes)              | ○ 3 axes                                 | △ 4 axes     | ○                |
| Simultaneously controlled axes expansion (each path)                                                                                     | ○ Max. 4 axes                            |              | ○                |
| Control axis detach                                                                                                                      | ○                                        |              | ○                |
| Polar coordinate interpolation                                                                                                           | ○                                        |              | ○                |
| Tool retract and recover                                                                                                                 | ○                                        |              | ○                |
| Thread cutting retract                                                                                                                   | ○                                        |              | ○                |
| Variable lead thread cutting                                                                                                             | ○                                        |              | ○                |
| Rigid tapping                                                                                                                            | ○                                        | ○            | ○                |
| Manual handle feed 1-unit                                                                                                                | ○ 1 unit                                 |              | ○ 1 unit         |
| Stored pitch error compensation                                                                                                          | ○                                        |              | ○                |
| Position switch                                                                                                                          | ○                                        |              | ○                |
| Spindle serial output                                                                                                                    | ○                                        |              | ○                |
| Spindle positioning                                                                                                                      | ○                                        | ○            | ○                |
| Spindle orientation                                                                                                                      | ○ 1 spindle                              |              | ○ 1 spindle      |
| Constant surface speed control                                                                                                           | ○                                        |              | ○                |
| Actual spindle speed output                                                                                                              | ○                                        |              | ○                |
| Spindle speed fluctuation detection                                                                                                      | ○                                        |              | ○                |
| Multi spindle control                                                                                                                    | ○                                        | ○            | ○                |
| Spindle orientation expansion                                                                                                            | ○                                        |              | ○                |
| Direct drawing dimension programming                                                                                                     | ○                                        |              | ○                |
| G code system                                                                                                                            | ○                                        |              | ○                |
| Custom macro                                                                                                                             | ○                                        |              | ○                |
| Chamfering/Corner R                                                                                                                      | ○                                        |              | ○                |
| Inch/metric conversion                                                                                                                   | ○                                        |              | ○                |
| Multiple repetitive cycles                                                                                                               | ○                                        |              | ○                |
| Multiple repetitive cycles II                                                                                                            | ○ Pocket profile                         |              | ○                |
| Canned cycle for drilling                                                                                                                | ○                                        |              | ○                |
| Workpiece coordinate system                                                                                                              | ○ G52 ~ G59                              |              | ○                |
| RS232C interface                                                                                                                         | ○ Channel 1                              |              | ○                |
| RS232C interface                                                                                                                         | ○ Channel 2                              |              | ○                |
| External message                                                                                                                         | ○                                        |              | ○                |
| Tool offset pairs<br>(Note) Specify total of tool offset pairs of each path.<br>999-pairs per each path) Max. digit of tool offset is 9. | (Max. 99-pairs                           |              | ○ 64-pairs       |
| Tool radius + Tool nose radius compensation                                                                                              | ○                                        |              | ○                |
| Tool geometry/wear compensation                                                                                                          | ○                                        |              | ○                |
| Part program storage size *3<br>(Note) Specify total of part program storage size of each path.                                          | ○ 512KByte                               |              | ○ 512KByte       |
| Background editing                                                                                                                       | ○                                        |              | ○                |
| Software operator's panel                                                                                                                | ○                                        |              | ○                |
| Software operator's panel general purpose switch                                                                                         | ○ Software operator's panel is required. |              | ○                |
| Run hour and parts count display                                                                                                         | ○                                        |              | ○                |
| Selection of Five Optional Language                                                                                                      | ○                                        |              | ○ Multi-language |
| MANUAL GUIDE                                                                                                                             | ○                                        |              | ○                |
| Controlled path                                                                                                                          | ○ 1 path                                 |              | ○ 1 path         |
| Machine groups                                                                                                                           | ○ 1 group                                |              | ○                |
| Designation of Spindle axes (each path / Total)                                                                                          | ○ 1 axis                                 | △ 2 axes     | ○                |

# Optional Accessories



3-jaw scroll chuck  
(Direct mount)



4-jaw independent  
chuck  
(Semi-steel body type)



4-jaw independent  
chuck  
(Steel body type)



4-jaw independent  
chuck  
(Face plate type)



4-jaw independent  
chuck  
(Top jaw type)



3-jaw hydraulic  
chuck



6-jaw hydraulic  
chuck



3-jaw pneumatic  
chuck



3-Point Steady Rest  
FIXED (Closed type)  
ψ30~400mm (1.18"~15.74")  
ψ350~700mm (13.77"~27.55")  
ψ600~1000mm (23.62"~39.37")



4-Point Steady Rest  
U shape (Opened type)  
ψ160~450mm (6.29"~17.71")  
ψ450~700mm (17.71"~27.55")  
ψ600~1000mm (23.62"~39.37")



3-point Follow Rest  
(Movement with carriage)  
ψ30~300mm (1.18"~11.81")



C-Type Steady Rest  
(Only for CN,KAN,KBN,  
SA,SB,SS MODEL)



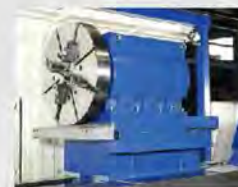
Hydraulic Steady Rest



Roller support Type A



Roller support Type B



Tailstock with chuck & center  
device for heavy parts cutting



Boring bar toolholder  
with linear rails

# Optional Accessories



Baruffaldi TB320 Servo turret with polygon disc



Baruffaldi TB400 Servo turret with polygon disc



Baruffaldi TB Servo turret with VDI disc



Baruffaldi TBMA power turret with VDI disc



Baruffaldi TB power turret with BMT disc



Hydraulic H4 Turret



Hydraulic H6 Turret



Grinding accessories



Servo Milling accessories



C axis function  
(Heidenhain measuring angles with angle encoders)



Renishaw Tool presetter



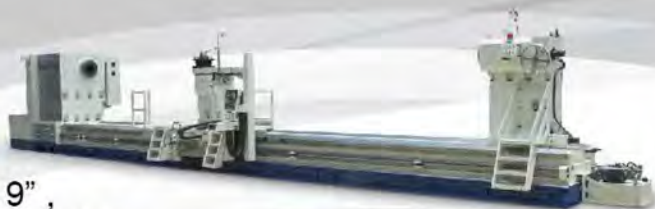
Sliding type manual rear chuck guard



Sliding type auto rear chuck guard

### **PK series**

Spindle bore 9" ,  
Swing over bed 120" ,  
Distance between centers 480"



### **KAN series**

Spindle bore 12" ,  
Swing over bed 55" ,  
Distance between centers 480"



### **CN series, (BORING MACHINE)**

Spindle bore 9" ,  
Swing over bed 60" ,  
Distance between centers 240"

### **CN series**

Spindle bore 18" ,  
Swing over bed 60" ,  
Distance between centers 100"

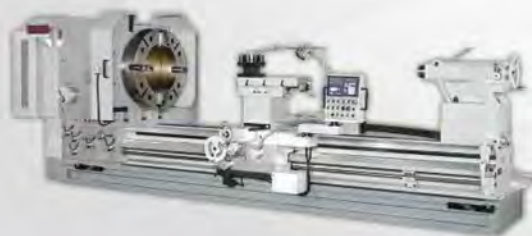


### **LD Series, (FULLY ENCLOSED SPLASH GUARD)**

Spindle bore 6" ,  
Swing over bed 45" ,  
Distance between centers 160"



### **TURRET Series**



### **CONVENTIONAL HOLLOW SPINDLE LATHE**

PA / PB / PC / PH / PKA / PKB / TURRET series



### **MEDIUM DUTY SLANT BED CNC LATHES**

SS27 series



### **CNC AND MANUAL VERTICAL LATHES**

Ruggedly built vertical lathes that offer precision and efficient turning operations