

# MICROCUT



**BNC-3000/3500/4000 series**

**Heavy Duty CNC Lathe**



National Award  
of Outstanding



ISO 9001:2015  
FM 538421



ISO 14001:2015  
EMS 546518



ISO 50001:2011  
ENMS 642457

# BNC-3000/3500/4000 Series

With one-piece casting bed made of Meehanite licensed casting (option), machine is capable for heavy-duty turning. Large working capacity (Swing in gap 1020~1280mm, Swing over bed 760~1020mm, Swing over cross slide 420~680mm, and Turning length 1M~6M) with wide selection of spindle bores including the largest bore of 356mm for a wide application of various industries. Large bore is particularly suitable for oil & gas industry.



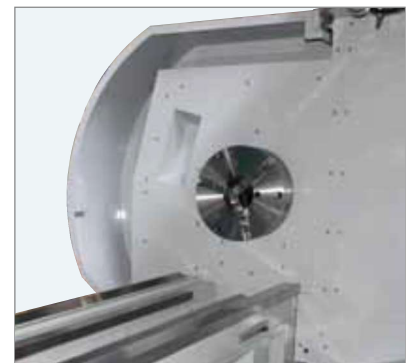
BNC-30120



The headstock is rigid and well balanced for high speed running & huge loading capacity. An automatic speed changing system is provided by powerful gear box, hence no noise would be created in the headstock. Standard spindle bore is 106mm, and it is available with 153mm, 254mm, or 356mm on your request.



2 steps gear box performs high torque spindle power. The smooth & fast speed changing time is to ensure fast working condition.



A travel chuck guard is designed to take biggest chuck and it is equipped with safety device (interlock). A very friendly design to ensure you using the machine easily and safely.



*BNC-30160 with one-piece base (opt.) (for reference only)*



The rigid rib designed carriage is coated with low friction pad & lubrication way for smooth & rigid moving.



An extra long quill to ensure that you get full cutting length, even when the machine is equipped with power turret. The complete tailstock can be moved by engaging to the carriage manually. A revolving quill is available if request

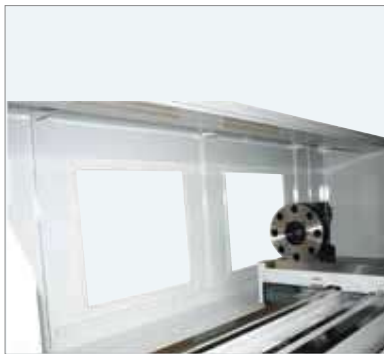




one-piece base (opt.)



BNC-3000 boring bar holder base (opt.)



A large opening at the rear of the machine allows easy access for maintenance.



The well-designed cross slide can accommodate servo turret (VD140 or 50), or power turret in the rear side. A hydraulic 4-way tool post is available on request.



The double "box ways" designed bed for rapid traverse and the extremely wide bed ways will be able to take heavier work pieces. The bed is designed for easier chip flow into chip tray or chip conveyor (on request). The large diameter ball screws are preloaded to ensure perfect positioning & repeatability.



An extra deep tray will make sure a big volume taken, and both chip trays and coolant tanks are separately made. Those are supported by rail, and easy to remove the chips. An additional chip conveyor with high pressure washdown system is available if request.



The high pressure pump ensures ample coolant no matter which type of tool holder is used



High-tech electrical cabinet meets the latest CE regulation.



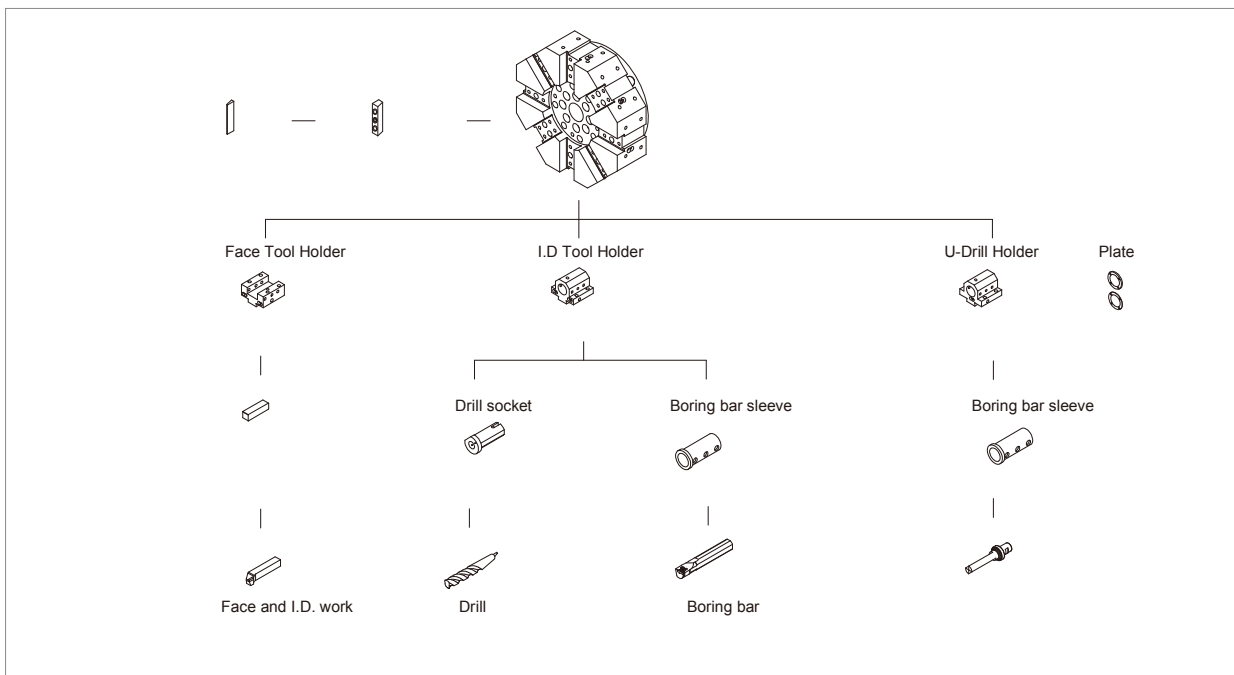
The efficient pneumatic fitting system offers ease in maintenance.



The automatic lubrication pump is installed at low level for easy monitoring.

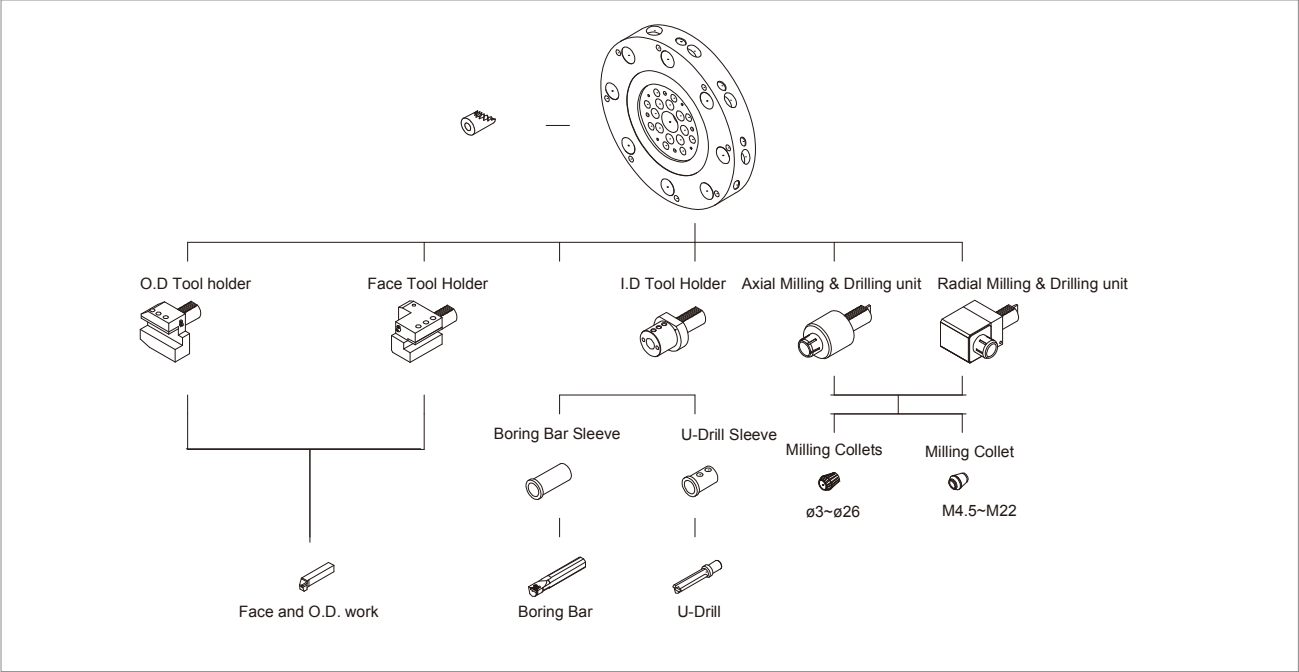
# Tooling System

## TB/LS-200 8-station turret disc

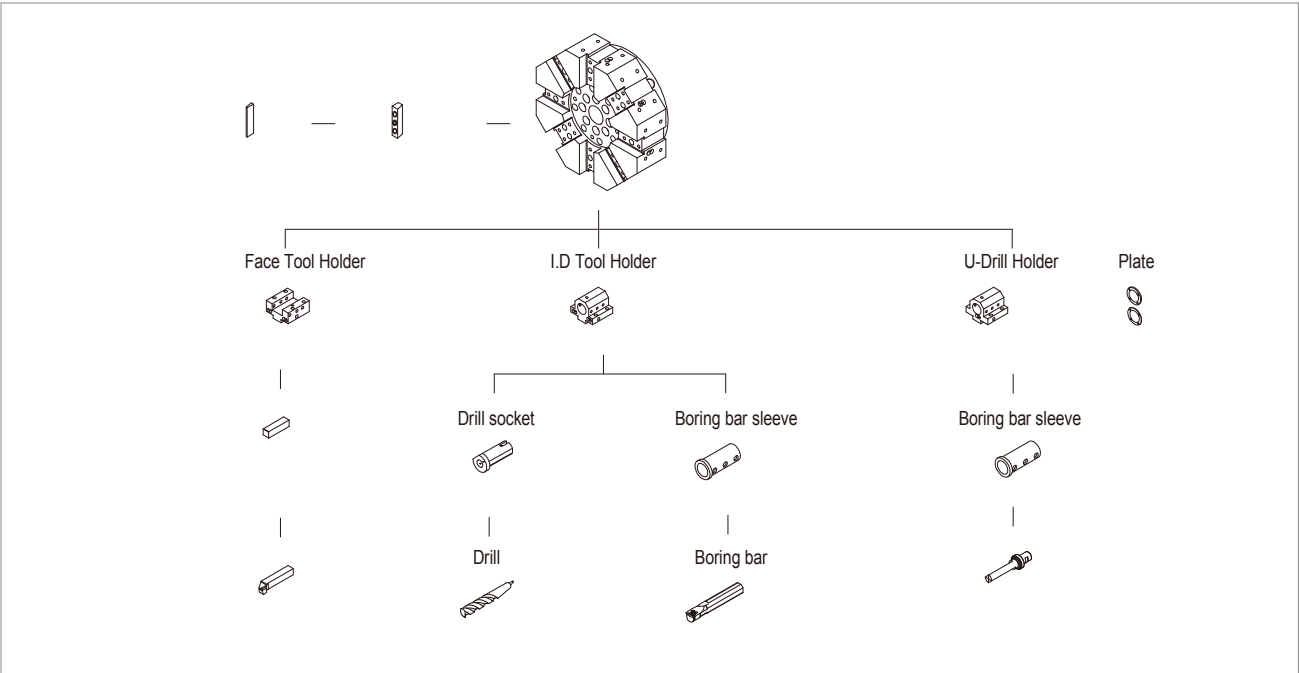


# Tooling System

## TB/LS-200 VDI50 8-station turret disc



## TB/LS-250H 8-station turret disc



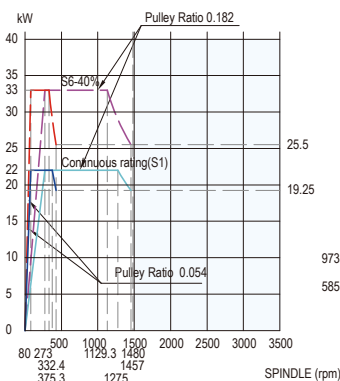


# Fagor control, 22/33kW

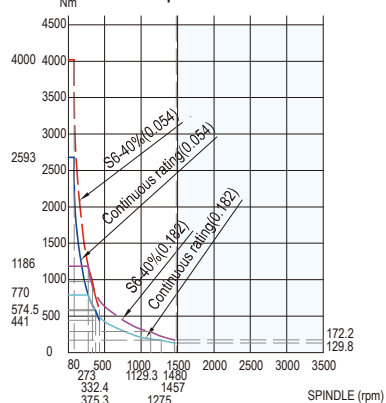
## 106mm/153mm bore

Torque / Horsepower Chart Data	
Spindle Taper	ISO A1-11(106mm) A2-11(153mm)
Spindle Speed	1480 RPM
Spindle Motor	Fagor FM7-A220
Motor Output	22/33 kW
Gear Ratio	0.182/0.054
Pulley Ratio	-

Horsepower Chart



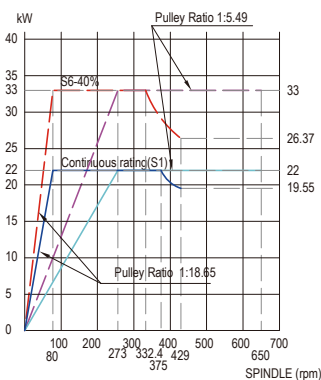
Torque Chart



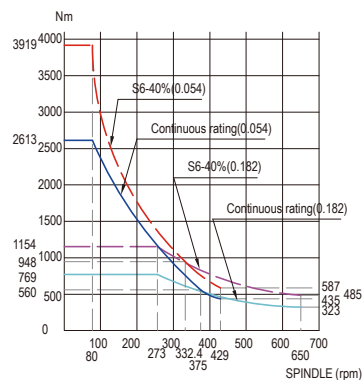
## 254mm bore

Torque / Horsepower Chart Data	
Spindle Taper	ISO A2-15(254mm)
Spindle Speed	650 RPM
Spindle Motor	Fagor FM7-A220
Motor Output	22/33 kW
Gear Ratio	-
Pulley Ratio	1:5.49/1:18.65

Horsepower Chart



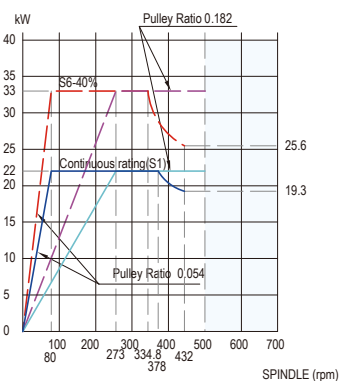
Torque Chart



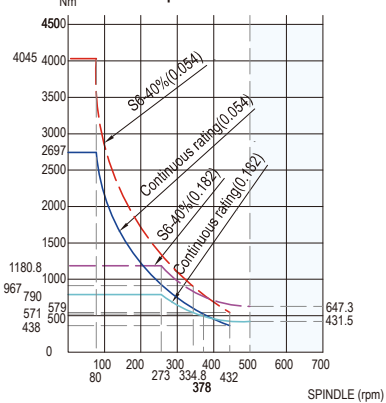
## 356mm bore

Torque / Horsepower Chart Data	
Spindle Taper	ISO A2-20(356mm)
Spindle Speed	500 RPM
Spindle Motor	Fagor FM7-A220
Motor Output	22/33 kW
Gear Ratio	0.182/0.054
Pulley Ratio	-

Horsepower Chart



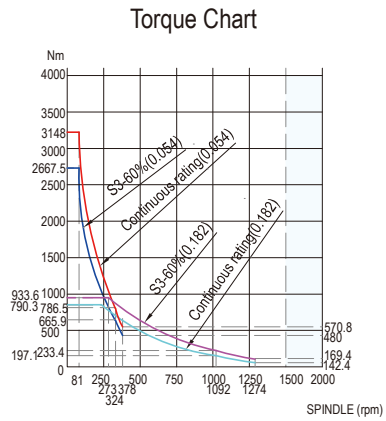
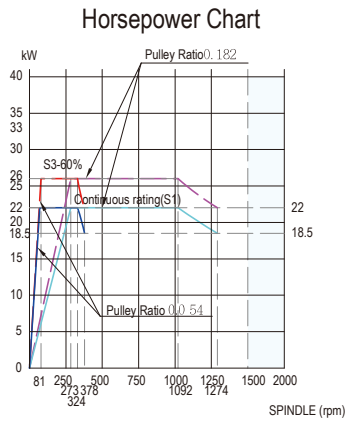
Torque Chart



# Fanuc control, 22/26kW

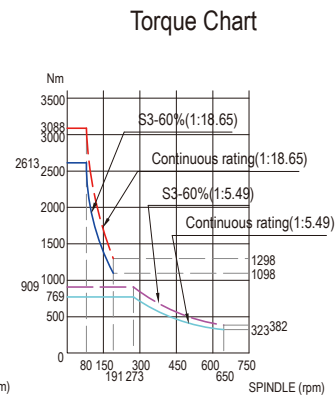
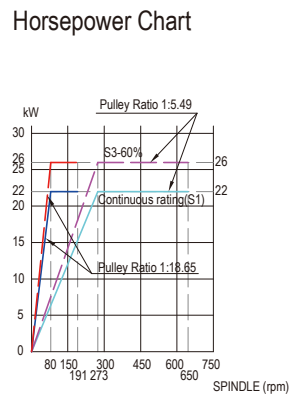
## 106mm/153mm bore

Torque / Horsepower Chart Data		
Spindle Taper	ISO	A1-11(106mm) A2-11(153mm)
Spindle Speed		1500 RPM
Spindle Motor		Fanuc a22/7000i
Motor Output		22/26 kW
Gear Ratio		0.182/0.054
Pulley Ratio		-



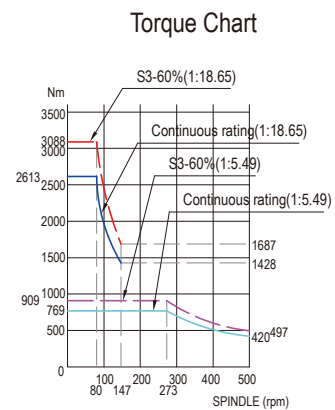
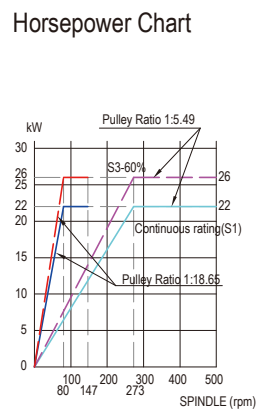
## 254mm bore

Torque / Horsepower Chart Data		
Spindle Taper	ISO	A2-15(254mm)
Spindle Speed		650 RPM
Spindle Motor		Fanuc a22/7000i
Motor Output		22/26 kW
Gear Ratio		-
Pulley Ratio		1.5.49/1:18.65



## 356mm bore

Torque / Horsepower Chart Data		
Spindle Taper	ISO	A2-20(356mm)
Spindle Speed		500 RPM
Spindle Motor		Fanuc a22/7000i
Motor Output		22/26 kW
Gear Ratio		-
Pulley Ratio		1.5.49/1:18.65



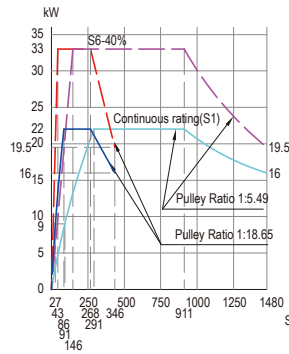


# Siemens control, 22/33kW

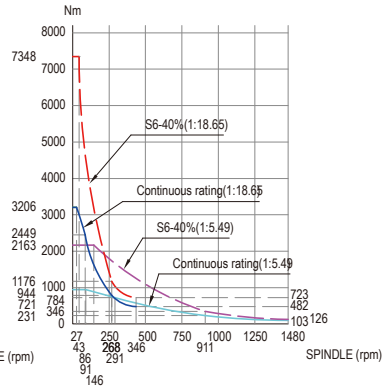
## 106mm/153mm bore

Torque / Horsepower Chart Data	
Spindle Taper	ISO A1-11(106mm) A2-11(153mm)
Spindle Speed	1480 RPM
Spindle Motor	Siemens 1P18137-1DF00-2BA1(SLM)
Motor Output	22/33 kW
Gear Ratio	-
Pulley Ratio	1:5.49/1:18.65

Horsepower Chart



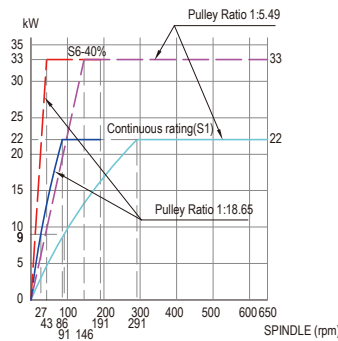
Torque Chart



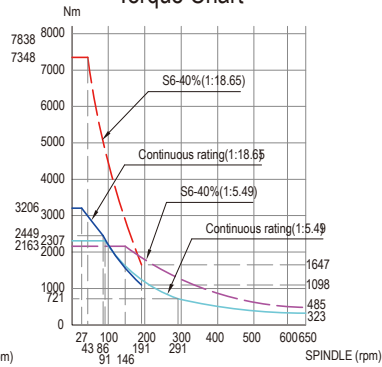
## 254mm bore

Torque / Horsepower Chart Data	
Spindle Taper	ISO A2-15(254mm)
Spindle Speed	650 RPM
Spindle Motor	Siemens 1P18137-1DF00-2BA1(SLM)
Motor Output	22/33 kW
Gear Ratio	-
Pulley Ratio	1:5.49/1:18.65

Horsepower Chart



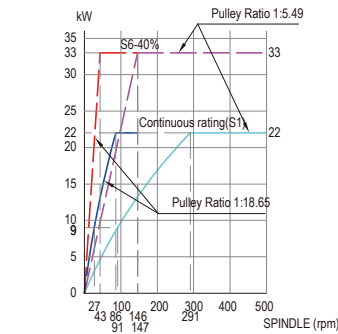
Torque Chart



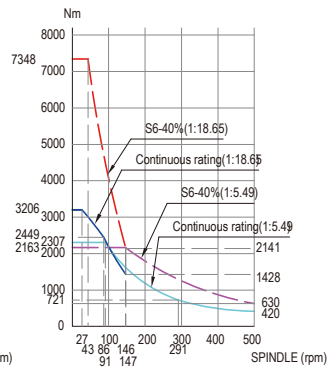
## 356mm bore

Torque / Horsepower Chart Data	
Spindle Taper	ISO A2-20(356mm)
Spindle Speed	500 RPM
Spindle Motor	Siemens 1P18137-1DF00-2BA1(SLM)
Motor Output	22/33 kW
Gear Ratio	1:5.49/1:18.65
Pulley Ratio	-

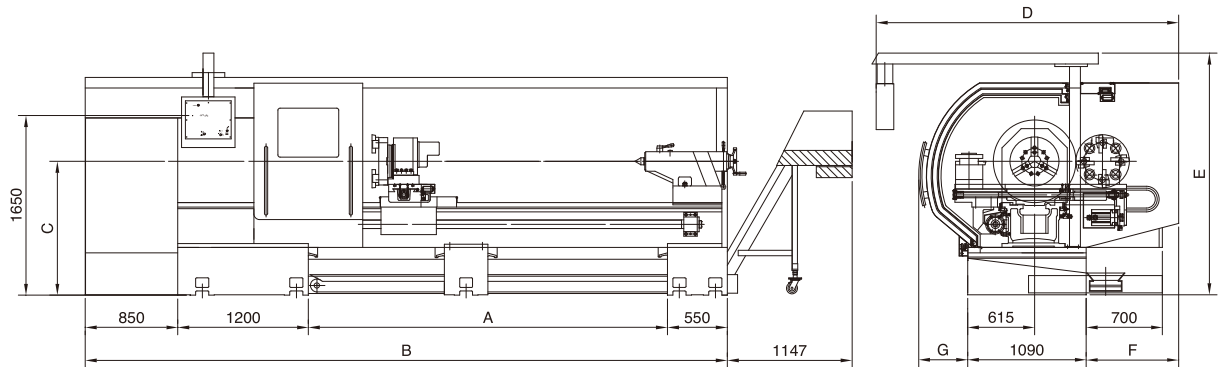
Horsepower Chart



Torque Chart



# Layout



MODEL	A	B	C		D	E	F	G
BNC-3040/3540	1850	3900	1230 (BNC-30)	1295 (BNC-35)	2630	2220	700	450
BNC-3080/3580	2300	4900						
BNC-30120/35120	3300	5900						
BNC-30160/35160	4300	6900						
BNC-30200/35200	5300	7900						
BNC-30240/35240	6300	8900						
BNC-4040	1850	3900	1360		2800	2285	850	485
BNC-4080	2300	4900						
BNC-40120	3300	5900						
BNC-40160	4300	6900						
BNC-40200	5300	7900						
BNC-40240	6300	8900						

## Standard accessories:

- Tailstock with interlock device with carriage
- Gap bed
- CNC control Fagor 8055
- A traveling front guarding system
- Coolant system
- Operation manual & parts list
- Levelling bolts and pads
- CE declaration
- Portable MPG
- Heat exchanger
- 22/33 kW spindle motor
- Lubrication system
- Low volt control system
- Top travelling panel
- Spindle oil cooler

## Optional accessories:

- 153/254/356mm spindle bore for BNC-30/35/40 series
- Steady rest (roller type)
- Follow rest (bronze type)
- 3-jaw manual / hyd.chuck
- Quick change tool post, QCT-160
- Electric/Hydraulic 4 way tool post
- Auto. V turret
- Joy sticker
- Extra I/O board for additional functions
- Chip conveyor and wash down device
- C-axis and power turret
- EMC

# Technical Data

Description	Unit	BNC-3000	BNC-3500	BNC-4000
<b>Capacity</b>				
Swing in gap	mm	1020	1150	1280
Swing over bed	mm	760	890	1020
Swing over cross slide	mm	420	550	680
Max. turning length (with turret)	mm	1000/2000/3000/4000/5000/6000		
Hole through with hyd. chuck(option)	mm	91mm for 106 bore/ 114mm for 153 bore/ 149mm for 254 bore		
Gap length from spindle nose surface	mm	374 (A1-11,4") / 355 (A2-11,6") / 359 (A2-15) / 351.4 (A2-20)		
Max. workpiece weight(with tailstock)	kg	3000		
<b>Travel</b>				
X axis	mm	455	455	550
Z axis	mm	1150/2150/3150/4150/5100/6100		
<b>Spindle</b>				
Speed (Fagor / Siemens)	rpm	0-1480 (106mm/153mm bore)/ 0-650 (254mm bore)/ 0-500 (356mm bore)		
Speed (Fanuc)	rpm	0-1200 (106mm/153mm bore)/ 0-650 (254mm bore)/ 0-500 (356mm bore)		
Suitable chuck size(option)	mm	305(106mm bore), 406(153mm bore or bigger)		
Spindle nose		A1-11(106mm bore), A2-11(153mm bore), A2-15(254mm bore), A2-20(356mm bore)		
Spindle hole diameter	mm	106(standard), 153, 254 & 355(option)		
Motor power	kW	Fagor: 22/33, Fanuc: 22/26, Siemens: 22/33		
<b>Turret(option)</b>				
Number of tool stations		8 (VDI50) / 12 (VDI40)		
Tool allowance	mm	32 x 32 (VDI50) / 25 x 25 (VDI40)		
Tool shank	mm	Ø50 (VDI50) / Ø40 (VDI40)		
<b>Feed rate</b>				
X axis	m/min	10		
Z axis	m/min	12		
Jog feed	m/min	3		
<b>Accuracy</b>				
Positioning	mm	0.01/300		
Repeatability	mm	±0.01		
<b>Guideway</b>				
X axis	mm	300		
Y axis	mm	560		
<b>Ballscrew</b>				
X axis	mm	Belt/ Ø40 x P5 x C3		
Z axis	mm	Direct/ Ø63 x P12 x C5 (shorter and 4M length) or Ø80 x P12 x C5 (longer and 5M length)		
<b>Tailstock</b>				
Quill stroke	mm	230		
Quill diameter	mm	125		
Quill inside taper	MT	6		
<b>Coolant</b>				
Pump motor	W	450(50Hz) / 560(60Hz)		
Pump capacity	L/min	58 (50Hz) / 66 (60Hz)		
Pump pressure	kg/cm <sup>2</sup>	15		
<b>Lubrication</b>				
Pump motor	W	12		
Pump capacity	L/min	0.13		
<b>Dimension</b>				
Length(without chip conveyor)	mm	3900/4900/5900/6900/7900/8900		
Width	mm	2977	2977	3119
Height	mm	2231	2231	2295
Weight	kg	9000/10000/11000/12000/13000/14000	9500/10500/11500/12500/13500/14500	10000/10800/11500/13000/14000/15000

\*Specification subjects to change without notice



## BUFFALO MACHINERY CO., LTD.

56, Lane 318, Desheng Road, Daya District,  
 Taichung City 428-46, Taiwan  
 P.O. Box 320, Daya, Taichung City, Taiwan  
 Tel: +886-4-25 60 37 59 Fax: +886-4-25 60 37 69  
 E-mail: [info@mail.buffalo.com.tw](mailto:info@mail.buffalo.com.tw)  
[www.buffalo-machinery.com](http://www.buffalo-machinery.com)



## MICROCUT EUROPE

Ulica hrvatskih branitelja 3  
 10430 Samobor CROATIA  
 Tel. +385 1 3141 515  
 Fax. +385 1 3141 516  
[info@microcut-europe.eu](mailto:info@microcut-europe.eu)  
[www.microcut-europe.eu](http://www.microcut-europe.eu)

