



Operating manual

KGD 35 EH

KGD 35 SA

0113_0011 / 0113_0012

Königswieser Gerätetechnik GmbH

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1. Technical specification

	Unit	35 EH	35 SA	45 EH	45 SA
Pulling force	kN	35	35	45	45
Brake force	kN	43,75	43,75	56,25	56,25
Wire rope medium speed	m/s	0,95	0,95	0,6	0,6
Wire rope maximum length	mm/m	8/85	8/85	9/120	9/120
	mm/m	9/60	9/60	10/100	10/100
Tractor required power	kW	10	10	20	20
Width	mm	1200	1200	1350	1350
Height with protective net	mm	2050	2050	2300	2300
Weight (without wire rope)	kg	272	278	392	402
Power take-off RPM	min-1	max 540	max 540	max 540	max 540

	Unit	55 EH	55 SA	65 EH	65 SA
Pulling force	kN	55	55	65	65
Brake force	kN	68,75	68,75	81,25	81,25
Wire rope medium speed	m/s	0,6	0,6	0,6	0,6
Wire rope maximum length	mm/m	10/100	10/100	11/100	11/100
	mm/m	11/80	11/80	12/90	12/90
Tractor required power	kW	25	25	35	35
Width	mm	1500	1500	1700	1700
Height with protective net	mm	2300	2300	2300	2300
Weight (without wire rope)	kg	411	419	452	460
Power take-off RPM	min-1	max 540	max 540	max 540	max 540

	Unit	85 EH	85 SA	105 EH	105 SA
Pulling force	kN	85	85	105	105
Brake force	kN	106,25	106,25	131,25	131,25
Wire rope medium speed	m/s	0,57	0,57	0,57	0,57
Wire rope maximum length	mm/m	12/120	12/120	13/100	13/100
	mm/m	13/100	13/100	14/80	14/80
Tractor required power	kW	60	60	60	60
Width	mm	1800	2000	1800	2000
Height with protective net	mm	2300	2300	2300	2300
Weight (without wire rope)	kg	728	756	728	756
Power take-off RPM	min-1	max 540	max 540	max 540	max 540

2. Declaration of Conformity

Manufacturer:

Königswieser Gerätetechnik GmbH

AU 52, 4654 Bad Wimsbach, Austria

declares with full responsibility that the products mentioned hereinafter:

Logging winches

**KGD 35 EH, KGD 45 EH, KGD 55 EH, KGD 65 EH, KGD 85 EH, KGD 105 EH
KGD 35 SA, KGD 45 SA, KGD 55 SA, KGD 65 SA, KGD 85 SA, KGD 105 SA**

covered by this declaration complies with the requirements of:

Order on Machine Safety – Official Gazette of RS, No. 25/06
(Directive 98/37/EC)

Bad Wimsbach, 02-10-2009

Königswieser Günter, CEO

3. Introduction

This manual describes the KGD winch and includes information and maintenance instructions for a safe and efficient machine operation.

Please, read the operation and service manual carefully even if you are an experienced winch user. The manuals include information required for an efficient and safe operation of the machine. Regular maintenance guarantees economical and correct machine operation.

The skidding winch is delivered test run and test loaded.

4. Safety Instructions

Do not use the winch, before you have read and understood the manual! The owner is responsible for the guidance of all persons, who have to deal with the device. Do not use or service the winch before the becoming acquainted with it.

- **Only skilled persons may use and service the winch.**
- **The winch must always be checked before use and at least once a day the safety conditions and the possible faults must be checked.**
- **Check the moving parts. They have to be fastened to their places and in good condition. All the protections and the limiters have to be in places.**
- **The winch must not be used even partly, without the protection parts.**
- **When winching to downhill, the winch must be pulled from the side through an extra snatchblock.**
- **It is perilous to be in the area between a load connected to the cable and a winch.**
- **Before using the winch get acquainted with the controllers of the winch, test the stopping functions of the winch and of the tractor and all the other functions. Each function has to be in perfect order.**
- **Check that the winch is free of rubbish and other obstructions.**
- **Check that all the outsiders are in a safe area, at a distance of at least 15 metres, from the running machine. Warning signs must be installed in the area of approaching roads .**
- **The cable must not be touched during winching with the hands.**
- **When the winch is used on slopes, the load must not be followed from below.**
- **The maximum load must be adapted to respective conditions.**
- **Check that the moving chains are carefully fastened. The cable must not be coupled directly to the load.**
- **The safety factor must be 2.5 for cable type couplings and 2 for chain type couplings.**
- **Inform all skidding winch users about the dangers and how they can be avoided.**
- **The skidding winch may be operated only if it is attached to a tractor.**
- **The winch has to be fastened to 3--point hitch of the tractor. Defective fastening may cause a dangerous situation.**
- **Do not let children or incapable persons operate the winch.**

5. Mounting

Mounting to the 3-point hitch

The winch can be mounted to the 3-point linkage of any tractor. Power transmission is obtained through universal shaft from tractor.

Assembly of the pto shaft

If the PTO shaft is too long it may get pressed when the three point hitch is lifted up. This may cause damage to the bearings of the winch or to the PTO of the tractor. The PTO shaft must not be too short in any position. The PTO length is suitable, if the pipes do not reach the bottom.

PTO is optional equipment.

1. Mount the winch to the 3-point hitch of the tractor.
2. Raise the winch high enough to get the PTO shaft of the tractor and the winch to a horizontal level.
3. If you have a shortened PTO shaft available, put one end into the drive shaft and check that the distance of the locking of the other end. Take into account the additional clearance of approx. 20 mm.
4. Fasten the other end of the PTO shaft in its place and also move the winch sideways at the same time securing that the axis does not base.

Shorten the drive shaft

Both PTO halves must be shortened by equal amounts.

- First cut the thicker cover to a correct length . Remember 20 mm clearance. Then cut away the same amount from the form pipe. Make a similar shortening to the second half of the PTO shaft. Remove the burr with the file.
- Connect the PTO shafts within each other. Make sure by moving elevator carefully up and down that the shortening of the axis is sufficient. Check that the axis have 20 mm latitude.

6. Operation Instructions

Wire rope unwinding

When the winch is properly connected, we can begin with unwinding of the wire rope. On tractors without a socket with constant current of 12 V, we can connect a supply cable in the socket, which is usually made for connection of light equipment on the trailer. Because of this, we have to turn on the position lights. On the steering console, press the white button to release the brake. Hydraulic cylinder shifts to position 1. The switch will permanently release the brake.

When unwinding, we have to be careful not to unwind the wire rope completely or leave at least three winds on the drum. Due to safety reasons, the wire rope is installed on the drum so that if the logs start to slide without control, the rope must “pull” itself off the drum. If the rope was pulled out with excessive force, we can pull out the entire wire rope during pulling. In this case, replace it according to the procedure, foreseen for wire rope installation.

Warning

Steel rope must be completely unwound before first use and wind it back on the generator drum under load. For instance, we can do this so that we attach the rope to a standing tree and pull the tractor with slight braking to the tree. This procedure must be done also before trying to tow, if we towed downhill beforehand or if the rope was wound loosely during towing.

ATTENTION!

Loosely wound steel rope can be damaged (stuck, bent) at greater load, so that it is prohibited to use it again.

Warranty does not apply for a steel rope, which is damaged in such manner.



Pulling

Turn the "Wire rope release" switch towards left and push the black button on the control console, and the winch starts to pull. When the "Pull" button is released, the pulling is interrupted.

During the interruption, the brake band automatically switches on and prevents the load from sliding when the pulling is stopped.

It is useful to know that at the constant drive power, the pulling power depends on the length of the wire rope coiled to the drum. The strongest pulling power is achieved at the first layer of coils. By multilayer coiling the pulling power decreases progressively. The pulling power changes in inverse proportion to the pulling speed, which is highest when the wire rope is fully coiled.

Release the wire rope under load

The brake prevents the load from sliding back, when you stop the pull. To release the stretched wire rope, quickly push and release the white button repeatedly to prevent the drum from uncoiling suddenly and loosening the coiled wire rope. If the wire rope on the drum gets loose, the outer coils of the wire rope get under the inner coils at the repeated pulling, and the wire rope gets damaged quickly.

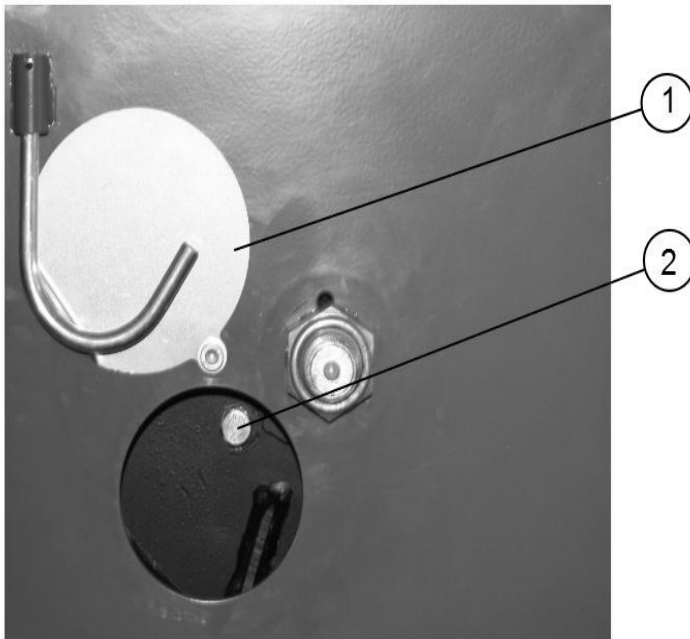
Emergency Stop

By pushing the »**Emergency Stop**« button, the pulling and wire rope release functions are stopped. The button mechanically locks in the pushed position. In this position the pulling or wire rope release functions do not work. Turn the button slightly to the right to disengage the emergency stop. In case any function button is pushed when the emergency stop is disengaged, the machine will detect the malfunction and prevent the »pushed« button from operating.

7. Settings

Installing a new rope

- Remove cover **1**
- Bring the drum in Position the reach screw **2** through the opening
- Unscrew the screw
- Insert the new rope from above
- Tighten the screw and close the Cover
- **Coil up the wire rope onto the drum tightly (see next Chapter!)**



Coiling the wire rope tightly onto the drum

First, uncoil the wire rope completely and check its quality. Afterwards push the “Pull” button to coil up the wire rope onto the drum. Pay attention to coil the first five coils using minimum force and the rest of the wire rope using higher force.

You can achieve this in two ways:

- By pulling the load;
- By fastening the wire rope to a fixed object, so that the tractor is pulled towards this object.

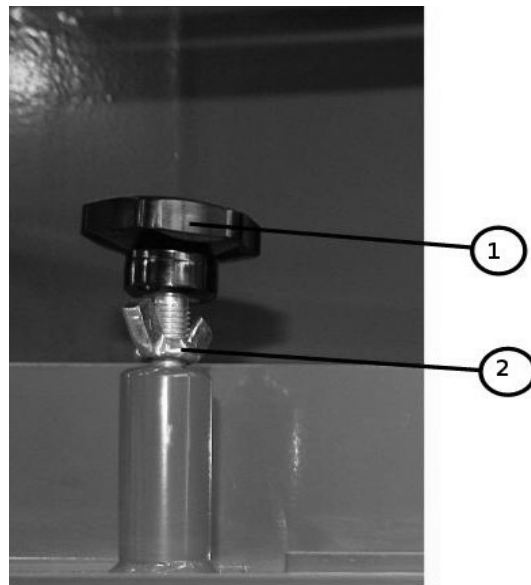
It is recommended to do this on a slight incline, so the tractor is pulled uphill, or by braking slightly

WARNING: The wire rope must always be tightly coiled up onto the drum – before starting the work with a new winch it is necessary to uncoil the wire rope completely without any load, check its quality and tightly coil it back onto the drum: first five coils should be coiled by using minimum load and the rest of the wire rope using higher load!

Setting the wire rope release power

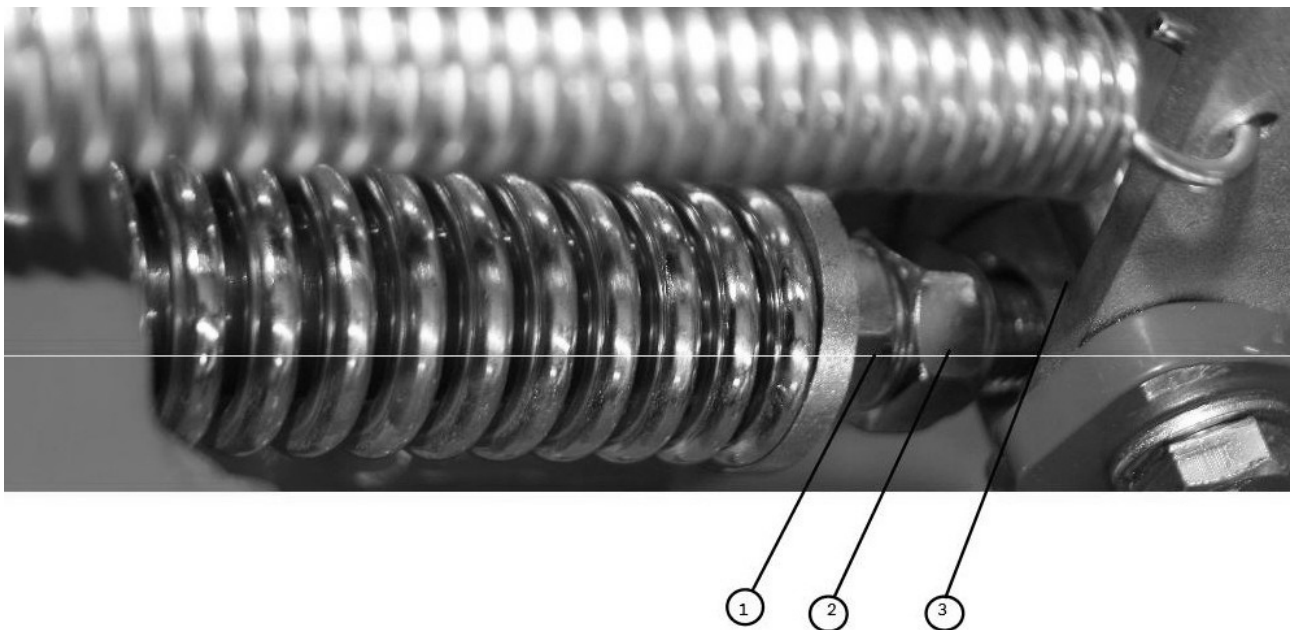
Setting the wire release power

The wire rope release power must be set correctly, so the drum stops immediately after releasing the wire rope. This prevents the wire rope on the drum from releasing by itself. Set the wire rope release power using the wing nut. By screwing or unscrewing the wing nut, the wire rope release power increases or decreases.



Setting the winch brake power

At the end of pulling, the differential brake automatically engages. The brake is factory set, and a new setting is usually not required in the warranty period. After a longer period partial wear of the frictional padding on the brake belt occurs and it is required to set it again. This is required when the brake does not hold the burden as described in the beginning of this paragraph. Perform the setting by tightening the nuts (pos.1+2), which tightens the spring. Then, control the distance between the nut (pos. 2) and cylinder on a lever (pos. 3). This distance should be 5 mm, when the brake is not loaded. If the brake is properly set, is determined when unwinding the wire rope from the drum, which must unwind easily. This unwinding depends on previously set pre-brake, which is described in the previous chapter.



8. Maintenance

Control of hydraulik oil

Oil level in the tank needs to be controlled occasionally. Oil level in the tank is 3.5 liters. For hydraulic system, oil for hydraulic systems ISO 32 is used. In summer months, when the ambient temperature surpasses 25 °C, oil ISO 46 needs to be used. First oil change needs to be done after 1000 hours of operation. Each next oil change must occur after 1000 hours of operation or at least once a year. During operation, oil temperature needs to be controlled. If this surpasses 70 °C, the cardan must be stopped and the reason of overheating must be determined. If you do not have a thermometer present, you can check the oil temperature by touching the hydraulic line. This can be done only with the engine stopped. Otherwise, the hydraulic system can malfunction.

Lubrication

Before proceeding with maintenance work, shut down the engine, remove the key and wait for all moving parts to stop.

There is a grease fitting on the winch, which enables greasing of the upper pulley and guide. The second grease fitting is on the housing of the lower pulley. Greasing is required every 60 hours of operation. The PTO shaft needs to be lubricated according to instructions of the manufacturer.

Non-frequent greasing can cause wear of slide elements and consequentially a defect, which is not subject to warranty terms!

Drive chain must be lubricated every 200 hours of operation. Lubricate it with spray for lubrication of chains or special grease, which does not melt at high temperatures, because the grease can come into contact with friction coating of the clutch.

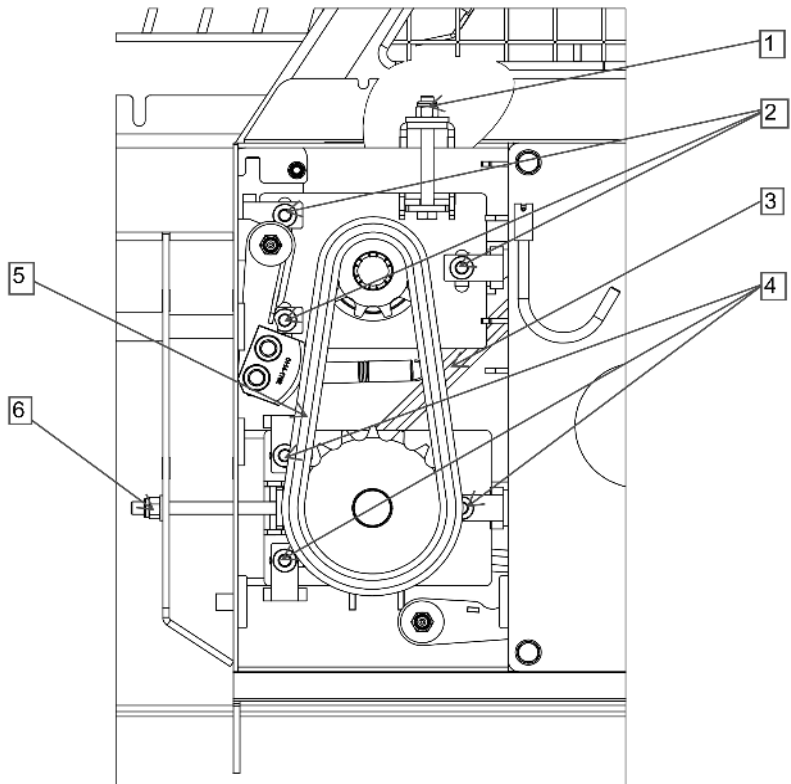
First, remove the PTO shaft protection. Clean the chain before lubrication. Do not lubricate the part, where the grease can reach clutch with application.

If grease comes into contact with friction coating of the clutch due do improper and excessive lubrication, this would mean a drastic reduction in pulling force and consequentially it would be required to replace the blades of the clutch, which cannot be a subject of this warranty!

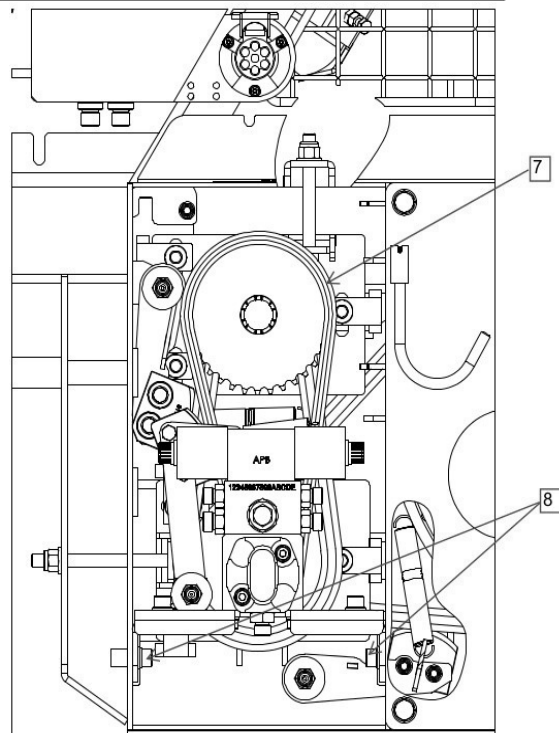
All other bearings on the winch are of closed type, therefore greasing is not necessary.

Checking and tightening the drive chain

- Open screws (4) from the back side. Try not to open too much so the nuts dont fall off.
- Tighten nut (6) until chain (3) is tight.
- Tighten screws (4)
- check chain – you should be able to move it 4-6mm



- now open screws (2)
- Tighten nut (1) until chain (5) is tight
- Check the small chain (7). if its too tight open screws(8) and adjust the height of the block.
- Tighten screws(2)
- check chain – you should be able to move it 4-6mm



When finished check all chains again.
You must be able to move every chain 4-6mm.

9. Removal of Faults

Determined faults (malfunctions)	Cause	Procedure for removal of faults (trouble)
Manometer does not show pressure.	Manometer does not work.	Replace the manometer.
	Sprocket does not drive the pump (broken axle, broken chains, spring pin on the sprocket).	Replace the damaged part.
	Impurities in pressure valve.	Unscrew the valve, clean it and replace it.
	Folded tube.	Replace the tube.
	Not enough oil in the tank.	Fill up oil in the tank.
	Pump malfunction.	Replace the pump.
Pressure drops too quickly.	The battery's membrane is damaged or nitrogen level in the battery is incorrect.	Fill up nitrogen or replace the battery.
	Impurities in steering valve.	Unscrew the valve, clean it and replace it.
	Non-return valve does not seal (impurities or malfunction).	Unscrew the valve, clean it and replace it.
	Pressure valve does not seal (impurities or malfunction).	Unscrew the valve, clean it and replace it or change it.
Clutch cannot be engaged.	Impurities in steering valve.	Unscrew the valve, clean it and replace it.
	No voltage / electrical current on the electro-magnetic coil.	Check the electrical wiring and contacts.
	Insufficient voltage on the electro-magnetic valve (min 11.6 V).	Check the electrical installation on the tractor.
	Electro-magnetic coil does not work.	Change the electro- magnetic coil.
Brake cannot be engaged.	Impurities in steering valve.	Unscrew the valve, clean it and replace it.
	No voltage / electrical current on the electro-magnetic coil.	Check the electrical wiring and contacts.
	Insufficient voltage on the electro-magnetic valve (min 11.6 V).	Check the electrical installation on the tractor.
	Electro-magnetic coil does not work.	Change the electro- magnetic coil.

Determined faults (malfunctions)	Cause	Procedure for removal of faults (trouble)
Pressure oscillates.	With each engagement of electro-magnetic valve it is normal for the pressure to oscillate. If the pressure oscillates, when the valves are not engaging, this means that the pressure valve is damaged or there are impurities in the valve.	Change or clean the pressure valve.
Insufficient pulling force.	Grease on frictional padding of the clutch.	Replace clutches.
	Burnt frictional padding of the clutch.	Clean padding with sandpaper or grind (thickness approximately 0.5 mm).
	Insufficient pressure in hydraulic system (required pressure at least 140 bar).	Determine the reason for pressure drop.
	Worn frictional padding of the clutch	Replace clutches.
	Incorrectly installed clutch.	Install according to technical documentation.
Insufficient brake force.	Improper setting.	Setting according to instructions for use.
	Grease on the padding of the brake belt.	Replace the brake belt.
	Damaged brake belt.	Replace the brake belt.
	Damaged brake mechanism.	Replace damaged parts.
Wire rope cannot be pulled out or the pulling is difficult.	Improper setting of pre-brake.	Setting according to instructions.
	Improper setting of brake,	Setting according to instructions.
	Damaged or stuck wire rope	Pull out the rope with a tractor and, if required, install a new wire rope.
	Damaged brake belt.	Replace the brake belt.
The winch pulls, despite the clutch being disengaged.	Error on electro-magnetic valve.	Cease work immediately and consult a service company.
	Not enough clutch distance.	Setting according to instructions.
	Broken part of frictional padding on the clutch.	Replace clutches.
	Excessively tensioned drive chain.	Chain setting according to instructions.
	Damaged winch drum.	Replacement or repair of the drum.

10. Warranty sheet

We guarantee:

- that the product will operate fault free, if operated according to enclosed operating instructions;
- that we will repair any fault or defectiveness within 45 days during the warranty period. In case the product is not repaired within the mentioned term, we will replace it with a new product on customer's request.

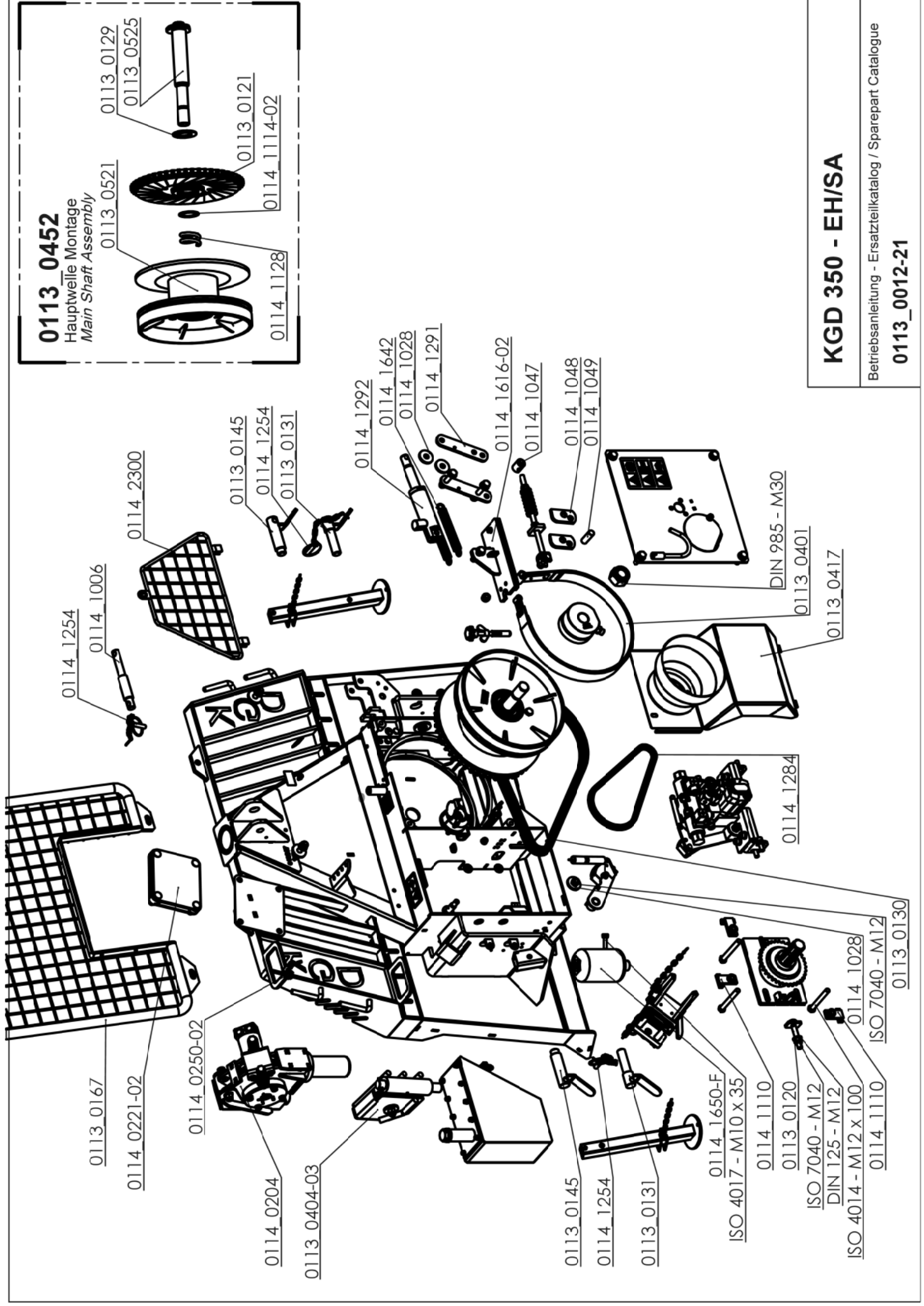
The product is warranted 36 **MONTHS** from the day of purchase, which must be proved by the customer with the certified warranty sheet (stamp of the shop, date of purchase and salesman's signature, serial number and year of manufacture). Warranty sheet is valid only if shown together with original invoice! The warranty covers any parts and labor against defects in material and workmanship. In case of repairs performed by unqualified person, or when using non-original spare parts, the customer loses all claims of warranty! Our warranty is void also in case of:

- Damages caused by not following these operating instructions;
- Damages which are customer's fault;
- Damages resulting from improper use or overload and operation in unsuitable conditions.

Garantieantrag / Warranty form

		KGD internal No.:	_____
owner	winch	First- and last name:	_____
		Street, No.:	_____
		Postal code, city:	_____
		Phone-No.:	_____
winch	winch	Serial-No.:	_____
		Type:	_____
		Purchase date:	_____
		purchased at (dealer):	_____

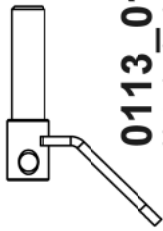
Problem description, changed parts, suggestions:



KGD 350 - EH/SA

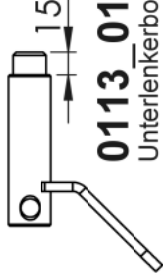
Betriebsanleitung - Ersatzteilkatalog / Sparepart Catalogue

0113_0012-21



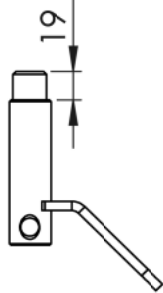
0113_0131

Unterlenkerbolzen - Kat. I
Lower Link Bolt - Kat. I



0113_0145

Unterlenkerbolzen - Kat. II
Lower Link Bolt - Kat. II



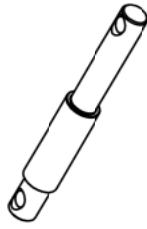
0113_0145-02

Unterlenkerbolzen - Reparatur Kit
Lower Link Bolt - repair Kit

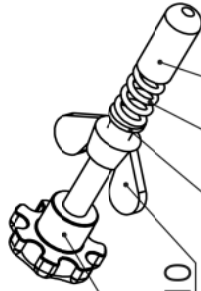
0114_1254
Klappsplint - kompl.
Hinged Split Pin



0114_1006
Oberlenkerbolzen
Bolt - Upper Link



0114_0220
Nachlaufbremse
Overrun Brake



0114_1041

DIN 315 - M10

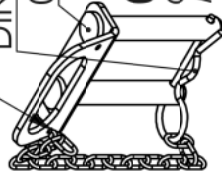
0114_1043

0114_1044

0114_1045

0114_0227

Griff - kompl.
Handle complete



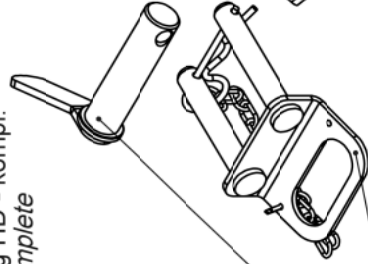
DIN 094 - 3.2 x 16

DIN 11024 - 4.0

0114_2348

0114_0226

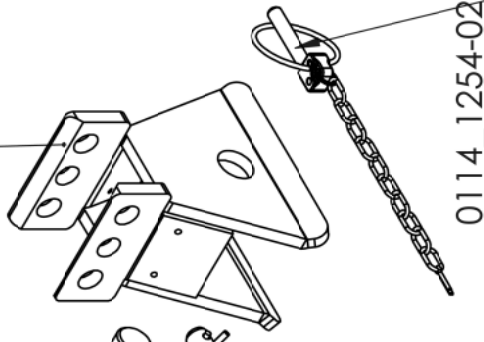
Anhängerkupplung HD - kompl.
Towing Hitch- Complete



0115_1064

0114_0227

0114_2347



0114_1254-02

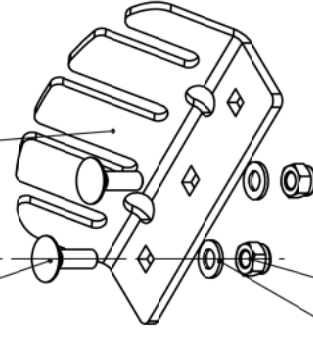
0118_0217

Kettenfalle
Chain Trap

Option

ISO 8677 - M10 x 30

0118_1058



ISO 7040 - M10

DIN 125 - M10

0114_0202-02

Motorsägen Halter-Nachrüst
Motorsaw Holder - Retrofit

Option

ISO 8677 - M08 x 45

0114_2331

0114_2338

0114_2337

ISO 4017 - M10 x 35

0114_2303

DIN 125 - M08

ISO 7093 - M08

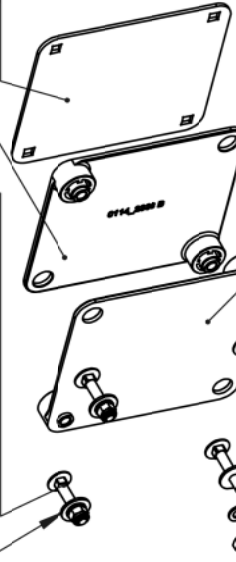
ISO 7040 - M08

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0114_2331

ISO 7093 - M08

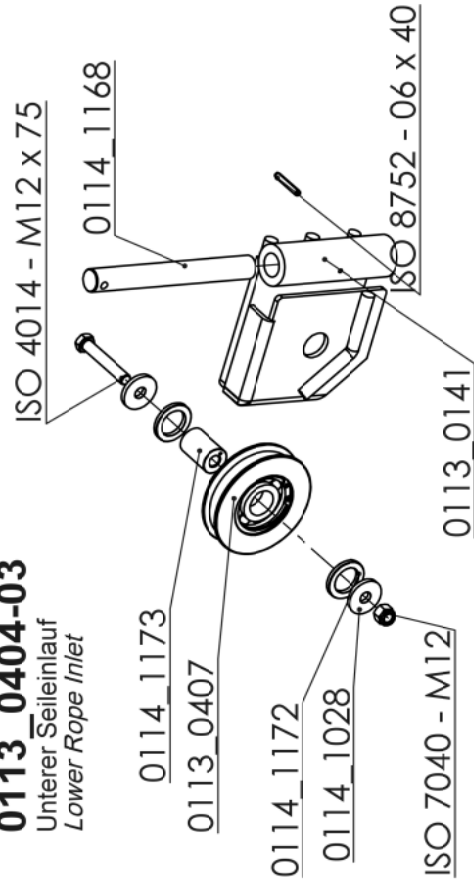
ISO 8677 - M08 x 45



0114_2337

0113_0404-03

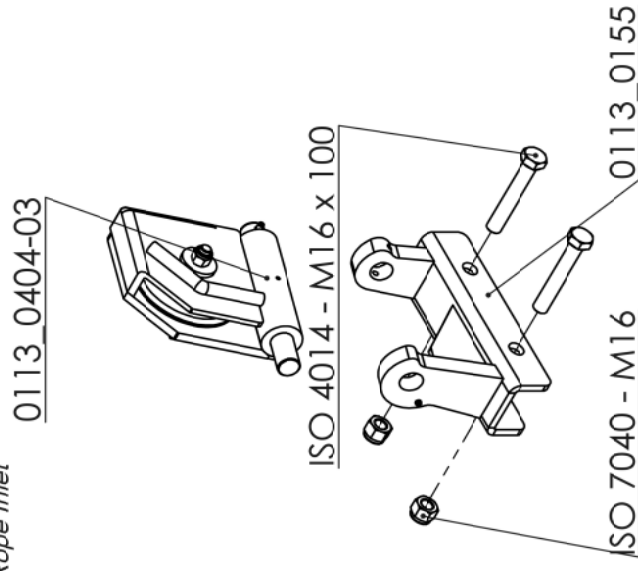
Unterer Seileinlauf
Lower Rope Inlet



0113_0409

Unterer Seileinlauf
Lower Rope Inlet

Option



0114_1048

Bremshebel
Brake Lever



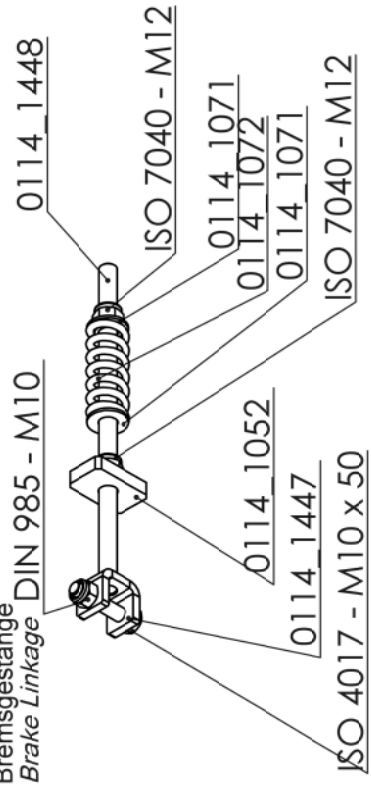
0114_1049

Bolzen - Bremse
Bolt - Brake



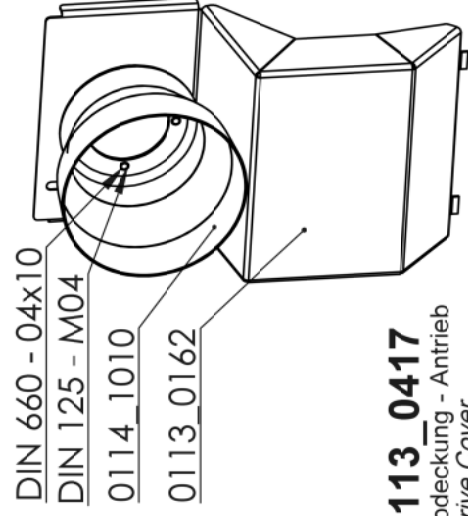
0114_1189

Bremsgestänge
Brake Linkage



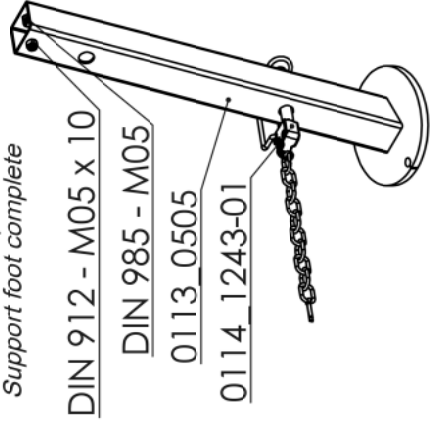
0113_0417

Abdeckung - Antrieb
Drive Cover

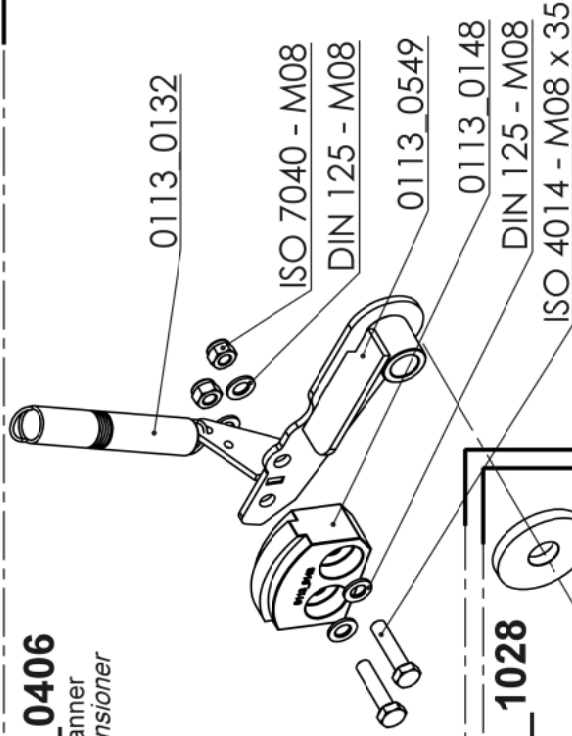


0113_0419

Stützfuß komplett
Support foot complete



0113_0406
Kettenspanner
Chain Tensioner



0114_1028
Scheibe
Washer



ISO 7040 - M12
Sicherungsmutter
Locking Nut



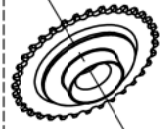
0113_0120
Spannschraube
Tensioner Bolt - 80



0114_1110
Verdrehsicherung
Anti Rotation Device



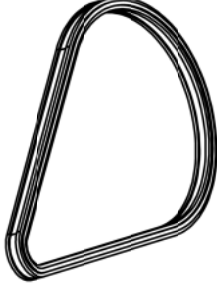
0114_1230
Kettenrad
Sprocket



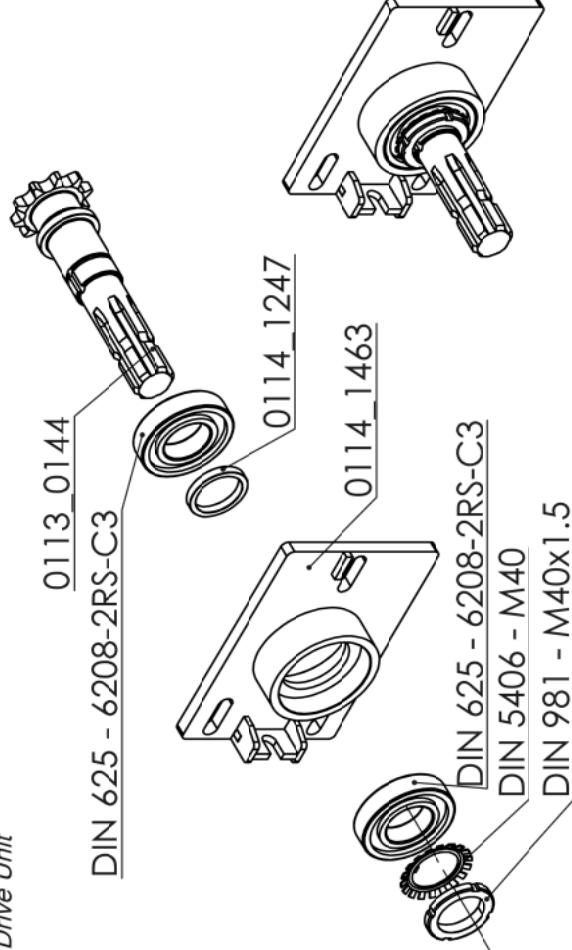
0114_1284
Rollenkette
Roller Chain



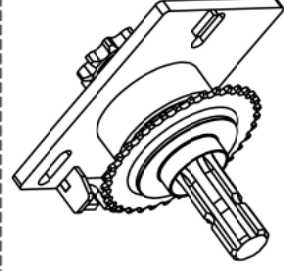
0113_0130
Rollenkette
Roller Chain



0113_0402
Antriebseinheit
Drive Unit

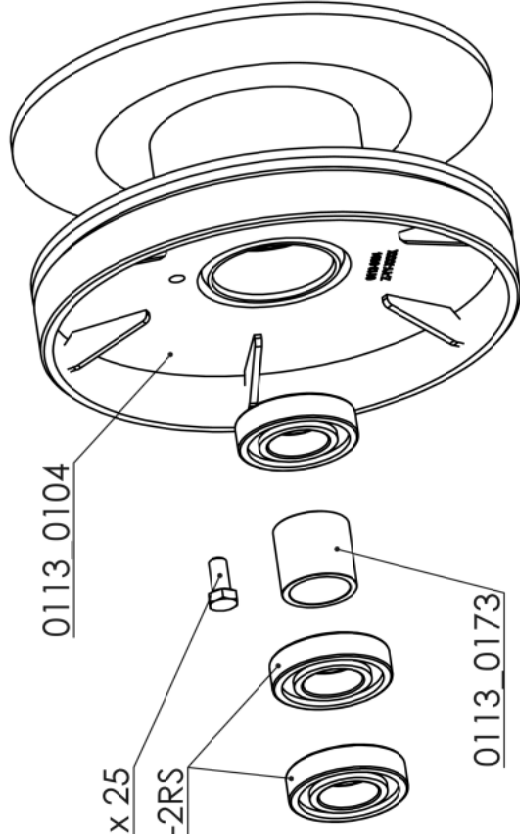


0113_0423
Antriebseinheit
Drive Unit



0113_0422

Seiltrommel
Rope Drum



0113_0104

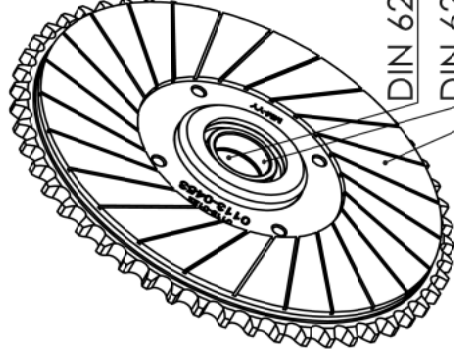
ISO 4017 - M12 x 25

DIN 625 - 6208-2RS

0113_0173

0113_0453

Kettenrad
Sprocket



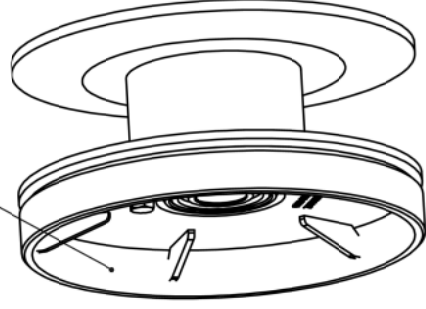
DIN 625 - 6208-2RS

DIN 625 - 6008-2RS

0113_0122

0113_0422

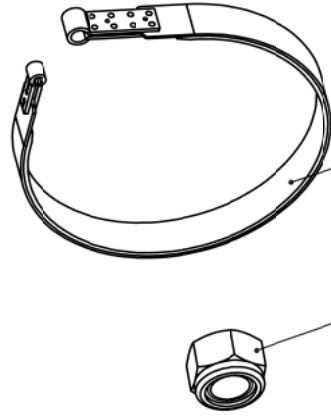
0113_0452
Hauptwelle Montage
Main Shaft Assembly



0113_0453

0113_0401

Bremsband
Brake Band



0113_0401

DIN 985 - M30

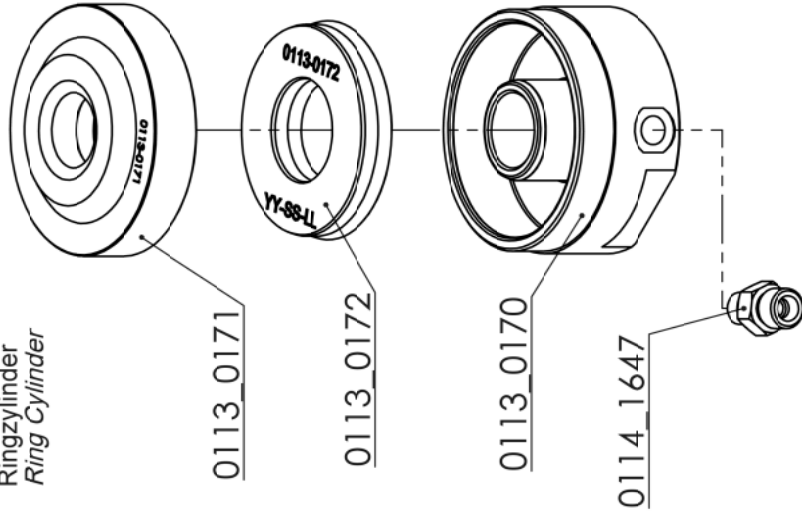


0114_1114-02

0114_1128

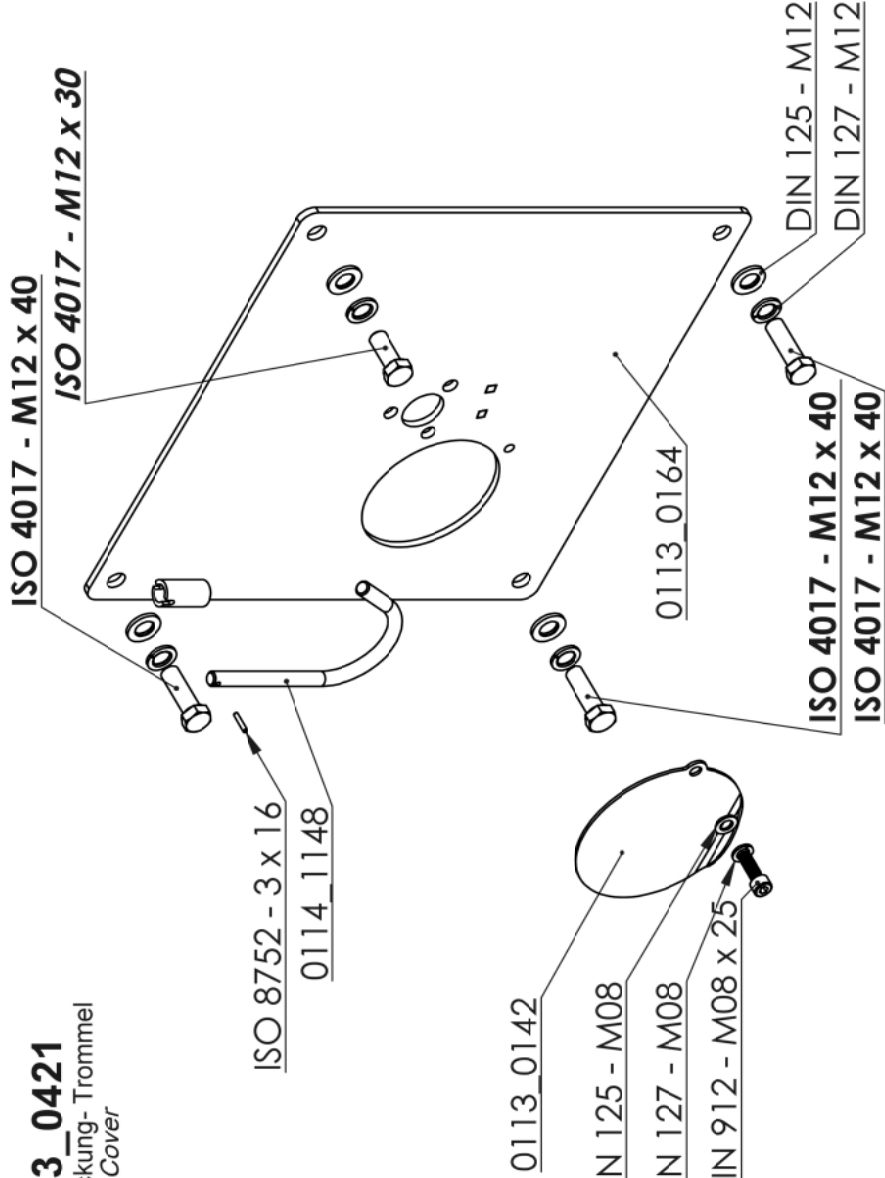
0113_0418

Ringzylinder
Ring Cylinder



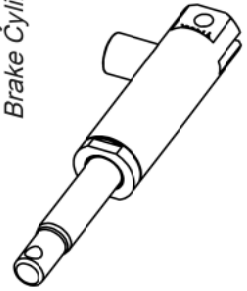
0113_0421

Abdeckung- Trommel
Drum Cover



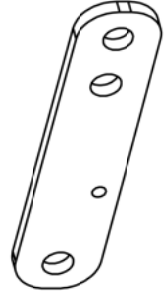
0114_1292

Bremszylinder
Brake Cylinder



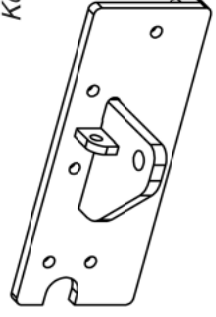
0114_1291

Hebel
Lever



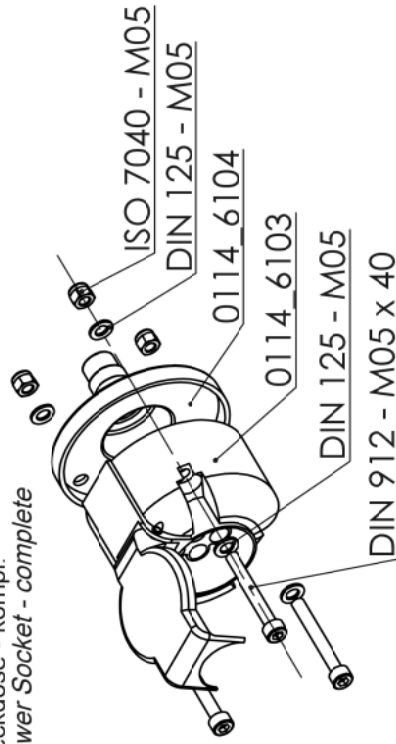
0114_1616-02

Brake cylinder bracket
Konsole Bremszylinder



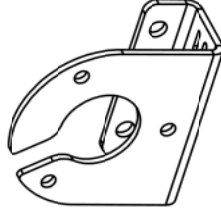
0114_6002

Steckdose - kompl.
Power Socket - complete



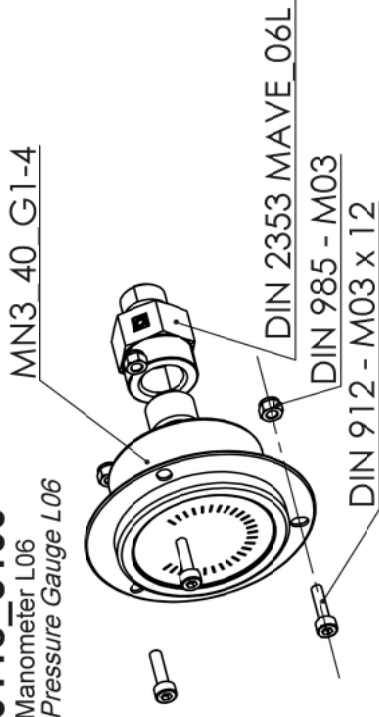
0113_0168

Dosenhalter
Socket Holder



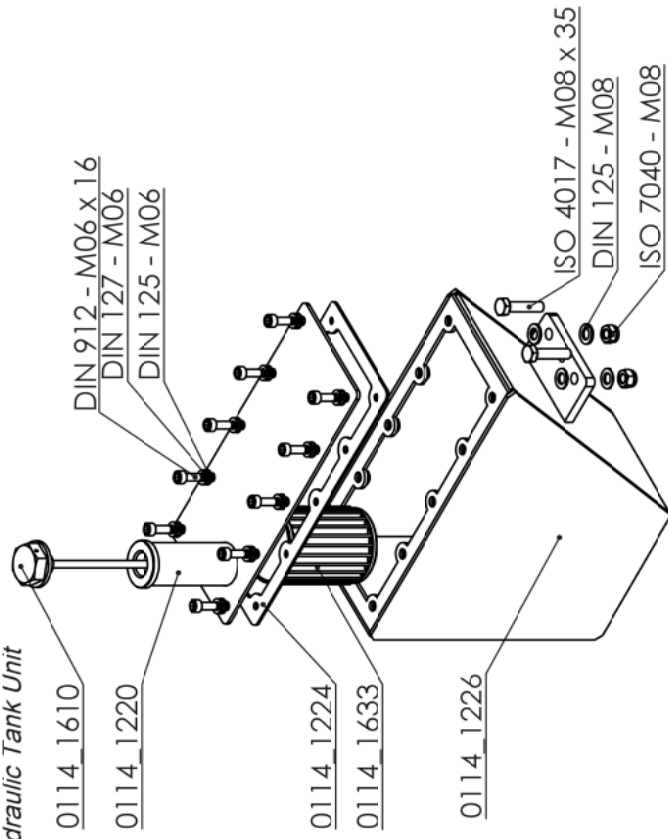
0118_5100

Manometer L06
Pressure Gauge L06



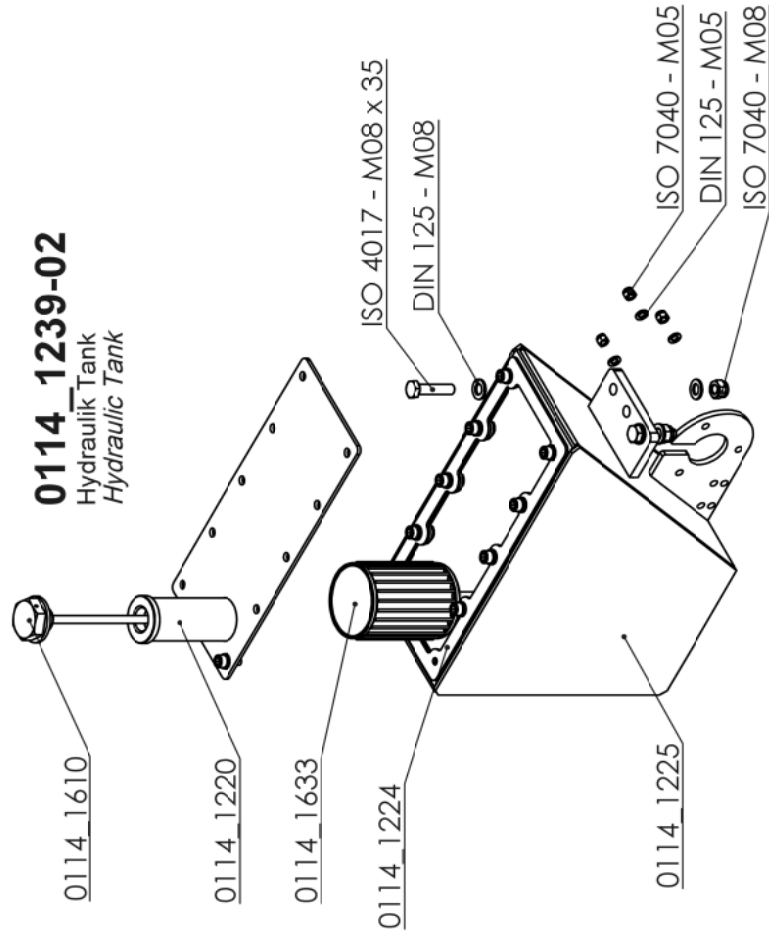
0114_0239

Hydraulik Tank
Hydraulic Tank Unit



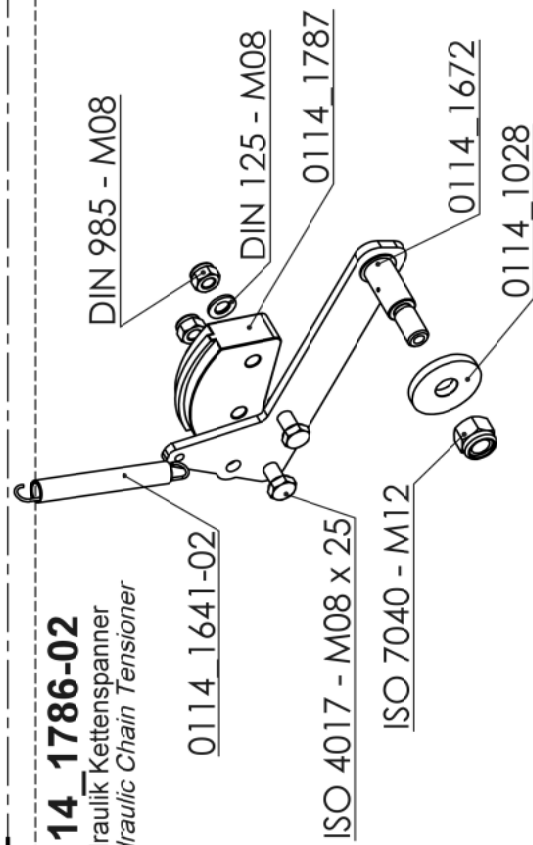
0114_1239-02

Hydraulik Tank
Hydraulic Tank



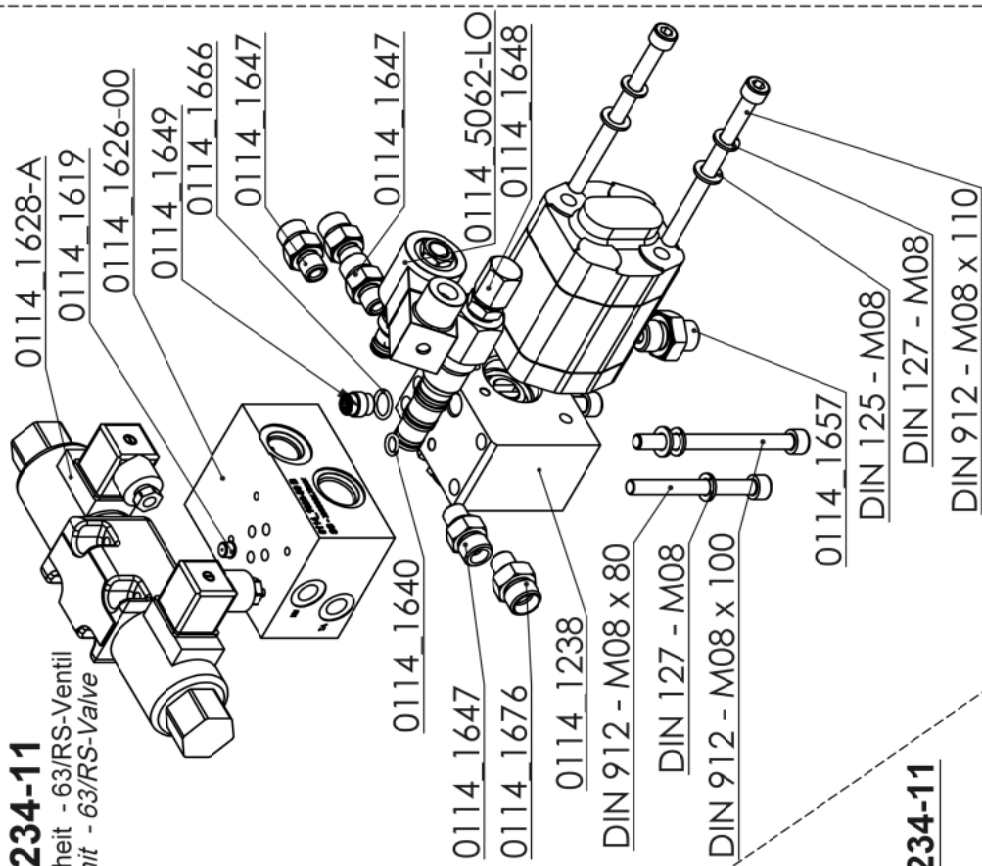
0114_1786-02

Hydraulik Kettenspanner
Hydraulic Chain Tensioner



0114_1234-11

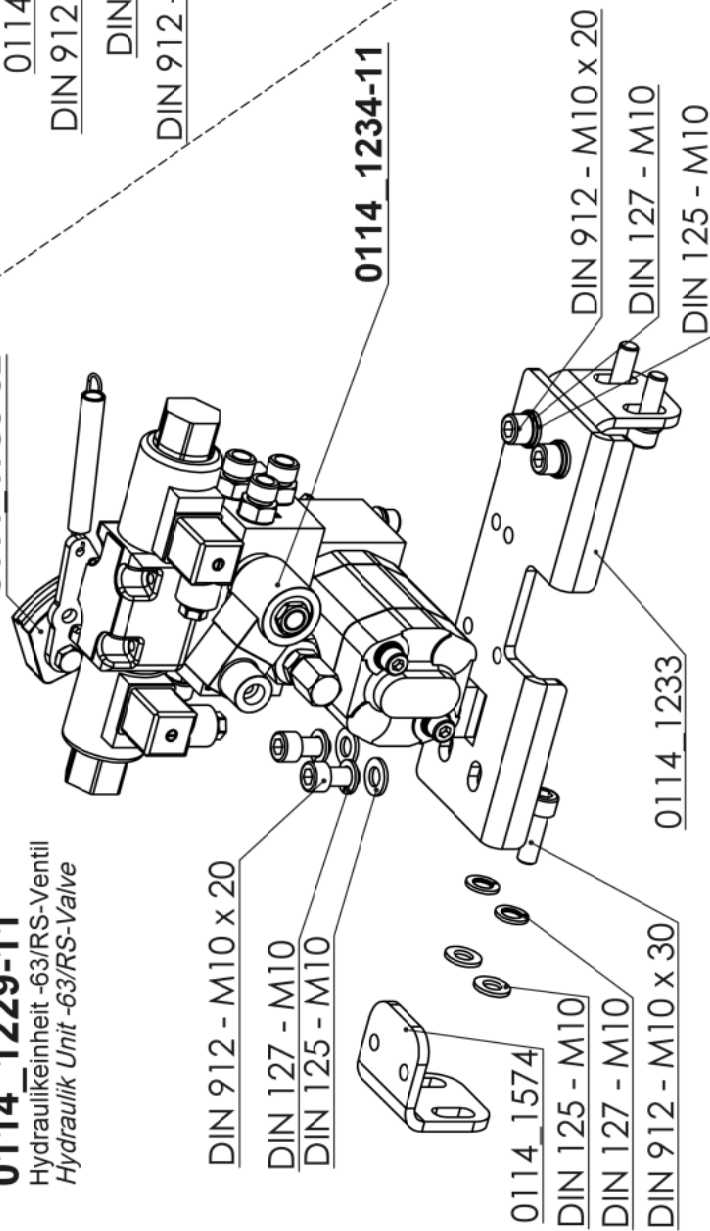
Hydraulikeinheit - 63/RS-Ventil
Hydraulic Unit - 63/RS-Valve



0114_1229-11

Hydraulikeinheit - 63/RS-Ventil
Hydraulic Unit - 63/RS-Valve

0114_1786-02



0115_1114

0115_1106

0114_1044

0115_1107

DIN 912 - M06 x 40

ISO 7040 - M10

DIN 125 - M10

0115_1110

ISO 4017 - M10 x 30

DIN 125 - M06

ISO 4017 - M06 x 12

ISO 4017 - M05 x 16

0115_1108

0115_1113

0115_0224

SF mit Endabschalter
Rope Guide With Limit Switch

0114_0204

Seileinlauf - Seilaustoss
Rope Inlet - Rope ejection

0115_1074

0115_1058

DIN 625 - 62210-ZZ

0115_1056

0115_1060

DIN 125 - M12

DIN 985 - M12

DIN 7642 - DN 06-14

Bonded seal 17,28x233,8

0114_5043

Hydraulikeinheit
Hydraulic Unit

DIN 7643

0114_5054

DIN 7642 - DN 06-14

DIN 2353 - 2xM16x1,5 90

DIN 7991 - M12 x 35

DIN 625 - 62210-ZZ

0115_1094

DIN 125 - M08

ISO 4017 - M08 x 25

DIN 127 - M08

DIN 125 - M12

ISO 4014 - M12 x 100

0115_1061

DIN 6885 A - 10x08x32

0115_1134

0115_3214

