

»»»» RHINO

Heavy duty turning



Superior Performance | Unmatched Productivity

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



PL m:

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BFW
Bharat Fritz Werner

Heavy Duty Horizontal Turning

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

Rhino series machines are made with single piece inclined bed cum saddle, built with heavy duty LM guide ways for rigidity and precise ball screws for higher accuracy.

Hydraulic turret provided as standard. It is an added advantage of better rigidity, productivity and improved tool life.

Spindle, turret and tail stock axis are parallel with each other, it entitle to have uniform load while turning and enables higher depth of cuts

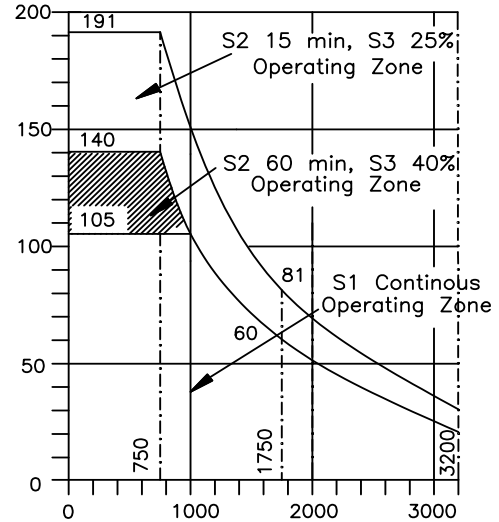
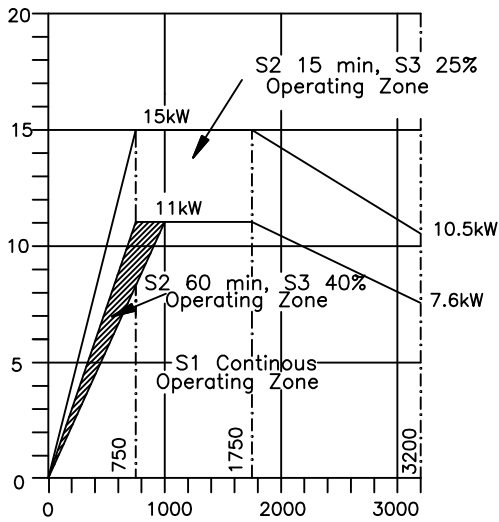
Best-in-class features

- Mono block construction of bed cum saddle with an inclined angle of 45 deg
- A2-6, A2-8 & A2-11 spindle with 3/2 bearing arrangement for front and rear
- Highest bar capacity 65 | 75 | 90
- HTP 100/ 125 - Hydraulic turret
- Swivel operator panel for operator easiness
- Lesser loading height from the floor and lesser distance from the door for clamping heavy components
- Basic TPM features

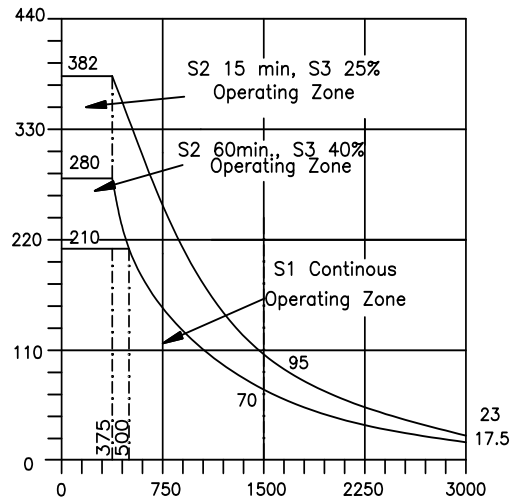
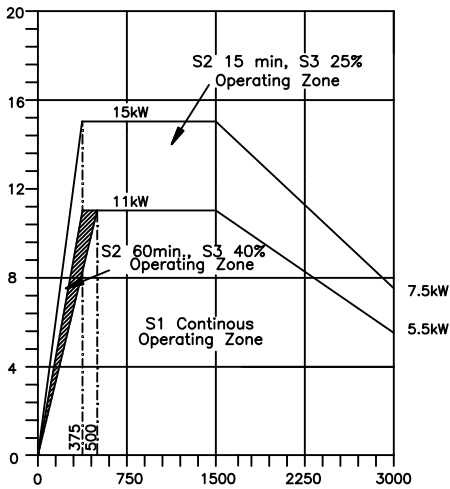


Spindle Characteristics

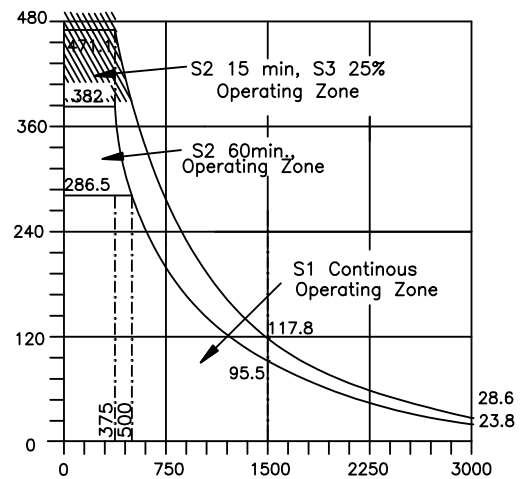
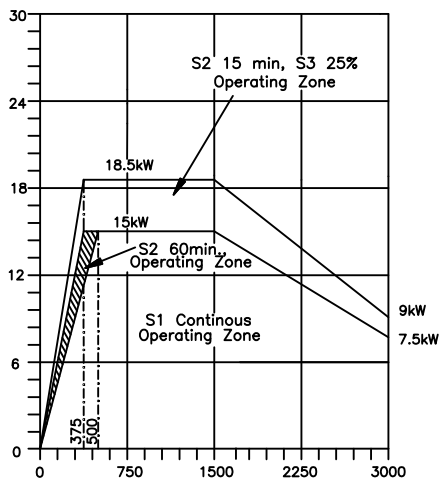
RHINO 2050 & RHINO 2070 - Fanuc 11/15 kW



RHINO 2550 & RHINO 2570 - Fanuc β 22 (Power up series-11/ 15 kW)

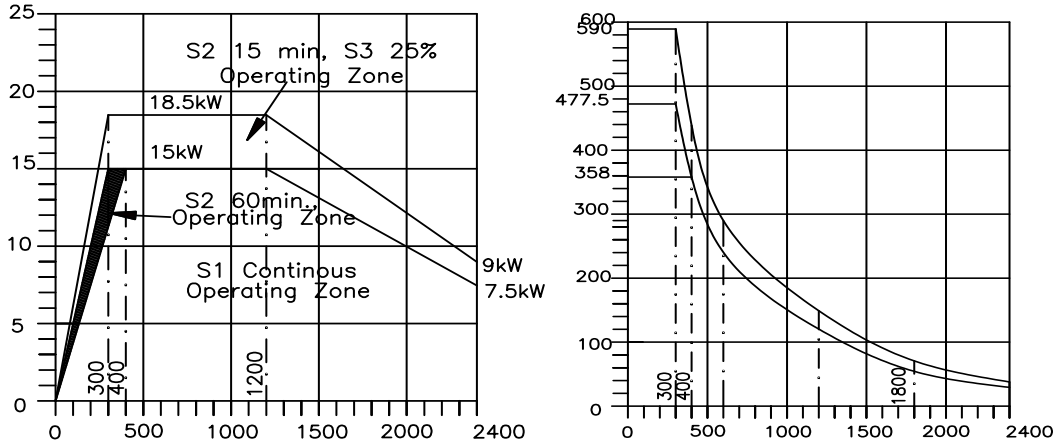


RHINO 2550 & RHINO 2570 - Fanuc β 30* (Power up series- 15/ 18.5 kW)

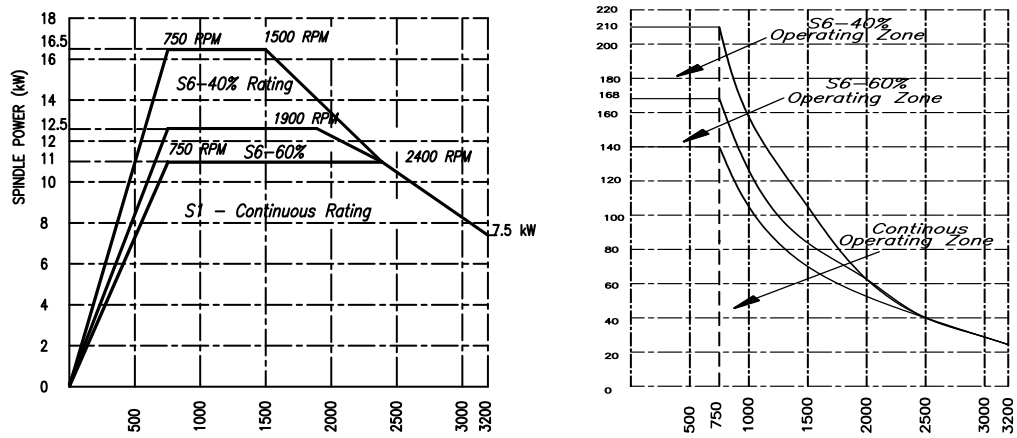


Spindle Characteristics

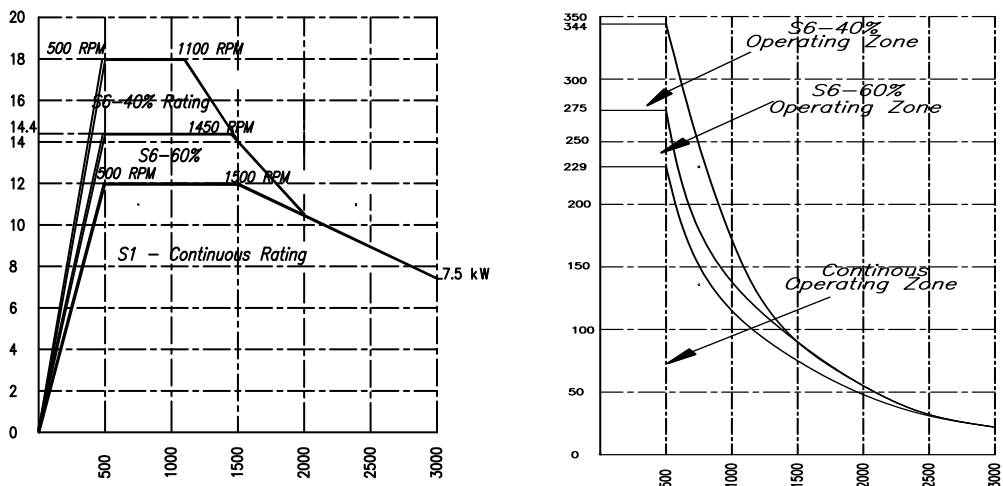
Rhino 3050 | 3070 | 3120 - Fanuc 15/18.5 kW



Rhino 2050 & RHINO 2070 - Siemens 11/16.5 kW



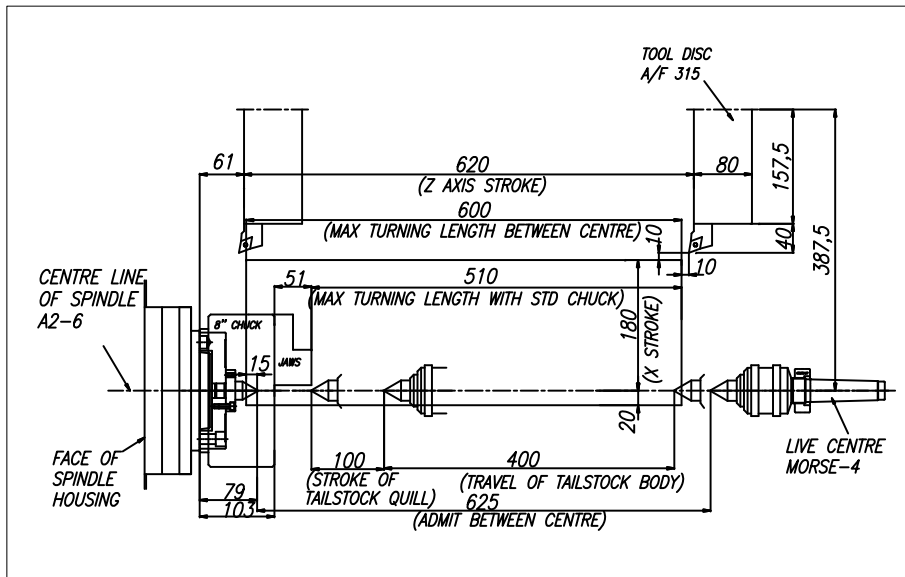
Rhino 2550 & RHINO 2570 - Siemens 12/18 kW



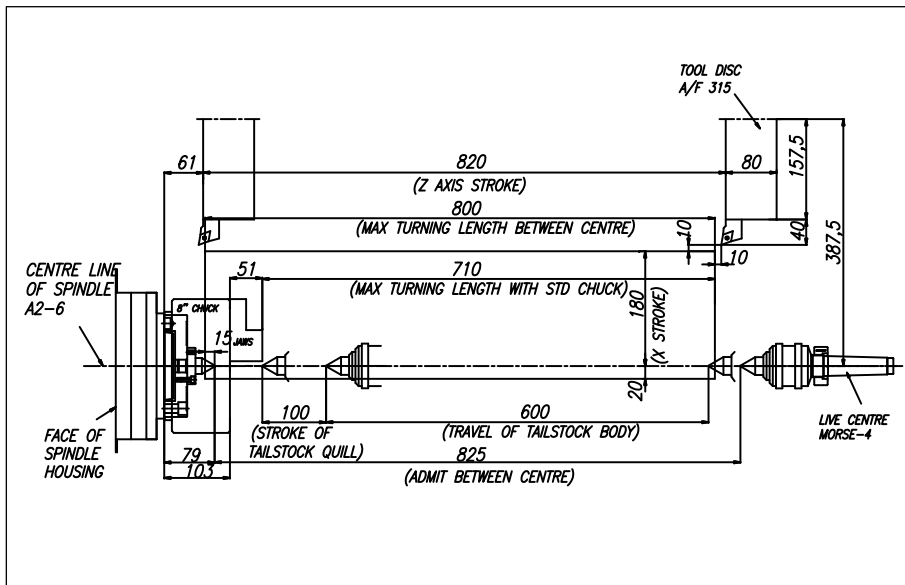


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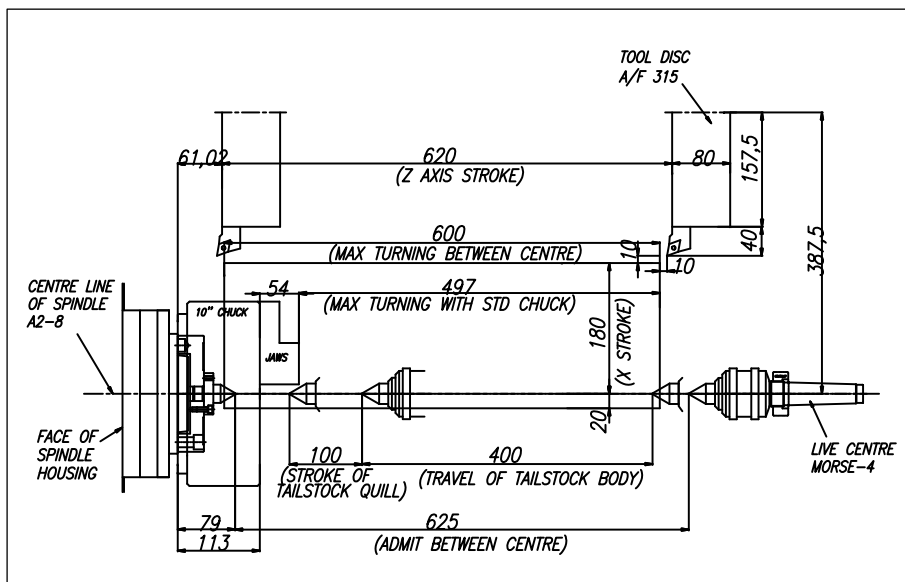
Moving Range Diagrams



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



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

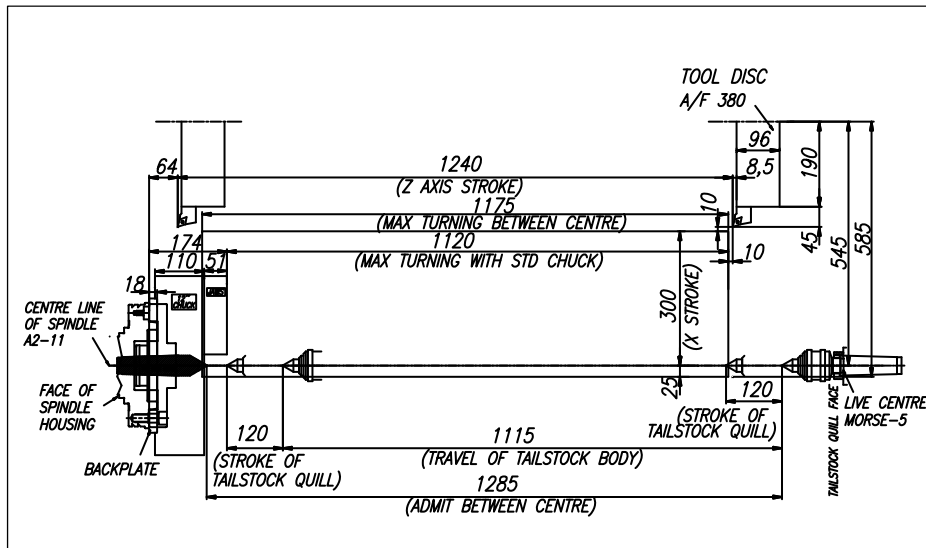


RHINO 2550
Main spindle A2-8
Z axis stroke=820



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Moving Range Diagrams



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

Standard Features

- LM guide ways for all axis - Class H
- High precision ball screws - Class C3
- Belt driven spindle
- AC servo motor for spindle & axis
- Linear & Circular interpolation
- Laser calibration & Ball bar tested
- Rigid tapping
- 8-station hydraulic turret
- Tool display
- 3 jaw self-centering chuck
- Solid rotary cylinder
- Tail-stock with programmable quill
- Coolant tank with chip tray
- Machine lamp
- Operations indication lamp- 3 colour
- AC unit for electrical cabinet
- Centralized lubrication system
- Maintenance tool kit

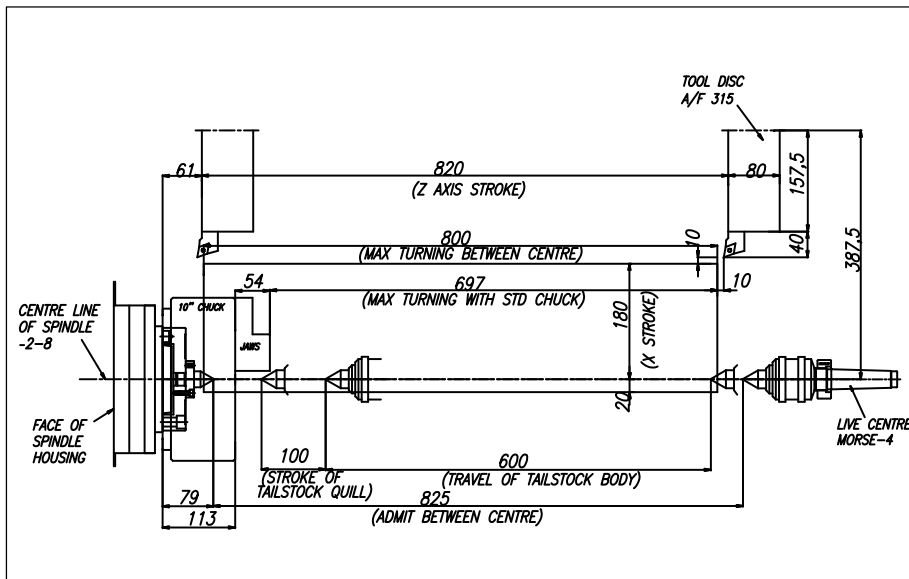
Optional Features

- 2 & 4 jaw self centering chuck
- Collet chuck
- Hollow cylinder
- Pneumatic operated auto door
- Chip conveyor with chip bin
- Door safety limit switch
- Rigid tap retraction push button
- Bar feeder
- Part catcher
- Steady rest
- Tool probe
- Work probe
- Automation solutions
- Tooling up solutions



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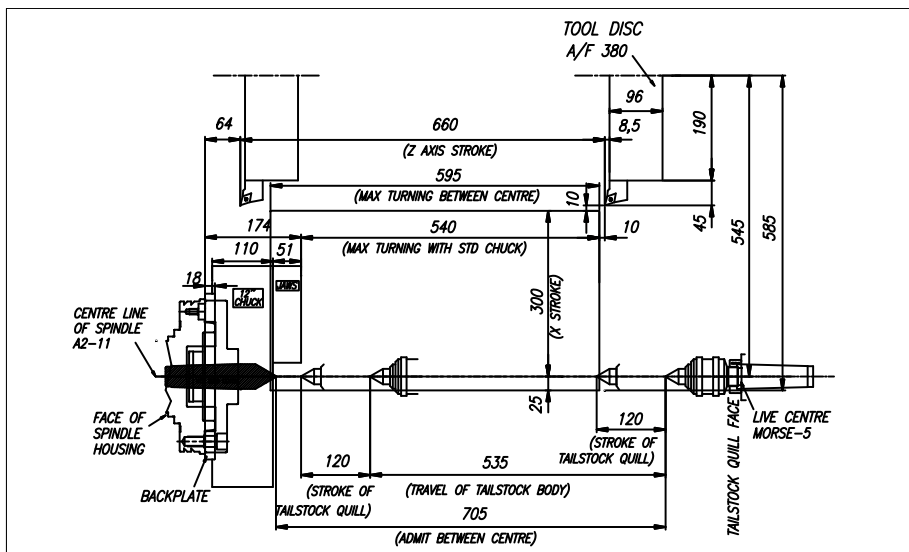
Moving Range Diagrams



RHINO 2570

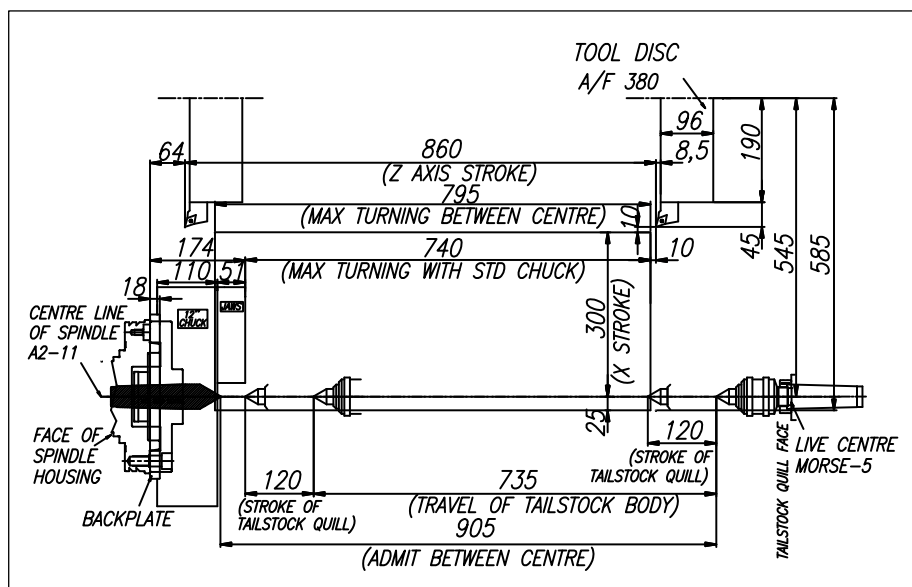
Main spindle A2-8
Z axis stroke= 820

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RHINI 3050

Main spindle A2-11
Z axis stroke= 660



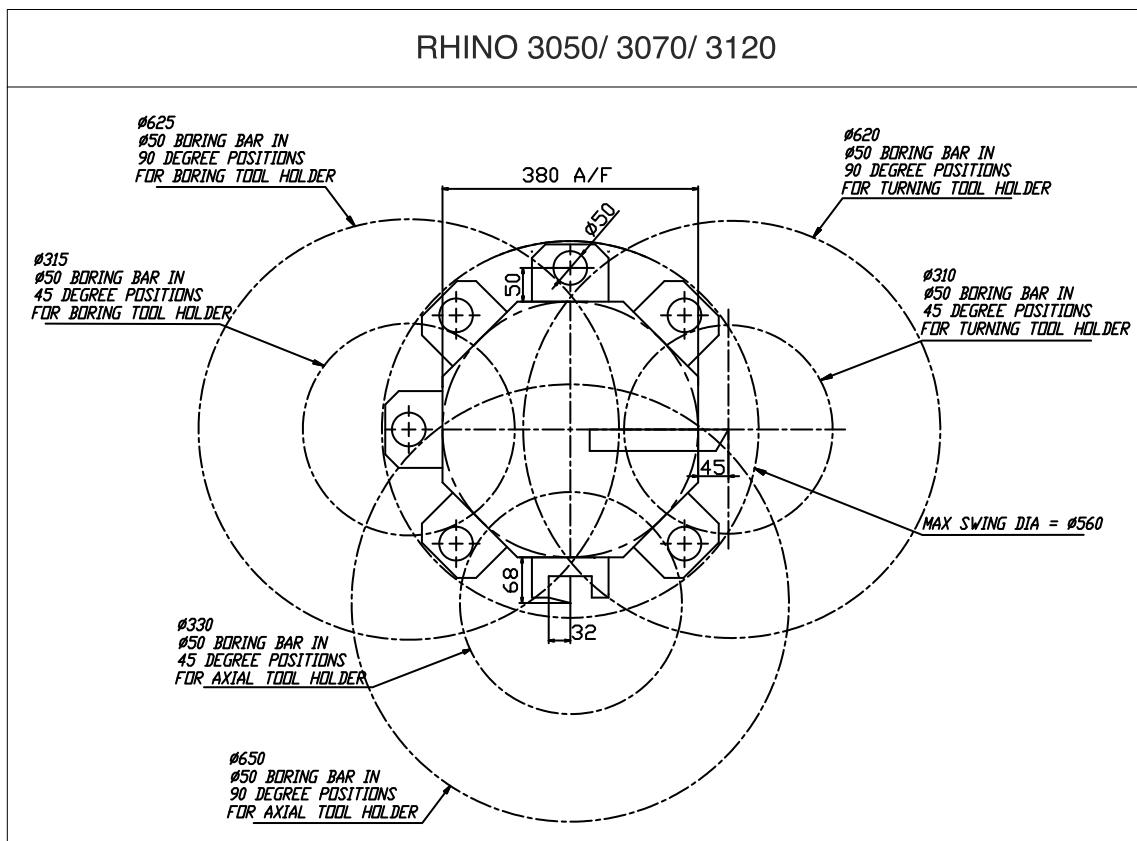
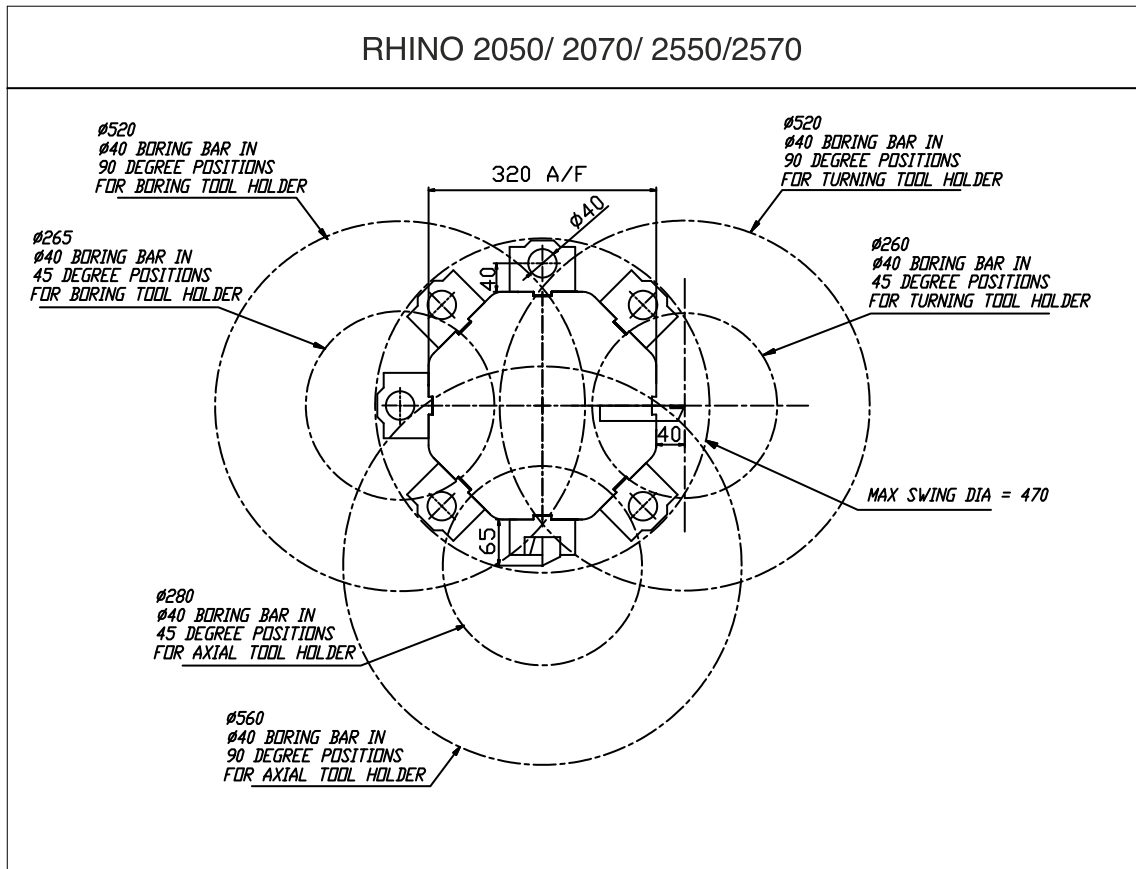
RHINO 3070

Main spindle A2-11
Z axis stroke=860



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Interference Diagrams





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Applications

Crankshaft



Differential Case



Knuckle



Compressor rotor



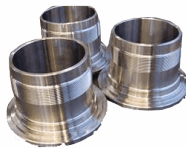
Hub adapter



Petrol line fitting



Cylinder



Pulley



Wheel hub



Rotor body



Spindle Assembly



Spindle Shaft



Flange



Pinion Yoke



Spindle



many more ...



RHINO

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 - 80 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 (304)*	250 (304)*
Bar capacity	mm	65	65	75	75
Turret indexing mechanism	type	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Turret center height		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	No.s	8 (12)*	12	12	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	No.s	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 (2200)*	3000 (2200)*
Control system					
Spindle motor power continues/ intermittent rating	kW	Fanuc - 11/ 15 PB22 (11/15)* Siemens 11/ 16.5 Mitsubishi 11/ 15	Fanuc - 11/ 15 PB22 (11/15)* Siemens 11/ 16.5 Mitsubishi 11/ 15	Fanuc - 11/ 15 PB22 (11/15) Siemens 12/ 18 Mitsubishi 11/ 15	Fanuc - 11/ 15 PB30 (15/18.5) Siemens 12/ 18 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	120	120	120	120
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	kg	4000	4500	4400	4800

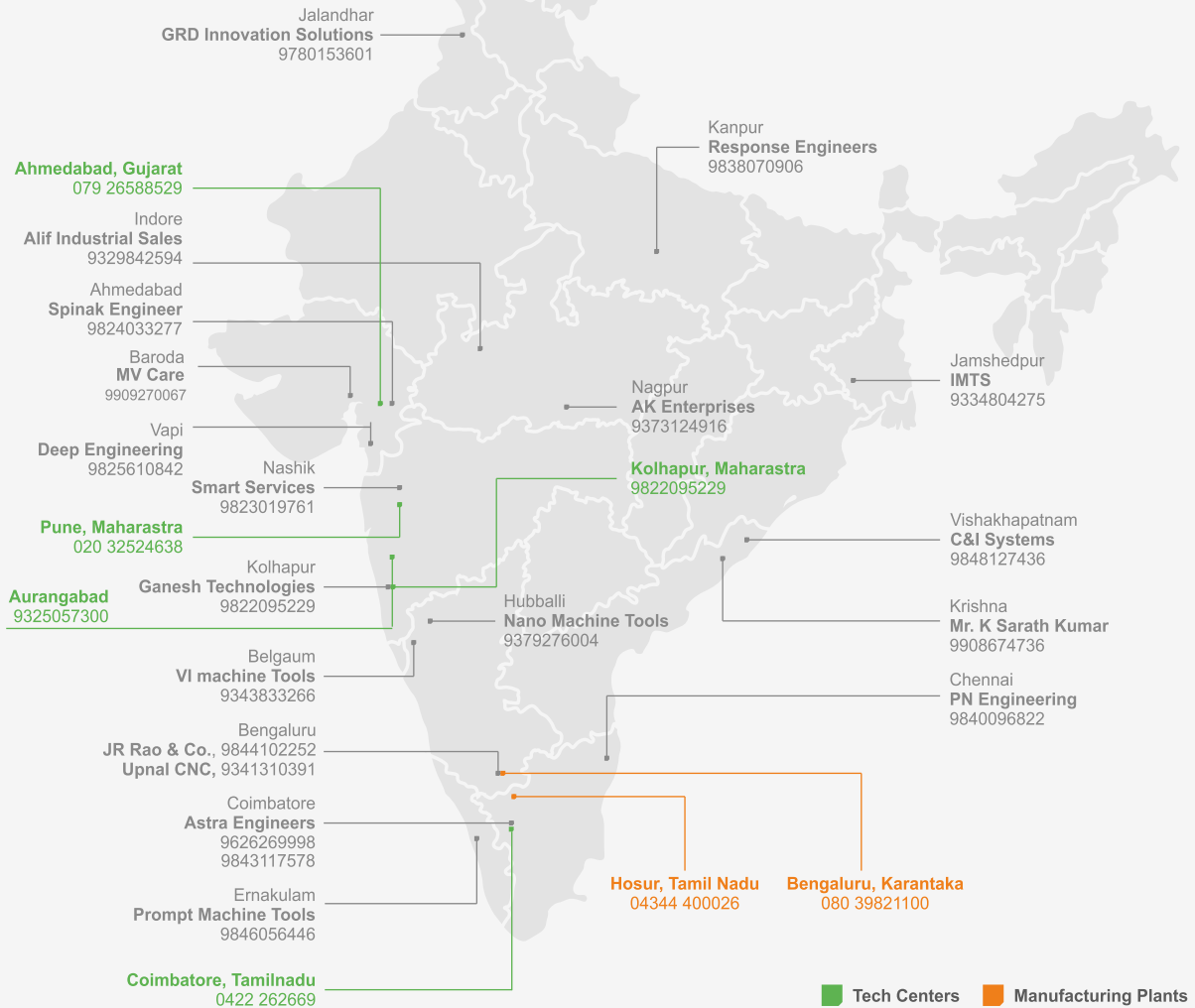


RHINO

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	1240
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 (400)*	304 (400)*	304 (400)*
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 (25 x 25)*		
Number of tools	No's	8 (12)*	8 (12)*	8 (12)*
Boring tool holder size (Dia)	mm	50 (40)*	50 (40)*	50 (40)*
Spindle				
Spindle nose	type	A2-11	A2-11	A2-11
Spindle bore	mm	105	105	105
No of bearing front/ rear	No's	3/2		
No of bearing front/ rear	No's	140/ 130	140/ 130	140/ 130
Spindle speed*	rpm	2400 (1500)*	2400 (1500)*	2400 (1500)*
CNC System				
Spindle motor power continuous/ intermittent rating	kW	Fanuc power up series Pβ30 (15/ 18.5)		
Full power range	rpm	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	4100 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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