D-Hydro

YOUR HOSE ASSEMBLY
MACHINE SUPPLIER

SM 50 M

Technical specifications

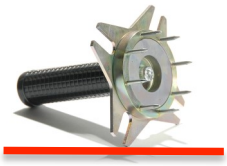
Max hose size	2" 2 SN, 1 ½" 4 SH
Crimping force (kN):	1800
Max crimping Ø (mm):	85
Max opening (mm):	die diameter + 32
Standard motor:	4 kW 400V 3-Ph
Control	Micrometer
Master dies opening / Length(mm):	107/105
Crimping range (mm):	6 – 85
Weight (kg)	148 (without oil)
Dimensions (LxWxH mm)	710 x 440 x 650
Quick Change-set	Optional
Stand for machine	Optional

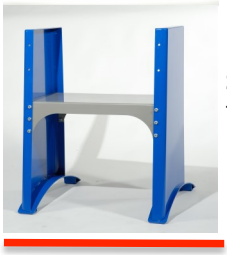
Optional
Standard die sets

	Range (mm)	Lenght
38-06	6-16	45
38-08	8–18	45
38-11	11-21	45
38-14	14-24	45
38-17	17-27	45
38-20	20-30	55
38-23	23-33	55
38-26	26-36	55
38-30	30-40	75
38-34	34-44	75
38-39	39-49	85
38-45	45-55	85
38-51	51-61	85
38-57	57-67	90
38-63	63-73	90
38-67	67-77	90
With master dies	75-85	105

Options

Quick Change Set: including storage rack & handle





Solid stand with ability to mount the Quick Change set and machine

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GENERAL INSTRUCTIONS

General information

The machine has to be installed on a solid desk or on the optional machine stand with M8 bolts. The optional die set rack can also be installed on the desk or on the optional machine stand with M8 bolts.
Machine is delivered without oil, fill the oil tank with hydraulic oil 32.
Oil volume: 20L.
This machine is designed for crimping hose fittings only!
Usage for other purposes at user´s own risk!

Electrical connection and rotation direction check of the motor

NOTE! Only an authorized electrician can do following operations!

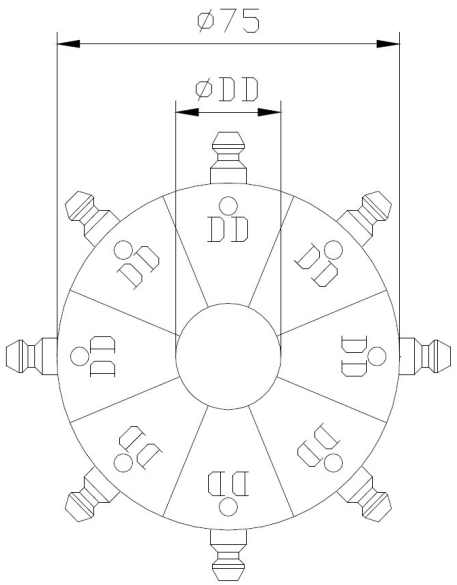
1. Check whether the *machine voltage* and the *supply voltage* are *similar*
2. Connect the cable to the power supply
3. Start the motor with button (1)
4. Make sure that the motor rotates clockwise in accordance with the markings
5. Stop the motor with button (2)
6. In case that the motor rotates in wrong direction, switch the electricity wires of the cable L1 to L2 and L2 to L1

Die set pin mounting

Each die set is delivered with 8 pcs of the die set pins. Carefully check whether all die set pins are **firmly tightened** onto the die set. Use thread locker glue (Loctite or similar) to fix the die set pins. **Incorrect tightened die set pins can prevent solid mounting of the die sets.**

Standard Die sets

DD= Smallest swaging diameter	Die lenght	Order code
06	45	38-06
08	45	38-08
11	45	38-11
14	45	38-14
17	45	38-17
20	55	38-20
23	55	38-23
26	55	38-26
30	75	38-30
34	75	38-34
39	85	38-39
45	85	38-45
51	85	38-51
57	90	38-57
63	90	38-63
67	90	38-67
Die set pin for sizes 06-57		09000010
Die set pin for sizes 63-67		09000301



OPERATION SWITCHES

1. **MOTOR START BUTTON**

   The electric motor will start, the machine is idle and ready to use

2. **STOP BUTTON**

   The motor will stop

3. **SWAGING BUTTON**

   The machine will swage the fitting to the chosen diameter

4. **OPENING BUTTON**

   The dies will open until the button is released, or the dies are completely opened

5. **SWAGING DIAMETER MICROMETER KNOB**

   Adjustable swaging diameter range is 0-10mm. One complete turn of the knob is one millimetre and each turn is divided one tenth of millimetre

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Choosing the correct die set

The correct swaging diameter can be asked to the manufacturer of the fittings. The last two numbers of the die set, is the smallest possible swaging diameter. For swaging, choose the closest die set which is smaller than the desired diameter. Each die set has a recommended range of swaging diameters, see the white area in the table. If necessary you can use the grey area, but only if the outer diameter of the fitting before crimping does not exceed the size of the die set with 20mm. For example with the die set 38-23, you should not swage fittings which outer diameter before crimping is over 43 mm!

Die set	Swaging diameter (mm)										
	0	1	2	3	4	5	6	7	8	9	10
38-06	6	7	8	9	10	11	12	13	14	15	16
38-08	8	9	10	11	12	13	14	15	16	17	18
38-11	11	12	13	14	15	16	17	18	19	20	21
38-14	14	15	16	17	18	19	20	21	22	23	24
38-17	17	18	19	20	21	22	23	24	25	26	27
38-20	20	21	22	23	24	25	26	27	28	29	30
38-23	23	24	25	26	27	28	29	30	31	32	33
38-26	26	27	28	29	30	31	32	33	34	35	36
38-30	30	31	32	33	34	35	36	37	38	39	40
38-34	34	35	36	37	38	39	40	41	42	43	44
38-39	39	40	41	42	43	44	45	46	47	48	49
38-45	45	46	47	48	49	50	51	52	53	54	55
38-51	51	52	53	54	55	56	57	58	59	60	61
38-57	57	58	59	60	61	62	63	64	65	66	67
38-63	63	64	65	66	67	68	69	70	71	72	73
38-67	67	68	69	70	71	72	73	74	75	76	77

With master dies 75-85mm

Installing the die sets

1. Open the master dies completely.
2. **Stop the motor**.
3. Install the dies so, that you are able to see die set size.

Removing the die sets

1. Open the master dies completely.
2. **Stop the motor**.
3. Remove the dies one by one

Swaging

1. Set the desired swaging diameter.
   Example: desired swaging diameter 24,6. Use the die set 38-23, adjust the micrometer knob to 1,6 **(23+1.6=24.6)**
2. Complete the swaging. In order to ensure the quality of the swaging, you need a pin gauge, a metal rod with correct dimension. By pushing the gauge into the fitting you find out whether the swaging has succeeded or not. For successful swaging the inner measurement of the fitting ought to be decreased.

Maintenance

Regularly clean the master dies and die sets when they look dirty. An old tooth brush can be helpful. The cylinder should be cleaned out from all metal dust by using a small magnet. After 8 hours of use, the master dies have to be properly cleaned and greased with our special high quality grease (molybdenum grease: Tribol Molub Alloy OG Heavy). Ask your distributor for more information and availability of our grease.

The hydraulic oil should be changed after the first 500 hours, afterwards every 1000 hours.
Minimum oil level: Bottom line of the dipstick.

Technical Specifications

Max. fitting size	2”
Die opening	32 mm
Swaging force	1800 kN
Max. pressure	325 bar
Operating voltage	380 / 230 V three phase
Motor	4 kW
Hydraulic oil	Hydraulic oil 32
Oil volume:	20 L

Dimensions

Height	650 mm
Width	710 mm
Depth	440 mm
Weight	148 kg (without oil)