

Rovanco® Piping Systems

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INS-RXL

Rhinoflex XL Press-Fit Tool for
125 mm, 140 mm & 160 mm
Installation Instructions

Revised 09/23/22



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Section 1: Safety Information

Use in line with provisions

The tool is intended exclusively for processing of the Rovanco press fit sleeve system in the size range 125mm x 182mm, 140mm x 202mm and 160mm x 250mm.

Note: Read all safety information and assembly instructions before the initial operation of the tool. Observe the information during operation and always keep the safety information with the tool.

In addition to the operating instructions, generally valid, legal and other binding regulations on accident prevention and protection must be observed and passed on.

General Safety Information

1. Keep your workplace tidy and free of obstructions. Make sure there is always sufficient light.
2. Keep children, pets, and unauthorized persons away from your workplace. Do not let other people touch the hydraulic hose, the tool or the cables.
3. Wear suitable work clothing. Do not wear loosely fitting clothes or jewelry. They may get caught in moving parts. Wear a helmet if you have long hair. Use protective goggles!
4. Do not touch moving parts (risk of trapping fingers)!
5. Be aware. Only use the equipment if you have been instructed on how to handle it.
(see *Rovanco Large Press Fit Tool Video on our web site in the Field Service Videos section*)
6. Keep your tools in a safe place. When not in use, tools should be kept in dry, locked rooms out of reach of children.
7. The tool is suitable for manufacturing Rovanco press fit sleeve joints of the sizes 125/160 mm. Do not use the tool or the electro-hydraulic unit for other purposes or sizes.
8. Only operate the equipment with Rovanco original parts and accessories.
9. Only allow maintenance and repair work to be carried out in a specialized workshop authorized by Rovanco. For work by external personnel, we do not assume any liability. The addresses of authorized service center can be obtained from your Rovanco Sales Office.

Tool-Specific Safety Information

1. Protect the tool from moisture, extreme heat, oil, and solvents.
2. Do not carry your hydraulic unit by the supply lead or hydraulic hose. Do not pull the equipment by the cable or hydraulic hose.
3. Make sure that the hydraulic hose and the supply lead are not damaged. Before initial operation, check the hydraulic hose and the supply lead for scuff marks, cuts, cracks, squashed points, kinking, etc. Never work with a damaged hydraulic hose or supply lead. Get damaged hydraulic hoses or supply leads replaced immediately at the Rovanco Service Center.
4. Do not touch any possible leaks in the hydraulic hoses while the system is pressurized.
5. Do not try to disconnect the quick couplings while the system is pressurized.
6. In a disconnected state, the quick coupling must not be pressurized.
7. Do not connect the pump/motor unit to any other cylinders or tools.
8. Only use single-phase alternating current for the voltage specified on the power specification label or battery pump.
9. Do not expose the equipment to rain. Do not operate the equipment in damp or wet conditions and/or in an environment where there is a fire or explosion risk.
10. Never leave the equipment unattended while connected to the mains supply.
11. Make sure that you use suitable extension cables, if applicable.
12. Each time the tool is converted (e.g. to change the expander heads, clamping jaw sets), the mains cable must be removed to prevent the tool from being switched on accidentally.
13. To prevent the motor overheating, do not let the tool run for too long at maximum pressure.
14. The tool weight is max. 26 kg. Depending on the installation situation, we recommend two-man operation.

Section 2: Scope of Delivery



- Base tool XL Press-Fit Tool for 125 mm, 140 mm, and 160 mm, including 2 cylinders with handle, hydraulic hose, quick couplings and 4 long pins
- Expander mandrel Including 2 short pins
- Transport case, basic
- Operating instructions
- Clamping jaw set 160, 140
- Set reducers 125/140/160
- Expander head 125, 140 and 160
- Y distributor with quick couplings
- Transport case, extension



Replacement Parts/Accessories

Roller pipe cutter 110-160

Roller pipe cutter 50-125

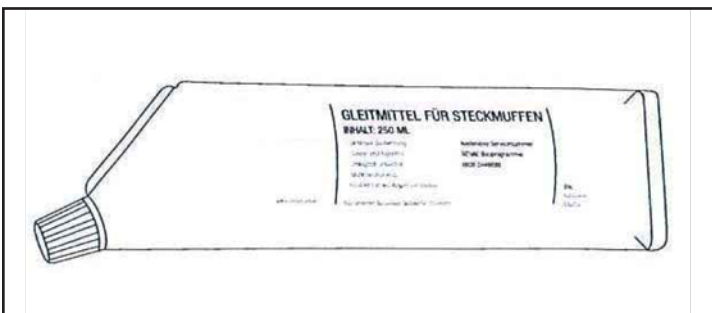
(not included)



Guillotine 20-225

Guillotine 20-315

(not included)



Lubricant 250g

Lubricant 500g

(white lithium grease only)

Section 3: Unit Description and Functioning Principle

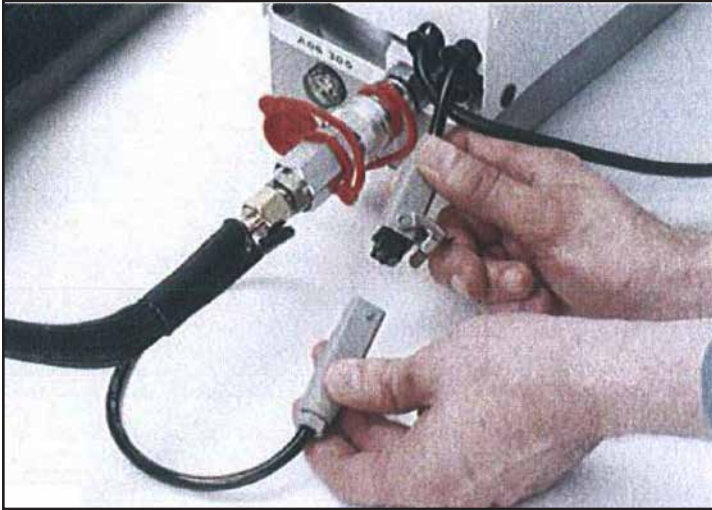
Hydraulic unit HMP 1/XL Press-Fit Tool for 125 mm, 140mm, and 160mm

Motor voltage:	230 v/50 Hz
Power input:	0.22 KW
Oil filing capacity:	0.41
Oil specification:	8 cSt (at 40°C acid-free and water-free)
Remote motor operation:	24 V safety voltage
Delivery rate:	0.28 1/min (theoretically usable 0.33 1/min)
Compression force per cylinder:	69 KN
Pressure:	550 bar
Piston surface area per cylinder:	12.56 ccm
Piston stroke per cylinder:	59 mm
Total tool weight:	26 kg (hand-held unit with jaw set + reductions)



Item No. (see image above)	Unit Element	Function
1	Electric Motor	Electro-hydraulic motor for building up pressure in the work unit
2	Compression Cylinder G1	Work units for supporting the clamping jaw sets 160 or expander set G1
3	Compression Cylinder 160	A set comprising a short and a long clamping jaw
3a	Compression Cylinder 160	Movable clamping jaw fo the size 160
3b	Compression Cylinder 160	Movable clamping jaw fo the size 160
4	Compression Cylinder 160	Pipe clamps size 125 for clamping jaw set 160. For pressing for size 125. A set comprising an eccentric and a centric reducer
5	Pins G1	Fixing devise of the clamping jaw set or expander set on the com-pression cylinder
6	Expander Head 125 x 11.4	Expander for expanding the pipes, size 125 x 11.4
7	Expander Heat 140 x 14.6	Expander for expanding the pipes 140 x 14.6
8	Expander G1	Expander device for expanding the pipes in connection with the expander head and the compression cylinder with 2 short lines
9	Short Pins G1	Fixing device of the expander set on the compression cylinder
10	Y Distributor	Distributor for connection the two compression cylinders with the electric motor for the pressing process

Section 4: Tool Preparation



Expansion

The cylinder must be connected directly to the motor via the hydraulic hose (quick coupling) and the control cable, for the expansion process.

Caution!

Make sure the quick coupling is properly engaged! The coupling may only be pressurized when it is locked in position! Check connectors thoroughly for dirt, and clean if necessary!



The expander set is fully inserted into the cylinder

Caution!

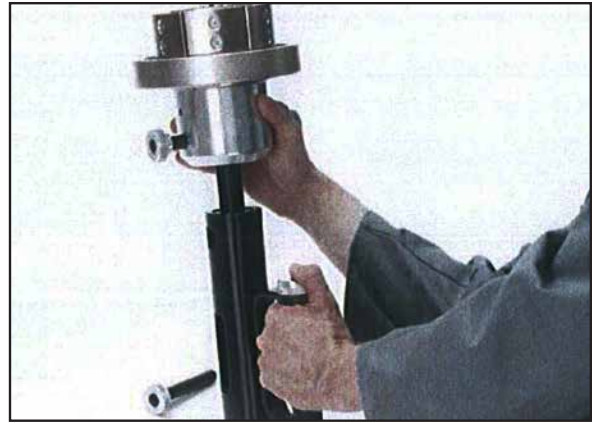
Pins should be fully inserted!
The tool may only be operated once the pins are fully inserted.



The expander heads 125, 140 or 160 are screwed directly onto the expander set. For this, the expander heads must be fitted so that they are flat and fully screwed in. Avoid any possible tilting when screwing the heads in.

Pressing

The expander set must be removed before pressing. To do this, pull out the long pin completely and pull the short pins as far as the stop. Pull out and remove the expander set from the cylinder.



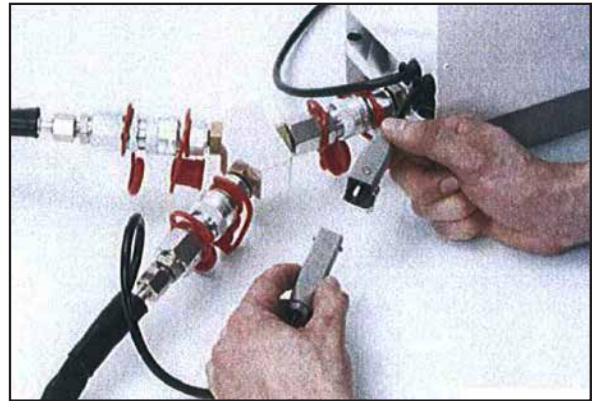
Both cylinders must be connected to the motor via a Y distributor, for the pressing function. Remove the hydraulic hose used during the expansion process and connect the Y distributor directly to the motor via the quick couplings or to the two hydraulic hose couplings.



Caution!

Only hydraulic hose couplings that are properly locked into position may be pressurized!

The control cable of one of the two compression cylinders must be connected to the motor (= master cylinder)



Caution!

Only the cylinder connected to the motor (master cylinder) can trigger the pressing process via the start button.

The control cable of one of the two compression cylinders must be connected to the motor (= master cylinder)



Caution!

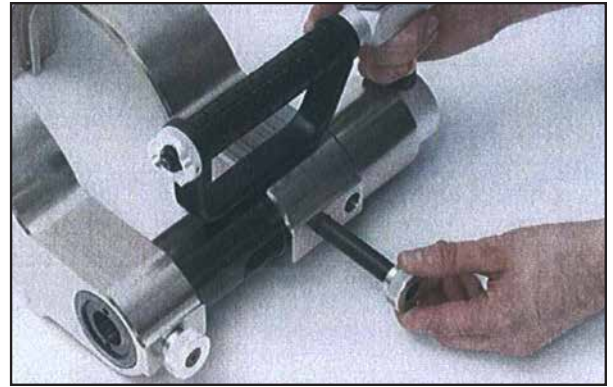
Only the cylinder connected to the motor (master cylinder) can trigger the pressing process via the start button.

(see Rovanco Large Press Fit Tool Video on our web site in the Field Service Videos section.)

The long movable clamping jaw has 2 pin positions. The first position is the start position, when the compression sleeve is still some distance from the fitting collar.

Caution!

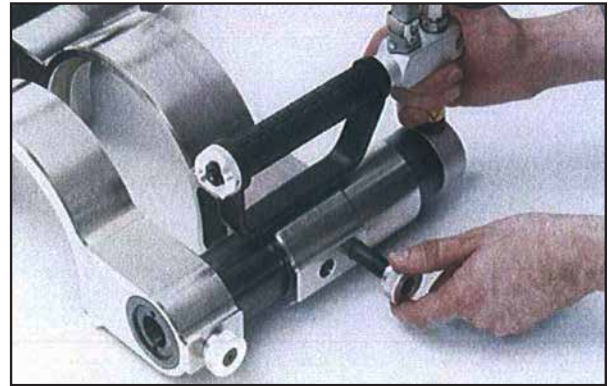
Pins must be fully inserted.



The second position is the end position to slide the compression sleeve right up to the fitting collar.

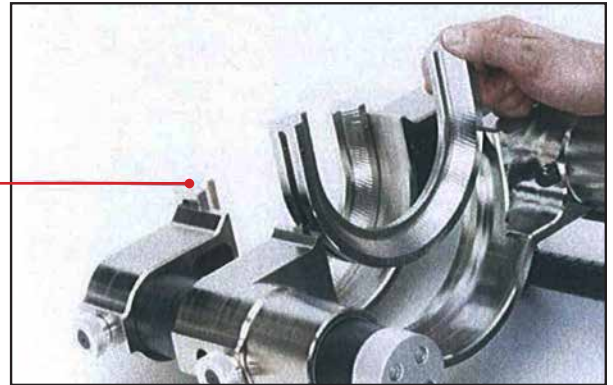
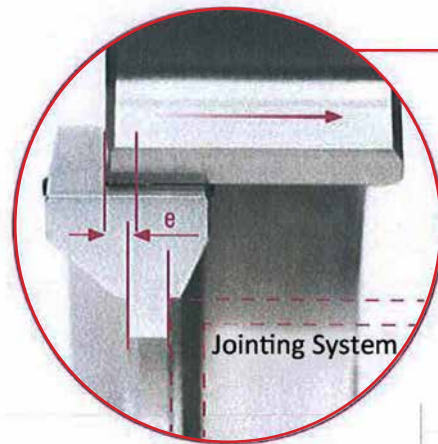
Caution!

Pins must be fully inserted.



Pressing process for the size 125

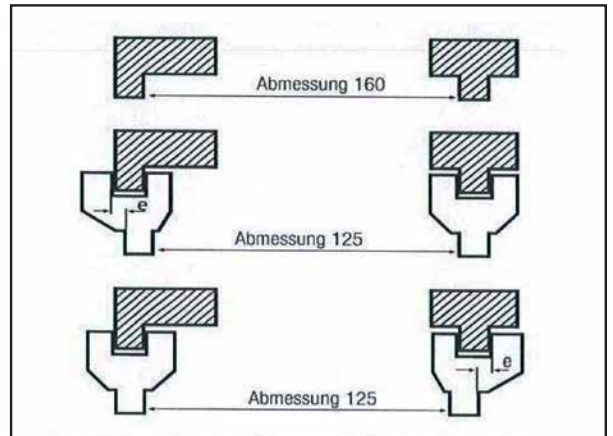
the reducers for the size 125 are clipped into the clamping jaw 160.



Caution!

Reducers must be fully clipped in.

The set of reducers comprises one eccentric and one centric reducer. Make sure that they are inserted with the eccentric reducer(s) up to the joint (compression sleeve or fitting collar).





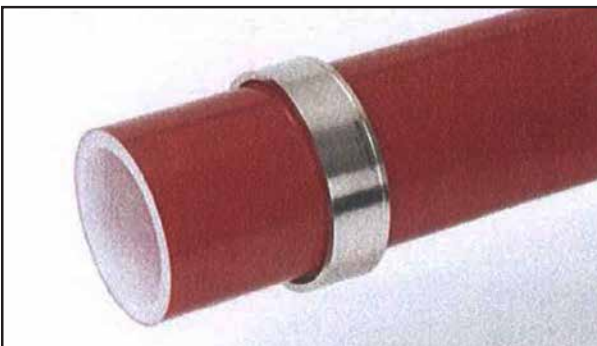
1. Cut the pipe into lengths of the required size with a square cut using a guillotine...



...alternatively, you can also use the roller pipe cutter.

Caution!

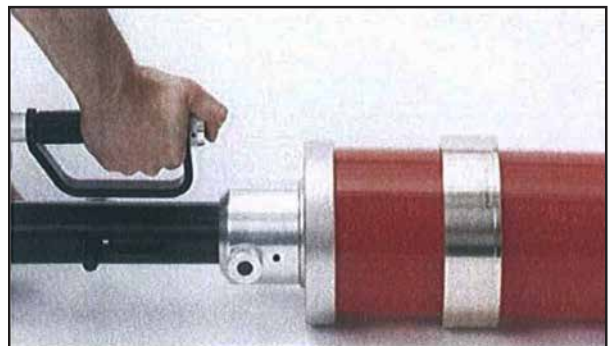
Do not use any type of saw or anything similar! The pipe must be cut into lengths so that the cut is square and burr-free!



2. Slide the compression sleeve on to the pipe.

Caution!

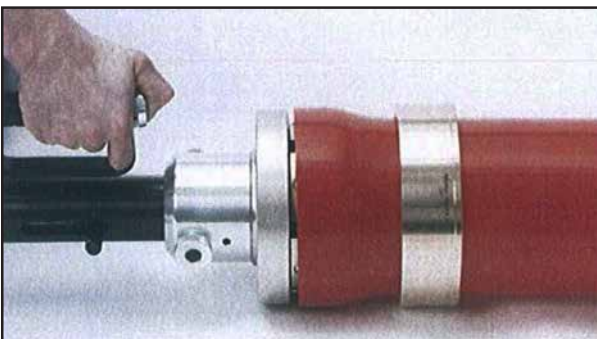
Internal beveling must point in the direction of the pipe end that should be pressed.



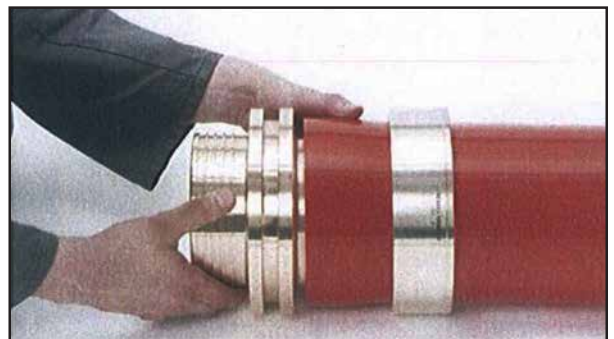
3. Expand the pipe once and, displacing the tool by 30° a second time.

Caution!

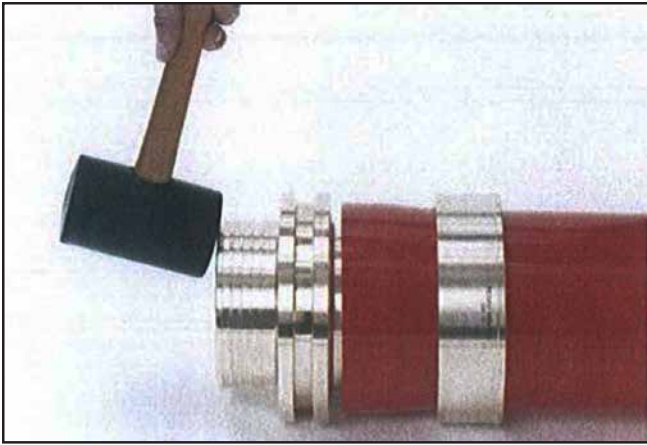
The compression sleeve must not be in the expansion zone. The minimum distance is 2 compression sleeve lengths. Insert the expander up to the stop and do not tilt it.



4. The insertion time of the fitting into the pipe can be affected by maintaining the expansion pressure while the expander head is fully open (end position during the expansion process).



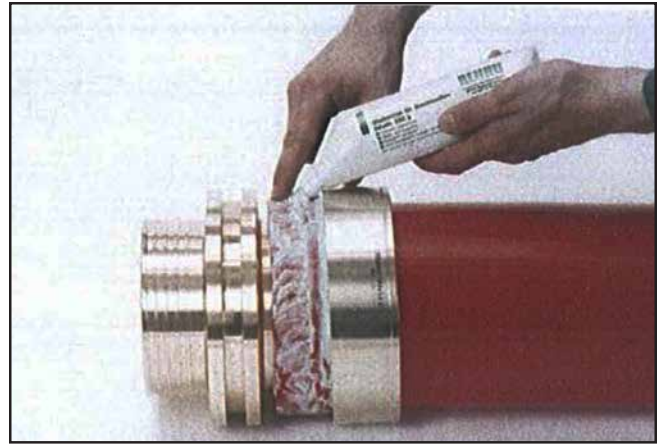
5. The insertion time of the fitting into the pipe can be affected by maintaining the expansion pressure while the expander head is fully open (end position during the expansion process).



6. There must be an even gap between the fitting collar and the pipe end. If necessary, the position of the fitting must be adjusted using a rubber mallet immediately after insertion.

Caution!

All sealing ribs of the fitting must be covered by the pipe!



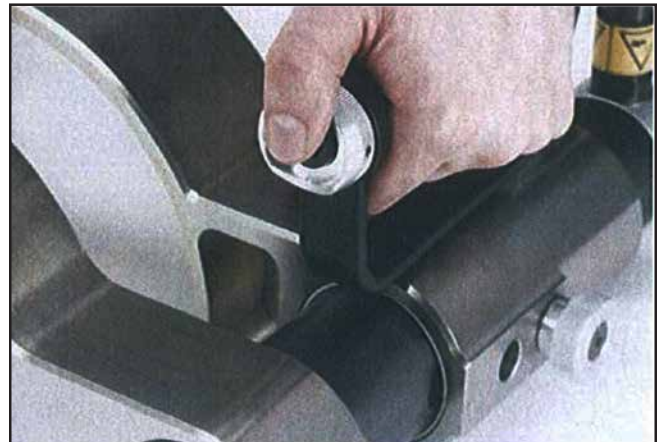
7. Cover the pipe evenly with lubricant around the full circumference of the joint area.



8. Attach the clamping tool.

Caution!

Do not tilt the tool! The tool must be fitted so that the full surface area is in contact and at a right angle!



9. By actuating the pressure pushbutton on the master cylinder, slide the compression sleeve up to the fitting collar. If necessary, change the positions of the pins on the movable clamping jaw to slide back the compression sleeve completely (see sections Tool Preparation/Pressing).

If machine comes with a battery operated pump, the trigger is on the handle of pump.

Caution!

Failure to observe these instructions may result in damage to the jointing system, damage to the tool, and/or personal injury!

Section 5: Tije and Tricks/Troubleshooting

Tips and Tricks

- Always fit clamping jaws or jointing systems so that they lie flat and at a right angle!
- Always insert the expander into the pipe up to the stop and do not tilt it.
- Do not touch moving parts (risk of trapping fingers).
- Using a rubber mallet, the compression sleeve can be tapped out a little before pressing, so that it may be possible to use the second pin hole immediately
 - => No need to change the position of the pin
- For the size 125, the stroke can be increased by rotating eccentric reducer.
 - => No need to change the position of the pin
- To remove the air, raise the pump motor and lower the clamping tool. Actuate the tool several times without running at maximum pressures.
- After use, clean and oil the tool, then store in a dry place.

Troubleshooting

Problem	Solution
Motor is not running	• Check whether socket used is live
	• Check the supply lead for defects, and if necessary get it replaced
	• Wrong start button pressed => actuate master cylinder with control cable connected
Motor is running but the tool doesn't work or only works to a limited extent	• The oil level, if necessary top up the oil
	• Remove the air from the unit
Unit doesn't reach pressure of 550 bar	• Check the oil level, if necessary top up the oil

If the malfunction cannot be remedied, send the unit to Rovanco Quality Assurance Department or to your dealer.