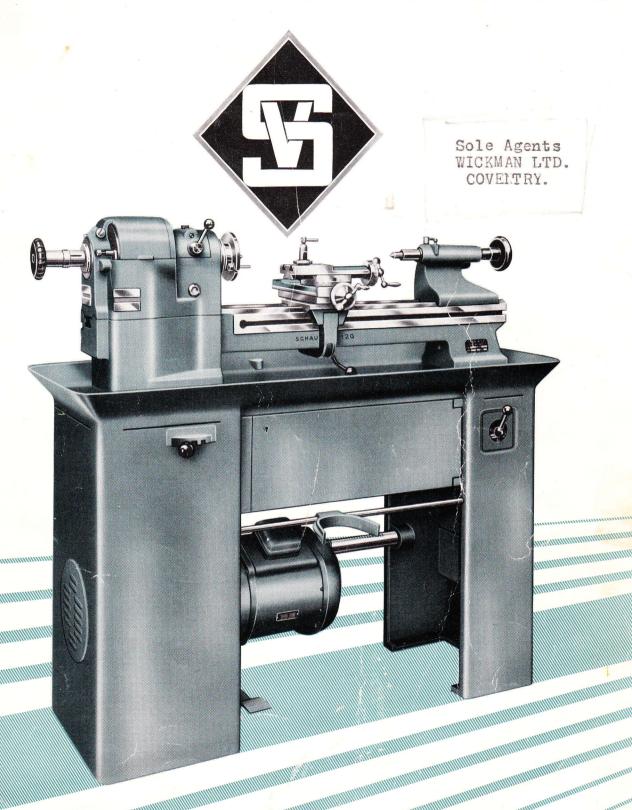
SV120 TOOLMAKERS'LATHES

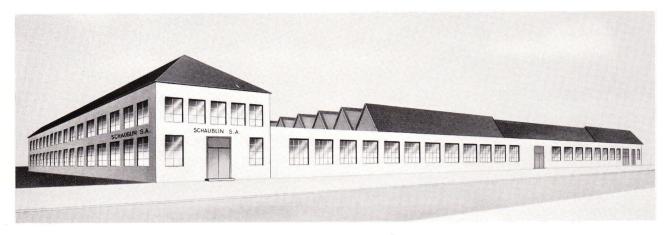


SCHAUBLIN LTD.
MACHINE-TOOL MANUFACTURERS
BÉVILARD SWITZERLAND



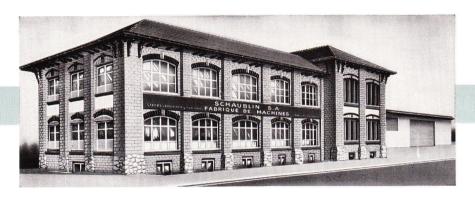


PRECISION - INTERCHANGEABILITY



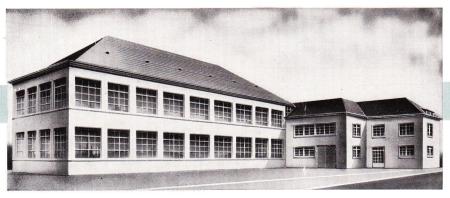
MAIN FACTORY AT BÉVILARD

Machines



MALLERAY BRANCH

Experimental Department and School



DELÉMONT BRANCH

Manufacture of Collets and Similar Accessories



GENERAL CONDITIONS OF SALE

PRICES

Unless otherwise stated, all prices quoted are strictly nett, exclusive of packing, ex Malleray-Bévilard station.

PACKING

Packing is charged extra, the cost being approximately 1 % to 2 % of the invoice amount. If packing is returned in good condition, carriage paid, to Malleray-Bévilard station, credit is given for $\frac{3}{4}$ of the amount charged.

TERMS OF PAYMENT

Only the terms of payment stipulated in our quotations are valid. Consignments can be held over for customers, if so desired, provided that sufficient storage space is available. In no case, however, will such warehousing justify any delay in payment. Interest on delayed payment will be calculated at the rate of 6 % per annum.

DELIVERY

Delivery dates are given as exactly as possible, and every effort is made to adhere to them. No responsibility can be accepted for circumstances outside our control, such as acts of God affecting manufacture or transport, delivery of unacceptable goods from suppliers, strikes or lock-outs at our works or at the works of our suppliers, or failure on the part of the customer to comply with the terms of payment agreed upon.

No penalty can be accepted for delay, and no orders can be cancelled on that account.

TRANSPORT

The greatest possible care is exercised in packing, and we decline all responsibility for damage incurred in transit. Shipment is effected at the consignee's risk, even when the cost of transport is borne by us. Therefore, we advise our customers, before they accept delivery, to check the goods with the forwarding agents for damage, breakage, loss, delay in transport, etc., so that they may, if necessary, claim compensation. Should this formality be omitted, the consignee will be entirely responsible for any loss sustained.

DOCUMENTS

It is forbidden, without our consent, to reproduce drawings, prints, floor-space diagrams, printed matter, or quotations, or to place these at the disposal of third parties or competitors.

We reserve the right to alter the design of our products at any time without notice. Neither the illustrations in this catalogue nor the weights indicated are binding.



SV MACHINES

The reputation now enjoyed by SV machines is the outcome of research, experience and sheer hard work extending over a period of thirty-five years.

In the building of these machines constant use is made of the most recent technical experience, with the result that SV machines are among the most up-to-date and efficient of their kind. Their distinguishing features include:

METICULOUS WORKMANSHIP
ALL COMPONENTS INTERCHANGEABLE
EXTREME ACCURACY OF WORK PERFORMED
HIGH OUTPUT
PLEASING APPEARANCE

TYPE SV 120 TOOLMAKER'S LATHE

In the majority of *toolmaker*'s lathes obtainable on the market the height of centres ranges from 65 to 105 mm. (2.3/5)'' to 4.15'' approx.).

Practical experience with these lathes has shown that in many cases a toolmaker's lathe with a wider working range and of more sturdy build would supply a keenly felt need. The introduction of new methods of working, largely due to the more widespread use of sintered carbide toolbits, lends enhanced force to this view.

The production of a Schaublin Type SV 120 lathe with 120 mm. (4.725'') height of centres, about fifteen years ago, was in advance of technical progress and development at the time.

This type of lathe, whose excellent qualities are universally recognized, now has the advantage of being backed by many years' experience.

Comprising a large number of working parts and attachments which are independent of each other and interchangeable, the SV 120 toolmaker's lathe is readily adaptable to any particular type of job, whether it be one-off or repetition production, repair or fitting work.

The bed, of ribbed construction throughout its length, rests on two amply dimensioned cabinet bases, an arrangement which affords the lathe as a whole the rigidity and stability it needs. The headstock and tailstock are held in alignment by prismatic ways.

Special attention was given to the construction of the headstock, as one of the principal elements of any lathe, in three respects, viz., design, choice of raw material, and workmanship. Two types of headstock are available for these toolmaker's lathes, namely with fourstep beltpulley, and with three-step pulley and reduction gear. Both models are arranged to accommodate Type W 25 collets whose chucking action is controlled by handwheel or lever. All standard attachments can be fitted to either of these headstocks.

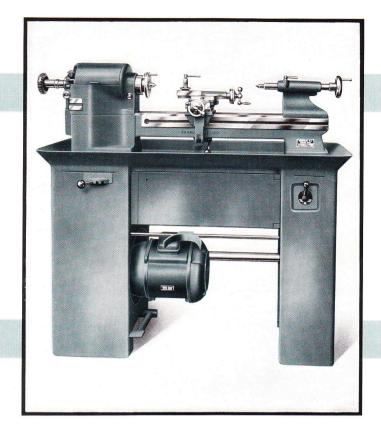
The *carriage* is provided with broad, completely enclosed ways. The swivelling top can be supplied complete with post type tool holder, clamp-type tool holder, or four-tool turret. The micrometer screws, *mounted on ball bearings*, are equipped with large-diameter index collars. The carriage is very firmly clamped to the bed by a strap with an eccentric lever.

The *underframe* is constituted by two cabinet-type legs connected by the swarf tray; a tilting drawer is provided between the two cabinet stands.

The three-phase change — pole motor provides two speeds. The drive is taken direct from the stepped pulley of the motor by a flat belt to the headstock, an arrangement which reduces transmission losses to a minimum.



SV 120 TOOLMAKERS' LATHE



Item No.	Standard specification
1	Bed with fixing bolts
13	Headstock, bore of spindle 25 mm, with driving plate and male centre
277	Tailstock with male centre
343	Carriage with toolpost and adjustable verniers
506	Hand rest
120 TS	Individual drive, comprising: Cast iron tray Pair of cast iron legs Swivel-drawer Swivelling motor bracket Belt shifter Pole-reversing switch Three-phase electric motor: 1.1/1.8 hp — 750/1500 rpm Knee device (optional)



SV 120 TOOLMAKERS' LATHE



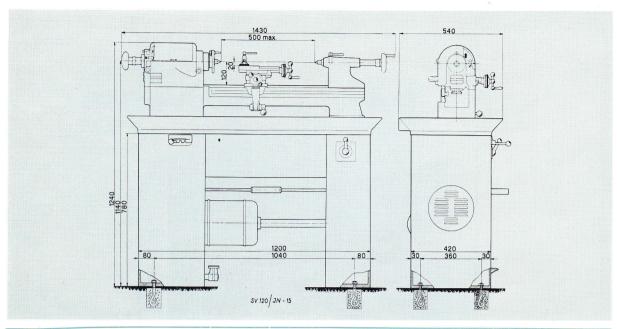
Same lathe as shown on page 4, but with headstock with reduction gear ratio 1:5 No. 13 A



Work samples



MAIN SPECIFICATION OF SV 120 TOOLMAKERS' LATHE



Item No.	Height of centres	mm mm	120 500
1	Bed		
-	Length	mm	1140
	Height	mm	180
	Headstock		
	Collet, type W, shank diameter	mm	25
	Hole in spindle	mm	25
2-1	Bore through collet	mm	18
	Diameter of steps of pulley	mm	42
13	Standard Headstock		
	Diameter of steps of pulley	mm	150–128
			106–84
	Standard speeds at headstock	rpm	285–455–570
			700–910–1070
13 A	Headstock with reduction gear		1400–2140
12 V	Diameter of steps of pulley	mm	150–125–100
	Diameter of steps of policy	311111	75–120–150
	Spindle speeds	rpm	185-240-360
	Spiritie speeds	I Pill	380–600–760
			920–1200–1850
277	Tailstock		
2//	Stroke of spindle	mm	80
2./2		311111	80
343	Carriage		105
	Stroke of slides \ \begin{array}{ll} long. \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	mm	105 100
4.	Dimensions of tools	mm	12 × 12
	Diameter admitted over carriage	mm	135
		1010	133
	Flanged pole reversing motor		
	Power	hp	1.1/1.8
	Speeds	rpm	750/1500
	net	kg	520
	Weight aross ordinary	kg	620
	overseas	kg	690
	(ordinary	cm	150 × 100 × 145
	,	in.	59'' × 40'' × 57''
	Packing / overseas	cm	150 × 95 × 148
-		in.	59'' × 37'' × 58''

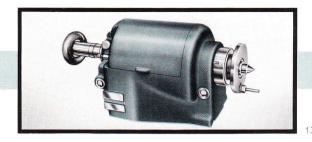
TEST CHART FOR TOOLMAKERS' LATHES

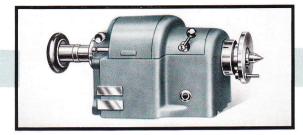
height of centres 65 to 120 mm

er No Machine No				ailstock No.
Test to be applied	Permissible Error	Actual Error	Fig.	
BED Bed straight in longitudinal direction (apron side) convex only	+ 0.02 0.01 1000 mm		1 a	
Ditto, opposite side	+ 0.01 0 1000 mm		1 b	ась
Bed level in transverse direction	0.05 1000 mm	н	1 c	
WORK SPINDLE Centre point for true running	0.01		3 a	
Spindle nose for true running	0.005		3 b	
Work spindle for axial slip	0.01		3 с	
Taper of work spindle for true running, measured at end of 300 mm mandrel	0.01		1 d	
Work spindle parallel with bed in vertical plane (rising towards free end of mandrel only)	+ 0.01 0 300 mm		1 d	9
Ditto, in horizontal plane (free end of mandrel inclined towards direction of tool pressure only)	0 — 0.01 300 mm		1 e	©-Ø e
CARRIAGE Upper slide parallel with work spindle in vertical plane	0.02 300 mm		4	
TAILSTOCK Sleeve parallel with bed in vertical plane (rising towards free end only)	+ 0.01 0 300 mm		5 α	a ≎ÿ¢Ø
Ditto, in horizontal plane (free end inclined towards direction of tool pressure only)	0 — 0.01 300 mm		5 b	b 0 0
Axis of centres parallel with bed in vertical plane, measured on mandrel between centres (rising towards tailstock only)	+ 0.01 0 300 mm		6	
ards tailstock only)		Inspec		

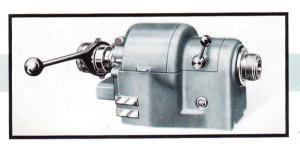


HEADSTOCKS FOR SPRING COLLETS TYPE W 25





13 A



191 A

Headstocks No. 13 and 13 A are supplied with catch plate and male centre.

Headstocks No. 191 and 191 A are supplied with protecting ring on spindle nose.

Item No. H	Spindle			Pulley		Caired an annualing	Weight
	Hole in spindle	For collet	Bore through collet	Width	Dia. of steps	Spindle mounting	kg
13	25	W 25	18	42	150-128 106-84	Cylindrical spindle, ball thrust bearing at front.	31
191	Headstock No. 13 with quick chucking attachment by lever						33
13 A	25	W 25	18	42	150-125 100	Double-row cylindrical roller- bearings at front, ball thrust- bearing at rear. Reduction gear: 1:5	35
191 A	Headstock No. 13 A with quick chucking attachment by lever					37	

RAISING BLOCKS



8 Set of 3 raising blocks
Height 30 mm — 13.6 kg
For height of centres 150 mm



ACCESSORIES FOR HEADSTOCKS

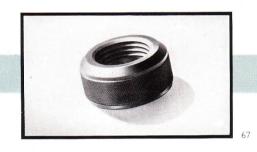
Item No.	Specification	Weight kg
14	Spring collet, type W 25, hole through collet 18 mm	0.16
44	Male centre for headstock	0.45
45	Hollow centre for head-stock	0.45
67	Protecting ring on spindle nose	0.2
62	Chucking carriers, hardened for dia. 6.5–8–10 12.5–16–20 and 25 mm, the set	0.6
682 A	Adjustable stop for operating spindle W 25 (Please see combined extractor and stop No. 636, page 11)	0.2















682 A

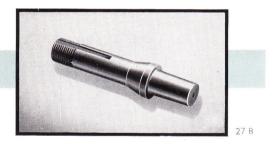


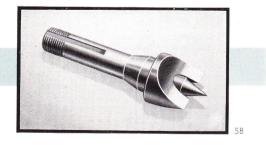














ACCESSORIES FOR HEADSTOCKS ARBORS

Item No.	Specification	Weight kg
43	Arbor with inner taper Morse 1, 2, 3 or 2°	0.25
52	Milling-cutter arbor shank dia. 16-22 mm length 15-20 mm	0.6
814	Arbor for grinding between dead centres	1.5
27 B	Arbor for «Jacobs» No. 3 A drill chuck (without chuck)	0.4
58	Three-point centre for wood-turning	0.45
51	Screw arbor for wood turning	0.45



ACCESSORIES FOR HEADSTOCKS **ARBORS**

79 Blank arbor W type 25 mm shank:

Blank head dia.: 33.7 - 40 - 50 mm

0.7 - 0.86 - 1.14 kg

Length of head: 50 mm

79 A Expanding arbor, slotted

with closing rod and nut

W type 25 mm shank Finished head

D 13-16 17-20 21-24 25-28 29-32 34-40 mm L 25 30 35 40 45 50 mm Average weight: 0.62 kg

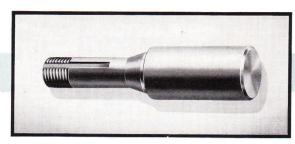
116 Stop nut for spindle nose

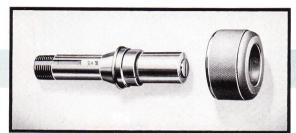
Weight: 0.4 kg.

160 Expanding arbor with double expansion-taper for powerful and concentric clamping over entire length.

> W type 25 mm shank Clamping dia.: 17-80 mm

Weight: 0.62 kg

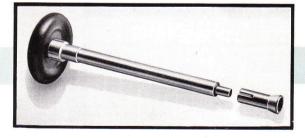








Weight: 1.2 kg



636 Combined extractor and stop,

Weight: 0.13 kg

Fits in draw-in bar of W type 25 mm collets.

Serves as extractor and stop for holding work to predetermined length in collet.

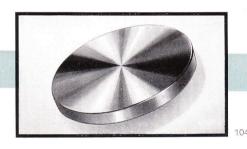
Length of justment: 30 mm

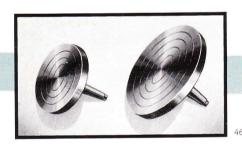


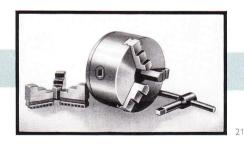


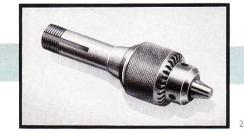












ACCESSORIES FOR HEADSTOCKS FACE PLATES AND CHUCKS

Item No.	Specification	Weight kg
85	Driver plate with finger dia. 118 mm (supplied with lathe)	0.85
625 V	Chuck adaptor plate for thread on spindle nose	1.25
104 A	Plain face plate, dia. 200 mm	2.8
46	Three face plates to which work is glued or soldered, dia. 25, 38, and 50 mm for use with arbor No. 43, 2° internal taper	0.3
21	Chuck dia. 127 mm with 2 sets of 3 jaws (with adaptor plate)	6
27	«Jacobs » No. 3 A drill chuck, capacity 13 mm (with arbor)	1



ACCESSORIES FOR HEADSTOCKS FACE PLATES AND CHUCKS

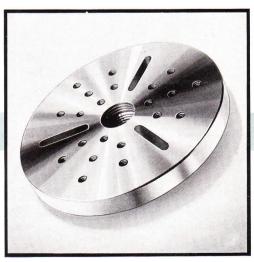
Item No.	Specification	Weight kg
86	Face Plate with 8 slots (4 ordinary slots and 4 T-slots). Dia. 240 mm, for 2, 3 or 4 clamping dogs	5.6
23 A	Chuck dia. 190 mm $(7 \frac{1}{2})$ with 4 independent and reversible jaws (with adaptor plate)	15
87	Face plate dia. 180 mm with 27 tapped holes size M 8 and 3 slots 12 mm wide, 50 mm long	4.6
96	Dog for clamping work away from face plate (fits in slots)	0.2
97	Dog for clamping work directly on face plate (fits in tapped holes)	0.07
98	Dog, 22 mm wide with base (dog fits in tapped holes, base in slots)	0.2















Step collets

Blank W 25 mm shank dia.

		T	1	1	
Size	1	П	Ш	IV	V
No. of collet	69	70	72	77	80
External dia.	56 mm	88 mm	120 mm	150 mm	182 mm
Weight	0.7 kg	1.3 kg	2.2 kg	3.8 kg	5.4 kg
No. of closer	68	71	73	78	81
Weight	0.9 kg	1.3 kg	2 kg	3 kg	4.4 kg



Chart of turned steps of finished step collets

Art. No.	Size	Weight	Number of steps	Dia. of steps	Remarks
69 A	1	0.6	6	21-50	The intervals between the steps is 5
70 A	Ш	0.9	6	51-80	mm. Five collets of
72 A	Ш	1.4	6	81-110	each size (with 6 steps each) are ne-
77 A	IV	2.3	6	111-140	cessary in order to obtain all diameters
80 A	V	3.8	6	141-170	at 1 mm intervals from 21-170 mm.



Used for holding rings and similar parts, these chucks are supplied blank (74) or with turned steps (74 A). With a set of 5 chucks with 14 steps each, steps at one mm intervals from 21-90 mm diameter can be obtained.

External step chucks, W 25 mm shank dia.

No. 74 – 1.35 kg

No. 74 A – 1.05 kg



74 A 748 S 635

Expanding ring for spindle nose

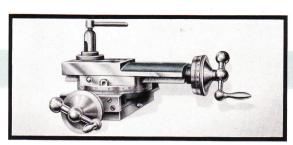
1 expanding ring No. 748/S 0.4 kg 1 nut with closing rod No. 635

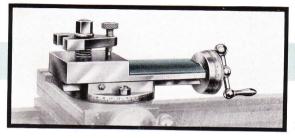
are sufficient for 1 set of external step collets.



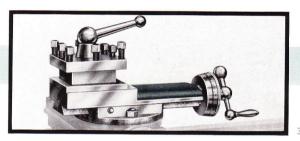
CARRIAGES

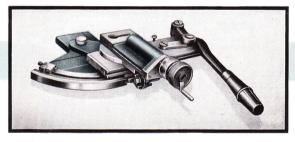
Item No.	Specification	Weight kg
343	CARRIAGE WITH MICROMETER screws 1. Fully protected slides 2. Protected micrometer screws 3. Adjustable vernierreading to 1/100 mm 4. Cross slide swivels 90° either side	12.8
	Long. stroke 105 mm Trans. stroke 100 mm 5. Pressure lubrication of slides and nuts 6. Height of centre above carriage 20 mm	
384A	TOOLCLAMP including upper part of carriage	6.2
395	SQUARE TURRET FOR 4 TOOLS including upper part of carriage	7.5
664	GRINDING SLIDE REST Longitudinal stroke 75 mm It is preferable to use the grinding carriage No. 664 rather than the grinding attachment No. 441 fitted on the carriage No. 343	12.7
712	SPHERICAL-TURNING ATTACHMENT WITH WORM- SCREW CONTROL Max. radius Stroke of top slide 35 mm 25 mm	9.4
712A	SPHERICAL-GRINDING TOP SLIDE for mounting on attachment No. 712	2.6
801	FORM-TURNING ATTACH- MENT	6.1
661	SLOTTING CARRIAGE WITH SADDLE INCLINABLE 30° with lever control Longitudinal stroke 100 mm Transverse stroke 60 mm	23.3

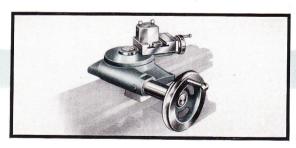


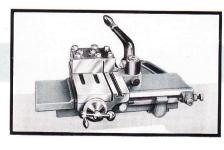


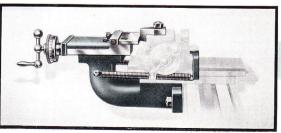
384 V











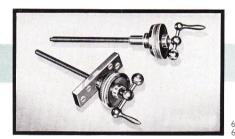








79



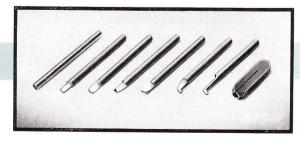
12 G



683 A



688



394 A 397

ACCESSORIES FOR CARRIAGES

Item No.	Specification	Weight kg
378	Toolpost for tool 12 × 12 mm	0.25
379	Toolpost with 2 screws for tool 12 × 12 mm	0.55
612 G	Screw for cross slide of carriages No. 343 - 708 - 673 - 669 (mounted on ball bearings, with adjustable vernier)	1.1
612 H	Screw for longitudinal slide of carriages No. 343 - 708 - 673 - 669 (mounted on ball bearings with adjustable vernier)	0.85
683	Support for second tool, with tool post	1.9
683 A	Adjustable support for second tool, with toolpost	2.2
687	Stop with 4 screws for cross slide	1.7
688	Stop with 4 screws for longitudinal slide	0.4
393	Set of 7 tools, hard-metal tipped, in wooden box	1.6
394 A	Set of round tools, dia. 8 mm.	0.4
397	Toolholder for round tools, dia. 8 mm, No. 394 A	0.05



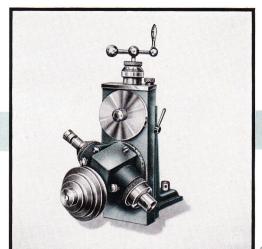


ATTACHMENTS FOR CARRIAGES

The milling headstock, the angle-plates No. 411 or 412, or the vice No. 409/27 can be fitted to the lower or upper part of the vertical colums of the milling attachment No. 409. A lid covers the face not used.

ltem No.	Specification	Weight kg
409	Milling attachment with inclinable headstock. Vertical stroke 80 mm Spindle for W 12 mm collet Inclination from 0 to 360° Stepped pulley for belt dia. 6 mm Diameter of steps: 40, 56 and 72 mm	6
435	Milling-cutter arbor W 12 mm shank Diameter 5, 8, 10, 13 and 16 mm	0.08
411	Angle plate with tapped holes	1
412	Swivelling angle plate with T-slots	1
409/27	Vice on milling attachment No. 409 width of jaws 50 mm Max. opening 35 mm	2





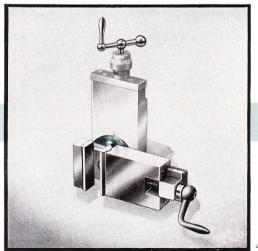




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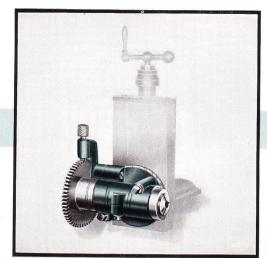


411

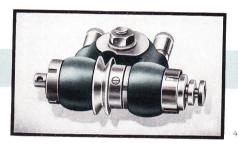


409/27

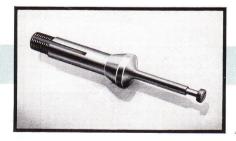














ATTACHMENTS FOR CARRIAGES

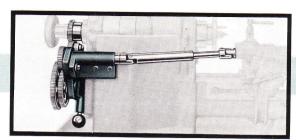
Item No.	Specification	Weight kg
437 110 108	Work headstock for milling attachment No. 409 Spindle for collet W 20 mm 60-tooth dividing plate Pawl for dividing plate	2
441	Grinding attachment Spindle for B 8 mm collet Stepped pulley for belt dia. 6 mm Diameter of pulley 39 mm Max. speed 12 000 rpm	1.3
414	Circular base For mounting No. 441 grinding attachment on vertical column of No. 409 milling attachment	0.4
457	Wheel arbor for external grinding Shank B 8 mm Diameter 10 mm	0.05
455	Wheel arbor for internal grinding	0.025
444	Internal grinding attachment Spindle with 2° taper Belt pulley for round belt dia 6 mm Dia. of pulley . 30 mm Stroke 65 mm	1.4



ATTACHMENT FOR SCREWCUTTING BY CARRIAGE AND UNIVERSAL JOINT

Of simple design, this attachment allows the cutting of threads up to 2.5 mm pitch, on a length of 100 mm by means of the carriage No. 343. It is supplied with a set of 15 gears for cutting the following threads: 0.5-0.6-0.7-0.75-0.8-0.9 1-1.25-1.5-1.75-2-2.5 mm

Gears for other threads, metric or English, can usually be supplied from stock.

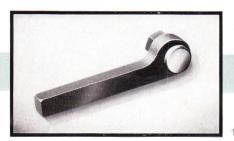


111



114

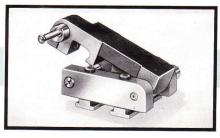
Item No.	Specification	Weight kg
	2	
111	Screwcutting attachment with universal joint with speed reversing attachment	10.1
114	Circular screwcutting- tool, 55° or 60° dia. 36 mm	0.02
115	Toolholder for circular screwcutting-tool No. 114	0.1
711	Adjustable toolholder for internal screwcutting, diameter of tool 10 mm .	0.7
851	Hinged toolholder for internal thread Diameter of internal- threading tool . 10 mm	2.2



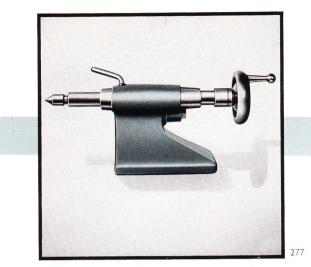
115



711







TAILSTOCK AND ACCESSORIES

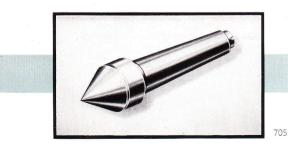
277 **Standard tailstock**with male centre Stroke of spindle 80 mm
Weight 11.1 kg



Accessories for tailstock No. 277



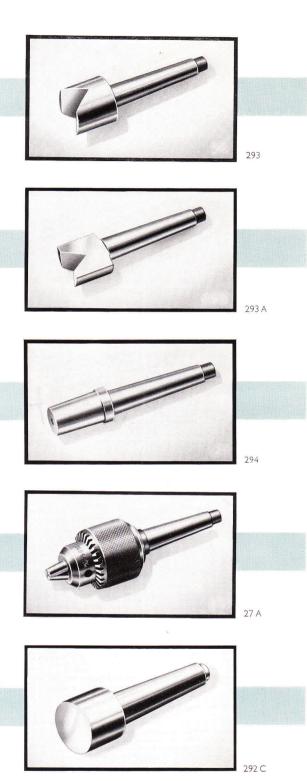
Item No.	Morse taper No. 2	Weight kg
290	Male centre	0.15
290 A	Half male centre	0.14
270 A	Truit mule centre	0.14
291	Hollow centre	0.15
291 A	Half hollow centre	0.14
705	Revolving centre.	0.75
705 A	Revolving hollow centre	0.75

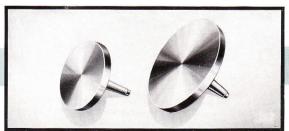




ACCESSORIES FOR TAILSTOCK

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Item No.	Morse taper No. 2	Weight kg
293	Drilling V	0.29
293 A	Half drilling V	0.25
294	Mandrel for drill chuck (without chuck)	0.15
27 A	<pre>« Jacobs » type drill chuck, cap. 13 mm, with arbor .</pre>	0.9
292	Drill plate, diameter 55 mm	0.3
292 A	Drill plate, diameter 80 mm	0.5
292 B	Drill plate, diameter 100 mm	0.7
292 C	Drill arbor	0.2



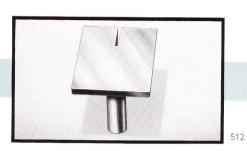


292/A/B



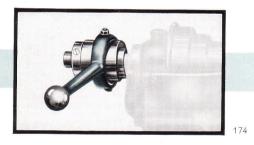


VARIOUS ACCESSORIES



Item No.	Specification	Weight kg
506	Hand rest	2.1
512	Rectangular sawing table 78 $ imes$ 55 mm	0.8
512 A	Triangular sawing table with V	0.3
174	Quick chucking attachment operated by lever for headstocks No. 13 and 13 A	4.65
524	Steady rest with 3 guided bronze jaws Max. cap. 80 mm	4





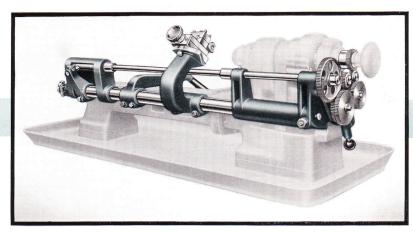




ATTACHMENT FOR SCREWCUTTING BY LEADER AND GEARING

No. 221 35 kg To be used simultaneously with carriage No. 343

Internal screwcutting with toolholder for internal thread No. 222

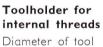


271



114 Circular screwcutting-tool 55 or 60° diameter 36 mm 0.02 kg

222



Min. bore 8 mm

Max. length of threading: 100 mm up to 5 mm pitch.

Each attachment comprises:

1 pinion on headstock spindle 1 set of 4 gears: 45, 45, 90, 90 4 gears and leaders: 2, 3, 3.5, 5 permit the cutting of threads with metric pitches of 0.5, 0.75, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 5

Complete set of leaders:

2, 2.4, 2.7, 3, 3.5, 5 mm

The gears and leaders required for other pitches can be supplied from stock or at short notice.

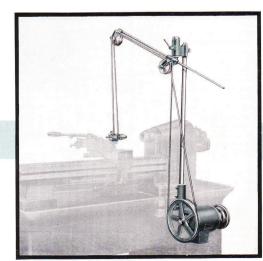


676 Grinding and milling attachment

comprising:
Adjustable and reversible
belt tightener
independent 1/3 HP motor (1500 rpm)
two driving pulleys
switch

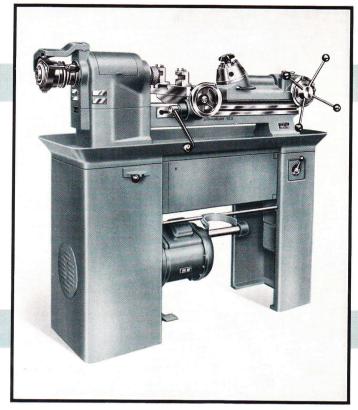
Weight

25 kg with motor 12 kg without motor



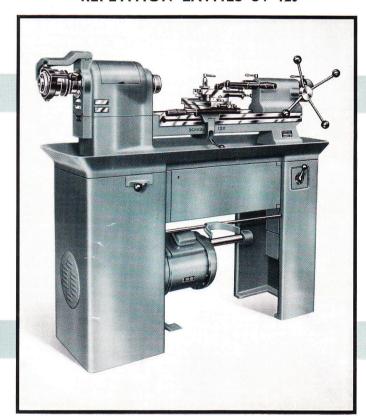


TURRET LATHES SV 120



915

REPETITION LATHES SV 120



916

PLEASE ASK FOR SPECIAL CATALOGUES