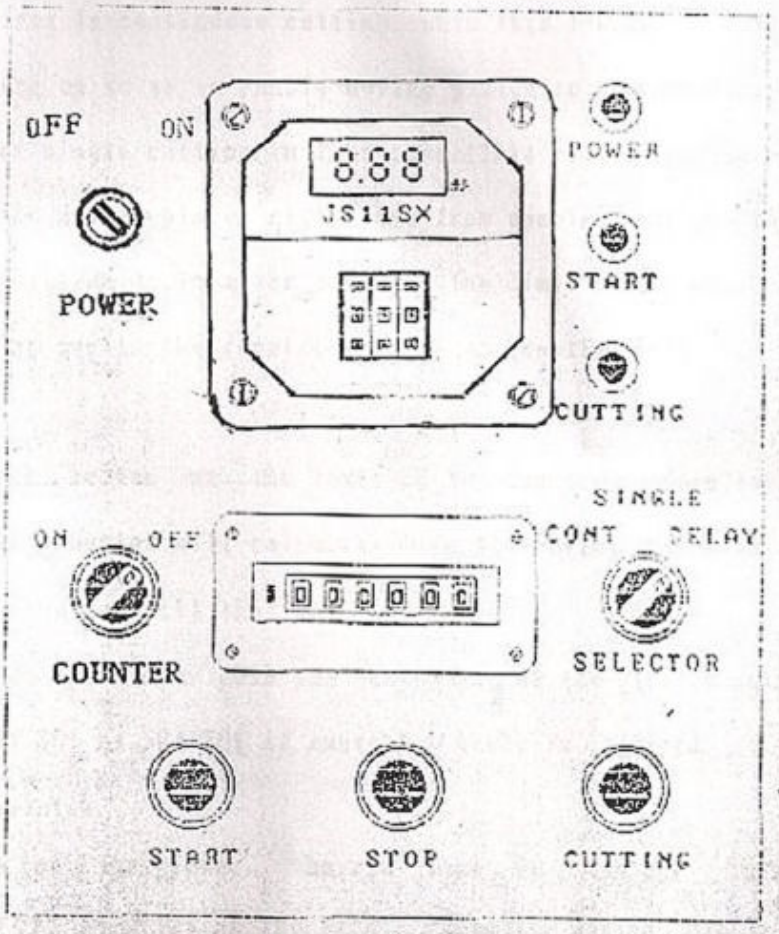
OPERATIONAL MANUAL FOR
CREASING AND CUTTING MACHINE
MODEL PYQ 203C

(C) Electrical Control

The power is three phase, 50 cycles, 380V, which is conducted into the electrical box and connected into U. V. W. circuit board. put the type plug into the socket which is located at the right front bottom of the machine base.

The controlling elements of the machine are centralized in the controlling box which is suspended overhead. (see figure 1)

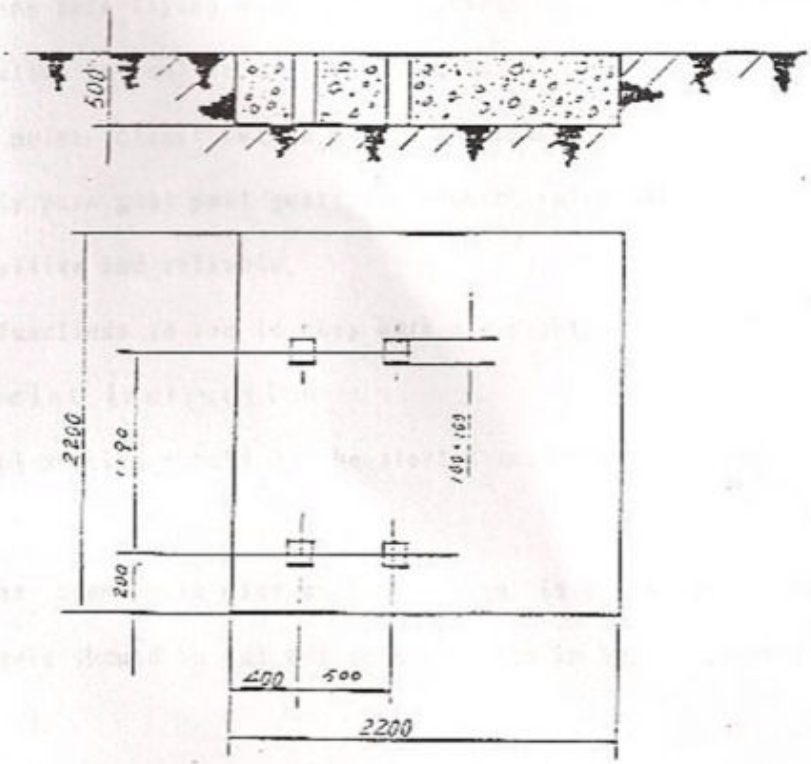
WIRING DIAGRAM OF CONTROL PANEL



4 Installation

(a) The complete machine is packed in one wooden case, It should avoid heavily collision when it is uncased and at same time the attachments should be checked according to packing list.

(b) Installation lay out is shown as Fig 2



(c) The left and right side of the foundation should be levelled.

5 Operational Instruction

(a) Check before operation.

1) Clean anti-rust grease and be sure all fasteners are tightened.

2) Fill all oil cups and oil holes to see that lubrication is normal.

3) Check motor and electricals and be sure. They are not moistened

(b) Idle Running

1) Take away the wrench from transmission shaft.

2) Push start button to see if flying wheel rotation direction is correct.

3) After being sure flying wheel running is in normal, push cutting and creasing button to run the moving platen to watch and listen if there is special noise, (limit switch noise is normal).

4) Repeatedly push goal post guard and stomach safty bar to see if the brake is sensitive and reliable.

5) Check 3 functions to see if they work all right.

(c) Special Instruction

1) The formal working should not be started until the test running is finished.

2) Fasten the chase with dies on body platen. To guarantee safty, be sure the power should be cut off when the dies is being prepared, tested and adjusted.

3) The platen distance is set 27mm before product delivery from factory, but the actual distance can be 28-33mm. The distance should be reset according to the height of the rules and thickness of board paper and chase itself.

4) During operation, if board is not fed all right or the finished product is not taken out timely, the goal post guard or stomach safty bar should be immediately pushed; or throw-on-off bar should be immediately pulled down in order that the waste should not be made.

6 Servicing

Although the machine structure is rather simple and operation is easy, the trouble still will be caused duo to improper maintenance.

(a) General troubles and shootings.

1) Freezing close, which means when platen closes, suddenly it stops at that position the belt slips or motor stop.

Causes:

I Platen distance is not set right, Distarce may be too small.

II Distance is correct, but feeding quantity is more than stipulated.

III Dies area is overloaded.

If freezing close happens, firstly cut off the power, then pull down throw-on-off bar, If it doesn't work, use the wrench which can be extended by a tube, forcibly opten the platen.

Check platen distance and reset it. If trouble is caused by feeding quantity, reduce the quantity. If because of over-loading of dies, try to correct it.

2) Slipery of dies, which means during the process of impression, Moving platen slips out of its original position causing a shadow of cutting and creasing lines.

This is mainly because of imbalanced dies layout according to the center of the platen the dies should be balanced from two sides. The other cause of platen slipery may be due to wearings of parallel guideways on machine stand as well as of up and down sliding block on the moving platen. As the wearings will cause increase of the tolerance, the trouble can be shooted by adjusting sliding block and parallel guideways tolerance, restricting them below 0.05mm.

3) If lubrication for transmission parts is not good, the bearing will become heat. If so, all lubrication roates should be checked to

see if any of oil holes is blocked up. A sudden stop of machine can be happened due to heating and expension of the bearings. Cut off the power, take off the bearings for servicing.

4) Controlling circuit is out of order, This generally due to bad contact of the wirings or invalid electrical elements. The checking should be done by electricians for repairing accordingly.

(b) Pay attention to the maintenance so that normal working can be ensured.

1) Abide by every details of this operational manual book.

2) All oil cups and moving parts should be regularly greased and oil filling should not be less than two times for every shift.

3) Working condition of machine should be watched so often. If anything is found adnormal, the machine should be immediately stoped for checking.

4) Try to keep the machine clean and sound.

5) Overall servicing should be given per year.

7 Electrical Diagram (Fig 3)

8 Positien of electricel elemcnts. (Fig4)

General Electrical Accident and Exclution Method

I . Connect the three-phase power, the motor can't run, wenn press the start knob or the indentation-cut knob.

2.Exclution method

(1) Connect the power the red lamp is not on.

A. It is plain that it is short of phase for the three phase power, check the three-phase power.

B. Check the power switch SA1 to see, if it is intact.

C. Check the power light to see, if it is intact; the voltage, of the light(HL1) is 24V.

(2) Open the power switch SA1, press the start knob, the motor can't run.

A. Check the AC contactor KM1 to see, if it is intact, the voltage for KM1(00, 13) is 24V.

B. Check the stop knob SB1and start knob SB3 to see, if they are intact.

C. When open the power switch. The red lamp and green lamp are on meanwhile, it is plain that the switch SQ1(on the back-side of body) is in the position of inspection machine, must push it into

working position.

II . Connect the power, the motor is running, the indentation-cut can't work.

1. Press the indentation-cut knob SB4; the AC contactor KM2 is not working if the green lamp is not on.

A. Check the AC contactor KM2(00, 29)to see if it is on-position.

B. Check indentation-cut knob SB4 to see, if it is intact.

C. Check in protection switchs SQ2(11-17), SQ3,SQ4(17. 19. 19. 21),SQ5(21-23) to see if they are in the condacting state.

2. If the green lamp is on.

A. Check the QF3 to see, if the is rebound, it must be in the switching position.

B. To see if the contact between the carbon brushs is intact.

C. To see if the normally open contact (57, 59) of AC contactor KM2 is intact.

D. To see if the coil of magnetic clutch is intact (the voltage is DC 24V).

E. To see if the cleance of magnetic clutch is too large.

F. To see if the rectifying bridge-stack is intact(the output voltage is DC 24V)

3. Can't time delay, when the relay switch SA3 is pushed into time delay position.

A. Check the timing relay KT to see, if it is intact (00, 35) the voltage is AC 24V.

B. Check the time delay contact (23, 29) of timing relay KT to see, if it is intact.

C. Check relay switch SA3 to see, if it is intact.

D. Check relay switch SA3 and push it into in the time delay position(23, 25) to see if it is the condacting position.

E. Check the AC contactor FM(00, 27) to see, if it is intact, the voltage is AC 24V.

F. Check delay lead switch SQ6 to see, if it is intact.

TROQUELADORAS

ADVERTENCLAS IMPORTANTES:

1、La distancia de frenado de la platina movil durante el trabajo, tal como la drieccion de la fuerza aplicada y de gravedad, son diferents cuando la platina movil va haicia arriba, la fuerza aplicada y la gravedad son opuestas y compensara el frenado y la distancia en que se detiene es alrededor de 5 cm, pero cuando va hacia abajo, la fuerza aplicada y la gravedad se sumaran y la distancia en que se detiene sera alrededor de los 10 cm. Pare estar seguro que el embrague de alre o magnetico pueda trabaijar normalmente y con seguridad, la maquina neceslta un servicio regular de mantenimiento.

2、La barre en triangulo situada en la platina movil esta disenada para su seguridad. Cuando la maquina esta funcionando, y si el operador encuentra cualquier elemento yntroducido en el tablero que su posicion no es la correcta, (como inclinado u oblicuo), no se puede sacar en ese momento de la platina movil, para evitar la perdida, uno puede activar la barra para detener la troqueladora de alimentacion manual de su posicion original. O cuando la platina movil se abre al maximo, el cuerpo del operador puede estar muy cerca de la maquina, en este caso, su cuerpo puede alcanzar la barra y parar la platina movil pare evitar el accidente. Cuando uno desea separar un papel que sigue atascado en la maquina, o el pliego de papel ha caido entre dos platinas, el procedimiento basico correctoo es cortar la energfa de la maquina, hasta que el volante de inercia se haya detenido por completo, solo asi estara seguro, podra ingresar la mano o pedir ayuda para sacar el pliego de papel. Cuando la maquina se encuentra en condiciones normales y obviamente, que es de conocimiento comun, el uso del temporizador es una modalidad de funcion de esta, que durante cualquier estado de funcionamiento de la maquina, se prohibe absolutamente que el operador se introduzca o manipule parte o totalmente dentro de esta. EI operador debe estar enterado que el ciclo

PACKING LIST

Model_____ Overall dimensions(L×W×H)_____

Name_____ Serial No._____

Box No._____ Gross weight_____

Mode of packing_____ Net weight_____

Serial No.	Name	Specifications	Qty	Remarks
1	Platen Creasing and Cutting Machine		1	
2	Chase		2	1 pc.on machine
3	Steel plate		1	on machine
4	Slotted head screw driver	8"	1	
5	Crosshead Screw driver	8"	1	
6	Adjustable wrench	10"	1	
7	Hexagonal head Wrench	5mm	1	
8	Wrench	6mm	1	
9	Wrench	8mm	1	
10	Wrench	10mm	1	
11	Electric brush		2	1 pc.on machine
12	Oil can		1	
13	Pedal Switch		1	

Date: _____

Inspector: RUIAN CITY FEIYUN PACKING MACHINERY WORKS

THE PEOPLE'S REPUBLIC OF CHINA

normal la platina movil (abierta o cerrada), necesita solamente 4-5 segundos, de abierto a cerrado, solo necesita 2 segundos. Por lo tanto, en cualquier caso, mientras este funcionando la maquina, al operador se le prohibe manipular dentro de esta, a excepcion de personal del servicio tecnico profesional despues de que la energfa de la maquina este totalmente cortada.

3、Segun el manual de operaciones, antes de que la maquina comience a hecar su trabajo, el operador necesita mantener funcionando la maquina sin carga (funcionamiento en vacio), debe chequear partida, frenando, temporizador, lubricaciones, etc, hasta que el operador este absolutamente seguro del normal funcionamiento de la maquina troqueladora, solo entonces podra trabajar en esta. Si el operador encuentra cualquier problema, primero que todo debe apagar la maquina y pedir que el servicio tecnico lo revise y repare, y asi poder retomar el trabajo despues de que se repare la falla.

4、La distancia de frenado sera influenciada por el uso en los platos a la friccion del freno y del embrague sea este de aire o magntico, cualquier cambio realizado cambiara la distancia de cada micro switch, la intensidad de las salidas de aire, tambien como el tiempo de activacion del relei (relee) de la valvula magnetica (el solenoide) que controla el embrague del aire.

5、La base de madera que se utiliza para el embalaje de la maquina y del transporte de esta, no esta pennitido outilizarla como base de la maquina, segun el manual de operaciones, el operdor debe instalar y nivelar la maquina en un piso duro (cemnto u otro material), y fijar la base por pernos al piso , se debe nivelar y amortiguar la base de la maquina.

6、El arco o portico en la troqueladora de alimentacion manual esta disenado para su proteccion lateral, asi como para la parte delantera, empujando la barra se puede detener facilmente la maquina, se prohibe estrictamente manipularla cuando el motor esta en funcionamiento. Cualquier problema que uno encuentre, es necesario en primer lugar detener el equipo, observar cuidadosamente, y si es necesario manipularlo, pero como primera medida se debe desconectar

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GARANTIA: Pelo periodo de 4(quatro) meses. O inicio da garantia é contado a partir da data de fornecimento do equipamento. A garantia não cobre eventuais despesas de transporte do equipamento ou de partes, locomoção, estadia, refeição e kilometragem dos técnicos, correndo estas por conta do comprador. A garantia só terá validade se a instalação do equipamento for feita por nossos técnicos. A garantia não terá validade se houver alterações feitas na máquina por parte de terceiros, assim como problema resultante de acidente, mau uso, suprimento inadequado de energia elétrica que afete os componentes eletro/eletrônicos e desgaste natural.

Os seguintes pontos devem ser colocados a disposição pelo cliente e não estão incluídos no preço;
- Consistência e capacidade de carga do piso e cobertura;
- Pessoal auxiliar para descarregamento e desembalagem da máquina na posição final de seu funcionamento;
- Meio de transporte e elevadores para levar a carga pesada ao lugar de seu funcionamento final;
- Cabos para alimentações elétricas ao painel de comando, assim como desde painel de comando aos diferentes pontos de consumo entre outros cabos locais;
- Instalações de conexões e cabos por um eletricista local;
- Ar comprimido para atender a capacidade necessária de funcionamento e condutores e conexões de alimentação;
- Remoção de aparas, recortes e pó, assim como tubos necessários;
- Modificação, adaptações, revisões ou desmontagem de instalações e materiais existentes;
- Estrados e bases para operação e manutenção;
-Iluminação e energia elétrica para a montagem.

De acordo:

AQUARIUS SBC EDITORA GRÁFICA LTDA.

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GERMAN GRAPHICS – GMBH.

la energia de la maquina.

7、Las funciones del temporizador de los platos son las mismas. Cuando el temporizador esta activado, por un lapso programado, la platina movil no se movera, cuando la platina movil se usa hacia arriba, esta comienza a moverse, por lo tanto, el temporizador claramente es una de las funciones mas comunes de la maquina y de sus condiciones, si alguien manipula dentro de la maquina estando encendida, sera inevitable el accidente.

8、Pare mantener correctamente los sensores de todos los dispositivos de proteccion de seguirdad, seguridad, se requiere un mantenimiento regular con especial detalle a lo relativo a las piezas de interruptores de seguridad. Cualquier modificacion, el cambio de sus piezas y componentes esta prohibido a menos que sea dado un consentimiento previo por el fabricante.

9、Las placas de la friccion (zapates) dentro del embrague de aire o magnetico son piezas de uso comun, la condicion de uso influenciara directamente la distancia del frenado, por lo tanto se requiere una revision, servicio y el mantenimiento regular de este.

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3. CONSTRUCTION
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8. POSITION OF ELECTRICAL ELEMENTS

1. Introduction

Cutting and Creasing Machine is a kind of special equipment designed for board paper, leather, plastic, etc.

It is applicable to printers' for embossing various kinds of exquisite printing matters.

2. Specifications

NO.	Items	Specification
1.	Platen working area	930×670 mm²
2.	Mode of cutting and creasing	I Continuous operation II Single operation III Continuous Opening Dwell
3.	Speed	1250 impression/ hour
4.	Dwell range	0—6 seconds
5.	Adjustable Platen Distance	12mm
6.	Dies length	<17500 mm
7.	Fedding Mode	Hand—fed

8.	Motor datas	3kw, 960 RPM. 380V／3 phase, 50 cycles, A.C.
9.	Overall Dimensions	2080×1650×1750mm(L／W×H)
10.	Weight	2800Kg

3. Construction

The machine is composed of machine stand, moving platen, electromagnetic clutch, panel cabinet, motor. The belt wheel is driven by motor which is mounted on the right side of machine stand. The driving power is transmitted to big flying wheel by the belt, under act of clutch and transmission shaft then rotates along with flying wheel to produce a reciprocation of rocking movement of moving platen connecting with a pair of arms through two-step reduction gears and a pair of crank gears on main shaft, so that the working cycle of creasing and cutting can be accomplished.

(a) Machine Stand and Moving Platen.

At machine back, there are bearing seats for main and transmission shaft, respectively fixed with bronze bush or roller bearing and bearing covers holding main and transmission shafts. Bronze bush's lubrication is done through 2 oil cups on top of the machine.

Chase which holds dies is put on the stationary platen, fastened by left and right footings at bottom, clamping plate and handles on top.

Moving platen rests on the parallel guideway of machine stand and with the left and right half moon slide blocks on itself as well as up and down slide blocks, it moves along the orbit of swan neck which is restricted in the roller fixed in front of machine stand.

A cutting plate can be found on the moving-platen and fastened by 6

screw in 8mm.

A shaft goes through the moving platen, of which each of its end is mounted with inner eccentric bush. Throw-on-off bar consisted of a cross bar, screw, taper pin is connected with the eccentric bush. When it is in normal working, cross bar positioning pin is clamped by moving platen position block, so if the bar is pulled down, the distance between cutting plate and stationary platen will be increased to avoid wastage making.

The eccentric teeth sleeve is fixed between a pair of connecting arms and a pair of inner eccentric bushes.

The working distance and parallel between moving platen and stationary platen can be adjusted by turning the eccentric teeth sleeve with a small hole in front and adjusting handle. The maximum distance to be adjusted is 12mm. After being adjusted, it should be fastened on the connecting arms by 12mm screw through front teeth plate and rear plate.

There is a goal post guard goes over across the front of machine stand, The stomach safty bar is installed on the moving platen, Pushing goal post guard or pressing stomach safty bar when human body or anything else is entering the dangerous area, the machine will immediately be put on brake, so as to protect human being and the machine itself.

(b) Transmission Machanism of the Electromagnetic Clutch

The weight of flying wheel is supported by a bracket, the shaft of which shares the same bush hole of the transmission shaft on the right of machine stand. The magnetic pack is fixed on flying wheel and it turns along with flying wheel. Through flying wheel bracket, the transmission shaft extends its spline part and is matched with armature

line sleeve of the clutch to be turnable axiality. On both ends of the armature, asbestos friction plates are riveted, which is changable when worn out. The magnetic iron attracts armature and makes the transmission shaft rotate when the power is on but the clutch spring pushes away the armature and presses braking ring to stop the transmission shaft when the power is off. The braking ring is seated on the braking bearing, of which the axial position can be adjusted by using 3 screws so that clutch working clearance can be controlled. It froms an entity with machine stand through the bearing seat bracket and base stand.

The small right-run-tooth gear on the transmission shaft meshes with a big left-run-tooth gear which is on the middle of second shaft.

The right small gear on the second shaft is coupled with its shaft by means of flat key adopting over tolerance assembly method wheras the left small gear is combined with its shaft by adopting fine clearance method $\frac{H_7}{f_7}$ So that the synchronous engagement of two helical gears can be easily adjusted, after being positioned, it is pined at joint place between the hole and the shaft.

At right end of transmission shaft, a square head is formed. The wrench (attached as an accesory) can be used when it needs a caliberation or freezing close of the platen happens. Underneath the square head, there is a safty limit switch SQ_2 as shown in electrical diagram is mounted to enable man drive when the wrench is used. As the wrench will push the limit switch, cutting off the electric circuit to make protection and at same time turning on the clutch circuit to release the brake so that man brive becomes possible.