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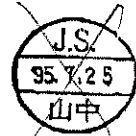
From Juki  
AKANO

# JUKI®

## JSF-900 SERIES

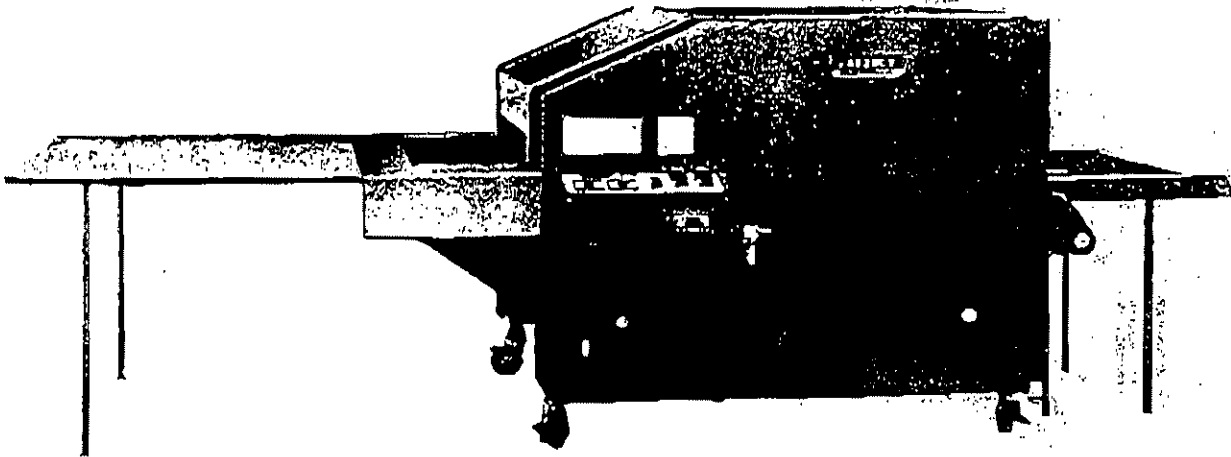
### Continuous Fusing Machine

### Instruction Book & Parts List



~~J.S. 山中~~

JSF-900 取扱の内、先租送信にてお分 FAX 致し  
(P1~P8.) 以上よりレシ印取へ致し。



**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)

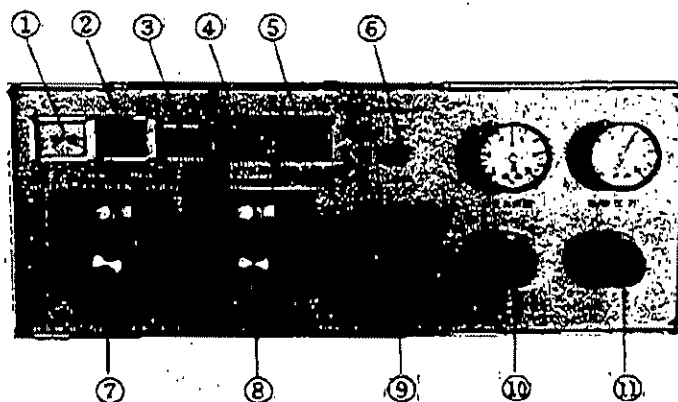
Voltage (V)	200	220	346	380	415	440
Current	33A or more	30A or more	19A or more	17A or more	16A or more	15A or more

- (2) This machine is air-driven. Since an air pressure of 6 kg/cm<sup>2</sup> 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<sup>2</sup>.
- (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 8 kg/cm<sup>2</sup>.
- (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.

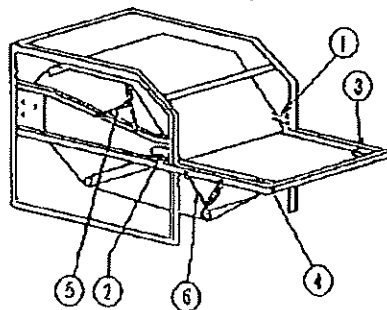


- ① power lamp
- ② emergency lamp
- ③ starting lamp and switch
- ④ idling lamp
- ⑤ stop lamp and switch
- ⑥ pressure switch
- ⑦ upper (front) temperature controller
- ⑧ lower (rear) temperature controller
- ⑨ heating time
- ⑩ pressure adjustment
- ⑪ control pressure

- (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 operations 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) Emergency  
 (1) When the belt meanders abnormally, if the control pressure has dropped to 5 kg/cm<sup>2</sup> 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). First, 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.



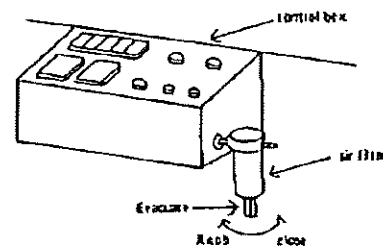
- (1) Limit switch lever for control of the upper belt on the right side of the machine  
 (2) Limit switch lever for control of the upper belt on the left side of the machine  
 (3) Limit switch lever for control of the lower belt on the right side of the machine  
 (4) Limit switch lever for control 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 alcohol spray or dilution liquid.  
 (Be careful that dilution 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 use in the scraping plate and remove the adhesive and scraps of cloth ratcheting to the left edge using a soft cloth.  
 If the left 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.

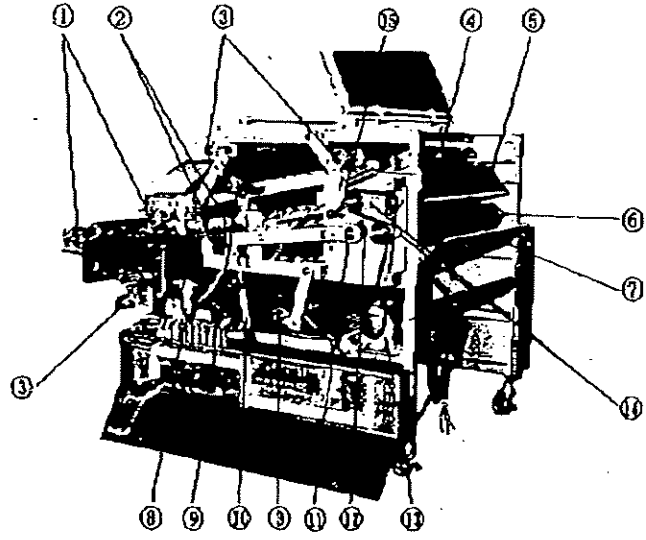
### Specifications

Item	Specifications
adhesion width	900 mm
adhesion length	no limit
pressurization method	air driven silicon rubber roller pressurization
pressure	0.5 kg/cm <sup>2</sup> - 4 kg/cm <sup>2</sup>
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. 10 m/min 60 Hz max. 11.7 m/min
belt control method	air method, meander control method
motor	variable speed motor IECM 200Y
dimensions when installed	width, 1655 x length, 3155 x height, 1230
weight	325 kg
power supply	3-phase 11 kW

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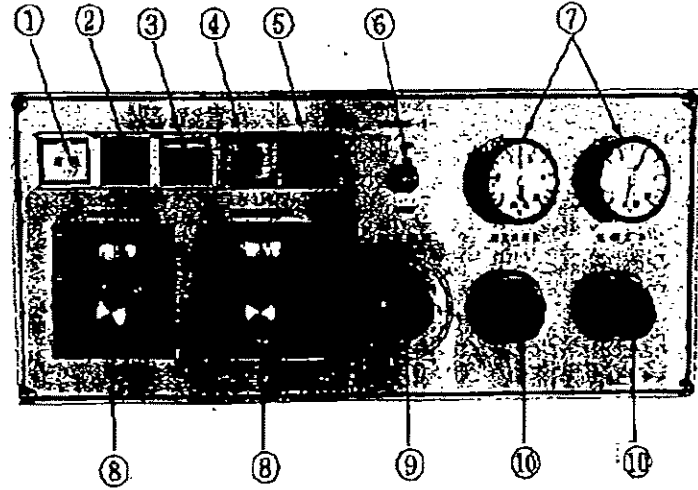
Parts List

[1] Main box



Part number	Part name	Quantity
① PBF10628026	Flange-type unit	4
② P14D1088000	Mount	12
③ PBF20327018	Flange-type unit	8
④ P18D1098000	Upper belt	1
⑤ P2003098000	Upper scraping edge	1
⑥ P2017717000	Scraping edge	1
⑦ P1802098000	Lower belt	1
⑧ PAF02160000	Air filter	1
⑨ PAC030025A9	Meander control cylinder	2
⑩ PAC030060B0	Press cylinder	2
⑪ PBF25347017	Flange-type unit	2
⑫ P2212098000	Press roller	1
⑬ P6801098000	Variable speed motor	1
⑭ PBF25901103	Flange unit	4
⑮ PBF20780017	Flange unit	2

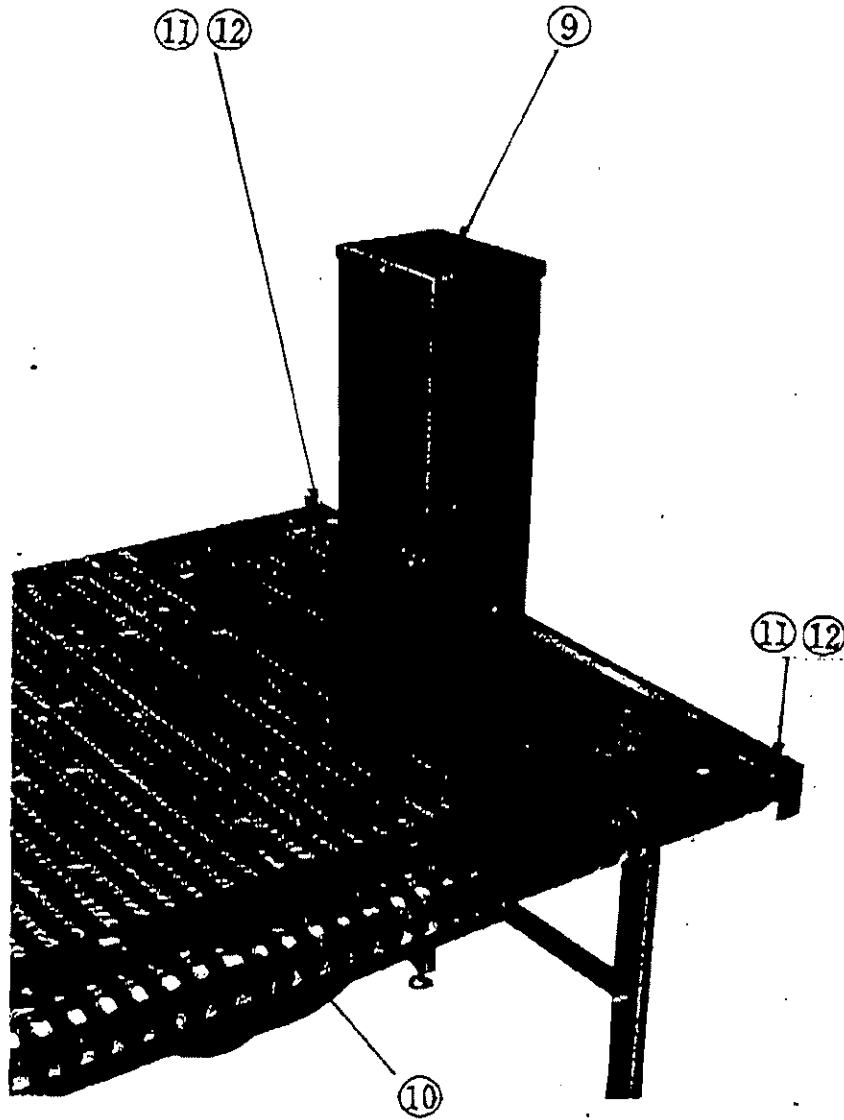
[2] Control panel



Part number	Part name	Quantity
① P590103A000	Indicator lamp (power supply)	1
② P590203A000	Indicator lamp (energy)	1
③ P570203A000	Illuminated pushbutton switch (start)	1
④ P5901098000	Indicator lamp (tidling)	2
⑤ P570109A000	Illuminated pushbutton switch (stop)	1
⑥ PAVD1180000	Air valve	1
⑦ PAGD1140000	Manometer	2
⑧ PG702098000	Temperature controller	2
⑨ P6801098000	Potentiometer	1
⑩ PAFD1160000	Pressure reduction valve	2

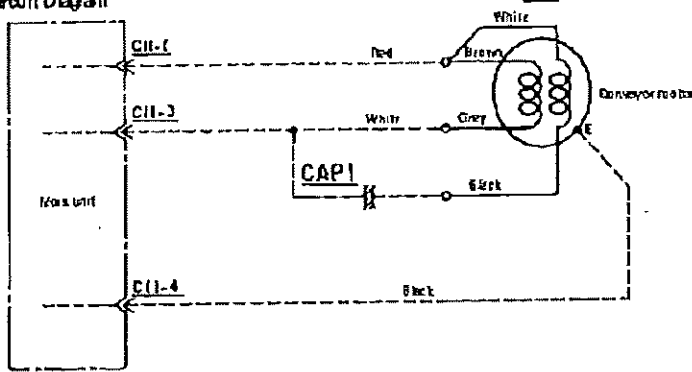


Rear Conveyor Part of JSF-900 With Vacuum No. 2



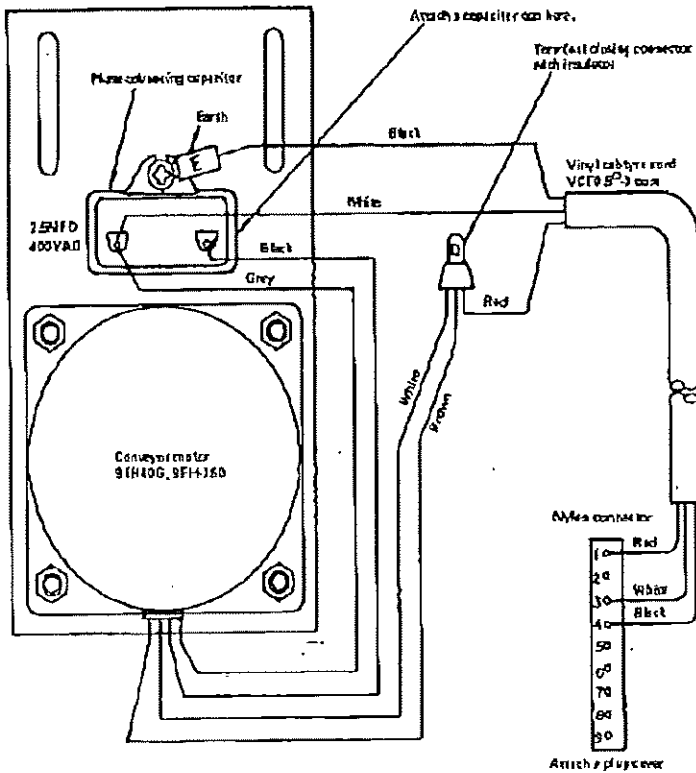
No.	Part number	Part name	Q'ty
9	P111209BV00	exhaust filter	1
10	P180109BV00	conveyor belt	30
11	PBR15351110	bearing (6202Z2)	4
12	RC1380001K0	shaft stop ring (C15)	4

Control Circuit Diagram

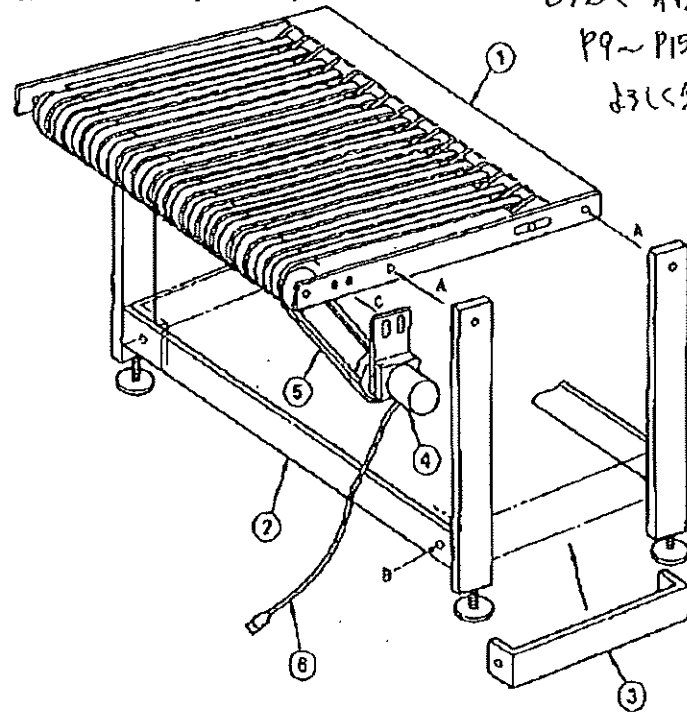


Symbol	Description	Maker	Type number
M1	Conveyor motor	Nittanhitu	9FH-40B, 9FH-30B (AC200V)
CAP1	Phase-advancing capacitor	Nittanhitu	2.5MFD (400VAC)
CII	Nylon connector (9-pole)	Nolex	1292P-1 (Male) 1292R (Female)

Machine Wiring Diagram



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



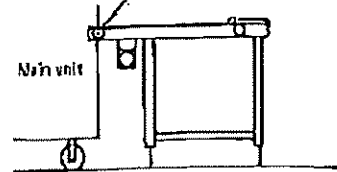
JS 小中段  
印色 材料の取扱い  
P9~P15 FAX 取付時  
33LC 30P 取付時



①	Conveyor 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

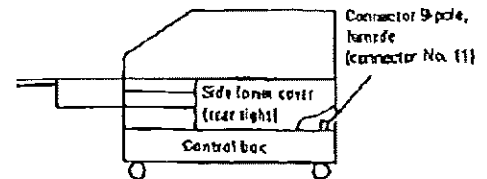
Connecting the rear conveyor to the main unit

1) Connection to the main unit  
Fit the conveyor into the main unit so that the conveyor rollers end meets the rear end of the main unit frame.

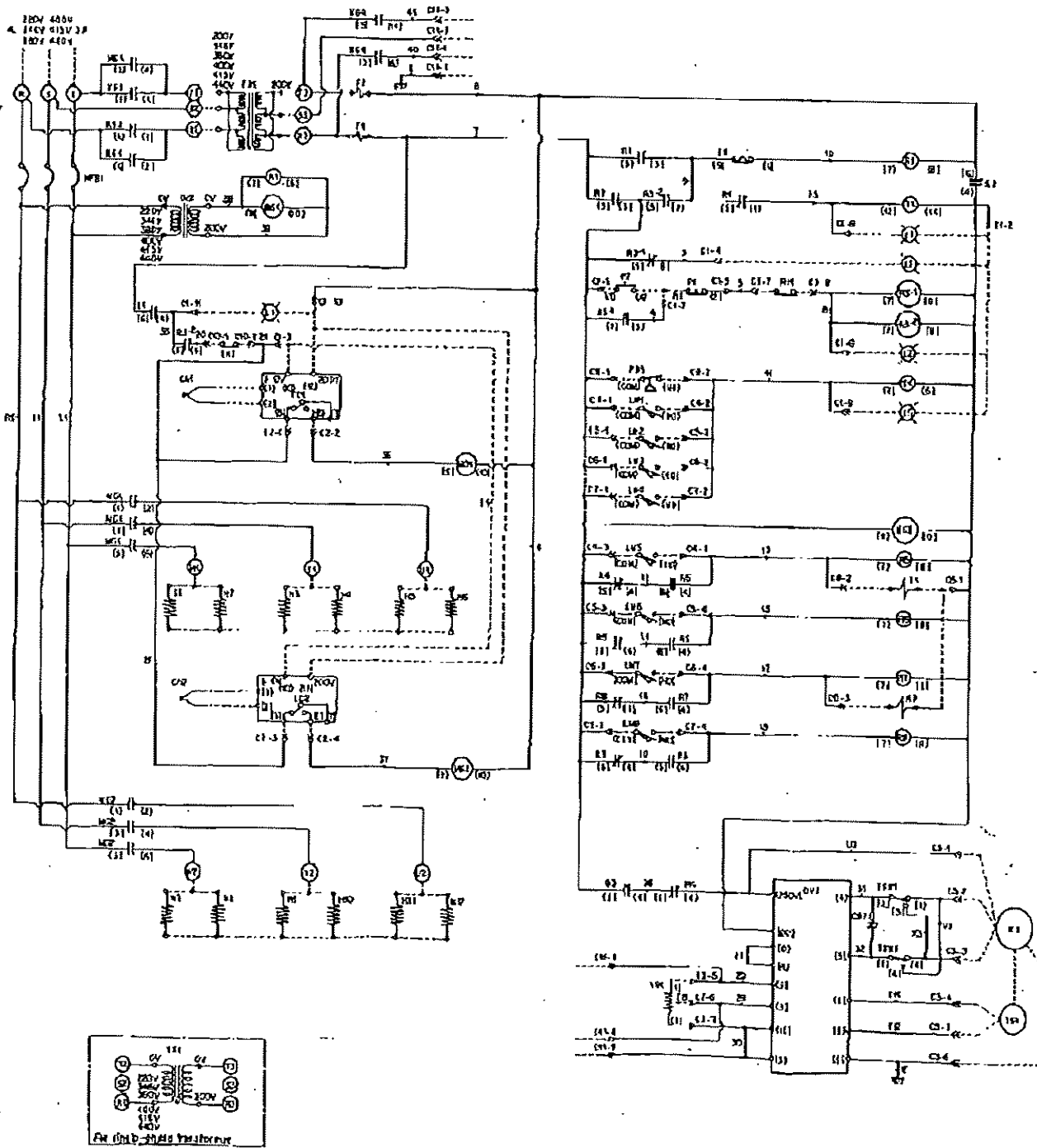


2) Power connection

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



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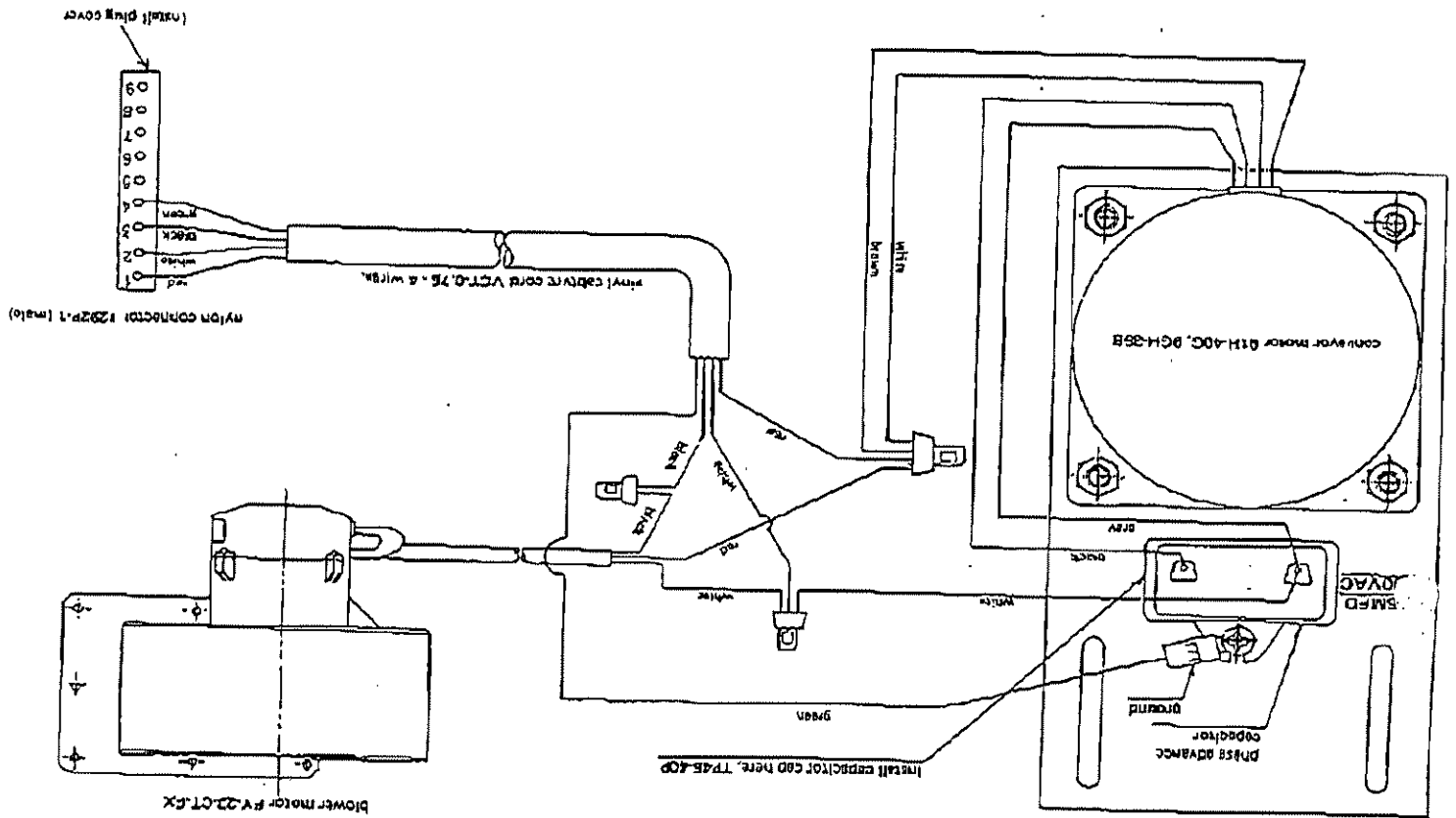


Part No	Design Cont	Company name	Model No
J8F-900	Engine control circuit	Keppel	W835E 55A
R1 - R4	Relay	Siemens	5Y161 2A (AC250V)
L1	Power lamp	Maruyama	P40-200V (AC100V)
R5 - R2	Relay	Maruyama	P40-200V (AC100V)
R2 - R3	Relay	Maruyama	P40-200V (AC100V)
L4	Warning lamp	Maruyama	P40-200V (AC100V)
L5	Emergency indicator lamp	Maruyama	P40-200V (AC100V)
YH1	Water level sensor	Edwards	
YH2	Overhaul prevention sensor	Edwards	
PS1	Pressure sensor	Sidense	15-37H-C2
LM1	Relay	Omron	Z154W-B
LM2	Relay	Omron	Z154W-B
LM3	Relay	Omron	Z154W-B
LM4	Relay	Omron	Z154W-B
LM5	Relay	Omron	Z154W-B
LM6	Relay	Omron	Z154W-B
LM7	Relay	Omron	Z154W-B
LM8	Relay	Omron	Z154W-B
R1	Relay	Sidense	YV-100-05-02 (AC200V)
R2	Relay	Sidense	YV-100-05-02 (AC200V)
R3 - R8	Relay	Omron	LY-2 (AC200V)
I	Indicator	Omron	H2Y4 (AC200V)
TR1	Thermocouple (Upper)	Shinko	
TR2	Thermocouple (Lower)	Shinko	
CU-1	Control unit	Shinko	A070-R10-R07-E (AC100V)
CU-2	Control unit	Shinko	A070-R10-R07-E (AC100V)
III - III D	Control unit	Shinko	
CUV	Control unit	Shinko	CUV-001-15A
YH1	Water level sensor	Edwards	YH-15 5A 10 10V
CU-1	Control unit	Shinko	CUV-001-15A
TPM1	Pressure sensor	Edwards	S-05

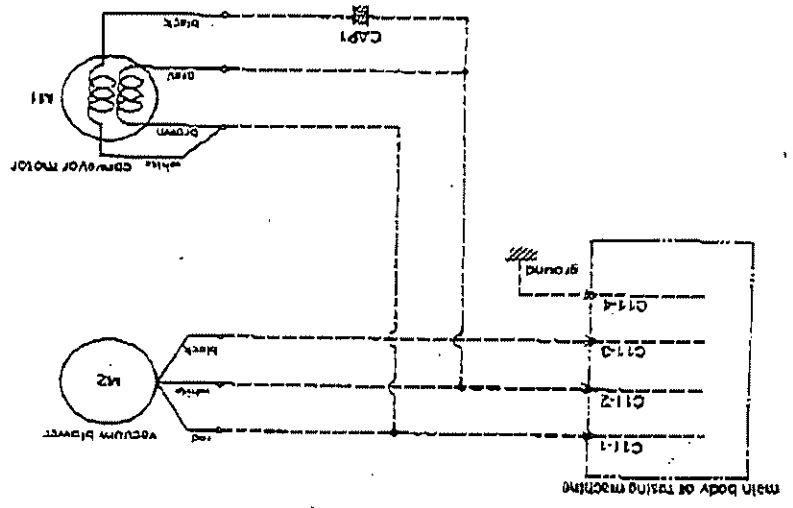
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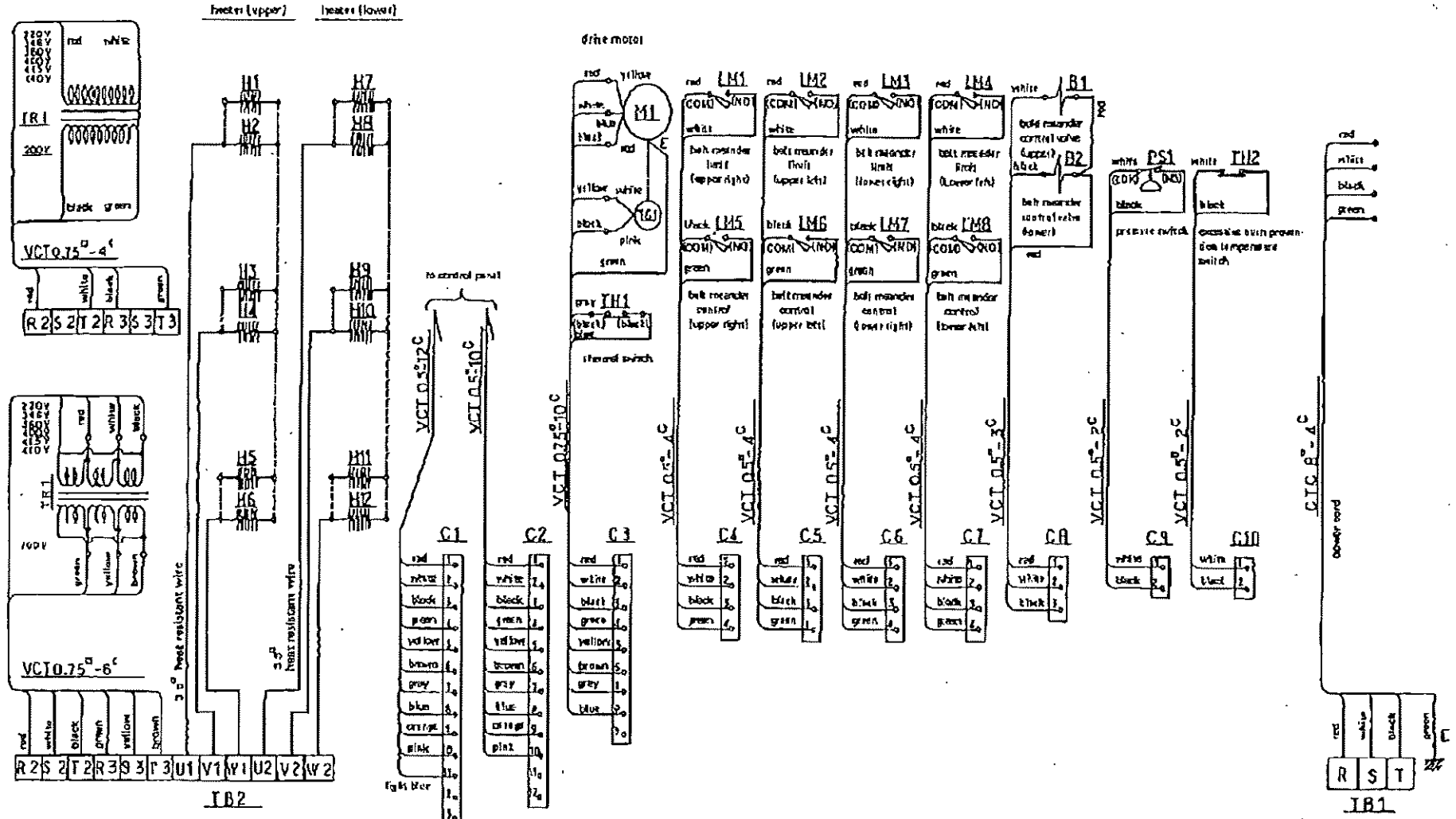




Symbol	Name	Manufacturer	Model number
M1	conveyor motor	MATSUSHITA	81H 40G (IAC200V)
CAP1	phase advance capacitor	MATSUSHITA	2 6 MFD (400 VA01)
M2	vacuum blower	MATSUSHITA	FY-23-CT-FX (IAC200V)
C11	nylon connector	MOLEX	1202P-1 (female)



JSF-800 Wiring diagram

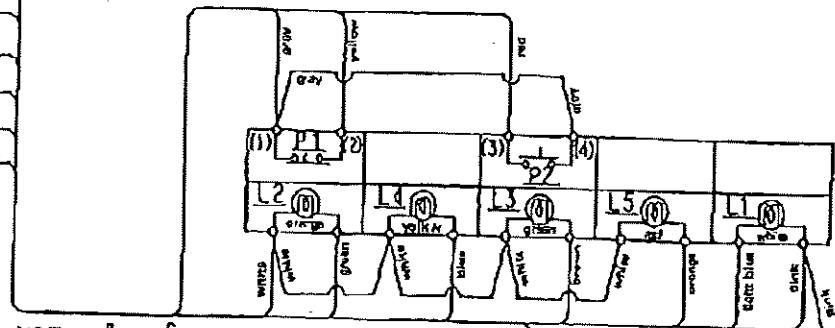


JSF-900 Wiring diagram

C1 (16x1)

15 P
10 red
20 white
30 black
40 green
50 yellow
60 brown
70 grey
80 blue
90 orange
100 pink
110 light blue

stop    Kilog    start    emergency    power supply

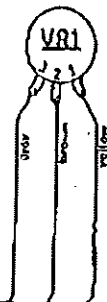


VCT-0.5°-12°C

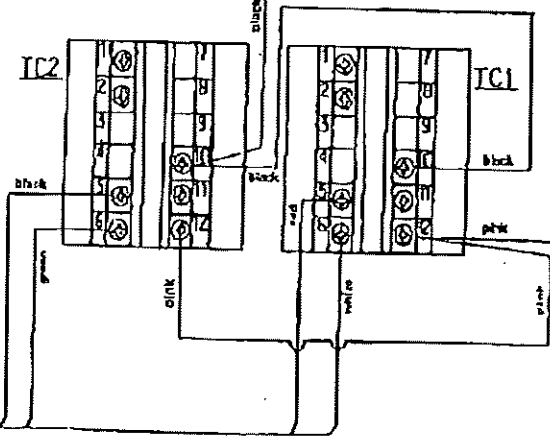
C2 (12x1)

12 P
10 red
20 white
30 black
40 green
50 yellow
60 brown
70 grey
80 blue
90 orange
100 pink
110 light blue
120

pressure meter



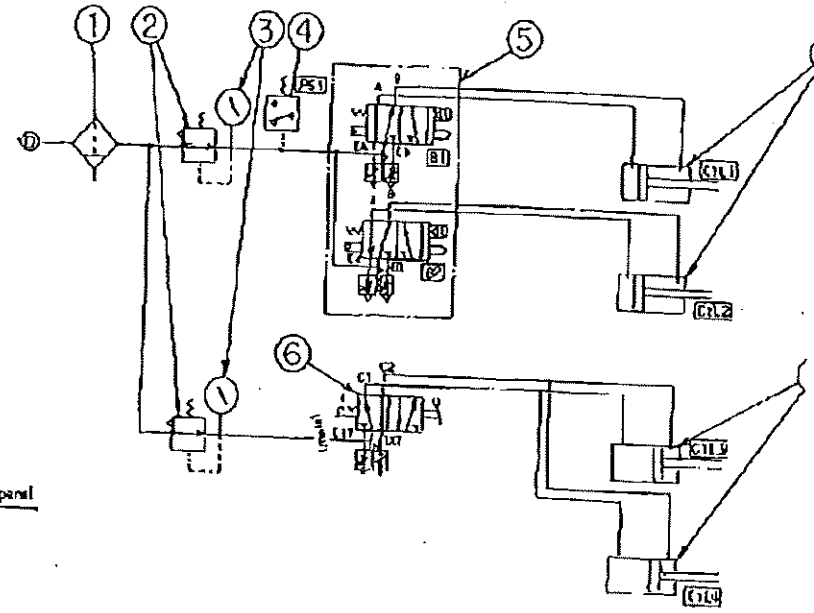
VCT-0.5°-10°C



temperature controller (rear)    temperature controller (front)

control panel

JSF-900 Pneumatic Circuit Diagram



No.	Part number	Part name	Q'ty
①	PAF02160000	air filter	1
②	PAP01160000	relaxing valve	1
③	PAG01140000	pressure gauge	2
④	PEB0208A000	pressure switch	1
⑤	FVA01570000	relaxoid valve	1 set
⑥	PAV01180000	air valve	1
⑦	PAC030023AS	mezzder control cylinder	2
⑧	PAC020050B0	press cylinder	2

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