



Your Forever Working Partner

KuDos Mechanical Co., Ltd

SAFE OPERATION & MAINTENANCE INSTRUCTIONS

Hydraulic Flange Spreader K-SW15TE / K-SW9TM



ATTENTION!

SAFE OPERATION & MAINTENANCE INSTRUCTIONS MUST BE FOLLOWED

KuDos hydraulic flange spreaders are carefully inspected for quality and tested for safety. We meet ISO 9001:2015, ISO 14001:2015, IECQ QC 080001, OHSAS 18001:2007, CE standards & UVDB



Safety Warnings

Carefully read ALL warnings before operating this tool:

 WARNING:	
	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 can cause serious injury.
	DO NOT use bare hands to check for oil leaks. High-pressure oil can penetrate the skin and cause severe damage.
 ATTENTION!	
	Read all instructions and warnings carefully. Follow all safety precautions to avoid injury or damage to property.
	Two-handed operation of this tool is required at all times. Maintain a firm grip on both handles when in use.

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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

Follow ALL instructions to ensure safety

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.

Maintenance

Follow these tips to ensure long product life:

- Keep the tool head free of dirt and metal chips. Use a lubricant to clean the tool when necessary.
- DO NOT let the tool drop to the ground or into the case to avoid damage to internal parts or to the plastic case.
- DO NOT keep this tool in places with high temperatures, high humidity, or direct sunlight.
- Suggested working temperatures are -10°C to 40°C. Check hydraulic fluid specifications.
- Hydraulic fluid temperatures over 65°C might soften seals and cause fluid leaks.
- DO NOT DISASSEMBLE OR ATTEMPT TO REPAIR THIS TOOL.

ATTENTION:

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

Product Description: K-SW15TE/K-SW9TM

- SPECIFICATIONS:**
- Length: 288 mm/283 mm •
 - Weight: 7.5kg/6kg
 - Max. pressure: 700 bar/10,000psi
 - Oil required: 79.0 cc/none
 - Max. output: 15.60 tons/9.0 tons
 - Max. tip clearance: 33 mm/32 mm
 - Max. spread: 81 mm

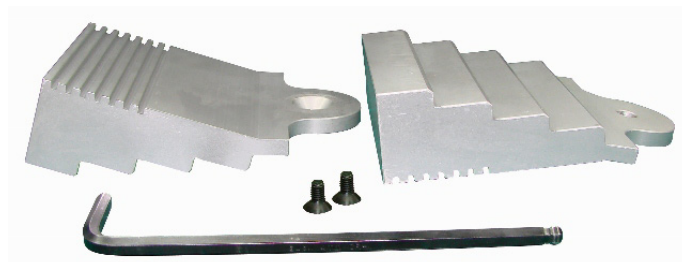
- FEATURES:**
- Integrated wedge concept: friction-free parallel wedge movement eliminates flange damage and spreading arm failure.
 - Unique interlocking wedge design: no first step bending and risk of slipping out of joint.
 - Requires very small access gap of only 6mm (.24 in.)
 - Two-stage pumping action
 - Accessories: Spreader block, KuDos® tool bag, and stepped-block extension kit. (Optional: wrench used for model K-SW9TM)



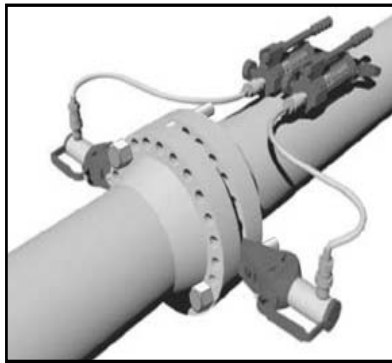
STEPPED-BLOCK EXTENSION KIT:

KuDos® Stepped Blocks can be used in a joint with a wider gap or used to open a joint up to 3.16 in. (81mm) further with less penetration. Fits both the K-SW15TE and K-SW9TM models.

The stepped blocks can be attached by using the supplied countersunk screws and hex key.

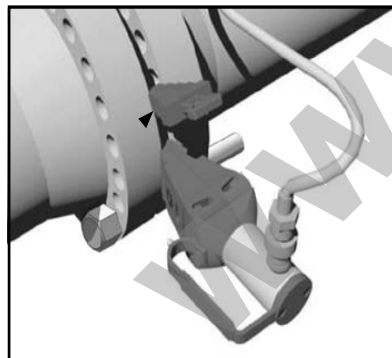


K-SW15TE



Strongly recommended that two K-SW15TE wedges be used on the flange joint positioned 180 degrees apart.

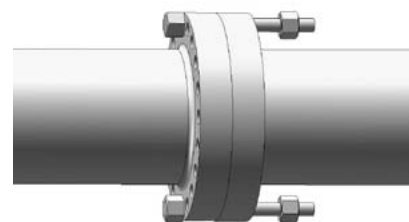
Prime each pump individually ensuring that the flange joint opens evenly.



The safety block should be inserted into the joint and the pressure released when the joint has been opened to the desired or the maximum spreading distance.

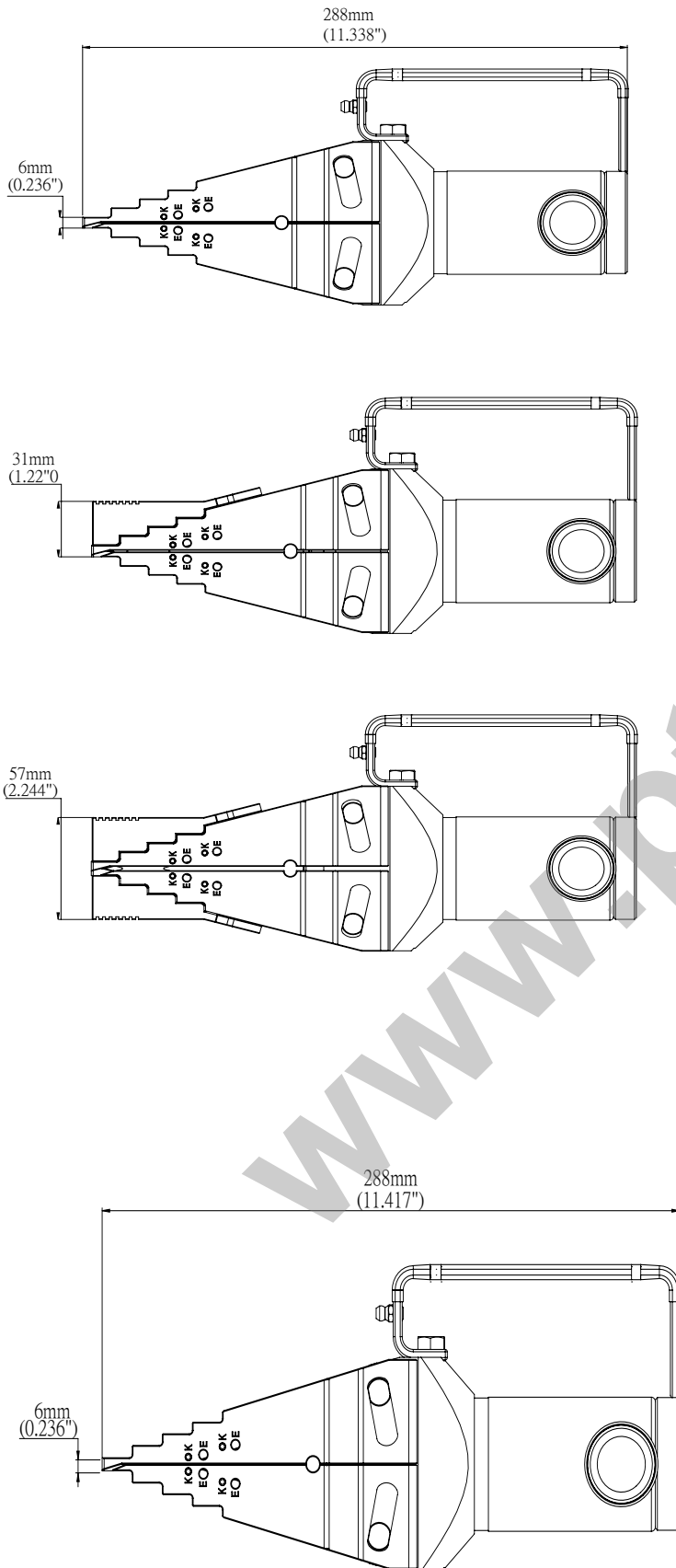


Before attaching the tool ensure at least two flange bolts remain in place 180 degrees apart with nuts loosened sufficiently enough for flange work to be carried out. These bolts will reduce lateral flange movement during flange spreading.

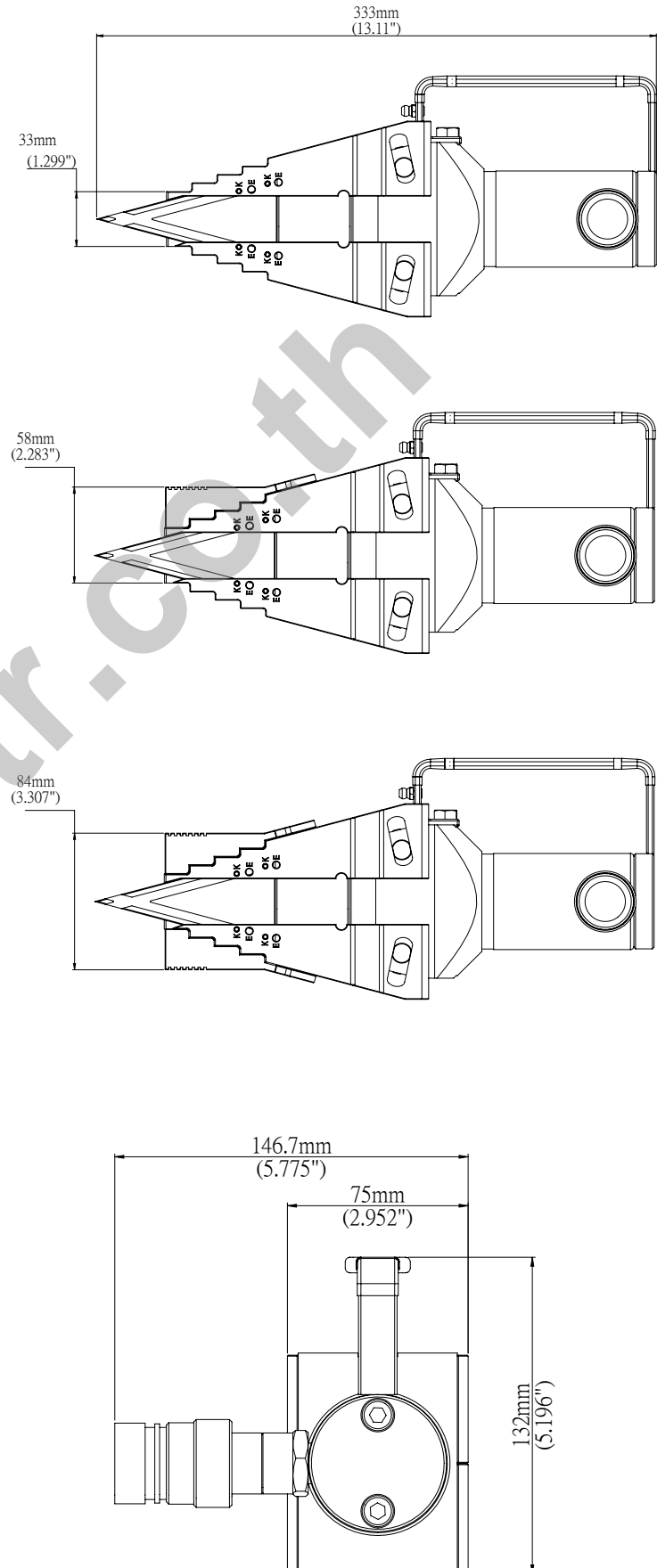


Dimensions

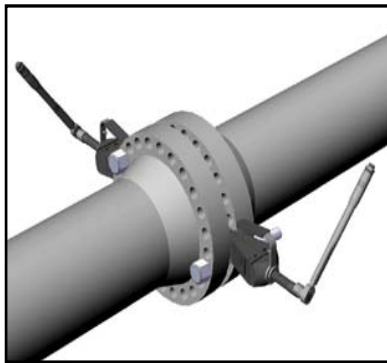
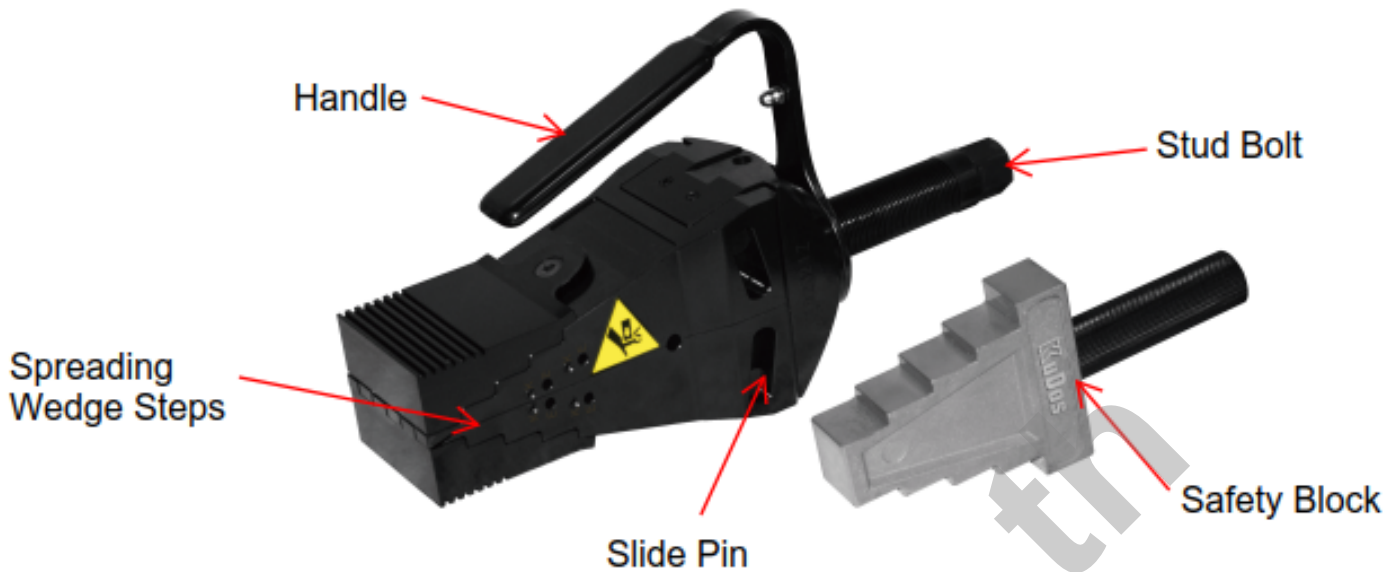
Close



Open

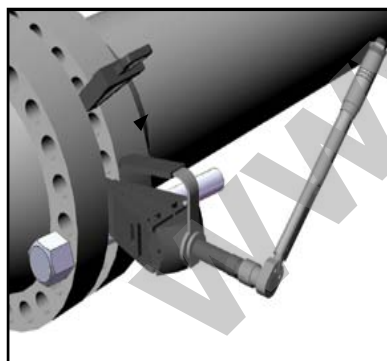


K-SW9TM



Strongly recommended that two K-SW15TE wedges be used on the flange joint positioned 180 degrees apart.

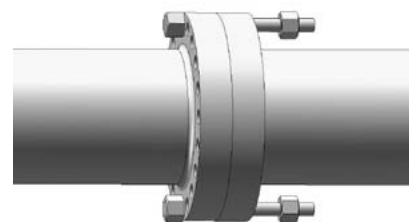
Prime each pump individually ensuring that the flange joint opens evenly.



The safety block should be inserted into the joint and the pressure released when the joint has been opened to the desired or the maximum spreading distance.

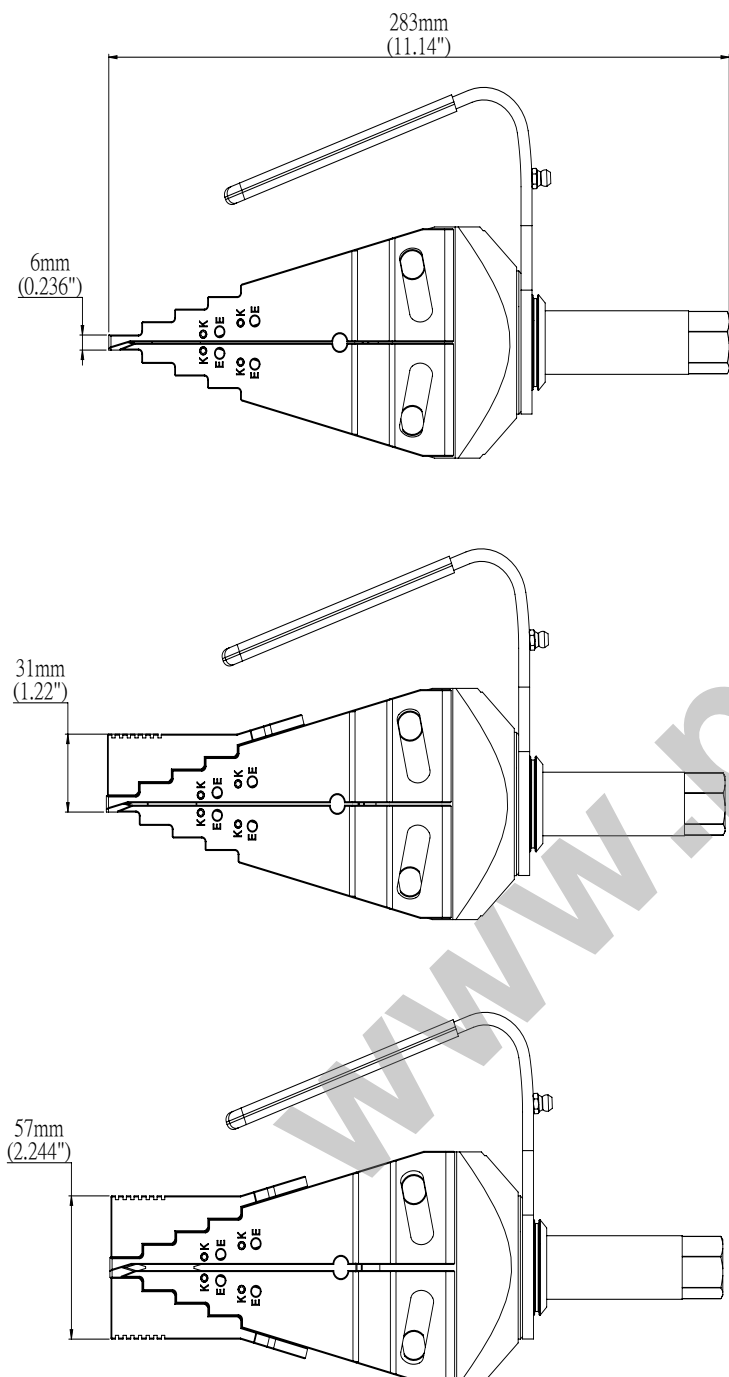


Before attaching the tool ensure at least two flange bolts remain in place 180 degrees apart with nuts loosened sufficiently enough for flange work to be carried out. These bolts will reduce lateral flange movement during flange spreading.

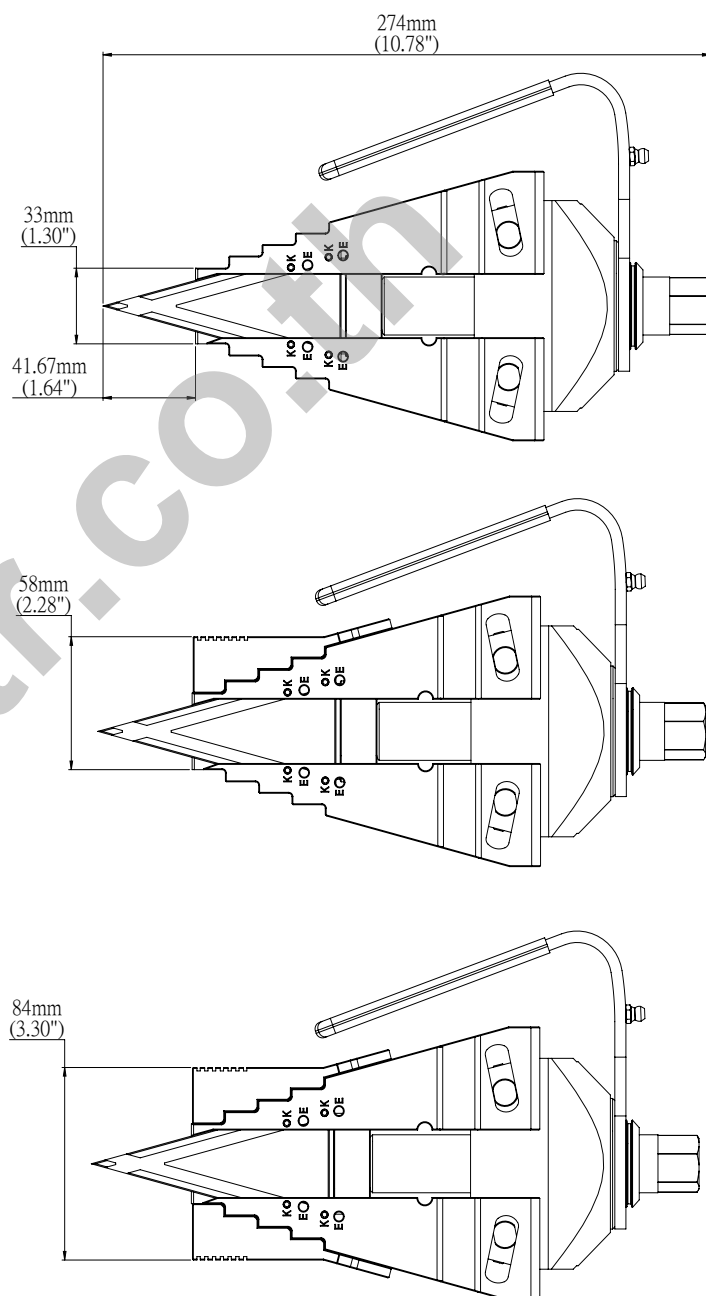


Dimensions

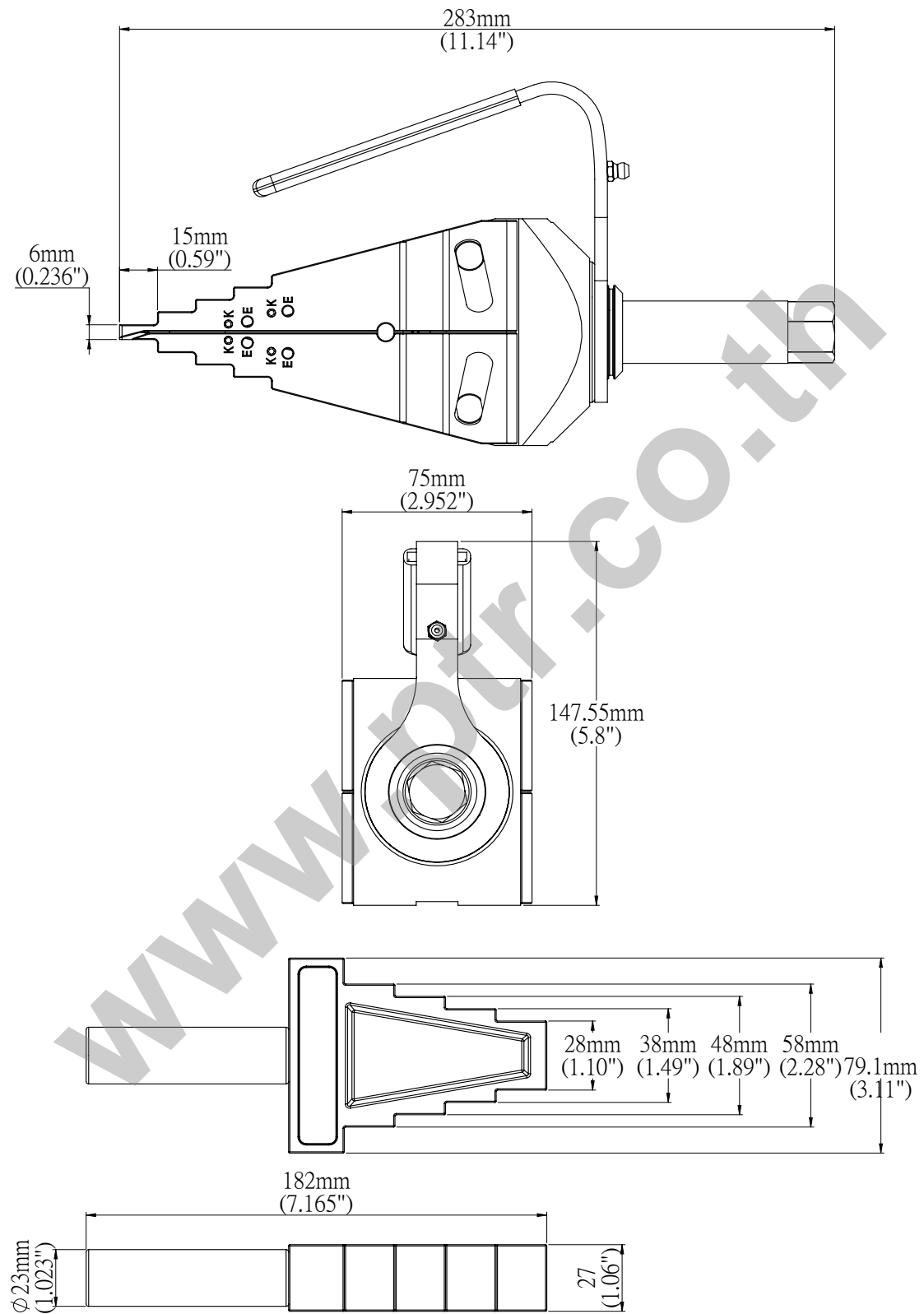
Close



Open



Dimensions



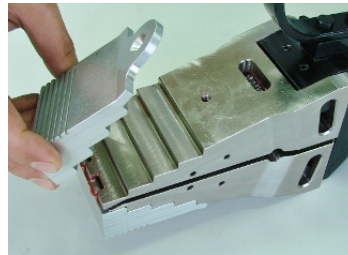
Operating Instructions

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.

Stepped-block extension kit:

Easy-to-install wedge extenders closely fit the spreader wedges. Install using the provided screws and hex key.



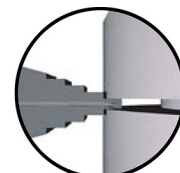
ATTENTION! When using the stepped blocks, ensure there is a minimum hold of 15mm (0.59") and that the full width of the block is used.

1. Connect the tool to the pump by engaging the couplers on the tool and hose. Firmly tighten the couplers to prevent restricted oil flow.
2. There must be a minimum access gap of 6mm or greater for the flange spreader to be inserted.
3. Advance and retract the cylinder piston several times to remove air trapped in the tool, hose or pump. Return the piston to the start position.
4. Insert the spreading wedge into the access gap as far as the heel of the chosen wedge step. The heel should be touching the outer surface of the joint and the spreader squarely facing the workpiece.

- Insert the wedge into the joint until the heel of the step is in contact with the outer surface of the joint.

- Ensure that the full step is used and that the jaw is positioned centrally.

- Inserting the wedge incorrectly may result in tool breakage and render the warranty void.



5. Operate the pump to spread the flange. When the flange has been opened to the maximum spreading distance of the current step, position the safety block into the gap to hold the flange apart.
6. Once the safety block is inserted, retract the spreader, and remove it. Continue the operation with a second flange spreader if available.
7. Re-insert the spreader up to the heel of the next step so the flange joint can be opened further. Repeat step 4.
8. Repeat steps 3-6 until the flange joint has been opened wide enough to do the necessary maintenance or repair work.
9. When the job is done, reverse steps 3-6 to gradually bring the flanges back to their original position.
10. Retract the piston completely by releasing the pump pressure.
11. Dismount the couplers. If the couplers won't dismount, restart the pump to release the internal pressure. Replace the dust caps to the couplers.

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.
- Care should be taken not to drop any of the component parts when removing them from the flange joint. This is to prevent injuries to either operators or passers-by.

Troubleshooting

The spreader tool can't complete the task:

- A. One or more tool parts require repair. Replace the parts immediately to prevent serious personal injury or property damage.
- B. Spreader tool tip may be broken or damaged.
- C. Insufficient hydraulic fluid. Follow steps on page 9 to add fluid.
- D. The cylinder piston might be deformed after crimping an off-centre fitting, or from the tool being used in a manner for which it was not intended.

Spreader wedges are stuck or unable to retract:

- A. Piston may be deformed by uneven distributed or oversized workpieces.
- B. Slide pins are blocked with impediments. Use an airgun to remove impediments or a lubricant to clean the tool.

Piston action is slow or spongy:

- A. There is air in the hydraulic system. Follow the directions on page 9 to eject the air and restore piston action.
- B. Insufficient hydraulic fluid. Follow steps on page 9 to add fluid.

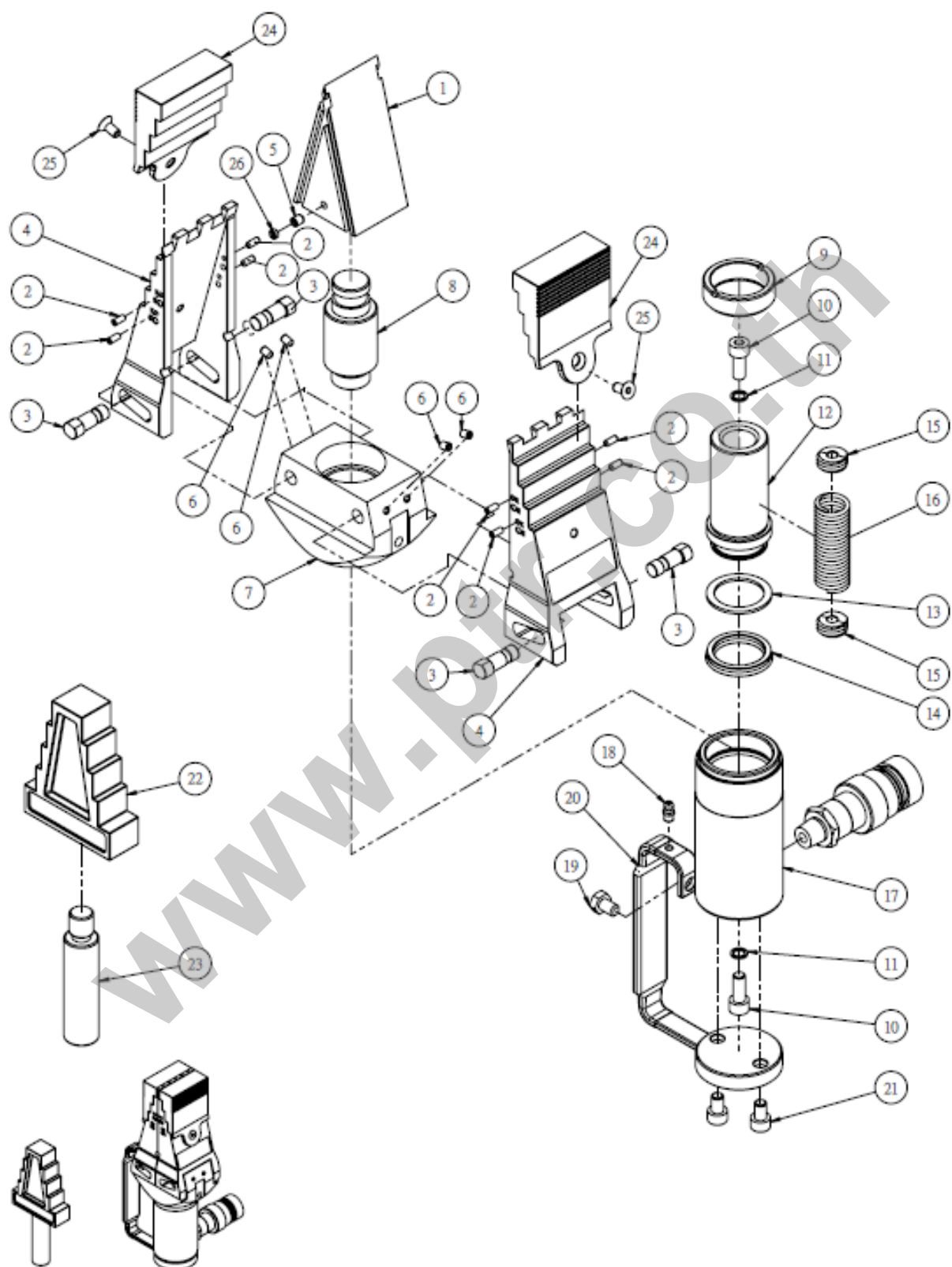
Pressure leaks away:

- A. Release valve is leaking. Contact your KuDos® service representatives.
- B. Piston seal is leaking. Contact KuDos® service representatives.
- C. Fluid leakage from the cylinder or pump body. Contact your KuDos® service representatives.

Limited Lifetime Warranty

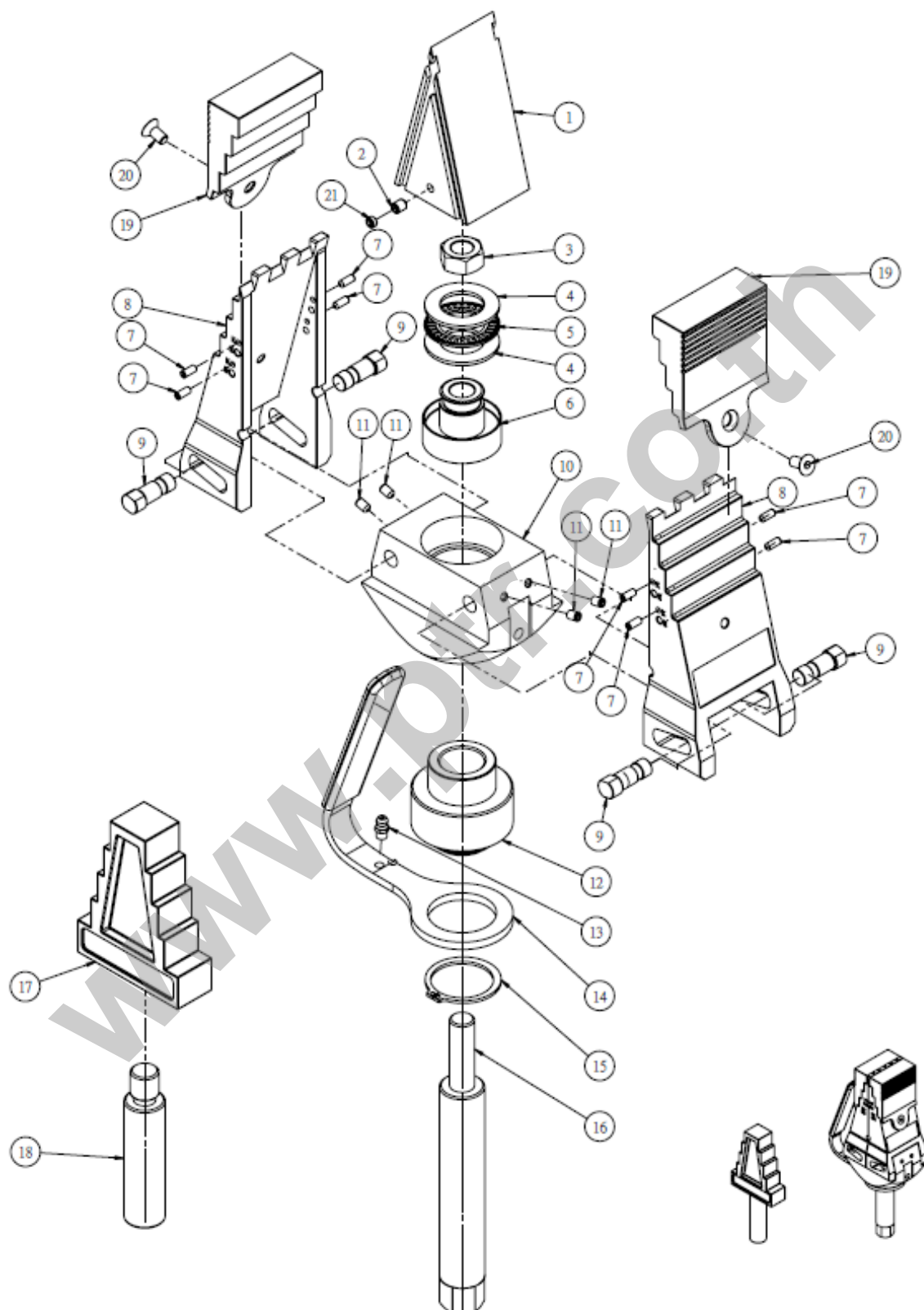
- KuDos® hydraulic products are warranted against defects in materials and workmanship for the life of the product. This is defined as that point in time when the product no longer functions due to normal wear.
- This warranty is subject to the following exclusions and limitations:
 1. This warranty 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.

K-SW15TE: Parts Guide



No.	Part	Q'ty
1	Locating Block	1
2	Socket Head Cap Screw	8
3	Slide Pin	4
4	Spreading Piece	2
5	Socket Head Cap Screw	1
6	Socket Head Cap Screw	4
7	Cylinder Cover	1
8	Piston Connector	1
9	Cylinder Bush	1
10	Screw	2
11	Copper Washer	2
12	Main Piston	1
13	Back-up Ring	1
14	Oil-Seal	1
15	Spring Connector	2
16	Tension Spring	1
17	Cylinder Body	1
18	Funnel	1
19	Hex. Nut	1
20	Handle	1
21	Screw	2
22	Safety Block	1
23	Block Handle	1
24	Spreading Block	2
25	Hex. Screw	2
26	Screw	1

K-SW9TM: Parts Guide



No.	Part	Q'ty
1	Locating Block	1
2	Socket Head Cap Screw	1
3	Hex. Nut	1
4	Bush Washer	2
5	Bushing	1
6	Locating stand	1
7	Socket Head Cap Screw	8
8	Spreading Piece	2
9	Slide Pin	4
10	Cylinder Cover	1
11	Socket Head Cap Screw	4
12	Nut	1
13	Funnel	1
14	Handle	1
15	Retaining Ring	1
16	Stud Bolt	1
17	Safety Block	1
18	Block Handle	1
19	Spreading Block	2
20	Hex. Screw	2
21	Screw	1



Your Forever Working Partner

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 FLANGE SPREADER

MODEL NO.: ☐K-SW15TE ☐K-SW9TM

SERIAL NO.: _____

INSPECTION DATE: _____

Q.C. SUPERVISOR: _____

<p>For KuDos Authorized Distributor Use Only:</p> <p>_____/_____/_____ Date of Purchase (dd/mm/yy)</p>	<p>For Industry or Individual Buyer Use Only:</p> <p>_____/_____/_____ Date of Purchase (dd/mm/yy)</p>
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