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EC Declaration of Conformity

We declare under our sole responsibility that this product is in conformity with the following standards or standardization documents: EN60204-1: 1997, DIN ISO EN12100-1/ -2:2004, EN1050: 1996 and EN294: 1992 according to the provisions of the regulation 98/37/EC,2006/95/EC,and 89/336/EEC.

Name and Signature

Date and Place

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

1. Safety Introduction

1.1. Foreword

The **Hydraulic Crimping Machine** is in the range of professional machinery for crimping the joint and air, hydraulic and water hose, made by During design & construction of this machine in addition to local standards and some relative standards for the safety design.

DIN EN ISO 12100-1	2004	Safety of machinery	Safety of machinery. Basic concepts, general principles for design. Basic terminology, methodology.
DIN EN ISO 12100-2	2004	Safety of machinery	Safety of machinery. Basic concepts, general principles for design. Technical principles
EN 414	1992	Safety machinery	Rules for the drafting and presentation of safety standards.
EN 1050	1996	Safety of machinery	Risk assessment.
EN 294	1992	Safety of machinery	Safety distances to prevent danger zones being reached by the upper limbs.
EN 982	1997	Safety of machinery	Safety requirements for air power systems and components - Hydraulic.
EN 60204-1	1997	Safety of machinery	Electrical equipment of machines. Part 1.
EN 60204-6-2	2005	Electromagnetic compatibility	Generic emission standard.
EN 60204-6-4	2005	Electromagnetic compatibility	Generic emission standard.

1.2. Using Restriction

The - series are suitable for crimping the joint and air, Hydraulic and water hose. Be careful for rigidity of the working material(s), don't try capacity that extend the specification.

Generally, this machine will be installed on the following conditions:

- 1) Supply voltage: 0.9 - 1.1 nominal supply voltage
- 2) Source frequency: 0.99 - 1.01 nominal frequency
- 3) Ambient temperature: 5°C - 40°C
- 4) Altitude: shall be at altitudes up to 1000m above mean sea level
- 5) Relative humidity: not exceed 50% at 40°C
- 6) Atmosphere: Free from excessive dust, acid fume, corrosive gases and salt.
- 7) Avoid exposing to direct sunlight or heat rays which can change the environmental temp.
- 8) Avoid exposing to abnormal vibration.
- 9) Please add the **Greasing** oil timely.

If you have any question, please refer to our agency or company.

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

1.3. Safety Instruction

1. **Read instruction manual before operating the machine for your safety.**

Person(s) who operate the machine must be trained, read and understood to use the safety measures, and possess the ability to obey and execute the regulation stated in this manual.

2. **Ground all machines.**

A terminal for the connection of the external ground conductor is provided in the vicinity of the associated phase conductor terminals with marked "PE". It should make sure the "PE" terminal being connection before power supply.

3. **Keep guards in place and working area clean.**

Keep guards in place and in working order.

4. **Don't use in dangerous environment.**

Don't use machines in damp or wet locations, or expose them to rain.

Keep working area well lighted and ventilation.

Do not operate electrical machines near potentially explosive environment.

5. **Keep children and visitors away.**

All children and visitors should be kept at a safe distance from work area.

6. **Wear proper apparel.**

No loose clothing, neckties, rings bracelets, or other jewelry to get caught in moving parts.

Wear protective hair covering to contain long hair.

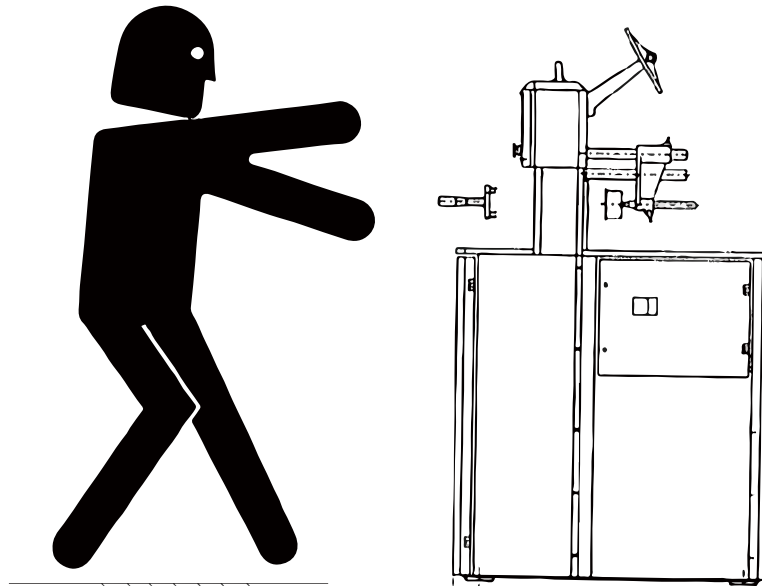
Please wear glove while operation, cleaning and repair.

7. **Stay alert.**

Watch what you are doing. Do not operate machine when you are tired. Please stand in front of machine for proper position operation.

8. **Access position:**

Please see the marked on the machine mean access position for maintenance. Do not stand/acces otherno-marked area!



9. **SHUT OFF** the power, removed the products, and isolated energy before leaving the machine.
10. **Have your machine repaired by a qualified person.**
Repairs should only be carried out by qualified persons using original spare parts; otherwise this may result in considerable danger to the user.
11. **Check damaged parts.**
Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine what it will operate properly and perform its intended function. Being 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.
12. **Disposing wasted material** and wasted lubricating oil shall obey the local regulation and be deeply careful.
13. **Fire extinguisher.**
The workshop of user shall be with the fire extinguisher or other devices according to the local safaty regulations and be deeply careful.
14. **Use recommended ancillary equipment.**

If ancillary equipment is removed the original guards or safety devices shall be replaced. The connection of ancillary equipment including any necessary modification of the guarding of the machine shall not afford unprotected access to danger areas of the machine. And our authorized agency are responsible for a future connection of the machine with ancillary equipment only if we ourselves have designed such connection.

15. Setting the machine

Use special equipment e.g. gauges for setting the tool when machine standstill. The setting of machine can be carried out by the qualified person only.

The setting of machine can be carried out only when the power is disconnected from the power source.

16. Reduce the risk of unintentional starting.

Make sure switches of control panel are OFF position before operating main disconnect. Never leave machine running unattended. Turn power off from the main disconnect. Don't leave machine until it comes to a complete stop.

17. Make sure machine is disconnected from power supply:

Shut down the machine before inspection, maintenance and adjustment. Make sure that all people are away from the revolving or moving parts before testing the machine.

Make sure hand-held disconnecting device is OFF position and locked with key.

18. Reaction with emergency situation:

The extruder is provided one emergency button. It is self-latching push-button on the control panel. The emergency button is colored red and yellow background.

After emergency stop, follow the normal stop procedure and to obviate the hazard soon. Please see the circuit diagram to connect emergency stop circuit with other ancillary equipment by qualified engineer.

19. Electrical equipment

Keep electrical equipment in a good and safe performance is necessary.

1) Have to connect to earth.

2) Electrical equipment shall withstand the effects of transportation and storage temperature within a range of -25°C to 55°C and for short periods not exceeding 24 hours at up to +70°C .

20. Particular safety rule for storage condition of machine:

1) If the machine is not be operated for a long period of time it shall be stored with the appropriate protection for the ingress of dust or the other substance in a suitable environment and place.

2) During storage, any kind of power should be disconnected, and clean the machine.

21. Never open the protective cover or door while the machine is running. Never attempt to change the settings of all protective devices without consulting

When the machine is out of order while running, shut it down and turn to serviceman for help as soon as possible.

22. The noise level of this machine is testing on continuous running.

1) Airborne noise emission by the -series are established on the basis of measurements made on the machinery.

2) The workstation for the measurement of enission sound pressure level is defined according to European Standard ISO3746.

3) A weighted sound pressure level measuring under load is less than 80.0 dB (A).

23. Ancillary equipment, the presence of which prevents access to a danger area of the machine



and which can be removed without the use of a tool, shall be interlocked with the machine control circuit in the same way as the movable guard for the area concerned.

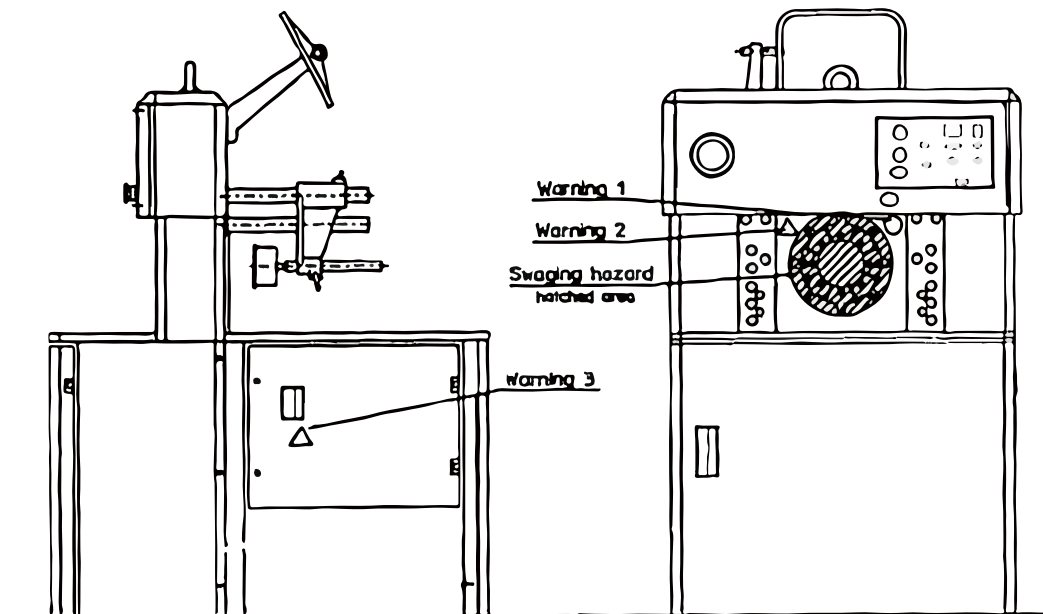
24. If machine intend to be used together with ancillary equipment it shall be so designed that the machine can only be operated if the ancillary equipment is connected in accordance with the above listed requirements.

25. Before cleaning and maintenance operations shall be carried out only when the machine is stationary.

26. The training of the user/operator should be carried out by our authorized agent or service engineer in an oral/practical in site of the ordered blown film line, including protective device explanation, mechanism, personal protective equipment, operation/use.

*Any other maintenance is welcome to be contacted manufacturer or our distributor.

1.4 Danger zones and warning labels



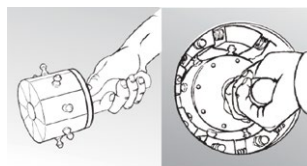
(1)



(2)



(3)



(4)

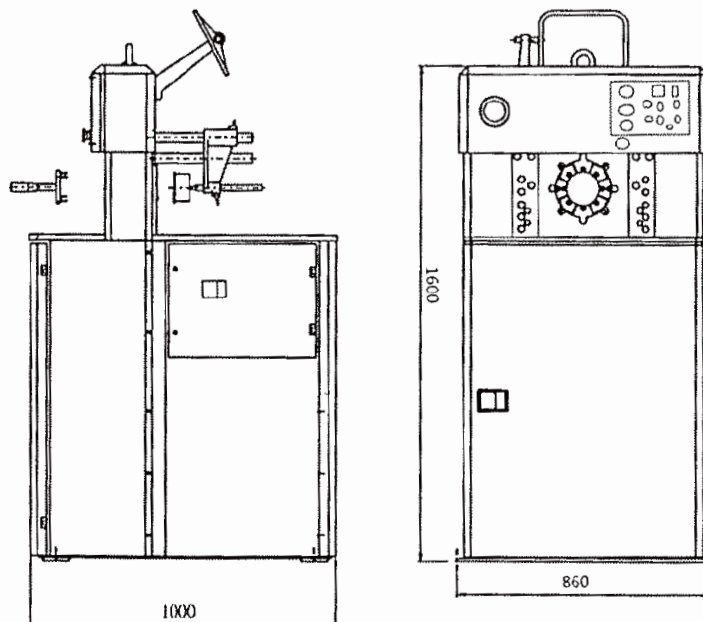
- 1) Do not put your hands inside the dies while the motor is running !
- 2) When swaging a fitting , hold the hose far enough to avoid swaging your hand !
- 3) High voltage. The electric box is to be opened only by a professional electrician !
- 4) When changing dies with the quick change tool, hold the handle as shown in the figures above. Make sure your hand will not get between the gaps of crimping finger.

2. Specification & Installation

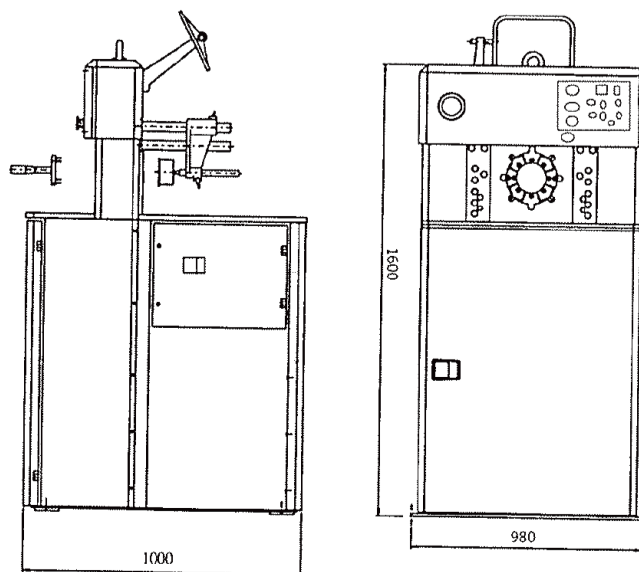


2.1. Specification:

FP120D Technical Date	Standard die sets		
Hose size	2"-4S	Code	Lenght (mm)
Swaging range (mm)	Ø4...87	32-10	55
Die type	32	32-13	55
Max opening (mm)	+65	32-16	55
Master die shoe lenght (mm)	97	32-19	55
Motor (KW)	5.5	32-22	55
Voltage (V)	220/440	32-26	55
Pump (l/min)	50	32-30	75
Swaging force (KN)	2400	32-39	75
Number of swagings / hour *	2400	32-45	90
Overall dimensions :		32-52	90
Length (mm)	860	32-57	100
Width (mm)	1000	32-64	100
Height (mm)	1600	32-69	100
Weight without oil (kg)	1200	32-74	110
*Theoretical with 1/2" hose $\Delta\text{Ø}10\text{mm}$		32-78	110



FP145D Technical Data	Standard die sets		
Hose size	4"	Code	Lenght (mm)
Swaging range (mm)	ø4...124	32-10	55
Die type	32/80	32-13	55
Max opening (mm)	+70	32-16	55
Master die shoe lenght (mm)	97	32-19	55
Motor (KW)	5.5	32-22	55
Voltage (V)	220/440	32-26	55
Pump (l/min)	50	32-30	75
Swaging force (KN)	3200	32-39	75
Number of swagings / hour *	2000	32-45	90
Overall dimensions :		32-52	90
Length (mm)	980	32-57	100
Width (mm)	1000	32-64	100
Height (mm)	1600	32-69	100
Weight without oil (kg)	1450	32-74	110
		32-78	110
		80-84	120
		80-92	120
		80-100	120
		80-108	120
*Theoretical with 1/2" hose $\Delta\varnothing$ 10mm		80-116	120



2.2 Installation of the machine:

1. The site for the machine should provide the conditions essential for appropriate space.
2. A clear area must be provided along the diagram of the machine and that's essential to permit efficient maintenance and assembly.
3. For the required space for the running machine, refer to following figures.
4. The strength must afford the matching weight and vibration.


After the machine is delivered and positioned on site, to maintain the stability of the equipment, padding for the four points at the bottom of the equipment shall be properly placed and adjust the level of the equipment and tight / fixed it.

2.3 Transporting:

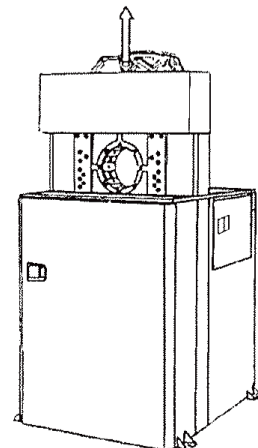
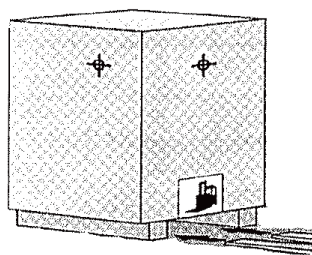


The machine shall be moved by persons who are qualified.

Persons besides the worker are not allowed to stay in the work place during transporting the machine.

1. Please refer to instruction manual in specifications and machine weight to arrange handling equipment. Be sure to use capable fork-lifter referring to lift of machine.
2. Forklift can be used in handling and shall be operated by qualified driver.
3. Before handling, make sure all movable parts are secured in their positions and all movable accessories should be removed from machine.
4. Make sure that the strength of forklift is sufficient to handle machine.
5. During handling, people are strictly prohibited from entering into the path of machine movement.
6. While transportation, Keep attention to the balance of machine.
7. About forklift position  of machine, please refer following diagram.

The fork length shall be $\cong 2/3$ machine width length.



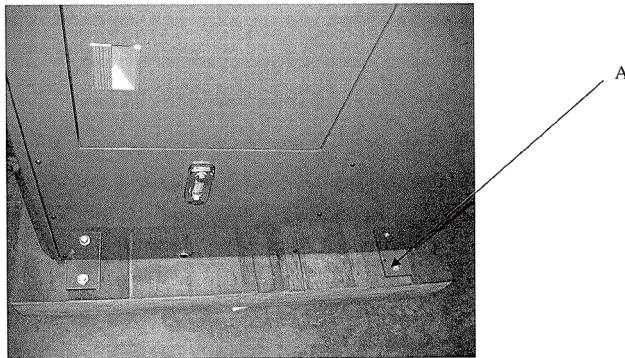
2.4 Adjustment of absorbing base

1. Before installation, the grounding with sufficient space showed as section 2.3.(Machine working area dimension) should be provided, and the ground for the installation of machinery should be flat and rigid enough.
2. After the machine to its intended installation position. The machine should be leveling by the horizontal leveling ruler and adjustable absorbing base.



3. The anchorage and leveling work carrier out by the screws show as the following.
4. After completed installation. Please check the screws of the base and safeguard. If the screws become unfastened, fasten it and examine all the attached parts and space parts with the machine.

It is recommended to screw the machine on the floor with four M12 wedge anchors (A). Boreholes in the floor: $\varnothing 12\text{mm}$, depth 55 mm.



2.5 Installation of electrical power supply:



Caution! Power supply has to be installed by a trained technician.

1. The machine should be connected the protective-earth terminal between machine and external ground before connected to the power source.
2. The cross-section of incoming supply protective conductor and each phase conductors must be in accordance with the following reference of supply conductor table. It is important to identify the voltage of source with machine. The voltage of connecting source should be marked on the electric cabinet.

Model	Recom. Fuse (400V)	Supply wire size	PE wire size
FP120D	25A>fuse>20A	5.5mm ²	5.5mm ²
FP145D	25A>fuse>20A	5.5mm ²	5.5mm ²

3. During connecting the power supply, always connect the earth conductor with yellow/green color before the connection of the other power conductor.
4. A terminal for the connection of the external ground conductor is provided in the vicinity of the associated phase conductor terminal with marked “**PE**”. It should make sure the “**PE**” terminal being connection before machine operating.
5. Connection should be made to the terminal mark **L1**, **L2** and **L3** at the connecting seat in the electrical cabinet. The Veneer Jointing Machine which electric system is equipped with one main switch, as a safety measure, the door of cabinet can't be opened unless main switch is disconnected.
6. On the contrary while disconnecting from the power supply disconnect the earth conductor with yellow/green color after the all power conductors at disconnected.
7. Always disconnect the power supply from the hand-operated disconnected device mounted on the door of electrical cabinet, before you intend to do the work of maintenance or inspection.
8. After disconnected the power for maintenance or inspection, be sure to lock the disconnecting device in “**OFF**” position.

9. When the power source is connected to the reverse phase, the chain will wrong rotary.
Please change the incoming wire L1 and L2, as show in the below.



2.6. Pneumatic system:

Prior to filling in hydraulic oil, the oil compartment should be checked for cleanliness.

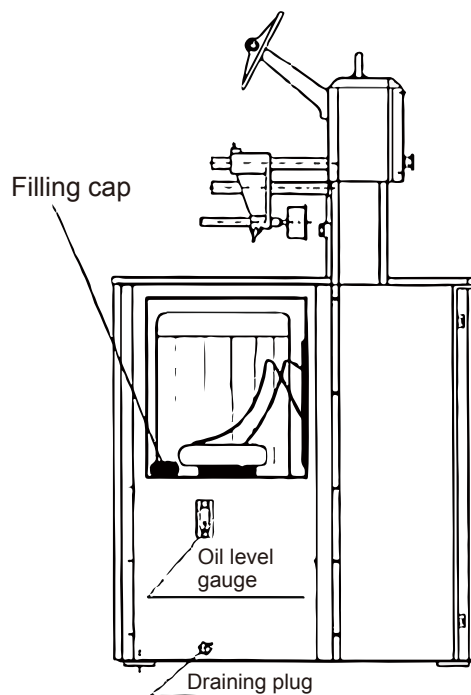
Remove vent cap. Draw gear oil through vent from oil bucket to tank.

The gear oil is poured in with the angled funnel which is the oil should reach the oil level mark, For the first time, be sure to fill 9/10 of tank.

The suction strainer of the hydraulic pump must be completely submerged in oil, otherwise the air will be drawn in and cause oil foaming.

All hydraulic oil flash point shall more then 150°C, and shall no seft-igniting/ explosive/ miscibility with water/ decomposition.

Fill the oil tank to center line of the oil level sight glass in the side plate with hydraulic oil like ESSO Nuto H 46 or equivalent. Volume of the tank is approx 135 liters.



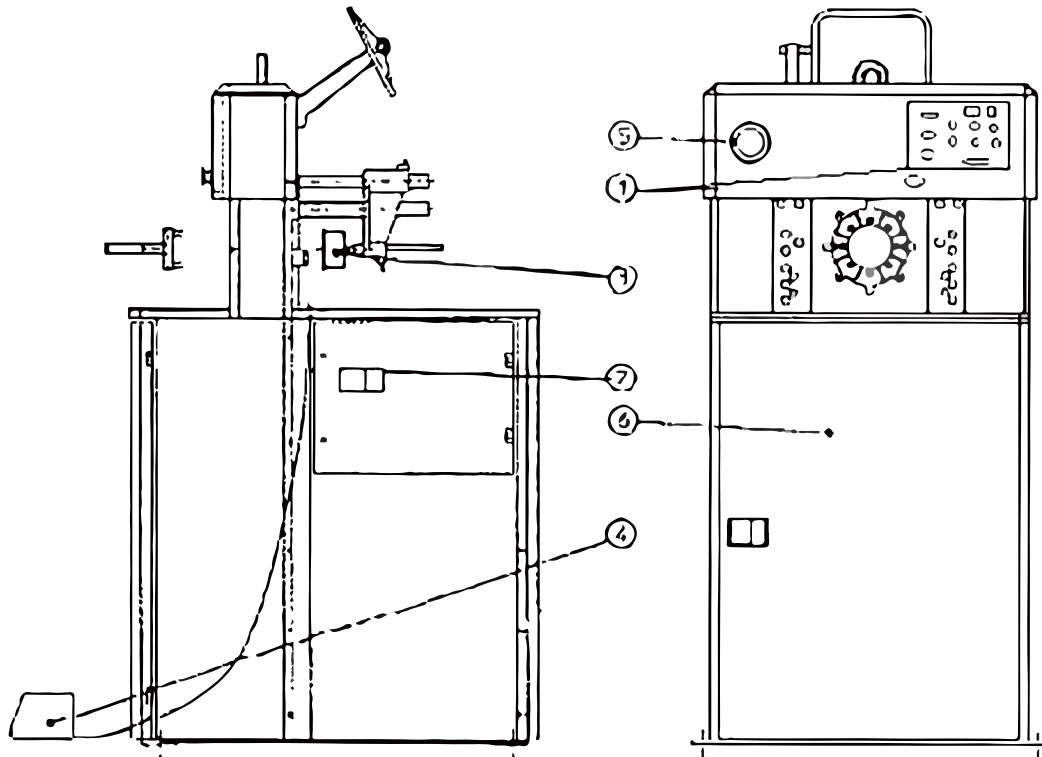
2.7. Functional tests and Re-testing:

1. **Check and tighten all the bolt/screw**
 - a) Un tighten or loosened bolt/screw, due to negligence in the assembling line or caused by the quakes during transportation, might effect unpredictable serious consequence!
Therefore, we strongly suggest that, after initial test running and before commence the normal production, please check and tighten all the bolts/screws.
Especially, check and tighten those on movable components.
 - b) Please check and tighten all the bolts/screws every two or there days in the beginning two weeks.
2. **Cleaning the machine**
 - a) Before test running, Please clean the machine, remove tools, bolt, nut, or any other article from the conveyor.
 - b) Open all the cover on this machine, check if everything is in normal.
3. **Check the machine very careful before run the machine.**
 - a) Check wires connected and the power source already connected to the power incoming terminal.
 - b) Check the machine already cleaned and without any other article on the machine.
4. The function of safety equipment shall be tested before starting machine.
Emergency stop — actuated the push button; the motor power should be shut down.
5. The function of electrical equipment shall be tested per half year normally, particular emergency push button.
6. Where a portion of the machine and its associated equipment is changed or modified, that tests shall be re-verified and retested, such as continuity test of the protective bonding circuit, insulation resistance tests, voltage tests, protection against residual voltage and functional tests.
7. Make sure tue “PE” terminal is properly connected and the machine is grounded before power connect and push “NO” the main power.
8. The mechanical parts and electrical parts must be on the position and without loosen.
9. Check any abnormal noise !
10. All identified numbers on electrical wires must be correct, check if all wire screws are properly tightened and no electric happens.
11. Turn on the main disconnecter (NFB: No-fuse Breaker) for the power source to the main cabinet, check if the voltage is correct, then on the NFB of main control panel and sub control panel.

3. Operation

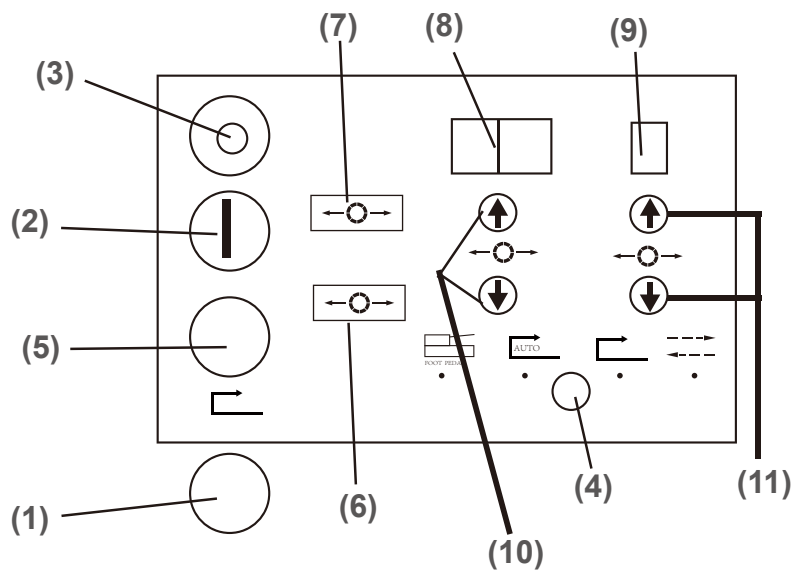


3.1. Functions of Operation Panel



- (1) Control panel.
- (2) Power supply.
- (3) When the stop device is pressed, the dies will perform a swaging-retraction cycle.
- (4) When the foot pedal is pressed, the dies will perform a swaging-retraction cycle.
- (5) Pressure gauge indicates the pressure in the hydraulic system during swaging.
- (6) Storage locker for die sets.

Control panel



(1) EMERGENCY STOP

Press this button in an emergency or when you for some other reason want to stop the machine quickly. Pressing the emergency stop push-button stops all machine functions.

The button is released by turning it clockwise (as indicated by the arrow). After an emergency stop, go on working in manual mode. Open the dies to the set retraction position, after which you can continue in the normal way if the machine is otherwise in working order.

(2) START

Press to start electric motor and control unit.

(3) STOP

This button is used to stop the machine in a normal situation. It stops both the control and the motor.

(4) MODE SELECTOR

MANUAL: Master dies can be opened by pressing retraction button (4) and Closed by pressing swaging button (5). Manual mode is used when changing dies and adjusting settings.

SEMI-AUTOMATIC: Swaging movement get started when the semi-automatic swaging button (3) is pressed. The movement can be interrupted by releasing the button. If need be, dies can be opened by using retraction button(4). Swaging goes on when the button is repressed. After reaching the swaging diameter, dies return to the retraction position of whether the button is pressed or not.

AUTOMATIC: Swaging starts when the fitting is pressed against the stop device. The movement stops if stop device is not adequately pressed by fitting. It can also be stopped by withdrawing the fitting from the stop device before it is gripped by dies. If need be, dies can be opened by using retraction button (4). Swaging goes on when the fitting is repressed against the stop device. After reaching the swaging diameter, dies return to the retraction position irrespective of whether the fitting is pressed against the stop device or not.

(5) **SEMI-AUTOMATIC:** Swaging movement get started when the semi-automatic swaging button (3) is pressed. The movement can be interrupted by releasing the by releasing the botton. If need be, dies can be opened by using retraction button (4). Swaging goes on when the button is repressed. After reaching the swaging diameter, dies return to the retraction position of whether the button is pressed or not

(6) **RETRACTION BUTTON:**

The dies will open when this button is pressed. The dies open until the button is released or the set retraction diameter has been reached. When using this button, manual mode must be selected.

(7) **SWAGING BUTTON:**

The dies will close when this button is pressed. The dies move until the button is released or the set swaging diameter has been reached. When using this button, manual mode must be selected. When the machine is started with the mode selector in manual mode, swaging cannot be started using the swaging button before first selecting O-position or opening dies with retraction button (4). Dies will not open if they are already in the set retraction position.

(8) **SWAGING VALUE**

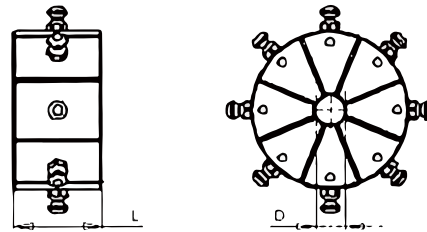
(9) **OPENING VALUE**

(10) **SWAGING CONTROL**

(11) **OPENING CONTROL**

Selecting the die set FOR FP120D

D	L	Swaging range
10	55	10----13
13	55	13----16
16	55	16----19
19	55	19----22
22	55	22----26
26	75	26----30
30	75	30----39
39	75	39----45
45	90	45----52
52	90	52----57
57	100	57----64
64	100	64----69
69	100	69----74
74	110	74----78
78	110	78----87

**Selecting the die set FOR FP145D**

D	L	Swaging range
84	120	84----92
92	120	92----100
100	120	100----108
108	120	108----116
116	120	116----145

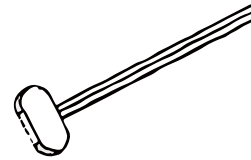
ADAPTER DIES

(Only provides to the FP145D USE)

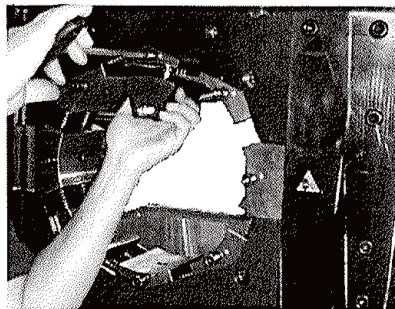
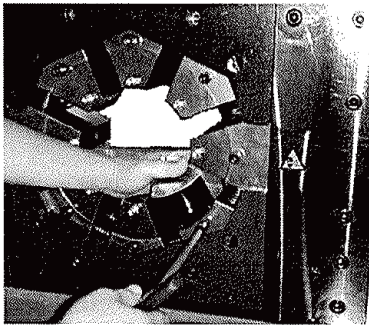
Installing the Master die set change of a single die

installed the master dies with change tool 1 change of a single die

- (1) Before installing dies, make sure that master dies are clean.
- (2) **STOP THE MOTOR PRIOR TO CLEANING DIES.**
- (3) After that, start the motor and select manual mode.
- (4) Set the swaging diameter dial to 0. 0.
- (5) Open the master dies.
- (6) Prior to installing dies, clean the contact surfaces of both the die and master dies properly to avoid damaging the surfaces.
- (7) Pull the pin in the master die with the change tool delivered together with the machine.
- (8) Insert the die with the retaining pin into the master die, die number always towards you.
- (9) Release the pull pin.
- (10) After installing all the dies, make sure they are straight and properly seated in the master dies.



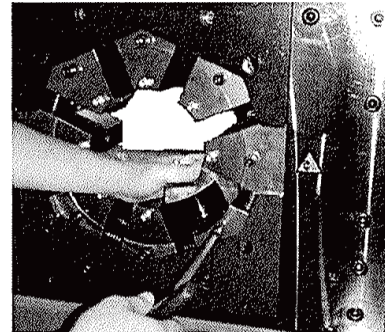
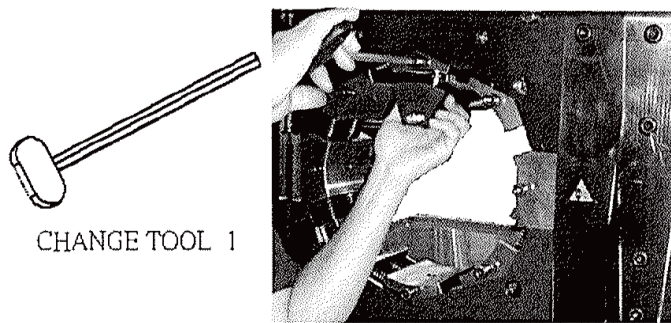
CHANGE TOOL 1



Installing the Second Master die set

installed the master dies with change tool 1 change of a single die

- (1) Before installing dies, make sure that master dies are clean.
- (2) **STOP THE MOTOR PRIOR TO CLEANING DIES.**
- (3) After that, start the motor and select manual mode.
- (4) Set the swaging diameter dial to 0. 0.
- (5) Open the master dies.
- (6) Prior to installing dies, clean the contact surfaces of both the die and master dies properly to avoid damaging the surfaces.
- (7) Pull the pin in the master die with the change tool delivered together with the machine.
- (8) Insert the die with the retaining pin into the master die, die number always towards you.
- (9) Release the pull pin.
- (10) After installing all the dies, make sure they are straight and properly seated in the master dies.

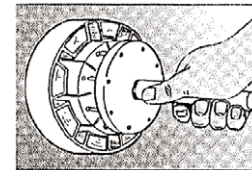
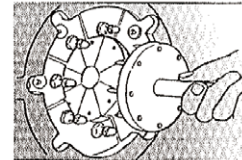


QUICK CHANGE (Only provides to the FP145D USE)

Die set are stored in the storage locker and installed in the master dies with a quick change tool one set at a time.

Changing the die set 10 with the quick change tool is not recommendable. The die set may get broken due to the tool rod's diameter. The die set no 74 and larger die sets have not quick change possibility. these dies are too thin for quick change tool holes.

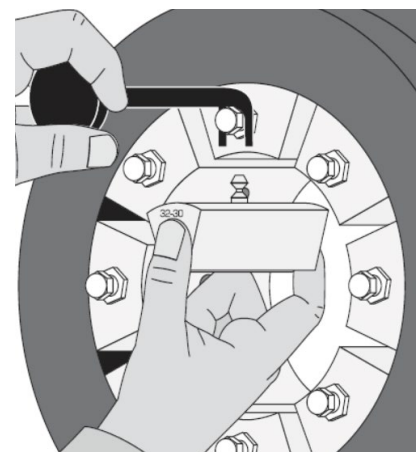
- (1) Before installing dies, make sure that master dies are clean.
- (2) **STOP THE MOTOR PRIOR TO CLEANING DIES.**
- (3) After that, start the motor and select manual mode.
- (4) Set the swaging diameter dial to 0. 0.
- (5) Open the master dies.
- (6) Insert the pins of the tool into the die set in the locker, turn the tool clockwise and pull the whole set out.
- (7) Hold the handle of the quick change tool as shown in figure 1. and make sure your hand will not get between the dies.
- (8) Turn down the centering lever behind the dies.
- (9) Mount the die set between master dies so that the tool rod is fitted deep enough in the centering hole and start closing the dies in manual mode.



CHANGE OF A SINGLE DIE

Die can also be changed one by one with a change tool:

- (1) Select MANUAL MODE
- (2) Open the master dies and STOP THE MOTOR
CAUTION ! ALWAYS TURE OFF THE POWER PRIOR TO INSTALLATION OR CHANGE OF DIES WITH THE CHANGE TOOL.
- (3) Prior to installing dies, clean the contact surfaces of both the die and master dies properly to avoid damaging the surfaces.
- (4) Pull the pin in the master die with the tool delivered together with the machine.

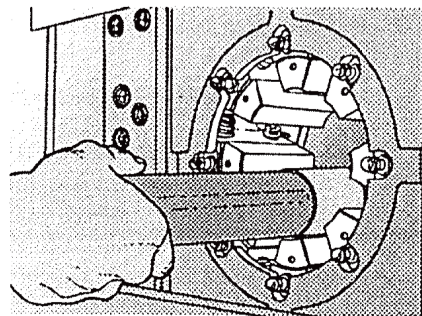


- (5) Insert the die with the retaining pin into the master die, die number always towards you.
- (6) Release the pull pin.
- (7) After installing all dies, make sure they are straight and properly seated in the master dies.

MANUAL MODE

Manual mode is used during die set change, set-up and test run and when swaging special fittings.

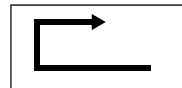
- (1) Select MANUAL MODE.
- (2) Press the start button.
- (3) Adjust the retraction diameter when required.
- (4) Press the swaging button until the dies hold the fitting lightly.
- (5) Adjust the recommended swaging diameter.
- (6) Press the swaging button until the dies stop.
- (7) Open the dies and remove the fitting.
- (8) Check the swaging diameter.
- (9) If necessary, perform fine adjustment with the swaging diameter dial.



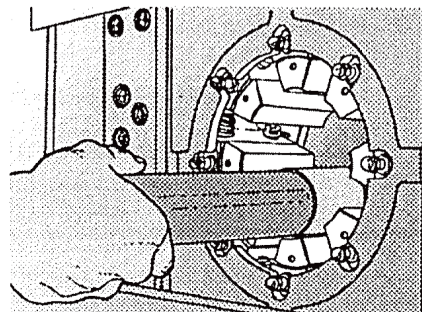
SEMI-AUTOMATIC MODE

Semi-automatic mode is used when performing small quantities of swages.

- (1) Adjust the swaging and retraction diameters.
- (2) Select SEMI-AUTOMATIC MODE.
- (3) Insert the hose assembly between the dies.
- (4) Press the semi-automatic swaging button, and dies perform a swaging-retraction cycle.



The cycle can be interrupted by releasing the button, If need be, dies can be opened by using the retraction button.

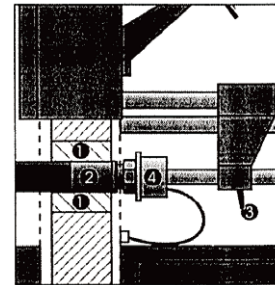


AUTOMATIC MODE

Automatic mode is best suited for serial production.
Pressing the fitting against the device starts the swaging movement.



- (1) Select MANUAL MODE.
 - (2) Insert the fitting 2 between the dies 1 to the correct position as shown in the figure.
 - (3) Swage the dies lightly until they hold the fitting properly.
 - (4) Loosen the locking lever 3 and push the stop device 4 against the fitting so that the spring-loaded stop device is compressed, making the limit switch inside it actuate. Tighten the locking lever.
 - (5) Open the dies until the fitting loosens.
 - (6) Set the required swaging diameter.
 - (7) Select AUTOMATIC MODE.
 - (8) When the stop device is pressed, the machine performs a swage and returns to the set retraction.
 - (9) The movement stops if the fittings is not adequately pressed against the stop device. If need be, dies can then be opened by using the reaction button.
 - (10) After dies have gripped the fittings. the swaging movement can be stopped only by the emergency stop push-button.
 - (11) Make sure that there are no foreign objects between the dies.
 - (12) Make a test swage by pressing the fitting against the stop device.
 - (13) Check the swaging diameter and correct the position of the stop device if necessary.
- To protect your hands from getting swaged, don't ever touch the stop device !



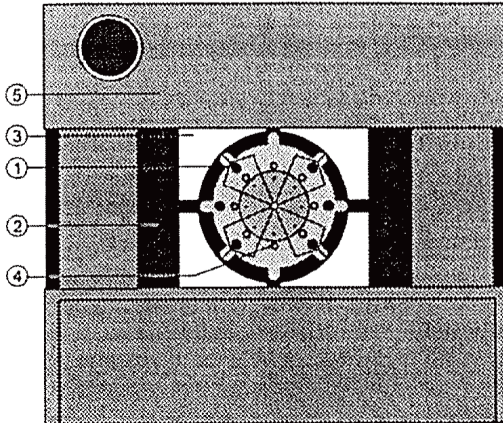
FOOT PEDAL

In FOOT PEDAL mode dies will move as long as the pedal is pressed or till the set swaging diameter has been reached. The swaging movement can be interrupted by lifting the foot from the pedal. If need be, dies can opeded by using the retraction button.

- (1) Lubricate the master dies and sliding plates daily with pressed-proof grease like Molub Alloy OG-H or equivalent.
- (2) Close tha master dies loosely before lubricating them.
- (3) Grease (1) master dies through 6 grease nipples and (2) sliding plates through 2 nipples.
- (4) Lubricate often with a small amount of grease rather than seldom with much grease.
- (5) Due to metal scurt that loosens from the fittings to be swaged, the master dies are to be cleaned carefully at intervals of approx 500 operation hours.

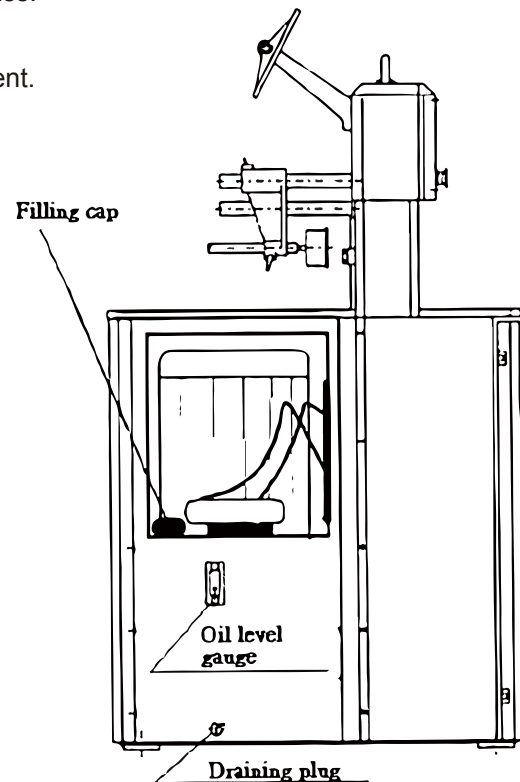
(6) To facilitate the cleaning, remove the die covers as follows:

- (1) Remove the locking pins(4)
- (2) Remove the front plate(5) and rear box.
- (3) Open the dies to the maximum.
- (4) Lift the die covers(3) up and remove them.



Oil change

- (1) Empty the tank of oil through plug in the tank.
- (2) Handle the waste oil according to law.
- (3) Fill the tank to center line of the oil level sight glass.
- (4) Oil tank volume : 135 litres.
- (5) Recommended oil : ESSO Nuto H 46 or equivalent.
- (6) Change hydraulic oil after the first 500 hours of operation and every 1000 hours thereafter.
- (7) If any oil has run out on the floor, wipe it away.



4. Maintenance & Trouble Shooting



4.1. General notice on Maintenance and Inspection

- 1). To keep the accuracy and maintain the best condition of machine, the exact maintenance and inspection of this machine is important.
- 2). Any maintenance shall be operated before POWER OFF state can be dangerous, only the qualified personnel are allowed to do the maintenance job. If the power is no need on maintenance job, the main circuit breaker should be turned off throughout the operation (refer to manual operation).
- 3). To the electrical maintenance, a qualified person who is capable of doing the job should do the maintenance.

Regular maintenance:

a) Daily maintenance

1. Check safety interlocks on the full enclosure, door and electric equipment. If it is not locked properly, notify electric maintainer to lock.
2. Clean worktable and cover by clean-cloth.
3. Clean the inside of the machine by washing and disinfecting process.
4. Clean the in-feed detector (photo-sensor).
5. Clean the environment around machine.
6. Clean the heating area. **Please wear safety gloves.**

b) Weekly maintenance

1. Check the noise during operating. Be sure that it is normal.
2. Check the damage or deterioration external electric cable. Be sure that it is normal.
3. Check warning labeling is clean or not. If dropped or disappeared, contact your dealer for a new one.
4. Check safety cover. Be sure that it is normal.

c) Monthly maintenance

1. Lubricate the shaft. Be sure that it is normal.
2. Check and clean all labels on this machine (refer to Chap. 1), if they become unclear or disappear, please contact to the agency for a new one.

d) Maintenance for every 3 months

1. Check the support belt of balance weights whether it is broken or damage. Change it if necessary. If it is still well, clean it by brush.

e) Half-yearly maintenance

1. Lubricate the shaft.
2. Check the motors, shaft, belts and related parts. Be sure that they can work normally and noise is normal when they are running.
3. Clean the electric parts in electrical cabinet. Be sure that they are in normal state. This operation can only be done after turning the main circuit off.
4. Inspect and adjust the machine leveling, be sure to follow the instruction in this manual.
5. Clean the opening of the machine.
6. Inspect the noise of motor running and check the value.
7. Inspect the contact relay of electric case internal.

4.2. Trouble shooting:

To prevent serious accidents, disconnect the power supply before inspecting the machine:

Conditions	Reasons	Countermeasure
Machine doesn't start	No power is supplied.	Contact the electric power company or check the power source.
	Open circuit or poor connection of the power circuit.	Check the fuse is broken or overload relay is actuated (shut-off).
	The interlock guard is opened.	Check the interlock guard is closed completely.
	Fault of motor, magnetic contactor, or other component.	Please call service engineer or our distributor.
	The Emergency stop button is actuated.	Check the hazard is eliminated, then reset the EMS button and power ON again.
Machine starts but stops immediately causing the motor protector to actuate.	Voltage drop	Correct the voltage to the rated voltage, or use an extension cable that meets the standard.
	A 50Hz model is operated at 60Hz	Check the nameplate or call service engineer.
	The outlet is obstructed, and the miller was operated for oily, sticky and fibrous material.	Remove the obstruction and confirm with supplier to sure the intend-use for what kind material.
	Motor abnormal.	Repair the motor or replace with a new motor by qualified engineer.
Abnormal noise or vibration.	The bearing of the motor may be damaged.	To replace the bearing. Contact the qualified engineer or our distributor from whom you purchased the equipment.
Product doesn't ideal	The piece is over scope.	Check the specification
	Pressure is not reached ideal.	Call supplier or servicer.

Any other maintenance, service and trouble are welcome to be contacted Yung Lung or our distributor.








5. Technical Manual

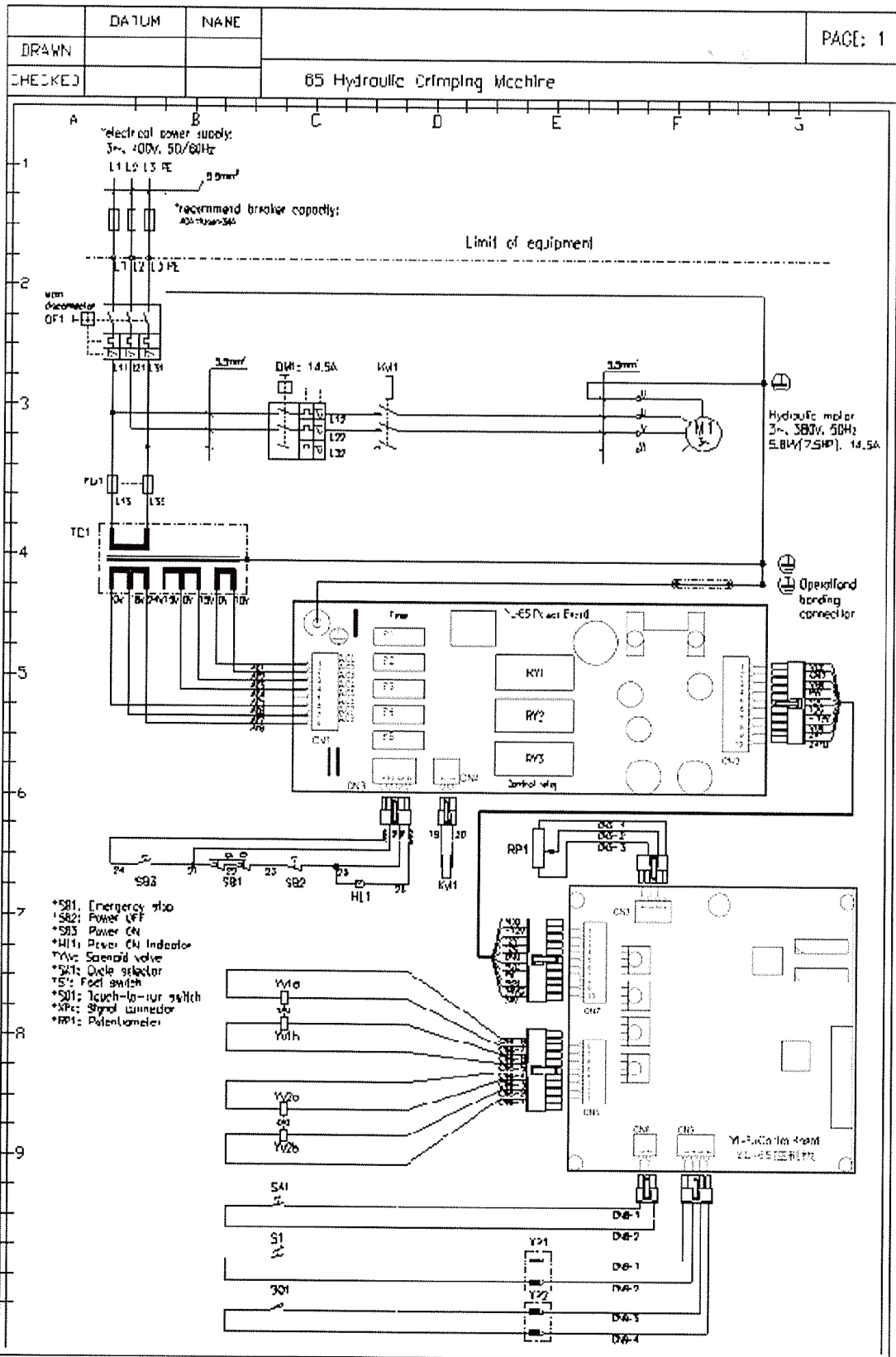


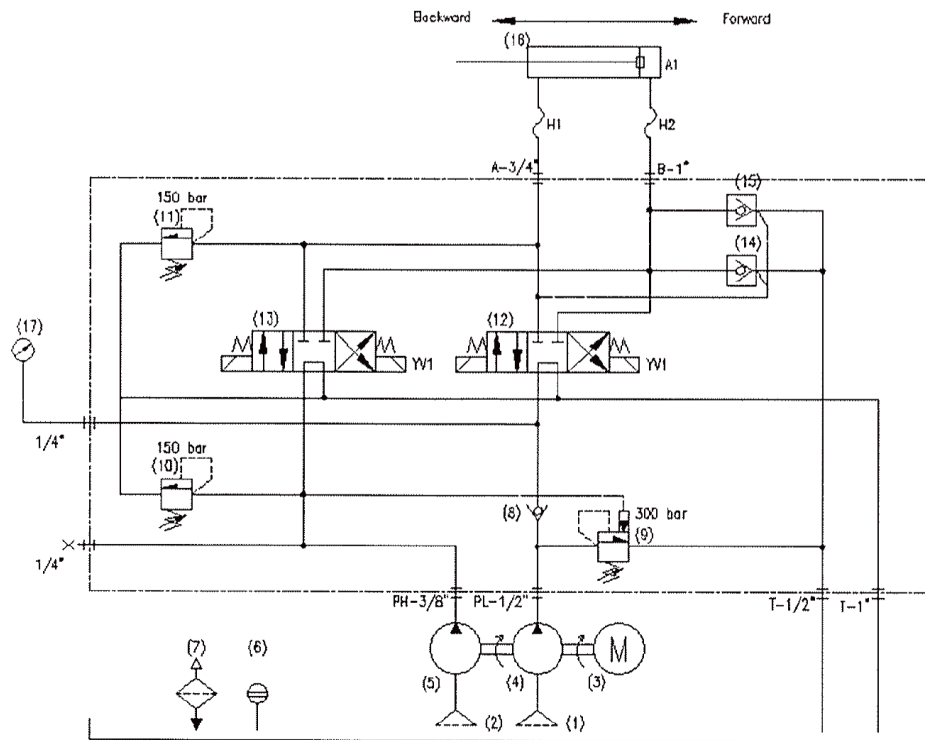
5.1. Electrical scheme

Electrical components list FP120D, FP145D

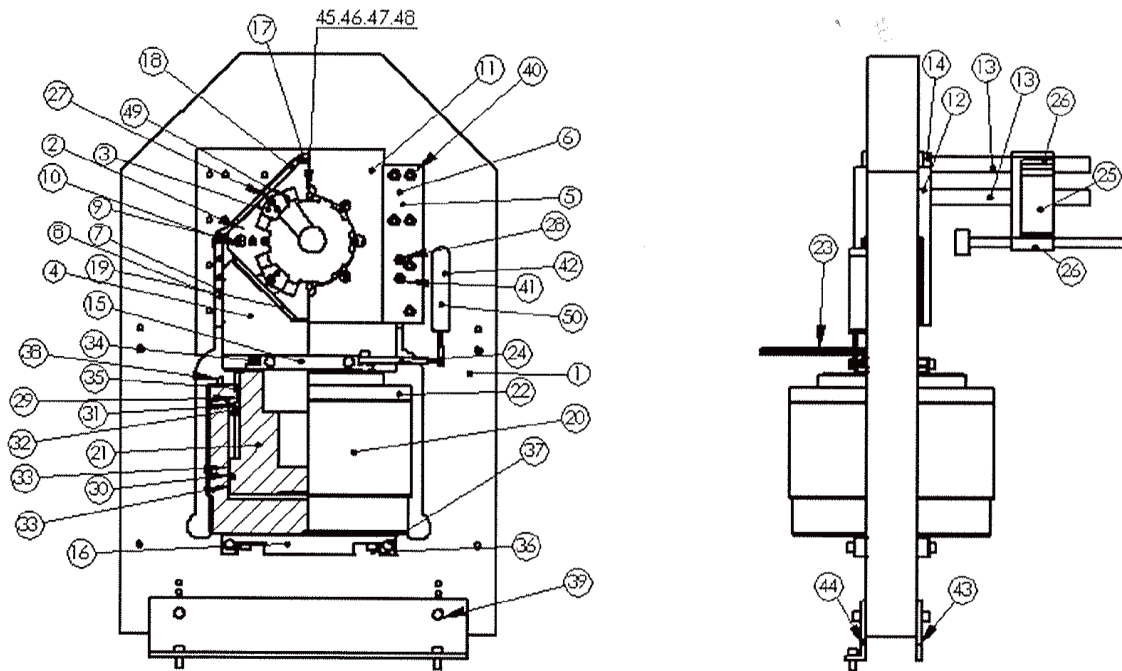
Item	Description	Manufacture	Type	Technical data	Standards	Marking
Q1	Main disconnecter (switch type) with undervoltage release trip	Moeller	P1-32EASVB	250Vac, 30A	EN60947-1 EN60947-2	
F1	Motor breaker	Moeller	PKZM0-32	250Vac, 30A	EN60947-1 EN60947-2	
		Telemecanique	GV2			
F2	Circuit breaker	Moeller	FAZ-2-S1	240/415V~ 1Ax1P	EN60947-2	
		Telemecanique	C60N C1A			
KM1	Magnetic contactor	Telemecanique	LC1D	Ui=660V 1th=32A	EN60947-2 EN60947-4-1	
		TECO	CN-18			
		Moeller	DILM 32D			
TC1	Transformer control circuit supply	San Li	SL-9640	0.082kVA 1~, 380V/18V, 24V	IEC61558-1 IEC61558-2-4	
		Suenn Liang	SP-TBSW			
M1	Pump motor	TATUNG	BEFC-D	5.6kW (7.5HP) 3~, 380V,50Hz, 14.5A, IP54, S1 INS. B	EN60034-1	
U1	Power PCB+ Control PCB			24Vac, 18Vac, 15Vac, 10Vac	-	-
SB1	Emergency Stop	Moeller	RMQ (M22-k01)	Ui=500V 1th=4A, Uimp=6kV	EN60947-5-1	
SB2+ HL1	Push button (ON) with indicator	Moeller	RMQ (M22-k10+ M22-LED230)	Ui=500V 1th=4A, Uimp=6kV	EN/IEC60947	
SB3	Push button (OFF)	Moeller	RMQ (M22-k01+ M22-LED230)	Ui=500V 1th=4A, Uimp=6kV	EN/IEC60947	

SA1	Selector	Moeller	RMQ (M22-k10)	Ui=500V 1th=4A, Uimp=6kV	EN/IEC60947	
SQ1	Touch-to-run switch	Telemecanique	XNE-L111	15A, 200V~	EN60947-1	
S1	Foot switch	Ssupou	YC-135	AC250V, 50/60Hz 3A	EN60947-1 EN60947-5-1	
RP1	Potentiometer	novotechnik	LHW 100	24Vdc	EN61010-1	
YV1	Solenoid valve	TOKIMEC	DG4V-5-8C- M-U1-H-7-40	24Vdc	VDE0580	
YV2	Solenoid valve	TOKIMEC	DG4V-3-8C- M-U1-H-7-52	24Vdc	VDE0580	
	Terminal block	Wago	280	Ue=800V,15A	IEC 947-7-1 EN60947 EN60127	
		idec	BN-,BNH-			
		legrand	390			



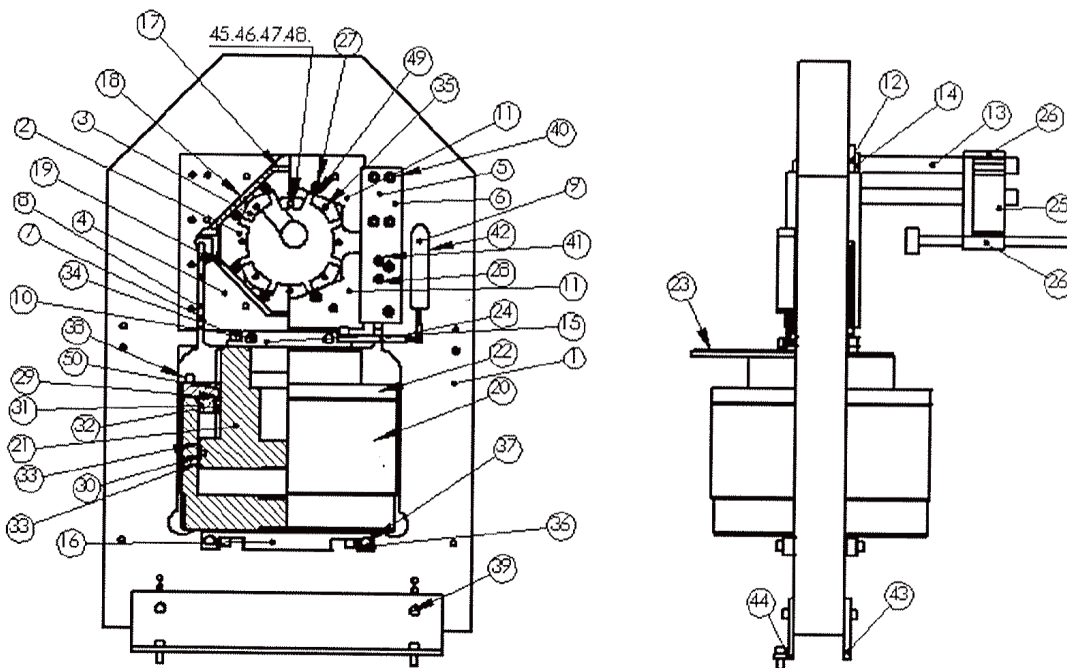


5.2 Assembly of FP120D

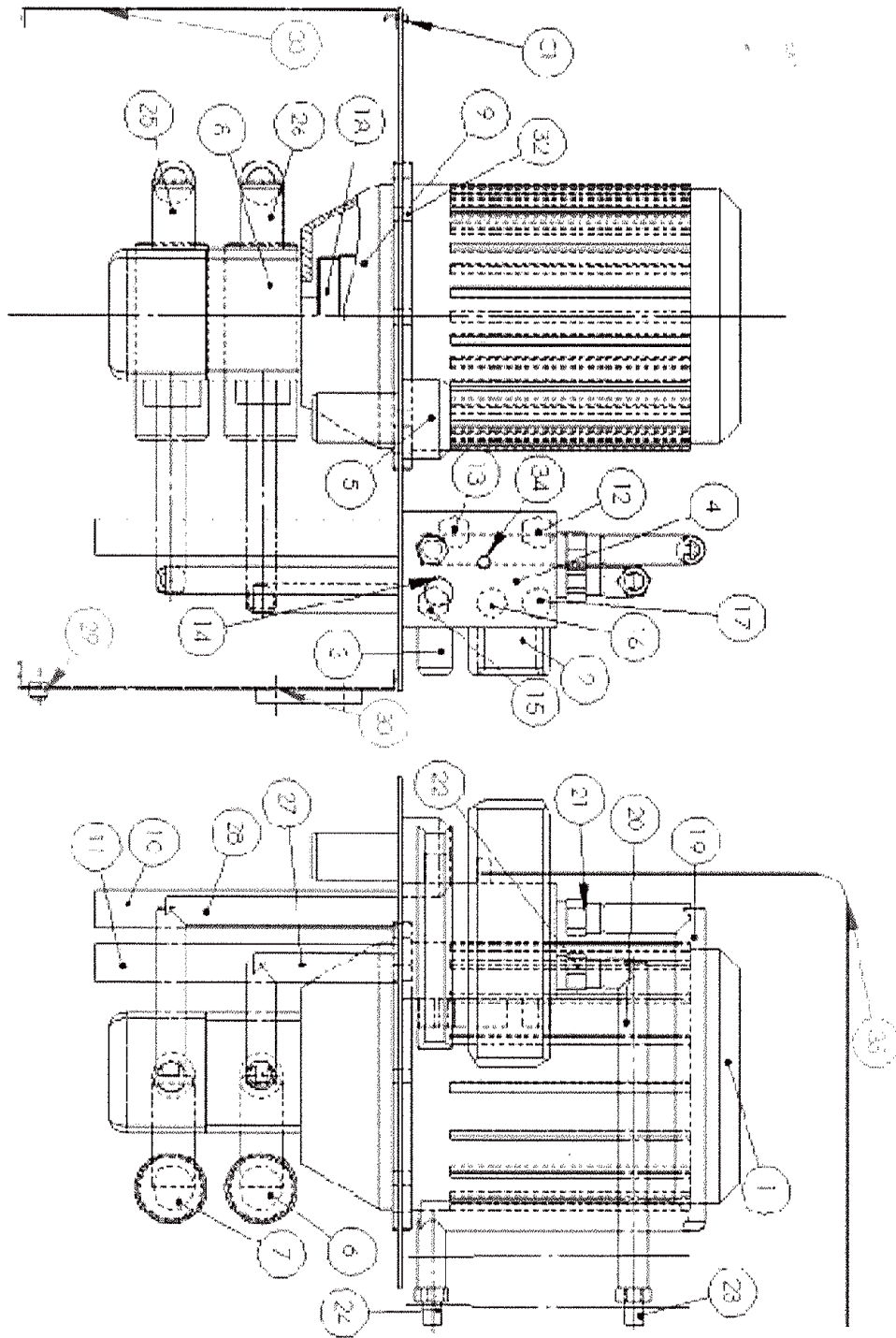


No	Cote	Qty	Name	No	Cote	Qty	Name
1	65-01	1	SWAGING UNIT FRAME	26	65-26	2	STOP LEVER
2	65-02	1	MASTER DIE SET LARGE	27	65-27	6	GREASE NIPPLE
3	65-03	1	MASTER DIE SMALL	28	65-28	4	SCREW
4	65-04	1	LOWERELANGE	29	65-29	1	GUIDERING
5	65-05	2	HOLDER FOR COVER(R)	30	65-30	1	O-RING
6	65-06	2	HOLDER FOR COVER(L)	31	65-31	1	O-RING
7	65-07	1	SLIDING PLATE	32	65-32	1	ROD SEAL
8	65-08	1	SLIDING PLATE	33	65-33	2	GUIDERING
9	65-09	2	GROOVE BALL BEARING	34	65-34	8	SCREW
10	65-10	2	GROOVE BALL BEARING	35	65-35	1	DUST SEALS
11	65-11	1	DIE COVER,FRONT	36	65-36	4	SCREW
12	65-12	1	DIE COVER,BACK	37	65-37	4	SCREW
13	65-13	2	CONTROL SHAET	38	65-38	16	SCREW
14	65-14	1	PLATE	39	65-39	6	SCREW
15	65-15	2	ADAPTER FOR PISTOL ROD	40	65-40	24	SCREW
16	65-16	2	ADAPTER FOR CYLINDER	41	65-41	2	GREASE NIPPLE
17	65-17	1	LOCKING PLATE	42	65-42	4	POTENTIOMETER SCREW
18	65-18	2	SLIDING PLATE	43	65-43	1	FIXING,ANGLE
19	65-19	2	SLIDING PLATE	44	65-44	1	FIXING,PLATE
20	65-20	1	CYLINDER	45	65-45	8	SCREW
21	65-21	1	PISTON	46	65-46	8	SPRING
22	65-22	1	SEAL HOUSING	47	65-47	8	LOCKING PIN
23	65-23	2	SCREW	48	65-48	8	CAPPED NUT
24	65-24	1	POTENTIOMETER SUPPORT	49	65-49	16	SPRING
25	65-25	1	ADJUSTING LEVER	50	65-50	1	POTENTIOMETER

Assembly of FP145D



No	Cote	Qty	Name	No	Cote	Qty	Name
1	80-01	1	SWAGING UNIT FRAME	26	80-26	2	STOP LEVER
2	80-02	1	MASTER DIE SET LARGE	27	80-27	6	GREASE NIPPLE
3	80-03	1	MASTER DIE SMALL	28	80-28	2	SCREW
4	80-04	1	LOWERELANGE	29	80-29	1	GUIDERING
5	80-05	2	HOLDER FOR COVER(R)	30	80-30	1	O-RING
6	80-06	2	HOLDER FOR COVER(L)	31	80-31	1	O-RING
7	80-07	1	SLIDING PLATE	32	80-32	1	ROD SEAL
8	80-08	1	SLIDING PLATE	33	80-33	2	GUIDERING
9	80-09	1	POTENTIOMETER	34	80-34	4	SCREW
10	80-10	2	SCREW	35	80-35	8	DUST SEALS
11	80-11	3	DIE COVER	36	80-36	4	SCREW
12	80-12	1	DIE COVER,BACK UP	37	80-37	4	SCREW
13	80-13	2	CONTROL SHAET	38	80-38	16	SCREW
14	80-14	1	PLATE	39	80-39	6	SCREW
15	80-15	2	ADAPTER FOR PISTONS ROD	40	80-40	24	SCREW
16	80-16	2	ADAPTER FOR CYLINDER	41	80-41	2	GREASE NIPPLE
17	80-17	1	LOCKING PLATE	42	80-42	4	POTENTIOMETER SCREW
18	80-18	2	SLIDING PLATE	43	80-43	1	FIXING,ANGLE
19	80-19	2	SLIDING PLATE	44	80-44	1	FIXING,PLATE
20	80-20	1	CYLINDER	45	80-45	8	SCREW
21	80-21	1	PISTON	46	80-46	8	SPRING
22	80-22	1	SEAL HOUSING	47	80-47	8	LOCKING PIN
23	80-23	2	SCREW	48	80-48	8	CAPPED NUT
24	80-24	1	POTENTIOMETER SUPPORT	49	80-49	16	SPRING
25	80-25	1	ADJUSTING LEVER	50	80-50	1	DUST SEALS



No	Code	Qty	Name
1	Z001	1	MOTOR
2	Z002	1	3/4 SOLENOID OPERATED VALVE (3/8")
3	Z003	1	3/4 SOLENOID OPERATED VALVE (1/4")
4	Z004	1	OIL PASSAGE BOARD
5	Z005	1	AIR BREATHER
6	Z006	1	FILTER
7	Z007	1	FILTER
8	Z008	1	PUMP
9	Z009	1	FLANGE
10	Z010	1	RETURN PIPE
11	Z011	1	RETURN PIPE
12	Z012	1	INSERT TYPE PILOT OPERATED CHECK VALVES
13	Z013	1	INSERT TYPE PILOT OPERATED CHECK VALVES
14	Z014	1	INSERT TYPE VALVES
15	Z015	1	OVERCENTRE VALVE PILOT ASSISTED REUEF WITH CHECK
16	Z016	1	INSERTEDUCING VALVES
17	Z017	1	INSERTEDUCING VALVES
18	Z018	1	COUPLING
19	A	1	HOSE ASSEMBY 1"
20	B	1	HOSE ASSEMBY 3/4"
21	Z021	1	NIPPLE
22	Z022	1	NIPPLE 45°
23	Z023	1	NIPPLE
24	Z024	1	NIPPLE 90°
25	Z025	1	NIPPLE (SET)
26	Z026	1	NIPPLE (SET)
27	Z027	1	HYDRAULIC PIPE (SET)
28	Z028	1	HYDRAULIC PIPE (SET)
29	Z029	1	MAGNET PLUG
30	Z030	1	OIL LEVEL SIGHT GLASS
31	Z031	12	SCREW
32	Z032	8	SCREW
33	Z033	1	TANK COVER
34	Z034	1	NIPPLE
35	C	1	HOSE ASSEMBY