

# YL-80



**Includes**

**STANDARD DIE SETS**

Size	Range (mm)	Length
32-10	10-14	55
32-14	14-16	55
32-16	16-19	55
32-19	19-22	55
32-22	22-26	70
32-26	26-30	70
32-30	30-34	75
32-34	34-39	75
32-39	39-45	75
32-45	45-51	90
32-51	51-57	90
32-57	57-63	100
32-63	63-69	110
32-69	69-74	110
32-74	74-78	110
32-78	78-87	110
80-84	84-92	120
80-92	92-100	120
80-100	100-108	120
80-108	108-116	120
80-116	116-126	120

**TECHNICAL SPECIFICATIONS**

<b>Max hose size</b>	4"
<b>Crimping force (kN)</b>	3200
<b>Max crimping Ø (mm)</b>	126
<b>Max opening (mm)</b>	die diameter + 80
<b>Standard motor</b>	5,5kW 400V 3-Ph
Different voltage versions available	
<b>Control</b>	Digital control
<b>Master dies opening / Length (mm)</b>	220/97
<b>Crimping range (mm)</b>	10 - 126
<b>Weight (kg)</b>	1350 (without oil)

<b>Dimensions (LxWxH mm)</b>	850 x 1000 x 1600
<b>Die sets</b>	Standard
<b>10-14-16-19-22-26-30-34-39-45-51-57-63-69-74-78-84-92-100-108-116</b>	
<b>Quick Change-set</b>	Standard
<b>Back stop device</b>	Standard
<b>Foot pedal</b>	Standard
<b>Oil cooler</b>	Standard
<b>Mirror</b>	Standard

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## 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.

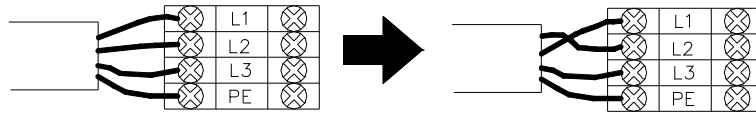
Model	Recom. Fuse (400V)	Supply wire size	PE wire size
YL-65	25A>fuse>20A	5.5mm <sup>2</sup>	5.5mm <sup>2</sup>
YL-80	25A>fuse>20A	5.5mm <sup>2</sup>	5.5mm <sup>2</sup>

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 terminals 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 disconnecting device mounted on the door of electrical cabinet, before you intend to do the work of maintenance or inspection.
8. After disconnecting 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.

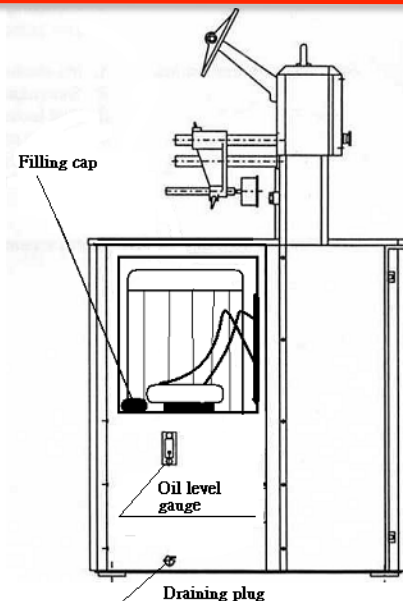
Remove vent cap. Draw gear oil through vent from oil bucket to tank.

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.**

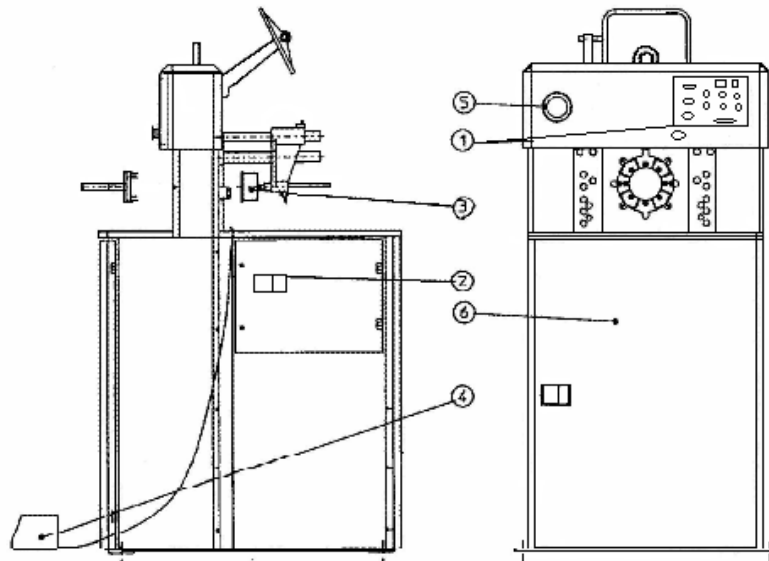
**Fill the oil tank to center line of the oil level sight glass in the side plate with hydraulic oil like ESSO Nuto H 46 or equivalent . Volume of the tank is approx 135 liters .**



## 3. Operation

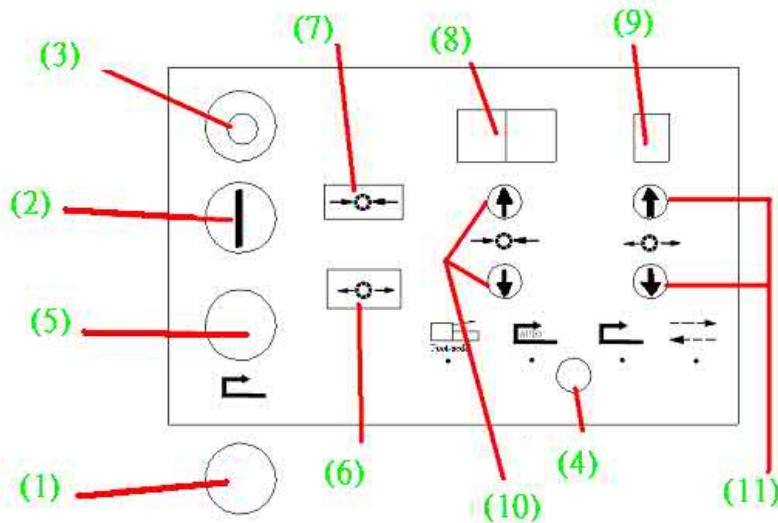


### 3.1. Functions of Operation Panel



- (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

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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 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

(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 0-position or opening dies with retraction button (4) .Dies will not open if they are already in the set retraction position .

(8) SWAGING VALUE

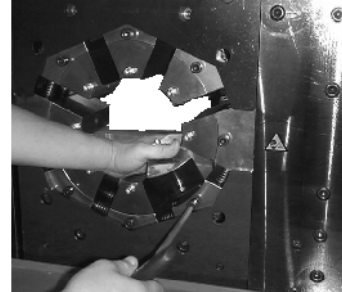
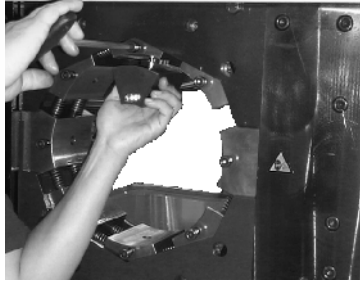
(9) OPENING VALUE

(10) SWAGING CONTROL

(11) OPENING CONTROL



CHANGE TOOL 1



### QUICK CHANGE (Only provides to the 80 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.

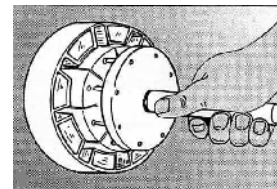
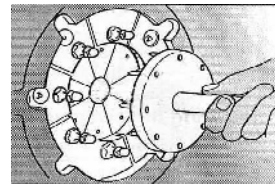
(5) Open the master dies .

(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

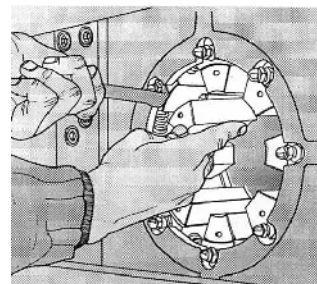
Die can also be changed one by one with a change tool :

(1) Select MANUAL MODE

(2) Open the master dies and STOP THE MOTOR  
CAUTION ! ALWAYS TURN 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 .



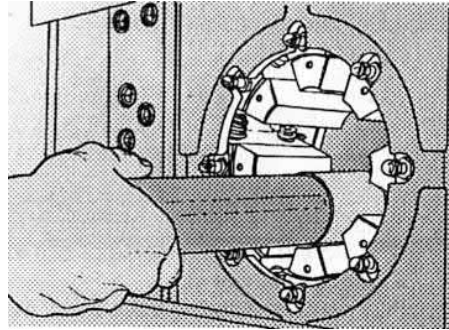


- (5) Insert the die with the retaining pin into the master die , die number always towards you .
- (6) Release the pull pin .
- (7) After installing all the dies , make sure they are straight and properly seated in the master dies.

### **MANUAL MODE**

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

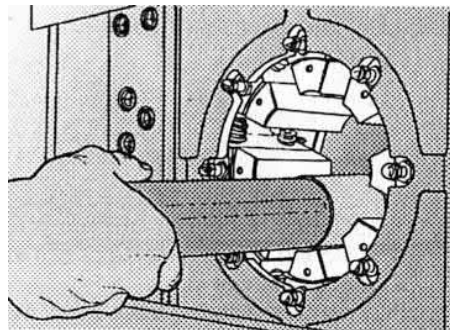
- (1) Select MANUAL MODE .
- (2) Press the start button .
- (3) Adjust the retraction diameter when required .
- (4) Press the swaging button until the dies hold the fitting lightly .
- (5) Adjust the recommended swaging diameter .
- (6) Press the swaging button until the dies stop .
- (7) Open the dies 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 .

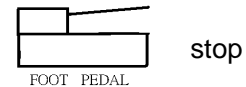
- (1) Adjust the swaging and retraction diameters .
- (2) Select SEMI-AUTOMATIC MODE .
- (3) Insert the hose assembly between the dies .
- (4) Press the semi-automatic swaging button , and dies perform a swaging-retraction cycle .  
The cycle can be interrupted by releasing the button . If need be , dies can be opened by using the retraction button .



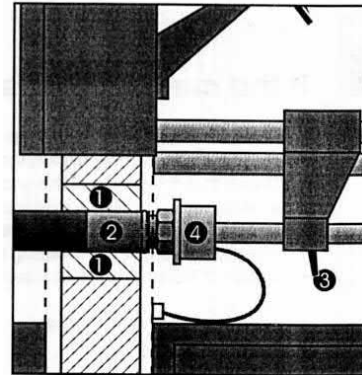


**AUTOMATIC MODE**

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 fitting 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 fitting . 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 Works with all modes**

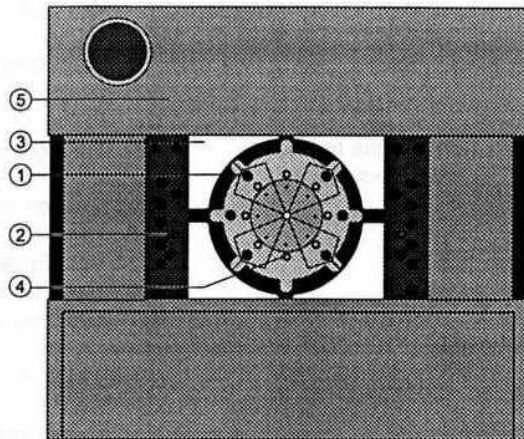
In FOOT PEDAL mode dies will move as long as the pedal is pressed or till the set swaging diameter has been reached . The swaging movement can be interrupted by lifting the foot from the pedal . If need be , dies can opened by using the retraction button .

**Greasing and cleaning**

- (1) Lubricate the master dies and sliding plates daily with pressure-proof grease like Molub Alloy OG-H or equivalent .
- (2) Close the 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 .

