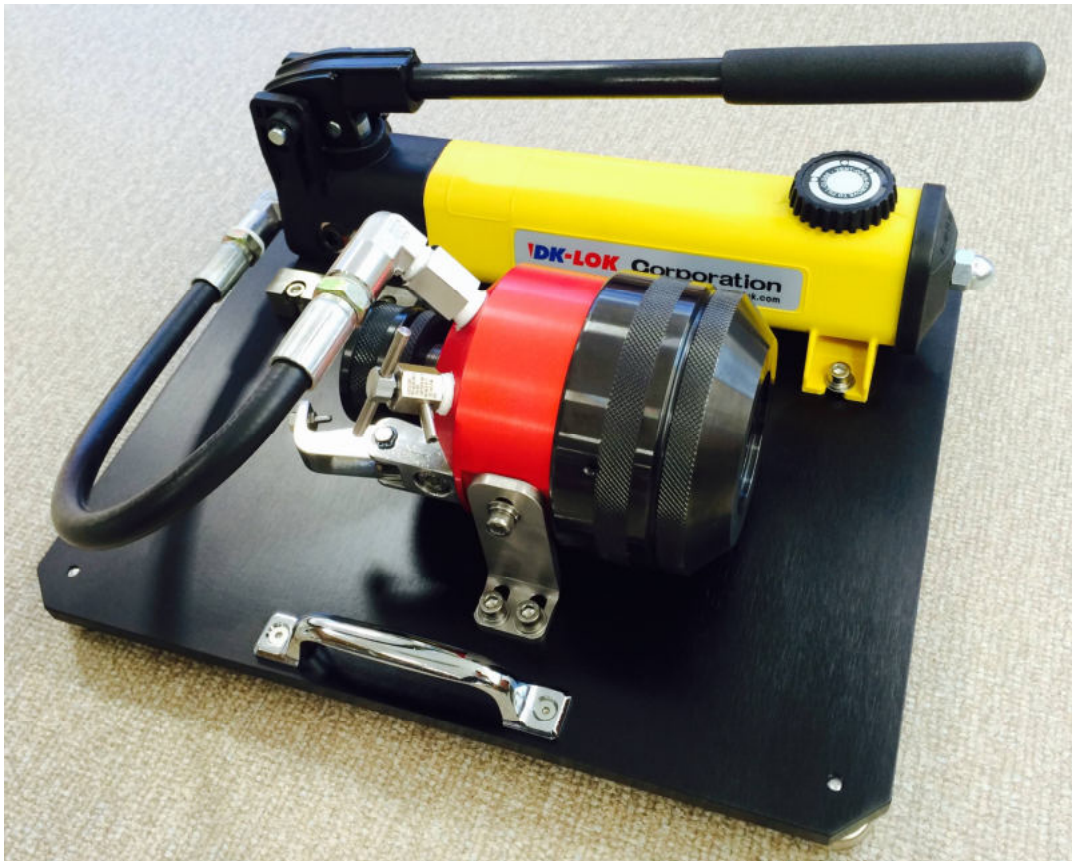


Hydraulic Swaging Unit DHS-2A Setup and Operating Instructions

Manual # DHS-2A June 2023



DK-LOK
Fittings & Valves

7, Golden root-ro 129beon-gil, Juchon-myeon, Gimhae-si
Gyeongsangnam-do, South Korea 621-842

TEL : (055) 338-0114

FAX : (055) 901-0146

<http://www.dklok.com>

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1. Safety Issues



You are duly requested to read and understand these instructions as well as the ENERPAC Instruction Sheet of the Hydraulic Hand Pump before using the DHS-2A.

Follow all safety precautions to avoid personal injury or property damage during system operation.

DK-Lok can't be responsible for damage or injury resulting from unsafe use, lack of maintenance or incorrect product and/or system operation.

Contact your authorized **DK-Lok** distributor when in doubt as to the safety precaution and operations.



WARNING!

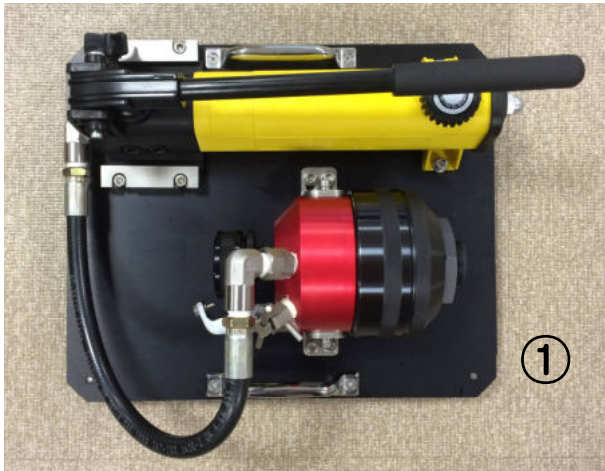
Wear proper personal protective gear when operating or working near the swaging unit.

2. Features

- Pre-swage **DK-Lok** ferrules onto tubing
- Fractional: 1/2" , 3/4" , 1" , 1-1/4" , 1-1/2" , 2"
- Metric: 12mm , 20mm , 28mm , 32mm , 38mm, 50mm
- Assure consistent makeup with only about 30% of the manual pull-up torque
- Reduce installation time
- Easy to use by one operation
- Different size can be pre-swaged just by replacing Die & Jig
- Portable with wheels on sturdy aluminum carrying case



3. Standard Components

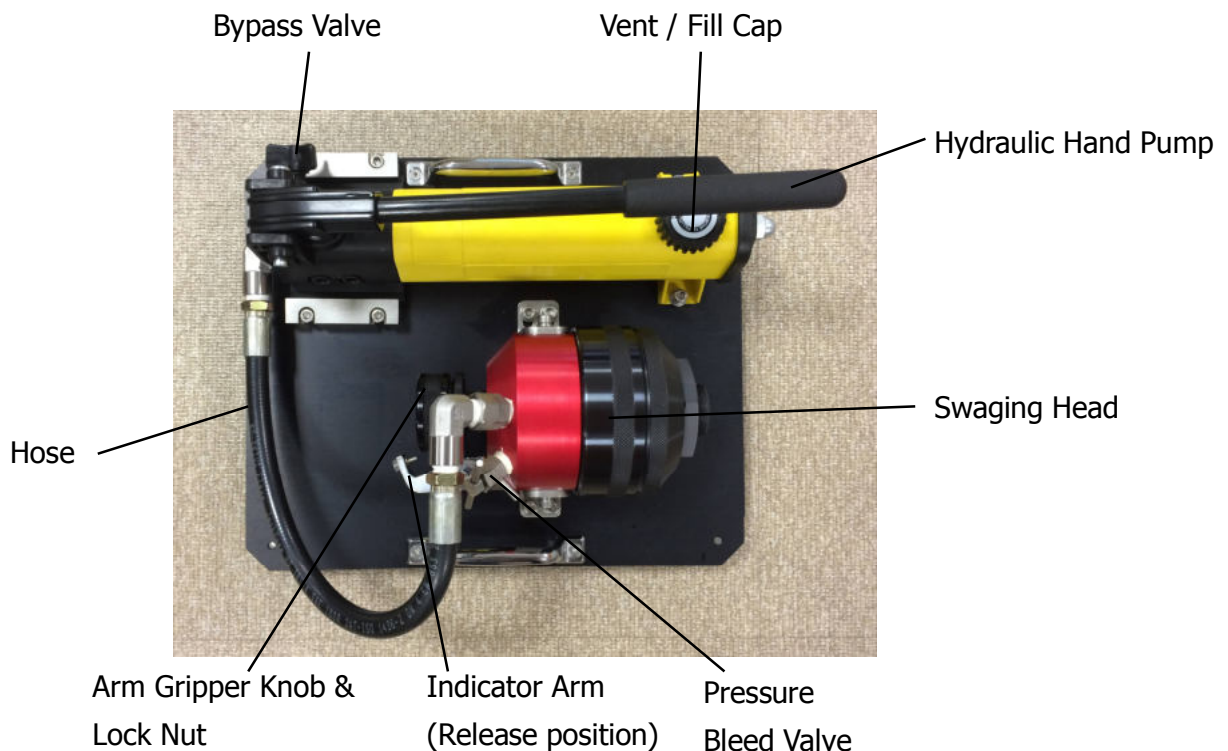


① Hydraulic Swaging Unit
(Swaging Head + Hydraulic Hand Pump)



- DJS consisting of DIE and JIG
- Spanner Wrench
Allen Wrench
DIE Securing Bolt
DKLUB-0311 (Lubricant)

4. Hydraulic Swaging Unit Lay Out



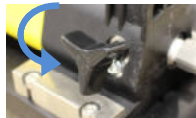
5. Setup Instructions

1. Check Hydraulic Oil Level Regularly

Please refer to "7.1 Adding Oil to the Pump" of the ENERPAC Pump Instruction sheet enclosed herewith.

2. Unit setup

3. Open Bypass Valve.



4. Open the Pressure Bleed Valve one turn to bleed air from the Swaging Head.



5. Close Bypass Valve.



6. Pump handle until the oil is free of air bubbles at the vent tube of the bleed valve.

7. Close Pressure Bleed Valve by finger tight



3. Swaging Head Setup

1) Select proper DJS OD size.

Note) In order to prevent deformation of the DJS, it is recommended to apply DKLUB-0311 lube to outside surface of the DIE



2) Hand tighten DJS into the Swaging Head and tighten completely with the Spanner Wrench



3) Insert and tighten the DJS DIE Securing Bolt into the Swaging Head with the Allen Wrench



6. Prepare Tubing

1. Check if tube O.D, wall thickness, circularity, hardness and their tolerance are within specifications for your application. Make sure the OD is free from scratches and dirt.
2. Make a square cut.
3. Remove burrs from inner and outer edges of tube.



7. Operating Instructions

1. Operation

2. Ensure the Indicator Arm is in the unsecured position by rotating the black knob clockwise (inward).
3. Put the DK-Lok Nut and Ferrules on the tubing in proper orientation.
4. Hand-tighten the Nut onto the DJS making sure that the tubing is bottomed out.
5. While keeping the tube bottomed, rotate the swaging head or the tube left to right minimally and pump the swaging unit the ferrules contact the tube OD disallowing any further rotary movement.
6. Place the Indicator Arm against the Arm Gripper Knob and rotate the knob counter-clock wise until the Arm Pin is captured hand tight. Snug the Lock Nut against the knob hand tight.



7. Pump the handle until the Arm Pin pops off the Arm Gripper Knob.



8. Open the bypass valve and loosen the nut and remove the swaged assembly.



9. Fittings over 1in. or 25mm only: Prior to completing the installation, apply the lubricant sparingly to the DK-Lok tube fitting body threads. Apply a similar amount of lubricant to the rear flange surface of the back ferrule.



10. Hand tighten the swaged assembly into the fitting body. Hold the fitting body stable and tighten the nut 3/4 turns with a wrench.



Note) For 1" OD connections, tighten the nut 1/2 turn from hand tight. Over 1" OD, 3/4 turn from hand tight.

Gauging Instructions

Insert the DHS NO-GO Gap Gauge (DIGS-X) between the Nut and Body Hex/Shoulder.

- If the DIGS does not enter the gap between the nut and body hex/shoulder, the fitting is sufficiently tightened.
- If the DIGS enters the gap, tighten the nut until the DIGS will not enter the gap.



2. Multiple Connections

3. Close Bypass Valve



4. Observe Swaging Head Indicator Arm in an Upward Position



5. Repeat the instructions **1. Operation** 2) through 6)

8. Trouble Shooting

1. If tubing is difficult to remove from DHS-2A after Pre-Swaging, Gently rock the tubing back and forth to remove it. Don't rotate the tube.
2. If the unit fails to swage sufficiently, check the oil level first, then follow the instructions **3. Swaging Head setup** 2) through 3)
3. If oil is leaking from the swaging head, return the unit to your authorized DK-Lok distributor

9. Storage Instruction

Dismantle Unit and Store

1) Open Bypass Valve



2) Unscrew the DIE Securing Bolt, and remove the DJS with the Spanner Wrench



3) Clean all Components & Accessories

4) Keep all of the Components & Accessories in the supplied DHS-2A Case

5) Lay the case horizontally down whenever possible

10. Recommended Tubing Wall Thickness for use with DHS-2A unit and DJS Ordering Number

※ CAUTION

Use of tubing below the recommended minimum wall thickness may result in the tube sticking in the die head.

For DK-Lok OD (in.)	Stainless Steel Seamless Tubing Wall Thickness		DJS Ordering Number
	Min. (in.)	Max (in.)	
1/2	0.065	0.083	DJS-8
5/8		0.095	DJS-10
3/4		0.109	DJS-12
1	0.083	0.120	DJS-16
1-1/4	0.095	0.156	DJS-20
1-1/2		0.188	DJS-24
2	0.109		DJS-32

For DK-Lok OD (mm)	Stainless Steel Seamless Tubing Wall Thickness		DJS Ordering Number
	Min. (mm)	Max (mm)	
12	1.5	2.0	DJS-12M
14		2.2	DJS-14M
15			DJS-15M
16	1.8	2.5	DJS-16M
18			DJS-18M
20	2.0	2.8	DJS-20M
22		3.0	DJS-22M
25			DJS-25M
28	2.2	3.5	DJS-28M
30		4.0	DJS-30M
32			DJS-32M
38	2.5	4.5	DJS-38M
50		5.0	DJS-50M

Safe Product Selection
When selecting a product, the total system design must be considered to ensure safe performance. Product function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the sole responsibility of the system designer and user.
Product Warranty
DK-Lok hereby warrants to the purchaser of this product that the components of the product shall be free from defects in material and workmanship for twelve months from the date of purchase. Manufacturer shall be liable only if the product is used as specified in the current catalog and written instructions.
The purchaser's remedies shall be limited to replacement and installation of ant parts that fail through a defect in material or workmanship.
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