



## INSTRUCTION SHEET FOR HYDRAULIC NUT SPLITTERS

Repair Parts Sheets for hydraulic Nut Splitter are available from your nearest authorized BELIUM Service Center or BELIUM Sales Office.



### NOTE:

**PLEASE READ AND FOLLOW THIS INSTRUCTION BEFORE YOU USE BELIUM HYDRAULIC NUT SPLITTERS.**

## 01 SAFETY



To avoid any personal injury or property damage, please follow all safety precautions. Belium cannot be responsible for injury or damage resulting from unsafe and incorrect products use or system operation, or lack of maintenance.

**DANGER** is used only when your action or lack of action may cause serious injury or even death. **WARNING** indicates a potential danger that requires correct action to avoid personal injury. **IMPORTANT** indicates a correct action to prevent damage or equipment failure.



### DANGER

- The hydraulic equipment operator must be a qualified operator familiar with correct training and work experience of hydraulic equipment. Lack of knowledge in any of these areas can lead to equipment damage or personal injury.

- To avoid personal injury, please do not modify hydraulic equipment without approbated by BELIUM.
- Please never split a nut more than the capacity of the Nut Splitter, overloading causes equipment failure and possible personal injury.
- The operating pressures of Nut Splitters are designed for a max pressure of 700 bar (10,000 psi), please do not use a pump with a higher pressure rating to connect the Nut Splitter. Higher pump may cause equipment failure and serious personal injury.
- To avoid personal injury, please keep fingers away from cutting blade during operation.



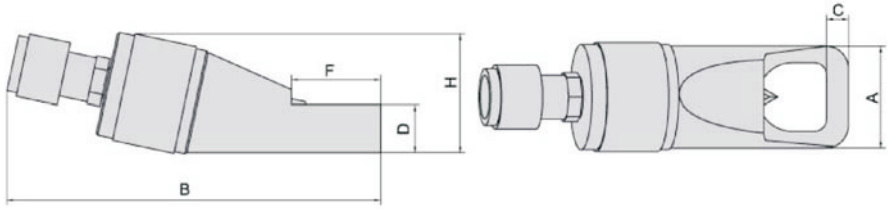
## WARNING

- Please wear safety glasses, helmet and other necessary personal protective equipment when operating hydraulic equipment.
- Nut splitters are only to be used on cutting Nuts, please do not use Nut splitters to cut bolts, chain, steel bar, glass, plastic, wood or other materials.
- Please install a pressure gauge in the system to monitor the operating pressure. The gauge must have the same pressure rating as the pump and Nut splitter; the wrong gauges may result in Personal injury.
- The system operating pressure must lower than the lowest rated pressure in the system.
- Please carefully inspect the Nut Splitters and couplers before use Nut Splitters or shift couplers. Never connect the Nut Splitters with damaged couplers or damaged port threads. The damaged coupler or damaged port threads may cause equipment failure and possible personal injury.
- Please shift and connect couplers in a clean place, prevent dust or other garbage into Nut Splitter body or tube. Dust or other garbage may damage the Nut Splitter and result in equipment failure and possible personal injury.
- Before removing or tightening hose or couplers, please release hydraulic pressure in system.

## IMPORTANT

- Please keep the Nut Splitters clean all the time. When the Nut Splitters is not in use, please keep the Blade fully return, remove hose and use rubber cap to recover the coupler.
- Please do not drop heavy duty on hose.
- Please do not lift and carry hydraulic equipment by the hoses or couplers, use the handle or other safe way.
- Please use hydraulic Nut Splitters in temperatures of -20°C to 50°C(-4°F to 122°F). Super-cooling or Overheating will make seals and hose failure.

## 02 SPECIFICATION



Model	Capacity (ton)	Hex.nut Range (mm)	Bolt Range (mm)	Nut Hardness (mm)	Dimensions (mm)						Weight (Kg)
					A	B	C	D	F	H	
<b>BNS-001</b>	5	10-19	M6-M12	≤HRC30	40	190	7	19	30	48	1.2
<b>BNS-002</b>	10	19-24	M12-M16	≤HRC30	53	215	10	25	42	62	2
<b>BNS-003</b>	15	24-32	M16-M22	≤HRC30	66	245	13	30	54	80	3.2
<b>BNS-004</b>	20	32-41	M22-M27	≤HRC30	75	285	16	36	66	92	4.5
<b>BNS-005</b>	35	41-50	M27-M33	≤HRC38	93	340	19	43	80	110	8.3
<b>BNS-006</b>	50	50-60	M33-M39	≤HRC38	106	370	23	52	98	128	13.9
<b>BNS-007</b>	90	60-75	M39-M48	≤HRC38	156	450	26	70	117	190	35

**REMARKS: For more questions, please contact BELIUM services.**

## 03 OPERATION

Before use hydraulic nut splitters, please visually check all units, to make sure there are no damage on Nut Splitters and other hydraulic equipment. No oil leaking and shortage of parts. If you find any problem, please contact with your nearest authorized BELIUM Service Center or Sales Office.

### 3.1 Connection

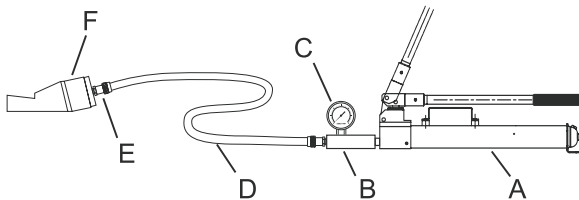


Figure 1

- A. Pump    B. Gauge Adapter    C. Pressure Gauge  
 D. Hose    E. Coupler    F. Hydraulic Nut Splitter

WWW.BELIUM.CN

To connect with the Hydraulic Nut Splitters(see figure 1), follow the steps below:

Step1: Selection of power resource. BELIUM Hydraulic Nut Splitters are single-acting and spring-r return. Hand pumps, Electric pumps or Air pumps could be Hydraulic power resources, the output pressures of pumps are 10,000 psi.

Step2: Clean all hose ends, couplers and other areas around oil ports of Nut splitter and pump. Remove thread protectors from the hydraulic oil outlets.

Step3: Install a pressure gauge into pump.

Step4: Thread hose into gauge adapter.

Step5: Connect the hose Coupler to Nut splitter's coupler. The thread of outlet port is NPT3/8-18.

### IMPORTANT

- To successful seal the connections, please use 2 or 3 wraps of Teflon tape or use thread glue on thread, leaving first complete thread free to prevent taps shed into hydraulic system. Any tape lose in hydraulic system, may jam the oil flow.

## 3.2 Bleeding Air from the system

Please bleed the air from Nut Splitter, hose and pump after you connect with the Pump and Nut Splitter. To bleed the air, fully extend and retract the blade several times.

## 3.3 Operation

- Fully connect with the pump and Nut splitter.
- Put the nut splitter in appropriate position, please correct put the splitter head in right position (Please see Figure 2). Incorrect placement of Nut splitter on the nut may result in failure.
- Hold the Nut Splitter in appropriate position.
- Operate the pump, extend the blade until the Nut is cracked.
- Open release valve on the pump to return the blade.
- Replace the Nut Splitter on the other side of Nut (180°from the first cut).
- After the second cut, please return blade and remove the Nut splitter and spilt nut.

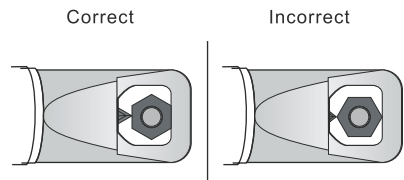


Figure 2

**IMPORTANT:** To avoid damage to the bolt thread, turn off the pump as soon as the nut is cracked.

## 3.4 Removing / replacing the blade

Step1: Connect with the hand pump.

Step2: Use the attached hexagonal wrench to remove the screw (Item No.2) on the side of Nut Adaptor Block (Item No.1).

Step3: Slow operate the pump, so that the mounting screws (Item No.5) of blade target the screw holes of blocks (Item No.1), Loose the mounting screw (Item No.5).

Step4: Mark the position of the blade ( Item No.3 ) angle for correct installation later.

Step5: Pull the blade (Item No. 3) out of the splitter body.

WWW. BELIUM. CN

Step6: Inspect the damage on the blade, repair or use new blade.

Step7: Insert the blade into the piston (Item No.4).

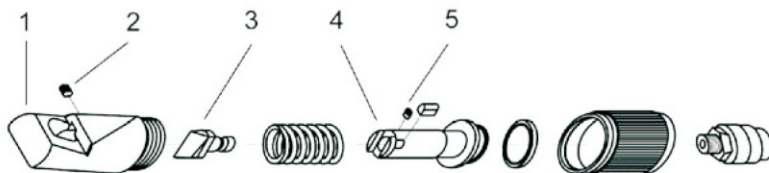
Step8: Align the blade to the position noted in step 3.

Step7: Tighten the screws (Item No.5).

Step8: Open the release valve on hand pump, so that blade return the splitter body, tighten the screw (Item No. 2).

Step9: Operate pump to extend and retract the blade several times, to make sure the Nut splitter works functionally.

Figure 3. Nut Splitter Parts List



Item No.	Description	Qty'
1	Nut Adaptor Block	1
2	Screw	1
3	Blade	1
4	Piston	1
5	Screw	1

## 04 TROUBLE-SHOOTING

**IMPORTANT:** BELIUM nut splitters should be repaired only by a qualified operator or Authorized BELIUM Service Centers. Repair nut splitter without special tools and knowledge may result in personal injury. Please release pressure and disconnect hose(s) before making repair.

Problem	Cause	Solution
Nut splitter can not extend or slower than normal	<ol style="list-style-type: none"> <li>1. Release valve open</li> <li>2. Leaky connection</li> <li>3. Pump malfunctioning</li> </ol>	<ol style="list-style-type: none"> <li>1. Close release valve</li> <li>2. Clean and reseal thread, tighten connection</li> <li>3. Repair or use another pump</li> </ol>
Nut splitter leaks hydraulic oil	<ol style="list-style-type: none"> <li>1. Leaky connection</li> <li>2. Worn or damaged seals</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean and reseal thread, tighten connection</li> <li>2. Contact with the nearest BELIUM Service Center</li> </ol>
Nut splitter will not retract or Retracts slower than normal	<ol style="list-style-type: none"> <li>1. Pump release valve closed</li> <li>2. Pump reservoir is full</li> <li>3. Hose is blocked</li> <li>4. Return spring is damaged</li> </ol>	<ol style="list-style-type: none"> <li>1. Open release valve</li> <li>2. Drain hydraulic oil to correct level</li> <li>3. Clean or Change hose</li> <li>4. Contact with the nearest BELIUM Service Center</li> </ol>