Attn. MR. Diego.
From Juki AKANO

No. I
1984. 8

JUKI®

JSF-900 SERIES

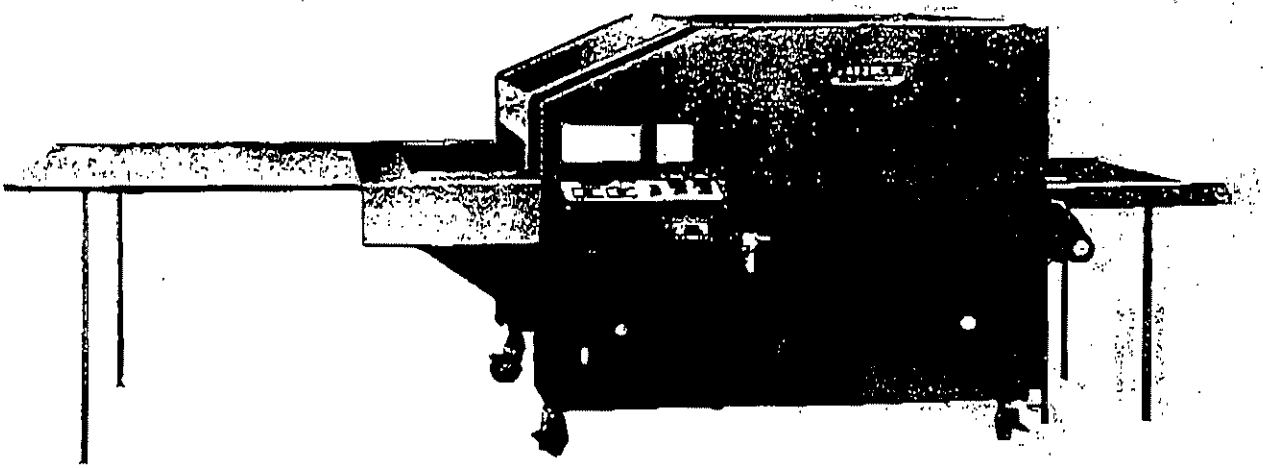
Continuous Fusing Machine

Instruction Book & Parts List

J.S. 95.7.25 山中

(JS) 山中殿

JSF-900 取扱の内、先程送信していない分 FAX致します。
(P1~P8.) 以上よろしく御願い致します。



TOKYO JUKI INDUSTRIAL CO., LTD.

JUKI SINGAPORE PTE LTD
TECHNICAL SECTION

Precautions in installing the machinery

(1) Since this machine draws 11 kw of power, it should be connected to a 3-phase power supply according to the working voltage. (see table below)

Voltage (V)	200	220	346	380	415	440
Current	33A or more	30A or more	19A or more	17A or more	16A or more	15A or more

(2) This machine is air-driven. Since an air pressure of 6 kg/cm^2 of more is required, it should be connected to an air supply facility in which the air pressure under a fluctuating load will not drop below 6 kg/cm^2.

(3) Since this machine is heavy, it must be installed on a very strong, level floor.

How to Operate the Machine

[1] Starting

(1) Turn the power switch on the lower part of the right side ON. The power on lamp (1) on the control panel will light up.

(2) Set the pressure control (11) on the control panel to 6 kg/cm^2.

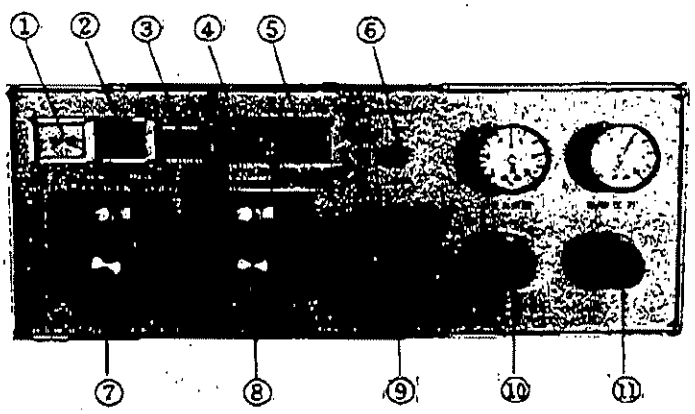
(3) When the start pushbutton switch (3) is pressed the start lamp (3) lights up.

(4) When the heating time setting knob (9) is turned, the teflon belt starts to run.

(5) Set the front (7) and rear (8) temperature controllers to correspond to the material. A green lamp will light up when electric current is flowing through the heater; at other times a red lamp will light up. It takes (10) to 15 minutes until the heater temperature stabilizes (at 150°C). Check to see that the upper deviation indicator inside the temperature controller reads 0 before using the machine.

(6) Set the pressure control (10) on the control panel to the necessary air gauge pressure. To convert between unit pressure and gauge pressure use the pressure conversion table on top of the control box.

(7) When pressure switch (6) is turned ON, pressure is applied. When pressurization is not needed this switch should be OFF.



(1) power lamp
(2) emergency lamp
(3) starting lamp and switch
(4) idling lamp
(5) stop lamp and switch
(6) pressure switch
(7) upper (front) temperature controller
(8) lower (rear) temperature controller
(9) heating time
(10) pressure adjustment
(11) control pressure

[2] Stop
Press stop switch (5) to stop the machine in an emergency. Stop lamp (5) will light up.

[3] Idling
(1) When the power switch is turned OFF at the completion of operation without pressing emergency stop switch (5), idling lamp (4) lights up. Only the heater goes off; the belt continues to run for a predetermined time (30 minutes) after which it stops automatically.
(2) During idling it is important that pressure switch (6) be OFF.

[4] Emergencies
(1) When the belt meanders abnormally, if the control pressure has dropped to 5 kg/cm² or below then the emergency lamp comes on and the belt stops.

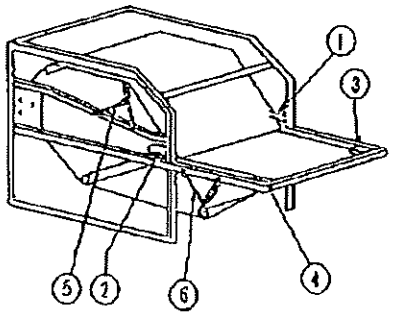
How to adjust the belt when it meanders abnormally

When the belt meanders abnormally the emergency lamp on the control panel [control panel *Figure* 2] lights up and the belt stops. In such a case it should be adjusted according to the following procedure.

(1) Check to see whether it is the upper or lower belt that has been meandering abnormally. If it is the upper belt, adjust meandering control adjustment bolt (5); if it is the lower belt, adjust meandering control adjustment bolt (6). Here, if the meandering is taking place on the left side [the adjustment bolt side] turn the adjustment bolt so that it becomes longer; conversely, if the meandering is taking place on the right side turn the adjustment bolt so that it becomes shorter.

(2) Next, press the control limit switch lever [* (1) to (4)] for the location where the meandering is occurring toward the belt. This will cause the belt to start running; keep pressing until the belt returns to the correct position [until it is centered on the roller] (* For example, in the case of the upper belt meandering to the right, press lever (1)].

(3) When the belt has started to run normally, look at how the belt runs on the roller and check to make sure that the meander control is being applied equally on both the right and left sides. If it is too far to one side, perform a fine adjustment by turning the adjustment bolt again.



(1) limit switch lever for control of the upper belt on the right side of the machine
(2) limit switch lever for control of the upper belt on the left side of the machine
(3) limit switch lever for control of the lower belt on the right side of the machine
(4) limit switch lever for control of the lower belt on the left side of the machine
(5) upper belt side meander control adjustment bolt
(6) lower belt side meander control adjustment bolt

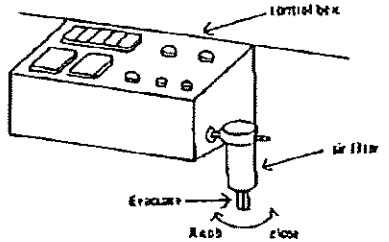
Precautions in Use

[1] Adhesion test
(1) Before starting operations always perform an adhesion test to make sure that nothing is loose.
(2) If the temperature is too high, the cloth can be damaged and the belt can become dirtier than normal, shortening the life of the belt, so be careful that these conditions do not occur.
(3) If the temperature is too low, adhesion will be poor.

[2] Heating time setting
(1) Avoid use inside of the red lines.
It can cause a breakdown.

Everyday inspection and maintenance

[1] Air filter
The air filter removes dirt and water from the air that is supplied. Since water accumulates in the cup it must be emptied regularly. This can be done by turning the bottom knob.



[2] Cleaning the belt and keeping it clean
(1) If the belt becomes dirty with adhesive, wipe it thoroughly with a soft cloth. If it is very dirty, clean it with silicon spray or silicon liquid.
(Be careful that silicon liquid does not get in underneath the belt; it can cause the belt to slip.)
(2) To prevent the belts from getting dirty spray the entire surfaces of both the upper and lower belts 3 times every day.

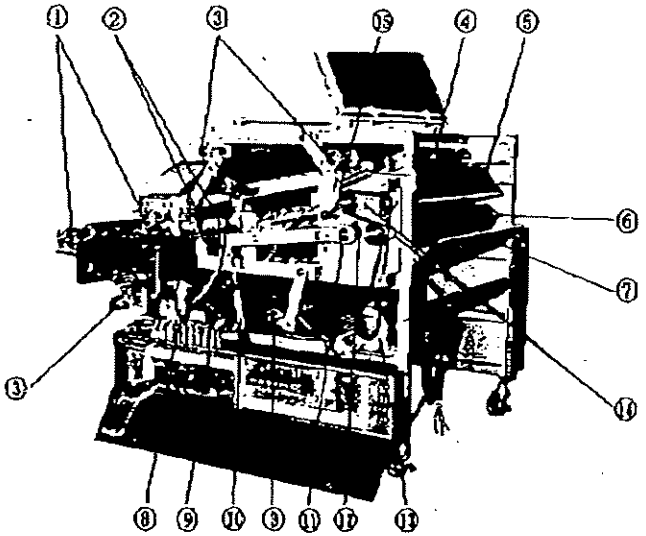
[3] Scraping plate
If the efficiency of scraping becomes poor during operation the scraping plate and remove the adhesive and scraps of cloth catching to the teflon edge using a soft cloth.
If the teflon edge has been scratched, sand it down with fine sandpaper until it fits the belt exactly.

[4] Belt cleaner
Inspect the belt cleaner every day. If part of it gets very dirty, cut the cloth off of that part.
Polyester cloth is the best material to use for cleaner cloth.

Specifications

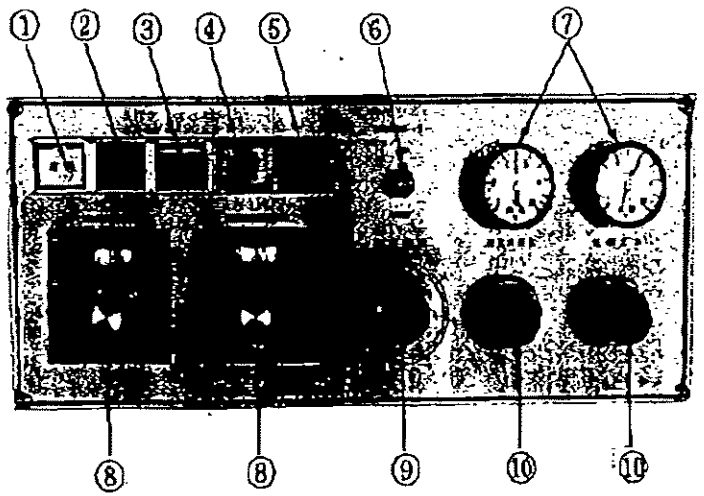
Item	Specifications
adhesion width	500 mm
adhesion length	no limit
pressurization method	air driven silicon rubber roller pressurization
pressure	0.5 kg/cm² ~ 4 kg/cm²
heating method	heater 10.8 kW
heating time	50 Hz 5 ~ 28 sec 60 Hz 4 ~ 24 sec
heating temperature	steady state temperature 200°C
belt speed	50 Hz. max. 10m/min 60 Hz max. 11.7 m/min
belt control method	air method, meander control method
motor	variable speed motor 100W 200V
dimensions when installed	width, 1555 x length, 3155 x height, 1230
weight	325 kg
power supply	3-phase 11 kW

[1] Main unit



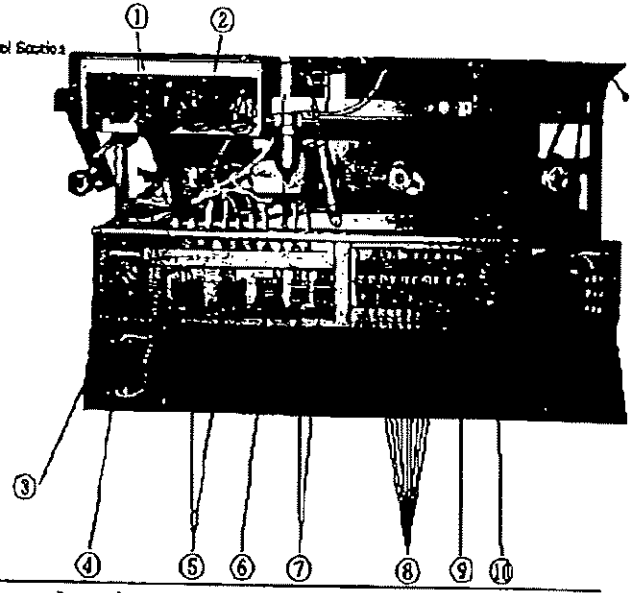
	Part number	Part name	Quantity
①	PBF2062B026	Pillow type unit	4
②	P140109B00C	Heater	12
③	PBF20327018	Flange-type unit	8
④	P180109B000	Upper belt	1
⑤	P2003098000	Upper scraping edge	1
⑥	P2017717000	Scraping edge	1
⑦	P180209B000	Lower belt	1
⑧	PAF021B0000	Air filter	1
⑨	PAC030025A9	Meander control cylinder	2
⑩	PAC030050B0	Press cylinder	2
⑪	PBF25347017	Flange-type unit	2
⑫	P2212098000	Press roller	1
⑬	P5B01098000	Variable speed motor	1
⑭	PBF25991103	Flange unit	4
⑮	PBF20780027	Flange unit	2

[2] Control panel



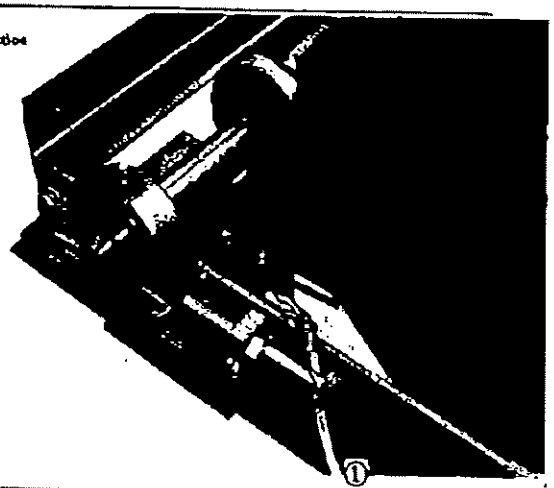
	Part number	Part name	Quantity
①	P5901B3A000	Indicator lamp (power supply)	1
②	P5902B3A000	Indicator lamp (emergency)	1
③	P5702B0AB00	Illuminated pushbutton switch (start)	1
④	P5901B98000	Indicator lamp (idling)	1
⑤	P5701B9A000	Illuminated pushbutton switch (stop)	1
⑥	PAV01180000	Air valve	1
⑦	PAG01140000	Manometer	2
⑧	P5702B9B000	Temperature controller	2
⑨	P5B01098000	Potentiometer	1
⑩	PAR01160000	Pressure reduction valve	2

[3] Control Section



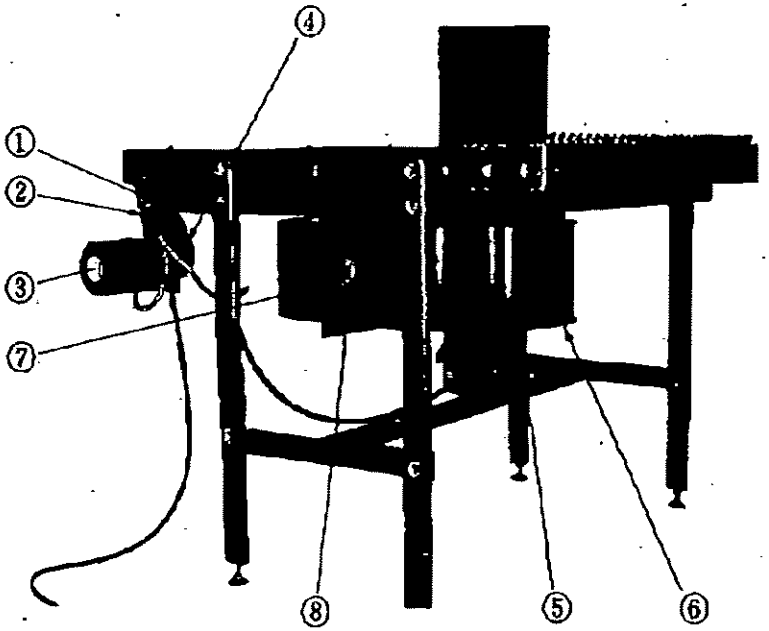
	Part number	Part name	Quantity
①	PVA01570000	Electromagnetic valve	1 set
②	P6802091A000	Pressure switch	1
③	P6001081A000	Fuse	2
④	P6501091B000	Circuit breaker for wiring	1
⑤	P6812720000	Electromagnetic contactor	2
⑥	P6551093000	Transformer	1
⑦	P6801093000	Electromagnetic contactor	2
⑧	P6101091H000	Relay	9
⑨	P5551081A000	Solid state timer	1
⑩	P5812093000	Control panel (for motor)	1

[4] Meandering detection section



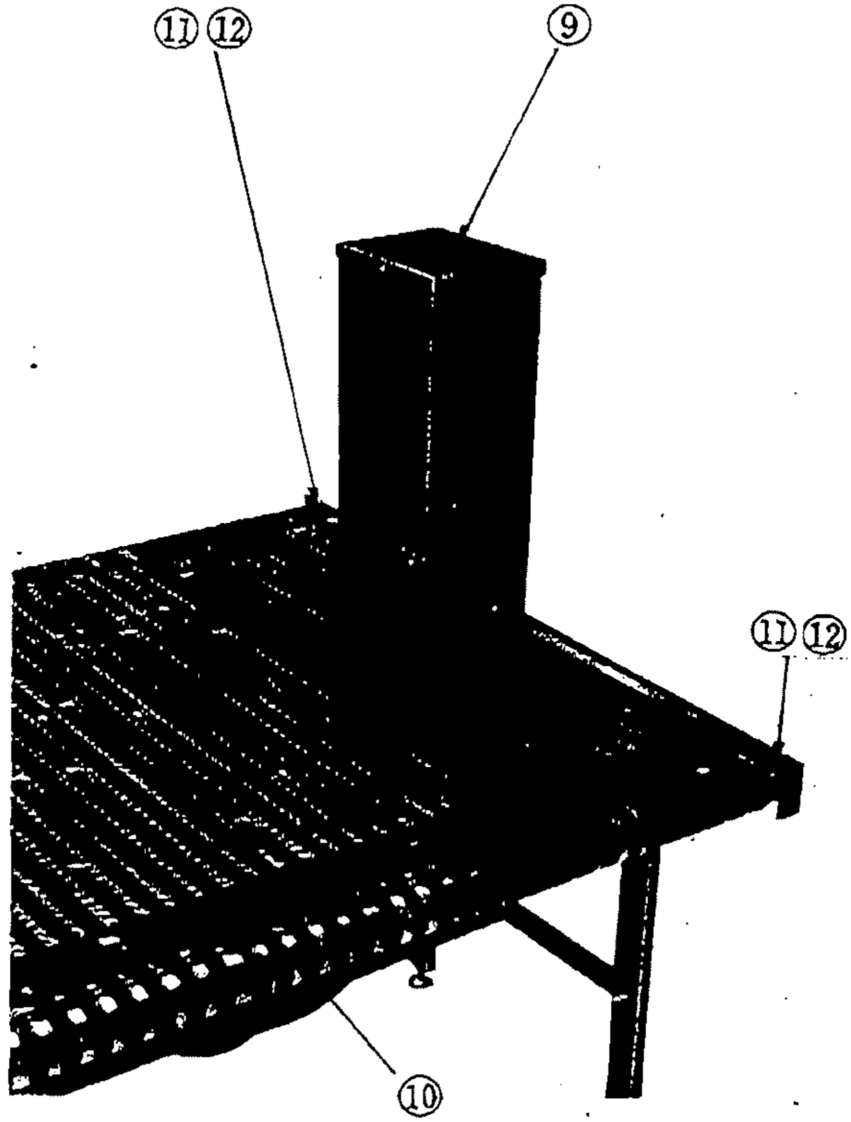
	Part number	Part name	Quantity
①	P5801091B000	Limit switch	8

Rear Conveyor Part of JSF-900V with Vacuum No. 1



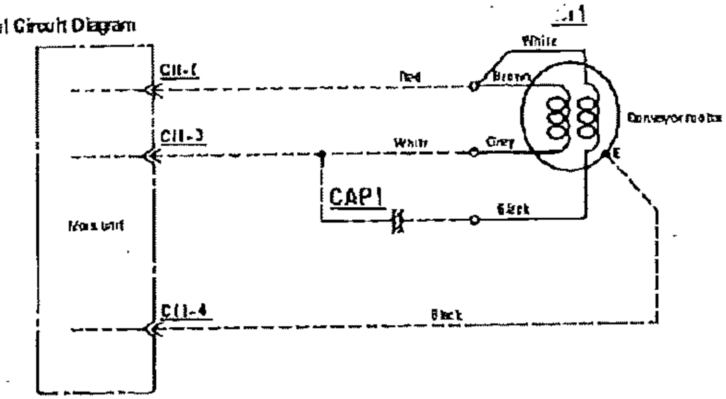
No.	Part number	Part name	Qty
①	P6352901A000	phase advance capacitor	1
②	P6401093000	capacitor cap	1
③	P6801991A000	small geared motor	1
④	P2201901A000	V belt (A)	1
⑤	JBW-041-1	sirocco fan	1
⑥	P2528E00N00	packing (G)	1
⑦	P2527E00N00	packing (H)	2
⑧	P2526E00N00	packing (J)	2

Rear Conveyor Part of JSF-900 With Vacuum No. 2



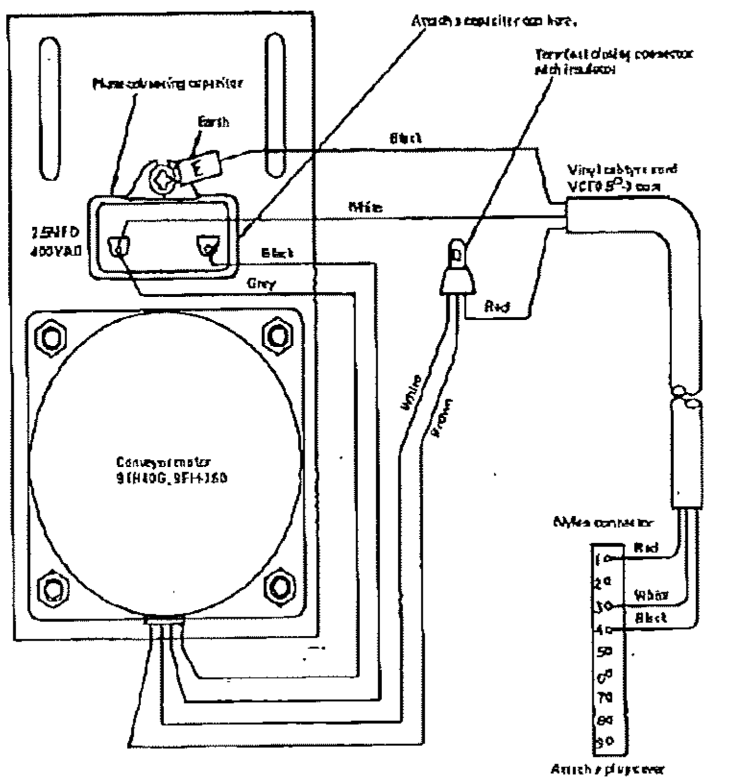
No.	Part number	Part name	Q'ty
9	P111209BV00	exhaust filter	1
10	P180109BV00	conveyor belt	30
11	PBR15351118	bearing (6202ZZ)	4
12	RC1380001K0	shaft stop ring (C15)	4

Control Circuit Diagram

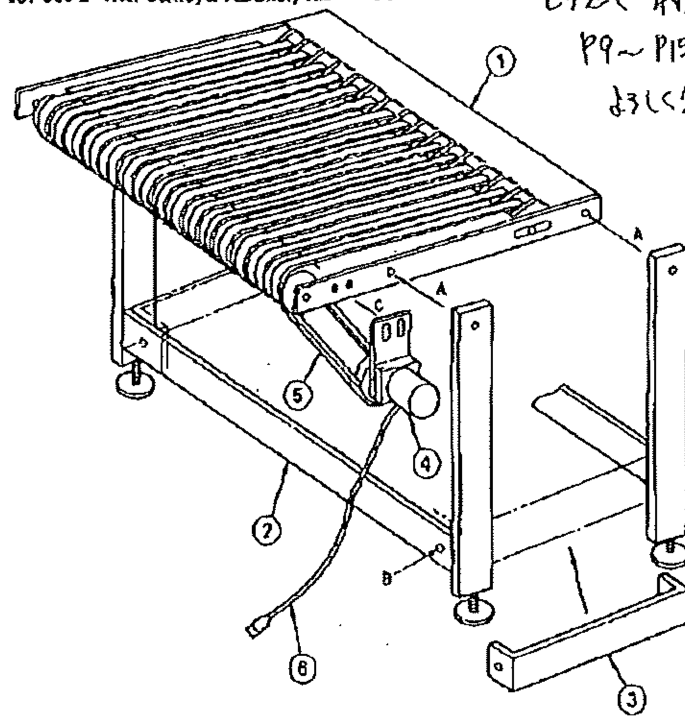


Symbol	Description	Maker	Type number
M1	Conveyor motor	Matsushita	91H40G, 9GH-36B (AC200V)
CAP1	Phase-advancing capacitor	Matsushita	2.5MFD (400VAC)
C11	Nylon connector (9-pole)	Molex	1292P-1 (Male) 1292R (Female)

Machine Wiring Diagram



JSF-900-1
JSF-900-2 Rear Conveyor Assembly Illustration

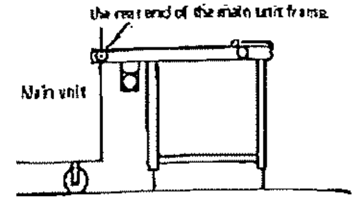


①	Conveyor main unit
②	Leg
③	Stay
④	Motor
⑤	V belt
⑥	Power cord (9-pole, male)
A	M6 x 35 Hexagonal headed bolt, M6 nut, Spring washer, Flat washer
B	M6 x 20 Hexagonal headed bolt, M6 nut, Spring washer, Flat washer
C	M8 x 15 Hexagonal headed bolt, M8 nut, Spring washer, Flat washer

* Connecting the rear conveyor to the main unit

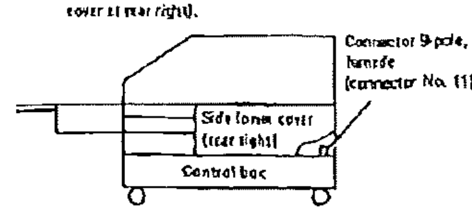
1) Connection to the main unit

Fit the conveyor into the main unit so that the conveyor roller ends meets the rear end of the main unit frame.



2) Power connection

Connect power cord ⑥ to connector No. 11 located on the top of the control box (inside the side lower cover at rear right).



(JS) 小中殿
とり急ぎ 対策の取説コピー
P9～P15 FAX致します。
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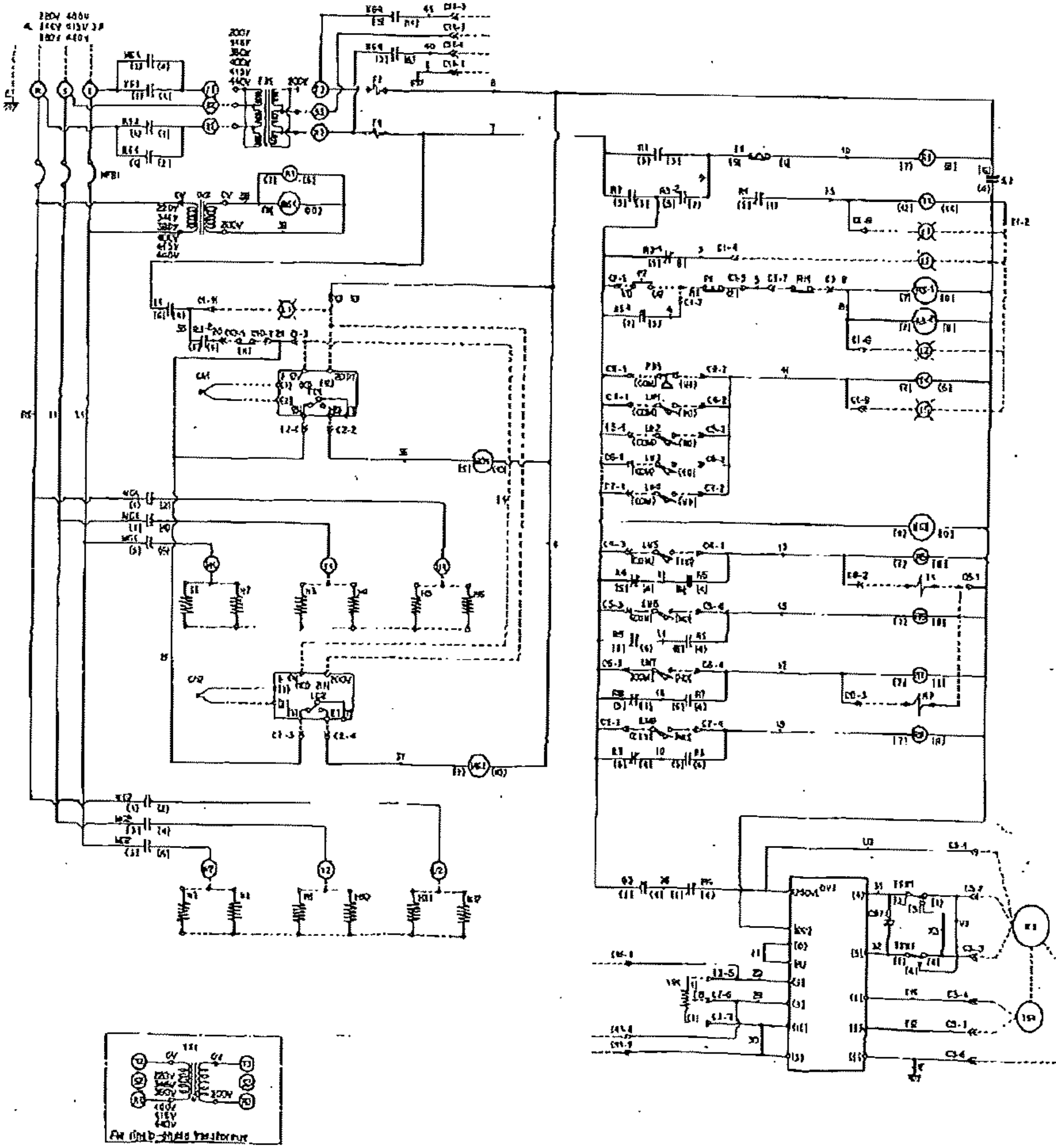
J.S. 95.7.25 山中

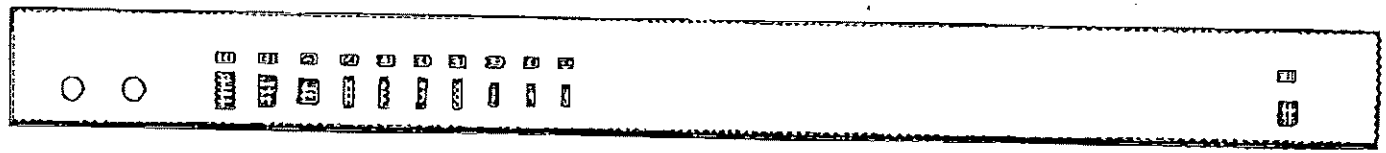
JSF-900 Control circuit diagram

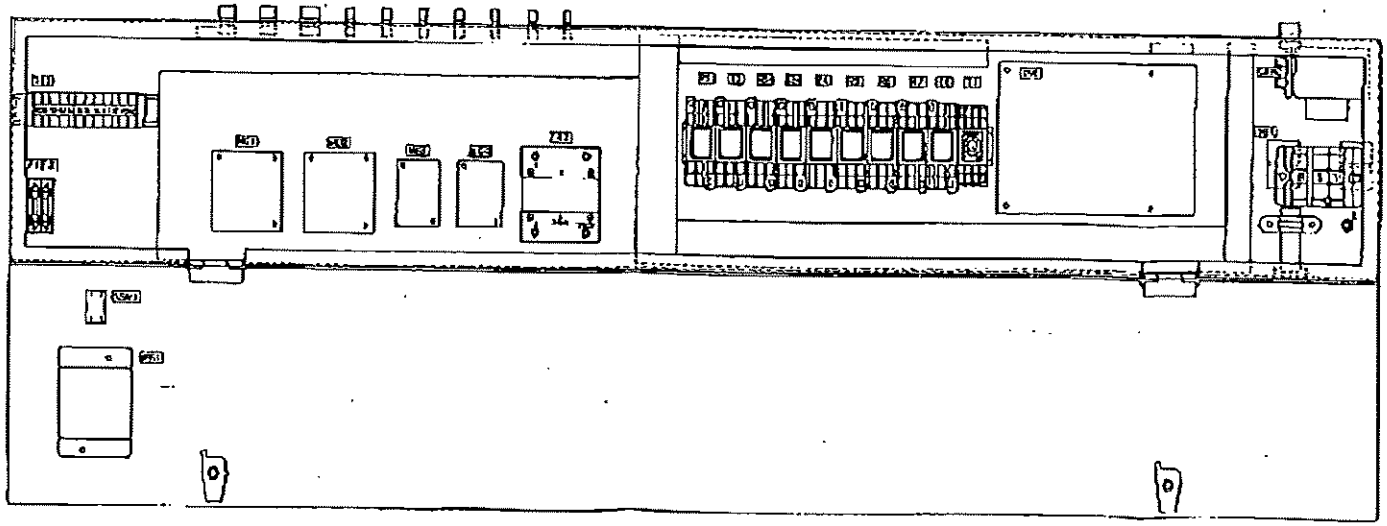


Symbol	Designation	Company name	Model No.
NFB1	Circuit breaker for wiring	[illegible]	[illegible] 50A
F1~F4	Fuse	[illegible]	[illegible] 2A (AC250V)
L1	Power lamp	Maruyasu	PAD-200V (AC200V)
PB1~L2	Stop switch and lamp	Maruyasu	PAD-200-01 (AC200V)
PB2~L3	Starting switch and lamp	Maruyasu	PAD-200-51 (AC100V)
L4	Idling lamp	Maruyasu	PAD-204-Y (AC100V)
L5	Emergency indicator lamp	Maruyasu	PAD-204-B (AC100V)
TH1	Motor thermal switch	[illegible]	
TH2	Overheat prevention temperature control switch	[illegible]	
PS1	Pressure switch	[illegible]	[illegible]
LM1	Belt meander boundary limit switch upper right	Omron	Z-15GW4-B
LM2	Belt meander boundary limit switch upper left	Omron	Z-15GW[illegible]-B
LM3	Belt meander boundary limit switch lower right	Omron	Z-15GW[illegible]-B
LM4	Belt meander boundary limit switch lower left	Omron	Z-15GW[illegible]-B
LM5	Belt meander control limit switch upper right	Omron	Z-15GW2-B
LM6	Belt meander control limit switch upper left	Omron	Z-15GW2-B
LM7	Belt meander control limit switch lower right	Omron	Z-15GW[illegible]-B
LM8	Belt meander control limit switch lower left	Omron	Z-15GW[illegible]-B
R1	Upper belt meander control valve	[illegible]	VV-[illegible] (AC200V)
R2	Lower belt meander control valve	[illegible]	VV-[illegible] (AC200V)
R3~R8	Control relay	Omron	LY-2 (AC200V)
T	Idling timer	Omron	H3Y-4 (AC100V)
CA1	Thermocouple (Upper)		
CA2	Thermocouple (Lower)	Shinko	
TC1	Temperature controller (Upper)	Shinko	[illegible] 0~300°C (AC100V)
TC2	Temperature controller (Lower)	Shinko	[illegible] 0~300°C (AC100V)
H1~H12	Sheathed heater		[illegible]W
CV1	Motor control panel	[illegible]	[illegible]
VR1	Speed setting knob	[illegible]	[illegible]
CU1	[illegible] capacitor	[illegible]	[illegible]
TPX1	[illegible] switch	[illegible]	[illegible]

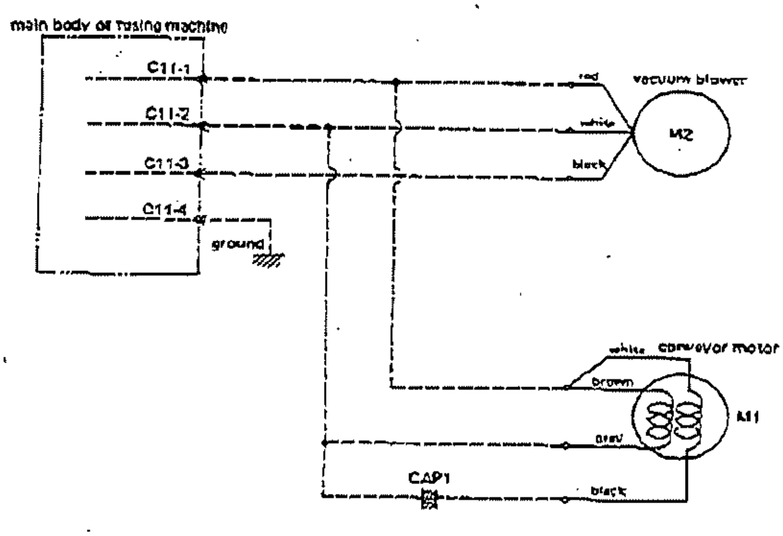
Symbol	Designation	Company name	Model No.
M1	Belt drive motor	National	GV6P-D6C 0.1 KW 1/50 (AC200V)
TG1	Speed generator		
TB1	Terminal base (For power supply)		TC-60C 3P
TB2	Terminal base (For heater)		CT-15 12P
C1	Nylon connector 15P	Molex	1375R 1375P
C2	Nylon connector 12P	Molex	1360R 1360P
C3	Nylon connector 8P	Molex	1292R 1292P-1
C4~C7	Nylon connector 4P	Molex	1490R 1490P-1
C8	Nylon connector 3P	Molex	1396R 1396P-1
C9~C10	Nylon connector 2P	Molex	1546R 1546P-1
C11	Nylon connector 8P	Molex	1292R 1292P-1
TR1	Transformer	Kasuga	DVS-650 DVS-1000
TR2	Transformer	Kasuga	DVS-00
MC3, MC4	Electro magnetic contactor	Fuji	SRCa-3631-02 4a (AC200V)

JSF-600 Parts installation diagram



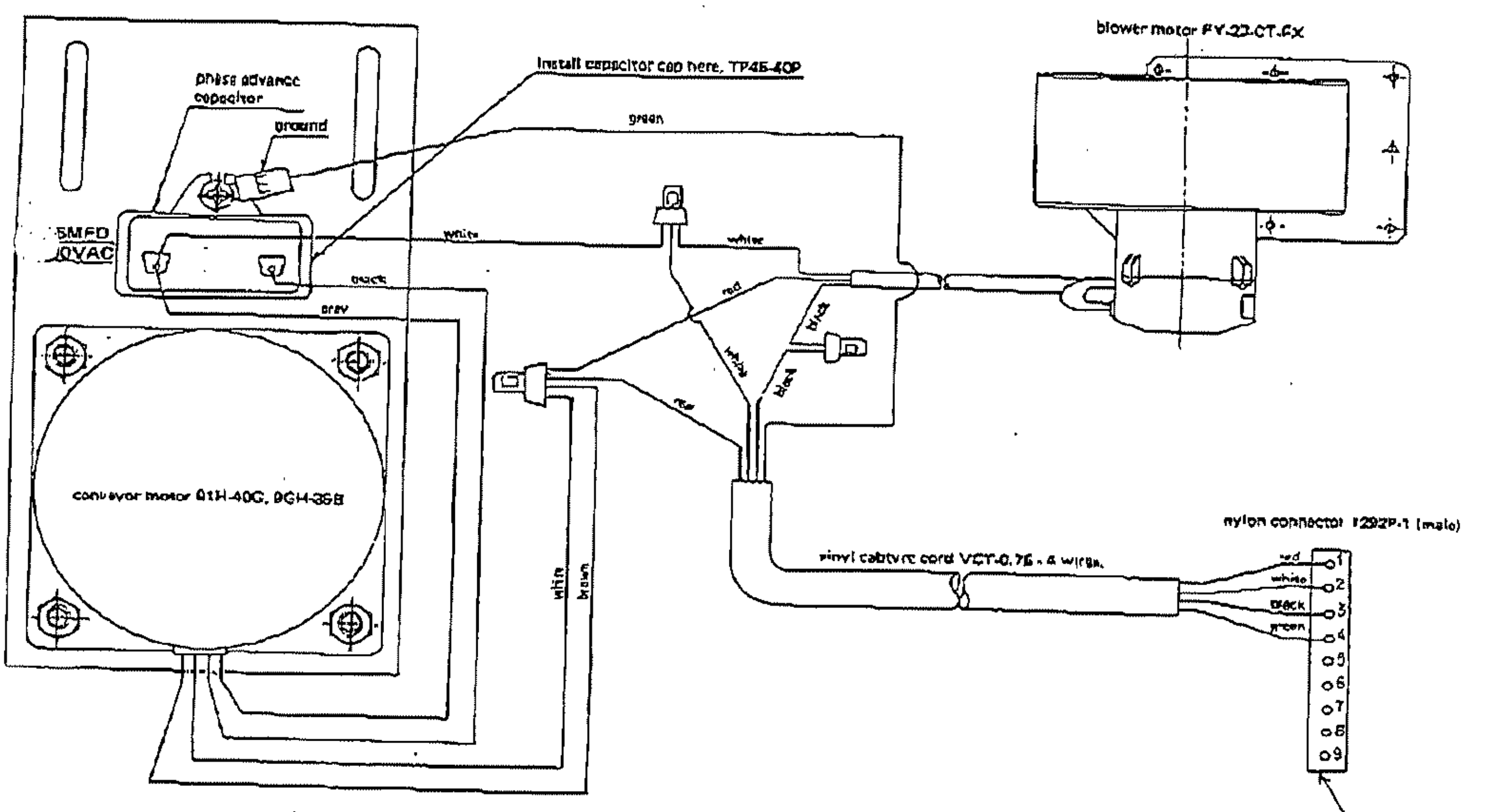


Control circuit diagram



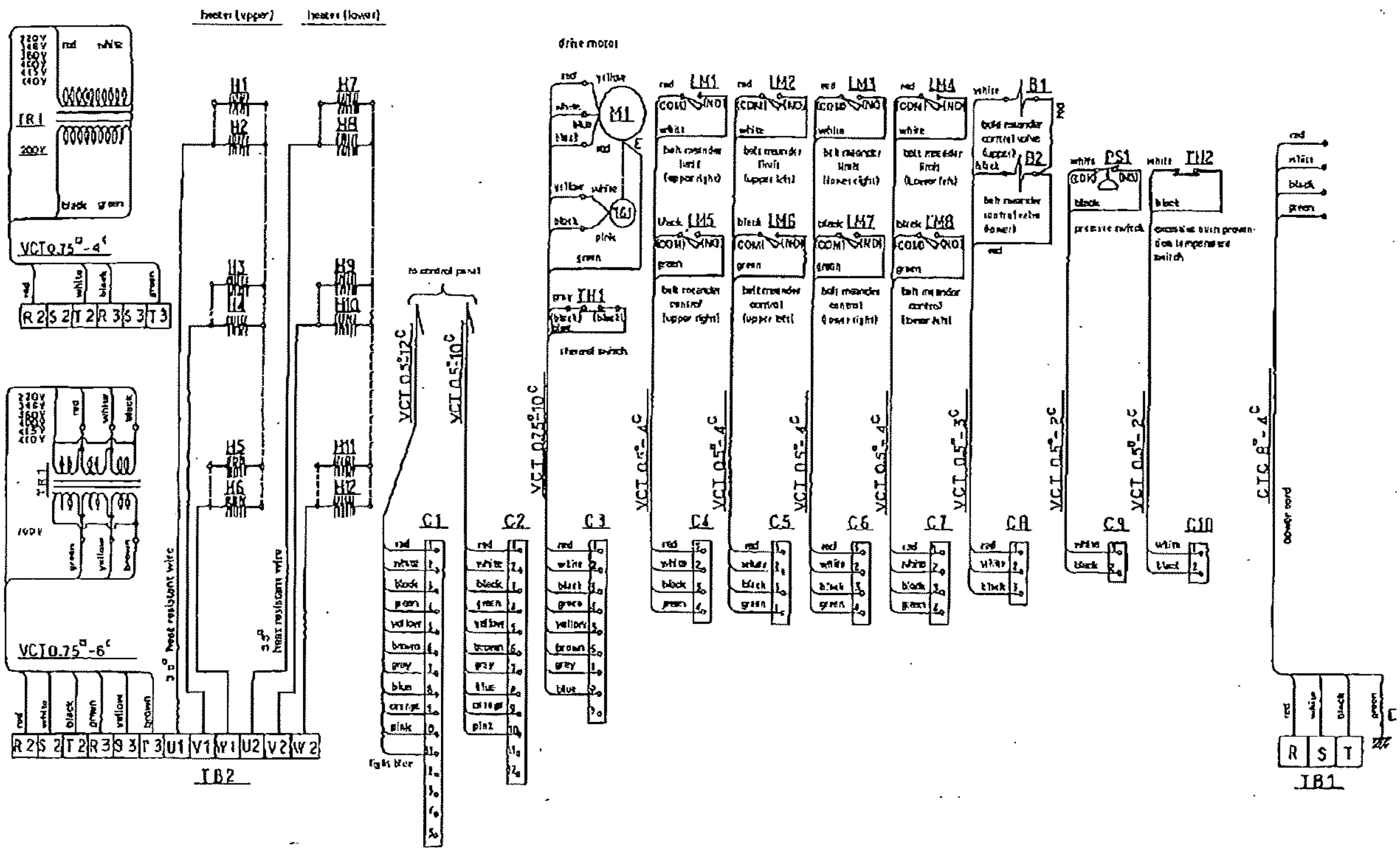
Symbol	Name	Manufacturer	Model number	
M1	conveyor motor	MATSUSHITA	91H 40G	(AC200V)
CAP1	phase advance capacitor	MATSUSHITA	2.5 MFD	(400 VAC)
M2	vacuum blower	MATSUSHITA	FY-23-CT-FX	(AC200V)
C11	nylon connector	MOLEX	1292P-1 1292R	(male) (female)

JSF-900V Wiring diagram

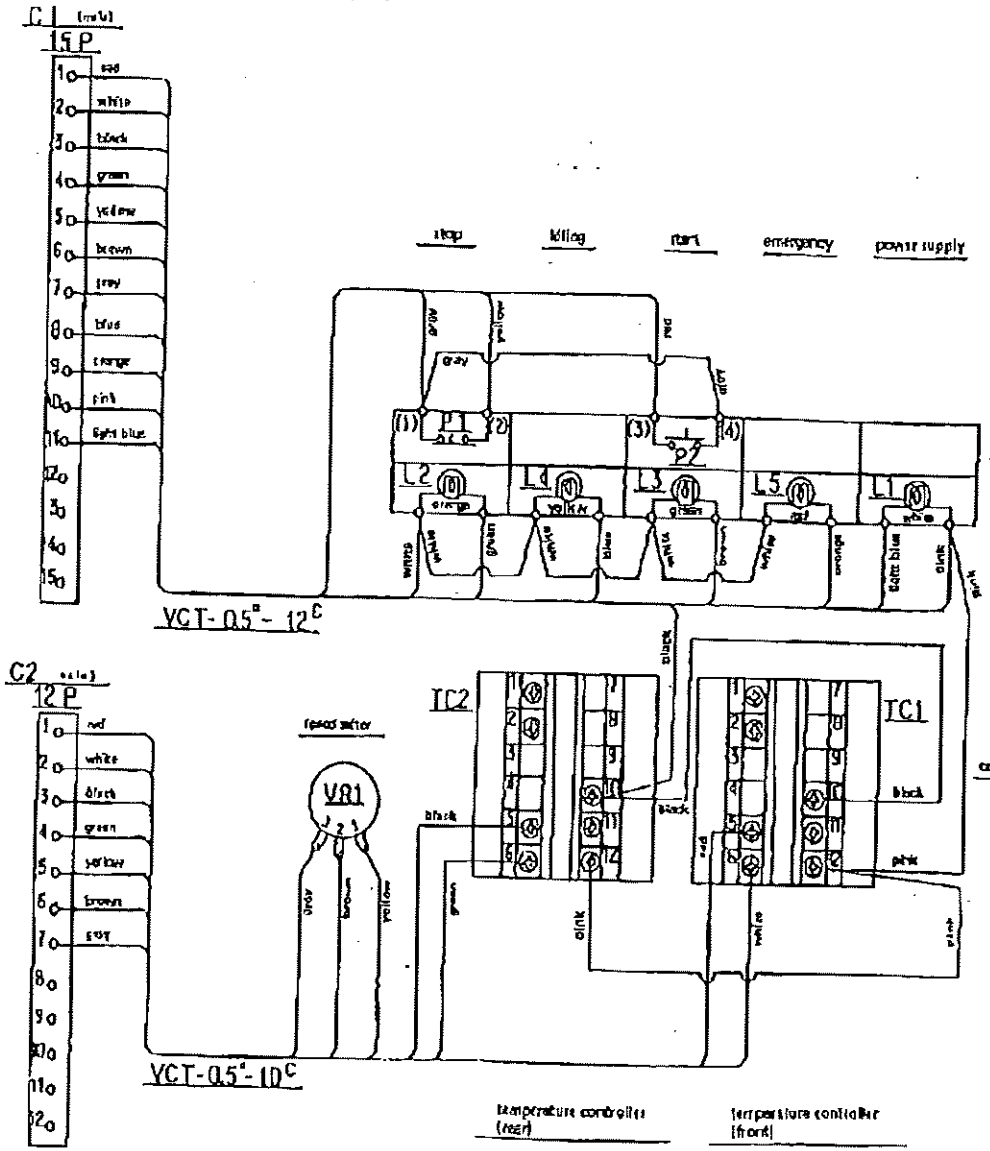


- 13 -

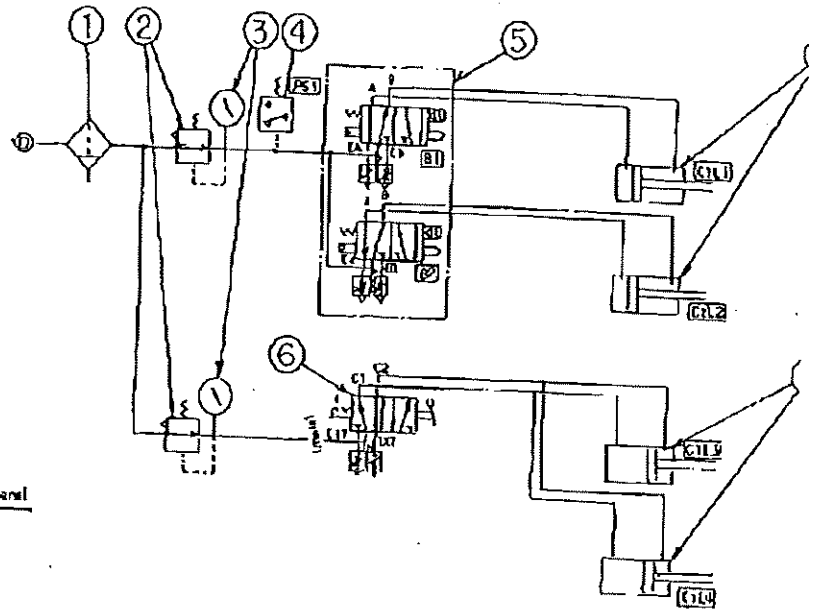
JSF-800 Wiring diagram



JSF-900 Wiring diagram



JSF-900 Pneumatic Circuit Diagram



No.	Part number	Part name	Q'ty
①	PAF02160000	air filter	1
②	PAR01160000	reducing valve	2
③	PAG01140000	pressure gauge	2
④	F580209A000	pressure switch	1
⑤	PVA01570000	solenoid valve	1 set
⑥	PAV01160000	air valve	1
⑦	PAC030025A0	mezzer normal cylinder	2
⑧	PAC030050B0	press cylinder	2

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