

Golvo™ 8000 / 8008

mobile lift



Service Manual

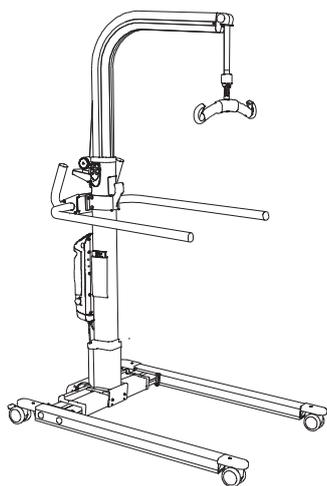
Product No.

2000014	Golvo™ 8000	<i>(Discontinued 2017)</i>
2000015	Golvo™ 8008	<i>(Discontinued 2017)</i>
2000019	Golvo™ 8008 LowBase	<i>(Discontinued 2017)</i>
2000024	Golvo™ 8000 Classic	<i>(Discontinued 2014)</i>
2000025	Golvo™ 8008 Classic	<i>(Discontinued 2014)</i>

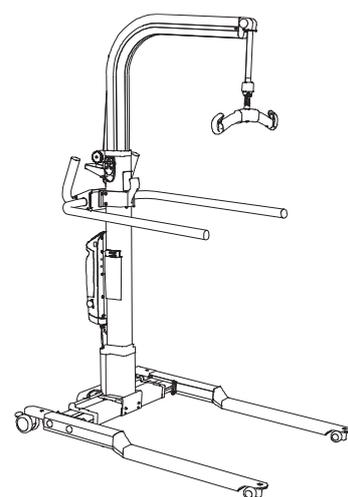
Golvo with fixed hand control:

Product No.

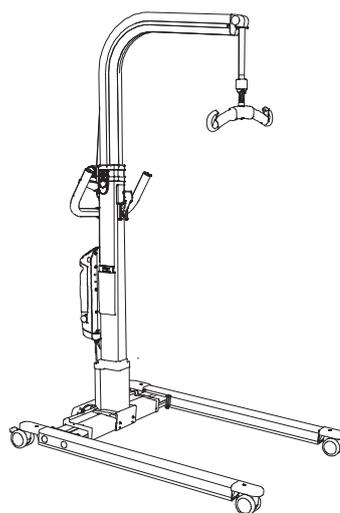
2000034	Golvo™ 8000	<i>(Discontinued 2017)</i>
2000035	Golvo™ 8008	<i>(Discontinued 2017)</i>
2000039	Golvo™ 8008 LowBase	<i>(Discontinued 2017)</i>



Golvo 8000 / Golvo 8008



Golvo 8008 LowBase



Golvo 8000 Classic / Golvo 8008 Classic

 *In this document, this warning symbol indicates that special care should be taken. If instructions are not followed there is a risk of serious injury to patient or caregiver.*

Spare part statement

Liko AB will as a manufacturer of overhead & mobile lifts keep spare parts available for 10 years after the last manufacturing date of the product.
Spare parts are available in the spare parts list or in the Service Manual for each model of lift.
Components (manufacturing parts) are not available after last manufacturing date.

Repairs and maintenance may only be performed by personnel authorized by Hill-Rom and using original Liko™ spare parts.
For information regarding Service and Maintenance education, contact your Hill-Rom representative.
For contact information please visit our website: www.hill-rom.com | www.liko.com

Table of Contents

Golvo™ 8000/8008 mobile lift

	<u>Page</u>
1.0	Technical Data
1.1	Dimensions Golvo..... 4
1.2	Dimensions Golvo Classic 5
1.3	Golvo with IR hand control..... 6
1.4	Golvo Classic with IR hand control 6
1.5	Golvo with fixed hand control 7
2.0	Troubleshooting
2.1	Golvo with IR hand control..... 8
2.2	Golvo with fixed hand control 9
2.3	CBL20 10
3.0	Spare Parts Positions 11
4.0	Spare Parts Assembly information 12
5.0	Spare Parts List 13
6.0	Service, Control Unit CBL
6.1	Parameter Code Key 19
6.2	Reset Service Interval Parameters 20
7.0	Liko Service System - LSS..... 21
8.0	Periodic Inspection Information..... 22
9.0	Preventive Maintenance 23
10.0	Product Changes..... 25

1.1 Technical Data, Dimensions Golvo™ 8000/8008 mobile lift

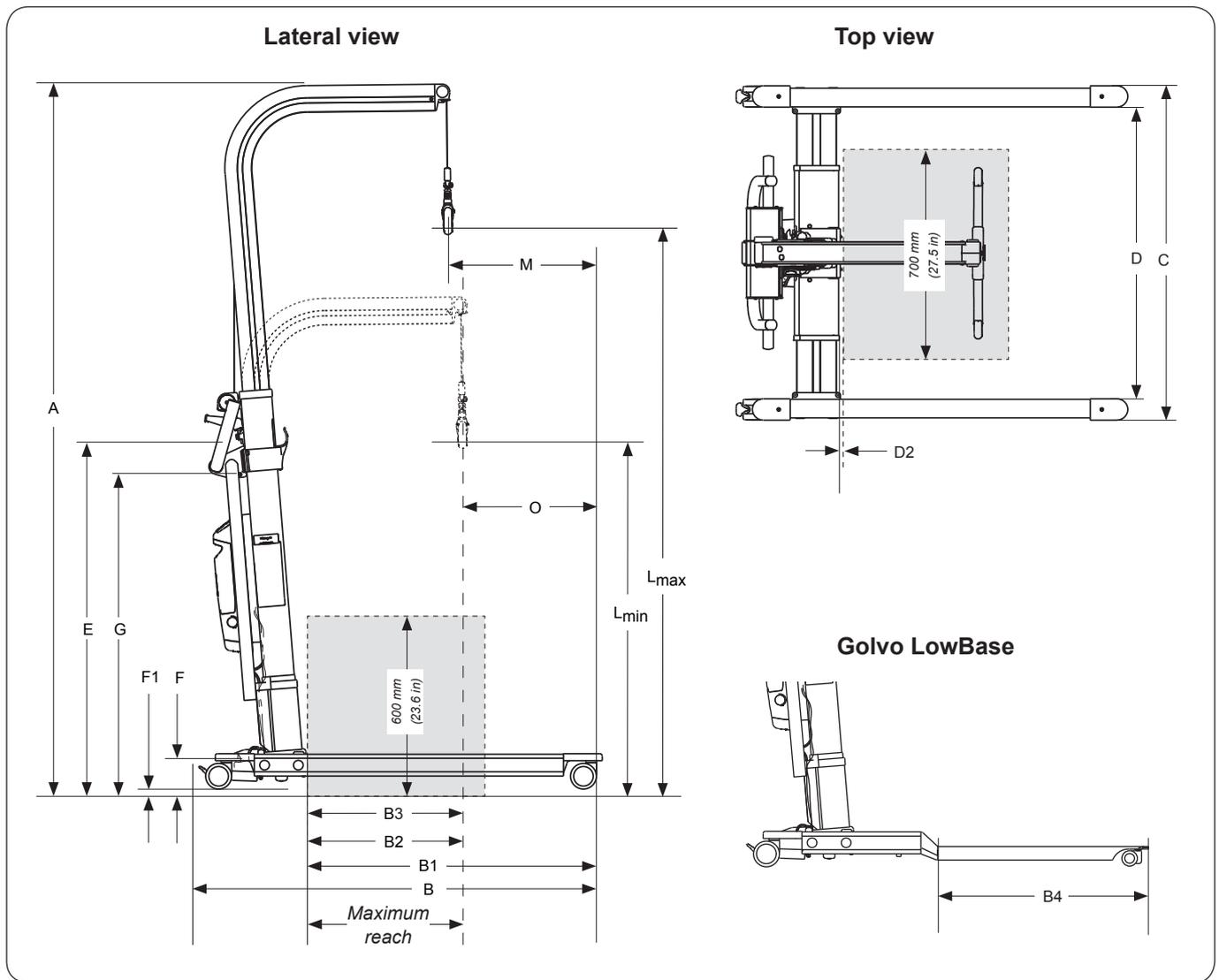


Table of measurements

(mm)

Model	A		B	B1	B2	B3*	B4	C		D		D2*	E	F	F1	G	Lmax	Lmin	M	O
	max.	min.						max.	min.	max.	min.									
Golvo 8000	1995	1360	1115	800	435	435	-	938	654	826	543	0	975	105	25	840	1735	475	440	362
Golvo 8008	2090	1455	1185	870	480	480	-	1020	735	907	623	0	1100	105	25	940	1860	600	436	391
Golvo Low-Base	2090	1455	1185	870	480	480	600	1028	745	907	623	0	1100	60 / 105	22	940	1860	600	436	391

(Inch.)

Model	A		B	B1	B2	B3*	B4	C		D		D2*	E	F	F1	G	Lmax	Lmin	M	O
	max.	min.						max.	min.	max.	min.									
Golvo 8000	78.5	53.5	43.9	31.5	17.1	17.1	-	36.9	25.7	32.5	21.4	0	38.4	4.1	1.0	33.0	68.3	18.7	17.3	12.8
Golvo 8008	82.3	57.3	46.6	34.2	18.9	18.9	-	40.2	28.9	35.7	623	0	43.3	4.1	1.0	37	73.2	23.6	17.2	15.4
Golvo Low-Base	82.3	57.3	46.6	34.2	18.9	18.9	23.6	40.5	29.3	35.7	623	0	43.3	2.4 / 4.1	0.9	37	73.2	23.6	17.2	15.4

The lifting interval 1260 mm (49.6 in) is height-adjustable..

Note: When changing to other lifting accessories check that the lift still achieves desired lifting height.

* Reference measurement according to Standard EN ISO 10535:2006

1.2 Technical Data, Dimensions Golvo™ 8000/8008 Classic mobile lift

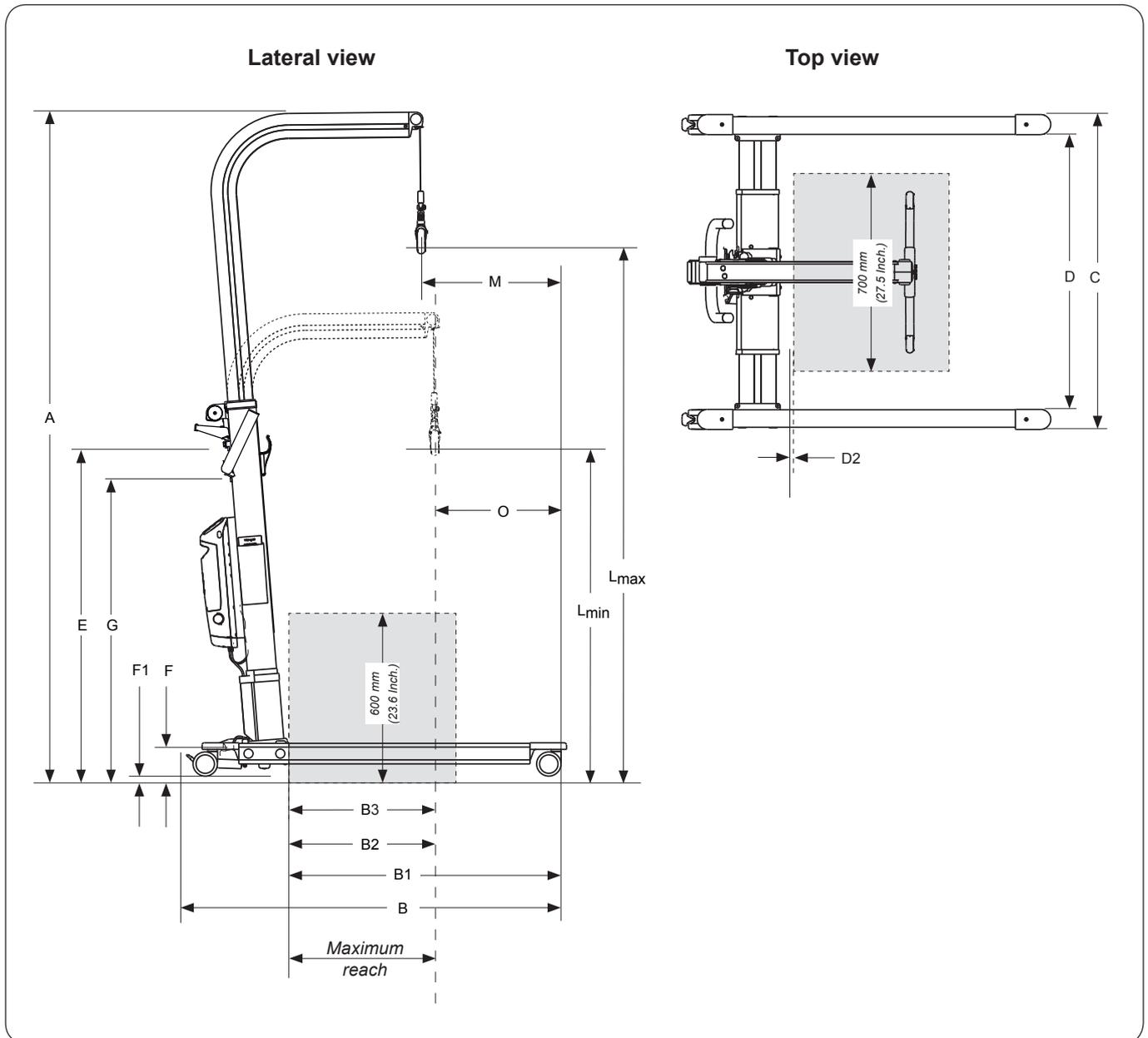


Table of measurements

(mm)

Model	A		B	B1	B2	B3*	B4	C		D		D2*	E	F	F1	G	Lmax	Lmin	M	O
	max.	min.						max.	min.	max.	min.									
Golvo 8000	1995	1360	1115	800	435	435	-	938	654	826	543	0	975	105	25	840	1735	475	440	362
Golvo 8008	2090	1455	1185	870	480	480	-	1020	735	907	623	0	1100	105	25	940	1860	600	436	391

(Inch.)

Model	A		B	B1	B2	B3*	B4	C		D		D2*	E	F	F1	G	Lmax	Lmin	M	O
	max.	min.						max.	min.	max.	min.									
Golvo 8000	78.5	53.5	43.9	31.5	17.1	17.1	-	36.9	25.7	32.5	21.4	0	38.4	4.1	1.0	33.0	68.3	18.7	17.3	12.8
Golvo 8008	82.3	57.3	46.6	34.2	18.9	18.9	-	40.2	28.9	35.7	24.5	0	43.3	4.1	1.0	37	73.2	23.6	17.2	15.4

The lifting interval 1260 mm (50 inch.) is height-adjustable.

Note: When changing to other lifting accessories check that the lift still achieves desired lifting height.

* Reference measurement according to Standard EN ISO 10535:2006.

1.3 Technical Data, Golvo™ 8000/8008 mobile lift with IR hand control

Maximum load:	200 kg (440 lbs)	Operating forces, controls:	Buttons on hand control: 4 N Button on display: 4 N
Material:	Anodised aluminium	HandControl IR:	Batteries: 2 AAA LR03 1.5 V, alkaline. Reach: 2 m (78.74 inch.)
Weight:	8000: 42 kg (92 lbs) 8008: 44 kg (97 lbs) 8008 LowBase: 46 kg (101 lbs) Heaviest removable part: 8000: 18 kg (40 lbs) 8008: 19 kg (42 lbs) 8008 LowBase: 21 kg (46 lbs)	Electrical data:	24 V
Wheels:	Front: 75 mm* (3 inch.) twin wheels. *Golvo LowBase: 46 mm (1.8 inch.) twin wheels. Rear: 75 mm (3 inch.) twin wheels with brakes	Intermittent operation:	Int. Op 10/90, active operation max 2 min. Only 10% of a given length of time may be active, yet no more than 2 min.
Turning diameter:	Golvo 8000: 1240 mm (49 inch.) Golvo 8008: 1330 mm (52 inch.) Golvo 8008 LowBase: 1330 mm (52 inch.)	Battery:	NiMH cells, 2.2 Ah. New batteries provided by the supplier.
Emergency lowering device:	Mechanical and electrical	Battery charger:	CBL20001, built-in, 100-240 V AC, 50-60 Hz, max 600 mA.
Lifting speed with no load:	Two speeds; 41 mm/s (1.61 inch/s) and 33 mm/s (1.3 inch/s)	Lift motor:	24 V, 8.2 A
Lifting interval:	1260 mm (50 inch.) (height-adjustable)	Motor for base-width adjustment:	24 V, 5.5 A
Sound level:	52,8 dB(A)		
Protection class:	IP X4		The device is intended for use indoors.
			Type B, in accordance with the electrical shock protection class.
			Class II equipment.

Protected by Patent

1.4 Technical Data, Golvo™ 8000/8008 Classic mobile lift with IR hand control

Maximum load:	200 kg	Electrical data:	24 V
Material:	Anodised aluminium	Intermittent operation:	Int. Op 10/90, active operation max 2 min. Only 10% of a given length of time may be active, yet no more than 2 min.
Weight:	Golvo 8000 Classic: 39 kg (86 lbs) Golvo 8008 Classic: 41 kg (90 lbs) Heaviest removable part: Golvo 8000 Classic: 18 kg (40 lbs) Golvo 8008 Classic: 19 kg (42 lbs)	Battery:	NiMH cells, 2.2 Ah. New batteries provided by the supplier.
Wheels:	Front: 75 mm* (3 inch.) twin wheels. Rear: 75 mm (3 inch.) twin wheels with brakes	Battery charger:	CBL20001, built-in, 100-240 V AC, 50-60 Hz, max 600 mA.
Turning diameter:	Golvo 8000 Classic: 1240 mm (49 inch.) Golvo 8008 Classic: 1330 mm (52 inch.)	Lift motor:	24 V, 8.2 A
Emergency lowering device:	Mechanical and electrical	Motor for base-width adjustment:	24 V, 5.5 A
Lifting speed with no load:	Two speeds; 41 mm/s (1.61 inch/s) and 33 mm/s (1.3 inch/s)		The device is intended for use indoors.
Lifting interval:	1260 mm (50 inch.) (height-adjustable)		Type B, in accordance with the electrical shock protection class.
Sound level:	52,8 dB(A)		Class II equipment.
Protection class:	IP X4		
Operating forces, controls:	Buttons on hand control: 4 N Button on display: 4 N		
HandControl IR:	Batteries: 2 AAA LR03 1.5 V, alkaline. Reach: 2 m (78.74 inch.)		

Protected by Patent

1.5 Technical Data, Golvo™ 8000/8008 mobile lift with fixed hand control

Maximum load:	200 kg (440 lbs)
Material:	Anodised aluminium
Weight:	8000: 42 kg (92 lbs) 8008: 44 kg (97 lbs) 8008 LowBase: 46 kg (101 lbs) Heaviest removable part: 8000: 18 kg (40 lbs) 8008: 19 kg (42 lbs) 8008 LowBase: 21 kg (46 lbs)
Wheels:	Front: 75 mm* (3 in) twin wheels. *Golvo LowBase: 46 mm (1.8 in) twin wheels. Rear: 75 mm (3 in) twin wheels with brakes.
Turning diameter	Golvo 8000: 1240 mm (49 in) Golvo 8008: 1330 mm (52 in) Golvo 8008 LowBase: 1330 mm (52 in)
Emergency lowering device:	Mechanical and electrical
Lifting Speed no load	Two speeds; 41 mm/s (1.61 in/s) and 33 mm/s (1.3 in/s)
Lifting interval:	1260 mm (49.6 in) (height-adjustable)
Sound level:	52.8 dB(A)
Protection class:	IP X4

Operating forces, controls:	Buttons on hand control: 2.4 N Button on display: 4 N
Electrical data:	24 V
Intermittent power:	Int. Op 10/90, active operation max 2 min. Only 10% of a given length of time may be active, but no more than 2 min.
Battery:	NiMH cells, 2.2 Ah. New batteries provided by the supplier.
Battery charger:	CBL20002, built-in, 100-240 V AC, 50-60 Hz, max 600 mA.
Lift motor:	24 V, 8.2 A
Motor for base-width adjustment:	24 V, 5.5 A



The device is intended for use indoors.



Type B, in accordance with the electrical shock protection class.



Class II equipment.

Protected by Patent

2.1 Troubleshooting, Golvo™ 8000/8008 mobile lift, with IR hand control

The lift cannot be controlled via HandControl IR.



1. Check that the emergency stop has not been activated.
2. Make sure that the charging cable is not connected to an electric outlet.
3. Check if HandControl IR indicates battery change.
4. If the lift has been inactive for 24 hours, enable the system, press optional button on the operation panel.
5. Make sure that the HandControl IR control is enabled.
6. *If the problem remains, see "The lift cannot be controlled via the operation panel", below.*

The lift cannot be controlled via the operation panel.



1. Make sure that the emergency stop has not been activated.
2. Check that the charger cable is not connected to an electric outlet.
3. Check the battery capacity.
4. Make sure that the cables to the control box are connected correctly.
5. Check that the battery's contact plates are not defective or broken.
6. *If the problem remains, please contact Liko/Hill-Rom.*

The charger doesn't work.



1. Make sure that the emergency stop has not been activated.
2. Make sure that the battery is properly attached.
3. Check that the battery pack's contact plates are not defective or broken.
4. *If the problem remains, please contact Liko/Hill-Rom.*

The lift is stuck in the high position.



1. Make sure that the emergency stop has not been activated.
2. Check the battery capacity.
3. HandControl IR indicates battery change.
4. Use the indicated electrical emergency lowering to lower the patient onto a firm surface.
5. Use the indicated mechanical emergency lowering to lower the patient onto a firm surface.
6. *If the problem remains, please contact Liko/Hill-Rom.*

The lift does not reach maximum lifting height.



1. Check that the lifting interval level is correctly set.
2. *If the problem remains, please contact Liko/Hill-Rom.*

If you hear unusual sounds.



Contact Liko/Hill-Rom.

2.2 Troubleshooting, Golvo™ 8000/8008 mobile lift, with fixed hand control

The lift cannot be operated with the hand control.



1. Check that the emergency stop button has not been pressed.
2. Check the battery capacity.
3. Check that the charger cable is not connected to an electric outlet.
4. Check that the hand control cable is correctly connected.
5. If the lift works via the operation panel, change the Hand Control.
6. *If the problem persists, please contact Liko/Hill-Rom.*

**The lift does not work up/down with the operation panel.
The base-width adjustment doesn't work (in/out) with the operation panel.**



1. Check that the emergency stop button has not been pressed.
2. Check that the cables to the control box are connected correctly.
3. Check that the charger cable is not connected to an electric outlet.
4. Check the battery capacity.
5. *If the problem persists, please contact Liko/Hill-Rom.*

The charger doesn't work.



1. Check that the emergency stop button has not been pressed.
2. Check that the charger cables are connected correctly.
3. Make sure that the battery is properly attached.
4. *If the problem persists, please contact Liko/Hill-Rom.*

The lift is stuck in the high position.



1. Check that the emergency stop button has not been pressed.
2. Check the battery capacity.
3. Check that the hand control cable is connected correctly.
4. Electrical emergency lowering, use the operation panel to lower the patient onto a firm surface.
5. Use the mechanical emergency lowering device to lower the patient onto a firm surface.
6. *If the problem persists, please contact Liko/Hill-Rom.*

The lift does not reach maximum lifting height.



1. Check that the lifting interval level is correctly set.
2. *If the problem persists, please contact Liko/Hill-Rom.*

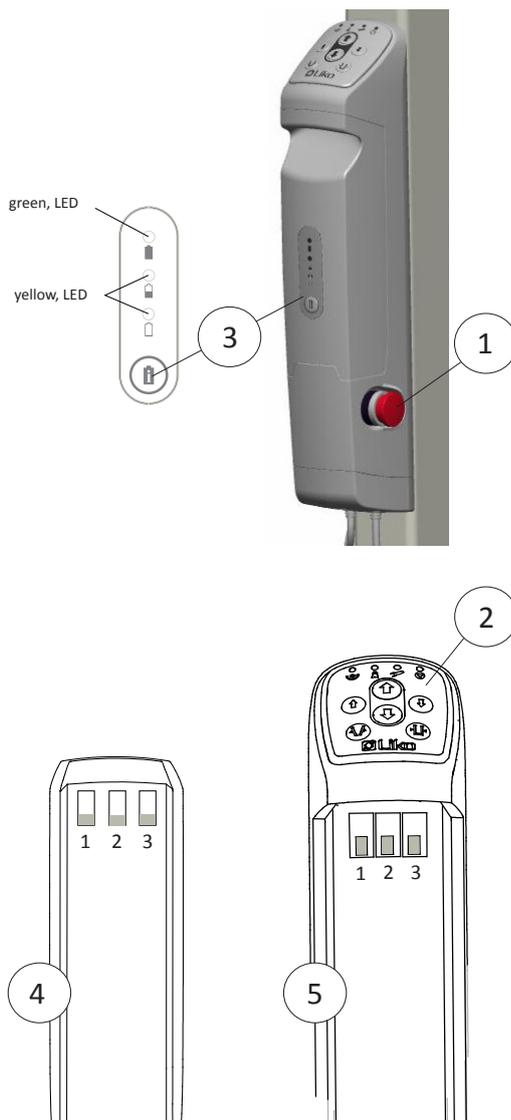
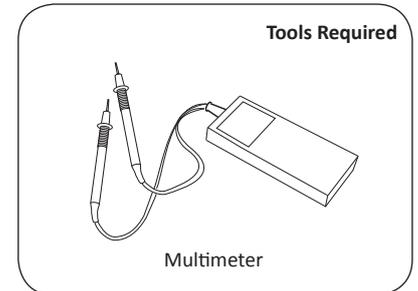
If any noises are heard.



Contact Liko/Hill-Rom.

Note!

Begin with trouble shooting 2.1 or 2.2. If problem remains, continue as described below.



Check point:

1. Make sure that:
 - the emergency stop ① is not activated.
 - the battery is assembled correctly.
 - the charging cable is not connected to mains.
2. Check operation panel function's for actuator and base motor
 - Push control buttons on operation panel ② at control box
 - If both actuator and base motor functions response, continue to step 5.
 - If no function, continue to step 3.
 - If only one of either the actuator or base motor function response: change position on actuator and base motor cables then check control function of operation panel, to see if fault is on output channels or the motors. If control box function is ok! Continue to step 5. If control box is faulty. **Replace the control box.**
3. Check battery capacity
 - 3a) Push in the battery capacity button ③:
 - If any of the three LED's on the battery start's the battery is OK, continue to step 4.
 - If not, continue to step 3b.
 - 3b) Measure battery voltage: release battery, ④ measure on contact 1 and 3:
 - If voltage over 0V the battery is ok! Continue to step 4.
4. Verify contact between control box and battery.
 - 4a) Remove the battery and wait for green LED to turn off.
 - 4b) Put back the battery and see if green LED start automatically.
 - If green LED starts, battery contact is ok!
 - If not, try to ensure that the battery's contact plates are not defective or broken and try to bend them out carefully, then repeat step 4.
 - If still no contact, continue to step 5.
5. Check charging function
 - 5a) Connect the charging cable to mains
 - If charging starts within 1 minute, charge and then continue to step 6.
 - If charging doesn't start, continue to step 5b.
 - 5b) Measure output voltage on the control box ⑤ on contact 1 and 3.
 - If voltage is 3-4V_{DC} charging is OK! **Replace the battery**, continue to step 6.
 - If voltage is 0V_{DC} when the charging cable is connected to mains the control box needs to be replaced! **Replace the control box.**
6. Charge the battery until green LED is flashing, on the battery.
 - Check that all function's on the control box is ok!
 - If not , **Replace control box.**

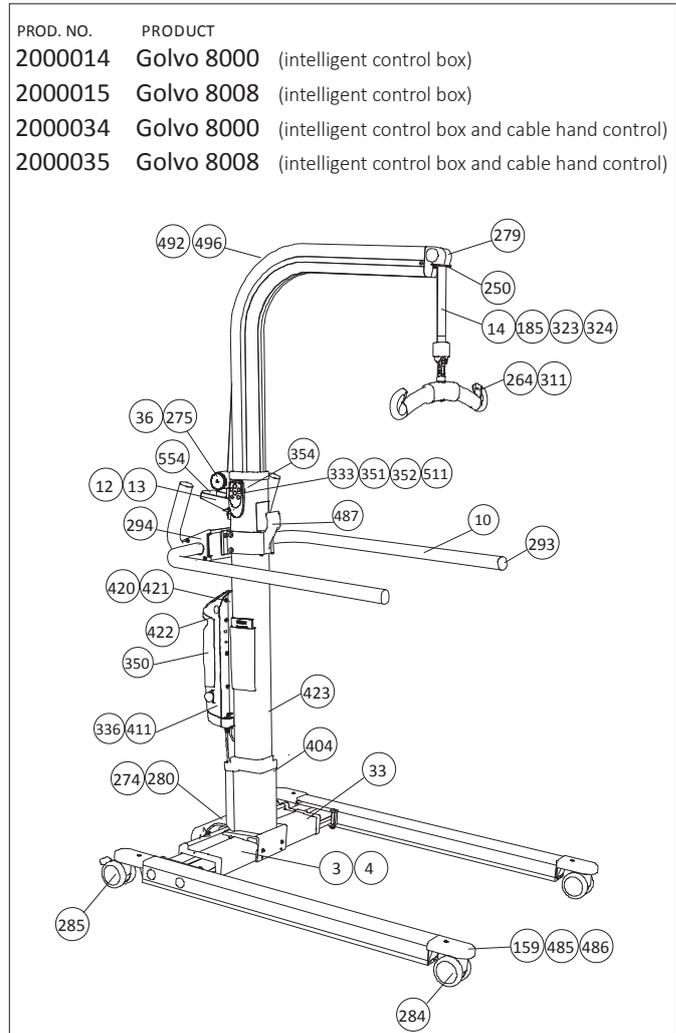
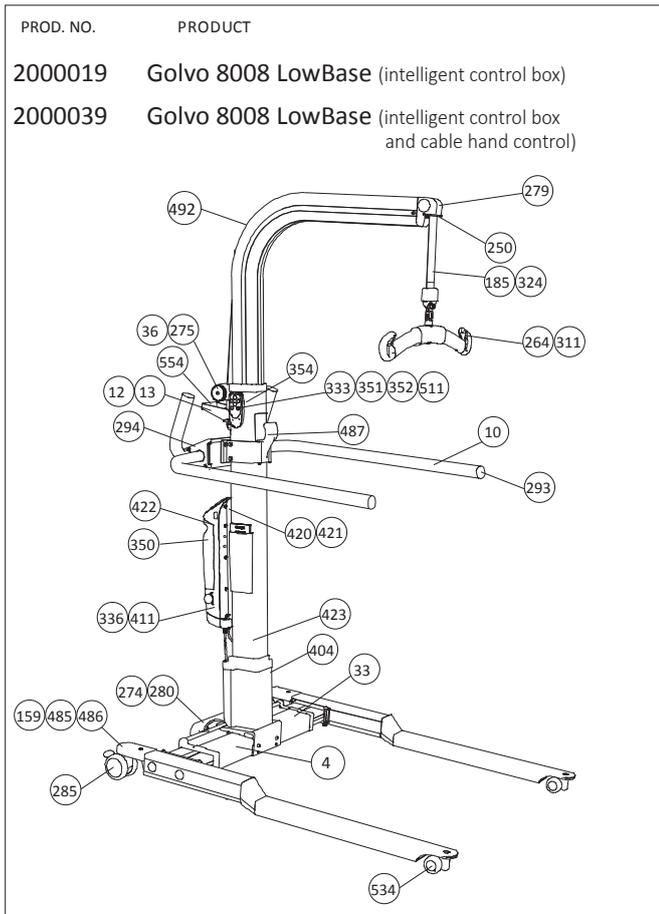
Customers FAQ:

- **The liftarms up/down function or base width in/out function doesn't work?**
 - a) Change position on actuator and base motor cables.
 - b) Perform step 2 and see if fault is on output channel or motors.
- **The control panel function's on controlbox is ok, but the hand control has no function?**
 - a) Check to ensure that battery contact plates in the hand control are not defective or broken.
- **There's no charging function?**
 - a) Verify contact between control box and battery. Perform step 4.
 - b) Check charging function. Perform step 5.

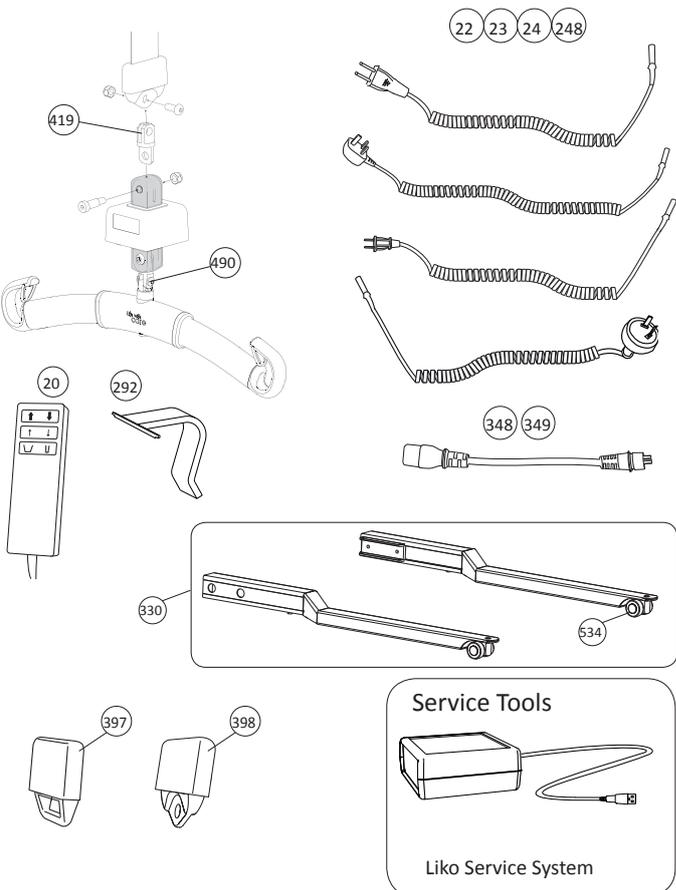
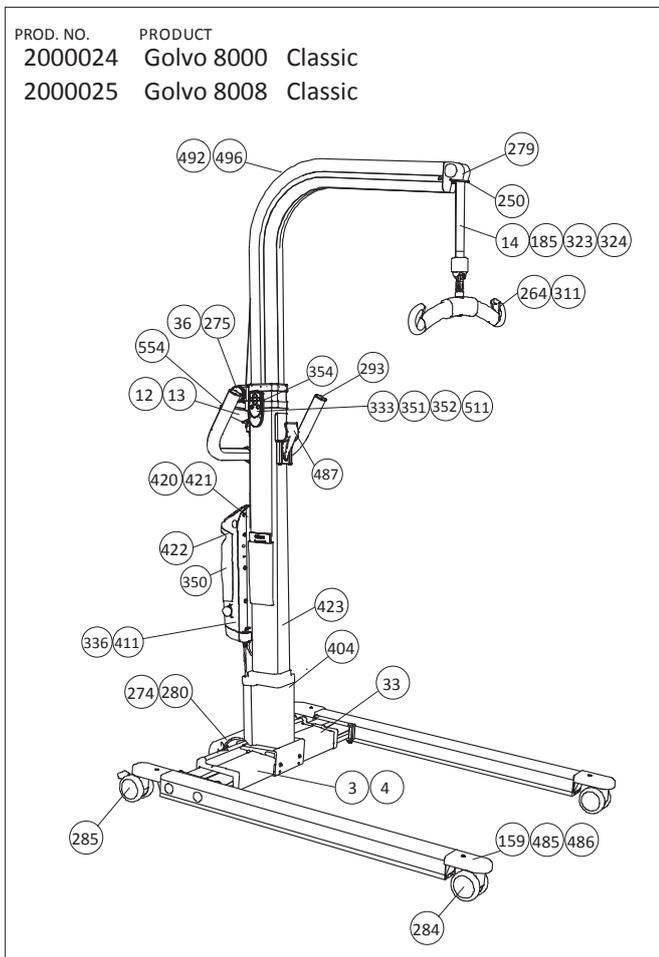
3.0 Spare Parts positions, Golvo™ 8000/8008 mobile lift

(Discontinued 2017)

(Discontinued 2017)

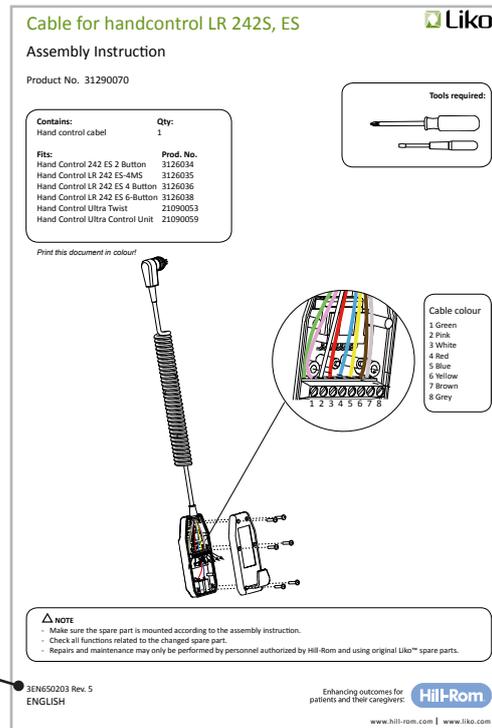


(Discontinued 2014)



4.0 Spare Parts Assembly Information

Assembly Instructions to Liko™ spare parts are attached with the products. The assembly instructions are also available in Agile and on the Partner Web. Document number to spare parts assembly instructions can be found in the spare parts list.



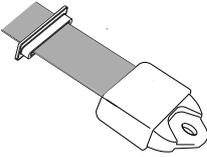
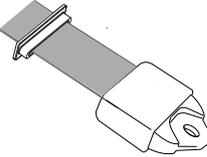
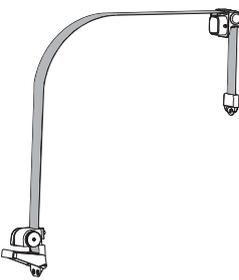
Document Number

NOTE

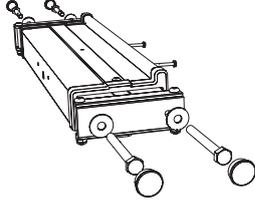
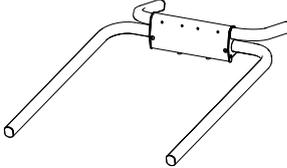
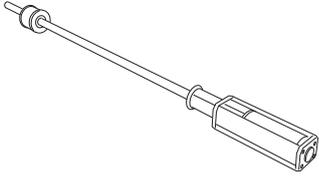
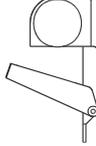
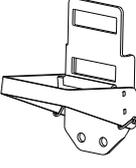
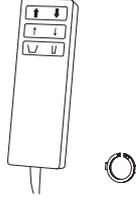
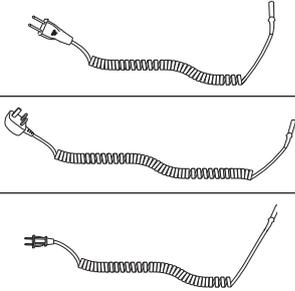
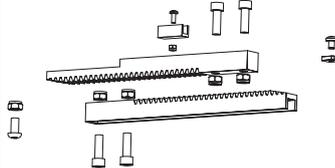
- Always make sure the spare part is mounted according to the assembly instruction.
- Check all functions related to the changed spare part.
- Repairs and maintenance may only be performed by personnel authorized by Hill-Rom and using original Liko™ spare parts.

Liko technical documentation can be found under “My information” - “Documents” on the Partnerweb: <https://partner.liko.com/> If you don't have access, contact Ann-Christin Sundström for registration: E-mail: ann-christin.sundstrom@hill-rom.com, Tel: +46 (0)920 - 47 47 10

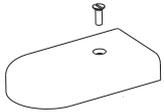
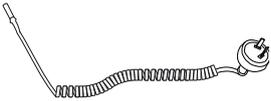
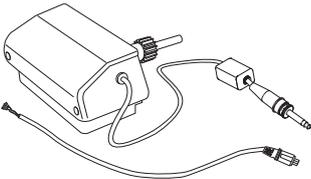
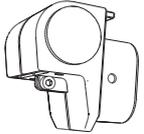
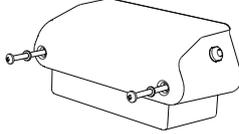
5.0 Spare Parts List

Golvo™ 8000/8008 mobile lift					
(G7=Golvo 7000, G77=Golvo 7007, G8=Golvo 8000, G88=Golvo 8008, G9=Golvo 9000)					
PROD. NO.	POS. NO.	NAME	UNIT		ASSEMBLY INSTR.
Golvo LiftStrap					
20090018	14	Lift Strap G7 / G8 <i>Grey strap and grey plastic details</i>	pce		3SE650272
20090048	185	Lift Strap G77 (from S/N: 7723630) / G88 / G9 <i>Grey strap and grey plastic details</i>	pce		3SE650272
20090107	323	Easy Strapper G7 / G8 <i>Grey strap and grey plastic details</i>	set		3SE640248
20090106	324	Easy Strapper G77 from S/N 7723630 / G88 / G9 <i>Grey strap, grey plastic details and handle.</i>	set		
Golvo Control Units					
20490039	336	Control Unit CBL, by S/N <i>Can only be ordered if S/N (serial number) can be provided to Liko Customer Service.</i> <i>Will be programmed at Liko before delivery.</i> <i>2 weeks delivery time from Hill-Rom/Liko Alvik, Sweden</i>	pce		3SE650270
20490054	336C	Control Unit CBL by S/N, Cable <i>Can only be ordered if S/N (serial number) can be provided to Liko Customer Service.</i> <i>Will be programmed at Liko before delivery.</i> <i>2 weeks delivery time from Hill-Rom/Liko Alvik, Sweden</i>	pce		3SE690227
20090073	411	Control Unit CBL, Golvo <i>Before use; requires Software and, needs to be programmed with Liko Service System, Prod. No. 21090024</i>	pce		3SE630255
20090088	411C	Control Unit CBL Golvo, Cable <i>Before use; requires Software and, needs to be programmed with Liko Service System, Prod. No. 21090024</i>	pce		3SE690230

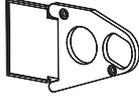
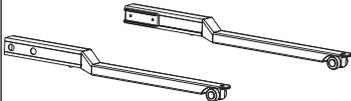
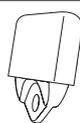
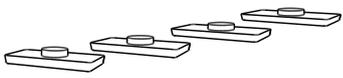
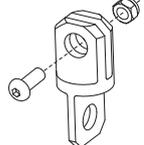
5.0 Spare Parts List

Golvo™ 8000/8008 mobile lift					
(G7=Golvo 7000, G77=Golvo 7007, G8=Golvo 8000, G88=Golvo 8008, G9=Golvo 9000)					
PROD. NO.	POS. NO.	NAME	UNIT		ASSEMBLY INSTR.
Golvo Spare Parts					
20090094	3	Middle Beam 7000/8000 <i>(motor <u>not</u> included)</i>	pce		3EN690271
20090095	4	Middle Beam 7007/8008/9000 <i>(motor <u>not</u> included)</i>	pce		3EN690272
20090103	10	Golvo Armrest	set		3SE630280
20090014	11	Actuator G7 / 77 <i>Fits: From S/N:</i> <i>Golvo 7000 7024206</i> <i>Golvo 7007 7729722</i>	pce		3SE630249
20090104	12	Emergency Lowering Golvo <i>Grey plate</i>	pce		3SE640253
20090105	13	Body/Handle set for Emergency Lowering Device <i>Grey plate</i>	pce		3SE630285
20090089	20	Hand control 6-Button	pce		3SE690232
20090026	22	Cable for charging EU	pce		3SE630237
20090027	23	Cable for charging UK	pce		3SE630237
20090028	24	Cable for charging US	pce		3SE630237
20090096	33	Gear Rack set	set		3EN690273

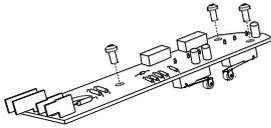
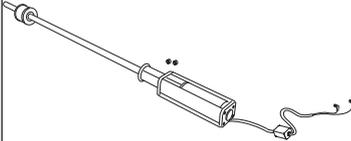
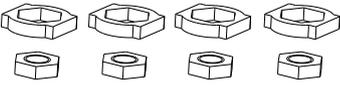
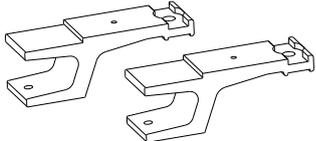
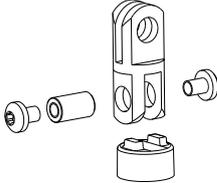
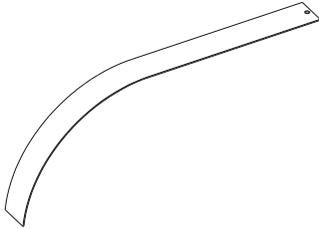
5.0 Spare Parts List

Golvo™ 8000/8008 mobile lift					
(G7=Golvo 7000, G77=Golvo 7007, G8=Golvo 8000, G88=Golvo 8008, G9=Golvo 9000)					
PROD. NO.	POS. NO.	NAME	UNIT		ASSEMBLY INSTR.
20090041	36	Spring Magazine	pce		3EN630214
20390006	159	Fork Cover	pair		3SE380202
20090050	248	Cable for Charging AU/NZ	pce		3SE630237
20090051	250	Reinforcement Plate Golvo	pce		3SE630215
31590011	264	Latch Universal SlingBar	pair		3SE630229
20090059	274	Motor Base Width Adjustment Golvo, grey <i>replaces 20090005 and 20090046</i>			3SE630216
20090060	275	Plastic Housing grey	pce		3SE630267
20090064	279	Roll Frame Attachment Golvo, grey	pce		3SE630269
20090065	280	Base Motor Cover grey	set		3SE630270
20490014	284	Front Wheel 75 mm Standard	pce		182904
20490015	285	Rear Wheel 75 mm Standard	pce		182903
20090058	292	Hook for Hand control 2,4,6	pce		3SE630210

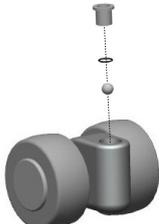
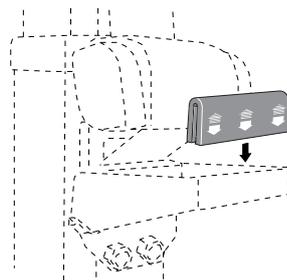
5.0 Spare Parts List

Golvo™ 8000/8008 mobile lift					
(G7=Golvo 7000, G77=Golvo 7007, G8=Golvo 8000, G88=Golvo 8008, G9=Golvo 9000)					
PROD. NO.	POS. NO.	NAME	UNIT		ASSEMBLY INSTR.
20090066	293	End Cover Handle/Arm Support grey, 4 pce	set		3SE630271
20090067	294	End Cover Armrest, grey	set		3SE630272
31590014	311	Latch, composite <i>Fits Universal SlingBar from S/N 1299511</i>	pair		3SE630272
20090071	330	Low base kit Golvo 7007/8008	set		3SE640242
20490031	333	Wireless hand control HBL20	set		3SE640298
21090018	348	Extension cable CBL	pce		3SE650216
21090019	349	Extension cable CBL, US	pce		
2006107	350	Extra Battery Box	pce		-
21090020	351	Beltclip HBL20	pair		3SE650217
21090021	352	Clips with hook HBL20	pair		3SE650218
21090022	353	Charge cable hook , 10 pce	set		3SE650219
21090023	354	Hand control hanger, 10 pce	set		3SE650220
31590005	397	Q-link	pce		3SE640236
31590025	398	Lift strap joint	pce		3SE640237
20090072	404	Friction plates 2.8-3.4 mm <i>20 pce of each model (2.8, 3.0, 3.2, 3.4 mm)</i>	set		3SE650254
2006010	419	Adapter Golvo (for Scale)	set		3SE650244

5.0 Spare Parts List

Golvo™ 8000/8008 mobile lift					
(G7=Golvo 7000, G77=Golvo 7007, G8=Golvo 8000, G88=Golvo 8008, G9=Golvo 9000)					
PROD. NO.	POS. NO.	NAME	UNIT		ASSEMBLY INSTR.
20090074	420	Limit switch box	set		3SE630266
20090076	421	Limit Switch PCBA	set		3SE630287
20090077	422	Locking device CBL20, 10 pce	set		3SE640217
20090078	423	Actuator G8 / G88 / G9	pce		3SE630263
21090028	425	Grease SHC460 30g	pce		-
20090080	485	Fork locking attachment, 4 pair	set		3SE690208
20090081	486	Wheel Fork	pair		3SE690209
20090082	487	Parking bracket	pce		3SE690204
20490052	490	SlingBar Assembly set	set		3SE690210
20090085	492	Lift strap Cover Strip, 7007/8008	pce		3SE690212
20090087	496	Lift strap Cover Strip, 7000/8000	pce		

5.0 Spare Parts List

Golvo™ 8000/8008 mobile lift (G7=Golvo 7000, G77=Golvo 7007, G8=Golvo 8000, G88=Golvo 8008, G9=Golvo 9000)					
PROD. NO.	POS. NO.	NAME	UNIT		ASSEMBLY INSTR.
20490057	511	Locking Ring CBL, 10 pce	set		3SE690231
20090092	534	Front Wheel LowBase <i>Fits: Golvo LowBase</i>	pce		3SE690241
20090102	554	Snap On Handle, 10 pce	set		-

6.1 Service, Control Unit CBL- Parameter Code Key

Liko Diagnostic System™ (operating data) is stored in Control Unit CBL

Parameter:	Information:
TAAxT [Ah]	Totally Accumulated Amphours (current x time)
TAAxTR [Ah]	Totally Accumulated Amphours, resetable (current x time) Can be reset by the manufacturer.
PAAxT [Ah]	Periodically Accumulated Amphours (current x time) Calculated continuously from the moment the lift is used until the first service.
PAKT [Months]	Periodically Accumulated Calendar time. Calculated between services.
TADT [Hours]	Totally accumulated drive time.
AAS [Starts]	Accumulated starts. The number of lifting motions counted from the moment the lift was used the first time.
ASERV [Services]	Accumulated services Number of performed service events made using LSS or LDS.
IMED [A]	Average power consumption during TADT. Overall accumulated operating time.
ALA [Charges]	Accumulatet number of started chargings.
AALA [Charges]	Accumulated number of completed chargings
AOLA [Charges]	Accumulated numbers of not completed charging. Counts each disrupted charging event.
AABT [Removals]	Accumulated number of battery replacements. Counts each battery replacement where a used battery is replaced.
AEUP [Endpos. up]	Accumulated number of end positions during lifting motion up.
AFSERV [Services]	Accumulated number of reset Service Number of "Clear Service" performed manually.
AEDWN [Endpos. down]	Accumulated number of end positions during lifting motion down.
SFSTAT	N/A (This funktion is not in use)
IDNR	Identity number of the control box.
AOLUP [Overloads]	Accumulated number of stops due to overload.
PADT [Hours]	Periodically accumulated operating time.
IMED 20 [A]	Average current consumption. Recounted for each lifting motion (up) which lasts more than 20 seconds.
ELT [Ah]	TAAxTR limit (constant) for ELT indication.
ELTCNT [Commands]	Number of ELT resets (only performed at replacement of actuator).
CLIM_1 [A]	Current limit for lifting motion (up).
CLCT [ms]	Maximum allowed time to override CLIM_1 before cut-off
CLIM_2 [A]	Current limit for widening motion (base-width adjustment).
SINTT [Months]	Indicates service intervals in calendar months.
SINTAS [Ah]	AxT limit for service event. (current x time)
CYCLET [Hours]	Cycle time is a constant for a medium driving cycle.
PAOLUP [Overloads]	Periodic accumulated number of stops due to overload.

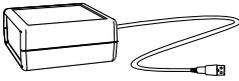


Control Unit CBL

- The information listed above is stored in the Control Unit CBL.
- Replacing the Control Unit CBL without using the LSS may cause some data loss as this data is recordable by LSS and a computer. When data is stored in Liko™ database it can be retrieved if needed.
- Resetting the Service Interval using the LSS, LDS or Manually, will reset the Accumulated Amp-hours (PAAxT), Accumulated Time (PAKT), Accumulated Operating Time (PADT) and Accumulated number of stops due to overload (PAOLUP).

6.2 Service, Control Unit CBL- Reset Service Interval Parameters

After the Periodic Inspection has been performed Service Light and Service Interval Parameters* in the Liko Diagnostic System™ has to be reset. Reset can be done using one of the following Service Tools/Methods:

<p>Prod. No. 21090024</p>	<p>1. Liko™ Service System, LSS (Requires a computer) <i>Read and store the data from the Control Unit CBL into a computer. Data can also be transferred to a Liko™ Server. Can also reset the ELT-light (Expected Life Time). Use when Periodic Inspection or Preventative maintenance is performed.</i></p> <p><i>Service Documents for the lift can be printed. Use for tracking and and transfer data when Spare Parts are changed.</i></p>	
<p>Prod. No. 21090016</p>	<p>2. LDS Service (LDS) <i>Reads the data from the Control Unit CBL. Use when Periodic Inspection or Preventative maintenance is performed.</i></p>	
<p>-</p>	<p>3. Manual Service <i>Resets the Service Interval Parameters*.</i> <i>△Service Interval Parameters should only be reset after a complete Periodic Inspection</i> <i>Use the following combination of buttons on the control panel:</i></p> <p><i>A: Press and hold button 1 & 2</i> <i>B: While holding 1 & 2, press button 3, and hold all three buttons for three seconds.</i></p> <p><i>Works from Item No: CBL20001-05, see label on CBL</i></p>	

IMPACT ON PARAMETERS

Changes of parameters when LSS, LDS or Manuel Service reset has been used:

Parameter:	1. LSS:	2. LDS:	3. Manual Service:	Check Points in PM ***
Service Light *	Unlit	Unlit	Unlit	
TAAxT	unchanged	unchanged	unchanged	x ***
TAAxTR	unchanged	unchanged	unchanged	
PAAxT **	0	0	0	x ***
PAKT **	0	0	0	
TADT	unchanged	unchanged	unchanged	
AAS	unchanged	unchanged	unchanged	x ***
ASERV	+1	+1	unchanged	x ***
IMED	unchanged	unchanged	unchanged	x ***
ALA	unchanged	unchanged	unchanged	x ***
AALA	unchanged	unchanged	unchanged	x ***
AOLA	unchanged	unchanged	unchanged	x ***
AABT	unchanged	unchanged	unchanged	x ***
AEUP	unchanged	unchanged	unchanged	x ***
AFSERV	0	0	+1	x ***
AEDWN	unchanged	unchanged	unchanged	x ***
SFSTAT	N/A	N/A	N/A	
IDNR	unchanged	unchanged	unchanged	x ***
AOLUP	unchanged	unchanged	unchanged	x ***
PADT **	0	0	0	x ***
IMED20	unchanged	unchanged	unchanged	
ELT	unchanged	unchanged	unchanged	
ELTCNT	unchanged	unchanged	unchanged	
CLIM1	unchanged	unchanged	unchanged	
CLCT	unchanged	unchanged	unchanged	
CLIM2	unchanged	unchanged	unchanged	
SINTT	unchanged	unchanged	unchanged	
SINTAS	unchanged	unchanged	unchanged	
CYCLET	unchanged	unchanged	unchanged	
PAOLUP **	0	0	0	x ***

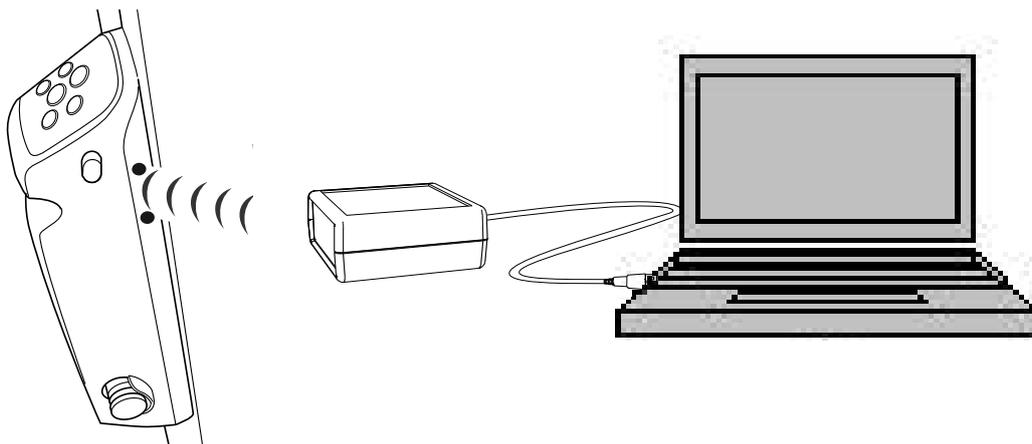
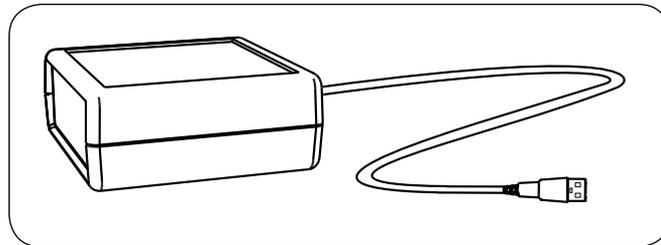
* Indicates Service Periodic Inspection interval reached.

** Service Interval Parameters (the PAAxT, PAKT, PADT and PAOLUP are all used to determine Service intervals)

*** Parameters to use in the Preventative Maintenance

7.0 Liko™ Service System - LSS

Prod. No. 21090024



Product Description

Liko™ Service System is a software developed to enable service technicians to conduct service in an easy way on all lifts equipped with Liko Diagnostic System™ (LDS), found in the Control Unit CBL 20. It also gives the service technician the possibility to program the spare part on the field.

Detailed information can be found in the instruction guide accompanying the product.

8.0 Periodic Inspection Information, Golvo™ 8000/8008 mobile lift

According to ISO 10535:2006 Annex B, Periodic Inspection of medical device Liko™ Mobile Lift should be performed at least once a year. For Liko™ mobile lifts Periodic Inspection Liko Mobile lifts (3EN371001) is available in Agile and on the Partner Web.

Periodic Inspection
Liko™ mobile lifts
Liko™ lift for stand lifts
3EN371001 Rev. 1

Lift information

Lift	Agreement No.
Product Number	Name
Serial Number	Address
Production date	Post Code

Customer reference

Accumulated lift time

Lift type	Capacity (kg)	Accumulated lift time (h)
Viking™ mobile lift	700 Ah	
Viking L mobile lift	520 Ah	
Viking XL mobile lift	2520 Ah	
Golvo 8/88 mobile lift	700 Ah	

Inspection sign off

Agree to use the mobile lift Approved Not approved

Next inspection:

NOTE!
 ⚠ Periodic Inspection shall be performed at least once per year.
 The accumulated use of the lift (As) should be logged at each Periodic Inspection!

Liko technical documentation can be found under “My information” - “Documents” on the Partnerweb: <https://partner.liko.com/> If you don't have access, contact Ann-Christin Sundström for registration: E-mail: ann-christin.sundstrom@hill-rom.com, Tel: +46 (0)920 - 47 47 10

Periodic Inspection may only be performed by personnel authorized by Hill-Rom and using original Liko™ spare parts.

Available Liko Periodic Inspections:

- 3EN371001 Periodic Inspection Liko Mobile lifts
- 3EN111001 Periodic Inspection Liko OH Rail system
- 3EN191001 Periodic Inspection Overhead Lifts
- 3EN301001 PI Freespan Freestand
- 3EN601001 Periodic Inspection Liko accessories

Also available is Periodic Inspection Slings. This inspection should be performed by a person who is suitable, has good experience and sufficient knowledge about design, use and maintenance of the sling.

- 7EN160834 General Periodic Inspection Protocol Liko Slings and Sabina SupportVests

9.0 Preventive Maintenance, Golvo™ 8000/8008 mobile lift

Expected Life Time

The expected life time of a Golvo™ mobile lift is 10 years of normal use or 700 Ah (which comes first) provided that required Periodic Inspection and Preventive Maintenance is performed by personnel authorized by Hill-Rom and using original Liko™ spare parts.

However certain parts have a shorter life cycle and will need to be replaced in order for the mobile lift to meet its expected life time. They are listed below:

Parts that needs to be replaced:

Part	Part No.	Replacement interval:	Replacement:
Hand Control	20490031	2 years	Can be used more than 2 years if no malfunction is detected.
Battery	2006107	4 years	Can be used more than 4 years (280 Ah) if no malfunction is detected.
Lift Strap	20090018 20090048 20090069 20090070	4 years	⚠ Must be replaced after 4 and 8 years of use (280 and 560 Ah), or if wear and tear are detected.
Gear Rack Set	20090096	4 years	Can be used more than 4 years (280 Ah) if no malfunction is detected.

Expected Life Time	Ah	Year
Golvo™ 8000/8008 mobile lift	700	10

Golvo with fixed hand control:

	Prod. No. 2000014	Golvo 8000
	2000015	Golvo 8008
	2000019	Golvo 8008 LowBase
	2000024	Golvo 8000 Classic
	2000025	Golvo 8008 Classic

Prod. No. 2000034	Golvo 8000
2000035	Golvo 8008
2000039	Golvo 8008 LowBase

Changes	Model 2000014 from S/N:	Model 2000015 from S/N:	Model 2000019 from S/N:	Model 2000034 from S/N:	Model 2000035 from S/N:	Model 2000039 from S/N:	Proj.
---------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------

2017

Golvo 2000014, 2000015, 2000019, 2000034, 2000035, 2000039 are obsoleted and replaced by Golvo™ 9000. (prod. No. 2000045 and 2000049). SM modified.	discontinued	discontinued	discontinued	discontinued	discontinued	discontinued	MOD005317
-----------------------------------------------------------------------------------------------------------------------------------------------------	--------------	--------------	--------------	--------------	--------------	--------------	-----------

2016

Periodic inspection page 107 is updated regarding information about inspecting the Slingbar in step 11 and Load testing in step 17, 18 and 19.	-	-	-	-	-	-	Q MOD 1238
------------------------------------------------------------------------------------------------------------------------------------------------	---	---	---	---	---	---	------------

2014

New Limit Stop is added to the base middle beam. New spare parts created: 20090094 Middle Beam 7000/8000 (replace 20090003) 20090095 Middle Beam 7007/8008 (replace 20090004) 20090096 Gear Rack Set (replace 20090038)	5 001 000	5 102 200	5 200 700	5 460 700	5 561 600	5 661 000	SUS000643
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------	-----------	-----------	-----------	-----------	-----------	-----------

Changes	Model 2000014 from S/N:	Model 2000015 from S/N:	Model 2000019 from S/N:	Model 2000024 from S/N:	Model 2000025 from S/N:	Model 2000034 from S/N:	Model 2000035 from S/N:	Model 2000039 from S/N:	Proj.
---------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------------------------	-------

2014

Golvo model Classic are discontinued. New Spare Part, Pos. 534: 20090092 Front Wheel LowBase Spare Part 20090013, Pos 10 now with grey plastic details. Fits G8/88.	-	-	-	discontinued	discontinued	-	-	-	MOD001478
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---	---	---	--------------	--------------	---	---	---	-----------

2013

New models of Golvo with fixed hand control on CBL20 control unit, are introduced.	-	-	-	-	-	5 460 001	5 560 001	5 660 001	1707
------------------------------------------------------------------------------------	---	---	---	---	---	-----------	-----------	-----------	------

2010

New models of Golvo with CBL20 control unit, are introduced.	5 000 000	5 100 001	5 200 001	5 220 001	5 240 001	-	-	-	490
--------------------------------------------------------------	-----------	-----------	-----------	-----------	-----------	---	---	---	-----



www.hill-rom.com | www.liko.com

 Liko AB
Nedre vägen 100
SE-975 92 Luleå, Sweden

Enhancing outcomes for
patients and their caregivers:

