



Established 1930

Distributors of new & used workshop Equipment

S707

SL-100

SLOTTING MACHINE

INSTRUCTION & PARTS MANUAL

14-11-11

WARNING:FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY

As with all machinery there are certain hazards involved with operation and use of the machine. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result.

This machine was designed for certain applications only. We strongly recommends that this machine. NOT be modified and/or used for any application other than for which it was designed. If you have any questions relative to its application DO NOT use the machine until you have had detail instruction from your dealer.

SAFETY RULES FOR ALL TOOLS

1.FOR YOUR OWN SAFETY ,READ THIS INSTRUCTION MANUAL BEFORE OPERATING THE TOOL. Learn the tool's application and limitations as well as the specific hazards peculiar to it.

2.KEEP GUARDS IN PLACE and in working order .

3.GROUND ALL TOOLS .If tool is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate a two-prong plug receptacle, the adapter lug must be attached to a know ground. Never remove the third prong.

4.REMOVE ADJUSTING AND WRENCHES.

Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it"on."

5.KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.

6.DON'T USE IN DANGEROUS ENVIRONMENT .Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well- lighted.

7.KEEP CHILDRE AND VISITORS AWAY. All children and visitors should be keep a safe distance from work area.

8.MAKE WORKSHOP CHILDROOF -with padlocks, master switches, or by removing starter keys.

9.Don't force tool. It will do the job better and be safer at the rate for which it was designed.

10.USE RIGHT TOOL .Don't force tool or attachment to do a job for which it was not designed.

11.WEAR PROPER APPAREL. No loose clothing,gloves,neckties,rings, bracelets, or other jewelry to get caught in moving parts. Nonslip foot wear is recommended. Wear protective hair covering to contain long hair.

12.ALWAYS WEAR EYE PROTECTION. Refer to ANSIZ87.1 Standard for appropriate recommendations. Also use face or dust mask if cutting operation is dusty.

13.SECURE WORK. Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate tool.

14.DON'T OVERREACH. Keep proper footing and balance at all times.

15.MAINTAIN TOOLS IN TOP CONDITION.

Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

16.DISCONNECT TOOLS before servicing and when changing accessories such as blades, bits, cutters, ect.

17.USE RECOMMENDED ACCESSORIES.

Consult the owner's manual for recommended accessories .The use of improper accessories may cause hazards.

18.AVOID ACCIDENTAL STARTING. Make sure switch is in "OFF" position before plugging in power cord.

19.NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted

20.CHECK DAMAGED PARTS. Before further use of the tool, a guard or other part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function check for alignment of moving parts binding of moving parts, breakage of parts mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

21.DIRECTION OF FEED. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

22.NEVER LEAVE TOOL RUNNING UNATTENDED.TURN POWER OFF.

Don't leave tool until it comes to a complete stop.

23.DRUGS, ALCOHOL ,MEDICATION. Do not operate tool while under the influence of drug, alcohol or any medication.

24.MAKE SURE TOOL IS DISCONNECTED FROM POWER SUPPLY while motor is being mounted, connected or reconnected.

ADDITIONAL SAFETY RULES FOR MILL DRILL

1. BE SURE cutting tool is securely locked in the chuck.
2. BE SURE chuck key is removed from the chuck before turning on power.
3. Adjust the table or depth stop to avoid into the table.
4. SHUT OFF the power ,remove the cutting tool, and clean the table before leaving the machine.
5. CAUTION. When practical, use clamps or a vise to secure workpiece to keep the workpiece from moving.
6. WARNING: FOR Your Own Safety Don't wear gloves when operating

SPECIFICATIONS:

Max. Slotting length	100 MM
No. of slotting per minute	60-350(6 ranges) r.p.m
Working table size	800mm X 240mm
Working table cross travel	190mm or 230mm
Working table longitudinal travel	560mm
T-Slot size	14mm
Head tilt left right	90°
Motor power	250W
Overall dimension	1090mm X 1120mm X 785mm
Packing dimension	850mm X 760mm X 1150mm
NW/GW Weight	280/330Kg

WARNING: CHANGE SPEED ONLY WHEN MACHINE IS STOPPED

CLEANING

- (1) Your machine has been coated with a heavy grease to protect it in shipping. This coating should be completely removed before operating the machine. Commercial degreaser, kerosene or similar solvent may be used to remove the grease from the machine, but avoid getting solvent on belts or other rubber parts.
- (2) After cleaning, coat all bright work with a light lubrication. Lubricate all points with medium consistency machine oil.

USE OF MAIN MACHINE PARTS

- (1) To raise and lower the head by head handle.
- (2) To adjust the quick or slow feeding by feed handle.
- (3) To adjust the table left and right travel by table handle wheel.
- (4) To adjust the table fore and after travel by table handle wheel.

OPERATION FOR SLOTTING HEAD

1. Usage

The slotting head can be widely used for slotting, pressing etc. With attachment and special tooling, it can make teeth inner hex spline.

2. Its construction and operation instruction.

- A. The slotting head is driven by 0.25kw motor. The reciprocal movement is realized by a pair of 6 step triangle pulley. Worm and worm gear through an eccentric block.
- B. Dial on the slotting head is used to adjust travel of slotting tube..
- C. 60–350 shown on nameplate stands for its stroke per minute.
- D. Machining range is 0–100mm. Machine oil is required before operation. Suitable travel for cast iron, brass, aluminium, plastic is 120 strokes per minute, 60 or 70 strokes per minute for steel.

PRECAUTION FOR OPERATION

Check all parts for proper condition before operation; if normal safety precautions are noticed carefully, this machine can provide you withstanding of accurate service.

(1) Before Operation

- (a) Fill the lubricant
- (b) In order to keep the accurate precision, the table must be free from dust and oil deposits.
- (c) Check to see that the tools are correctly set and the workpiece is set

firmly.

- (d) Be sure the speed is not set too fast.
- (e) Be sure everything is ready before use

(2) After Operation

- (a) Turn off the electric switch.
- (b) Turn down the tools.
- (c) Clean the machine and coat it with lubricant.
- (d) Cover the machine with cloth to keep out the dust.

(3) Adjustment of head

- (a) To raise and lower the head, loosen the leaf screw located on the right side of the raise and lower base. When the desired height is reached tighten leaf screw to avoid vibration.
- (b) Unscrew 3 nuts while the workpiece needs to be bevel turn to the degrees you wish on the scale ,then screw the 3.

ADJUSTING TABLE SLACK AND COMPENSATE FOR WEAR(see fig.3)

- (1) Your machine is equipped with jib strip adjustment to compensate for wear and excess slack on cross and longitudinal travel.
- (2) Clockwise rotation the job strip bolt with a big screw for excess slack otherwise a little counter clockwise if too tight.
- (3) Adjust the jib strip bolt until feel a slight drag when shifting the table.

CLAMPING TABLE BASE AND MACHINE BASE(See Fig.3)

- (1) When milling longitudinal feed. It is advisable to lock the cross feed table travel to insure the accuracy of your work. To do this, tighten the

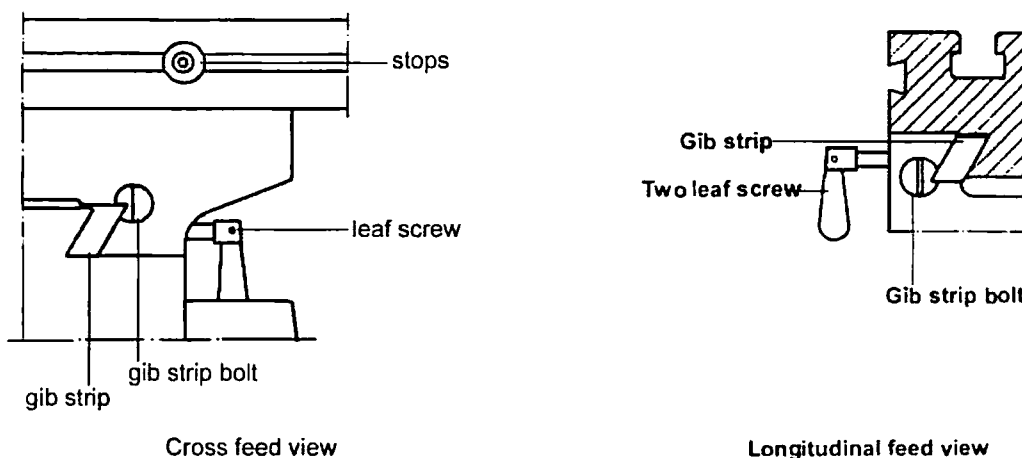


Fig.3

small leaf screw located on the right side of the table base.

- (2) To tighten the longitudinal feed travel of the table for cross feed milling, tighten the two small leaf screw on the front of the table base.
- (3) Adjustable travel stops are provided on the front of the table for control of cross travel and the desired milling length.

SPECIFICATION OF T-SLOT

The size of T-Solt on table as Fig.4.

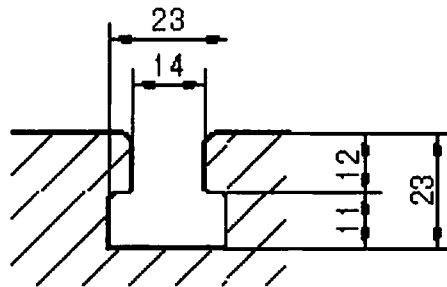


Fig.4

OPERATION MANUAL FOR SLOTTING HEAD

1. USAGE

The slotting head can be widely used for slotting internal and external keyways, spline cutting and machining odd shapes etc.

2. ITS CONSTRUCTION AND OPERATION INSTRUCTION.

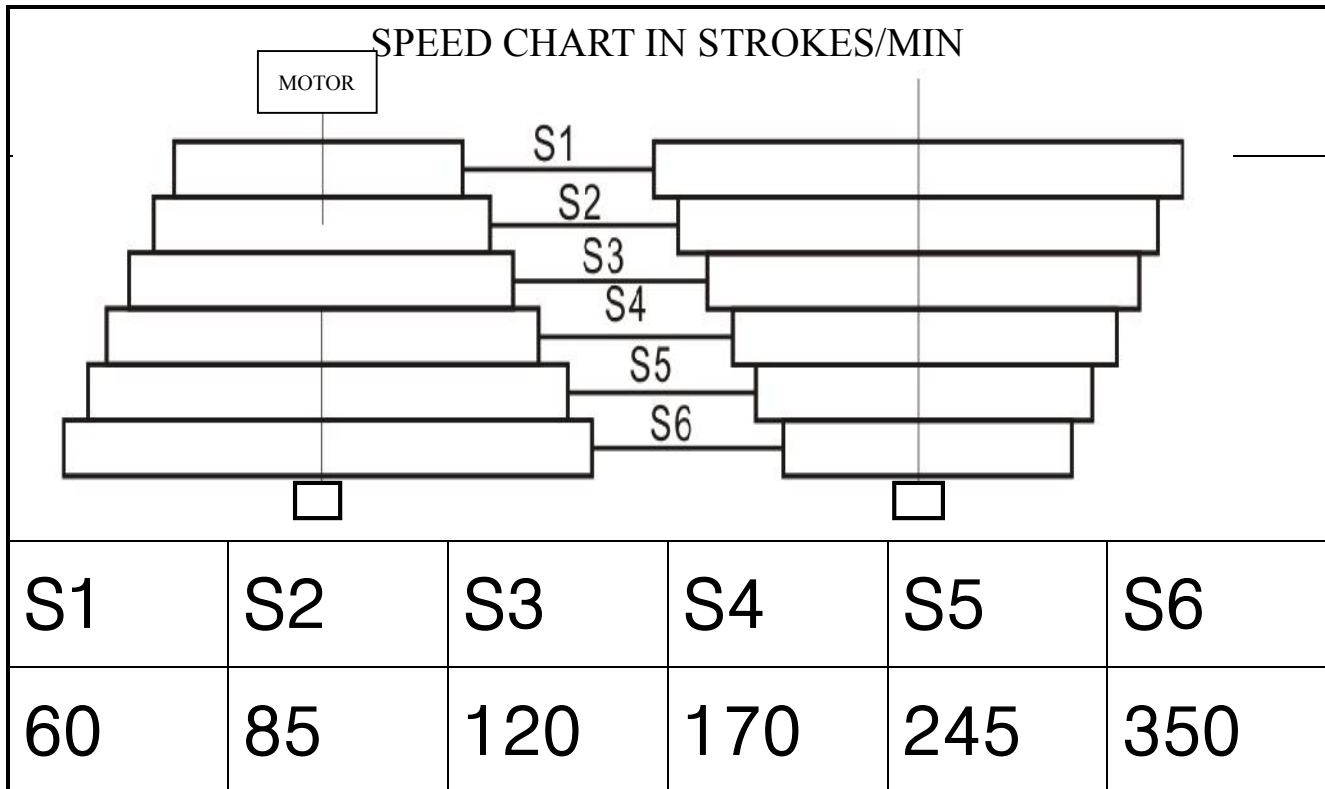
- A. The slotting head is driven by 0.25kw motor. The reciprocal movement is realized by a pair of 6 step triangle pulley, worm and worm gear through an eccentric block.
- B. Dial on the slotting head is used to adjust Stroke of slotting tube.
- C. 60-350 shown on nameplate stands for its stroke per minute.
- D. Machining range is 0-100mm slotting head stroke.
- E. Machine oil is required before operation.
- F. Suitable travel for cast iron, brass, aluminum, plastic is 120 strokes per minute
60 or 70 strokes per minute for steel.

3. SPEED CHANGE

Speed change is achieved by Vee belts

ensure machine is isolated from the power before opening Vee belt lid and changing speed range

Close lid and screw Shut.



4. STROKE ADJUSTMENT

Ensure machine is unplugged from Power Supply

Open Vee belt cover and turn pulleys manually to get ram stroke in Center of the stroke.

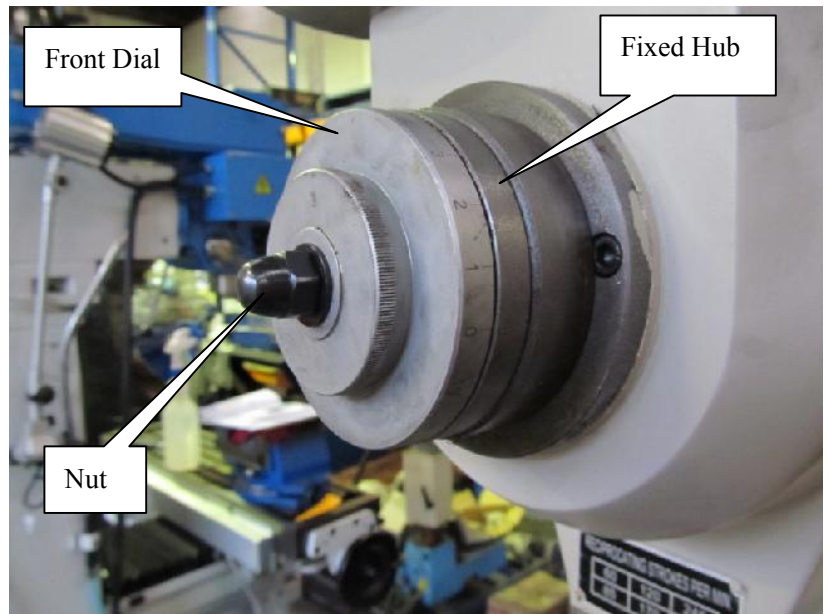
Undo the nut on front dial as needed, The Dial will come with it and disengage the fixed pin in the dial from the hub.

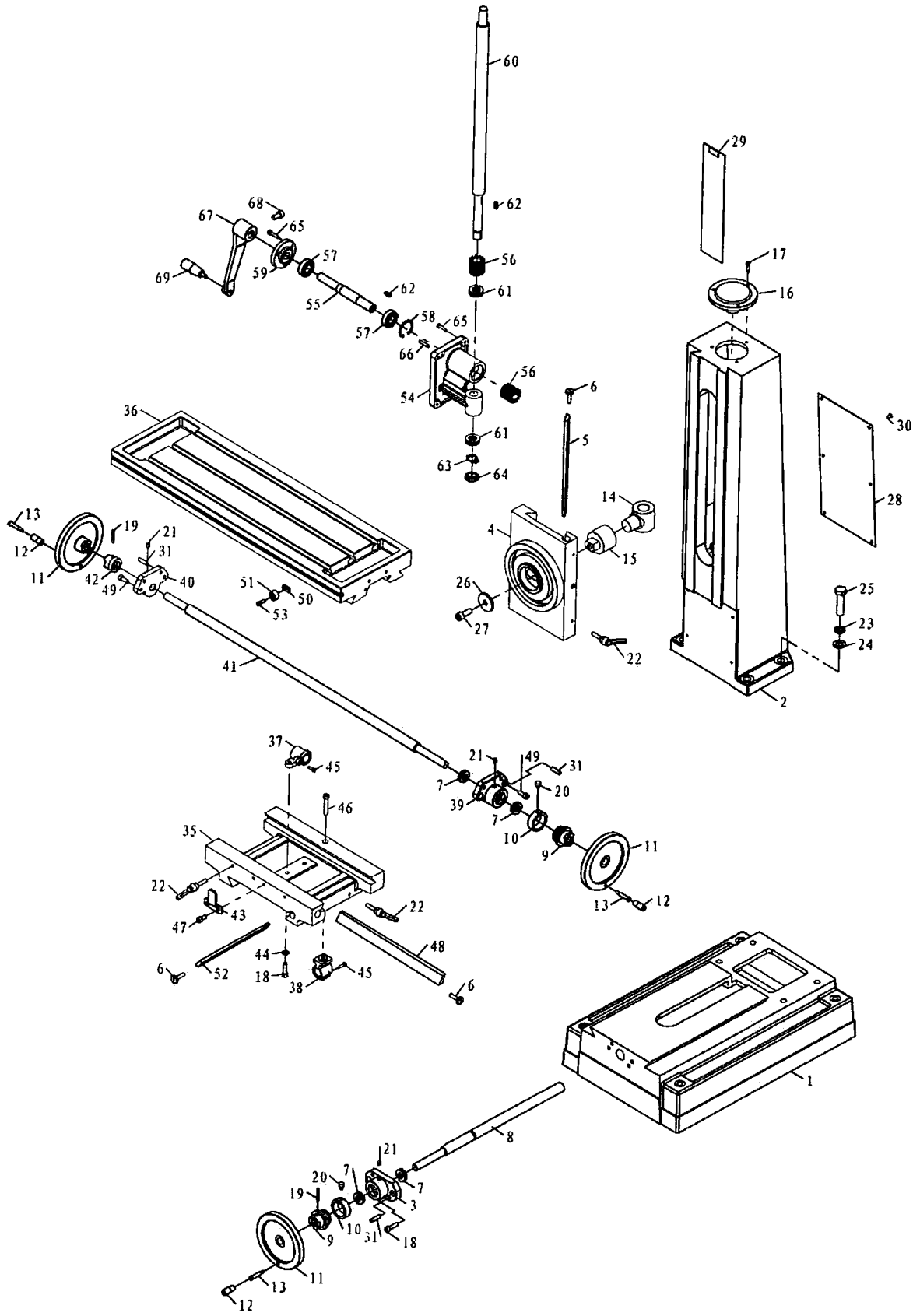
Spin the front dial to set the stroke length as needed and retighten the front nut, re-pining the front dial to the hub.

Lock firmly.

Carefully rotate front pulley manually to ensure the tooling will not crash into the table or workpiece etc .

Shut Vee belt cover and screw shut.

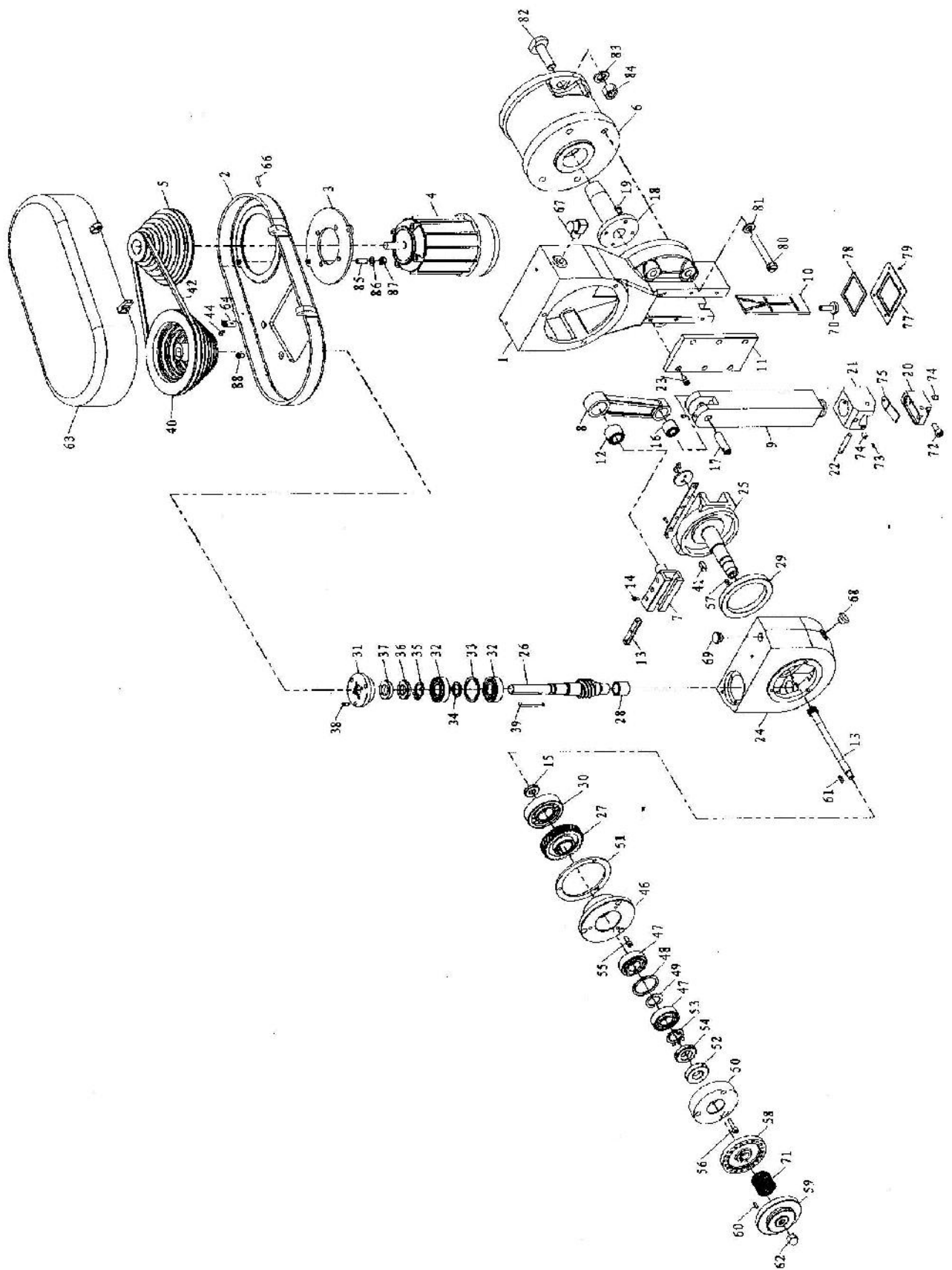




BASE

Base parts

No.	Qty.	Code	Name	No.	Qty.	Code	Name
1	1	10010	base	40	1	10019	left flange
2	1	10013	column	41	1	10103	table screw
3	1	10021	square flange	42	1	10105	dial clutch
4	1	10016	raise and lower base	43	1		fixed block
5	1	10025	gib strip	44	2		washer
6	3	10106	screw	45	2		screw
7	4		bearing	46	1		screw
8	1	10104	table screw	47	2		screw
9	2	10102	dial clutch	48	1	10022	gib strip
10	2	10111	graduated plate	49	4		screw
11	3	10301	wheel	50	2	10108	movable fixed block
12	3	20305-1B	turn handle	51	2	10109	fixed block support
13	3	20305-2B	screw	52	1	10023	gib strip
14	1	10024	nut	53	2		screw M6X16
15	1	10117	nut bracket	54	1	10017	raise and lower base
16	1	10014	cover	55	1	10113	shaft
17	3		screw	56	2	20109	gear
18	4		screw	57	2		bearing
19	3		pin	58	1		retaining ring
20	2	10107	screw	59	1	10015	flange
21	3	8	oil cup	60	1	10116	raise and lower screw
22	6		fixed handle	61	2		bearing
23	4		washer	62	2		key6X20
24	4		washer	63	1		lock washer
25	4		bolt	64	1		lock nut
26	1	10120	washer	65	7		screw M6X25
27	1		screw	66	2		pin 6X30
28	1	10119	plate	67	1	10018	head handle
29	1	10124	protecting cover	68	1		screw M10X20
30	6		screw	69	1		turn handle
31	6		pin				
35	1	10011	center base				
36	1	10012	table				
37	1	10202	table nut				
38	1	10203	table base nut				
39	1	10020	right flange				



SLOTING HEAD

SLOTING HEAD PARTS

No.	Qty.	Code	Name	No.	Qty.	Code	Name
1	1	X6325-3011	slotting head	30	1	80-105-12	seal ring
2	1	X6325-3304	housing cover	31	1	2306	bearing
3	1	X6325-3022	adjust plate	32	1	X6325-3013	Cover
4	1		motor	33	2	7204AC	bearing
5	1		motor pulley	34	1	X6325-3116	washer
6	1		slotting connector	35	1	X6325-3117	washer
7	1	X6325-3014	eccentric block	36	1	20	lock washer
8	1	X6325-3019	joint rod	37	1	M20X1.5	nut
9	1	X6325-3020	rod	38	1	20-35-07	seal ring
10	1	X6325-3018	gi strip	39	3	M4X10	screw
11	1	X6325-3112	Cover	40	1	6X56	key
12	1	322022	bearing	41	1		pulley
13	1		rack	42	1	8X20	key
14	3	M4X8	screw	43	1		V-belt
15	1		gear	44	2	X6325-3201	plate
16	1	X6325-3106	washer	45	18	4X10	screw
17	1	261420	bearing	46	1	X6325-3114	retaining ring
18	1	X6325-3109	pin shaft	47	1	X6325-3015	cover
19	1	X6325-3123	bracket	48	2	7205AC	bearing
20	4	M6X10	screw	49	1	X6325-3102	washer
21	1	X6325-3113	Cutter saddle	50	1	X6325-3103	washer
22	1	X6325-3111	Cutter saddle body	51	1	X6325-3016	bearing cover
23	1	X6325-3124	Pin	52	1	X6325-3101	washer
24	6	M6X12	Screw	53	1		seal ring
25	1	X6325-3012	Transmission box	54	1	25	lock washer
26	1	X6325-3023	drive shaft	55	1	M25X1.5	nut
27	1	X6325-3118	worm shaft	56	3	M6X16	screw
28	1	X6325-3301	worm gear	57	3	M6X25	screw
29	1	X6325-3108	sleeve	58	1	5X10	key

No.	Qty.	Code	Name	No.	Qty.	Code	Name
59	1	X6325-3017	travel adjuster	88	2	M8	Nut
60	1	X6325-3120	travel dial	89	4	M6X12	Screw
61	1	5X12	pin	90	3	M8*100	Screw
62	1	4X16	key	91	1		Ventilation plate
63	1	M10	nut	92	2	M4*8	Screw
64	1	X6325-3303	housing cover				
65	1	X6325-3205	plate				
66	1		handle knob				
67	2	4X20	pin				
68	1		oil cup				
69	1	16	oil pointer				
70	1		choke plug				
71	1		adjust screw				
72	1	X6325-3104	Spring				
73	1	M8X20	Screw				
74	1	M4X8	Screw				
75	3	M8X12	Screw				
76	1	X6325-3202	Plate				
77	1	M5X10	Screw				
78	1	X6325-3204	Cover				
79	1		rubber washer				
80	4	M3X6	Screw				
81	4	M12X80	Bolt				
82	4	12	Washer				
83	3	M16X50	T-bolt				
84	3	16	Washer				
85	3	M16	Nut				
86	2	X6325-3326	Bolt				
87	2	8	Washer				


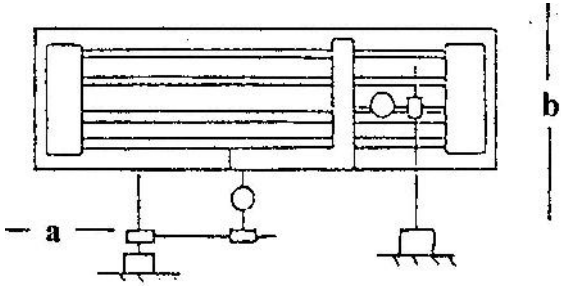
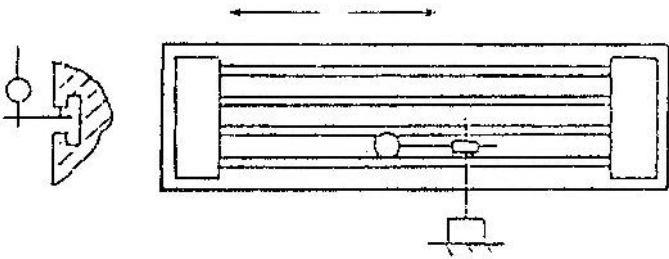
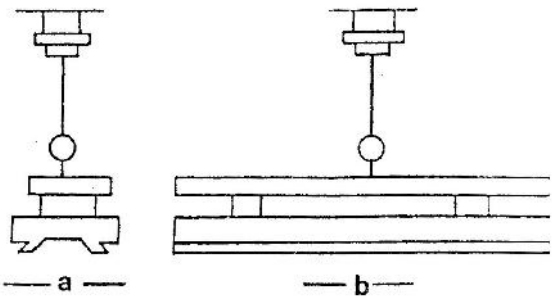
Certificate of Inspection
for
VERTICAL SLOTTER

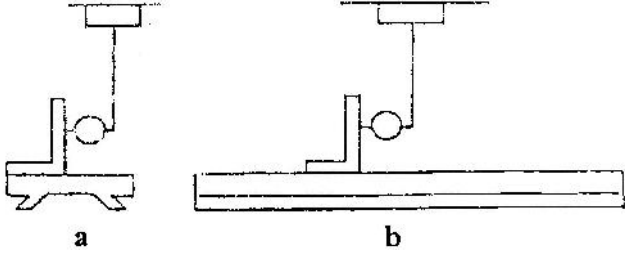
Dispatch No.:

The machine has been qualified and may be permitted to dispatch

Head of inspection depart_____ Date_____

Director_____ Date_____

ACCURACY TEST FOR VERTICAL SLOTTER		Total 2 P1	
No.	Checking items	Tolerance	Error tested
G1	<p>The flatness of worktable surface</p> 	<p>0.025 for any tested length 200 Max 0.08</p>	
G2	<p>Squareness of worktable longitudinal movement to cross movement</p> 	<p>0.04/300</p>	
G3	<p>Parallelism of worktable longitudinal movement to the base T-slot</p> 	<p>0.05</p>	
G4	<p>Parallelism of worktable movement to worktable surface</p> 	<p>a 0.02 for any 100 testing length b 0.03 for any 300 testing Max 0.06</p>	

ACCURACY TEST FOR VERTICAL SLOTTER		Total 2	
		P2	
No.	Checking items	Tolerance	Error tested
G7	Squareness of slotting head vertical movement to worktable surface 	a 0.05/100 b 0.05/100	

WARNING

General Machinery Safety Instructions

Machinery House
requires you to read this entire Manual before using this machine.

- 1. Read the entire Manual before starting machinery.** Machinery may cause serious injury if not correctly used.
- 2. Always use correct hearing protection when operating machinery.** Machinery noise may cause permanent hearing damage.
- 3. Machinery must never be used when tired, or under the influence of drugs or alcohol.** When running machinery you must be alert at all times.
- 4. Wear correct Clothing.** At all times remove all loose clothing, necklaces, rings, jewelry, etc. Long hair must be contained in a hair net. Non-slip protective footwear must be worn.
- 5. Always wear correct respirators around fumes or dust when operating machinery.** Machinery fumes & dust can cause serious respiratory illness. Dust extractors must be used where applicable.
- 6. Always wear correct safety glasses.** When machining you must use the correct eye protection to prevent injuring your eyes.
- 7. Keep work clean and make sure you have good lighting.** Cluttered and dark shadows may cause accidents.
- 8. Personnel must be properly trained or well supervised when operating machinery.** Make sure you have clear and safe understanding of the machine you are operating.
- 9. Keep children and visitors away.** Make sure children and visitors are at a safe distance for you work area.
- 10. Keep your workshop childproof.** Use padlocks, Turn off master power switches and remove start switch keys.
- 11. Never leave machine unattended.** Turn power off and wait till machine has come to a complete stop before leaving the machine unattended.
- 12. Make a safe working environment.** Do not use machine in a damp, wet area, or where flammable or noxious fumes may exist.
- 13. Disconnect main power before service machine.** Make sure power switch is in the off position before re-connecting.
- 14. Use correct amperage extension cords.** Undersized extension cords overheat and lose power. Replace extension cords if they become damaged.
- 15. Keep machine well maintained.** Keep blades sharp and clean for best and safest performance. Follow instructions when lubricating and changing accessories.
- 16. Keep machine well guarded.** Make sure guards on machine are in place and are all working correctly.
- 17. Do not overreach.** Keep proper footing and balance at all times.
- 18. Secure workpiece.** Use clamps or a vice to hold the workpiece where practical. Keeping the workpiece secure will free up your hand to operate the machine and will protect hand from injury.
- 19. Check machine over before operating.** Check machine for damaged parts, loose bolts, Keys and wrenches left on machine and any other conditions that may effect the machines operation. Repair and replace damaged parts.
- 20. Use recommended accessories.** Refer to instruction manual or ask correct service officer when using accessories. The use of improper accessories may cause the risk of injury.
- 21. Do not force machinery.** Work at the speed and capacity at which the machine or accessory was designed.
- 22. Use correct lifting practice.** Always use the correct lifting methods when using machinery. Incorrect lifting methods can cause serious injury.
- 23. Lock mobile bases.** Make sure any mobile bases are locked before using machine.
- 24. Allergic reactions.** Certain metal shavings and cutting fluids may cause an allergic reaction in people and animals, especially when cutting as the fumes can be inhaled. Make sure you know what type of metal and cutting fluid you will be exposed to and how to avoid contamination.
- 25. Call for help.** If at any time you experience difficulties, stop the machine and call you nearest branch service department for help.

WARNING

Slotting Machine Machine Safety Instructions

Machinery House
requires you to read this entire Manual before using this machine.

- 1. Maintenance.** Make sure the Slotting Machine is turned off and disconnect from the main power supply and make sure all moving parts have come to a complete stop before any inspection, adjustment or maintenance is carried out.
- 2. Slotting Machine Condition.** Slotting Machine must be maintained for a proper working condition. Never operate a Slotting Machine that has low oil levels, damaged or worn parts. Scheduled routine maintenance should be performed on a scheduled basis.
- 3. Tool Condition.** Never operate a Slotting Machine with a damaged or badly worn tooling. Replace if required.
- 4. Hand Hazard.** Keep hands and fingers clear from moving parts. Serious injury can occur if hand or finger tips come between slotter.
- 5. Glasses.** Always wear approved safety glasses when using this machine.
- 6. Authorized and trained personnel.** The machine must be operated by authorized and trained personnel.
- 7. Avoiding Entanglement.** Remove loose clothing, belts, or jewelry items. Never wear gloves while machine is in operation. Tie up long hair and use the correct hair nets to avoid any entanglement with the shearing blades or moving parts.
- 8. Power outage.** In the event of a power failure during use of the machine, turn off all switches to avoid possible sudden start up once power is restored.
- 9. Work area hazards.** Keep the area around the Slotting Machine clean from oil, tools, objects & chips. Pay attention to other persons in the area and know what is going on around the area to ensure unintended accidents. The working area of the machine must be properly lit up.
- 10. Guards.** Do not operate Slotting Machine without the correct guards in place. Necessary guards protect you from injuries by slotter's moving parts.
- 11. Warning Labels.** Take note of any warning labels on the machine and do not remove them.
- 12. Secure Material.** During the slotting process, the workpiece must be held firmly in the chuck.
- 13. Emergency stop.** Use the emergency stop button in case of any emergency.
- 14. Level machine.** Level the machine on a flat concrete surface by using a spirit level.
- 15. Hearing protection and hazards.** Always wear hearing protection as noise generated from machine and workpiece can cause permanent hearing loss over time.
- 16. Call for help.** If at any time you experience difficulties, stop the machine and call your nearest branch service department for help.

PLANT SAFETY PROGRAM

NEW MACHINERY HAZARD IDENTIFICATION, ASSESSMENT & CONTROL

Vertical Slotting Machine

Developed in Co-operation Between A.W.I.S.A and Australia Chamber of Manufactures
This program is based upon the Australian Worksafe Standard for Plant(NOHSC:1010-1994)

Item No.	Hazard Identification	Hazard Assessment	Risk Control Strategies <small>(Recommended for Purchase / Buyer / User)</small>
A	ENTANGLEMENT	HIGH	Eliminate, avoid loose clothing / Long hair etc.
B	CRUSHING	LOW	Secure & support work material on slotting table.
C	CUTTING, STABBING, PUNCTURING	MEDIUM	Isolate power to machine prior to any checks or maintenance being carried out. Do not adjust or clean machine until the machine has fully stopped.
D	SHEARING	MEDIUM	Make sure all guards and doors are secured shut when machine is on. Isolate power to machine prior to any checks or maintenance.
F	STRIKING	LOW	Ensure tooling is secure in chuck. Wear safety glasses. Stand clear of moving parts on machine. Remove all loose objects around moving parts.
H	ELECTRICAL	MEDIUM	All electrical enclosures should only be opened with a tool that is not to be kept with the machine.
O	OTHER HAZARDS, NOISE.	LOW	Machine should be installed & checked by a Licensed Electrician. Wear hearing protection as required.
Plant Safety Program to be read in conjunction with manufactures instructions			



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Authorised and signed by:
Safety officer:


.....
Manager:

.....

Revised Date: Aug-08