

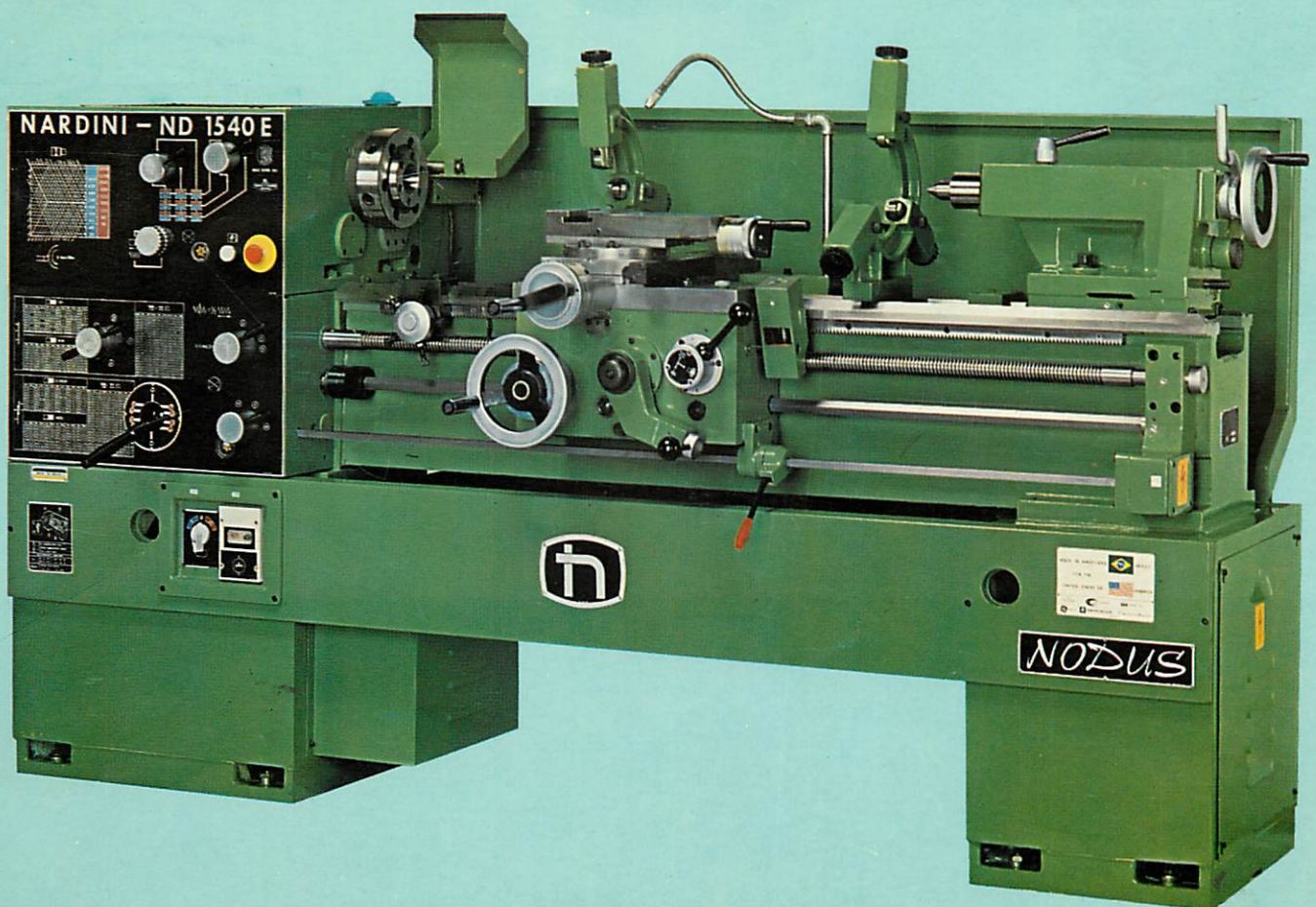
**HIGH PRECISION LATHE**

**“NODUS”**

**ND-1500 S/E**

**ND-1700 S/E**

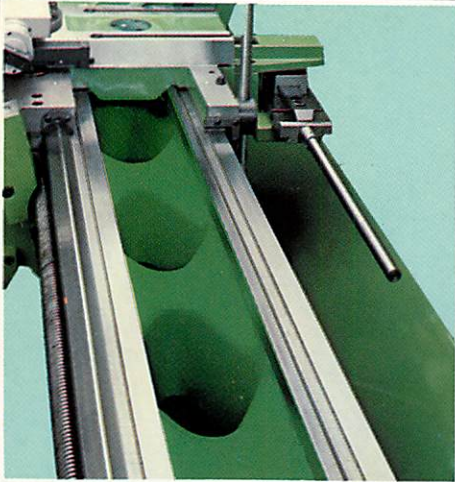
**NARDINI**



**UManuals**

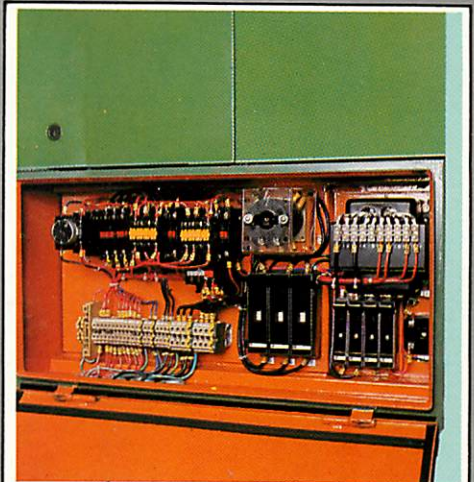
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# Features



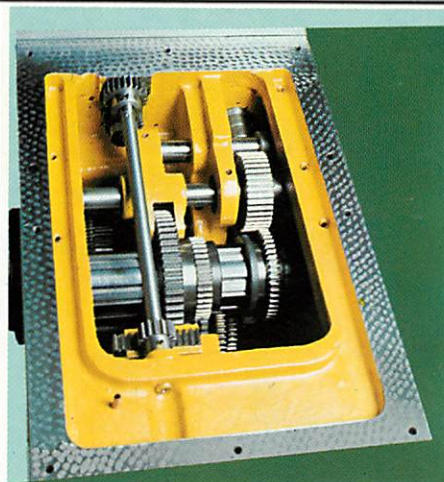
## Bed Ways

The heavy duty compact one piece bed is extremely rigid and multiribbed to eliminate torsional twisting and vibrations. All "V" ways and flat ways of the bed are induction hardened to BRINELL 400 and above (ROCKWELL 43 RC and above) and precision ground. Bed ways are made of special grey iron alloy, and are naturally aged at the Nardini Foundry to relieve internal stress and tension. Autocollimated bed ways permit true alignment and parallelism throughout the life of the lathe.



## Electrical Equipment

The electrical equipment used is made of the highest quality components. Klockner Moeller and Telemecanique electrical components offer high and low voltage protection with a 110V magnetic starter. Motors are supplied as our standard, both 7½ HP (S), 8/5 HP (E) versions. The electrical panel conforms to "JIC STANDARD", designed for easy access and is fully protected from dust and contamination. Four "V" belt drive is used for positive and smooth power transmission.



## Headstock

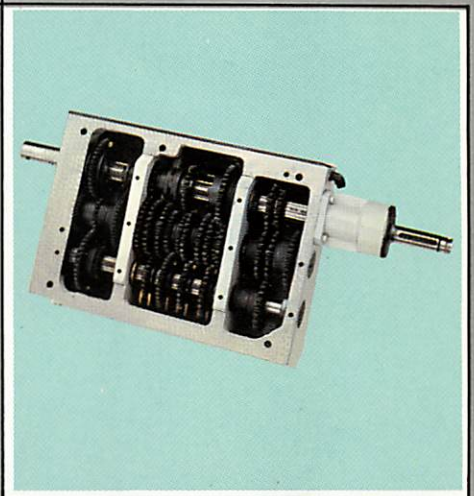
Rugged headstock design provides maximum efficiency in all forms of turning and finishing.

The short and rigidly supported spindle is made from Chromium, Nickel, Molybdenum alloy steel, case hardened and fully ground. The spindle turns on preloaded high precision "TIMKEN" taper roller bearings. All spindle assemblies are high speed dynamically balanced on a "SCHENCK" balancing machine.

The D1-6" Camlock spindle nose has a large hole through the spindle of 2.½" (52mm).

The headstock provides 9 or 18 spindle speeds, which are in geometric progression and are easily selected.

All headstock gears are case hardened and "REISHAUER" ground with splined shafts which turn on anti-friction bearings. Headstock lubrication system consists of automatic pump and oil bath with sight glass. All test conditions and deviations are according to the ISO Norm 1708-1979 (E).

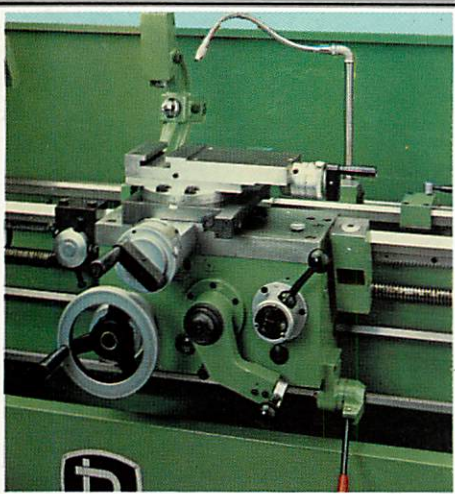


## Universal Gear Box

The universal gear box allows immediate selection of both inch and metric threads without changing end gears. The totally enclosed gear box provides the user with one of the most comprehensive range of metric and inch feeds and threads.

All gears are hardened and are made of special alloy steel. The spline shaft is case hardened and turns on anti-friction bearings.

Automatic pump and oil bath lubrication system creates cascade flow of oil. Adjustable safety overload feature disengages feed in case of excess stress and misuse of lathe.



## Carriage

Automatic longitudinal and transversal disengage increases productivity. D-tenth control lever for maximum safety. The Nardini carriage is guided by a long wee-way bearing surface providing smooth feeds and travel with maximum accuracy and minimal wear. Wide carriage is properly fitted to saddle base adding strength and reducing torsional twisting. Cross feed adjustment eliminates backlash, permitting greatest possible accuracy. Fully adjustable tapered gibs on cross slide and top slide provide for wear, compensation, and long life. All parts are automatically lubricated. Single lever provides rapid engagement of leadscrew, cross feed and longitudinal movement. "T" slot on cross slide permits quick mounting of rear tool post and other accessories.

# Specifications

CAPACITY	ND-1500 S/E		ND-1700 S/E	
	inches	mm	inches	mm
Height of centers	7. <sup>11</sup> / <sub>16</sub>	195	8. <sup>5</sup> / <sub>8</sub>	220
Distance between centers	20-40-60-86	500-1000-1500-2200	20-40-60-86	500-1000-1500-2200
Swing over bed	15. <sup>3</sup> / <sub>8</sub>	390	17. <sup>5</sup> / <sub>16</sub>	440
Swing over wings of saddle	13. <sup>3</sup> / <sub>8</sub>	340	15. <sup>3</sup> / <sub>8</sub>	390
Swing over cross slide	8. <sup>5</sup> / <sub>8</sub>	220	10. <sup>5</sup> / <sub>8</sub>	270
(*) Swing in gap	22. <sup>7</sup> / <sub>8</sub>	580	24. <sup>3</sup> / <sub>4</sub>	630
(*) Length of gap in front of faceplate	7	180	7	180
Cross slide travel	9. <sup>7</sup> / <sub>8</sub>	250	9. <sup>7</sup> / <sub>8</sub>	250
Top slide travel	5	125	5	125
Tool section	3/4 x 3/4	20x20	3/4 x 3/4	20x20
<b>BED</b>				
Width	10. <sup>5</sup> / <sub>8</sub>	270	10. <sup>5</sup> / <sub>8</sub>	270
Height	12. <sup>5</sup> / <sub>8</sub>	320	12. <sup>5</sup> / <sub>8</sub>	320
<b>HEADSTOCK</b>				
Spindle nose (CAMLOCK)	D1-6"	D1-6"	D1-6"	D1-6"
Spindle bore	2. <sup>1</sup> / <sub>32</sub>	52	2. <sup>1</sup> / <sub>32</sub>	52
Spindle internal taper	1:20	1:20	1:20	1:20
Taper in reduction sleeve (MT)	4	4	4	4
Spindle speeds (number) -Version"S"	9	9	9	9
Version"E"	18	18	18	18
Speeds range -Version"S"(RPM)	50 to 2000	50 to 2000	50 to 2000	50 to 2000
Version"E"(RPM)	25 to 2000	25 to 2000	25 to 2000	25 to 2000
<b>TAILSTOCK</b>				
Quill diameter	2. <sup>3</sup> / <sub>8</sub>	60	2. <sup>3</sup> / <sub>8</sub>	60
Quill travel	8. <sup>5</sup> / <sub>8</sub>	220	8. <sup>5</sup> / <sub>8</sub>	220
Quill internal taper (MT)	4	4	4	4
Lateral adjustment	5/8	15	5/8	15
<b>GEAR BOX</b>				
Number of threads	216	216	216	216
Metric threads (mm)	(54) 0.40 - 18.472	(54) 0.40 - 18.472	(54) 0.40 - 18.472	(54) 0.40 - 18.472
Inch threads (TPI)	(54) 42 - 2.3/4	(54) 42 - 2.3/4	(54) 42 - 2.3/4	(54) 42 - 2.3/4
Module threads (Mod.)	(54) 0.2 - 3.5	(54) 0.2 - 3.5	(54) 0.2 - 3.5	(54) 0.2 - 3.5
Diametral pitch threads (DP)	(54) 84 - 3	(54) 84 - 3	(54) 84 - 3	(54) 84 - 3
Pitch of leadscrew (TPI)	4	4	4	4
<b>FEEDS RANGE</b>				
Number of feeds	264	264	264	264
Cross feeds (132)	0.0010 - 0.0488 in/rev	0.0265 - 1.239 mm/rev.	0.0010 - 0.0488 in/rev	0.0265 - 1.239 mm/rev
Longitudinal feeds (132)	0.0021 - 0.0976 in/rev	0.053 - 2.479 mm/rev	0.0021 - 0.0976 in/rev	0.053 - 2.479 mm/rev
<b>MOTORS</b>				
Main motor (specify voltage) -Version"S"(HP)	7.1/2	7.1/2	7.1/2	7.1/2
Version"E"(HP)	8/5	8/5	8/5	8/5
Coolant unit motor (HP)	1/8	1/8	1/8	1/8

(\*) Optional

## DIMENSIONS (PACKING) AND APROXIMATE WEIGHT

MODEL	DISTANCE BETWEEN		DIMENSIONS						VOLUME		GROSS WEIGHT		NET WEIGHT	
	CENTERS		LENGTH		WIDTH		HEIGHT		Ft <sup>3</sup>	M <sup>3</sup>	Lb	Kg	Lb	Kg
	INCHES	MM	INCHES	M	INCHES	M	INCHES	M						
ND-1500 S/E	20	500	79	2,00	40	1,00	58	1,47	106	2,94	3060	1390	2550	1160
	40	1000	98	2,50	40	1,00	58	1,47	132	3,68	3360	1530	2770	1260
	60	1500	118	3,00	40	1,00	58	1,47	159	4,41	3700	1680	2990	1360
	86	2200	146	3,70	40	1,00	58	1,47	196	5,44	4130	1880	3280	1490
ND-1700 S/E	20	500	79	2,00	40	1,00	58	1,47	106	2,94	3150	1430	2640	1200
	40	1000	98	2,50	40	1,00	58	1,47	132	3,68	3450	1570	2860	1300
	60	1500	118	3,00	40	1,00	58	1,47	159	4,41	3780	1720	3080	1400
	86	2200	146	3,70	40	1,00	58	1,47	196	5,44	4220	1920	3370	1530

### CHARACTERISTICS AND STANDARD EQUIPMENT

### CHARACTERISTICS AND OPTIONAL EQUIPMENT

- One piece induction hardened and ground bed
- Five positions turret stop device
- Polar electromagnetic brake
- Splash guard
- Top slide with "T" slot
- Chip pan
- Change gears
- Dual reading inch / metric dial
- Graduated quill (inch / metric)
- Coolant system
- Two MT4 hardened centers
- Color: green RAL 6011
- Spindle reduction sleeve 1:20 x MT4
- Thread cutting indicator
- Manual lubrication pump
- Left side apron handwheel
- Service wrenches
- Set of leveling screws
- Adjustable feed shaft overload protection device
- Complete electrical equipment for 220V, 60Hz (110V-control)
- Operating and parts manual.

- Lighting system
- Four independent jaw chuck  $\varnothing$  12.1/4" (310mm) ND-1500S/E and  $\varnothing$  14.1/4" (360mm) ND-1700S/E
- Faceplate  $\varnothing$  14" (356mm)
- Driving plate  $\varnothing$  7.1/2" (190mm) ND-1500S/E and  $\varnothing$  8.5/8" (220mm) ND-1700S/E
- Three jaw universal chuck  $\varnothing$  7.1/2" (190mm) ND-1500S/E and  $\varnothing$  8.1/4" (210mm) ND-1700S/E
- Backplate for universal chuck  $\varnothing$  7.1/2" (190mm) ND-1500S/E and  $\varnothing$  8.1/4" (210mm) ND-1700S/E
- Rear tool post
- Steady rest with bearings (interchangeable bronze tips  $\varnothing$  7/16" (10mm) to 3.15/16" (100mm))
- Follow rest with bearings (interchangeable bronze tips  $\varnothing$  7/16" (10mm) to 3.1/8" (80mm))
- American type tool post
- Collet chuck
- Quick change tool holder
- Air operated chuck  $\varnothing$  6.1/4" (160mm)
- Taper turning attachment [capacity 10" x 8" (200mm)]
- Hydraulic tracer unit
- Chuck guard
- Micrometer stop
- Bed wit gap
- Other equipment on special request.