

This original user manual must be read before start-up and be available to the user at all times.

Hand winch with worm gear Type WH 7 S in accordance with DIN EN 13157

Intended use: Raising and lowering loads

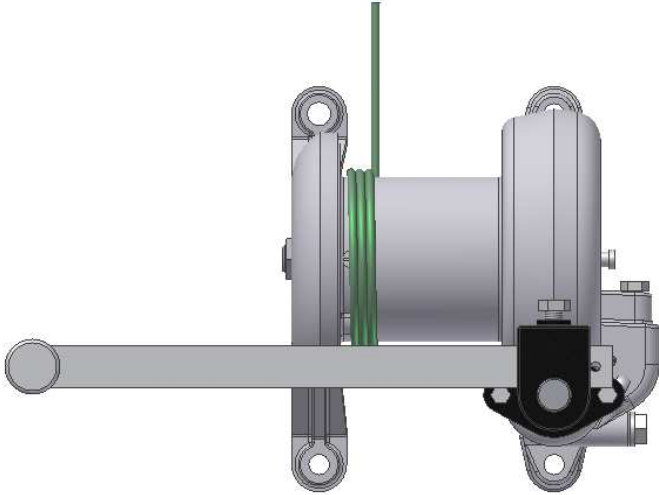
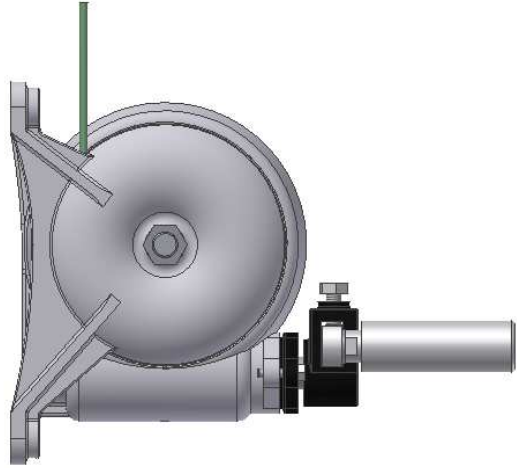
Do not use for!	<ul style="list-style-type: none"> In acc. with BGV C1 (stages and studios) Moving persons 	<ul style="list-style-type: none"> Motorised operation Usage in acc. with Atex
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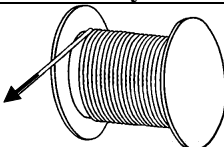
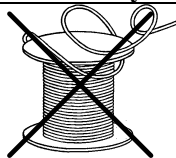
Technical Data for WH 7 S							
Total load:	750kg	Cable diameter:	8 mm	Gear unit:	1Bm	Maximum cable take-up:	49 m
Minimum load for safe friction disc brake operation				10 kg	Ambient temperature range -10°C to +50°C		

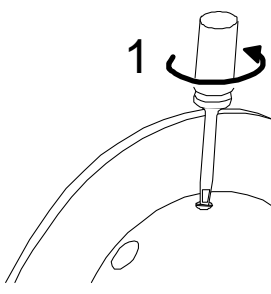
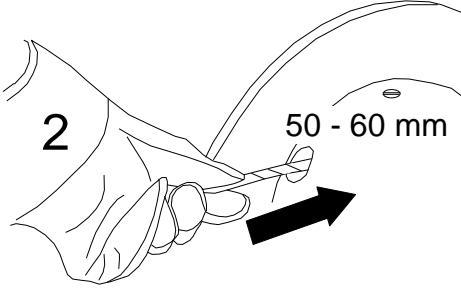
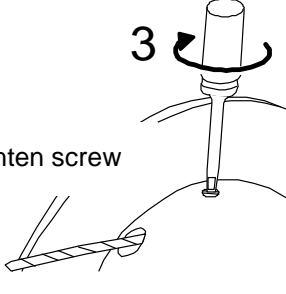
Detailed specifications					
	WH 7 S			WH 7 S	
No. of cable layers	4		Load capacity last cable layer	600 kg	
Drum diameter (ungrooved)	165 mm			Load raising per crank turn 1st cable layer	20 mm
Drum length	182 mm		Load raising per crank turn last cable layer		25 mm
Flanged wheel diameter	240 mm			Length of hand crank raising arm	100...440mm
Winder diameter, 1st cable layer	173 mm		Force on crank at rated load in 1st cable layer at rated load		16 kg
Winder diameter, last cable layer	215 mm			Dyn. test load during factory acceptance	904kg
Winder ratio	1.24				


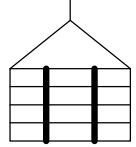
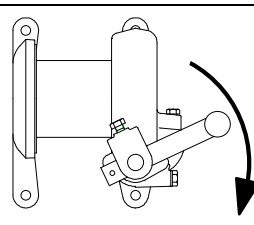

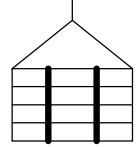
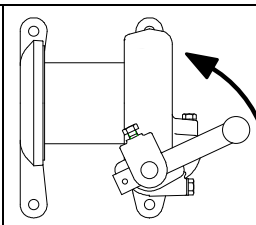
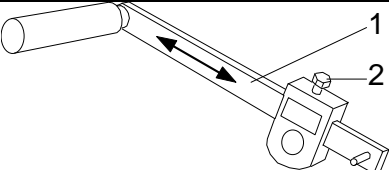
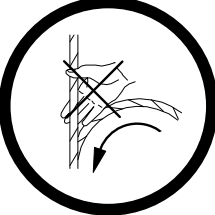
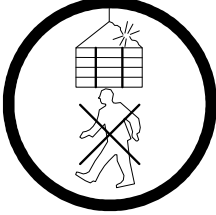
Mounting position and cable payout

Mounting position always vertically on the wall; cable payout always vertically downwards

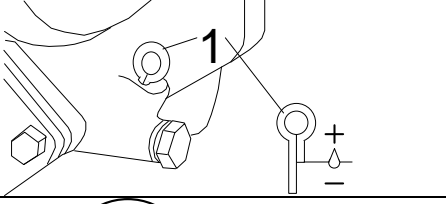
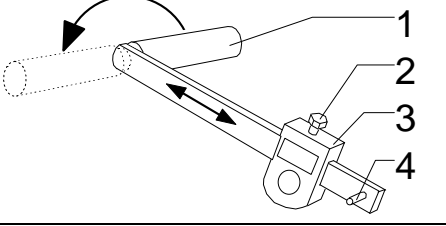



<p>Wire cable specification</p> <p>Only use cables with a safety factor of at least 3 times the minimum breaking strain at the rated total load!</p> <p>Recommended: Minimum breaking force $\geq 36,8$ kN</p>	<p>Pay out the cable correctly</p> <div style="display: flex; justify-content: space-around;">   </div>
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Cable attachment		
 <p>1</p>	 <p>2</p> <p>50 - 60 mm</p>	 <p>3</p> <p>Tighten screw</p>
<p>Caution - Danger! The cable must always be laid in the correct direction of rotation. Failure to do this will render the friction disc brake ineffective and the load will fall. Note the directional arrows on the winch for raising and lowering.</p>		

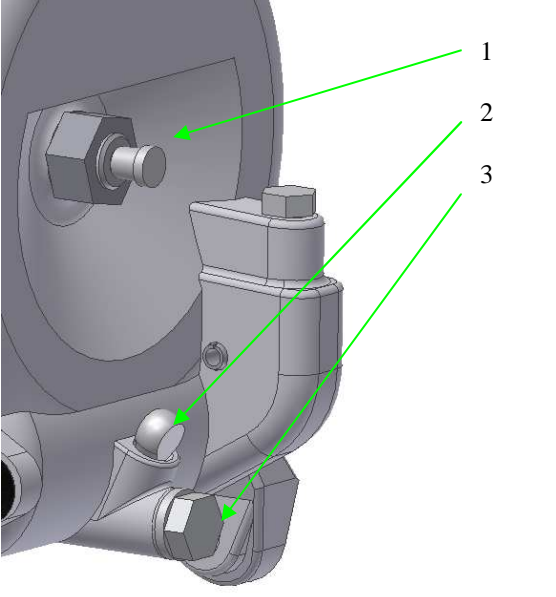
Operation		Do not release crank suddenly during rotation or wind on rapidly		
 		<p>Look out for total load change through multi-layer winding</p> <p>Always leave 2 to 3 spare turns on the drum</p>	 	
		<p>Large load ⇒ Long lever Small load ⇒ Short lever</p>	<ul style="list-style-type: none"> • Undo the Allen screw (2) • Adjust the crank (1) • Tighten the Allen screw 	
	<p>The winch must only be used by suitable and trained persons!</p> <p>The cable must be visually inspected prior to use!</p> <p>Always wear gloves!</p>			

!All repairs must be carried out by the manufacturer or an authorised workshop!
Maintenance
<p>The brake and gearbox of the winch are subject to use-related wear and tear. This cannot be completely prevented by regular inspection and maintenance. A general overhaul of the winch is required after 10 years at the latest, as prescribed in FEM 9.755, in order to ensure the required safety for you.</p>

Initial commissioning		
Gearbox Do not fill with oil until after installation		<ul style="list-style-type: none"> • Pull out the dipstick (1) • Fill with 20 - 25 cm³ of SAE 80 gearbox oil • Replace the dipstick • Check oil level (+ too much/- too little oil)
Hand crank Move from the transport position to the operating position		<ul style="list-style-type: none"> • Knock out the locking pin (4) and loosen the Allen screw (2) • Take hold of the crank head (3) and pull out the crank (1) <p style="text-align: center;">Crank head can fall off</p> <ul style="list-style-type: none"> • Turn the crank and push into the crank head • Tighten the Allen screw and hammer the locking pin into position
Wire cable Selected for	normal operation, see name plate	Special safety requirements by the user

User tasks	Technician's tasks
Check brake and cable regularly.	Inspection before start-up
A raised load must not drop over a 10 minute period Check the cable for damage and discard if necessary.	Inspect at least once a year, keep a record. We recommend an inspection log for winches, lifting and towing gear.

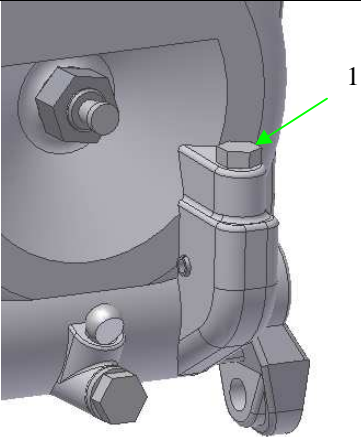
Lubricate depending on the application (use in accordance with driving gear group 1 Bm (DIN 15020) in a temperature range of - 20°C to + 50°C)

	<ol style="list-style-type: none"> 1. DRUM BEARING Lubricate approx. every 5 operating hours, at least every 6 months or prior to operation after a longer standstill. Factory filling: Shell Alvania EP 2. DRUM GEAR AND GEARBOX Check oil level approx. every 6 months or according to type of operation (too much / - too little oil). Recommended: Gear oil SAE 80 <p>ALWAYS DRAIN THE OIL BEFORE DISMANTLING</p>
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OIL IS A HAZARD TO THE ENVIRONMENT
COMPLY WITH THE REGULATIONS FOR SUBSTANCES HAZARDOUS TO WATER

Faults and fault remedying

Load is not held


>	Cable put on in wrong direction	Put on cable correctly
>	Stopper does not engage (no noise when hoisting)	<ul style="list-style-type: none"> • Stopper/bolts rusty • Compression spring defective
	<ul style="list-style-type: none"> • Unscrew locking screw (1) and remove it from the housing • Pull locking screw and mushroom head rivet out of the housing • Check locking screw and mushroom head rivet, replace if damaged • Check stopper (visible from above) for free movement and knock it gently to loosen it if necessary • Repairs to the stopper may only be carried out by the manufacturer or an authorised repair shop • Reassemble in reverse order • Function check 	

Load is not lowered

>	Insufficient load	<ul style="list-style-type: none"> • Pulley stiff • Too much dead rope
	<ul style="list-style-type: none"> • Increase load (e.g. weight on hook) 	
>	Brake stiff	<ul style="list-style-type: none"> • Not lubricated • Winch has been overloaded
>	<ul style="list-style-type: none"> • Check oil level 	

Maintenance

Maintenance of the winch is the responsibility of the user; in particular check the wire rope and brakes. The winch brakes and gearbox are subject to use-related wear and tear. This cannot be completely prevented by regular inspection and maintenance. We recommend a general overhaul of the winch after 10 years at the latest, as prescribed in the FEM 9.755, in order to ensure the required safety for you.

	<p>BRAKE MAINTENANCE / REPAIR MUST ONLY BE CARRIED OUT BY THE MANUFACTURER OR AN AUTHORISED REPAIR SHOP</p>
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Spare Parts

Spare parts may only be ordered from Köster. Only original parts are approved. The winch order number and the description of the spare part are needed when ordering spare parts. We would be pleased to provide you with telephone assistance in the event of any problems.

Spare part lists are included with the user manual. The serial number can be found on the nameplate or the order confirmation. At least the last six digits are always required.

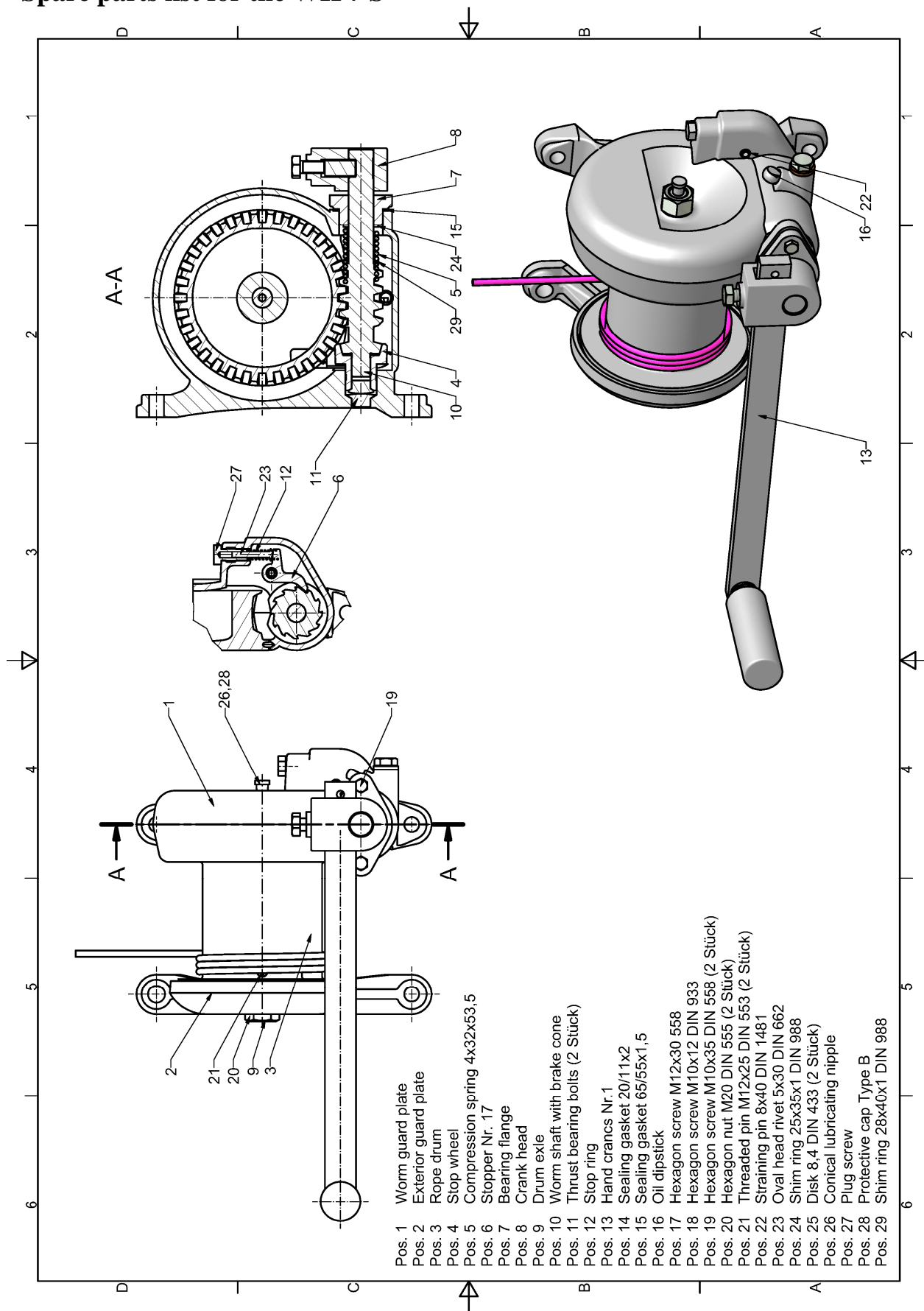
Please indicate in each order

- Type
- Year of manufacture
- Serial No.

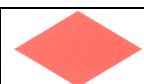
User Manual Hand Winch WH 7 S	Betriebsanleitung WH 7 S EN rev 00	Date printed:12.03.2015 07:13:00	Date created:13.07.2010 15:59:00
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Details of testing by the manufacturer and the user		
Parameter	Explanation	Value
Nominal load	Load capacity in the first cable layer	750 kg
Static test load	1.5 times	1125 kg
Dynamic test load	1.1 times nominal load	825 kg
Testing by the manufacturer	Each winch is dynamically tested by the manufacturer with a test load of 904 kg. This load is raised and lowered 5 times through approximately 2.5 m.	
Testing by the user	<ul style="list-style-type: none"> • Before commissioning • After repair or refitting • After an extended period of no use • At least once a year <p>The results of the tests must be recorded in a test log. The test should be carried out with a static test load for 10 minutes. In doing so, the safe holding of the load must be checked by means of a mark on the cable drum.</p> <p>When carrying out the dynamic test, attention must be paid to the magnitude and uniformity of the cranking force and to any noise.</p>	
Life	The cable winch has a safe operating period of 800 h (driving gear group 1Bm/M3, heavy load spectrum). A general overhaul must be carried out by the manufacturer after not more than 10 years.	

Spare parts list for the WH 7 S



- Pos. 1 Worm guard plate
- Pos. 2 Exterior guard plate
- Pos. 3 Rope drum
- Pos. 4 Stop wheel
- Pos. 5 Compression spring 4x32x53,5
- Pos. 6 Stopper Nr. 17
- Pos. 7 Bearing flange
- Pos. 8 Crank head
- Pos. 9 Drum axle
- Pos. 10 Worm shaft with brake cone
- Pos. 11 Thrust bearing bolts (2 Stück)
- Pos. 12 Stop ring
- Pos. 13 Hand cranks Nr.1
- Pos. 14 Sealing gasket 20/11x2
- Pos. 15 Sealing gasket 65/55x1,5
- Pos. 16 Oil dipstick
- Pos. 17 Hexagon screw M12x30 558
- Pos. 18 Hexagon screw M10x12 DIN 933
- Pos. 19 Hexagon screw M10x35 DIN 558 (2 Stück)
- Pos. 20 Hexagon nut M20 DIN 555 (2 Stück)
- Pos. 21 Threaded pin M12x25 DIN 553 (2 Stück)
- Pos. 22 Straining pin 8x40 DIN 1481
- Pos. 23 Oval head rivet 5x30 DIN 662
- Pos. 24 Shim ring 25x35x1 DIN 988
- Pos. 25 Disk 8,4 DIN 433 (2 Stück)
- Pos. 26 Conical lubricating nipple
- Pos. 27 Plug screw
- Pos. 28 Protective cap Type B
- Pos. 29 Shim ring 28x40x1 DIN 988



Dimension drawing WH 7 S

