



BC/BCS

Tiger Beam Clamp



ORIGINAL INSTRUCTION GUIDE

- PLEASE PASS ONTO OPERATOR

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Operator Instruction Guide



MUST READ BEFORE USE

1. It is important that this manual is read and fully understood and that all instructions are followed before using the beam clamp.
2. The beam clamp should be used by a trained and or experienced person who understands its use and will operate the unit in a responsible and safe manner.
3. Inspect the beam clamp for any damage or wear before use. Do not use the beam clamp if it is not in good working order. Continuous monitoring of the condition of the machine is an important safety consideration.
4. The supplier takes no responsibility for any consequential loss or damage if the beam clamp has been dismantled or altered by an unauthorised person, especially if original parts were not used to repair the machine.
5. The clamps described in this manual must not be used to lift, support or transport people in any way.
6. These clamps are for manual operation only. Do not attempt to use a motorized mechanical device to operate the machine.
7. Check the beam clamp is of the correct profile, size and lifting capacity, or correctly adjusted, for the beam width and that it seats correctly on the beam flange.
8. Ensure the supporting structure is adequate for the full load that will be imposed and suitable for the application.
9. The adjusting screw must be fully hand tight before any load is applied; failure to do so could result in serious injury to persons or damage to equipment.
10. Do not attempt to overload the machine as this could cause damage to person or equipment.
11. Always ensure the beam clamp is used, maintained and repaired by a competently trained person.
12. Do not use the beam clamp in explosive environments unless an ATEX version has been supplied.

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For details of the full Tiger product range visit our website: www.tigerlifting.com

Due to our policy of continual product development, dimensions, weights and specifications may change without prior notice.

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1. Safety Information

Tiger Lifting products have been built in accordance with state of the art and generally accepted engineering standards. Nonetheless, incorrect handling when using the products may cause dangers to life and limb of the user or third parties and/or damage to the product or other property. The operating company is responsible for the proper and professional instruction of the operating personnel. The personnel responsible for operation, maintenance or repair of the product must read, understand and follow these operating instructions. These instructions are intended to make the user familiar with the product and enable them to use it to the full extent of its intended capabilities. Acting in accordance with these instructions helps to avoid danger, reduces repair costs and downtime and increases the reliability and lifetime of the product.

The operating instructions must always be available at the place where the product is operated. Apart from the operating instructions and the accident prevention act valid for the respective country and area where the product is used, statutory regulations and procedures along with the commonly accepted regulations for safe and professional work must also be adhered to. The indicated protective measures will only provide the necessary safety if the product is operated correctly and installed and/or maintained according to the instructions. The operating company must be committed to ensure safe and trouble-free operation of the product.

If the product's ability to do a job, or to do so safely is in question - DON'T TRY IT.

Definitions

! WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury. It may also be used to alert against unsafe practices.

Competent Person

The competent person should have appropriate, practical and theoretical knowledge and experience of the Tiger product which will enable them to detect defects or weaknesses and to assess their importance in relation to the safety and continued use of the unit. Competent persons may be, for example, the maintenance engineers of the manufacturer or the supplier. However, the company may also assign performance of the inspection to its own appropriately trained specialist personnel.

Beam Clamp

A beam clamp is a device designed to attach to a suitable steel beam section to provide a means of suspension for a lifting appliance.

Beam

A beam is any structural steel section provided it is suitable for the purpose of lifting.

Health and Safety at Work

All equipment must be maintained and tested to meet relevant statutory regulations when put to use. It is the responsibility of every company to ensure that their employees have been fully and properly trained in the safe operation of their equipment.

It is the owner's and user's responsibility to determine the suitability of a product for any particular use. It is recommended that all applicable industry, trade association, federal, state and local regulations are checked. Read all operating instructions and warnings before operation.



Equipment Labelling

The identification label/name plate details the product type, model, manufacturer, working load limit (WLL), serial number and the beam width range. The CE marking indicates compliance with the essential health and safety requirements of the Machinery Directive 2006/42/EC.

2. Function/Operation

The Tiger BC and Tiger BCS Beam Clamps are quick and versatile rigging points for hoisting equipment.

The working load limit specified on the label/name plate is the maximum load which can be applied to the product in service. The clamp must only be attached to structures which are approved and recommended to carry or sustain the maximum safe working loads which will be applied. These structures must be free from defects and have end stops fitted. We advise that structural calculations are carried out on all beams and supporting steel work by qualified engineering departments to ensure safe operation.

! WARNING

All clamps should be installed correctly onto the beam by a competent person and fully tightened by hand. All lifting operations should be fully risk assessed by a competent person before commencing any operation.

The BC/BCS beam clamp is easy to install. To open the clamp, turn the adjusting screw anti-clockwise. Unscrew the clamp so it is wider than the beam. Fit the clamp onto the beam. To tighten the clamp onto the beam, turn the adjusting screw clockwise. The adjusting screw must be fully hand tight before any load is applied; failure to do so could result in serious injury to persons or damage to equipment. Check the clamp is of the correct profile and size, or correctly adjusted, for the beam width and that it seats correctly on the beam flange. Ensure that the clamp is in contact with the beam at the curved mid-point of the side plates. There should be no other contact between the beam and the clamp. Ensure the beam clamp is strong enough for the full load that will be imposed. Ensure the lifting appliance is compatible with the clamp and that hooks or other attachments fit freely into the anchor point of the clamp. This is the load pin for the BC model and the shackle for the BCS model.

Before removing it from a beam, make sure there is no load on the beam clamp. Unscrew the adjusting screw anti-clockwise until the beam clamp is open sufficiently to be removed from the beam.

Where two or more clamps are used for one lift, care should be taken to ensure that no one clamp will be subjected to a load greater than its own working load limit (WLL). The use of ancillary equipment may also be necessary, eg spreader beam. You should seek appropriate guidance for multi-point lifting.

The BC/BCS beam clamp is designed for static use. Moving the position of the beam clamp should only be carried out by a qualified person and must never be done while the clamp is loaded.

! WARNING

- Never** use beam clamps which are unidentified or uncertified for lifting applications.
- Never** replace any parts without consulting the supplier or an authorised repairer.
- Never** throw or drop beam clamps.
- Never** use beam clamps on damaged or distorted beams.
- Never** force or wedge hooks of lifting appliances into the attachment anchor point/shackle.



- Never** attach a load, hoist or any other object to any part of the clamp other than the anchor point.
- Never** attempt to move the beam clamp under load.
- Never** allow a load attached to the beam clamp to swing or spin unintentionally.
- Never** work near or under suspended loads.

3. Inspection

According to national and international accident prevention and safety regulations, this equipment must be inspected:

- in accordance with the risk assessment of the operating company
- prior to initial operation
- before the unit is put into service for any subsequent use
- after substantial changes
- however, at least once per year, by a competent person.

Note: Actual operating conditions (e.g. operation in galvanizing facilities) can dictate shorter inspection intervals.

The intervals of inspection must be determined by the individual application and are based upon the type of service to which the beam clamp will be subjected.

In the event of any defects refer the clamp to a Tiger distributor or Competent Person for thorough examination.

Examinations should include the following:

- Examine side frame for wear, damage and distortion.
- Examine adjusting screw for damaged threads and distortion.
- Examine adjusting screw handle for distortion and loose bar end stops.
- Examine the load pin and/or shackle
- Examine for loose or missing fasteners, stops or nameplates.
- Examine for corrosion.
- Examine for illegible markings.
- In the case of a clamp in-situ, examine the beam to which the clamp is attached for any distortion.

An Inspection Log is included in Chapter 10 for making a dated record of any required inspections.

4. Maintenance

Beam clamps should be cleaned and any moving parts should be lubricated. All fastenings should be correctly secured.

If the adjusting screw is difficult to turn or is stuck, it is likely that the thread has been damaged and the beam clamp will need to be replaced.

Strip down:

- Remove handle securing pin using the correct diameter punch. Wind off the handle.
- Remove adjusting screw

Reassemble:

- Install adjusting screw
- Wind on handle and secure with a new spring pin
- It is advised that all parts are well lubricated before putting them into place



5. Transport, Storage, Decommissioning and Disposal

Transporting the unit:

- Do not drop or throw the unit, always deposit it carefully.
- Use suitable transport means. These depend on the local conditions.

Storing or temporarily taking the unit out of service:

To ensure the continuing integrity of the unit you should store the unit in conditions that do not lead to damage or deterioration. Therefore:

- Inspect beam clamps and accessories before placing into storage.
- **Never** return damaged beam clamps to storage.
- The unit should be secured against unauthorised and unwarranted use.
- Store the unit in a clean and dry place.
- Protect the unit including all accessories against contamination, humidity and damage by means of a suitable cover.
- Protect against corrosion.
- Wipe off all dirt and water.
- A light oil film should be applied to moving parts.
- If the unit is to be used again after it has been taken out of service, it must first be inspected again by a competent person.

Disposal

After taking the unit out of service, recycle or dispose of the parts of the unit in accordance with the legal regulations.

6. Manufacturer Testing and Verification

This product was manufactured under our single-unit control of quality and was passed with strict inspection in accordance with our inspection standards.

Capacity (tonne)	WLL (kg)	Test Load (kg)
1	1000	1500
2	2000	3000
3	3000	4500
5	5000	7500
10	10000	15000

Tiger BC and BCS Beam Clamps have a 5:1 factor of safety. They are tested in line with the requirements within applicable sections of the European standard EN13155:2003+A2:2009. All items comply with the essential health and safety requirements of the Machinery Directive 2006/42/EC. Tiger beam clamps are third party verified by SGS Certificate Number MDC 1302.



7. Product Warranty and Warnings

Definitions

'Customer' means the individual, firm, company or other party with whom the Company contracts;

'Company' means Tiger Lifting UK Limited or Woo Sing Industrial Co., Ltd;

'Contract' the contract between the Company and the Customer for the sale and purchase of this product;

'Defective Goods' goods, parts or materials, which by reason of fault or incorrect design or workmanship, are found to be defective or fail or are unable to perform in accordance with a Contract;

One Year Limited Warranty

The Company makes every effort to assure that its products meet high quality and durability standards and extends the following warranty to the Customer of new products manufactured by the Company:

1. The Company warrants that this product, when shipped, shall be free from defects in materials and workmanship under normal use and service and the Company shall, at its election, repair or replace free of charge any Defective Goods, provided that all claims for defects under this warranty shall be made in writing immediately upon discovery and, in any event, within one (1) year from the date of purchase of this product by the Customer and provided, further, that Defective Goods shall be kept for examination by the Company or its authorised agents or returned to the Company or an authorised service centre upon request by the Company.
2. The Company does not warrant components of products provided by other manufacturers. However to the extent possible, the Company will assign to the "Purchaser" applicable warranties of such other manufacturers.
3. Except for the repair or replacement mentioned in (1.) above, which is the Company's sole liability and Customer's exclusive remedy under this warranty, the Company shall not be responsible for any other claims arising out of the purchase and use of this product, regardless of whether the Customer's claims are based on breach of contract, tort (including negligence), breach of statutory duty, or otherwise, including claims for any loss of profit, goodwill or business opportunity or any indirect or consequential loss arising under or in connection with the Contract.
4. This one year limited warranty is conditional upon the installation, maintenance and use of this product pursuant to the product manuals prepared in accordance with content instructions by the Company. The warranty on this product does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents. This warranty does not apply if the product has been subjected to improper fittings, alignment or maintenance.
5. The Company shall not be responsible for any loss or damage caused by transportation, prolonged or improper storage or normal wear and tear of this product or for loss of operating time.
6. This warranty shall not apply to this product if it has been fitted with or repaired with parts, components or items not supplied or approved by the Company or which have been modified or altered.
7. The Company limits all implied warranties to the period specified above from the date the product was purchased by the Customer.
8. Except as stated herein, any implied warranties or merchantability and fitness are excluded.

If our inspection discloses a defect, the Company will repair, replace the product or refund the purchase price, if we cannot readily or quickly provide a repair or replacement and if you are willing to accept such refund. The Company will return repaired or replacement products at The Company's expense, but if it is determined there is no defect, or that the defect resulted from causes not within the scope of Tiger Lifting's warranty, then the Customer must bear the cost of storing and retrieving the product.

! WARNING

The use of this product is beyond the control of Tiger Lifting. The warranty of this product is limited to the replacement cost of this product should it be found to be defective in material and/or workmanship. The warranty is void if the beam clamp is damaged, worn or used improperly. Normal wear and tear is not considered grounds for replacement. The Tiger Lifting product warranty does not apply where there has been excessive overloading of the beam clamp.

Disclaimer

We believe that the information in this document, including technical information and any advice, is reliable although we give no guarantee as to its accuracy or completeness. The user of our products must determine if the product, either used alone or conjunction with other products, is suitable for their purpose and assumes all risk and liability in connection with those decisions. We have made every effort to make sure this document is accurate. The information contained in this document does not form part of any contract.

Please also refer to our terms and conditions which can be found at: www.tigerlifting.com/terms-conditions/



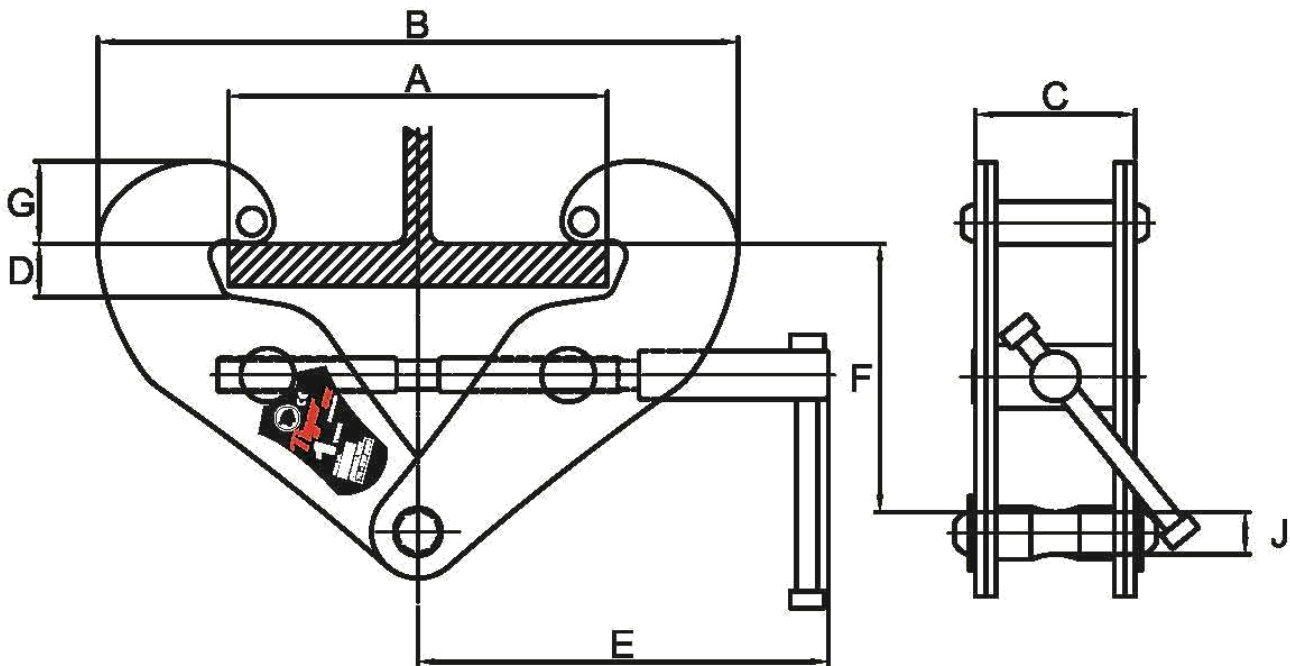
8. Technical Data

BC Model

Product Code	Capacity (tonne)	Dimensions (mm)								Weight (kg)
		A	B	C	D*	E	F	G	∅J	
BC-0100	1.0	72-210	182-328	77	26	190	144-117	52-38	∅20	3.5
BC-0200	2.0	75-210	182-328	85	26	190	144-117	52-38	∅20	4.5
BC-0300	3.0	73-305	214-460	107	35	240	224-179	58-40	∅22	8.0
BC-0500	5.0	73-305	214-460	121	35	240	224-175	58-40	∅28	10.0
BC-1000	10.0	90-330	289-496	135	36	277	231-182	75-58	∅38	24.0

*D=minimum beam flange thickness

Operating temperature of -50°C to +50°C



Due to our policy of continual product development, dimensions, weights and specifications may change without prior notice.



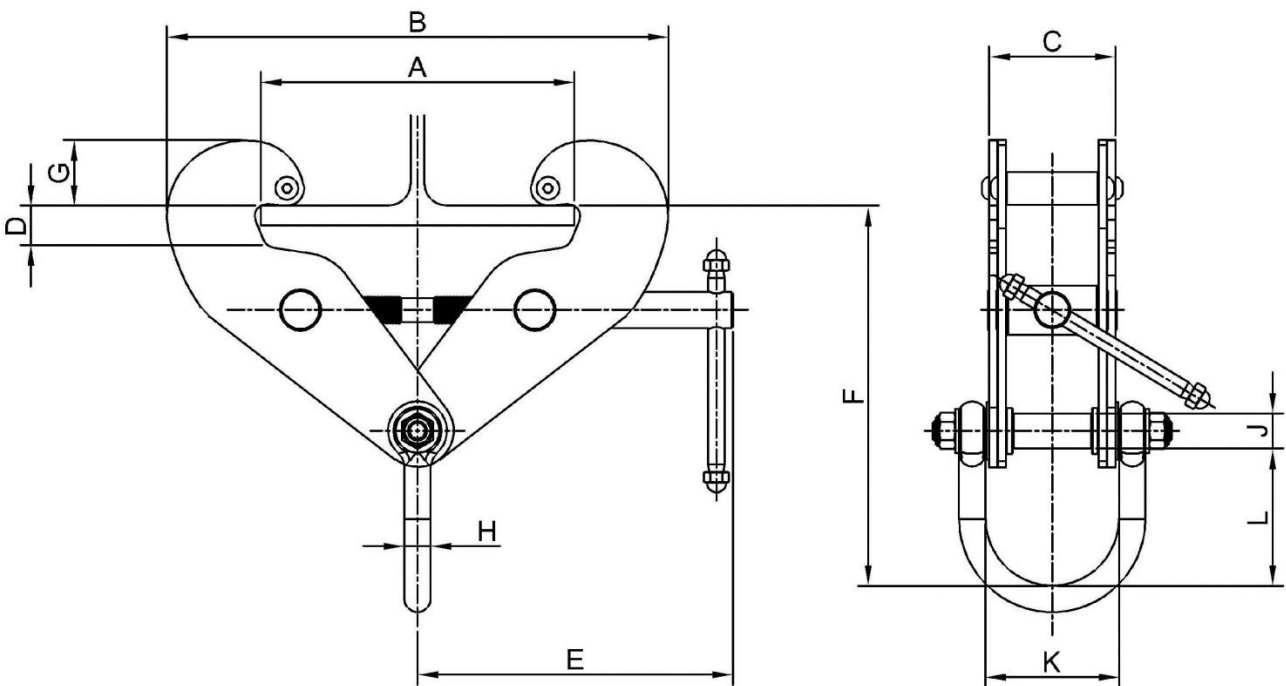
BCS Model

Product Code	Capacity (tonne)	Dimensions (mm)											Net Weight (kg)
		A	B	C	D*	E	F	G	H	∅J	K	L	
BCS-0100	1.0	75-210	182-328	77	26	190	250-225	52-38	16	∅21	81	83.5	4.5
BCS-0200	2.0	75-210	182-328	85	26	190	260-236	52-38	18	∅21	89	94.5	5.5
BCS-0300	3.0	75-305	214-460	107	35	240	357-311	58-40	22	∅27	112	105.5	9.5
BCS-0500	5.0	75-305	214-460	121	35	240	363-315	58-40	27	∅27	125	111	11.0
BCS-1000	10.0	120-350	295-510	180	30	300	381-330	71-54	32	∅37	83	120	26.5

*D=minimum beam flange thickness

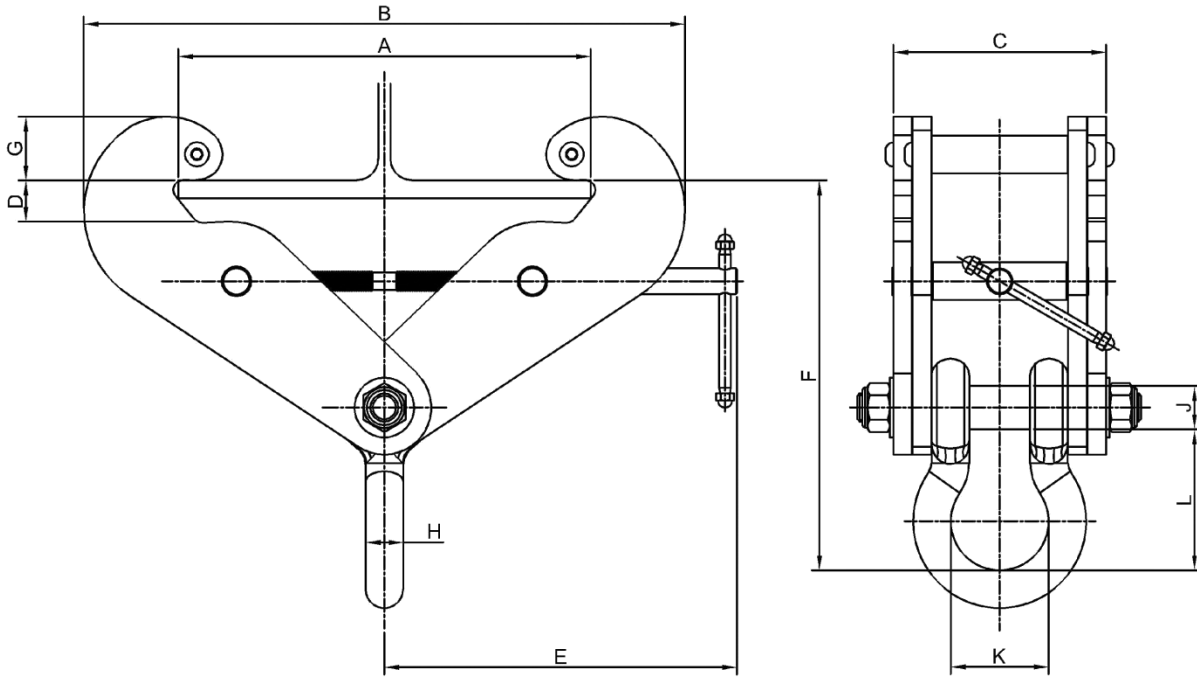
Operating temperature of -50°C to +50°C

For BCS models BCS-0100, BCS-0200, BCS-0300 and BCS-0500 (1t, 2t, 3t and 5t capacity)

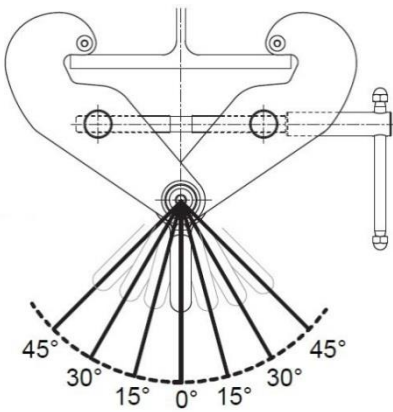




For BCS model BCS-1000 (10t capacity)



Reduction in working load limits when side loads applied:



Angle from vertical	0°	0° - 15°	15° - 30°	30° - 45°
Reduction Factor	Nil	17%	34%	50%
Product Code	WLL	WLL	WLL	WLL
BCS-0100	1000 kg	830 kg	660 kg	500 kg
BCS-0200	2000 kg	1660 kg	1320 kg	1000 kg
BCS-0300	3000 kg	2500 kg	2000 kg	1500 kg
BCS-0500	5000 kg	4100 kg	3300 kg	2500 kg
BCS-1000	10000 kg	8300 kg	6600 kg	5000 kg

The above working load limits and derations have been established for Tiger BCS model clamps and apply only for overhead beam attachments. They DO NOT apply when used for lifting beams. Our Tiger BCU clamp has been specifically designed for this purpose. The above tables apply only to the Tiger BCS model and we advise that structural calculations are carried out on all beams and supporting steel work by qualified engineering departments to ensure safe operation.

Due to our policy of continual product development, dimensions, weights and specifications may change without prior notice.

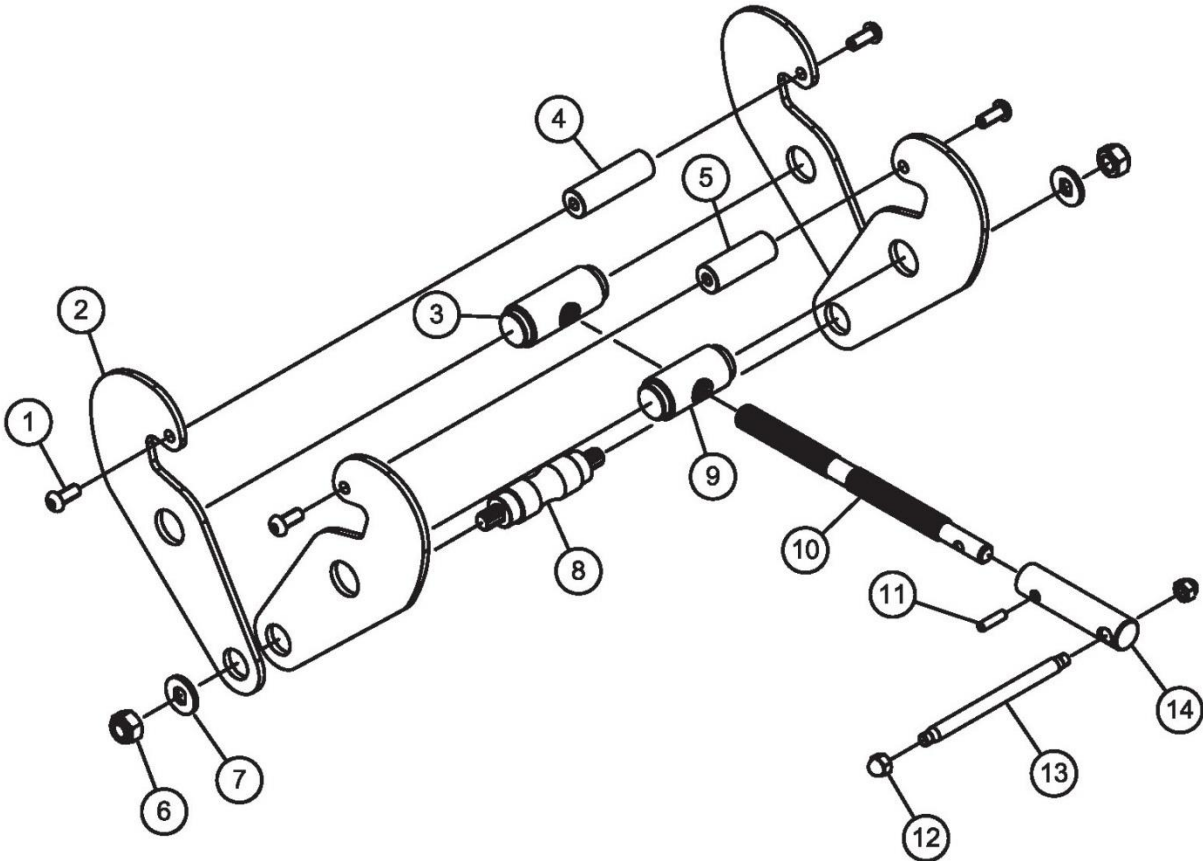




9. Explosion Diagram

BC Beam Clamp

For BC model BC-0100, BC-0200, BC-0300, BC-0500 and BC-1000 (1t, 2t, 3t, 5t and 10t capacity)



Part No.	Part Name	Part No.	Part Name	Part No.	Part Name
1	Plate connector fixing	6	Nut	11	Securing pin
2	Side Frame	7	Keyway washer	12/13/14	Handle assembly
3/9	Mounting bar	8	Load pin		
4/5	Plate connectors	10	Adjusting screw		

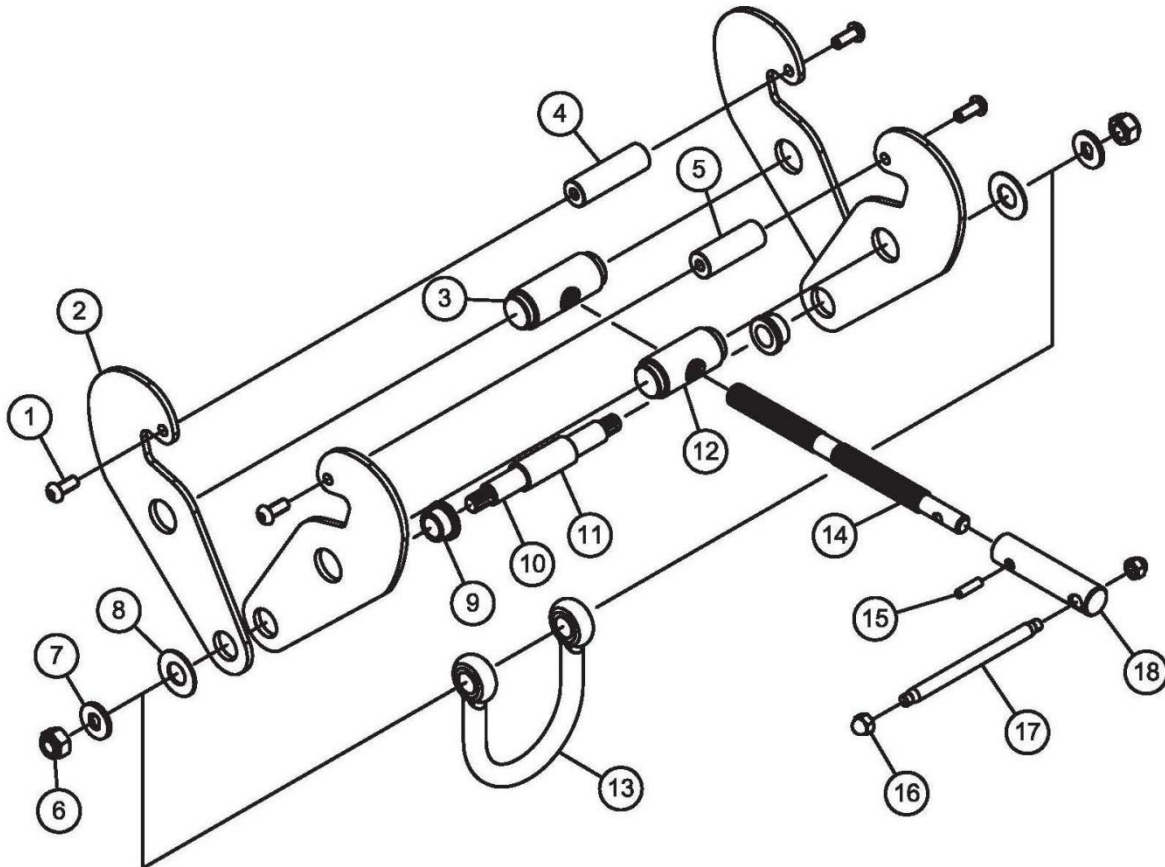
Replacement parts available are 12 & 13 handle bar parts which are available by ordering B-01



BCS Beam Clamp

For BCS models BCS-0100 and BCS-0200 (1t and 2t capacity)

The following diagram is intended to clarify terms that appear in the Product Operation and the Inspection and Maintenance chapters.



Part No.	Part Name	Part No.	Part Name	Part No.	Part Name
1	Plate connector fixing	7	Keyway washer	13	Shackle
2	Side Frame	8	Washer	14	Adjusting screw
3/12	Mounting bar	9	Housing	15	Securing pin
4/5	Plate connectors	10	Anchor pin	16/17/18	Handle assembly
6	Nut	11	protection sleeve		

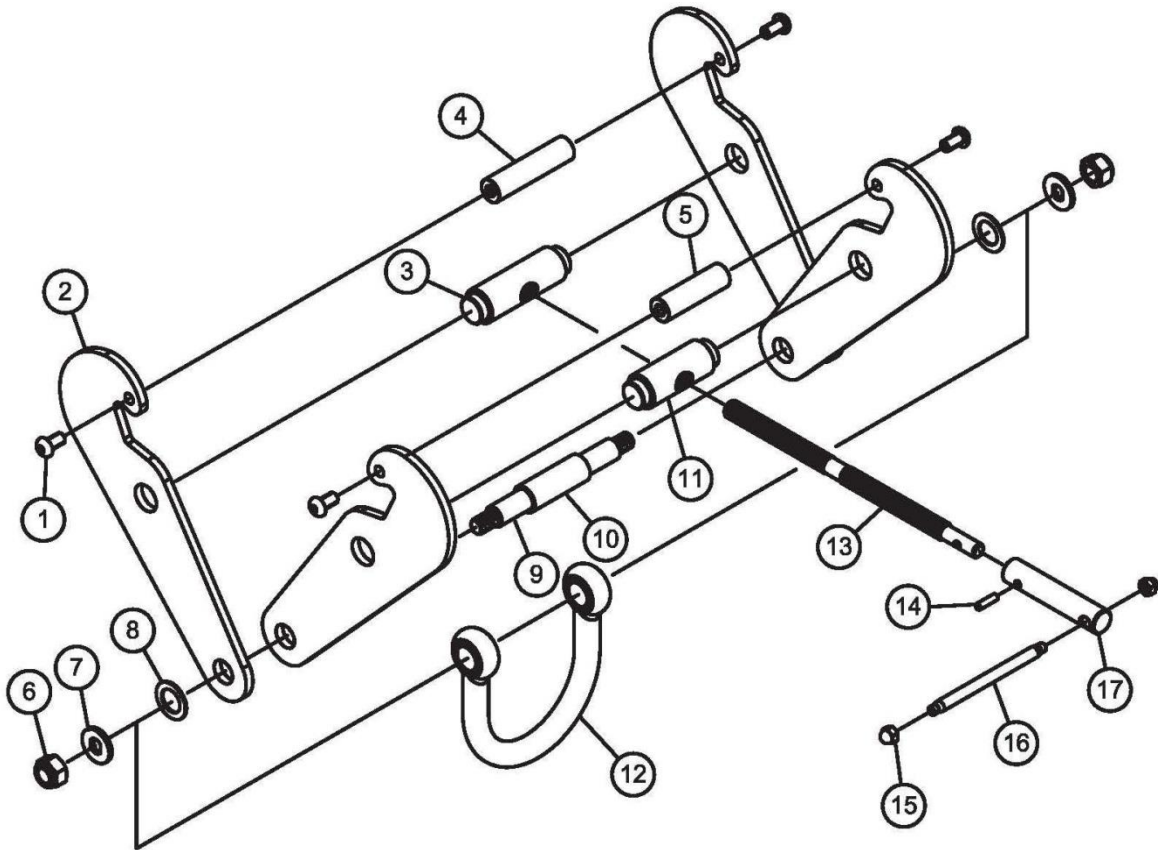
Replacement parts available are 16 & 17 handle bar parts which are available by ordering B-01



BCS Beam Clamp

For BCS models BCS-0300 and BCS-0500 (3t and 5t capacity)

The following diagram is intended to clarify terms that appear in the Product Operation and the Inspection and Maintenance chapters.



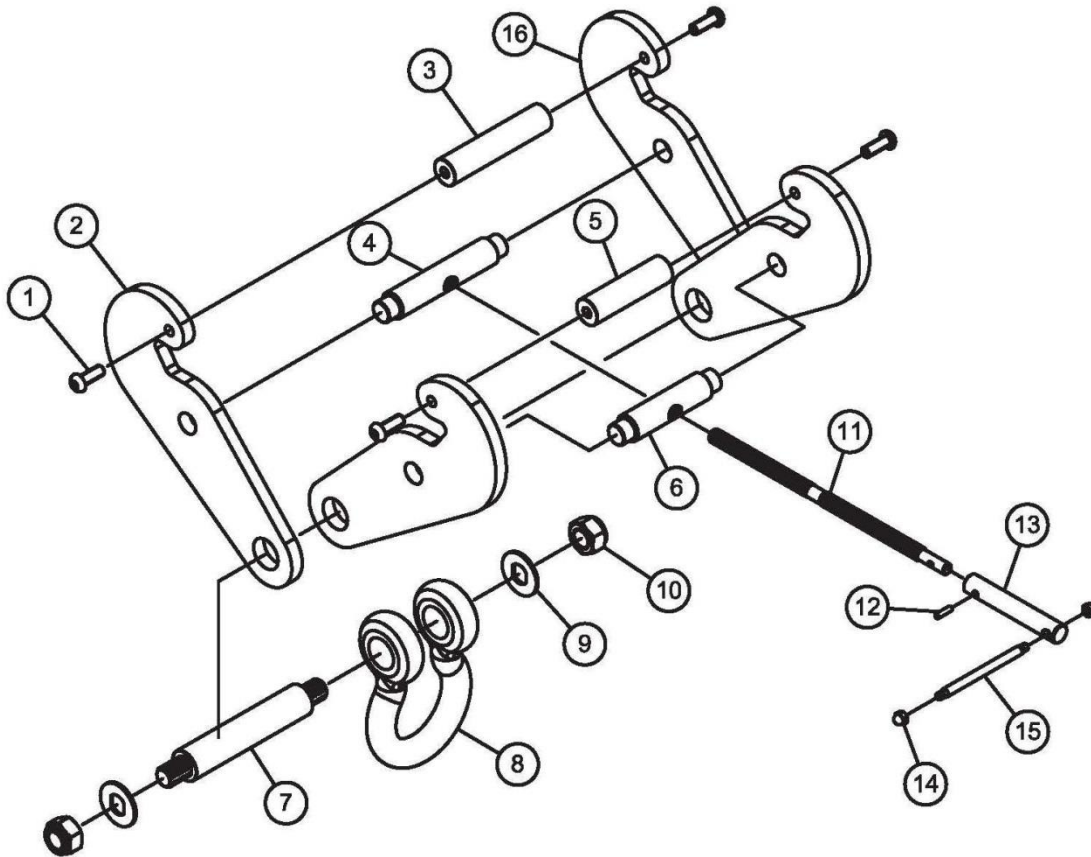
Part No.	Part Name	Part No.	Part Name	Part No.	Part Name
1	Plate connector fixing	7	Keyway washer	13	Adjusting screw
2	Side Frame	8	Washer	14	Securing pin
3/11	Mounting bar	9	Anchor pin	15/16/17	Handle assembly
4/5	Plate connectors	10	protection sleeve		
6	Nut	12	Shackle		

Replacement parts available are 15 & 16 handle bar parts which are available by ordering B-01



BCS Beam Clamp
For BCS model BCS-1000 (10t capacity)

The following diagram is intended to clarify terms that appear in the Product Operation and the Inspection and Maintenance chapters.



Part No.	Part Name	Part No.	Part Name	Part No.	Part Name
1	Plate connector fixing	7	Anchor pin	11	Adjusting screw
2	Side Frame	8	Shackle	12	Securing pin
3/5	Mounting bar	9	Keyway washer	13/14/15	Handle assembly
4/6	Plate connectors	10	Nut		

Replacement parts available are 14 & 15 handle bar parts which are available by ordering B-01



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