EN

Original operating instructions

Operating instructions CondorLift Ramshorn Hook

Carl Stahl Hebetechnik GmbH
Tobelstraße 2
73079 Süßen

Tel. hotline:
0800 – 2442441-01

Fax hotline:
0800 – 2442441-02

E-mail:
carlstahl@carlstahl.com

Internet:
www.carlstahl-hebetechnik.de

Contents

1. Introduction

The CondorLift Ramshorn hook serves to lift and lower non-guided loads.

Before you use the CondorLift Ramshorn hook for the first time, read the operating instructions in their entirety. The operating instructions explain how to safely use, maintain, inspect, and dispose of the CondorLift Ramshorn hook. These operating instructions are a component of the product and must be available to all users. Keep the operating instructions in a safe place for re-use. The CondorLift Ramshorn hook is called the Ramshorn hook below.

1.1 Manufacturer/Service

Carl Stahl Hebetechnik GmbH
Tobelstraße 2
73079 Süßen

Telephone hotline
0800 – 2442441-01

Fax hotline
0800 – 2442441-02

E-mail
carlstahl@carlstahl.com

Internet
www.carlstahl-hebetechnik.de

INFO
We will be happy to answer any questions you may have about your product.

1.2 General terms and conditions

The general terms and conditions are available directly from the manufacturer or at:
www.carlstahl-hebetechnik.de/downloads/

1.3 EU declaration of conformity

Content of the document:

For the product designated below

Name:	CondorLift Ramshorn Hook
Type:	

we hereby declare that it corresponds to the **basic requirements** specified in the harmonization legislation named below:

DIRECTIVE 2006/42/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL of May 17, 2006 about machines and the change of Directive 95/16/EC (new version) – for short: **Machine directive**

Specification of the applicable harmonized standards that apply or details of the specifications for which conformity is declared:

Reference	**Date of issue**	**Title**
Harmonized standards for the machine directive:		
EN ISO 12100 + Correction 1	2010-11 2013-08	Safety of machines – General principles for design – Risk assessment and risk reduction
EN 13155	2009-08	Cranes – Safety – Non-fixed load lifting attachments
Additional applicable technical specifications (not published in the EU official gazette):		
DIN ISO/TR 14121-2 DIN SPEC 33885	2013-02	Safety of machinery - Risk assessment - Part 2: Practical guidance and examples of methods

Authorized within the meaning of Annex II No. 1. A. No. 2, 2006/42/EC for the compilation of the technical documents:

Company	Carl Stahl Hebetechnik GmbH
Address	Tobelstr. 2 D-73079 Süßen

Sole responsibility for issuing this declaration of conformity with regard to meeting the basic requirements and preparation of the technical documents is borne by the manufacturer (or installation company):

Company	Carl Stahl Hebetechnik GmbH
Address	Tobelstr. 2 D-73079 Süßen

Declared by:

Last name, first name	Schwenger, Wolfgang
Title	Managing director

This declaration certifies conformity with the named harmonization legislation, however it does not promise properties.

Additional details:

This declaration applies to all copies that are manufactured according to the corresponding production drawings, which are a component of the technical documents. The attached accompanying documentation that supports the declaration of conformity contains additional details about adherence to above references.

The complete declaration of conformity is attached as a separate document**.**

2. Preparation of information

These operating instructions contain symbols, designations, instructions, and lists as depicted in Chapters 2.1 to 2.2.

2.1 Symbols and designations

Warnings

The warnings are classified and depicted as follows:

DANGER

A warning with the signal word “DANGER” indicates a hazard that can immediately and certainly cause death or severe, lasting injuries.

WARNING

A warning with the signal word “WARNING” indicates a hazard that may cause severe injuries or death.

CAUTION

A warning with the signal word “CAUTION” indicates a hazard that may cause minor to moderate injuries.

ATTENTION

A warning with the signal word “ATTENTION” indicates a hazard that may cause property damage.

In a **warning**, steps are marked with ▶ and structured chronologically.

Pictographs for specific hazards

Meaning:
Warning about suspended load.

Meaning:
Warning about danger of crushing.

Meaning:
Warning about hand injuries.

The pictographs are used in connection with the associated classification and the appropriate signal word.

Useful information and tips

INFO
This symbol identifies useful information and tips.

Disposal

NOTICE ABOUT DISPOSAL
of packaging materials and load lifting devices.

2.2 Instructions and lists

All instructions are structured in chronological order and numbered sequentially, e.g.:

1. Step 1
2. Step 2

The result of an action is marked with an arrow:

➢ Result or device reaction

Instructions that do not have to be carried out in a particular sequence are marked as follows:

- Step
- Step

The result of an action is marked with an arrow:

➢ Result or device reaction

Lists are marked with dashes:

– List

3. Safety

Before you use the Ramshorn hook, carefully read the following safety instructions.

Chapters 3.1 to 3.3 list basic behavior rules that you must observe when handling the Ramshorn hook. You must absolutely follow the instructions that are marked with a ⚠ symbol to prevent danger to people. Warnings that belong to individual instructions are always listed before the step in question.

3.1 Basic safety instructions

The Ramshorn hook is constructed, tested, and left the company in a perfectly safe condition. In order to maintain this state, you must follow the instructions in these operating instructions.

- Read these operating instructions in their entirety;
- Heed the warnings and safety instructions;
- Make sure that these operating instructions are always available where the Ramshorn hook will be used;
- Make sure that only suitable specialized personnel perform work with and on the Ramshorn hook (see Tab. 1);
- During use of the Ramshorn hook, comply with the locally-applicable requirements for occupational safety and the work instructions of the operator;
- Consider the circumstances on-site;
- Observe the permissible angle of inclination (see Technical data in Chapter 4);
- Comply with the maximum load capacity depending on the angle of inclination (see Technical data in Chapter 4);
- Consider the tare weight of the Ramshorn hook, the tare weight must be added to the load:

  Tare weight Ramshorn hook + load weight = total weight ▶ Consider the total weight of all components with regard to the maximum load capacity depending on the angle of inclination (see Technical data in Chapter 4)!
- You must immediately repair damage that compromises safety;
- Perform all work with great care;
- Wear your personal protective equipment;
- Tie up long hair;
- Do not wear loose clothing, rings, chains or other jewelry;

- Never linger under a suspended load, this is forbidden;
- Never open a load lifting device when it is under load;
- Only use the Ramshorn hook if the nameplate is easily legible;
- Use the Ramshorn hook only in connection with a sling, heed the operating instructions for the sling;
- Use only suitable slings, take special care that the load capacity of the sling fulfills the requirements;
- Consider the additional tare weight of the sling:

  Tare weight Ramshorn hook + tare weight sling + load weight = total weight ▶ Consider the total weight of all components with regard to the maximum load capacity depending on the angle of inclination (see Technical data Chapter 4)!

Classification of the qualification areas for load lifting devices

Area of activity	Qualification	Professional knowledge
Delivery and transport	Dealer, mover	– Proof of training in securing loads – Safe handling of load lifting devices
Storage	Storage specialist	– Safe handling of load lifting devices
Start-up, maintenance, and service	Specialized personnel	– Expert: professional training and experience, sufficient knowledge in the area of load lifting devices – Safe handling of load lifting devices – Product-specific knowledge
Use, simple visual inspection	Specialized personnel	– Safe handling of load lifting devices, professional training and experience
Disposal	Specialized personnel	– Knowledge of the regulations for proper disposal and re-use

Tab. 1: Overview

3.2 Proper use

The following points comprise proper use:

- Vertical lifting and lowering of non-guided loads;
- Observe the permissible load capacity: **Tare weight of the individual components + load weight and depending on the angle of inclination (see Technical data in Chapter 4);**
- Temperature range from -20 °C to + 80 °C;
- Storage only indoors;
- Use indoors and under dry conditions outdoors;
- Even distribution of the load;
- Attachment of the load on both sides;
- The freely-moving suspension eye or the freely-moving sling at the hook base;
- Designed for a maximum of 20,000 load changes, depending on external conditions, the number of load change may decrease.

In addition to the points listed here, additional details must be taken from the technical data and observed (Chapter 4).

3.3 Improper use

The following points comprise improper use:

- Exceeding the maximum load capacity;
- An angle of inclination of more than 45° (see Technical data in Chapter 4);
- In a damp and wet environment;
- Conveying people and animals;
- Transporting fluids, molten material, and hazardous materials;
- Diagonal pulling and asymmetrical loading;
- Attachment of the load on one side;
- Loading of the hook tip;
- Stuck suspension eye or stuck sling on the hook base;
- Missing or damaged Ramshorn hook safety device;
- Breaking free stuck loads;
- Changes to the construction;
- If people linger under suspended load;
- In environments that are subject to explosion, or where there is exposure to salt, acid, and/or alkaline substances;
- Pulling of loads on the floor;

Chapter 3.3 does not guarantee completeness. Anything that is not expressly permitted falls under improper use.

4. Technical data

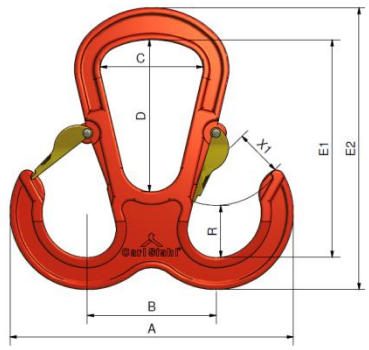
The following tables in Chapters 4.1 and 4.2 provide specific technical data for the different Ramshorn hook types. Depending on the type, product properties vary substantially.

- Consider the data that apply to your specific Ramshorn hook type.

4.1 Forged model

Name:	Ramshorn hook
Type:	1.0 t; 3.2 t; 6.4 t;
Model:	**Forged**

General information	**Type 1.0 t**	**Type 3.2 t**	**Type 6.4 t**
Load capacity	1,000 kg	3,200 kg	6,400 kg
Tare weight	1.00 kg	2.6 kg	3.75 kg
Usable height	115 mm	160 mm	165 mm
Temperature range for storage and use	-20 °C to 80 °C	-20 °C to 80 °C	-20 °C to 80 °C
Maximum number of load changes	20,000	20,000	20,000

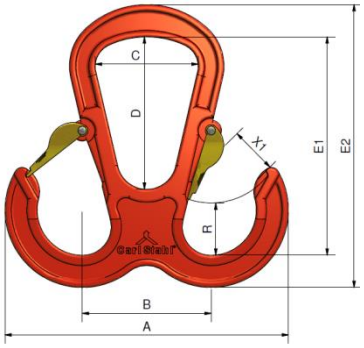
Dimensions	**Type 1.0 t**	**Type 3.2 t**	**Type 6.4 t**
	**A:** 175 mm	**A:** 220 mm	**A:** 255 mm
	B: 80 mm	**B:** 100 mm	**B:** 135 mm
	C: 55 mm	**C:** 80 mm	**C:** 95 mm
	D: 75 mm	**D:** 120 mm	**D:** 120 mm
	E1: 115 mm	**E1:** 160 mm	**E1:** 165 mm
	E2: 150 mm	**E2:** 220 mm	**E2:** 230 mm
	X1: 27 mm	**X1:** 32 mm	**X1:** 40 mm
	R: 32 mm	**R:** 37 mm	**R:** 55 mm

Tab. 2: Technical data for forged model

4.2 Fired model

Name:	Ramshorn hook
Type:	8.0 t; 10.0 t;
Model:	**Fired**

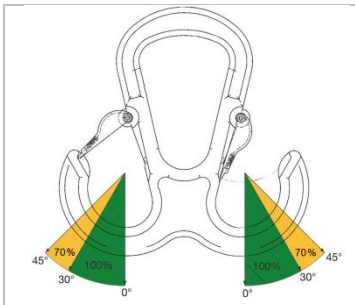
General information	**Type 8.0 t**	**Type 10.0 t**
Load capacity	8,000 kg	10,000 kg
Tare weight	36 kg	50 kg
Usable height	320 mm	355 mm
Temperature range for storage and use	-20 °C to 80 °C	-20 °C to 80 °C
Maximum number of load changes	20,000	20,000

Dimensions	**Type 8.0 t**	**Type 10.0 t**
	**A:** 594 mm	**A:** 650 mm
	B: 330 mm	**B:** 355 mm
	C: 140 mm	**C:** 160 mm
	D: 230 mm	**D:** 260 mm
	E1: 320 mm	**E1:** 355 mm
	E2: 461 mm	**E2:** 521 mm
	X1: 51 mm	**X1:** 57 mm
	R: 60 mm	**R:** 65 mm

Tab. 3: Technical data for fired model

4.3 Angle of inclination for forged and fired models

The permissible angles of inclination are listed below; these apply to all Ramshorn hooks. Other angles of inclination and an asymmetrical load are not permitted!

Load Ramshorn hook	**Angle of inclination**	**Load capacity**
	0° - 30°	100 %
	30° - 45°	70 %
	An angle of inclination of more than 45° is not permitted!	

Tab. 4: Angle of inclination relative to load capacity

5. Delivery and transport

5.1 Scope of delivery

Check the delivery to ensure it is complete.

Pieces	Item	Item number depending on model/type
1	Ramshorn hook	Type 1.0 t 25302030015001 or; Type 3.2 t 25302030015002 or; Type 6.4 t 25302030015003 or; Type 8.0 t 25302030015004 or; Type 10.0 t 25302030015005.
1	Original operating instructions	-
1	Declaration of conformity	-
1	Inspection document	-

Tab. 5: Scope of delivery

If parts are missing or damaged, contact the manufacturer/dealer (Chapter 1.1).

5.2 Transport

The Ramshorn hook is tested, checked and packed properly before delivery. Delivery is made using a suitable transport system.

- Always transport the Ramshorn hook using a suitable transport system.

5.3 Storage

ATTENTION

Damage to device due to improper storage!

Improper storage can damage the Ramshorn hook.

- ▶ Store the Ramshorn hook in a suitable storage system.
- ▶ Store the Ramshorn hook in a clean, dry place indoors.
- ▶ Protect the Ramshorn hook against:
  - The effects of temperatures that fall below or exceed the permissible temperature range (see Chapter 4).
  - Humidity,
  - Soiling,
  - Damage,
  - Corrosion.

6. Structure and function

The Ramshorn hook consists essentially of the following components:

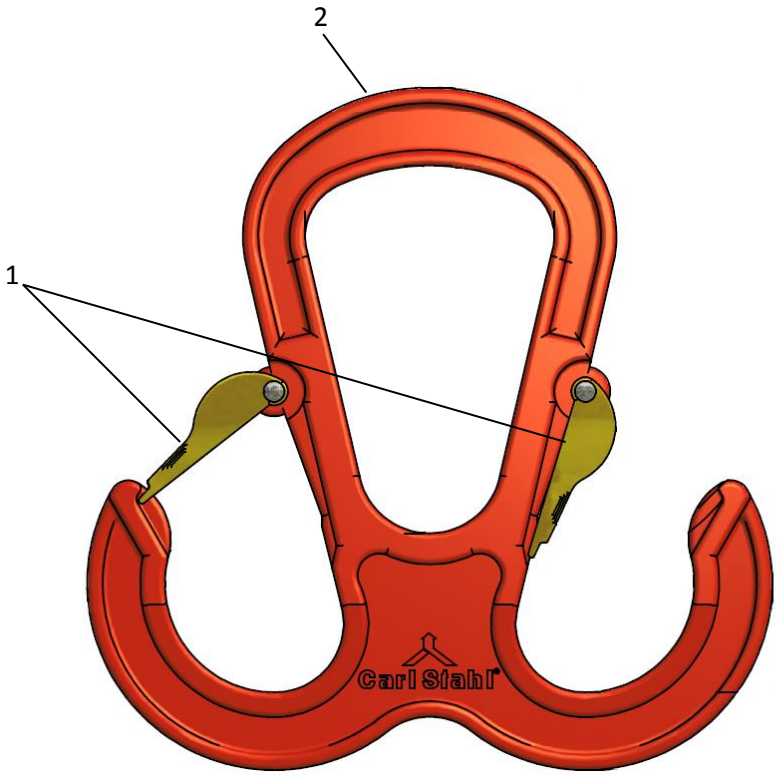


Fig. 1: Ramshorn hook

Position	Name	Function
1	Ramshorn hook safety device	Safety device against unintentional unhooking of the sling
2	Base frame	Symmetrical load lifting and crane attachment

Tab. 6: Structure and function

7. Use

7.1 Inspection before use

An inspection must be conducted before each use. You must conduct an inspection before first use (initial start-up), before each recurring use or after each servicing.

The inspection is intended to ensure that the Ramshorn hook is in perfect condition and ready for operation.

For the precise details of the corresponding inspections, see the maintenance/inspection plan. Read Chapter 8, especially 8.3 - 8.5.

Before you use the Ramshorn hook, you must observe the following:

DANGER

Danger to life due to falling load!

A falling load can cause severe injuries or death.

- Never linger under a suspended load.
- Never pass under a suspended load.
- Ensure there is sufficient free space to work.
- Ensure that there are no people in the working area.

WARNING

Danger of crushing due to lack of space!

There is a danger of crushing due to clearances that are too small at the load pick-up point, on the load transport path or at the load drop-off point.

- Inspect your work environment.
- Ensure there is sufficient space at the load pick-up point, on the load transport path, and at the load drop-off point.

7.2 Attaching the Ramshorn hook to the crane

In order to attach Ramshorn hook that is stored in the storage system to the crane, proceed as follows:

1. Position the crane hook vertically over the Ramshorn hook.
2. Hook the crane hook into the suspension eye.
   - ➢ Crane hook safety device snaps in.
3. Check the crane hook safety device.
4. Lift the Ramshorn hook slowly and carefully.

7.3 Using a sling

The Ramshorn hook is always used in connection with two slings, the following points must be observed:

- Only use suitable slings.
- Heed the operating instructions for the slings.
- No asymmetrical loading may result from the slings.

7.4 Lifting, transporting, and lowering loads

DANGER

Danger to life due to incorrect angle of inclination!

An unsuitable angle of inclination can cause a reduction or failure of the load capacity, and as a result the load may fall.

- ▶ Observe the angle of inclination and the associated load capacity in Tab. 4 (see also Technical data in Chapter 4.3).

1. Hook the sling on one side into the hook base of the Ramshorn hook.
   - ➢ The Ramshorn hook safety device snaps in.
2. Check the Ramshorn hook safety device.
3. Repeat steps 1 and 2 on the other side.
4. Position the Ramshorn hook vertically over the load.
5. Hook the sling on one side into the hanger of the load.
6. Check the suspension of the sling.

DANGER

Danger to life due to falling load!

Loads can fall due to forbidden, asymmetrical load distribution.

- ▶ Check the sling position on the side that has already been set.
- ▶ Select the same setting on both sides.
- ▶ Set the same length on both sides.

7. Repeat steps 5 and 6 on the opposite side.
8. Lift the load slowly and carefully.
9. Transport the load to the desired load drop-off point.
10. Lower the load slowly and carefully until the load stands so that it will not tip.
11. Remove the slings from the load.

8. Servicing

The Ramshorn hook must be cleaned, maintained, and inspected regularly. For the maintenance/inspection intervals, see the maintenance/inspection plan.

8.1 Cleaning

INFO

Regular cleaning and careful handling mean that the Ramshorn hook will be in good condition throughout its life cycle.

Component	Cleaning criteria	Actions
Base frame	The base frame must be free of dust and dirt.	Clean the base frame.
Ramshorn hook safety device	The Ramshorn hook safety device must move easily.	Clean and lubricate a Ramshorn hook safety device that is difficult to move.

Tab. 7: Cleaning

8.2 Inspection document

The inspection document serves as proof of the inspections conducted. Furthermore, all noted defects must be repaired and the proof thereof that is kept must be presented to the authorities if necessary. The inspection document listed below is just an example. The original inspection document is attached as a separate document.

Hersteller	
Anschrift der Firma/Werk	CarlStahl

Prüfdokument für Lastaufnahmeeinrichtungen

Bezeichnung	
CondorLift Ösen-Doppelhaken	
Typ	
CS-Artikel-Nr.	CS-Fertigung-Nr.
Zeichnung-Nr.	Chargen-Nr.
Tragfähigkeit	Baujahr

Werksabnahme

Hiermit wird bescheinigt, dass die hier beschriebene Lastaufnahmeeinrichtung nach den einschlägigen Normen geprüft wurde und diese im vollen Umfang bestanden hat.

Prüfdatum	Prüfbefund	Prüferkennung
	Bestanden	

Prüfung vor der Erstinbetriebnahme

Die Prüfung vor der Erstinbetriebnahme wurde durchgeführt und es wurden keine Mängel festgestellt.

Prüfdatum	Prüfbefund	Unterschrift

Wiederkehrende Prüfungen

Prüfdatum	Prüfbefund	Unterschrift

Außerordentliche Prüfungen

Prüfdatum	Prüfbefund und Prüfgrund	Unterschrift

Fig. 2: Inspection document

8.3 Maintenance/inspection plan

Maintenance/inspection interval	Activity
Before first use (initial start-up)	– Visual inspection and function check
Before each recurring use of the Ramshorn hook without extraordinary events	– Visual inspection
Annually	– Visual inspection and function check
Extraordinary inspection	– Depending on external conditions, the **annual** inspection cycle may be shortened. This includes the following points: – After damage events, servicing or special incidents, – Permanent use in shift operation, – Increased wear, – Corrosion, effects of heat due to environmental influences, – etc.

Tab. 8: Maintenance/inspection plan

8.4 Inspection criteria

The discard criteria for the Ramshorn hook are determined by using the inspection criteria in the following table. For the base value, specified in mm, see Technical data (see Chapter 4).

Component	Inspection criteria	Actions
Safety flap	Any type of deformation and wear, or if missing	Take out of service and contact manufacturer/service
Base frame	Any type of deformation and wear	Take out of service and contact manufacturer/service
Load attachment area (hook base)	Any type of deformation and wear	Take out of service and contact manufacturer/service
Crane attachment area Suspension eye	Any type of deformation and wear	Take out of service and contact manufacturer/service
Nameplate	Legibility	Take out of service and contact manufacturer/service

Tab. 9: Inspection criteria

8.5 Visual inspection and function check

The Ramshorn hook must be checked and inspected before each use. The tables on page 15 list criteria which may indicate that you must take the Ramshorn hook out of service.

DANGER

Danger to life due to falling load!

Due to deformation and wear of the individual components, the load capacity may be reduced and the load can fall.

- Check the Ramshorn hook for defects.
- Check to what extent the individual components are functional.
- Take the Ramshorn hook out of service by marking it appropriately, if it is no longer functional and is irreparably damaged (see Chapter 9.1).
- If necessary, contact the manufacturer/service (see Chapter 1.1).
- If necessary, dispose of the Ramshorn hook (see Chapter 9.2).

Visual inspection

1. Check the Ramshorn hook for visual defects such as:
   - Cracks,
   - Deformation,
   - Wear,
   - Completeness
2. Take the Ramshorn hook out of service if the Ramshorn hook has a defect.

Function check

1. Check all moving parts to ensure they move easily.
2. Check the functionality of the Ramshorn hook.
3. Check the functionality of the Ramshorn hook safety device.
4. Take the Ramshorn hook out of service, if its function is compromised.

8.6 Servicing the Ramshorn hook safety device

If the function of the Ramshorn hook safety device is compromised or if parts are missing, you must replace the Ramshorn hook safety device. Original spare parts must be used:

1. Remove the screw of the Ramshorn hook safety device.
2. Pull off the safety flap.
3. Replace all parts of the Ramshorn hook safety device with original spare parts.
4. Tension the spring between the holes of the safety flap, the spring legs must rest on the base of the safety flap (see Fig. 3).

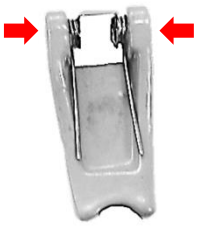


Fig. 3: Positioning the spring

5. Position the safety flap on the position of the hole in the base frame in such a way that the hole in the base frame and the holes of the safety flap lie on the same axis.
6. Screw the safety flap to the base frame.
7. Check the function of the Ramshorn hook safety device.

9. Taking out of service and disposal

9.1 Taking out of service

1. Take the Ramshorn hook out of service by marking it.
2. Contact the manufacturer/service (see Chapter 1.1).
3. Dispose of the Ramshorn hook if necessary.

9.2 Disposal

Disposal of the Ramshorn hook

NOTICE ABOUT DISPOSAL

If the Ramshorn hook can no longer be repaired or if it is no longer functional, it must be disposed of in accordance with the applicable legal provisions.

Disposal of packaging material

NOTICE ABOUT DISPOSAL

According to the Packaging Ordinance, the dealer must take back for re-use and/or ensure disposal of the packaging for its products which do not bear the symbol of a system for complete disposal (such as the Green Dot of the Duales System Deutschland AG).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