

## **EZY- MAT II    Portable pre-swaging machine (Electric swaging machine)    1**

### **General Information**

**EZY-MAT II**, HYUPDONG's Auto Hydraulic Pre-swaging Machine, designed for use for all Hy-Lok tube fittings ranging 1/2"-2"(12-38mm), The unit may therefore be used for a variety of different applications. The standard version is for 220 V supply, a 110 V version is also available on request.

### **Swaging process**

Ferrules, nut and tube being properly pre-assembled, tube end shall rest on die shoulder, tapered face of front ferrule shall contact swaging cone, and nut shall be fixed to swaging jig. Press the "start" switch, initiating the swaging process. The piston with the swaging cone advances. Once the set pressure has been reached the swaging process is concluded. The piston with the swaging cone automatically returns to its initial position and the hydraulic pump unit switches off. Now, pre-swaging is completed.

### **Technical data**

#### **220 V version**

Hydraulic pump: 0.35 kW-2.0 l/min.  
Operating pressure: 0~600 bar.  
Connection: 220 V/1~/50/60 Hz/2.5 A.  
Dimension: 400X400X230 mm.  
Weight: 30 kg.

#### **110 V version**

Hydraulic pump: 0.35 kW-2.0 l/min.  
Operating pressure: 0~600 bar.  
Connection: 110 V/1~/50/60 Hz/6.5 A.  
Dimension: 400X400X230 mm.  
Weight: 30 kg.



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### **How to Set-up EZY-MAT II**

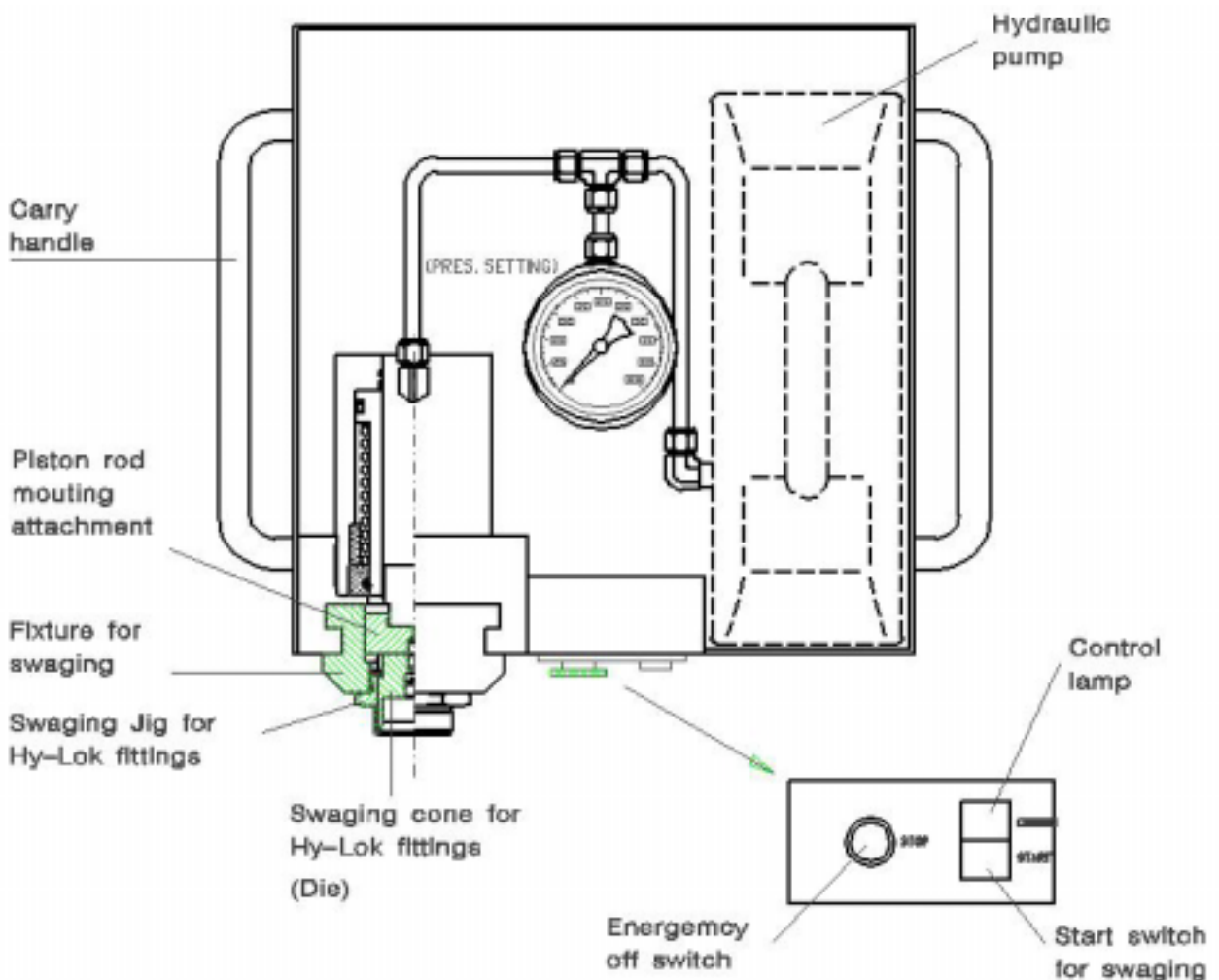
Install swaging jig of desired size firmly into a swaging fixture using wrench. Insert swaging cone into swaging jig. Jig key should fit in swaging cone slot. Position bolt in the center of swaging cone and tighten it using 6mm Allen key to fix swaging cone onto piston.

### **How to Prepare Tube**

1. Check if tube O.D, wall thickness, circularity, hardness and their tolerances are within specs for your application. Also check if surface is free from scratches and dirt.
2. Make a square cut.
3. Remove burrs from inner and outer edges of tube.

### **How to Make Pre-swage**

1. Set up the swaging pressure shown in **Table 1** for each size.
2. Assemble front ferrule, back ferrule and nut onto jig.
3. Insert the prepared tube in pre-assembled nut and ferrules and hand-tighten the nut.
4. Keeping tube end in contact with die shoulder, press "start" switch, pre-swaging completed.
5. Unthread nut from swaging jig. Remove pre-swaging tube, by gently rocking it up and down if necessary.
6. Insert the pre-swaging tube into a fitting body, and make sure the ferrule seats in the fitting. Tighten the nut on the fitting body until finger tight without resistance.
7. Tighten the nut with a wrench the additional amount shown in **Table 2** for each size.
8. For continuous operation, go to step 2.



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**Important !**

1. The pressure must be set according to the data stated on the machine. Incorrect pressure setting leads to faulty swaging.
2. Long tube must be supported during the swaging process.
3. Dirt, chips and others can interfere with properly swaging process. The swaging cones should be thoroughly cleaned after each use.
4. When made up Tube fitting:  
 Alighment of fitting and tube shall be done before tighten the nut.  
 Do not tighten the nut without alignment of fitting and tube.  
 Nut will be made up on the fitting body without resistance.

**Table 1**

Fitting size	Swaging pressure(bar)
1/2"-12M	80
5/8"-15/16M	120
3/4"-18/20M	150
7/8"-22M	180
1"-25M	200
28M	220
1-1/4"-30M	290
32M	320
1-1/2"-38M	350
42M	400
2"-50M	480

**Table 2**

Fitting size	Turns
1/2"-12M	1 / 2
5/8"-15/16M	1 / 2
3/4"-18/20M	1 / 2
7/8"-22M	1 / 2
1"-25M	1 / 2
28M	1 / 2
1-1/4"-30M	5 / 8
32M	5 / 8
1-1/2"-38M	5 / 8
42M	5 / 8
2"-50M	3 / 4

**Part numbers of pre-swaging component**

**Inch**

Fitting size	Part number	
	Swaging jig	Swaging cone
1/2"	PS-CSD-8T	PS-CSJ-8T
3/4"	PS-CSD-12T	PS-CSJ-12T
1"	PS-CSD-16T	PS-CSJ-16T
1-1/4"	PS-CSD-20T	PS-CSJ-20T
1-1/2"	PS-CSD-24T	PS-CSJ-24T
2"	PS-CSD-32T	PS-CSJ-32T

**Metric**

Fitting size	Part number	
	Swaging jig	Swaging cone
12M	PS-CSD-12M	PS-CSJ-12M
16M	PS-CSD-16M	PS-CSJ-16M
20M	PS-CSD-20M	PS-CSJ-20M
22M	PS-CSD-22M	PS-CSJ-22M
25M	PS-CSD-25M	PS-CSJ-25M
30M	PS-CSD-30M	PS-CSJ-30M
38M	PS-CSD-38M	PS-CSJ-38M
50M	PS-CSD-50M	PS-CSJ-50M