




Automatic Safety Hook



SYMBOLS USED

The following symbols are used throughout this documentation, and/or marked on the product:

	CAUTION. This symbol on the equipment indicates that the manual must be consulted. In this manual it appears before instructions, which if not followed, may result in product damage or improper function.
	CE-mark. Indicates that we as a manufacturer declare that this product is in conformity with all relevant CE-marking Directives.
	Follow local regulations regarding recycling at disposal of this product. This product must be disposed of separately, and not with normal household waste. See separate section in this manual.

To ensure safe operation, this manual, together with applicable local user industry's safety rules and regulations must be followed.

Gigasense product warranty is not valid if other modifications than those described in this manual are made.

Gigasense AB will not be responsible for any other use of this product than the intended use, which is specified in this manual.

The buyer of this product is responsible for giving only adequately trained people access to installation, commissioning, maintenance and usage of this product. The users and installation personnel must have read and understood this manual, before using or installing this product.

The instructions in this manual must be followed in installation, usage and maintenance procedures.

Gigasense AB will not accept any responsibility for failure due to misuse, improper installation or improper maintenance.

Apart from the above, there may be local laws, safety regulations and directives from public authorities, relevant for the use of this product.

Revision history:

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GENERAL – INTENDED USE

Intended use for the Automatic Safety Hook is to perform safe lifting without dropping the load in an industrial, other heavy duty industry or process industry. The Automatic Safety Hook is recommended to use with lifting eyes, chains, master links or similar lifting devices that will slide easily into the Automatic Safety Hook. If textile rope sling is used, the locking function may not work properly due to the sling not sliding to the bottom of the Automatic Safety Hook. The suspension must be of swivel or similar type due to the fact that the Automatic Safety Hook must be able to follow the movements of the load to prevent torsion forces. The Automatic Safety function shall only be used by machines or lifting equipment's, human beings are not allowed to lock and release the Automatic Safety Hook. The Automatic Safety Hook can be used indoor, outdoor and in wet conditions, e.g. in water.

CONSTRUCTION

The Automatic Safety Hook is made of an open housing with bushings, latch, springs, carrier, cam shaft and the yellow hook. The construction is rivet made, which means the base construction cannot be open and assembled again. When load is applied on the Automatic Safety Hook, the locking function is automatically done. The locking device inside the Automatic Safety Hook is not affected by the applied load, only the spring of the Automatic Safety Hook handles the locking and release function, therefore the wear of parts is minimal.



SAFETY INFORMATION AND WARNINGS

- Safety mechanisms must not be bypassed without evaluation of the risk assessment.
- Supplementary protective measures may be required on the basis of risk assessments for the application.
- If the system is operated in conjunction with other components, the corresponding user information must be followed.
- The product must be taken out of operation in the event of damage.
- The personnel who work, install and operate the system are responsible for understanding the function and installation prescriptions described in this manual. If any questions or uncertainties occur, Gigasense AB must be informed before the product is put in operation.
- A correct function must be verified before the product is put in normal operation.
- If this equipment is used in a manner not specified in this manual, or by Gigasense AB personnel, protection or function normally provided by this equipment may be reduced.
- If the Automatic Safety Hook is used in a lifting device which is equipped with two Automatic Safety Hooks, there is a risk of dropping the load if one of the Automatic Safety Hooks release before the other one due to uneven loading of the lifting device. Gigasense strongly do not recommend this type of lifting.
- It is prohibited to force the Automatic Safety Hook to release by using ropes or tools, the release must be done by the Automatic hook itself.
- Never touch the Automatic Safety Hook during operation of the locking and release function.

SPECIFICATIONS

- Type designation: Automatic Hook 2 ton, Automatic Hook 5 ton, Automatic Hook 10 ton, Automatic Hook 15 ton, Automatic Hook 20 ton, Automatic Hook 27 ton
- Permitted ambient temperature: -20°C ... + 90°C
- Safety factor 4:1
- Locking force:
 - Automatic Hook 2 ton = 40-50 kg
 - Automatic Hook 5 ton = 50-70 kg
 - Automatic Hook 10 ton = 200-250 kg
 - Automatic Hook 15 ton = 500-700 kg
 - Automatic Hook 20 ton = 600-800 kg
 - Automatic Hook 27 ton = 500 - 1500 kg

The various locking forces is because of the position of the lifted object in the automatic hook.

Materials

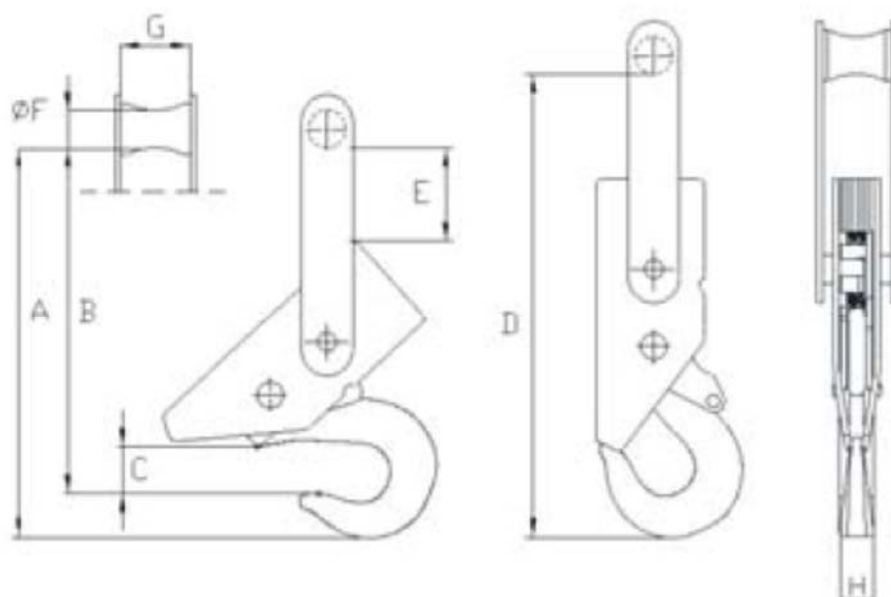
HOUSING, LINK, LATCH - HARDOX 400 STEEL

BRINELL	C	Si	Mn	P	S	Cr	Mo	B
HB	max.	0,10	max.	max.	max.	max.	max.	max.
360-400	0,20	-0,70	1,7	0,025	0,010	0,80	0,80	0,005
AXLE PINS - SS2541			TENSION SPRING - SPRINGFLEX				HOOK - CLASS 10	

MEASUREMENTS (mm)

Type	Part no.	A	B	C	D	E*	F	G	H
2 ton	300159	310	275	63	330	72	20	42	25
5 ton	300165	360	325	49	450	85	36	67	34
10 ton	300161	510	435	72	575	110	49	68	51
15 ton	300165	555	470	90	728	110	54	77	51
20 ton	300163	668	558	95	728	128	65	83	61
27 ton	3001515	608	530	100	725	125 lock/175 release	65	92	61

*the smallest measurement



FUNCTION

The Automatic Safety Hook is attached in a lifting equipment, and automatic locks when a force is applied in the hook (the load is lifted). When the hook is lowered to the ground and the force decreases and the angle exceeds 50 – 60 degrees, the hook automatically releases.



HOOK UP

Lifting eye or similar.



LIFT

When the Automatic hook is engaged, the load tension automatically safety locks the hook and housing assembly.



LOWER

After completed lifting operation the hook is lowered until it tilts (60 degrees) into release position and opens.



RELEASE

The Automatic hook automatically frees itself from the load and is ready for the next lifting operation. Do not force it open with any tools!



Before operation do an ocular inspection of the Automatic Safety Hook. In case of any damaged parts, do not install the Automatic Safety Hook. Consult Gigasense AB or dealer.



Be sure to not lift the load when the lifting eye or similar rests on the tip of the hook.

MAINTENANCE

The housing is open from both sides for easy inspection. Clean the sliding surfaces with compressed air or water. Put grease or spray Teflon oil on the sliding surfaces for lubrication.

Cleaning and lubrication should be performed as often as the visual inspection indicates.

As a guideline, these intervals can be used:

1. Clean environment – operation of 100 cycles (lock and release) or every month.
2. Dirty environment – inspection of the sliding surfaces is required every day.
3. In rain conditions or in water use – inspection of the sliding surfaces is required every day.

MARKING

A plate on the Automatic Safety Hook indicates: Year of manufacturing, part number, serial number, Working Load Limit (WLL) and manufacturer address.

TESTING

Before delivery, each Automatic Safety Hook is tested with a load 2 x WLL.

TROUBLESHOOTING

1. The Automatic Safety Hook does not release

- Dirty sliding surfaces
- Mechanical damage of the carrier / shaft cam.

Solution:

- Clean and lubricate
- Send unit to Gigasense AB or the dealer

2. The Automatic Safety Hook does not lock

- The latch/ carrier having malfunction

Solution: Send the unit to Gigasense AB or the dealer

IDENTIFICATION AND SPARE PARTS

Identification: Automatic Hook 2 ton, Automatic Hook 5 ton, Automatic Hook 10 ton, Automatic Hook 15 ton, Automatic Hook 20 ton, Automatic Hook 27 ton

According to Drawing No. BS8001 Automatic Hook, Gigasense

Part Description	2 ton Art.No.300159	5 ton Art.No.300165	10 ton Art.No.300161	15 ton Art.No.300162	20 ton Art.No.300163	27 ton Art.No.3001515
Lock	BS0879	BS0757	BS0811	BS0833	BS0853	Contact Gigasense
Pin	BS5034	BS5041	BS5042	BS5043	BS5045	Contact Gigasense
Distance	BS0877	BS0769	BS0810	BS0829B	BS0849	Contact Gigasense
Lock Spring	BS0876	BS0759	BS0813	BS0831	BS0831	Contact Gigasense
Up.Spring H	BS5034	BS5040	BS5042	BS5043	BS5045	Contact Gigasense
Tension Sp	BS0690	BS0770	BS0571	BS0571	BS0583	Contact Gigasense
Lower Sp.Ho	BS5038	BS5039	BS5031	BS5032	BS5036	Contact Gigasense



REPLACEMENT OF PARTS AND DISPOSAL

If a failure should occur, it is recommended to send back the unit to the manufacturer for repair.

After repair/service, and the unit is put to operation again, read this manual carefully before use, to verify proper function. When proper function is verified, the system can be used again.

Replaced and disposed parts can be sent to Gigasense AB for destruction.

RECOMMENDED SPARE PARTS

The Automatic Safety Hook does not require any spare parts.

In a sensitive application, where downtime is not acceptable, we recommend to keep one unit in stock for quick replacement if needed.

CE-CERTIFICATION

Hereby, Gigasense AB, declares that this equipment is in compliance with the essential requirements.

CONTACT

Sales and service

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