



# FH 400/450



## MAIN FEATURES

### HEADSTOCK

Headstock design provides maximum power for roughing and smoothness for finishing. Spindle, gears and shaft are made of nickel-chromium steel, hardened and ground. Clutches and brake are hydraulic operated.

24 speeds, range 32-1500 RPM, are available in the following combination:

1. one lever shift from low to high ranges;
2. one handwheel chooses 2 groups of 4 speeds each. This makes 16 speeds;
3. the third lever allows the operator to use clutches either to reverse spindle rotation while cutting threads, or for shift to higher speed while cutting, without stopping the spindle. This lever may allow the operator to choose 8 more speeds. So the total speeds available are 24.

The spindle is made of special hardened and ground steel.

The spindle is provided with a CAMLOCK 8" nose. The front bearing is of a special brass bushing with high pressure lubrication system. Automatic lubrication for gears and shafts.

### NORTON BOX

Gear box totally enclosed and automatically lubricated.

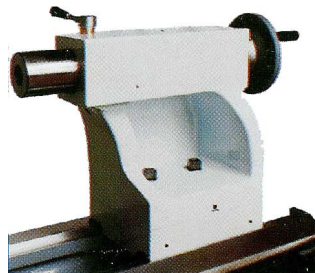
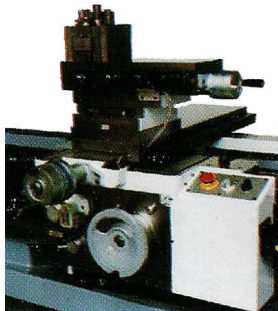
### APRON

Is equipped with safety device to prevent the operation of contrasting movements; automatic disengagement device for longitudinal movement; mechanical over/under safety device; lubrication pump for gears, saddle and carriage ways.

### CARRIAGE CROSS SLIDE

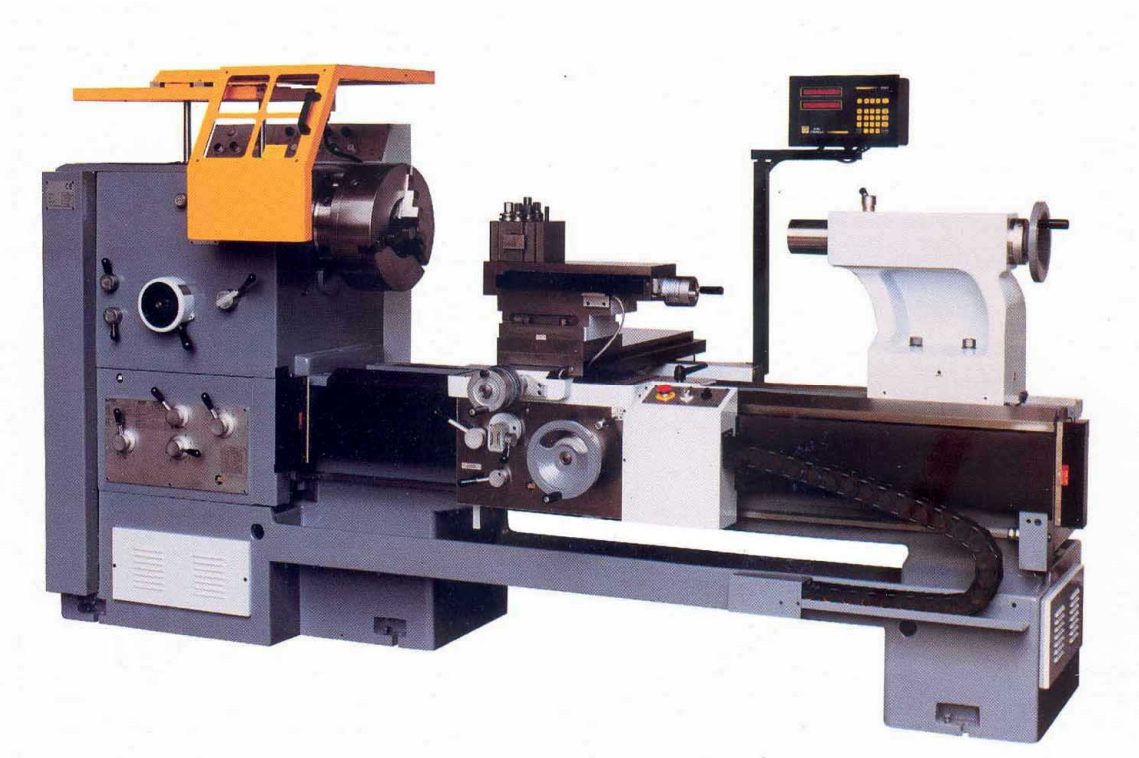
Compensation for wear is provided by gibs. The top slide dovetail is gibbed on the headstock side. The carriage is amply ribbed for rigidity and the bridge is deep and wide.

Its ways are hardened and ground.



**BED**

Bed is cast form metallurgically controlled cast-iron. Provides unequalled vibration dampening. Ways are induction hardened and ground.

**STANDARD EQUIPMENT**

Motor and electrical installation with control panel, coolant, multiple longitudinal stops, steady rest, follow rest, n. 1 spindle reduction sleeve, safety protection for chuck, n.1 set of service wrenches, instructions manual.

**SPECIAL EQUIPMENT**

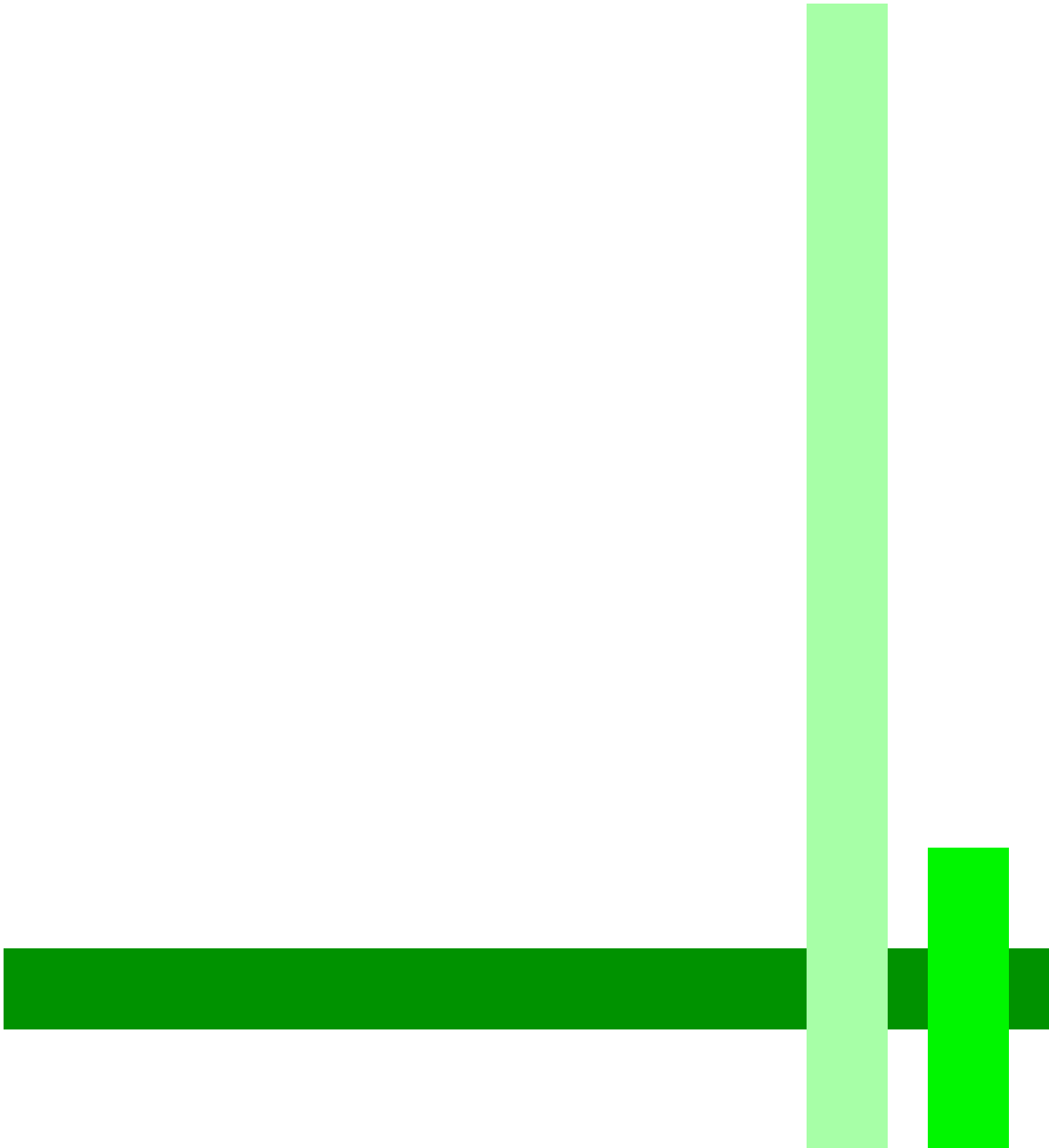
4-jaws independent chuck, 3-jaws self centring chuck with back-plate, rear tool post, taper turning device, live centre, quick change tool post, hydraulic copying attachment, lighting installation, 6-positions longitudinal stop

## TECHNICAL DATA

		FH400	FH450
Height of centres	mm	400	450
Max. swing in gap	mm	1000	1100
Max. swing over bed	mm	800	900
Max distance between centres	mm	280	320
Height of centres	mm	1500 2000 3000 4000 5000	1500 2000 3000 4000 5000
<b>HEAD</b>			
Spindle speeds	n	24	24
Spindle speeds r.p.m.	n	15-1050 12-800	15-1050 12-800
Spindle bore	mm	110/182	110/182
CAMLOCK nose	n	8	8
<b>BED</b>			
Hardened slideways			
Length of gap in front table	mm	330	330
Width of bed	mm	460	460
<b>TAILSTOCK</b>			
Sleeve diameter	mm	100	100
Sleeve travel	mm	280	280
Morse taper	mm	5	5
<b>FEEDS AND STANDARD THREADS</b>			
Lead screw diameter	mm	50	50
Lead screw pitch	mm	10	10
Longitudinal feeds	mm	0,08-2,4	0,08-2,4
Cross feeds	mm	0,04-1,2	0,04-1,2
Metric pitches	mm	0,5-30	0,5-30
Whitworth pitches	thr./1	1-60	1-60
Power of motor	HP	15	15
<b>OVERALL DIMENSIONS</b>			
Length	mm	3100 3600 4600 5600 6600	3100 3600 4600 5600 6600
Width	mm	1300	1300
Height	mm	1420	1450
Approx. net weight for centre distance 1500	Kg	4200	4300
Approx. net weight for centre distance 2000	Kg	4600	4700
Approx. net weight for centre distance 3000	Kg	5200	5300
Approx. net weight for centre distance 4000	Kg	6100	6200
Approx. net weight for centre distance 5000	Kg	7100	7200

Technical specifications are subject to change without notice.

Special machines are available on request, provided that the requested features represent an improvement of the standard features of the machine.



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