



Kellfri[®]

21-STM400 STROKE HARVESTER



CAREFULLY READ THE OPERATING INSTRUCTIONS BEFORE USING THE PRODUCT!

OPERATING INSTRUCTIONS TRANSLATED FROM THE ORIGINAL

INTRODUCTION

Thank you for choosing a product from Kellfri AB. By following the general safety information and the instruction manual and by using common sense, you will have a great and safety use of your Kellfri product for many years.

Kellfri designs and delivers effective, affordable machinery and components for forest, agriculture, construction and gardening in Sweden, other Nordic countries and Europe.

PRODUCT INFORMATION

Kellfri stroke harvester delimbs, cuts and stack logs in a pile. The logs are stacks out of the way thanks to the cutting process on the protruding part of the stroke harvester. The machine increases your capacity in the forest and makes the work safer. The chain saw is driven by a Parker F11 Swedish made hydraulic motor. Mounting kit for Kellfri's forestry trailer included. Simple length measurement by counting stroke.

INTENDED USE

The equipment is intended for delimbing and cutting timber, mounted on Kellfri's forestry trailer. The tractor must be equipped for forest and approved for the purpose.

TECHNICAL DATA	21-STM400
Length	2480-3480 mm
Width	840 mm
Height	1350 mm
Height including legs	1670 mm
Recommended oil flow	50-60 l/min
cut diameter max	400 mm
Delimb diameter max	350 mm
Guide bar	16" Iggesund
Chain	.404
Saw motor	Parker F11
infeed cylinder stroke length	1000 mm, 1220 mm , 1250 mm
Weight	600kg

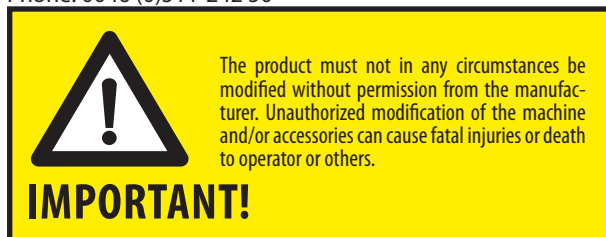


FOR YOUR SAFETY

Before using the product, please read the safety information and instruction manual and understand its contents for your own and others' safety. Always keep the safety information and instruction manual easily accessible to the user of the product. Remember that it may be good for your own and others' safety to read the safety information every now and then. If the instructions manual is damaged or otherwise unusable, please contact and order a new one from:

Kellfri AB, Munkatorpsgratan 6, 532 37 SKARA, Sweden

Phone: 0046 (0)511-242 50



For more information visit our website: <https://www.kellfri.co.uk/>

Do not use this equipment if you are feeling sick, tired or in influence of alcohol. Nor if you are under the influence of strong medications or drugs, suffering from strong depression or severe mental illness. Always follow the general traffic rules and regulations and the rules of the Animal Welfare Act. Persons under 15 years old and people with mental illness may not use these product.

PRODUCT SAFETY INSTRUCTIONS

- Read the instruction manual carefully before using the machine.
- Never leave the tractor before the equipment is unloaded and the tractor braked.
- Danger zone 15 m. No one other than the operator may be present within the danger zone during operation.
- Keep the operation area free of bystanders and animals and make sure you always have enough turning space for the unit.
- Operator or any other person must never be under suspended load.
- Do not allow other persons to be near the machine at startup and shutdown.
- Keep bystanders and animals away from the working station.
- Keep all parts of your body away from the saw when the engine is running.
- Always check the condition of the chain saw, do not use the chain saw if it is damaged or not set correctly.
- Always keep a fire extinguisher nearby.
- The machine is not allowed to be used until all safety devices are correctly mounted.
- Always disconnect the machine before performing service or maintenance work.
- Turn the machine off and release all pressure in the hydraulic system before you leave or before performing maintenance and service.
- NEVER allow children and / or inexperienced persons operate the machine.
- Make sure that the hydraulic hoses are connected correctly (Pressure / Return)
- Never overload the machine.
- Never feed a log to the Stroke harvester, which has a diameter larger than 40 cm. Cutting diameter is 40 cm.
- The worktable is rotatable. Always be careful when maneuvering the stroke harvester.
- Make sure to have the sufficient knowledge of how the machine works before operating.

WARNING SIGNS AND LABELS

Ensure that warning labels are always visible and clean. Clean the warning labels as required. Do not rinse using pressure washer directly on the warning labels. Any damage/ broken stickers should be replace. Order new stickers from your supplier.

SYMBOL	EXPLANATION
	Read the operating manual before carrying out work!
	WARNING! Flying debris! Risk zone 15m.
	WARNING! No one may stand underneath suspending load.
	WARNING! Risk of crushing.
	WARNING! Keep off the machine!
	Rotating knives.
	The product is CE marked.

INCASE OF EMERGENCIES

In case of an emergency please dial 112.

Keep cell phone or emergency phone available specially when working alone. First aid kit and fire extinguishers must be kept easily accesable during all work, maintenance and service.

PERSONAL PROTECTION

Always wear suitable clothing and footwear. Do not wear loose clothing or jewelry when using the machine. Remember to put up long hair when operating rotating machines. Wear protective gloves, to prevent risking burns on contact with hot surfaces such as exhaust system, and to avoid oil and gasoline on the skin. Hearing protection should be used when the engine is running.



SURROUNDINGS

Make sure your working area is clear from people, children and objects before installing and using the machine. Risk of serious injuries can occur during operation. Take an extra caution when children are in the area where the equipment/ product is being use or stored. Check the area for low hanging electrical wires. Be careful when working onslopes and near ditches. Always work alone with single - purpose tools/ products. Never have junk lying in your area. Keep working areas clean. Always respect the risk zone.



SAFETY MEASURES BEFORE OPERATING

Read the safety information and instruction manual carefully. Be sure you understand the safety measures, instruction manual and warning labels. Use common sense when operating the machine and use appropriate personal protective equipment. Always check the performance and the machine combination that are used. It's highly important these matches in a satisfactory manner. This is to ensure the product or the function and most important yours and others safety. Do visual inspection of equipment or product before use. Fix or replace damaged or worn parts immediately to reduce the risk of injury. Lubricate moving parts and check that all screw-nuts and bolts are tightened. Learn and remember the correct working methods. Beginners should always keep a low speed, use extreme caution before routine and product knowledge is achieved. The user/customer is responsible to handle the situation correctly. The product should not be taken into use unless it can be done in a safe way for the user.



USE

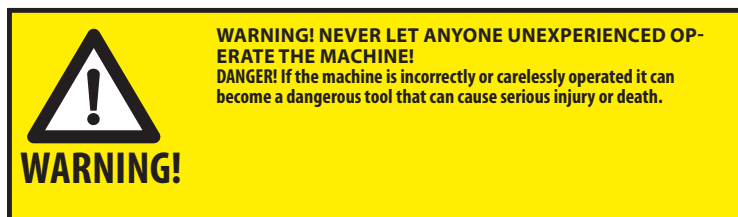
Only those who understand the safety instructions and the operating instructions may use the equipment or product. Exercise caution and care when working with the equipment and only use it in the way described in the operating instructions. There is a risk of crushing when working with equipment that has moving parts. Exercise caution when working with equipment with hydraulic hoses as oil under pressure can penetrate the skin. Immediately seek medical attention if this should occur. Avoid operating the machine during temperatures lower than -20°C and higher than +30°C.

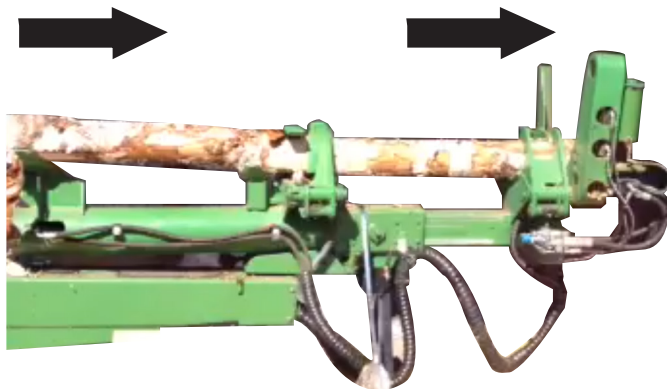
Check the brackets on the stroke harvester and the hydraulic hoses. Connect the hydraulic hoses and ensure they do not touch any obstacles. Read the operation manual for the tractor and the forestry trailer before operation.

Due to a hydraulic system is never 100% tight, a hydraulic system control should be performed before the equipment is operated. Leakage can occur due to internal leakage in the tractor's valve, internal leakage in the equipment's hydraulic cylinder etc. Check the extent of the leak by running the equipment's cylinder in end position and keep up the pressure for 1 min. If the cylinder begins to "wander" in the other direction then there is a leakage in the gasket. Gasket or cylinder must be replaced.

Always work alone with equipment that are designed as single purpose equipment. Never overload the equipment and respect its risk zone.

- When the equipment is in position, lower the support legs to the ground. The ground should not exceed 10° tilt. If the machine is mounted on the trailer make sure the trailer is stable and the support legs are on the ground. Take the time needed to learn how steering works before operating. Practising movement with the stroke harvester leads to safer work and more efficient driving.
- Always place the machine in a place where you have good visibility over the entire working area and where the logs are put where you want them to end up.
- Perform a safety check on the machine before each use. If you notice any errors or omissions, the machine should immediately be repaired.
- Make sure there are not any foreign objects in the machine before using it.
- Avoid working on slippery surfaces, especially in winter.
- The sliding boom should always be checked and lubricated before each use.
- Minimum working pressure 175 bar
- Maximum working pressure 210 bar
- Recommended pump power min / max: 50L / 60L per minute
- Remove the transport safety pin before operating.



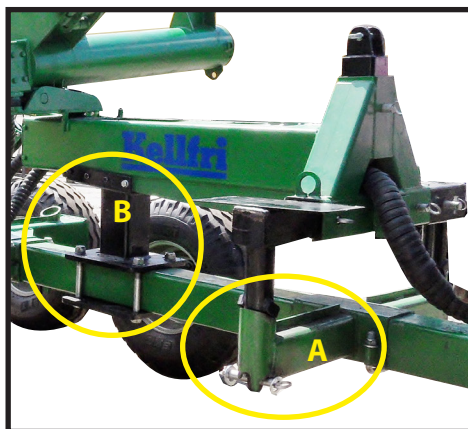


OPERATING *(during operation, the machine should stand on a hard, flat surface)*

1. Open the stroke harvester's grapple claws. Lift and put the log with the root end right on the saw. (TIP: If the log end is too far out, grip the log with the delimb knives and move the sliding boom closer to the root end. Close the grapple claws and move the root end to the saw.)
2. Cut off the root end if necessary, close the gripping claws and delimb knives.
3. Feed the log and calculate the cylinder stroke length 1 stroke = 1m *(set upon delivery)*, cut off at the desired size. Saw off when the cylinder is in it's outermost position to avoid logs falling too close too the trailer/machine.
4. Clear / move away branches from the operation area now and then.

Mounting instructions for the stroke harvester on the trailer

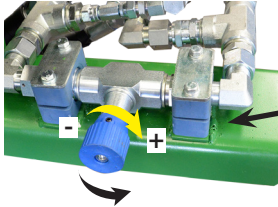
- The machine may only be lifted in the designated lifting points. Use only suitable lifting equipment with sufficient lifting capacity to lift the machine.
- The stroke harvester is customized for mounting on Kellfri trailers. Lift the stroke harvester and place it in front of the trailer, support legs are to be mounted on the trailer's front bunk (A). Check that the bunk is firmly fixed on the trailer. Tighten the bolts when necessary.
- Secure the stroke harvester on the trailer (B), tighten the bolts properly!
- Check that all pins are properly installed.



CHAIN SAW UP AND DOWN MOVEMENT

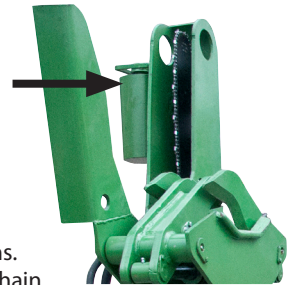
SPEED ADJUSTMENT OF THE CHAINSAW

Turn the throttle valve (marked in the picture) for the adjustment of the chain saw's up and down motion. Always adjust your speed according to the thickness of the log. It is recommended to reduce speed when cutting thick logs.



Closing the throttle valve: slower chain, faster cylinder

Opening the throttle valve: faster chain, slower cylinder



REFILLING CHAIN OIL

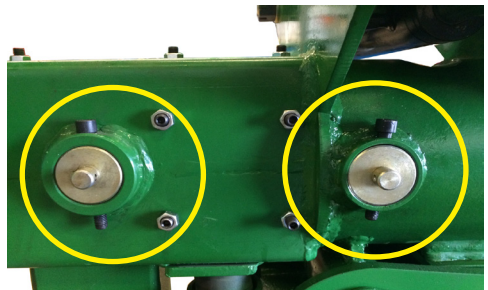
Ensure that the oil reservoir is always filled with oil.

Use a specific chain oil which remains liquid in cold conditions.

Do not use hydraulic oil or motor oil as this can damage the chain and generate heat and smoke.

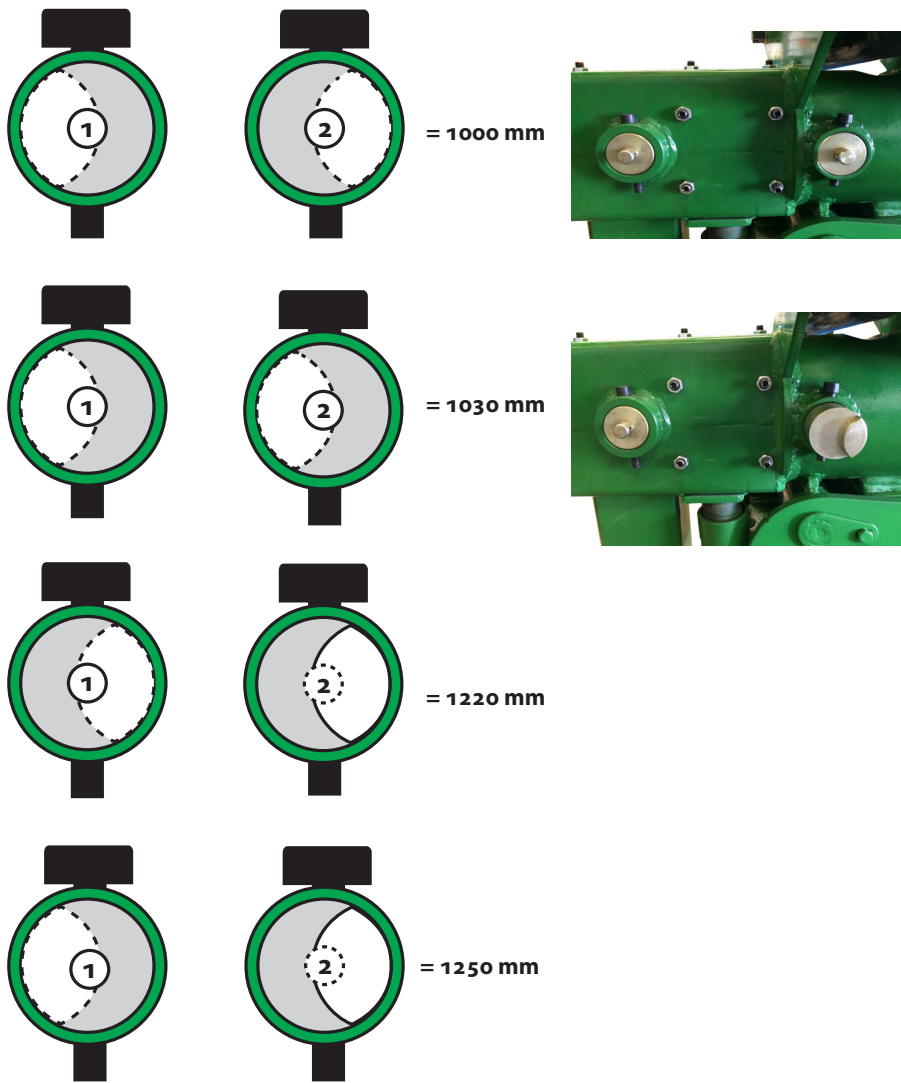
ADJUSTMENT OF STROKE LENGTH

The stroke length can be adjusted by removing the pins (2 on each side of the sliding boom), by changing the position of the pins. Loosen the locking screw of the pins, pull and twist the pins into a special marking. Make sure that the mark is at the same point on both sides of the boom (marked in the picture). Select the desired stroke length: 1m, 1,03m, 1,22m and 1,25m, see next page for the setting of the pins.



PIN SETTINGS TO ADJUST THE LENGTH OF THE STROKE

IMPORTANT! The adjustments of the pins must always be performed on both sides of the machine.



AFTER USE

Parking is not allowed with the equipment above ground. Parking is done with the equipment resting on the ground. Rinse the tool with water if necessary.

TRANSPORT AND STORING

Make sure there are no people, children and foreign objects around the area before transporting the machine. Always take an extra caution during the transport. Ensure that the product is well secured and that transport brackets are mounted. Always place the load as low as possible. Respect the danger zone even during transport. When lifting the equipment, never go underneath suspended loads. Trailer used for transport should have working brakes.

Always store the machine in a dry place preferably underneath a cover when not in use. Ensure that the product is stable and not likely to tip over. Never let children play where the machine is being stored. Always keep in mind the risk of tipping!

MAINTENANCE AND SERVICE

The tractor engine must be switched off and the equipment lowered to the ground before work and service begins. Replace damaged or worn parts immediately to reduce the risk of abrasion. Always perform maintenance, service and inspection, as recommended. Use only original replacement parts or spare parts with equivalent performance to reduce the risk of damage. Lubricate all moving parts and grease fittings and check hydraulic hoses regularly. The hydraulic system is not adapted to environment oil. All repairs and connections with electricity must be performed by a qualified person. Check all nuts and bolts are tightened after performing maintenance and service. Always test the machine before using it.

SERVICE INTERVAL / MAINTENANCE

Lubricate moving parts and check that all bolts and nuts are tightened before each run.

Grease fittings must be lubricated every 10th hour, depending on how often you operate.

RECYCLING

Disposal of the product, disassemble and transport to the municipality's recycling station. Contact your local authority for further information

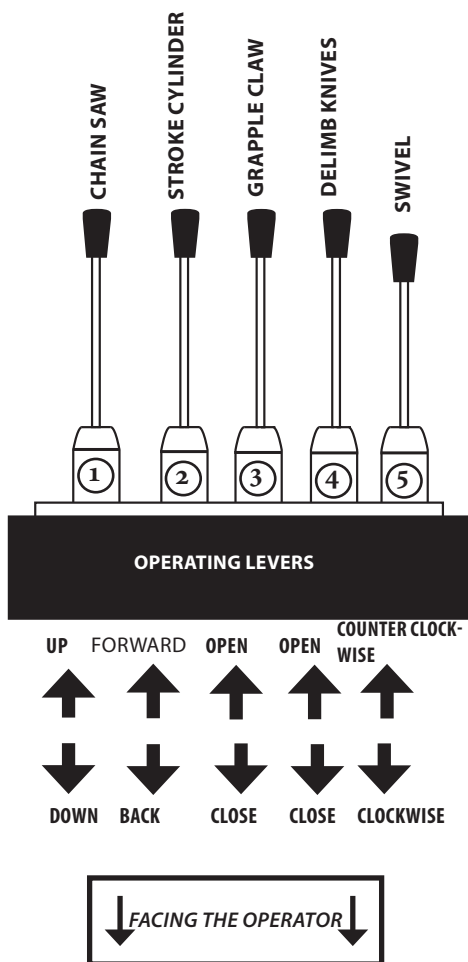


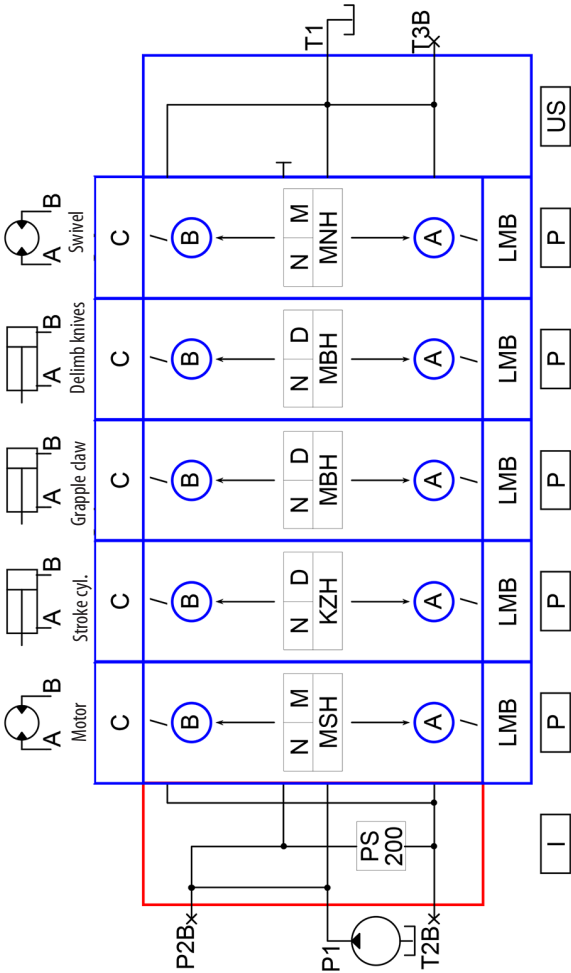
WARNING: Leaking oil under pressure can penetrate the skin and cause serious injury. Do not use your hands when searching for leaks. Use a piece of cardboard to find leaks.

OPERATING STROKE HARVESTER

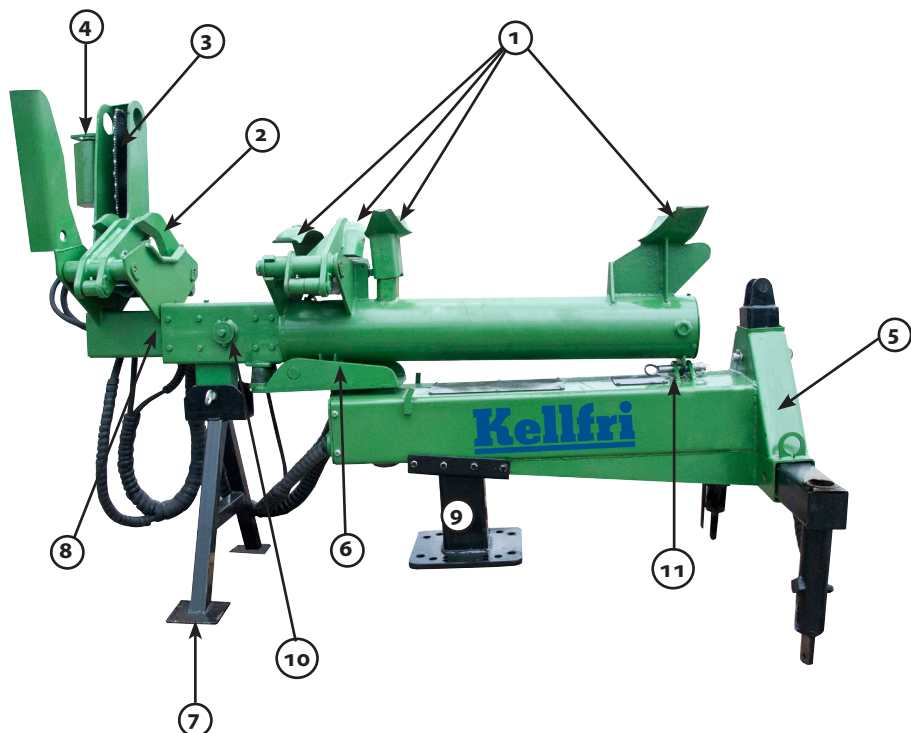
CAUTION! Be aware that the chain saw starts as soon as you pull down the lever (1) - (towards the operator)
Always stop the delimb knives before you feed in the log.

Stroke harvester is operated behind the tractor. Make sure you have a good overview of the work area.





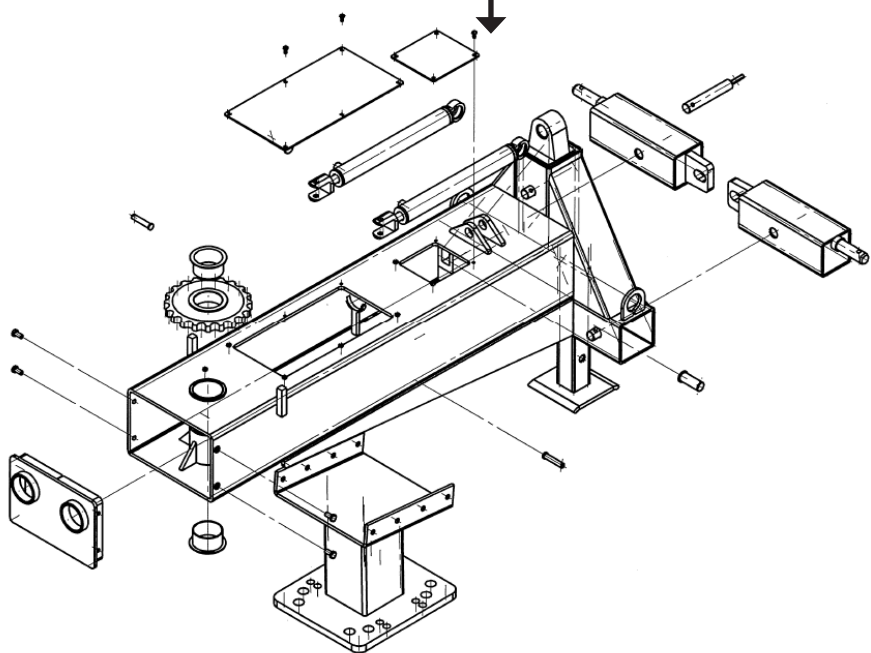
<div><div><div><div><div></div><div>Parker</div></div><div>Mobile Hydraulics</div></div></div><div>Overview drawing</div></div>		Customer specification number P70CF-05-SE11-130 Issued by: Pekka Sipilä Approved by: DF	
<div><div><div><div>Date of issue: 2013-10-09</div><div>Printing date: 2013-10-09</div><div>Latest update: 2013-10-09</div><div>SYBER version: 6.15</div><div>Option list edition: 24</div></div></div><div>Company: Kellfri</div><div>Project name: Huggarvagn</div><div>Application:</div></div>		Page 1	

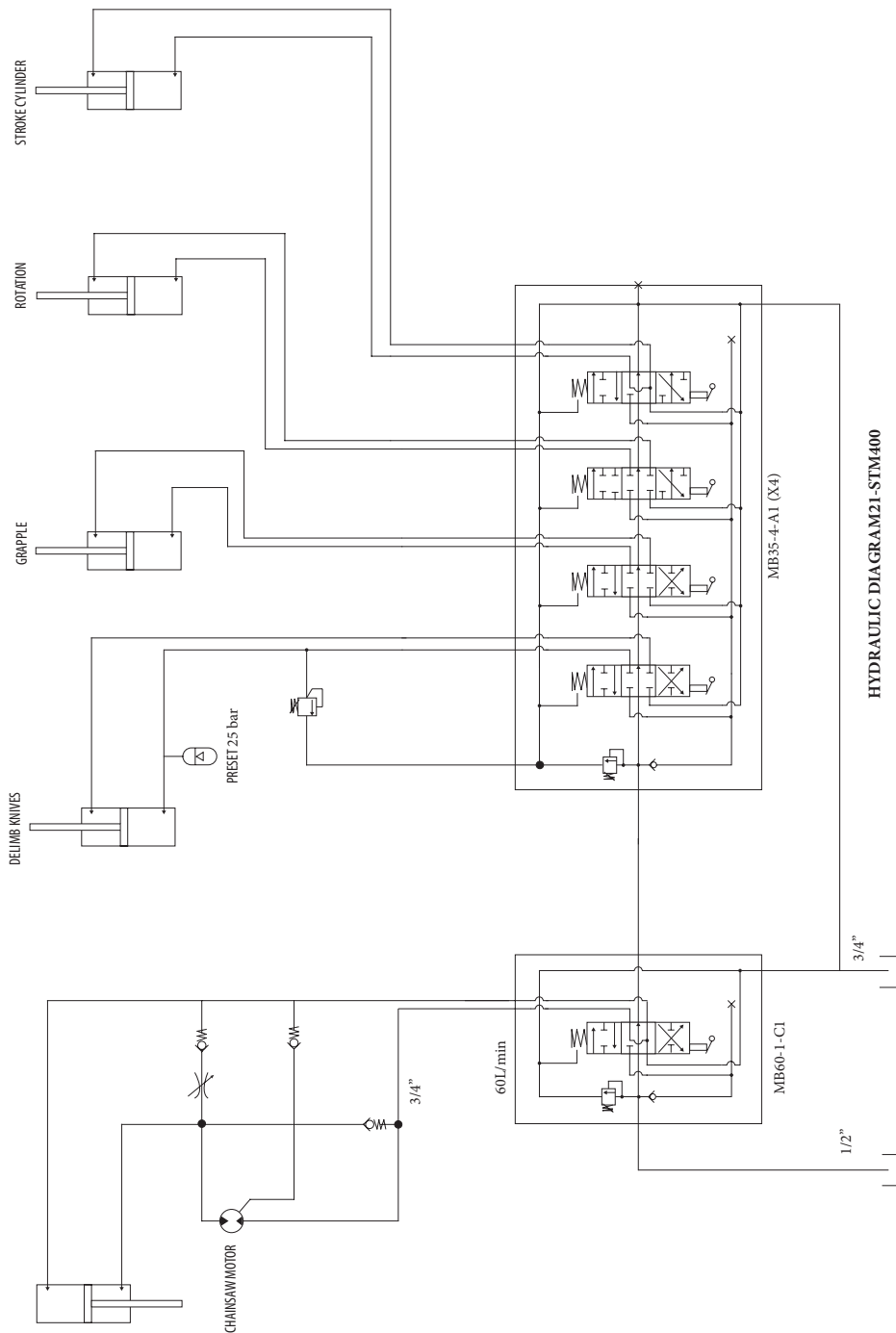


NO	DESCRIPTION	ART.NO. SPAREPARTS
1	Delimb knives	R21-STM400.024 (left) R21-STM400.025 (right)
2	Grapple claws	R21-STM400.022 (narrow) R21-STM400.023 (wide)
3	Chain saw	R21-STM400.003 (guide bar) R21-STM400.004 (saw chain)
4	Tank - chain saw oil	R21-STM400.019
5	Frame brackets	
6	Swivel arm	
7	Support leg	
8	Gliding boom	
9	Brackets for trailer	
10	Setting pins - stroke length setting	
11	Transport safety	



Lubricate the bearings and chain with grease regularly, depending on how much the machine is used. If the machine is used often, all bearings should be lubricated every week. Otherwise, every 50 hours or once a year.

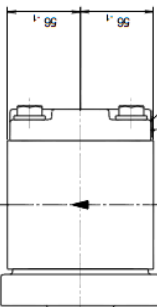




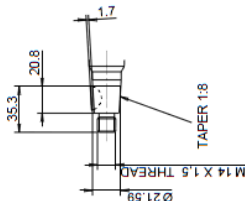
HYDRAULIC DIAGRAM21-STM400

PUMP DATA	
DISPLACEMENT	44.0 cm ³
MAX PRESSURE	220 bar
SPEED RATE	500 TO 2800 min ⁻¹
MAX INPUT SHAFT TORQUE	250 Nm
ROTATION	ANTI CLOCKWISE

WOODRUFF KEY
DIN 6888 4.0 X 7.5 X Ø19

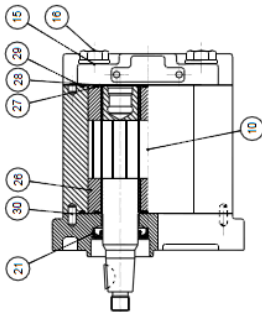
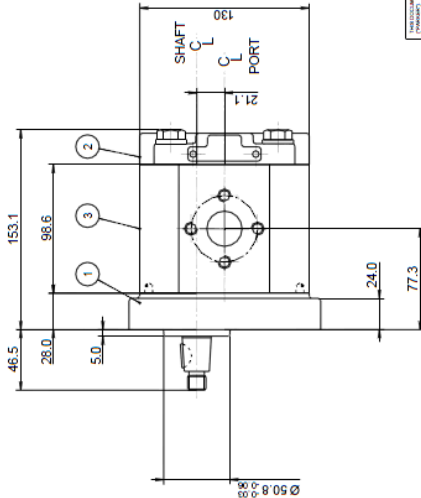
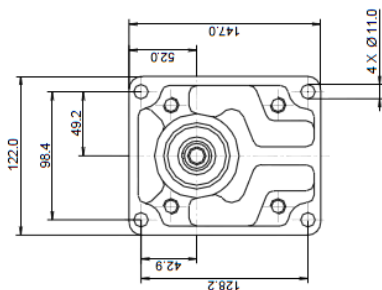


INSTALLATION TORQUE
50 + 10 NM



19MM ITALY-FL.
4 X M8X1.25 THD.
15.0 DEEP
40MM PCD

27MM ITALY-FL.
4 X M10X1.5 THD.
18.0 DEEP
51MM PCD



NOTE

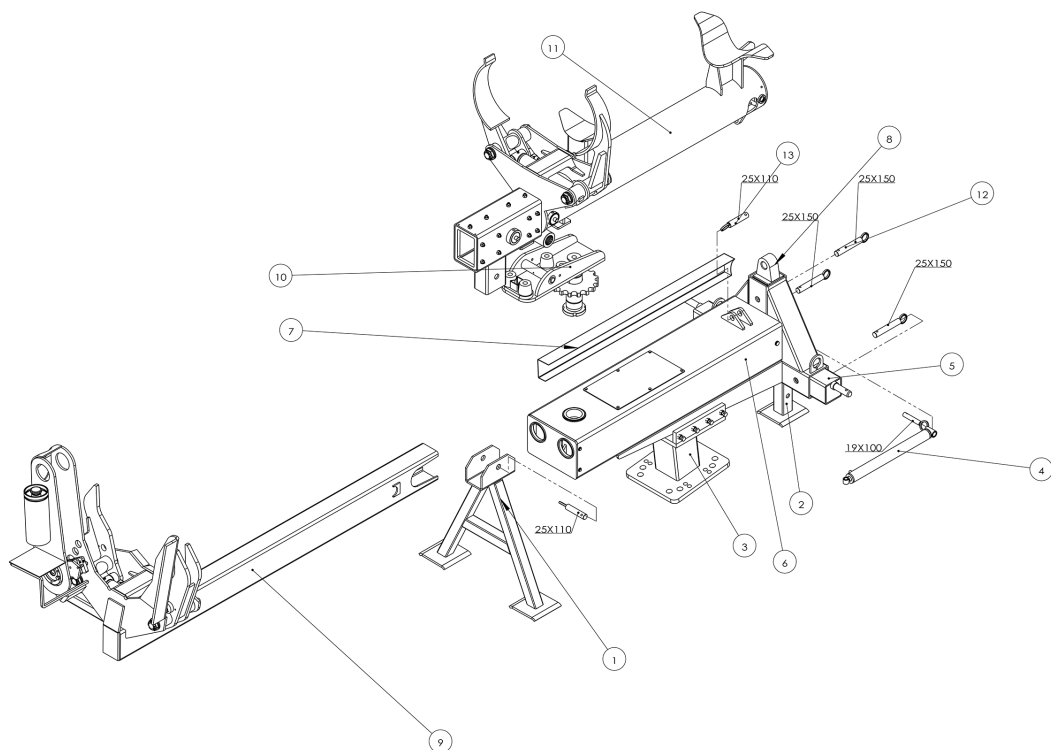
FOR ASSEMBLY INSTRUCTIONS SEE DWG. NO. "517-B1"
"PGP517 PUMP ASSEMBLY INSTRUCTIONS".

ITEM	PART NO.	QTY	REMARKS
28	381 2882 102	2	SEAL BK-UP
27	381 2882 101	2	SEAL CHAN
26	381 2185 093	2	THRILLER/SHG
25			
24			
23			
22			
21	381 2883 058	1	SEAL LIP
20			
19			
18			
17	391 1401 557	4	CAPSCREW (140 MM)
16	391 3782 232	4	WASHER
15	391 3782 232	4	WASHER
14			
13	391 3782 260	1	WASHER
12	391 1451 161	1	NUT
11	391 1781 115	1	KEY
10	333 2544 773	1	SET. GEAR SHAFT
9			
8			
7			
6			
5			
4			
3	333 8144 911	1	HOUSING. GEAR
2	333 3000 100	1	HOUSING. PEC
1	333 5040 205	1	HOUSING. SEC

ITEM	PART NO.	QTY	REMARKS
20	SEE ABOVE		
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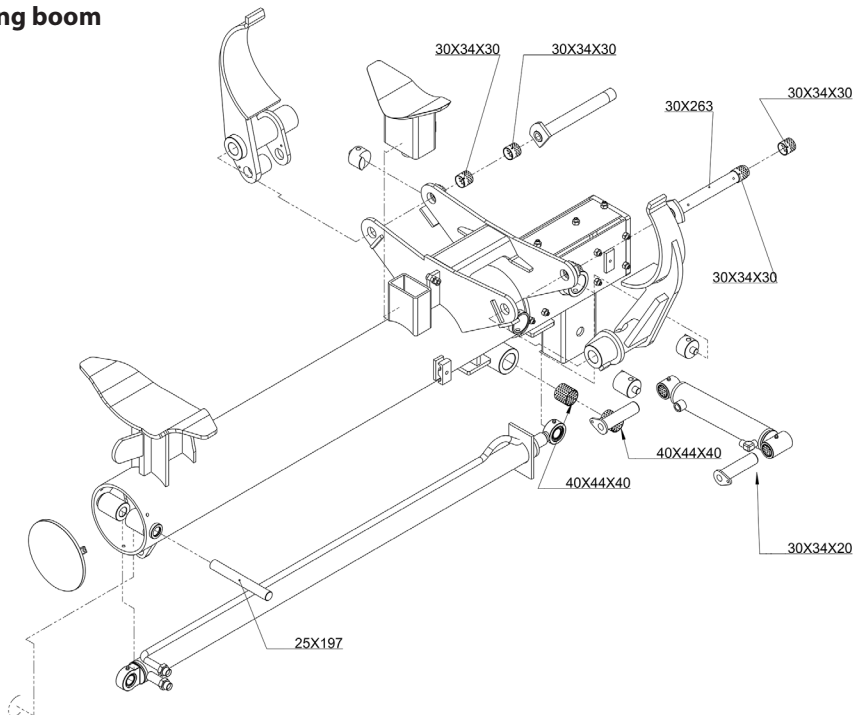
ITEM	PART NO.	QTY	REMARKS
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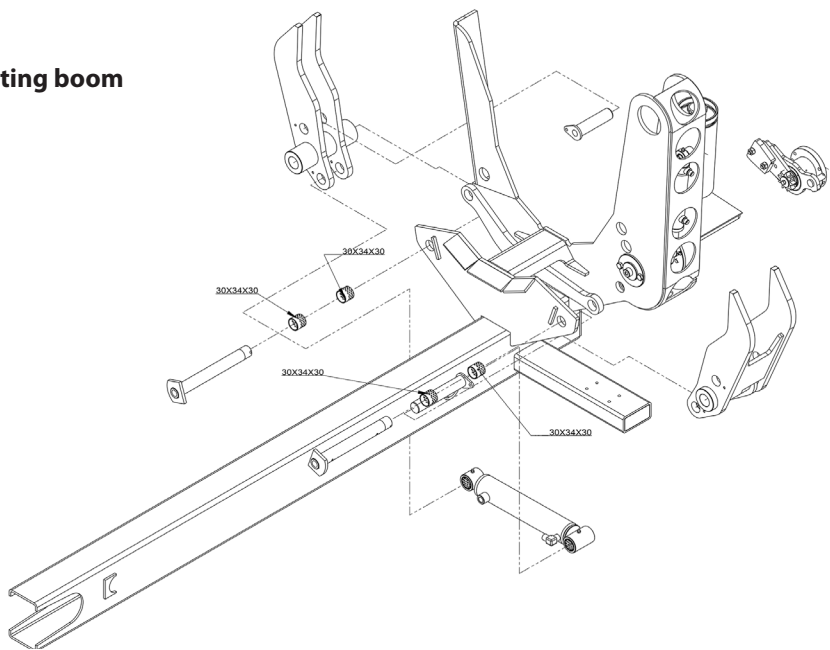


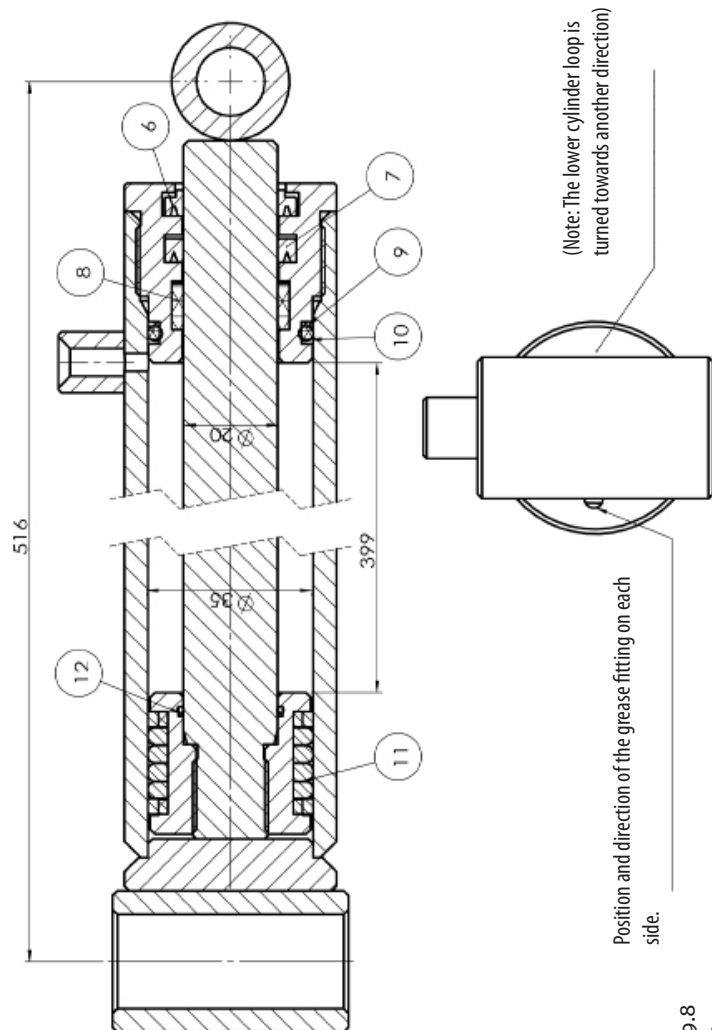
NO	DESCRIPTION	AMOUNT
1	Support leg - front	1
2	Support foot - frame	1
3	Stabilizing bracket in the middle	1
4	Rotate cylinder	2
5	3 point lower hitch	2
6	Frame	1
7	Plate protection - hydraulic hose	1
8	3 point upper hitch	1
9	Splitting boom	1
10	Swivel arm	1
11	Gliding boom	1
12	Shaft 25x150	3
13	Shaft 25x110	2

Sliding boom



Splitting boom



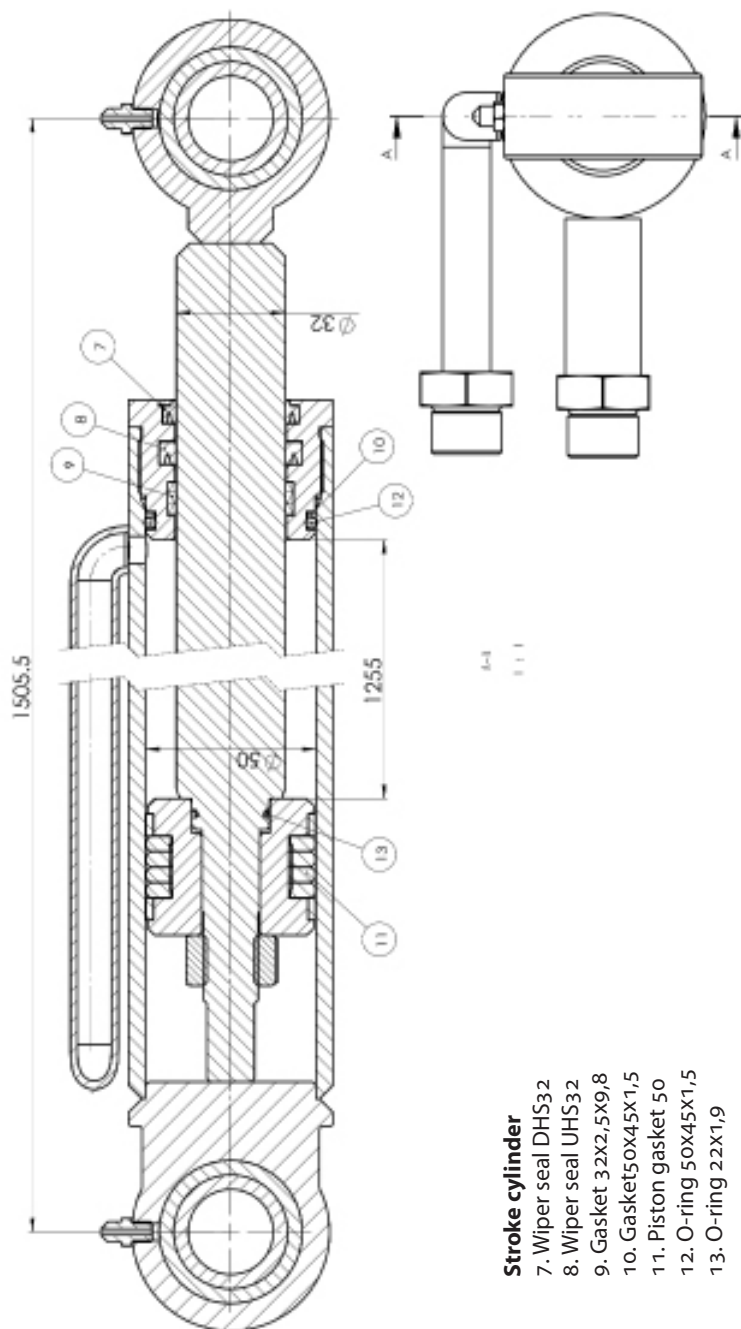


(Note: The lower cylinder loop is turned towards another direction)

Position and direction of the grease fitting on each side.

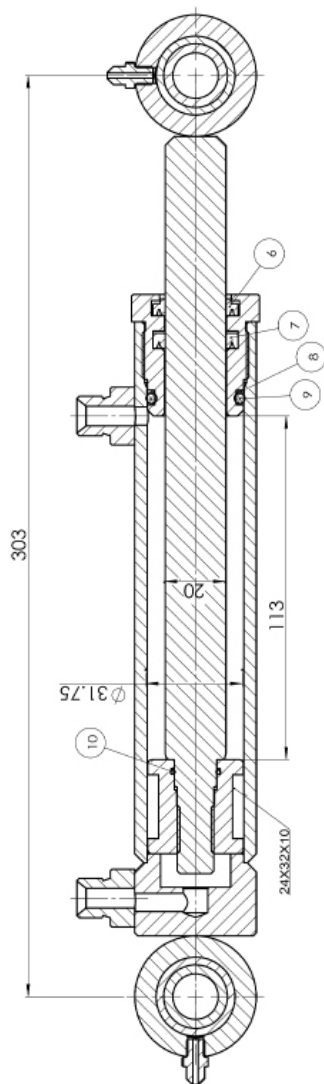
Rotate cylinder

- 6. Wiper seal DHS20
- 7. Wiper seal UHS20
- 8. Bushing 20X2.5X9.8
- 9. Gasket 35X30X1.2
- 10. O-ring 35X3.1
- 11. Piston gasket 35
- 12. O-ring 23X1.5



Stroke cylinder

- 7. Wiper seal DHS32
- 8. Wiper seal UHS32
- 9. Gasket 32x2,5x9,8
- 10. Gasket 50x45x1,5
- 11. Piston gasket 50
- 12. O-ring 50x45x1,5
- 13. O-ring 22x1,9



Squeezing cylinder.

- 6. Wiper seal DHS20
- 7. Wiper seal UHS20
- 8. Gasket 32x27x1.2
- 9. O-ring 32x3.5
- 10. O-ring 17x1.5

WARRANTY TERMS AND CONDITIONS

Validity of the warranty - Kellfri's Warranty is valid 12 months from the date of purchase.

This warranty replaces - Compensation for spare parts after acknowledgment that the fault lies on the material or manufacturing defects.

This guarantee do not cover

- Labour costs
- Travel expenses
- Any modification that the buyer himself has/had made.
- Any consequential damages that occurred out of damage to the machine.
- Damage due to normal deterioration of the machine, inadequate: service, user inexperience or use of spare parts which are not original.
- Wear parts such as hoses, seals, oils, and mechanical belts

EG-FÖRSÄKRAN OM MASKINENS ÖVERENSTÄMMELSE, ORIGINAL

EC-DECLARATION OF CONFORMITY

According to 2006/42/EC, Annex 2A

Kellfri AB

Munkatorpsgratan 6

532 37 Skara, Sweden

Declares that the machine

Name: 21-STM400

Type: Stroke harvester

Complies with all applicable provisions of the Machinery Directive 2006/42/EC.

Other equipment must meet the hardware requirements of the Directive.



Tina Baudtler, VD 2013-12-05

Kellfri AB is constantly working on further developing their products and therefore reserves the right to modify, among other things the design and appearance without notice.

Last edited: 2015-06-16

CUSTOMER SERVICE

You are always welcome to give your feedbacks, reviews or ask us about our tools and products.

KELLFRI AB

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Kellfri®