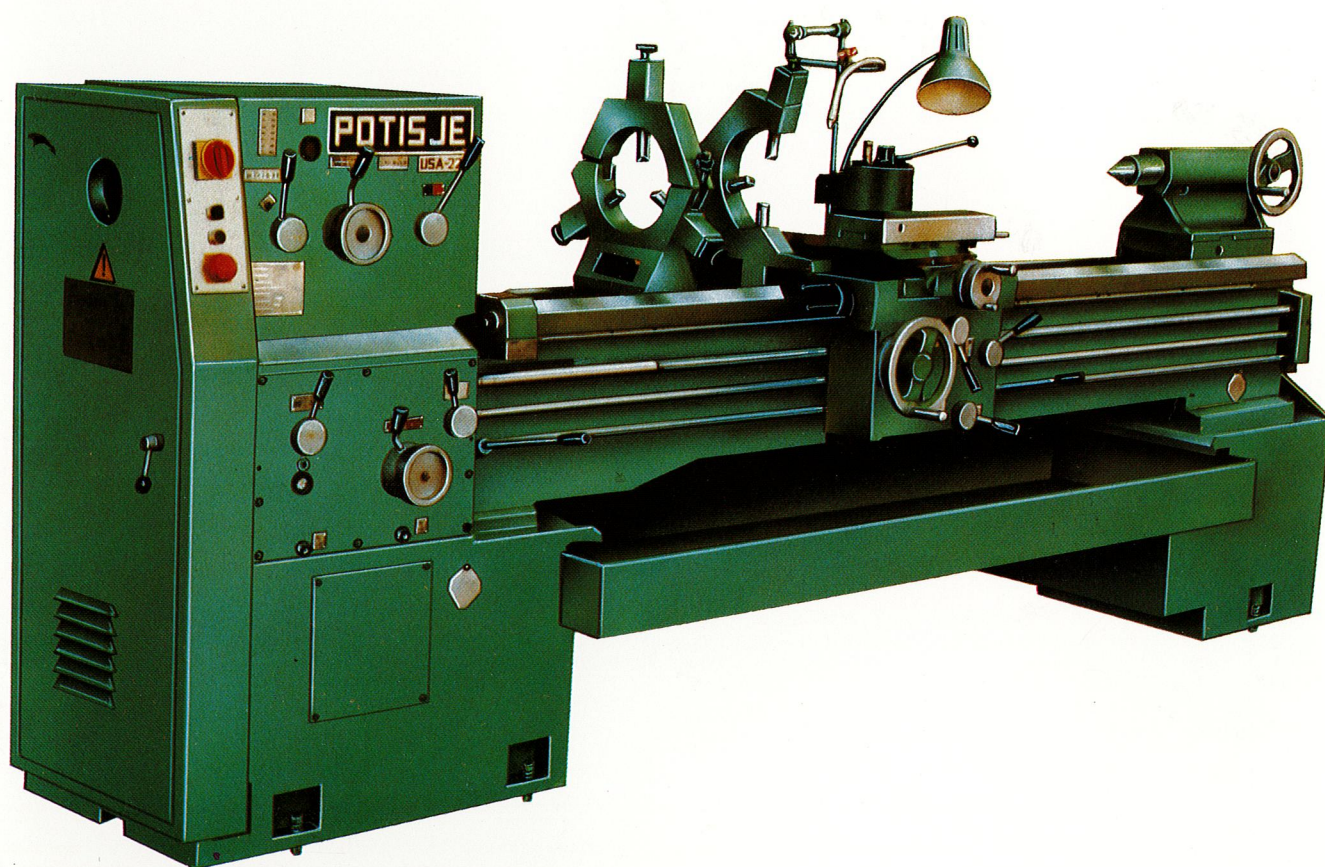




**FOUNDED
1921
YUGOSLAVIA**

POTISJE ADA



UNIVERSAL HIGH-PRODUCTIVE AND PRECISION LATHES

**USA-200
USA-225
USA-250**



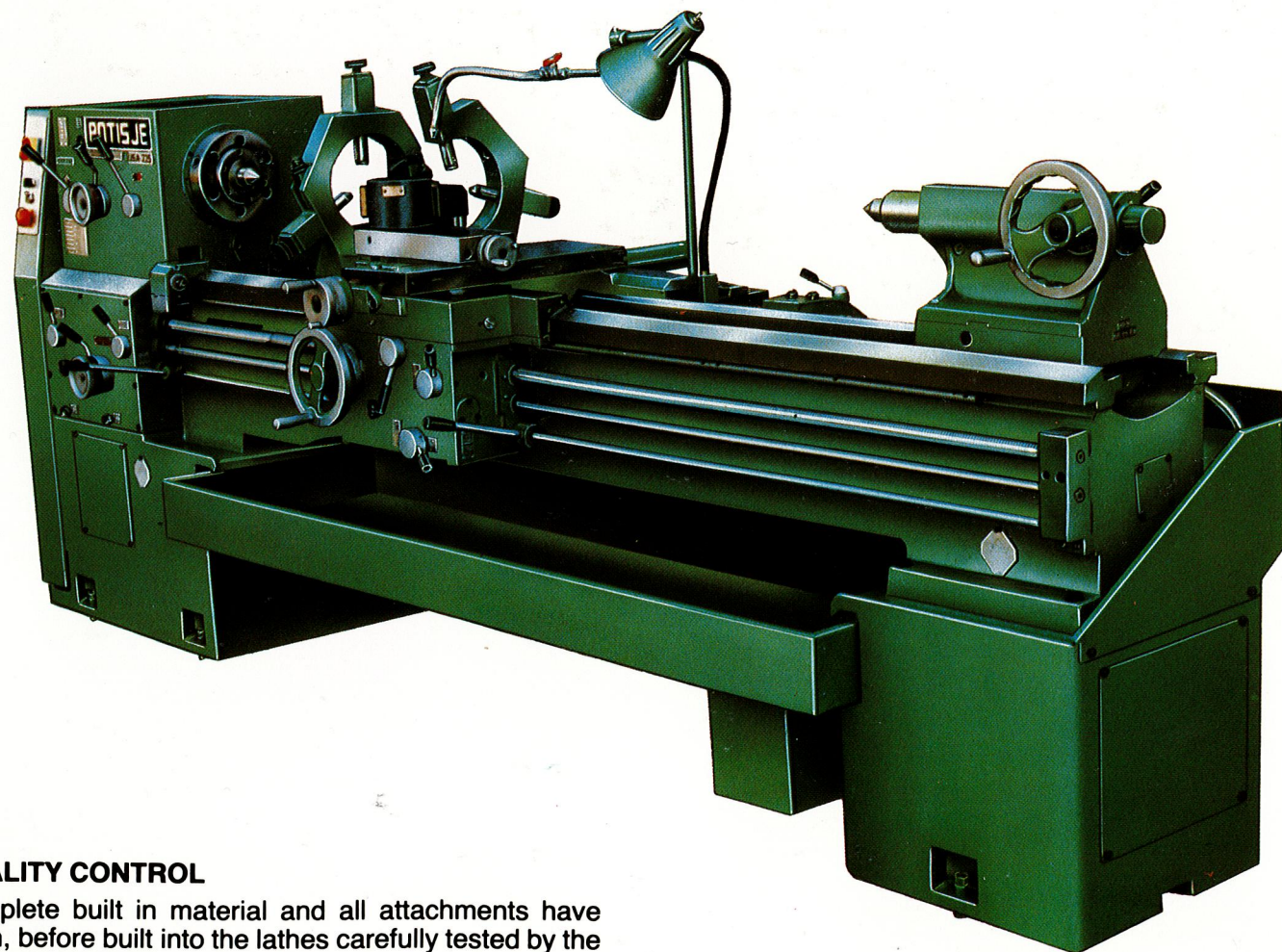
CHARACTERISTICS OF THE LATHES FAMILY

The family of the lathes includes a great number of members:

- per height of centers (205, 230 and 255 mm)
- per distance between centers 1000, 1500 and 2000 mm
- per execution with or without gap
- per execution in millimeter or inch system
- per execution with taper turning attachment or without it
- per execution as classical universal lathe or as a copying lathe

ALL MEMBERS OF THE FAMILY HAVE IN COMMON FOLLOWING ESSENTIAL CHARACTERISTICS:

- very stable bed, with hardened guideways
- quality ground guideways
- headstock with carburized, hardened and ground gears giving 12 different speed rotation
- large choice of metric, whitworth, module and diametral pitch threads without any change of gears out of mechanism of feed gear box
- abundant lubrication of all movable parts
- feed gear box completely closed, all gears carburized and hardened
- all controls are concentrated, and therefore the handling is easy and simple
- driving electro motor of 5,5 kW
- two ways disc clutch
- disc brake



QUALITY CONTROL

Complete built in material and all attachments have been, before built into the lathes carefully tested by the most modern instruments. Therefore the final control of the lathe provides the high preciseness and quality, which can satisfy even the most severe world standards.



BED

The guideways of the bed have been inductively hardened by the current of medium frequency. Standard version of the lathe is with or without gap, usually distance between centers is 1000 mm (40"), 1500 mm (60") or 2000 mm (80").

The construction of the bed, especially cross section, has been formed in such way, so even the strongest forces of cutting can not influence to the preciseness of the operation. All other elements, as well as the power of electro motor have been harmonized with the bed.

The material of the bed is gray iron with great percentage of united carbon what improves hardening of guideways.

Front carrying surface of the guideways is placed under the most convenient angle for acceptance of the forces of resistance for tools penetrating. The bed is fixed on the massive, founded legs, made of gray iron.

Movable chip collector with tank for coolant liquid, has been moving on guideways which are founded into the legs of the bed.

HEADSTOCK

The headstock with working spindle bore dia. 76 mm, (3"), $\varnothing$ 106 mm ($4 \frac{3}{16}$ ").

By means of carburized, hardened and ground gears, is possible to achieve twelve different revolution numbers of working spindle.

Working spindle revolution number range is 30–2000 and 22 – 1500 r.p.m.

Driving electro-motor power is 5,5 kW

Drive over disc clutch

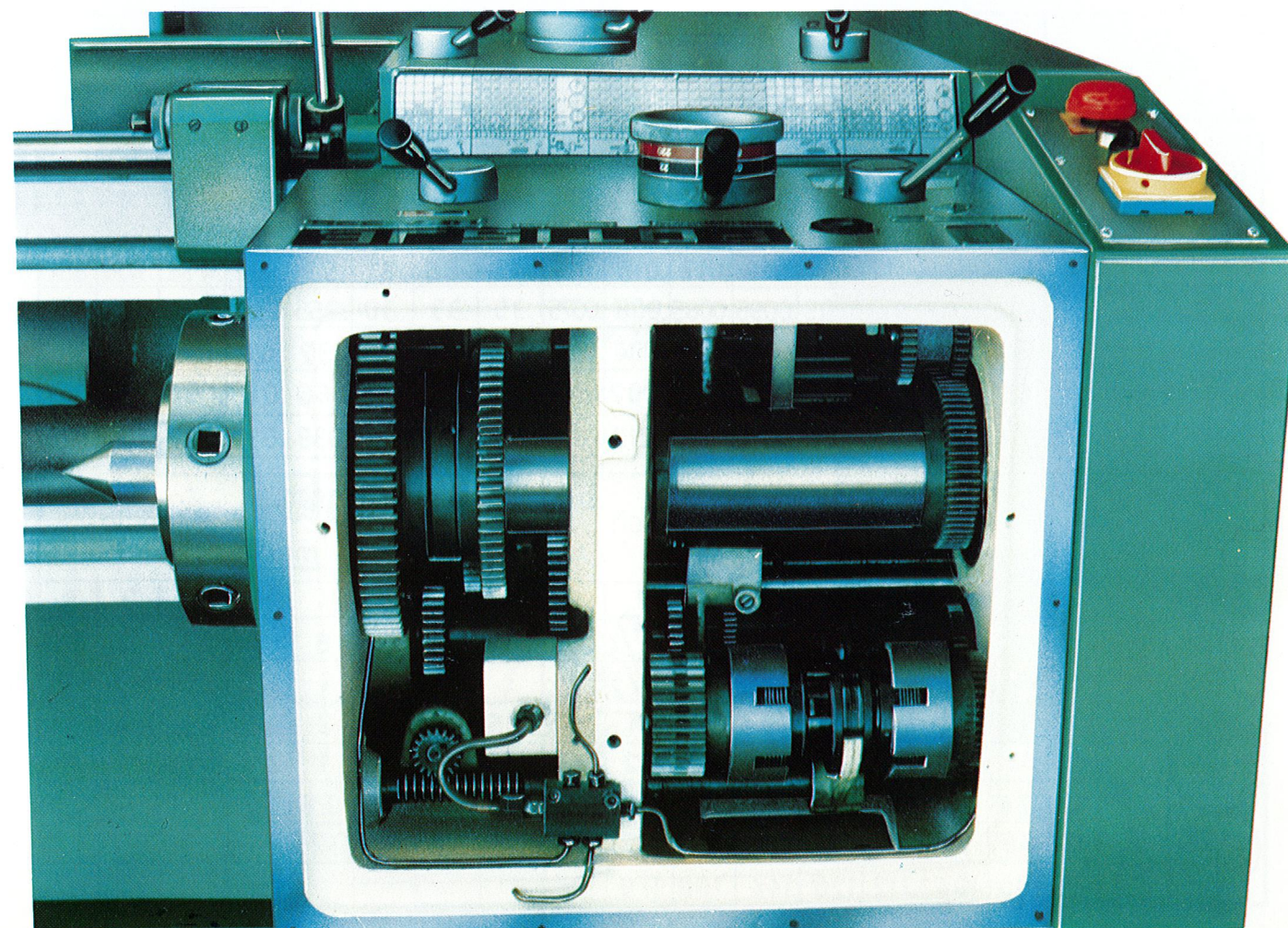
Braking of the working spindle by means of disc brake. Disc clutches and brakes of our own production, are activating with lever, always at the hand of the operator, providing the transmission of the entire power and fast stoppage of the working spindle.

Twelve different revolution numbers can be obtained by movement of one lever and two drums rotating around the same axis. All gears in the headstock are thermally treated and quality ground.

Working spindle is very massive and made from forgings thermally treated and very precisely ground. It is embedded in two precise taper roller bearings on the front and cylindrical roller bearings at the rear end.

Very high resistance, typical for cross section of the tubes of big dimensions, gives to the spindle stability, not only during normal operation, but also when the face plates without jaws dia. 600 mm have been used.

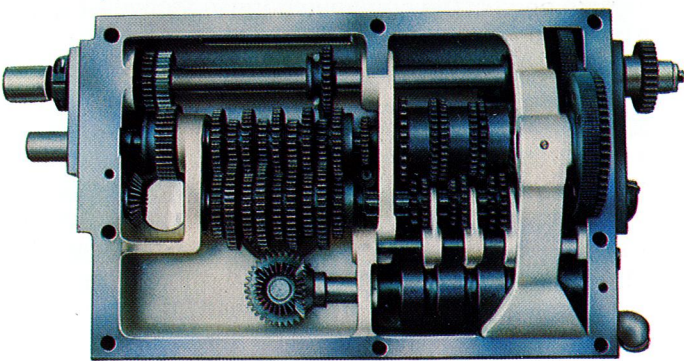
Headstock is lubricated by cogged pump, putted at the very accessible place. The lubrication has been controlled on the oil level indicator placed on the headstock.



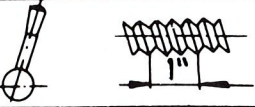
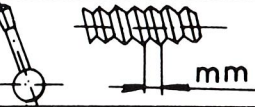


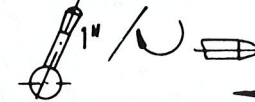
FEED GEAR BOX

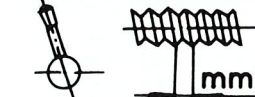
Feed gear box is of sturdy construction and without any change of gears gives entire line of metric and Whitworth threads. These threads have been shown on the parts of the chart printed on this page. Modifying only one gear, it is possible to obtain complete line of module and diametral pitch threads. The construction enables obtaining all threads by removing of typeface of gears without movable wedges and Norton line of gears. All commands of feed gears box are concentrated on three places, the changes can be accomplished by movement of two levers and two drums. The movability of all controls is very easy.



FEED GEAR BOX

		 Whitworth								 Metric							
		1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
	A	3/4	13/16	7/8	1	1 1/8	1 1/4	1 3/8	1 7/8	12	13	14	16	18	20	22	23
	B	1 1/2	1 5/8	1 3/4	2	2 1/4	2 1/2	2 3/4	2 7/8	6	6.5	7	8	9	10	11	11.5
	A	3	3 1/4	3 1/2	4	4 1/2	5	5 1/2	5 3/4	3	3.25	3.5	4	4.5	5	5.5	5.75
	B	6	6 1/2	7	8	9	10	11	11 1/2	1.5		1.75	2	2.25	2.5	2.75	
	C	12	13	14	16	18	20	22	23	0.75			1		1.25		
	D	24	26	28	32	36	40	44	46				0.5				
	E	48	52	56	64	72	80	88	92				0.25				

		 1"								 mm							
		1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
	A	.112	.104	.096	.084	.076	.068	.064	.060	2.84	2.64	2.44	2.12	1.93	1.72	1.62	1.52
	B	.056	.052	.048	.042	.038	.034	.032	.030	1.42	1.32	1.22	1.06	.965	.864	.812	.762
	A	.028	.026	.024	.021	.019	.017	.016	.015	.71	.66	.61	.53	.482	.432	.406	.381
	B	.014	.013	.012	.0105	.0095	.0085	.008	.0075	.35	.33	.30	.265	.241	.216	.203	.190
	C	.007	.0065	.006	.0052	.0047	.0042	.004	.0037	.175	.165	.15	.132	.120	.108	.101	.095
	D	.0035	.0032	.003	.0026	.0023	.0021	.002	.0018	.087	.082	.075	.066	.06	.054	.050	.047
	E	.0017	.0016	.0015	.0013	.0011	.001	.0010	.0009	.043	.041	.037	.033	.03	.027	.025	.0235

		 Diam. pitch								 Module							
		1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
	A	1 1/2	1 5/8	1 3/4	2	2 1/4	2 1/2	2 3/4	2 7/8	6	6.5	7	8	9	10	11	11.5
	B	3	3 1/4	3 1/2	4	4 1/2	5	5 1/2	5 3/4	3	3.25	3.5	4	4.5	5	5.5	5.75
	A	6	6 1/2	7	8	9	10	11	11 1/2	1.5			2	2.25	2.5	2.75	
	B	12	13	14	16	18	20	22	23	0.75			1		1.25		
	C	24	26	28	32	36	40	44	46				0.5				
	D	48	52	56	64	72	80	88	92				0.25				
	E	96	104	112	128	144	160	176	184								

ELECTRICAL EQUIPMENT

Electrical equipment is very simple but functional. It is placed beyond headstock on the rear side of the bed, on very accessible place and composed of the high quality elements from domestic and foreign production.

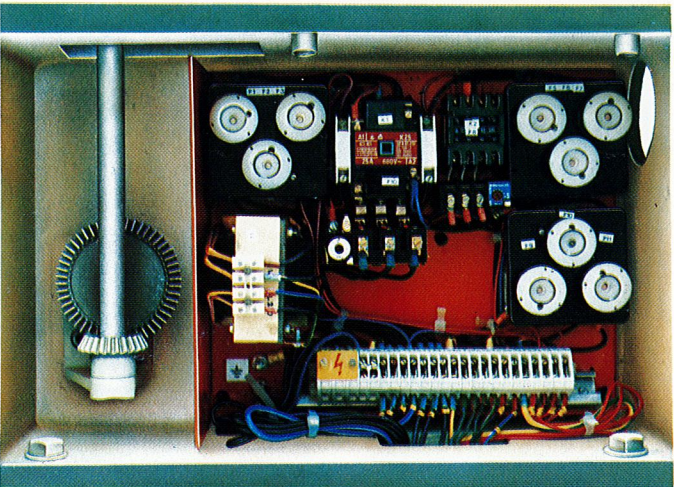
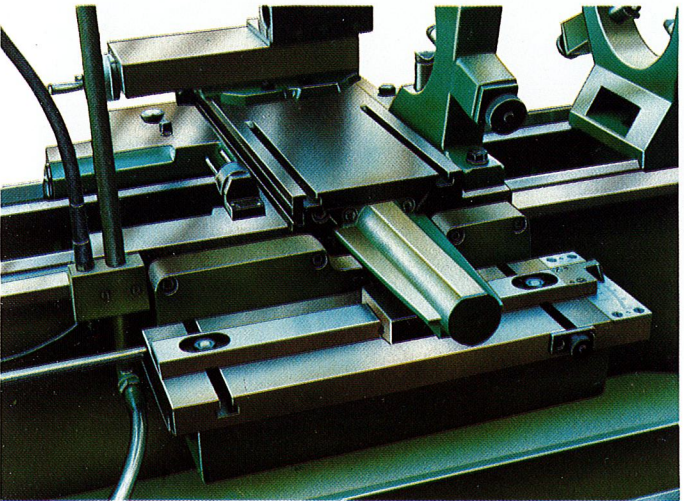


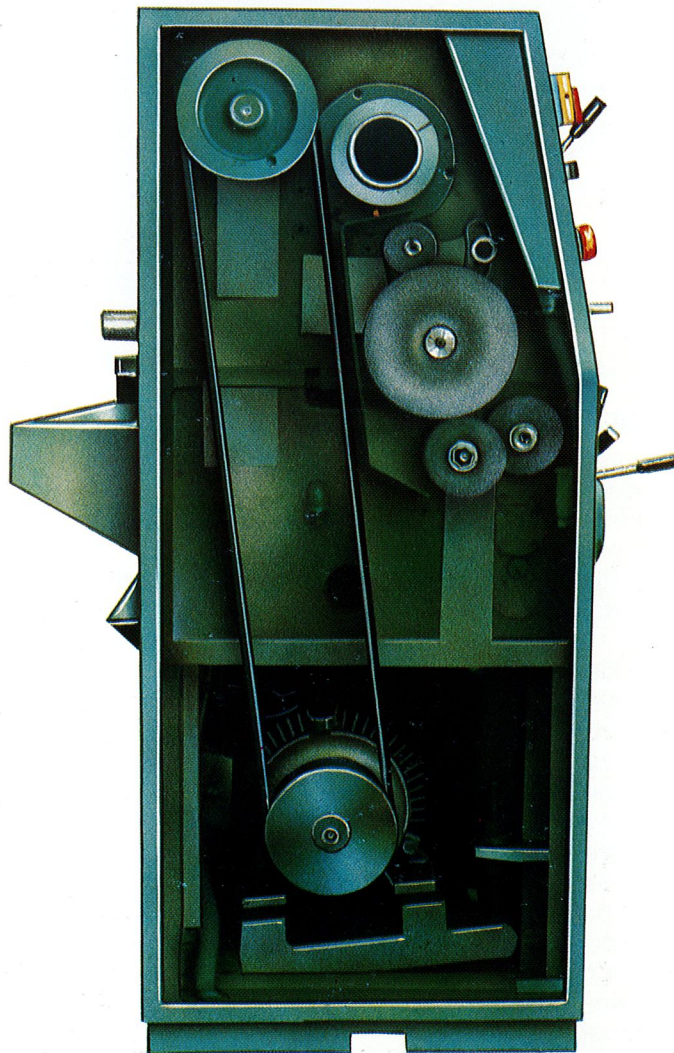
TABLE OF ELECTRICAL APPLIANCES

Taper turning attachment has been setted in extension of cross slide and serves for taper turning max. 15° and lenght 400 mm.

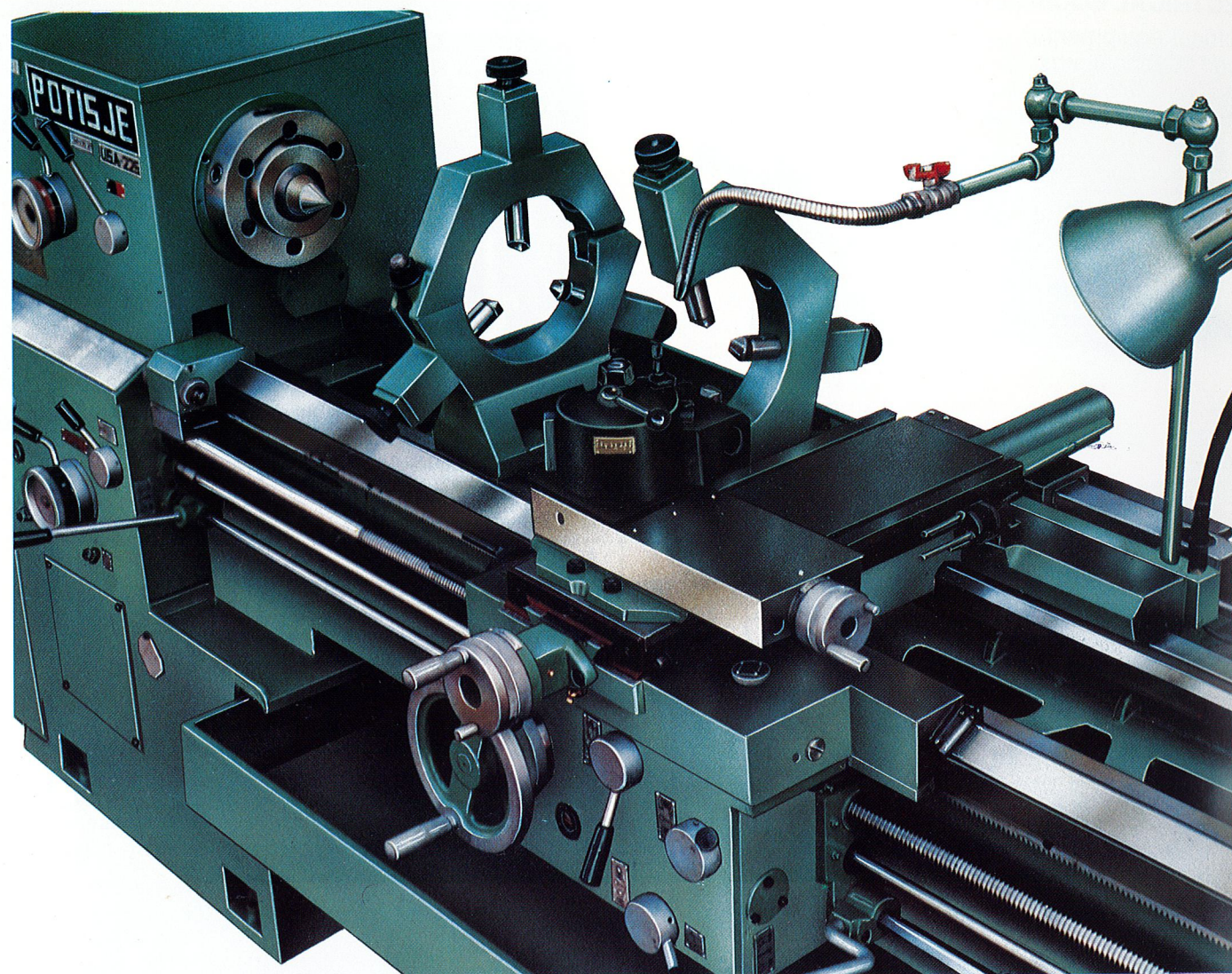


TAPER TURNING ATTACHMENT

Motor for main drive has been setted on swinging holder, placed in front leg of the machine. This solution enables tightening of Vee belt pulleys.



SWINGING HOLDER



TOOLS HOLDER

The travelling steady is setted on the saddle, from the headstock side.

The four-points stop for cross feed is placed on the right side of saddle from tailstock side.

This stop can be used for machining in both direction – to and from the center of working spindle.

Four – point stop for longitudinal feed is setted on the left side of saddle from the headstock side.

Cross slide on its rear side has T-slots, adaptable for positioning of copying attachment, rear tool holder and etc. Upon buyers request, it is possible to put single, or four-point or quick change tool holder.

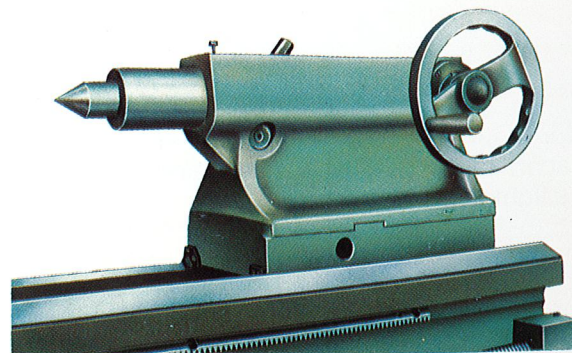
Apron is hermetically closed, apron and saddle has been lubricating by means of piston pump fitted into apron. The mechanism of falling worm, used in operation with multi-point stops, ensures safety work and at the same time increases the productivity of the lathe, as when tool holder comes accross to the stop, it can be returned at the start position quickly, after lifting of tools from the material.

TAILSTOCK

The tailstock is very stable. The tailstock sleeve, diameter 76 mm (3") is graduated in millimeter of inch – per buyers request.

Tailstock sleeve length is sufficient to enable travel of 200 mm. The tailstock sleeve has taper bore with Morse taper No. 5. It can be removed by hand wheel placed on the front or lateral side of the tailstock. The tailstock sleeve is fixed on the front end due stability. The bore in tailstock body is quality machined, and the leading at the boring of deep holes is high – quality.

The tailstock can be fixed with two screws or wedge, depending on the type of machining.



TECHNICAL DATA

		USA-200	USA-225	USA-250
Height of centers				
– over bed	mm	205	230	255
– in gap space	mm	310	320	355
TURNING DIAMETER				
– over bed	mm	410	460	510
– over cross slide	mm	220	270	320
– in face plate	mm	400	450	500
– in gap space	mm	620	650	700
– length of gap space in front of face plate	mm	255	255	255
– the biggest turning diameter in gap space	mm	620	650	700
WORKING SPINDLE				
– diameter of the bore	mm	Ø 76	Ø 76 or Ø 106	Ø 76 or Ø 126
– nose	mm	ASA L ₂ or Camlock	ASA L ₂ or Camlock	ASA L ₂ or Camlock
– internal front bearing diameter	mm	100	100	130
– number of speeds	No	12	12	12
– speed range – normal	r.p.m.	30–2000	22–1500	22–1500
BED AND TOOL HOLDER				
– bed width	mm		350	
– saddle length	mm		550	
– cross slide travel	mm		165	
– lead screw pitch	mm		6,35	
– tool section	mm		25 × 25	
FEEDS				
– number	No.		56	
– longitudinal	mm/rev.		0,023–2,84	
– cross	mm/rev.		1/2 longitudinal	
THREADS				
– Numbers	No.		56	
– metric	mm		0,25–23	
– withwort	at 1"		3/4–92	
– module	mm		0,25–11,5	
– diam. Pitch	1"		1 1/2–184	
TAILSTOCK				
– tailstock sleeve diameter	mm		Ø 76,2	
– tailstock sleeve Morse taper	No.		5	
– tailstock sleeve travel	mm		200	
STEADIES				
– travelling steady opening diameter	mm		10–180	
– fixed steady opening diameter	mm		10–180	
DRIVING ELECTROMOTOR				
– power	kW		5,5	
– revolution numbers	min ⁻¹		1430	

Distance between centres	Bed length in mm	Area needed in mm	Net weight cca Kg		
			USA-200	USA-225	USA-250
1000	2485	2485 × 1060	1500	1600	2200
1500	2986	2986 × 1060	1700	1800	2400
2000	3485	3485 × 1060	1900	2000	2600

Standard accessories and accessories per buyers desire given in the price list.
We reserve the rights of designing and execution modification.

