

Operating manual

G-smartrac[®] **150 vario**

**Rope traction hoist
with electric motor for
material transport**

**↑ Pendulum
hoist ↓**

Important!
Read thoroughly before use!
Keep for reference purposes!



Service

Service Europe

goracon Systemtechnik gmbh
Färbereistraße 4
48565 Steinfurt, Germany

Phone: +49 2552 9975 0
Fax: +49 2552 9975 10
Service: service@goracon.de
E-Mail: info@goracon.de
Web: www.goracon.de

Service Asia

Ewkor Trading Co. Ltd.
670 Daiwangpangyo-Ro Bundang-Gu
463-400 Seongnam Gyenggi- Do
Korea

Phone: +82 31 628 6631
Fax: +82 31 628 6630
E-Mail: +82 10 6287 3821
Web: info@goracon.de



These operations instructions must be available to the operator at all times! These operating instruction must be thoroughly read, understood and observed with regard to all points before taking into operation of the  **G-smartrac**.

Item number 14228
Author M. Noordanus
Version KW43_2016

Copyright and industrial property rights

goracon systemtechnik gmbh reserves the copyright to this operating manual. The technical descriptions, operating instructions, drawings, etc. contained must not be duplicated in whole or in part, distributed or used for competition in an unauthorized manner or made available or accessible to third parties. All rights of use are reserved to **goracon** systemtechnik gmbh.

Warranty

The warranty is in accordance with the statutory regulations. Use for other than that defined under the designated use will lead to the voiding of all warranty and liability claims.

As of the delivery date, the warranty period is 2 years and 1 year for all mechanical and electrical parts, respectively under the following pre-conditions:

- Designated use
- Carrying out the initial maintenance within the first year following delivery.
- If this time is earlier, then 50 operating hours at the latest following commissioning.
- Carrying out the second maintenance within the second year following delivery.
- If this time is earlier, then 100 operating hours at the latest following commissioning.
- Maintenance to be exclusively carried out by **those trained by the manufacturer!**
- Use of the yearly maintenance check list for documenting the maintenance (see check list).
- Use only faultless winches, goracon ropes, lifting equipment and power supply and control cables serviced in keeping with the maintenance instruction.

Wear parts are not covered by the warranty.



Table of contents

1	Basic information on this manual	6
1.1	Information on this manual	6
1.2	Applicable documents	7
1.3	Terminology.....	7
1.4	Symbols and safety instructions.....	8
1.4.1	General safety symbols.....	8
1.4.2	Specific safety symbols	8
1.4.3	Composition of the safety instruction	9
1.4.4	Handling symbols	9
2	Product information	10
2.1	Overview.....	10
2.2	Application and description.....	11
2.3	Safety equipment.....	12
2.4	Designated use.....	12
2.5	Unauthorised use	13
2.6	Personnel places of work	13
2.7	Technical data	14
2.8	Capacity and electrical power supply	15
2.9	Operating ambient conditions.....	15
2.10	Corrosion protection	16
2.11	 G-smartrac® Modifications.....	16
2.12	Personnel selection and requirements placed on them.....	16
3	Safety information	17
3.1	General safety instructions	17
3.2	Safety notices on the  G-smartrac®	17
3.3	Installation owner obligations	18
4	Preparing the  G-smartrac® for use.....	19
4.1	Handling and storage	19
4.2	Installation and startup	19
4.2.1	Fastening the  G-smartrac®	19
4.2.2	Fall damping (optional).....	20
4.2.3	Rope fitting	21
4.2.4	Rope fitting	21
4.2.5	Installation of the radio remote control	23
4.3	Inspection before startup	24
5	Operation.....	25

5.1	Operation safety instructions	25
5.2	Actuation instruction	26
5.2.1	Control system description	26
5.2.2	LED display	28
5.2.3	Actuation	28
5.2.4	Manual mode (optional).....	29
5.2.5	Decommissioning	30
5.3	Troubleshooting and fault rectification.....	31
5.3.1	Faults, Causes and Steps	31
6	Upkeep and repair	33
6.1	In general.....	33
6.2	Upkeep	33
6.3	Maintenance	33
6.4	Upkeep / Repair.....	34
6.5	Spare and wear parts	34
7	Declaration of conformity	35
8	Appendix A: Palstek-knot	36



1 Basic information on this manual

1.1 Information on this manual

This manual is part of the operating manual. The other sections of the operating manual are indicated under Chapter 1.2.

This manual is an integral part of the product and enables it to be safely handled. It must be kept right next to the product where the operating personnel have access to it at all times.

It communicates the following to the installation owner and the operating personnel:

- designated use
- basic knowledge for safe and proper utilization
- risks in handling the product
- optimum, continuous, dependable and fault-free utilization
- avoidance of repair costs and outage times

All those involved with the product must have thoroughly read through and understood the manual in question before the product is used or before installation, maintenance, cleaning or upkeep work is carried out!

In addition to this manual, the local accident prevention regulations and the general safety requirements for the field of operation of the product apply.

The pictures in this document serve for general understanding and could deviate from the delivered design.

- Read through the operating manual **from end to end** before use!
- Do not use the product before having **completely read through and understood** the operating manual!
- Follow **all** the instructions!
- You must have **access at all times** to this operating manual.
- Do also regard **all** those instructions from other sections of the overall documentation and the manual on the individual components of the various suppliers - and in particular the safety instructions.

1.2 Applicable documents

In addition to this manual, the product package contains the following manual and documents:

- Circuit diagram
- EC Declaration of Conformity

The aforementioned manuals and documents together with the present operating manual comprise the instruction manual.

1.3 Terminology

Use

This manual considers the following work as representing **use**:

- Startup
- Any use of the installation
- Installation, maintenance, cleaning and upkeep
- Trouble-shooting
- Inspections

Installation owner

The **installation owner** is the organization or person arranging for the product to be used.

Option

An option is the choice of a particular additional installation or equipment for the product. It is possible that the product which you are operating, is fitted with none or only a few of these options.

1.4 Symbols and safety instructions

The point of safety instructions is to rule out or lessen hazards. Safety symbols with additional signal wording bring one's attention to a safety instruction. Explanations to the used **symbols** are listed below.

1.4.1 General safety symbols

Safety symbols	Signal word
	Danger! This signal word designates a hazard with a high degree of risk. The hazard will result in death or severe injuries if it is not avoided!
	Warning! This signal word designates a hazard with a medium degree of risk. The hazard may result in death or severe injuries if it is not avoided!
	Caution! This signal word designates a hazard with a low degree of risk. The hazard may result in slight or medium-scale injuries if it is not avoided.
	Note This signal word designates a hazard for the product or environment . However, there are also pointers and tips on operating the product.

1.4.2 Specific safety symbols

Safety symbol	Signal word
	Danger! This symbol with signal word points to a hazard coming from the electric current. The hazard may result in death or severe injuries if it is not avoided!
	Caution This symbol with the signal word points to a hazard coming from hot surfaces. The hazard may result in burns if it is not avoided!

1.4.3 Composition of the safety instruction

Safety instructions are composed as follows:

1. **Signal word**
2. **Kind** (source of danger and danger)
3. **Consequences**
4. **Escape** (steps)

1.4.4 Handling symbols



Observe the operating manual!

This symbol points to the operating manual being observed.



Observe the maintenance manual!

This symbol points to the maintenance manual being observed.

2 Product information

2.1 Overview

Essentially the basic design of the **G-smartrac®** consists of following components:

- | | |
|---------------------|---|
| 1.) Motor | 6.) Loading hook |
| 2.) Rope drive | 7.) Loading hook protection |
| 3.) Appliance hook | 8.) Control unit |
| 4.) Support bracket | 9.) Pendant control |
| 5.) Rope | 10.) Power supply connection cable ¹ |

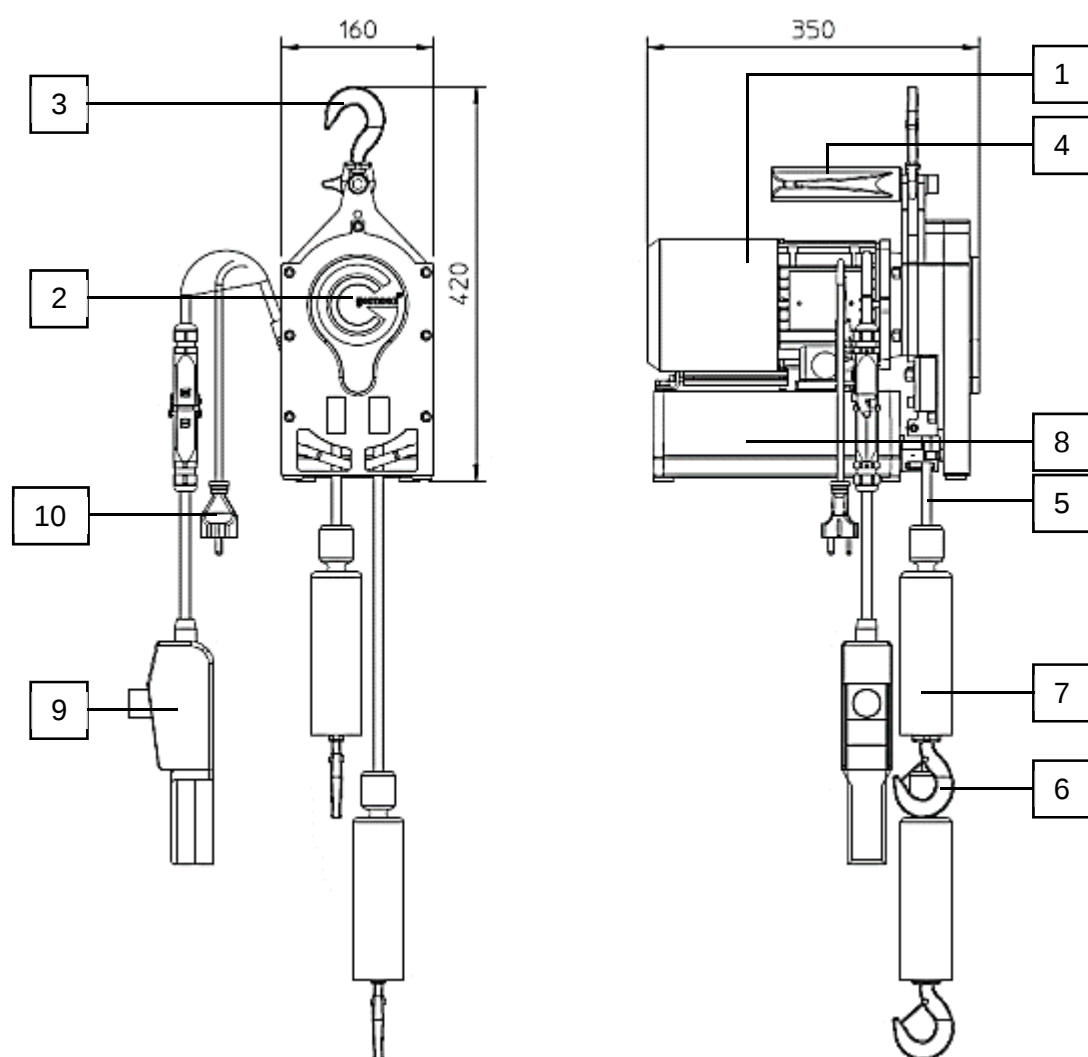


Figure 1: general representation

¹The **G-smartrac®** is standardly designed with Schuko plug.

2.2 Application and description

Application

G-smartrac® traction hoists are portable, electrically operated appliances for **lifting and lowering loads** with use made of a rope specified by **goracon** systemtechnik gmbh.



Warning

Falling load from use of the wrong rope

By not using the rope specified by **goracon** systemtechnik gmbh the rope could rip and result in a falling load. This can lead to **death or serious injuries**.

- Only use the specified goracon rope!

Pendulum hoist

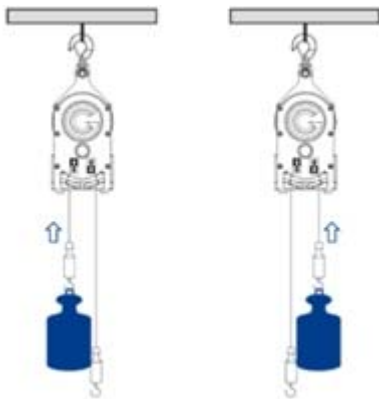


Figure 2: Pendulum hoist

The **G-smartrac**® can be run in a pendulum hoist operation. This means that loads up to a **max. 150 kg** can be reciprocally lifted and lowered.



*Pendular load lift in
both directions possible*





2.3 Safety equipment

The **G-smartrac®** is fitted out with the following safety equipment:

- Motor circuit-breaker
- EMERGENCY limit switch
- EMERGENCY stop button

Motor circuit-breaker

No operation is possible should a load greater than the working load of a **max. 150 kg** be suspended. This is shown by the motor circuit-breaker indicator (Red LED).

EMERGENCY limit switch

An EMERGENCY limit switch for both lifting directions, which shuts down a load being lifted before rope end, is provided at the rope intake of the rope drive.

EMERGENCY stop button

The pendant control is fitted out with an EMERGENCY stop button. This can be pressed by the operator in a hazardous situation. The power supply to the drive motor is immediately switched off.

Emergency descent (optional)

In case of a blackout, the motorbrake can be detached by use of the brake release lever. This leads to a controlled downward movement (see Chapter 5.2.4).

2.4 Designated use

The designated and thus allowable use is as follows:

- **Lifting and lowering loads** with a working load of a **max. 150 kg**.

The following points must thereby be observed:

the safety information specified in this:

- operating manual,
- the operating ambient conditions,
- maintenance instructions and
- installation instructions

safety information

- the **G-smartrac®** is designed for professional usage.
- it's only permitted to use the **G-smartrac®** by trained and authorized personnel.
- especially for all kind of dangers these personnel must be instructed.
- improper or unauthorized use could result in dangerous situations.
- to avoid any kind of risk of injury, use the original goracon accessories and tools.
- obey the information for taking operating, caring and maintaining the **G-smartrac®**.
- attend the national requirements for industrial safety.

2.5 Unauthorised use

Unauthorized and thus **non-** allowable use is as follows:

- Lifting and lowering loads with a working load of **more** than 150 kg.
- **Lifting and lowering of persons**
- Operation outside the permitted ambient conditions



Someone could fall if passengers are transported

The **G-smartrac®** is **not designed for transporting passengers!**

Goracon systemtechnik gmbh prohibits the transportation of passenger. No liability or warranty is assumed!
Doing so could lead to **death or serious injuries**.

- Only for lifting and lowering loads!

2.6 Workplaces for operating personnel



Warning!

It is forbidden to stand under suspended loads.

Secure the area underneath suspended loads to prevent anyone from standing there.



2.7 Technical data

Technical Data	
	150 vario
Typ	MK150930
goracon rope	Polyester with sheath
Working load	150 kg
Rope nominal diameter	9 mm
Rope rated speed	13 / 30 m/min
Power supply²	230 V AC / 50 Hz / 1~ / N / PE IP54 / 0,75 kW / 8,3 A
Plug	16 A Schuko
Motor rated power	0,75 kW
Motor rated current	max. 5,7 A
Dead weight³	22 kg
Minimum breaking strength rope	2100 daN
Noise emissions	L _{pa} = 83 dB(A)
Required electrical output with generator operation	> 2,0 kW
Drive group	1 Bm / M3 / 400 h
Item No.⁴	13356
Function	2 speeds, smooth starting and stopping function

Table 1: technical data

² The data under Power supply can differ in case of product variants. The exact data you can find on the type plate

³ The weight could differ in case of product variants. The exact data you can find on the type plate.

⁴ The item number can differ in case of product variants. The exact data you can find on the type plate.

2.8 Capacity and electrical power supply

Check that the power supply provided by others tallies with the specified data of the appliance (see nameplate or technical specifications, Chapter 2.7).

Safety equipment

A 16 A circuit breaker and either a isolating transformer or a 30 mA Type B earth leakage protection device must be installed upstream of the **G-smartrac®**.

If this is not the case, then turn to us as the manufacturer or to your qualified electrician.

The following is also to be noted:

- Minimum cross-section of the power supply lead:
 - o $< 50 \text{ m} = 1.5 \text{ mm}^2$
 - o $> 50 \text{ m} - 100 \text{ m} = 2.5 \text{ mm}^2$
 - o $> 100 \text{ m} - 150 \text{ m} = 4 \text{ mm}^2$
- Use heavy rubber cables with a bearer wire!
- Make sure the power supply lead is a suitable one in the case of hanging cables.
- When using a generator, the power should be at least 2,5 times that of the **G-smartrac®**.

2.9 Operating ambient conditions

humidly enviroment

The **G-smartrac®** is protected for dust and splashing water (IP 54) and is protected for electrical contact.

The **G-smartrac®** can be used outdoor.

In case of heavy rainfall, show an severe weather the **G-smartrac®** must be taken out of operation and must be stocked as good as possible on a dry place.

The **G-smartrac®** is not designed for exposing any kind of water jets.

Ambient temperatures

The **G-smartrac®** is only to be operated at ambient temperatures between -10°C and 50°C .

fire/explosion hazard endangered environment

It is not allowed to use the **G-smartrac®** in fire/explosion hazard endangered environments.

2.10 Corrosion protection

Either an appropriate material selection or a subsequent surface treatment ensures that all components fitted are protected from corrosion.

Housing	Aluminium, powder-coated
Motor	Various materials
Loading hooks	Stainless steel
Carrying handle	Various materials
Protective casing (optional)	Aluminium

2.11 Modifications

In respect of damage arising from non-authorised retrofitting, alterations or use of non-original parts, **goracon systemtechnik gmbh neither assumes any liability or accepts warranty claims.**

2.12 Personnel selection and requirements placed on them

The national regulations must be observed!

Only those familiar with the fastening or automatic actuation of the appliance are to be entrusted with it. They must be authorized as such by the owner for fastening or actuation work.

For Germany

The operator must know of the relevant BR regulations such as "Winches, Lifting and Hoisting Devices" (acc. to DGUV), chapter 2.8 of "DGUV-Regel 500" ("Operation of Lifting Machines with Suspended Loads", "Operation of Working Equipment" etc.) and of this operating manual and must have received the corresponding instruction.

3 Safety information

3.1 General safety instructions

The national regulations must be observed!

Injuries are avoided by you following the instructions of this operating manual.

- Use **only** faultless **G-smartrac®**, specified goracon ropes and lifting equipment .
- Given **non-adherence to the above goracon systemtechnik gmbh assumes no liability** and any **warranty claims cease to apply**.
- **Passenger transportation is prohibited!**



Someone could fall if passengers are transported

The **G-smartrac®** is **not designed for transporting passengers!**

Goracon systemtechnik gmbh prohibits the transportation of passenger. No liability or warranty is assumed! Doing so leads to **death or serious injuries**.

Only for lifting and lowering loads!

Any maintenance work is reserved for either **goracon systemtechnik gmbh** or those contractual associates that goracon has named and authorized.

3.2 Safety notices on the **G-smartrac®**



Danger!

This symbol with signal word points to a hazard coming from the electric current. The hazard may result in **death or severe injuries** if it is not avoided!



Caution

This symbol with the signal word points to a hazard coming from hot surfaces. The hazard may result in **burns** if it is not avoided!

3.3 Installation owner obligations



The installation owner undertakes to observe the operating manual and make it available to his operating personnel before the **G-smartrac®** is used!

Damage

Report any damage arising immediately to **goracon** systemtechnik gmbh.

Upkeep

The necessary regular maintenance and checks must be organised by the installation owner and these must be documented in writing.

4 Preparing the G-smartrac® for use

4.1 Handling and storage



Figure 3: G-Case

The installation owner is responsible for handling and storage.

Ensure that no damage occurs to the G-smartrac® when being handled and stored.

To avoid any damage, use of the G-case provided for this purpose is recommended.

Storage

Securely store the G-smartrac® in a dry place.

4.2 Installation and startup

4.2.1 Fastening the G-smartrac®

Lifting capacity

Have a sufficient bearing capacity of the fastening point determined beforehand by a specialist.

Fastening variants

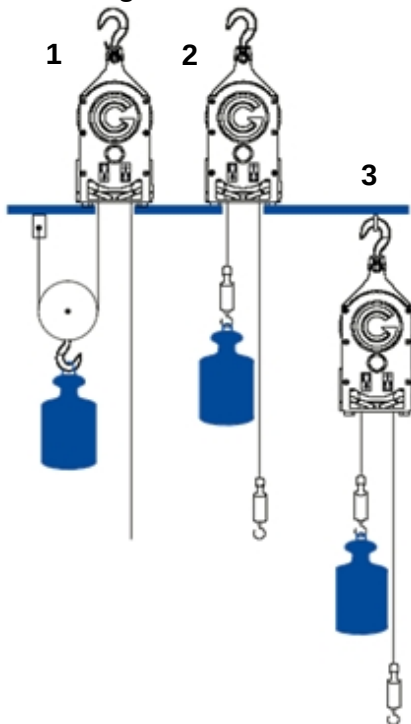


Figure 4: Fastening variants

The following three fastening variants are possible (see Fig. 4):

- 1.) Hoist-pulley block principle on a sound surface
- 2.) Set-up on a sound surface
- 3.) Attachment to the equipment hook

The load must hang freely at all times with no collision points on hand!

The opening under the G-smartrac® must be large enough for the loading hook to run in and out.

Never use the goracon rope for attaching the G-smartrac®!

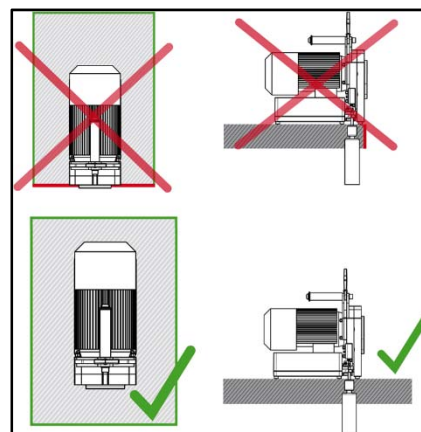


Figure 5: Correct position

Do not place the G-smartrac® too near to an edge or right next to it (see Fig. 5).

Hoist-pully block principle

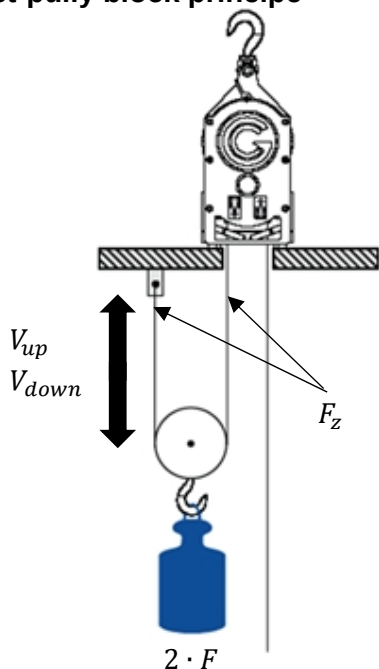


Figure 6: Hoist.pulley block principle

Application of hoist-pulley block principle casus the rope speed (V) and working load (F) of the **G-smartrac** to change.

Rope speed (V) and working load (F) in keeping with chapter 2.7 changes as follows:

$$V_{up} \text{ resp. } V_{down} = \frac{V}{2}$$

$$F_z = 2 \cdot F$$

Where:

F_z = Load at the rope

V_{up} = upward speed with the hoist-pulley block principle

V_{down} = downward speed with the hoist-pulley block principle

V = Rope speed under normal conditions.

Always fit the loading hook protector at the non-detached rope end!

The roller diameter must be at least 10 x the rope diameter!

$$\varnothing_{pulley} \geq 10 \cdot \varnothing_{Rope}$$

Where::

$\varnothing_{Pulley}$ = Diameter of the pulley

$\varnothing_{rope}$ = Diameter of the rope

4.2.2 Fall damping (optional)



Figure 7: Fall damping

Mount the shackle to the designated attachment point.

Note the maximal drop height!

4.2.3 Rope fitting



Note

Ensure there is no combustible material in the surrounding area!

Prepare the rope tip as follows for the operation:



Figure 8: Heat the rope



Figure 9: Disconnect the rope



Figure 10: heat the rope tip

- 1.) Heat the rope with a rope tip burner to a length of 1 – 1.5 cm until the fibres melt or harden.
- 2.) Cut through the rope at the melted point at a 45° angle.
- 3.) Finally keep heating the rope edges until they melt together with the kern. Make sure, the melted edges do not protrude beyond the outer contour.

4.2.4 Rope fitting

Rope test

Check the rope for correct diameter and adequate length.
No loops are to be in the rope over its entire length.

The rope must **not** be pulled across edges!

Ensure there is no obstacle to the rope emerging!



Caution

Crushing risk on threading the rope

There is a risk of crushing when not paying full attention on threading the rope. This can result in minor or light injuries.

- The safety of personnel is to be ensured with all work and motion sequences!

Threading the rope



Figure 11: Rope insertion at a standard G-smartrac 300 vario

Insert the rope as follows into the **G-smartrac®** (see Fig. 11):

- 1.) Firstly switch the **G-smartrac®** on for operations in keeping with chapter 5.2 "Switching on the appliance".
- 2.) Insert the rope tip as far as it will go.
- 3.) Press the corresponding ON button and again push until it threads in on its own.
- 4.) Wind up rope in the correct layers (no loops to form!!!)

Fitting the loading hook protector and loading hook



Warning

Always fit the loading hook protector at both ends of the rope!

Falling load without any loading hook protector

The loading hook protector ensures the required EMERGENCY stop. By not using the loading hook protector, the rope may emerge from the **G-smartrac®** and a falling load ensue. This can lead to **death or serious injuries**.

- Always use the prescribed loading hook protector at both ends of the rope!



Figure 12: Fitting the loading hook and loading hook protector at a standard G-smartrac 150 vario

Fit the loading hook protector as follows:

- 1.) Firstly slip a loading hook protector onto a rope end.
- 2.) Slip the rope fixing locking mechanism onto the same end of the rope.
- 3.) Finally slip the loading hook onto the end of the rope.



Figure 13: Rope fixing installation at a standard G-smartrac 150 vario

- 4.) Form a loop around the rope fixing device as in Fig. 13.
- 5.) Turn the locking mechanism onto the rope fixing device and slip the loading hook protector under it.



Figure 14: Rope fixing installation

4.2.5 Installation of the radio remote control



Figure 15: Connection

Install the radio remote control as follows:

- 1.) Firstly detach the pendant control connector from the **G-smartrac®**.
- 2.) Connect the receiver connector to the **G-smartrac®**.



Figure 16: Receiver installation at a standard G-smartrac 300 vario

- 3.) Now fasten the receiver to the metal plate envisaged for this purpose in keeping with Fig. 16.

4.3 Inspection before startup

Equipment required

The following equipment is needed for the appliance to be safely operated (see chapter 2.1):

- **G-smartrac®** with pendant control.
- Power supply lead of the required length.
- Rope of a sufficient length.
- 2x loading hooks each, rope fixing device and loading hook protector

Optional equipment

The following equipment can be acquired as an option:

- Radio remote control
- G-case (equipment case, see Fig. 3)
- G-bag (rope bag)
- Lighter

Inspections

Carry out the following inspections before each and every startup:



Figure 17: faultless rope condition



Figure 18: rope failure

- Check faultless condition of the rope (Fig. 17)
Fig. 18 reveals rope faults as a result of which the **rope needs to be immediately replaced**.
- Check on the correct rope diameter (ø9 mm)
- **G-smartrac®** is to be checked for faultless functioning.
- Sufficiently sound base / adequate load-bearing lifting equipment.
- Visually check on all the components used as to a flawless condition

Manual mode (optional)

If no constant downward movement is available, please contact **goracon** systemstechnik gmbh.

5 Operation

5.1 Operation safety instructions



Warning

Injuries caused from falling loads

Unforeseen circumstances may give rise to a case of emergency involving a load falling. This can lead to **death or serious injuries**.

- No-one is allowed to stand under swaying loads.
- Cordon off the area under swaying loads!

It is forbidden to overload the appliance!

The national regulations must be observed!

Use only as in accordance with the designated use (chapter 2.4)!

Never trip the EMERGENCY switch under normal operations! Undertake no blind operations

Operating personnel

Only those familiar with the fastening or the automatic actuation of the **G-smartrac®** are to be entrusted with it. They must be authorized as such by the owner for fastening or actuation work.

Secure load movements

The user is only to effect a load movement when he is sure that **G-smartrac®** and **load are securely attached** and that there is **no-one in the danger area**.

At the same time, the user must **observe all load movements**. If his view of the operational area is blocked, then someone is to direct him. They must be able to communicate effectively.

Rope

Always have the hauling rope running **vertically** into the **G-smartrac®**.

A loading hook protector must be attached at both ends of the rope.

Never pull the rope over edges!

5.2 Actuation instruction

5.2.1 Control system description

Pendant control

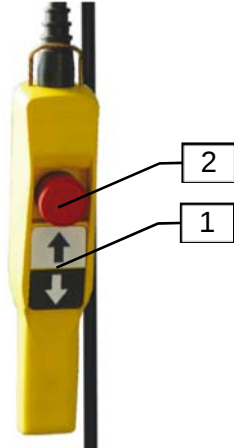


Figure 19: Pendant control

A pendant control operates the **G-smartrac®**.

The pendant control consists of the following operating elements (see Fig. 19):

- 4.) "Lift / Lower" arrow button
- 5.) "EMERGENCY STOP" button

„Lift / Lower“ arrow button

The „Lift / Lower arrow buttons lift and lower the load respectively.

„EMERGENCY STOP“ button

The "EMERGENCY STOP" button can be pressed in a hazardous situation. **It interrupts the power supply to the drive motor** and load movement is stopped.

Radio remote control station



Figure 20: Radio remote control

The **G-smartrac®** can also be run with a radio remote control. It is not included in the standard scope of delivery and can be used **as an option**. Contact **goracon systemtechnik gmbh** in this respect.

This additional device consists of (see Fig. 20):

1. Remote control (transmitter)
2. Antenna-equipped receiver

Radio remote control

The radio remote control consists of the following operating elements (see Fig. 21):

- 1.) "Lift / Lower" arrow button
- 2.) "Start" button
- 3.) "EMERGENCY STOP" button
- 4.) Flight mode / Panic switch
- 5.) Charging socket
- 6.) LED start signal



Figure 21: Remote control

"Lift / Lower" arrow button

The "Lift / Lower" arrow buttons lift and lower the load respectively.

"Start" button

The "Start" button switches the radio remote control to an operative state. For this, press **both** the "Start" buttons for several seconds until a **signal sounds** and the two **LEDs (6) light up continuously**.

"EMERGENCY STOP" button

The "EMERGENCY STOP" button can be pressed in a hazardous situation. **It interrupts the power supply to the drive** and the transfer of material is stopped. This button is also the **on/off switch of the remote control**.

Flight mode / Panic switch

The flight mode /panic switch has two operating positions (1 = on / 0 = off). In Position 0 the switch interrupts the supply of power to the battery. As a result, the remote control can **no longer be used** in the **rechargeable battery mode**. Operations with use made of the **charger are still possible**.

Place this switch in Position 0 in case of air transport

Charging socket

The charger is attached to the charging socket.

5.2.2 LED display

LED display	
Designation	Description
Motor circuit-breaker	THIS LED lights up in case of: - overload - Motor failure - frequency converter failure RESET by pushing the "EMERGENCY STOP" button, wait for about 25 sec. and unlock.

Table 2: LED display

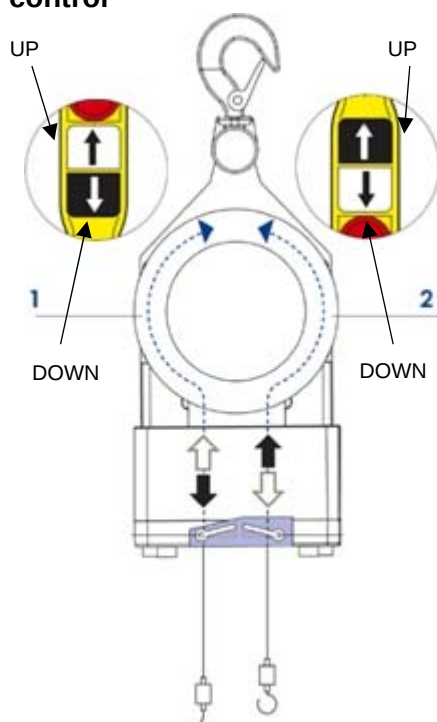
5.2.3 Actuation

2

Bring the **G-smartrac®** into an operative state as follows:

- 1.) Insert the mains plug into the socket provided by others.
- 2.) Release the "EMERGENCY STOP" button by turning clockwise.

Operation using the pendant control



The appliance is operated with the pendant control as follows:

- 1.) Press "UP" or "DOWN" for the required respective (1) or (2) direction (see Fig. 22).
 - Slowly:** Depress button slightly (starting or load positioning)
 - Quickly:** Press down button
- 2.) To stop, release the button Load stops immediately!

Figure 22: Pendant control operation

Operate by radio remote control



Figure 23: radio remote control operation

The **G-smartrac** is operated with the radio remote control as follows:

- 1.) To connect the radio remote control with the receiver, keep pressing **both** "Start" buttons simultaneously until a signal sounds and LEDs 7 and 8 light up continuously.
- 2.) Press "UP" or "DOWN" for the required respective (1) or (2) direction (see Fig. 23).

Slowly: Depress button slightly (starting or load positioning)

Quickly: Press down button

- 3.) To stop, release the button load stops immediately!

5.2.4 Manual mode (optional)

Emergency descent

In case of a blackout, the motor brake can be detached by use of the brake release lever. This leads to a controlled downward movement.



Emergency descent is prohibited in case of overload!



Take note: in case of a blackout all electrical safety devices loses its function.

Always lift / lower from point of view.

To lower **[1]** pull the brake release lever in the direction of the end of the motor. To hold **[2]** reveal the brake release lever!

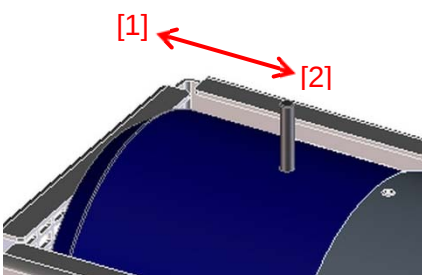


Figure 24: brake release lever

Please make contact with **goracon systemtechnik gmbh** after emergency descent.



5.2.5 Decommissioning

Work stoppage

If work is to be stopped, then G-smartrac® is to be taken out of service as follows:

- Press the "EMERGENCY-STOP" button,
- Pull out the power supply lead of the G-smartrac®,
- Cordon off the hazardous area under swaying loads.

Work termination

When the work is over, the G-smartrac® is to be taken out of service as follows:

- Dismantle loading hook and loading hook protector from the rope,
- Allow the rope to run out of the G-smartrac®, clean it and either wind it up or stow it away in the G-bag,
- Remove power supply lead from G-smartrac® and wind up the lead,
- Dismantle G-smartrac® and clean its exterior,
- Store G-smartrac®, rope and all the other parts at a secure and dry place,
- Depress emergency stop button on the remote control.

5.3 Troubleshooting and fault rectification



Danger!

Inspections and repairs of the electrical equipment are only be carried out by qualified electricians. The circuit diagram is in the terminal box. Non-adherence may result in **death or severe injuries**.

5.3.1 Faults, Causes and Steps

Faults, Causes and Steps		
Fault	Cause	Step
Rope jam	Defective rope, the wrong rope or rope run-out hindered.	Underpin load (e.g. with wedge clamp and hoist). Cut through both rope ends under the G-smartrac® . Send in G-smartrac® for repair and inform goracon systemtechnik gmbh!
Motor does not start	No power supply	Insert plug.
	„EMERGENCY-STOP“ button pressed	Release „EMERGENCY-STOP“ button.
	Power lead supply defective	Check power supply lead for any breaks in it.
	Motor over-heated	Allow the motor to cool down (see Over-heating)!
	LED „Motor circuit-breaker“ lights up!	G-smartrac® over-loading. Reduce the load! Push the EMERGENCY STOP button for 25 sec.
	No mains power supply	Have fuses and socket examined by a qualified electrician.
G-smartrac® only rotates in one direction	EMERGENCY limit switch tripped.	Operate G-smartrac® in the other direction.
	Pendant control defective	Have the pendant control replaced by a qualified electrician.
	Remote control rechargeable battery exhausted	Attach charger to the remote control.
	Remote control defective	Have the remote control inspected by a qualified electrician and, if necessary, replaced.

Faults, Causes and Steps		
Over-heating	Overloading	Check load and, if necessary, reduce it.
	Insufficient cooling	Clean air grille of the motor cover, ensure adequate supply of air.
	Motor winding burned through from over-loading	Have the motor replaced by a qualified electrician, inform goracon systemtechnik gmbh.
LED "Motor circuit-breaker" lights up	Overloading	 overloading. Reduce the load! Push the EMERGENCY STOP button for 25 sec.
Motor hums	Brake not released	Check the brake for mechanical failures. (loud click noise by de-/activating Send in the  for an inspection to goracon systemtechnik gmbh.
Load not held directly on stopping	Overloading	Check brake for any mech. damage (loud clicking on switching on/off) Send in  for examination to goracon systemtechnik gmbh.
Emergency descent does not function properly.	Motor over-heated!	Cool down the motor!

Table 3: Faults, causes and steps.

If the steps described in Table 3 do not clarify the cause and lead to its rectification, then contact **goracon** systemtechnik gmbh!

6 Upkeep and repair

6.1 In general

Maintenance solely by **goracon systemtechnik gmbh** or by **manufacturer authorized contractual associates!**

6.2 Upkeep

Rope

The rope:

- Always wind and unwind it the correct layers.
- Clean it both before and after each use.
- **Never** use it for attaching loads!
- **Never** pull it over edges!

Motor, gearbox, brake

Clean, if heavily soiled.

Always ensure that the supply of air to the motor is adequate

Keep the brake free of oil and grease.

Inspections only by **goracon systemtechnik gmbh** or the authorized contractual associates

Rope drive

Clean, if heavily soiled.

Inspections only by **goracon systemtechnik gmbh** or the authorized contractual associates!

6.3 Maintenance

Safety inspections and maintenance work only by **goracon systemtechnik gmbh** or by **contractual associates authorised by the manufacturer!**

Safety inspections

Safety inspections are, for instance:

- Accident prevention regulation tests
- Skilled inspection
- Inspections in keeping with DGUV Vorschrift 54 / DGUV Grundsatz 309-008 / DGUV Vorschrift 3

As part of these safety inspections, the used-up proportion of the theoretical operating life of the  **G-smartrac®** needs to be established and assessed. The outcome needs to be documented in a test log.



Implementation intervals

Maintenance and safety inspections must be carried out **at least once a year or after 50 operating hours** - depending on which comes first.

However, they must also be carried out in-between if deployment and operating conditions warrant it.

The national regulations must be observed!

The installation owner has to ensure that all findings are documented into a test log.

6.4 Upkeep / Repair

Repairs on the **G-smartrac[®]** are only to be carried out by **goracon systemtechnik gmbh** or by **contractual associates authorised by the manufacturer** and given the **use of genuine spare parts!**

6.5 Spare and wear parts

Contact **goracon systemtechnik gmbh**.

7 Declaration of conformity

EC Statement of Conformity

as envisaged by the EC Machinery Directive 2006/42/EC dated 17 May 2006

We, i.e.

-
goracon systemtechnik gmbh
Färbereistraße 4
48565 Steinfurt,

declare that in view of its design and type and in the version as brought onto the market by ourselves the following designated machine/installation/unit corresponds to the relevant, basic safety and health requirements of the EC directives.

This declaration loses its validity on the machine being changed in a way that we have not agreed to.

Machine/installation designation:



(Traction hoist for lifting and lowering loads)

Machine type:

G-smartrac® 150 vario

Relevant EC regulations:

EC Machinery Directive (2006/42/EC) dated 17 May 2006
EC Low Voltage Directive (2006/95/EC)
EC Directive - Electromagnetic Compatibility (2004/108/EEC)

Applied harmonized
standards - in particular:

DIN EN ISO 12100:2004-04
DIN EN 349:1993-06
DIN EN 60204:2007-06

Other regulations:

DIN 14492: 2010-06

Person authorized with
compiling the technical
documents:

D. Feldkamp
Address - see above company address

Date:

Steinfurt, May 2014

Signature:



Hermanns



Virus-Tetzlaff

8 Appendix A: Palstek-knot



- 1.) Take the rope and make a lug.
Carry through the rope-end into
the hook like it is figured.



- 2.) Lead the rope-end from below
through the lug.



- 3.) Lead the rope-end in the way back
to the lug



- 4.) Lead the rope-end back through
the lug from above.



- 5.) Tighten the knot whereby distance
of rope-end to the lug is about 15
cm. The Palstek-knot is finished.