

RECIPIROCATING

PRECISION SURFACE & PROFILE GRINDERS



50 Years Of
Grinding Excellence



www.alexmachinetools.com

SURFACE & PROFILE GRINDER - NH/BW/CF SERIES

DESCRIPTION

- In our NH family we have separated all movements in X, Y and Z direction. Our objective is to attain a precision of $90^{\circ} \pm 0^{\circ}$ in all 3 axes and to preserve this precision at all times. This provides superior stability even at extreme ends of working range.
- The spindle runs in super precision angular contact preloaded bearings with optimum concentricity and balance characteristics.
- The spindle head travels in the vertical column in handscrapped guideways with power elevation and manual infeed.

The transverse carriage carrying the column traverses firmly on the base on handscrapped guideways via electromechanical drive. This provides intermittent cross infeed.

The table carries out longitudinal traverse only, so that the entire grinding area is at all times fully supported by the slideways of the front base, even when the table is in its end position.

The column carries out cross traverse only. This ensures the transverse guiding system is always uniformly supported by the rear base slideways regardless of column position. The spindle head only carries out vertical traverse, hence the grinding wheel is always at the same distance from vertical guideways regardless of working height, which in turn ensures absolute parallelism between grinding wheel and worktable.

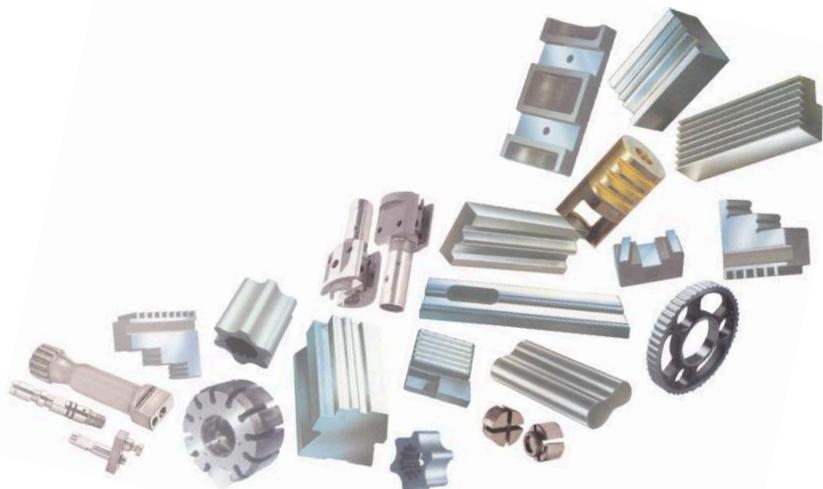
- For large working area, high table loads and very high rates of material removal we offer our BW Series that distinguishes itself by its heavy duty construction. The spindle head as well as vertical cross traverse and table guideways are specially designed for heavy duty cycles.

- The Alex low pressure hydraulic unit is located inside the base which establishes a defined thermal state in the machine frame.
- Optional: All models are available with CNC controls for automatic grinding cycle including wheel dressing and compensation.
- All models can be customized for specific application to suit customer needs.
- For Creep feed applications we offer our CF Series. This series focus is on individual production solutions. All 3 axes X, Y and Z are powered by servomotors and drives through precision ball screws. Feed rates start from a few millimeters to a very wide range on the upper end.

Spindle is of superior rigid construction to handle heavy full cut grinding load.

Coolant system is of very robust design to ensure adequate dissipation of heat.

Dressing system is designed to suit individual application. (Fully automatic cycle to include rapid approach creep feed grinding, auto dressing, compensation and return to home position.)



TECHNICAL SPECIFICATIONS

MODEL			NH-500	NH-750	NH-8040	NH-1000	BW-800	BW-1000	BW-1200
	Grinding Length x width (Max.)	mm (inch)	500 x 250 (20 x 10)	750 x 300 (30 x 12)	800 x 400 (32 x 16)	1000 x 250 (40 x 12)	800 x 500 (32 x 20)	1000 x 500 (40 x 20)	1200 x 600 (48 x 24)
Machining Range	Distance between table and spindle centre (Max)	mm (inch)	400 (16)	400 (16)	400 (16)	400 (16)	450 (18)	450 (18)	450 (18)
	Working Surface	mm (inch)	500 x 250 (20 x 10)	750x 300 (30 x 12)	800 x 400 (32 x 16)	1000 x 250 (40 x 12)	800 x 500 (32 x 20)	1000 x 500 (40 x 20)	1200 x 600 (48 x 24)
	Weight carrying capacity of table (Max.)	Kg (Lb)	200 (440)	400 (880)	600 (1320)	500 (1100)	800 (1760)	1000 (2200)	1200 (2640)
Table	Max. longitudinal movement	mm (inch)	550 (22)	800 (32)	850 (34)	1050 (42)	850 (34)	1050 (42)	1250 (50)
	Max. Cross movement	mm (inch)	280 (11)	330 (13)	430 (17)	330 (13)	550 (21.65)	550 (21.65)	665 (26)
	T-slots (number x width)	mm (inch)	1 x 14 (1 x 0.55)	1 x 14 (1 x 0.55)	1 x 14 (1 x 0.55)	1 x 14 (1 x 0.55)	1 x 14 (1 x 0.55)	1 x 14 (1 x 0.55)	3 x 14 (3 x 0.55)
Longitudinal Movement	Max. Table Speed	m/min (ft/min)	15 (50)	15 (50)	15 (50)	15 (50)	20 (65)	20 (65)	20 (65)
Cross Movement	Auto cross feed at each Table reversal	mm/stroke (inch/stroke)	0.25-6 (0.01-0.24)	0.25-6 (0.01-0.24)	0.25-6 (0.01-0.24)	0.25-6 (0.01-0.24)	1-10 (0.04-0.40)	1-10 (0.04-0.40)	1-10 (0.04-0.40)
	Manual feed rate / turn	mm (inch)	1 (0.04)	1 (0.04)	1 (0.04)	1 (0.04)	1 (0.04)	1 (0.04)	1 (0.04)
	Least count of hand wheel	mm (inch)	0.01 (0.0004)	0.01 (0.0004)	0.01 (0.0004)	0.01 (0.0004)	0.01 (0.0004)	0.01 (0.0004)	0.01 (0.0004)
Vertical Movement	Manual feed rate / turn	mm (inch)	0.2 (0.0008)	0.2 (0.0008)	0.2 (0.0008)	0.2 (0.0008)	0.2 (0.0008)	0.2 (0.0008)	0.2 (0.0008)
	Least count of hand wheel	mm (inch)	0.002 (0.0001)	0.002 (0.0001)	0.002 (0.0001)	0.002 (0.0001)	0.002 (0.0001)	0.002 (0.0001)	0.002 (0.0001)
	Power elevation	mm/min (inch/min)	100 (4)	100 (4)	100 (4)	100 (4)	100 (4)	100 (4)	100 (4)
Grinding Wheel	Diameter x thickness x bore	mm (inch)	200x20x50.8 (8 x 0.75 x 2)	250x25x76.2 (10 x 1 x 3)	300x25x76.2 (12 x 1 x 3)	250x25x76.2 (10 x 1 x 3)	350x50x127 (14 x 2 x 5)	350x50x127 (14 x 2 x 5)	350x50x127 (14 x 2 x 5)
	Speed	rpm	2880	1440	1440	1440	1440	1440	1440
Motors	Grinding Spindle	hp (KW)	2 (1.5)	5 (3.75)	5 (3.75)	5 (3.75)	10 (7.5)	10 (7.5)	10 (7.5)
	Vertical up down	hp (KW)	0.25 (0.18)	0.25 (0.18)	0.25 (0.18)	0.25 (0.18)	0.75 (0.56)	0.75 (0.56)	0.75 (0.56)
	Cross feed	hp (KW)	0.25 (0.18)	0.33 (0.25)	0.5 (0.38)	0.33 (0.25)	0.75 (0.56)	0.75 (0.56)	0.75 (0.56)
	Coolant pump	hp (KW)	0.12 (0.1)	0.12 (0.1)	0.12 (0.1)	0.12 (0.1)	0.12 (0.1)	0.12 (0.1)	0.12 (0.1)
Hydraulic System	Working Pressure	kg/cm ² Lb/inch ²	10 (140)	15 (210)	15 (210)	15 (210)	15 (210)	15 (210)	15 (210)
	Power of Hydraulic Pump Motor	hp (KW)	1 (0.75)	2 (1.5)	2 (1.5)	2 (1.5)	3 (2.25)	3 (2.25)	3 (2.25)
	Tank Capacity	Liters	35	50	50	50	200	200	250
Machine Size	Length x Width x Height	mm	1250 x 1450 x 1650	1450 x 2050 x 1650	1600 x 2150 x 1700	1450 x 2300 x 1650	1890 x 2250 x 1890	1890 x 2900 x 1890	2190 x 3500 x 1890
		(inch)	(50x57x65)	(57x81x65)	(63x85x67)	(57x91x65)	(75x89x75)	(75x114x75)	(87x137x75)
Weight	Net Weight	Kg (Lb)	1200 (2640)	2800 (6160)	3200 (6600)	3200 (7040)	4000 (8800)	4700 (10340)	5000 (11000)
	Gross Weight	Kg (Lb)	1600 (3520)	3600 (7920)	3800 (7920)	3800 (8360)	4800 (10560)	5500 (12100)	6500 (14300)

CNC CONTROLS AND PLC CONTROL OPTIONS AVAILABLE

All machine can be provided with

- CNC control for automatic grinding cycle including wheel dressing and compensation
- PLC control with Servo motor for Auto Down feed.



STANDARD EQUIPMENT

Grinding wheels (2): grinding wheel flange unit, wheel balancing mandrel; table guard; set of wrenches; hydraulic system; electric motors; all internal wiring and control gear.

OPTIONAL ACCESSORIES

Plain vice; Swivel vice; Universal vice; Sine vice; Wheel balancing stand; Radius & Angular wheel truing attachment; Head Wheel dresser; Wet grinding attachment; Magnetic Separator and/or Paperband filter; Dust control unit; Demagnetizer - platen or aperture type; Permanent Magnet; Electromagnetic chuck with or without built-in demagnetizer; Diamond Dresser; Machine lamp; Workpiece handling system; Spare grinding wheels; Re-circulating Ball Screws (free from back lash).

RECIPROCATING SURFACE GRINDER WITH VERTICAL SPINDLE - NV SERIES



DESCRIPTION

- Specially suited for quick flat grinding of workpieces.
- Cross traverse is manual for infeed and powered for positioning hydraulic drive for table.

TECHNICAL SPECIFICATIONS

MODEL		NV500	NV750
Max. Longitudinal Table Travel	mm (inch)	550 (22)	800 (32)
Max. Wheel Clearance above Table	mm (inch)	200 (8)	250 (10)
Working Surface over Magnet	mm (inch)	500 x 200 (20 x 8)	750 x 250 (30 x 10)
Max. Table Speed	m/min	15	15
	ft/min	(50)	(50)
Power Elevation	mm/min	100	100
	inch/min	(4)	(4)
Least Count of Vertical Feed Hand Wheel	mm (inch)	0.002 (0.0001)	0.002 (0.0001)
Size of Cup Wheel	mm	200 x 63 x 76.2 bore	250 x 63 x 76.2 bore
	(inch)	(8 x 2.5 x 3 bore)	(10 x 2.5 x 3 bore)
Power of Spindle Motor	hp (KW)	2 (1.5)	5 (3.7)
Power of Elevation Motor	hp (KW)	0.25 (0.18)	0.25 (0.18)
Power of Coolant Motor	hp (KW)	0.13 (0.09)	0.13 (0.09)
Cross Feed Motor	hp (KW)	0.25 (0.18)	0.25 (0.18)
Speed of Grinding Spindle	rpm	2880	1440
Working Pressure	kg/cm ²	10	15
	(Lb/inch ²)	(140)	(210)
Power of Hydraulic Pump Motor	hp (KW)	1 (0.75)	2 (1.5)
Tank Capacity	liters	50	60
Machine Size	mm	1250 x 1450 x 1650	1450 x 2050 x 1650
Length x Width x Height	(inch)	(50 x 57 x 65)	(57 x 81 x 65)
Net Weight of Machine	Kg (Lb)	1200 (2640)	2800 (6160)
Gross Weight of Machine	Kg (Lb)	1600 (3520)	3600 (7920)



As Alex Machine Tools Pvt. Ltd. is constantly improving the design of its machines the appearances, specification, dimensions and weight are subject to change without notice.

INDIA OFFICE