

# Safe Operation & Maintenance Instructions

## Hydraulic Compression Tool

### HYCP-240R



Version: 2018/09

**KuDos**<sup>®</sup> Hydraulic Compression Tools are carefully inspected for quality and tested for safety. We follow ISO 9001: 2015/ ISO 14001: 2015/ IECQ QC 080001/ OHSAS 18001: 2007, CE Standards & UVDB

### **ATTENTION!**

*Safe Operation & Maintenance Instructions must be followed.*

# Table of Contents



■ Table of Contents.....	1
■ Safety Instructions.....	2
■ Product Description.....	3
■ Maintenance .....	4
■ Operating Instructions.....	5
■ Dies.....	8
■ Compression Diagram.....	9
■ Trouble–Shooting.....	10
■ Diagram of Components (HYCP-240R).....	12
■ Table of Components (HYCP-240R).....	13
■ Limited Lifetime Warranty.....	14
■ Manufacture & Quality Certificate	

Thank you for using **KuDos®** products. This manual must be read carefully prior to operating this product. Special attention should be paid to the section “Safety Instructions”. Damages and injuries caused by improper use of this product are **NOT** included in our warranty. We would like to remind you to work safely and to keep this manual on hand.

## Safety Instructions

- Follow ALL instructions to ensure safety.

<b>WARNING</b>	
	Work safely. Use both hands to firmly grip the tool handles. Keep hands off the compression section.
	This product is not fully insulated. Proper equipment must be used to avoid electrical shock.
<b>ATTENTION</b>	
	Do not use this tool on glass, plastic, wood or any other materials which could shatter. <b>Do not exceed the equipment ratings.</b>
	Always wear safety goggles when operating this product. Projectiles or hydraulic fluid can cause serious injuries.

# Product Description

## ■ Subassembly



## ■ Specifications & Functions

### **HYCP-185**

Length: 373 mm

Weight: 2.1 kg

Max. Pressure: 550 bar

Oil Required: 16 cc

Max Output: 5.3 ton

### **HYCP-240R**

Length: 377 mm

Weight: 2.4 kg

Max. Pressure: 550 bar

Oil Required: 23 cc

Max Output: 5.3 ton

- Light-weight, compact and slim design
- Accepts BEKU type dies
- Latch type head for easy die changes and removal of connectors
- Built-in bypass relief valve for constant compression
- Adjustable ram stroke, 10-15 mm to minimize pumping action
- Spring loaded pump handle allows one-handed pumping
- Small handle spread of 210mm for close quarter work
- Dies are sold separately. Stock dies are for Din 46235 terminals

- Keep the tool head free of dirt and metal chips. Use a lubricant to clean the tool when necessary.
- Routine application of rust preventive oil to the product is needed. Avoid bringing the tool into contact with water or solvents.
- Do **NOT** keep this product in places with high temperatures, high humidity, or direct sunlight.
- Suggested working temperatures : -10°C ~ 40°C.
- Hydraulic fluid temperatures over 65°C might cause damages to components sealed inside the product.
- The hydraulic fluid pressure should be adjusted only by **KuDos®** service representatives.
- Inform KuDos® authorized distributors in case of any abnormalities or malfunctions of the product.
- **DO NOT DISASSEMBLE OR ATTEMPT TO REPAIR THIS TOOL.**

# Operating Instructions

## ■ Before operation:

1. Make sure all parts of the product are clean and rustless, and that no loose parts exist.
2. Check that no leakage occurs while the tool is resting or while the product is tested without cables

■ **ATTENTION** ! Do not build up the hydraulic tool when the tool head jaws are closed and the dies are not in place.

■ **ATTENTION** ! Oversized fittings will not allow the tool head frame of the tool to close completely, causing damage to the tool head frame.

## ■ During operation:

1. **Do NOT operate the product without the dies or a connector in place.** It may damage the piston or tool head or the injure the operator.
2. Operation with dies in accordance with the specifications in this handbook is required. Always keep the fitting centered on the tool die and do not use over- specification materials.
3. Stop operating immediately in case of any abnormalities. Refer to the **Trouble- Shooting** section of this manual, if:

a) **Compression of lugs cannot be implemented.**

b) **Dies cannot be set in place or removed.**

c) **Piston is stuck or unable to retract after operation.**

## ■ After operation:

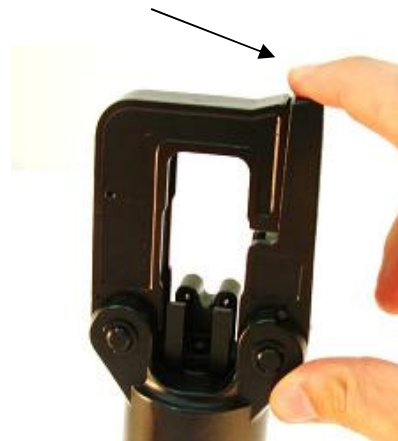
1. Clean the product and ensure that all pieces are in working condition.
2. Apply rust preventive oil on a regular basis.
3. Always store this tool in the case with the cylinder piston fully retracted.

# Operating Instructions

1. Press the release switch to release the hydraulic pressure in the tool.  
When the piston returns to the starting position the tool is ready to operate.



2. Pull back the latch to open the head,  
The head will spring open.



3. Slide the dies into the open head.  
Make sure the dies are matching  
and seated correctly.



# Operating Instructions

4. Place the cable and fitting into the opening of the tool head frame. The cable and fitting must be positioned at the **CENTER** of the open top to balance the compression. If put off-center, the dies may be damaged or the tool head frame deformed.
  5. Release the handle catch. The moving handle will spring open.
  6. Follow connector specifications and apply the necessary number of crimps. See the diagrams on page 9 for the crimping sequence.
  7. Pump the moving handle to advance the lower die forward. When the lower die makes contact with the fitting, ensure the tool is at a 90° angle to the fitting.
- For model HYCP 240R:** Once the upper and lower dies are tightly pressed, the rapid motion of the piston with low hydraulic pressure will convert to a slow motion with high pressure.
8. Continue pumping until both dies are touching. Operation is complete when the hydraulic pressure reaches 550 bar, and the relief valve releases the internal pressure.
  9. Press the release lever to retract the piston. Open the tool head and remove the fitting –OR– reposition the fitting and compress again according to your operation specifications.
  10. Clean the product and dies after use. Apply rust preventive oil to the product and dies before putting them back in the carrying case.

**\*\*IMPORTANT\*\***

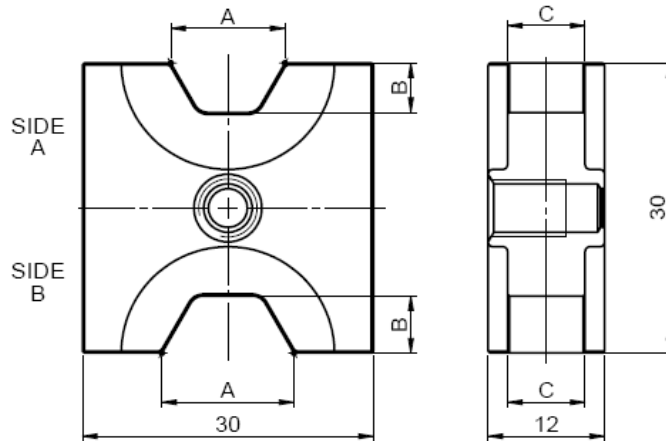
**\*\*Under any operation, the piston MUST BE FULL RETRACTED to keep the tool in good condition.**

**\*\*Do not test the crimper without dies to avoid damage head.**



# Dies

# HYCP-185 / HYCP-240R



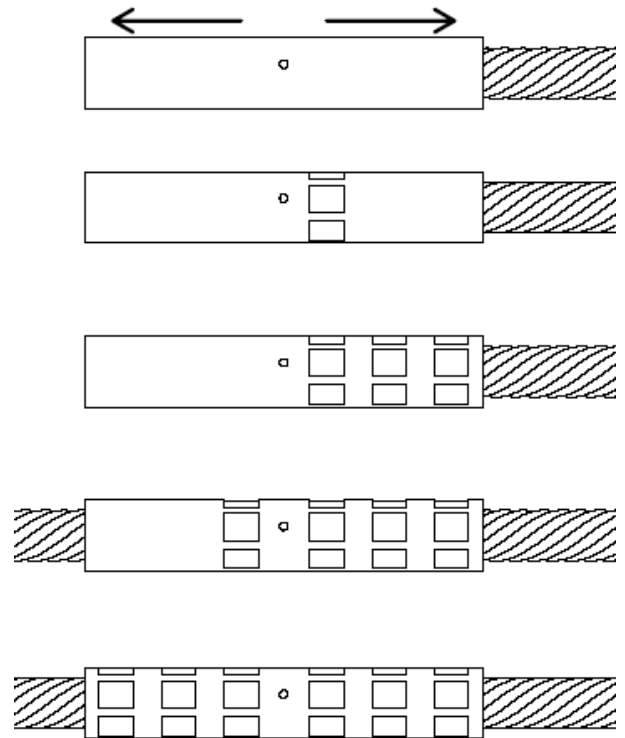
Die No.	Side		A	B	C
AHE-1016	A	CU10	5.45	2.3	12
	B	CU16	6.8	2.85	12
AHE-2535	A	CU25	8.35	3.5	9
	B	CU35	9.4	4	9
AHE-5070	A	CU50	11.35	4.8	9
	B	CU70	13.8	6.05	9
AHE-95120	A	CU95	16.17	6.9	9
	B	CU120	18.05	7.6	9
AHE-150	A	CU150	20.15	8.55	6
AHE-185	A	CU185	22.15	9.35	6
AHE-240	A	CU240	25.6	11.1	6



# Compression Diagrams

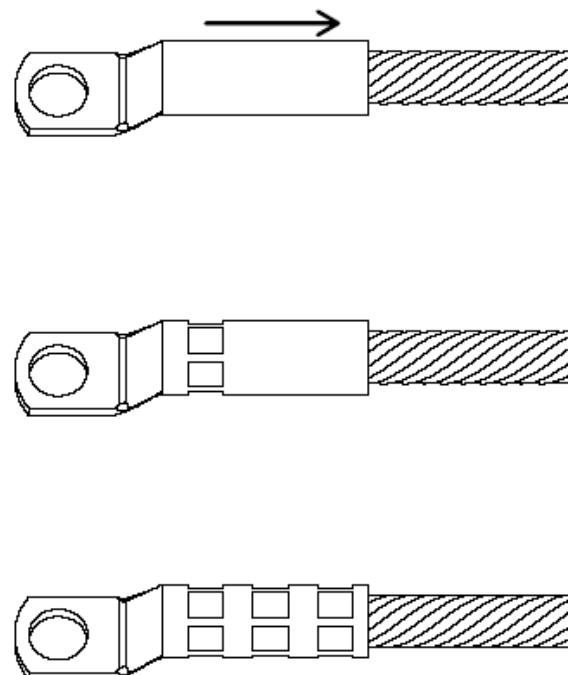
## ■ Sleeve Fittings

Direction of Compression: Single-sided / Outward



## ■ Terminal Fittings

Direction of Compression: Outward



## Air in the Hydraulic System:

- Air in the hydraulic system may cause the lower blade from advancing or cause it to advance slowly. To eject the air bubble from the hydraulic circuit:
  1. Position the tool upside-down in a vice with the pump handle in the open position.
  2. Unscrew the main handle from the body, then remove the reservoir filler cap (HYCP-185, #55 / HYCP-240R. #45).
  3. Pump the moving handle a few times to advance the ram.
  4. Rotate the pump handle and close it to release the pressure in the hydraulic circuit until the piston is fully retracted and the oil has returned completely into the reservoir.
  5. Repeat the process several times to assure that all air bubbles are ejected.
  6. Close the rubber reservoir and insert the the reservoir filler cap. Reassemble the main handle.

## Oil Refilling:

- Check the oil reservoir every six months and make sure the reservoir is full. To refill the oil reservoir, follow the steps above to disassemble the tool. Do not use restored, used oil, or mix different kinds of oil.

# Trouble-Shooting

## ■ Compression of lugs cannot be completed:

- A. Applied cables or terminals are over-specification.
- B. Operation instructions were not followed. The product or dies have been already damaged.
- C. Internal leakage: Contact your **KuDos®** service representatives.

## ■ Dies can not be set in place or can not be removed:

- A. Deformed tool head or dies. Contact **KuDos®** service representatives.
- B. Clean the grooves on the tool head to remove impediments.
- C. Clean the die seats on the tool head to remove impediments.

## ■ The piston is stuck or is unable to retract after operation:

The piston may have been deformed by uneven stress distribution when the product was operated with off-centered fittings. Contact **KuDos®** service representatives.

## ■ Replace any worn or damaged parts immediately. Do not use parts not supplied by KuDos.

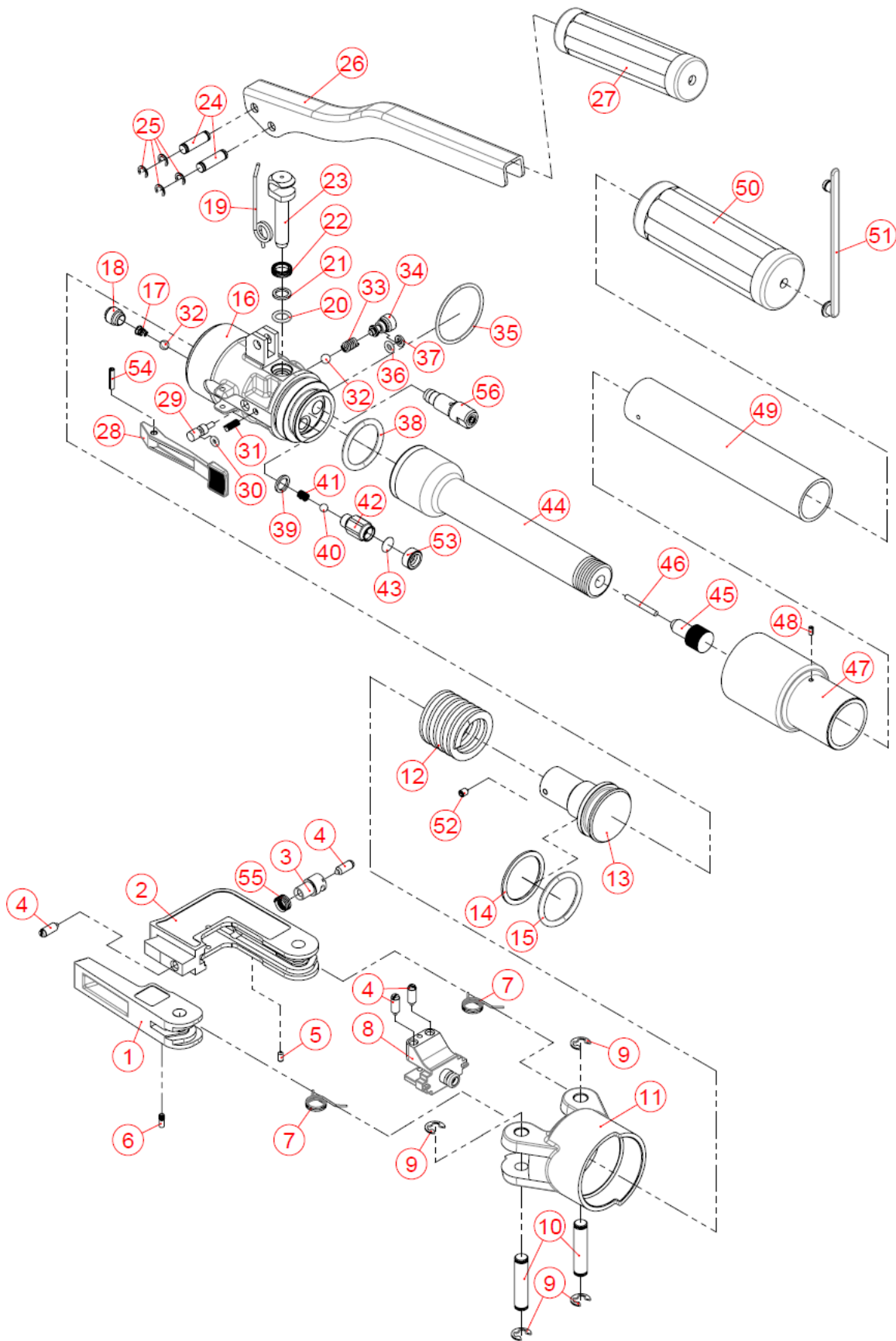
## ■ Contact KuDos® service representatives to request parts or for problems not shown above.

## ■ Do NOT attempt to disassemble or repair the product.

## ■ KuDos hydraulic tools must be serviced by a qualified technician.

# Diagram of Components

HYCP-240R



# Table of Components

HYCP-240R

No.	Parts	Q'ty	No.	Parts	Q'ty
1,2,6	Latch	1	29	RELEASE VALVE STEM	1
	Yoke	1	30	O-RING	1
	Pin	1	31	COMPRESSION SPRING	1
3	DIE SIZING LOCK PIN	1	32	BALL	2
4	BALL PLUNGER	4	33	COMPRESSION SPRING	1
5	SCREW	1	34	VALVE SCREW	1
7	TORSIONAL SPRING	2	35	O-RING	1
8	DIE HOLDER	1	36	O-RING	1
9	CRESCENT	4	37	BACK-UP RING	1
10	HINGE PIN	2	38	O-RING	1
11	SPINDLE HUB	1	39	COPPER WASHER	1
12	COMPRESSION SPRING	1	40	BALL	1
13	MAIN PISTON	1	41	COMPRESSION SPRING	1
14	BACK UP RING	1	42	SOLID FILTER	1
15	O-RING	1	43	OIL SCREEN	1
16	CYLINDER	1	44	OIL RESERVOIR	1
17	COMPRESSION SPRING	1	45	FILLER CAP	1
18	VALVE SCREW	1	46	MAGNETIC BAR	1
19	TORSIONAL SPRING	1	47	EXTENSION TUBE	1
20	O RING	1	48	SPRING PIN	1
21	BACK-UP RING	1	49	FIBER GLASS PIPE	1
22	DUST SEAL	1	50	HANDLE GRIP	1
23	PUMP PISTON	1	51	HOLDING BAND	1
24	HINGE PIN	2	52	SCREW	1
25	CRESCENT	4	53	SCREEN HOLDER	1
26	PUMP HANDLE	1	54	SPRING PIN	1
27	HANDLE GRIP	1	55	COMPRESSION SPRING	1
28	RELEASE LEVER	1			