



Your Forever Working Partner

KuDos Mechanical Co., Ltd

**SAFE OPERATION & MAINTENANCE INSTRUCTIONS**

# Nut Splitter Head HYNC-Series



**ATTENTION!**

**SAFE OPERATION & MAINTENANCE INSTRUCTIONS MUST BE FOLLOWED**

KuDos Nut Splitter Heads are carefully inspected for quality and tested for safety. We meet ISO 9001:2008, ISO 14001:2004, IECQ QC 080001, OHSAS 18001:2007 & CE standards.



Cert. No. TW-HSPM-1237



# Safety Warnings

Carefully read ALL warnings before operating this tool:

 <b>WARNING:</b>	
	DO NOT attempt to disassemble or repair this product. Doing so will violate the terms of the warranty.
	DO NOT use this tool on glass, plastic, wood or any other materials which could shatter. Do not exceed equipment ratings.
	Always wear safety goggles when operating this product. Projectiles or hydraulic fluid under pressure can cause serious injuries.
	This product is NOT an insulator. Use protective equipment when working near power lines.
 <b>ATTENTION!</b>	
	Read all instructions and warnings carefully. Follow all safety precautions to avoid injury or damage to property.
	Only crimp terminals and sleeves that fit the tool specifications. DO NOT attempt to crimp oversized fittings

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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

## WORK AREA SAFETY

1. Keep the area around the equipment clean and free of obstructions
2. Bystanders should stay clear of the work area to ensure safety

## PERSONAL SAFETY

1. Stay alert while using this hydraulic equipment to prevent serious injury. Do not use under the influence of drugs, alcohol or medicine.
2. Do not wear loose hair or clothes that may get caught while the equipment is in operation.
3. To reduce the risk of injury, wear nonconductive gloves and non-skid safety-shoes. Always wear protective eyewear.
4. Work safely. Maintain your balance and do not reach while operating hydraulic tools.

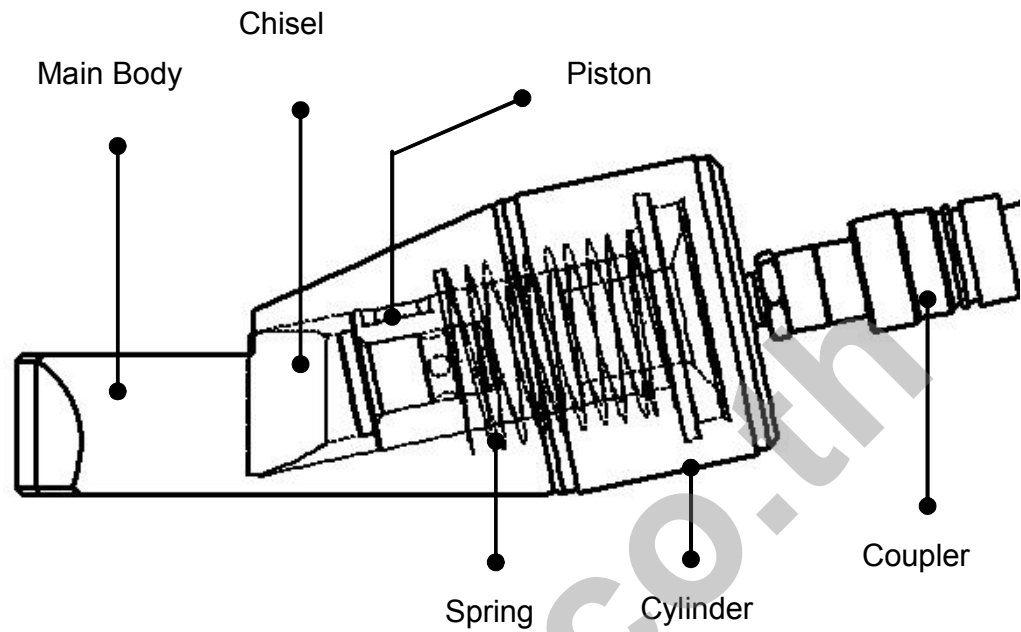
## TOOL USE AND CARE

1. Do not use this tool if there are any abnormalities or damage to any of its components.
2. Keep out of the reach of children. All users should be familiar with its use before operating.
3. Inspect the tool before and after every use. Do not use this tool if it is damaged in any way.
4. Personal injury can be caused by operating damaged or poorly maintained tools. Check for loose parts before use.
5. Use only Kudos recommended accessories with this tool.
6. Do not use this tool in wet conditions. Store this tool in a dry place.

## SERVICE

1. This tool must be repaired by qualified technicians. Do not attempt to disassemble or repair this tool yourself.
2. When having the tool serviced, always use identical Kudos replacement parts.

# Product Description



**FEATURES:**

- Compact design and easy to use
- Unique angled-head design for different applications
- Single-action, spring-return hydraulic cylinder
- Seven model sizes ranging from 13 to 75mm capacity





# Operating Instructions

## BEFORE USE, DON'T FORGET TO...

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

1. Connect the pump hose and splitter couplers. Firmly tighten the couplers to prevent restricted oil flow between the pump and the hydraulic tool head.
2. To remove air trapped in the hydraulic system, operate the pump to advance and retract the chisel several times.
3. Retract the piston and the chisel. The product is now ready to operate.

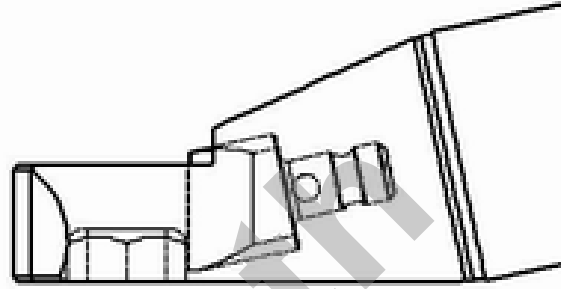


## **WARNING:**

- DO NOT use the nut splitter to cut chains or bolts
- DO NOT use the nut splitter to rotate nuts
- DO NOT move the tool during operation
- DO NOT heat up nuts with the nut splitter in place

6. Position the splitter over the nut. Make sure the nut is squared at the top of the nut splitter head. Improper positioning of the splitter on the nut might cause damages to the chisel.

The flat surface of the splitter must rest flush (90°) against one of the nut flats, and the head must rest on a flat surface.



7. Hold the splitter in place and operate the pump until the chisel cuts through the nut. Stop the pump immediately after the nut is split to avoid damages to the bolt threads.
8. Retract the chisel and lift the splitter off the nut. If the nut cannot be removed after one cut, position the splitter on the side opposite (180°) the first split and the operation repeated.
9. Turn off the pump after the nut is split and the chisel is retracted completely.
10. Dismount the couplers and the hose and replace the dust caps to all couplers. If the couplers cannot be dismounted, release the internal pressure from the pump.

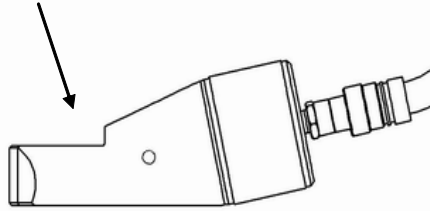
**AFTER USE, DON'T FORGET TO...**

- Clean the product and check to ensure that all pieces are in working condition.
- Apply rust preventive oil to the product and blades before returning it to the carrying case.

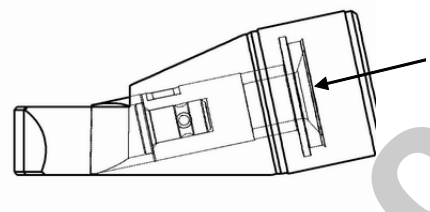
# Chisel Replacement - Removal

1. Remove the set screw from the side of the main body.

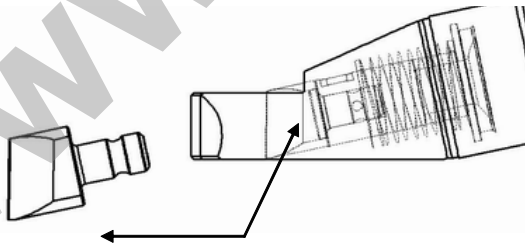
**NOTE:** Refer to page 12 for the specifications of wrenches and screws for all models of splitters.



2. Operate the pump to advance the chisel until fully extended.



3. Remove the smaller set screw from the same hole in the side of the main body.
4. Use the pump to retract the piston and separate the chisel from the piston. Pull the chisel out of the main body.



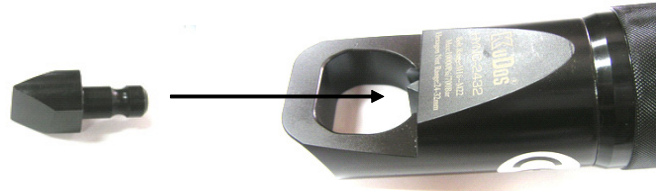
## **⚠ ATTENTION!**

Wrenches with the correct specifications are needed to replace chisels, or the product may be damaged.



## Chisel Replacement - Installation

6. Advance the cylinder piston until fully extended. Place the chisel in the cylinder and align it to the correct position. Insert the small set screw and tighten.



NOTE: The set screw must be tightened firmly, or the chisel may perform improperly.

7. Retract the piston and the chisel. Insert the larger set screw and tighten.



8. Check the splitter and cylinder action by advancing and retracting the chisel several times.

### **IF THE PISTON CANNOT BE RETRACTED AFTER THE CHISEL IS REPLACED:**

- The set screw might not be tightened firmly enough, or the replaced chisel is misaligned with the piston, interfering with the motion of the piston. Remove the setscrews and repeat steps 6-8 to reinstall the chisel.
- A squeal of metal while advancing or retracting the piston indicates that the setscrew #2 may be over-tightened and interfering with the motion of the piston.
- Adjust set screw so the piston will not be scratched.

# Troubleshooting

- Failure to split nuts:**
- 1) The hardness or size of applied nuts might exceed equipment ratings.
  - 2) The chisel is worn or damaged and must be replaced. Splitting nuts with a worn or damaged chisel might cause property damage or even injury.
  - 3) The pump output might be insufficient.
  - 4) Internal leakages of hydraulic fluid: Contact your KuDos® service representatives.

- Low operating pressure (<700 bar/ 10,000psi):**
- 1) Secure the couplers properly to prevent restricted oil flow.
  - 2) Inspect the pump output for any possible pressure losses. Do not use your fingers when looking for fluid leaks.
  - 3) Test the pump to ensure it reaches 700 bar pressure. Never adjust the pump relief valve over 700 bar.

- Piston action is slow or spongy:**
- 1) There is air in the hydraulic system. Follow steps on page 6 to expel any air in the system.

- Pressure leaks away:**
- 1) Release valve is leaking. Contact your KuDos® service representatives.
  - 2) Piston seal is leaking. Contact your KuDos® service representatives.
  - 3) Fluid leaks on the cylinder or pump body. Contact your KuDos® service representatives.

# Maintenance

Follow these tips to ensure long product life:

- Keep the tool head free of dirt and metal chips. Routine application of rust preventive oil to the product is needed.
- Avoid bringing the tool into contact with solvents or water.
- Routine renewal of pump oil is required. Particles mixed in the pump oil may cause malfunctions or damage to the product.
- Use only new SHELL T37/T46 hydraulic fluid or equivalent. Using the incorrect type of oil will cause damage to the tool head and pump.
- Do NOT lift the tool by the hydraulic hose or couplers, or let the tool drop to the ground or into the carrying case.
- DO NOT keep this product in places with high temperatures, high humidity, or direct sunlight.
- Suggested working temperatures are -10°C to 40°C. Hydraulic fluid temperatures over 65°C might soften seals and cause fluid leaks.
- DO NOT DISASSEMBLE OR ATTEMPT TO REPAIR THIS TOOL.

 **ATTENTION:**

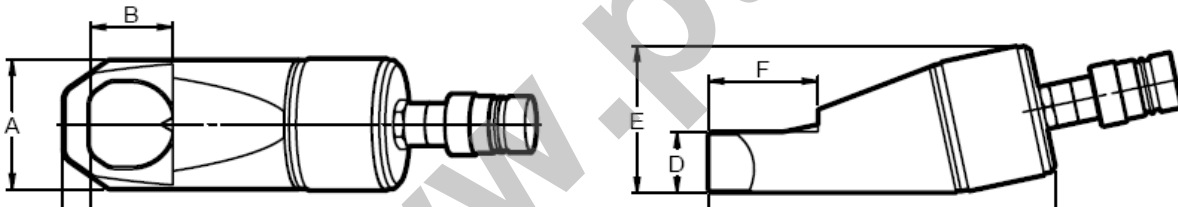
- KuDos tools must be serviced by a qualified technician.
- Replace any worn or damaged parts immediately. Only use parts supplied by Kudos.
- Contact KuDos service representatives to request parts or for problems not shown here.

# Model Specifications

Model No.	Bolt Range	Hex Nut Range (mm)	Capacity (ton)	Oil Capacity (cm <sup>3</sup> )	Dimensions (mm)			Net Weight (kg)	Gross Weight (kg)
					Length	Width	Height		
HYNC-1319	M6-M12	10-19	5	5	170	40	48	1.2	2.6
HYNC-1924	M12-M16	19-24	10	10	191	54	62	2.0	3.6
HYNC-2432	M16-M22	24-32	15	15	222	64	72	3.0	5.2
HYNC-3241	M22-M27	32-41	20	20	244	75	88	4.4	7.0
HYNC-4150	M27-M33	41-50	35	35	288	94	105	8.2	13.6
HYNC-5060	M33-M39	50-60	50	50	318	106	128	11.8	18.4
HYNC-6075	M39-M48	60-75	90	90	393	156	181	34.1	42.7

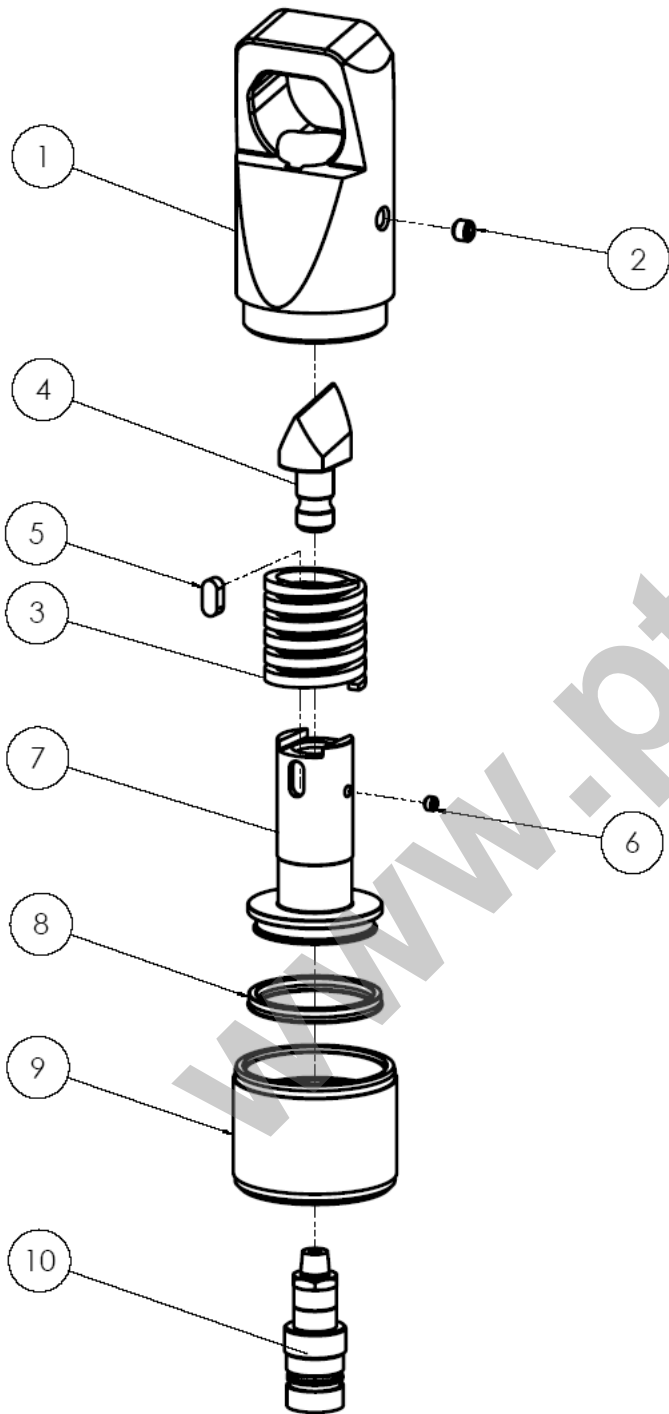
Attention! Maximum allowable nut metal hardness is HRC-44

## Dimensions



Model Specs	A	B	C	D	E	F	G
HYNC-1319	39.80	20.90	7.00	19.10	49.71	29.00	120.43
HYNC-1924	53.84	25.35	10.00	25.00	62.17	40.00	146.50
HYNC-2432	64.00	33.84	13.00	30.00	76.47	51.80	180.12
HYNC-3241	77.01	42.75	16.00	36.10	87.28	64.90	205.01
HYNC-4150	94.00	53.82	21.10	44.70	107.90	76.00	243.91
HYNC-5060	106.00	60.77	24.30	54.30	125.28	92.00	288.56
HYNC-6075	156.19	80.43	27.00	75.00	184.11	110.00	365.36

# Parts Guide



Part No.	Qty.	Part Name
1	1	Main Body
2	1	Screw
3	1	Spring
4	1	Moving Blade
5	1	Guide Piece
6	1	Screw
7	1	Piston
8	1	O-Ring
9	1	Cylinder
10	1	Coupler

# Part Specifications

Parts	Model Number						
	1319	1924	2432	3241	4150	5060	6075
Screw (#2)	M8×1.25×10	M10×1.5×8	M12×1.75×10	M12×1.75×10	M12×1.75×10	M14×2×18	M14×2×18
Spring (#3)	D27.5×51	D30.5×61	D42×78	D48.5×87	D60×98	D72×122	D105×155
Screw (#6)	M5×0.8×4	M6×1×6	M8×1.25×6	M8×1.25×6	M8×1.25×6	M10×1.5×12	M10×1.5×12
Seal (#8)	D24×32×7	D35×43×6	D45×55×7	D55×65×6	D70×80×8	D85×95×8.5	D122×130×8
Coupler	3/8-18						
Accessories	Model Number						
	1319	1924	2432	3241	4150	5060	6075
Hex Wrench (mm)	2.5 & 4	3 & 5	4 & 6	4 & 6	4 & 6	5 & 6	5 & 6
Packing	KuDos® Original Plastic Carrying Case						Crate



# Limited Lifetime Warranty

- Kudos® hydraulic products are warranted against defects in materials and workmanship for the life of the product. This is defined as that point in time when the product no longer functions due to normal wear.
- This warranty is subject to the following exclusions and limitations:
  1. This warranty does not cover damages to products which are not installed, operated, used and maintained in accordance with written instructions.
  2. This warranty does not cover products that have been worn out, damaged by improper storage, damaged or otherwise altered, or from disassembly or attempted disassembly by parties other than KuDos® or its authorized service representatives.
  3. This warranty does not cover damages caused by the use of components not manufactured or authorized by KuDos®, acts of God, accidents, or use in a manner for which they are not intended.
- KuDos's liability in all cases is limited to, and shall not exceed, the purchase price paid. Kudos shall not be liable to any buyer for consequential or incidental damages of any kind.
- Batteries, chargers, electric motors, gas engines and cutting blades sold with Kudos products are not covered by this warranty. All electric motors and gas engines are separately warranted by the manufacturer.
- Receipt and warranty card are required for warranty services.
- If the tool is found to be defective, in our sole judgement, Kudos will either repair or replace the defective product or part.
- All revisions in warranty policy and product information will be included in future versions of our manuals. Copies of this warranty are available from the factory upon request.



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## Manufacture & Quality Certificate

We hereby certify that the following KuDos product was manufactured in accordance with our specifications and has passed our quality inspection.

ITEM: HYDRAULIC NUT SPLITTER

MODEL NO.: HYNC-

SERIAL NO.: \_\_\_\_\_

INSPECTION DATE: \_\_\_\_\_

Q.C. SUPERVISOR: \_\_\_\_\_

For KuDos Authorized  
Distributor Use Only:

    /    /      
Date of Purchase (dd/mm/yy)

For Industry or Individual  
Buyer Use Only:

    /    /      
Date of Purchase (dd/mm/yy)