

»»»» RHINO

Heavy Duty Turning



Superior Performance | Unmatched Productivity

Series

3050 | 3070 | 3120

2050 | 2070 | 2550 | 2570



Rhino

www.bfwindia.com

BFW
Bharat Fritz Werner

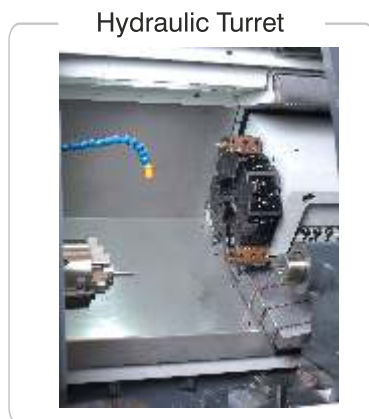
High Performance Horizontal Turning

Rhino Series: 2050 | 2070 | 2550 | 2570 | 3050 | 3070 | 3120

BFW HTL Rhino platform developed for heavy-duty applications & superior cutting performance. Machines have been built with optimized structural rigidity and stiffness for ultimate performance. Ensures the consistent accuracies on heavier cuts. Suitable for medium to large size components. The right turning platform for Auto components of commercial vehicles, Oil & Gas, Valves, Defence, Railways & General Engineering.

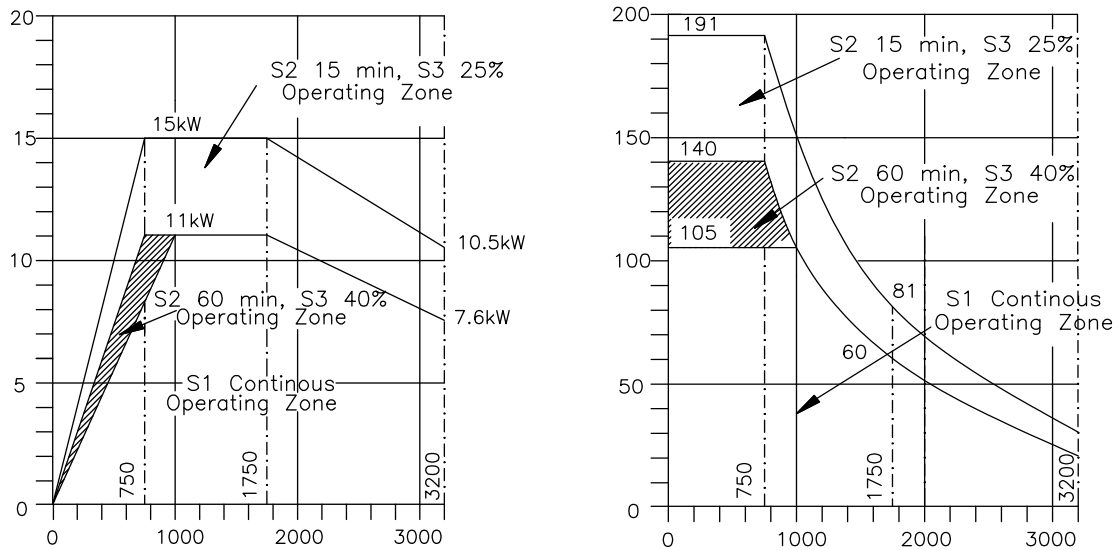
Best-in class features

- Single piece slant bed
- A2-6 spindle - Rhino 2050/ 2070 with 65 mm bar capacity
A2-8 spindle - Rhino 2550/ 2570 with 75 mm bar capacity
A2-11 spindle - Rhino 3050/ 3070/ 3120 with 90 mm bar capacity
- Large spindle bore dia 105 mm for Rhino 3000 series
- 8 station hydraulic turret
- Auto door
- Enabled for Automation
- Built-in center for tailstock for Rhino 3000 series.
- Innovative design for tramp oil separation
- Maximum turning dia 600 mm for Rhino 3000 series

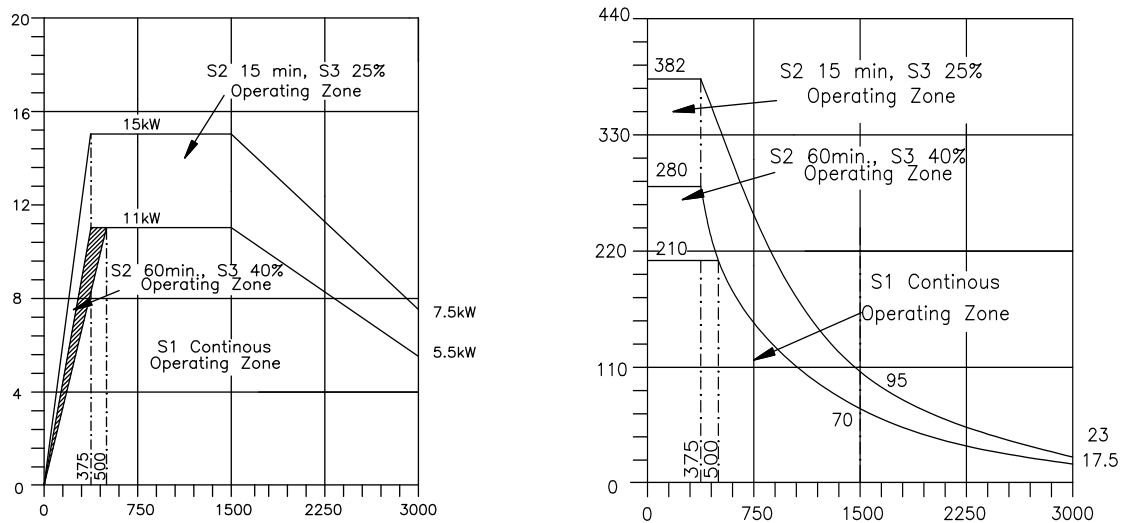


Spindle Characteristics

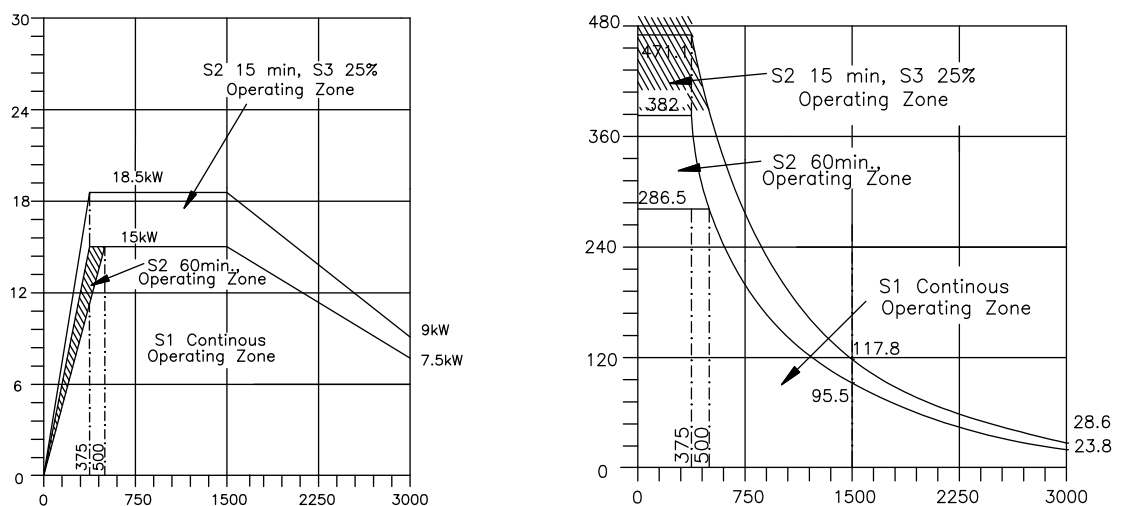
Fanuc 11/15 kW - RHINO 2050 / 2070



Fanuc Power up series P22 - 11/15 kW - RHINO 2550 / 2570

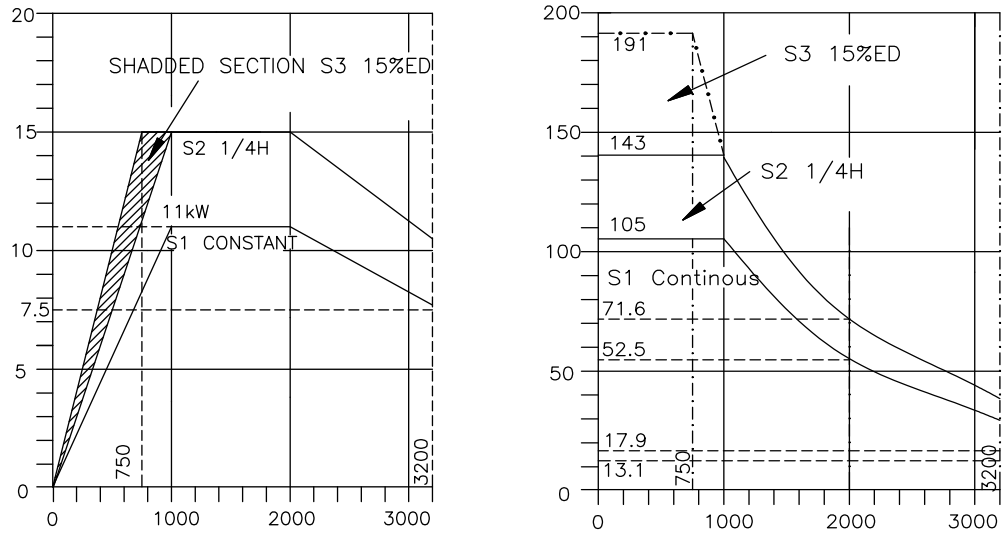


Fanuc Power up series P30 - 15/18.5 kW - RHINO 3050/ 3070/ 3120

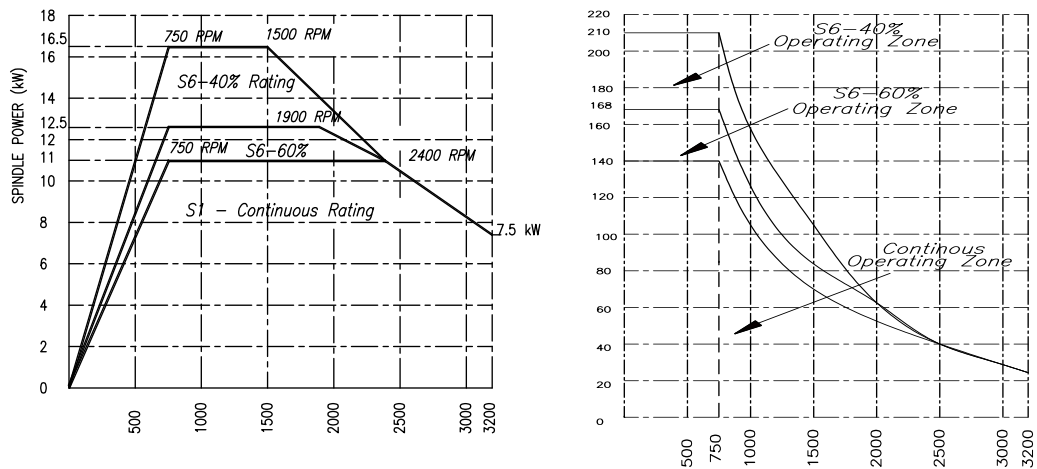


Spindle Characteristics

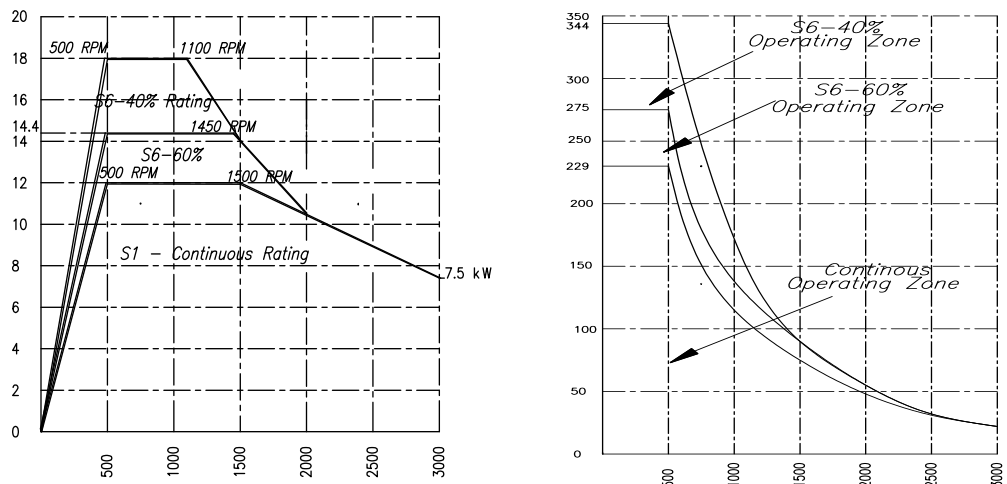
Siemens 11-15 kW - RHINO 2050 / 2070



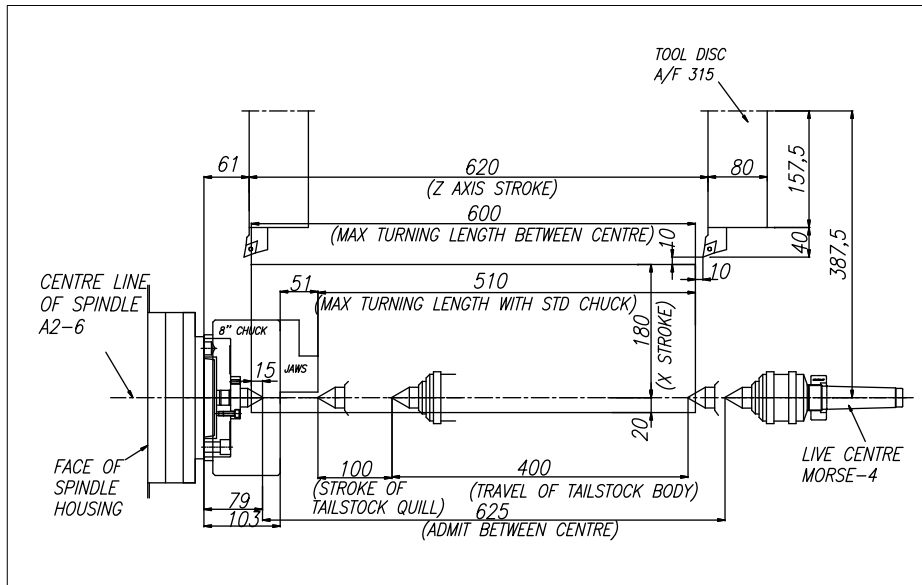
Siemens 11-16.5 kW - RHINO 2550 / 2570



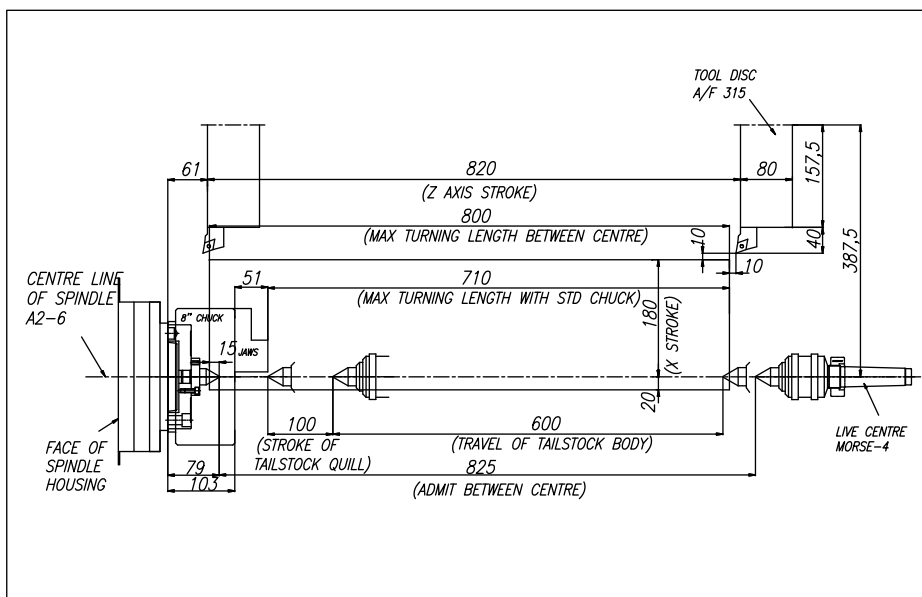
Siemens 12/18 kW - RHINO 3050/ 3070/ 3120



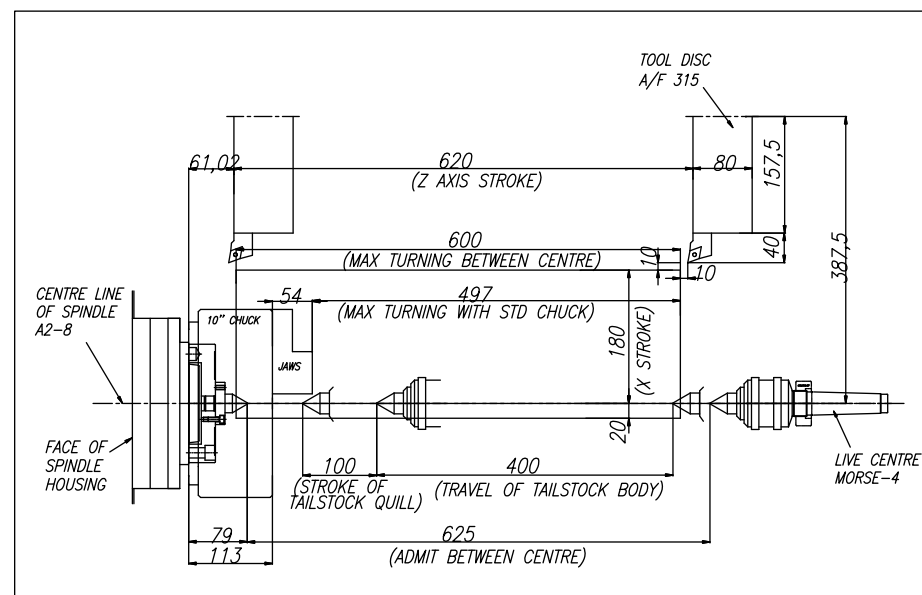
Moving Range Diagrams



RHINO 2050
Main spindle A2-6
Z axis stroke= 620

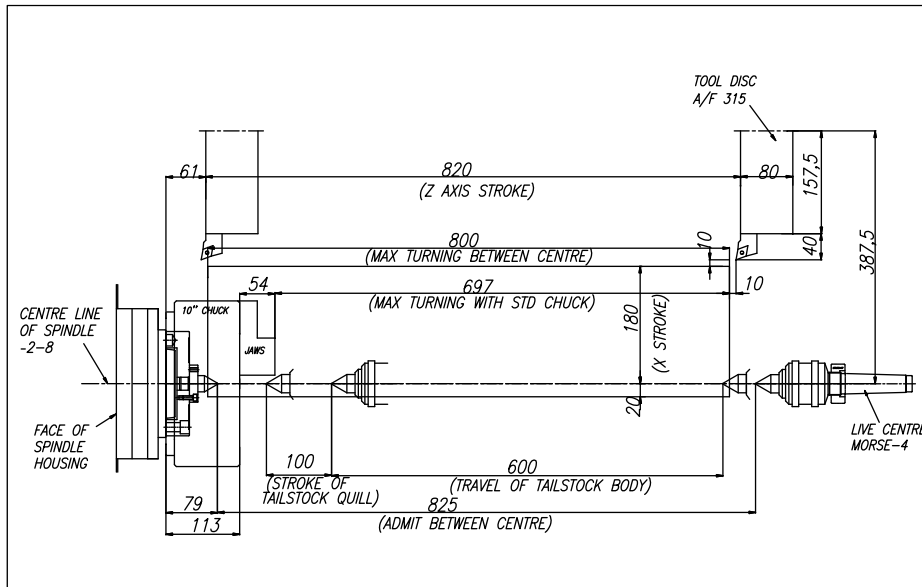


RHINO 2070
Main spindle A2-6
Z axis stroke=820



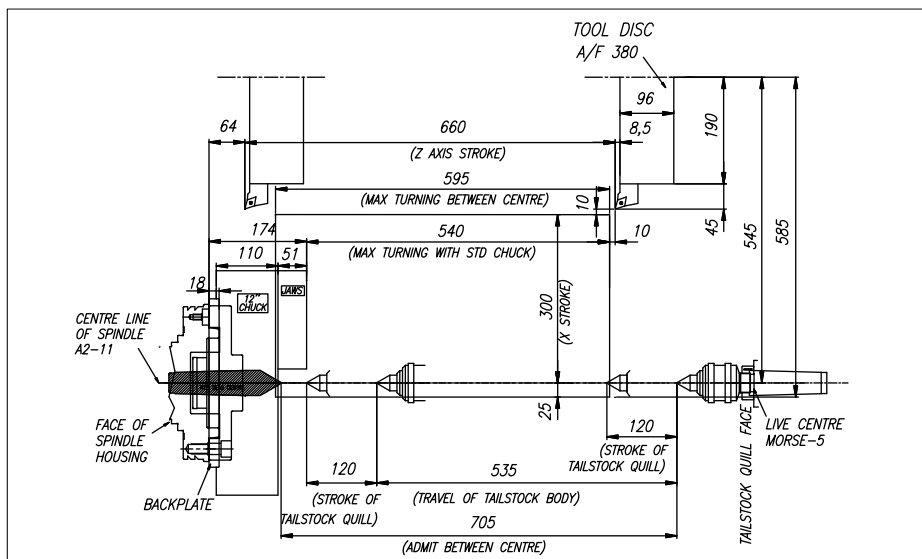
RHINO 2550
Main spindle A2-8
Z axis stroke=620

Moving Range Diagrams

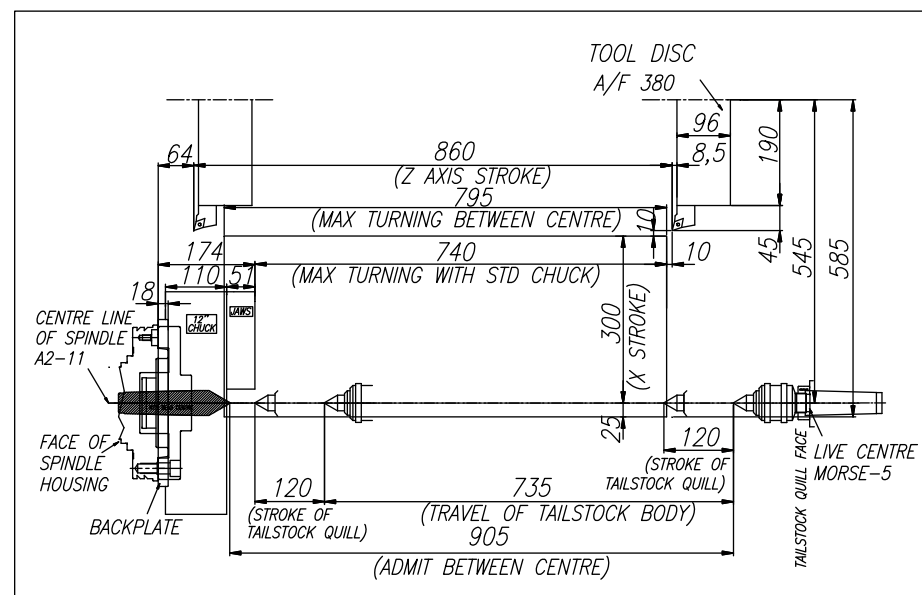


RHINO 2570
 Main spindle A2-8
 Z axis stroke= 820

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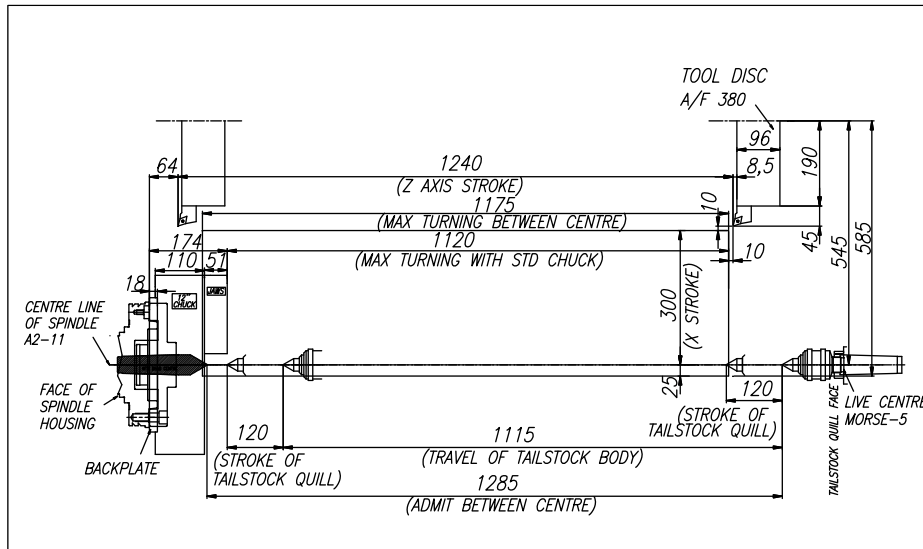


RHINO 3050
 Main spindle A2-11
 Z axis stroke= 660



RHINO 3070
 Main spindle A2-11
 Z axis stroke=860

Moving Range Diagrams



RHINO 3120
Main spindle A2-11
Z axis stroke=1240

Standard Features

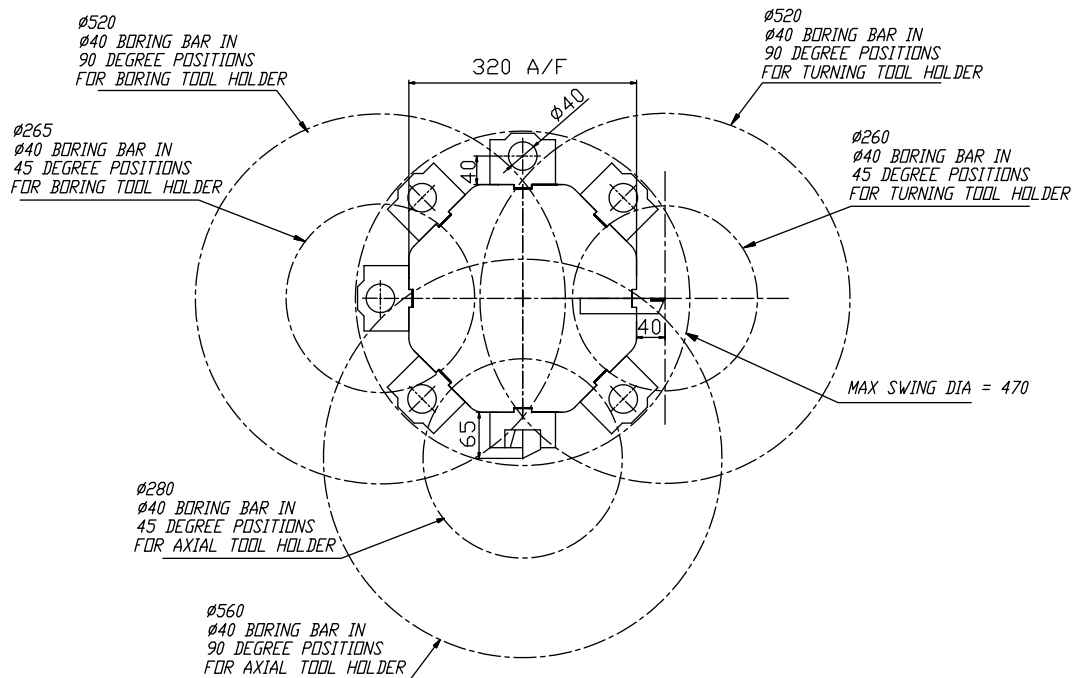
- Roller type LM guide-ways for all axis - Class H
- Precise ball screws for all axis - Class C3
- Automatic centralised lubrication system
- AC servo drives for all axis
- Coolant tank cum chip tray
- Hydraulic power pack for machine functions
- Belt-driven spindle
- 10.4 colour display - Fanuc Oi TF Plus/ Siemens
- 8.4 color display - Mitsubishi
- Rigid tapping
- Linear, circular interpolation
- 8-station hydraulic turret
- Tri-colour lamp
- Machine alarm diagnostics
- Energy saving functions
- 3-jaw self centering chuck
- Solid rotary cylinder
- Tail-stock with programmable quill
- AC for electrical cabinet
- Mechanical tool kit
- Machine lamp
- Tool display
- Leveling pads

Optional Features

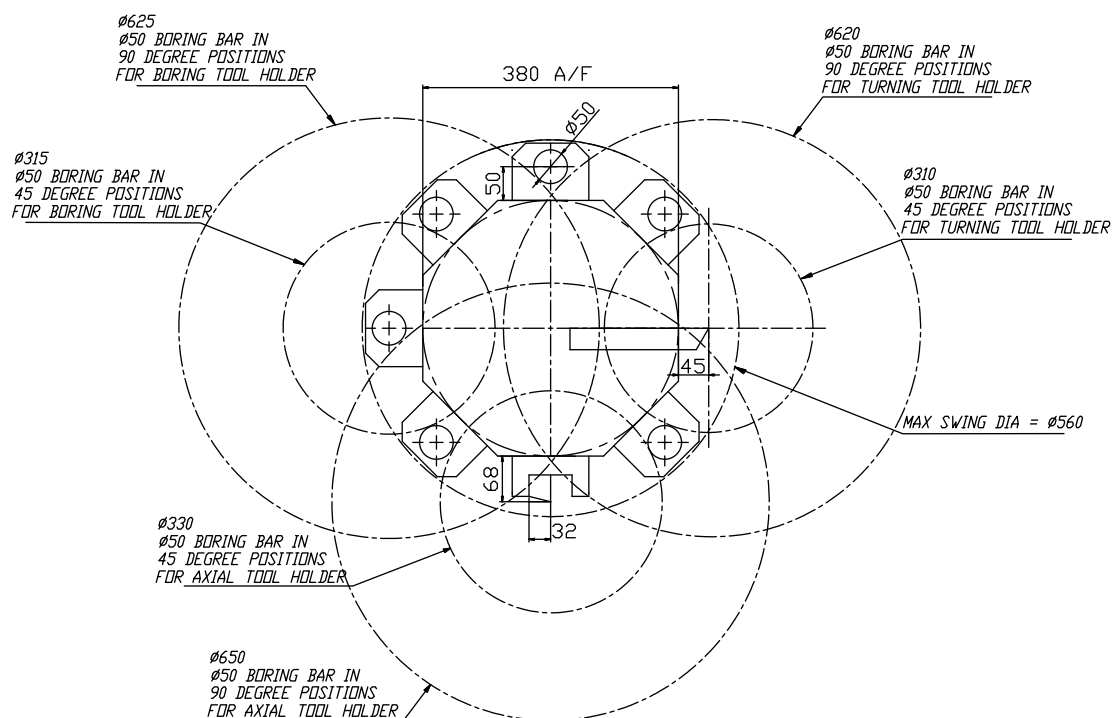
- Chip conveyor
- 12-station hydraulic turret
- 2 & 4 jaw self-centering chuck
- Pneumatic auto door
- Bar feeder system
- Tool touch probe
- Rigid tap retraction
- Part catcher
- Steady rest, work probe
- Hollow cylinder
- Gantry / robotics automation
- Tooled up solutions
- Industry 4.0 integrated system IRIS
- Operator door and safety lock

Interference Diagrams

RHINO 2050/ 2070/ 2550/2570



RHINO 3050/ 3070/ 3120



Technical Specifications

Specifications	Unit	RHINO 2050	RHINO 2070	RHINO 2550	RHINO 2570
Capacity:					
Swing over bed	mm	550	550	550	550
Swing over carriage	mm	330	330	330	330
Admit between center distance	mm	625	825	625	825
Standard turning diameter (full length)	mm	330	330	330	330
Max turning diameter (disc - 100 mm length)	mm	360	360	360	360
Interference free turning dia (Tool collision dia with adjacent tool pocket)	mm	258	258	258	258
Max turning length between Tail-stock & Head-stock centre	mm	600	800	600	800
Max turning length from chuck hard jaw face to tailstock centre	mm	510	710	497	697
Work holding & tool holding:					
Standard chuck size	mm	250	250	250	250
Bar capacity	mm	65	65	75	75
Turret indexing mechanism	type	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Turret center height	mm	100	100	100	100
Turning Tool Shank size (B x W)	mm	25 x 25	25 x 25	25 x 25	25 x 25
No of tools	Nos	8 (12)	8 (12)	8 (12)	8 (12)
Boring tool holder dia	mm	40	40	40	40
Spindle:					
Spindle nose	type	A2-6	A2-6	A2-8	A2-8
Spindle bore	mm	77	77	86	86
Number of bearing front/ rear	Nos	3/ 2	3/ 2	3/ 2	3/ 2
Spindle bearing front/ rear	mm	110/ 100	110/ 100	120/ 100	120/ 100
Spindle speed	rpm	3200	3200	3000	3000
Control system: Fanuc/ Siemens					
Spindle motor power continues/ intermittent rating	kw	Fanuc - 11/ 15 (P22 - 11/15) Siemens 11/ 15 Mitsubishi 11/ 15	Fanuc - 11/ 15 (P22 - 11/15) Siemens 11/ 15 Mitsubishi 11/ 15	Fanuc - P22 -11/ 15 (P30 - 15/18.5) Siemens 11/ 16.5 Mitsubishi 11/ 15	Fanuc - P22 -11/ 15 (P30 - 15/18.5) Siemens 11/ 16.5 Mitsubishi 11/ 15
Full power range	rpm	Fanuc - 1000 -1750 Siemens - 750 - 2400 Mitsubishi -1000 - 2000	Fanuc - 1000 -1750 Siemens - 750 - 2400 Mitsubishi -1000 - 2000	Fanuc - 1000 -1750 Siemens - 750 - 2400 Mitsubishi -1000 - 2000	Fanuc - 1000 -1750 Siemens - 750 - 2400 Mitsubishi -1000 - 2000
Traverse					
Cross slide movement (X axis)	mm	200 (+180/ -20)	200 (+180/ -20)	200 (+180/ -20)	200 (+180/ -20)
Longitudinal movement (Z axis)	mm	600	800	600	800
Rapid traverse (X axis)	m/ min	20	20	20	20
Rapid traverse (Z axis)	m/ min	20	20	20	20
Cutting feed rate	m/ min	0 - 10	0 - 10	0 - 10	0 - 10
Tailstock					
Quill diameter	mm	80	80	80	80
Quill traverse	mm	100	100	100	100
Base traverse	mm	400	600	400	600
Quill taper	type	MT - 4	MT - 4	MT - 4	MT - 4
Quill thrust force - Max at 15 bar	kgf	300	300	300	300
Fluid system					
Coolant tank capacity	ltr	160	180	160	180
Coolant pump capacity	lpm	200	200	200	200
Lubrication tank capacity (servo 68)	ltr	2.7	2.7	2.7	2.7
Hydraulic tank capacity (Servo 68)	ltr	40	40	40	40
Hydraulic pump capacity	lpm	20	20	20	20
Hydraulic system pressure	bar	35	35	35	35
Accuracy as per ISO 230 - 2					
Positioning X/ Z	mm	0.01	0.01	0.01	0.01
Repeatability - X/ Z	mm	0.007	0.007	0.007	0.007
Machine installations:					
Machine dimension W x D X H	mm	3300 x 1700 x 1950	3550 x 1700 x 1950	3300 x 1700 x 1950	3550 x 1700 x 1950
Total connected load	kVA	25	25	30	30
Machine weight	kgs	4000	4500	4300	4800

Applications

Crankshaft



Differential Case



Knuckle



Compressor rotor



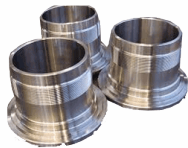
Hub adapter



Petrol line fitting



Cylinder



Pulley



Wheel hub



Rotor body



Spindle Assembly



Spindle Shaft



Flange



Pinion Yoke



Spindle

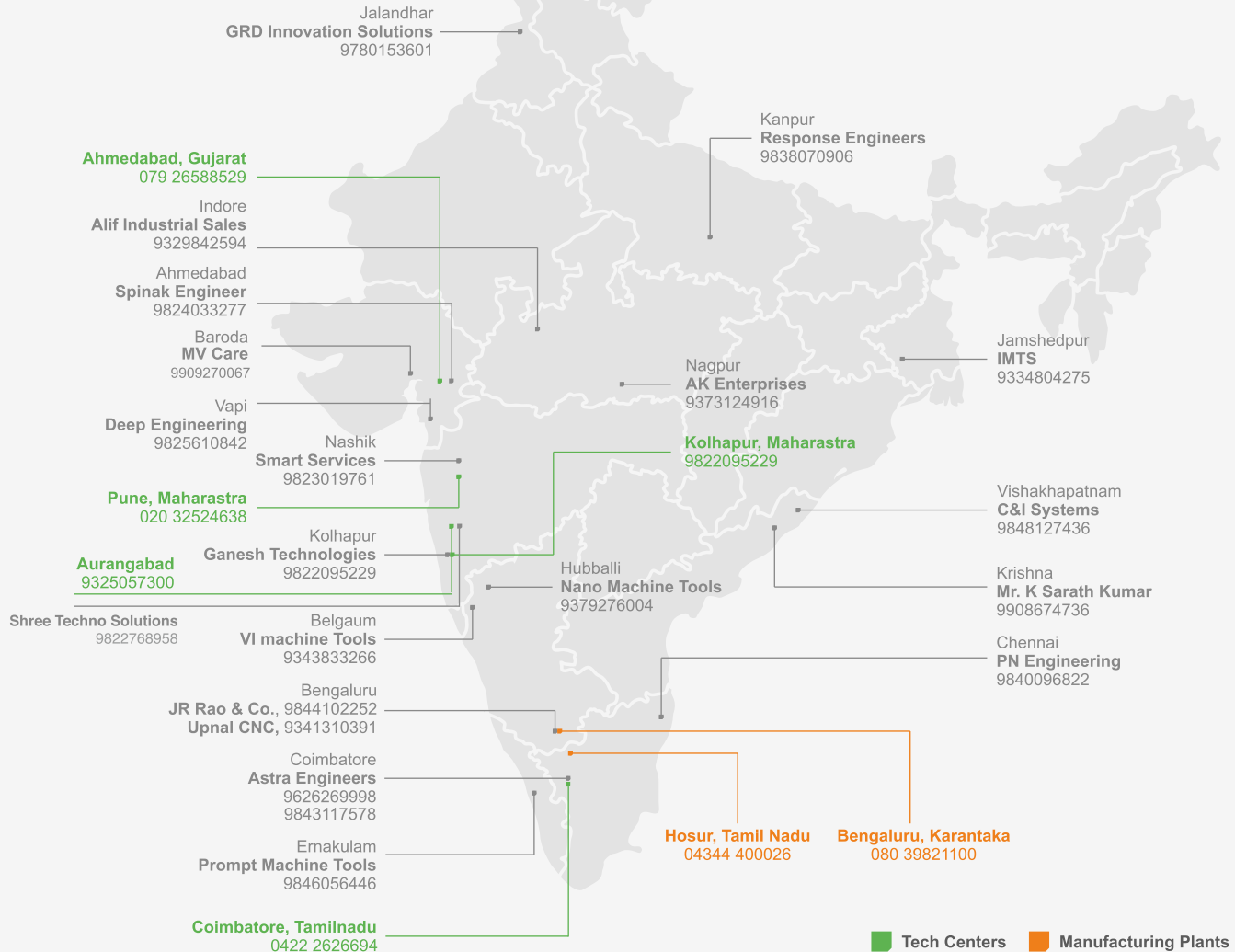


many more ...

Technical Specifications

Specifications	Unit	Rhino 3050	Rhino 3070	Rhino 3120
Capacity:				
Swing over bed	mm	750	750	750
Swing over carriage	mm	480	480	480
Admit between center distance	mm	660	860	1260
Standard turning diameter	mm	480	480	480
Max. turning diameter (Disc)	mm	600	600	600
Interference free turning diameter (tool collision dia with adjacent tool pocket)*	mm	310	310	310
Max. Turning length between Tailstock & Headstock center	mm	595	795	1175
Max. Turning length from chuck hard jaw face to tailstock center*	mm	520	720	1120
Work holding & tool holding:				
Standard chuck size	mm	304	304	304
Bar capacity	mm	90	90	90
Turret indexing mechanism	type	Hydraulic	Hydraulic	Hydraulic
Turret center height	mm	125	125	125
Turning tool shank size (B x W)	mm	32 x 32		
Number of tools	Nos	8	8	8
Boring tool holder size (Dia)	mm	50	50	50
Spindle:				
Spindle nose	type	A2-11	A2-11	A2-11
Spindle bore	mm	105	105	105
No of bearing front/ rear	Nos	3/2		
No of bearing front/ rear	mm	140/ 130	140/ 130	140/ 130
Spindle speed*	rpm	2400	2400	2400
CNC System:	make	Fanuc	Fanuc	Fanuc
Spindle motor power continuous/ intermittent rating		Fanuc power up series P30 (15/ 18.5)		
Full power range	rpm	Fanuc 400 - 1200	Fanuc 400 - 1200	Fanuc 400 - 1200
Traverse:				
Cross slide movement (X axis)	mm	325 (+300/ 25)	325 (+300/ 25)	325 (+300/ 25)
Longitudinal movement (Z axis)	mm	660	860	1240
Rapid traverse (X axis)	m/min	20	20	20
Rapid traverse (Z axis)	m/min	20	20	20
Cutting feed rate	m/min	0 - 10	0 - 10	0 - 10
Tailstock (Live centre - Quill)				
Quill diameter	mm	120	120	120
Quill traverse	mm	140	140	140
Base traverse	mm	500	500	500
Quill taper	type	MT-5	MT-5	MT-5
Quill thrust force - max @15 bar	kgf	500	500	500
Fluid system:				
Coolant tank capacity	ltr	160	180	220
Coolant pump capacity	lpm	200	200	200
Lubrication tank capacity	ltr	2.7	2.7	2.7
Hydraulic tank capacity	ltr	40	40	40
Hydraulic pump capacity	lpm	20	20	20
Hydraulic system pressure	bar	35	35	35
Accuracy As Per ISO 230-2:				
Positioning X / Z	mm	0.01	0.01	0.01
Repeatability X / Z	mm	0.007	0.007	0.007
Machine installations:				
Machine dimension W x D X H ~	mm	3500 x 12200 x 2200	3700 x 2200 x 2200	3700 x 2200 x 2200
Total connected load	kVA	30	30	30
Machine weight	kgs	~ 5200	~ 5500	~ 6000

Network



International Network

- Bangladesh • Bahrain • China • France • Germany • Iran • Kuwait • Netherlands • Oman • Poland
- Qatar • Russia • Saudi Arabia • Sri Lanka • South Africa • Thailand • Turkey • UAE



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