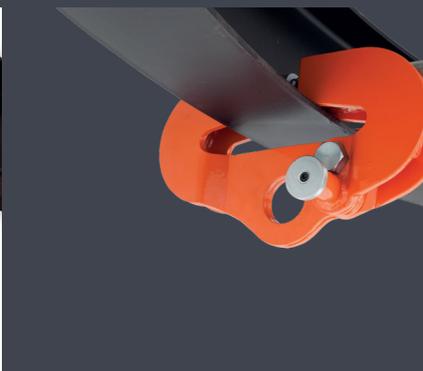




**William Hackett**

# BEAM CLAMPS USER MANUAL



Manufactured in accordance with  
BS EN13155: 2003 + A2: 2009 - Cranes - Safety – Non Fixed Load Lifting Attachments.  
Australian Standard AS4991-2004  
American Standard ASME B30.20

## **WH BC Fixed Jaw Super Clamp**



## **WH UBC Universal Beam Clamp**



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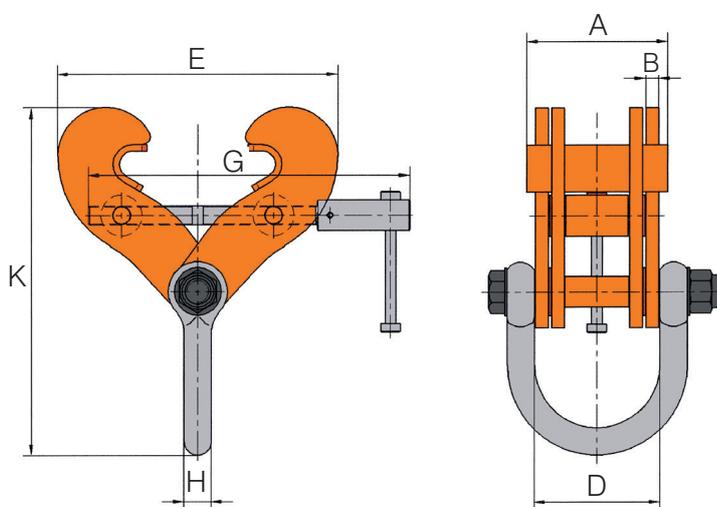
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# WH BC Fixed Jaw Super Clamp

## Specifications and Dimensions

The WH-BC fixed jaw super clamp is fitted with a 'gussett' in both jaws of the beam clamp maximising contact between the beam and beam clamp thereby increasing the grip of the beam clamp. A shackle is fitted to the bottom of the beam clamp allowing an easy connection of the hoist to be attached.

This fixed jaw super clamp can be used to an angle of 45° to the vertical. When the angle is moved away from the vertical the working load limit of the beam clamp needs to be reduced. Please refer to the table opposite on page 67 for the reduction in working load limits when side loads are applied.



Part Code	Model No.	WLL tonnes	Beam Range mm	Max. Beam Thickness mm	A mm	B mm	D mm	E max	E min	G mm	K max	K min	H mm	Mass Kg
027.200	WH-BC2	2.0	76 - 190	14	130	3	90	254	133	275	263	223	20	4.0
027.320	WH-BC3	3.2	76 - 190	16	130	12	102	275	166	275	289	251	20	8.0
027.320.E	WH-BC3W	3.2	127 - 350	16	130	12	102	438	228	560	375	294	20	11.5
027.400	WH-BC4	4.0	150 - 254	12	130	10	112	371	185	410	369	308	25	11.0
027.500	WH-BC5	5.0	76 - 190	12	130	12	116	306	191	295	338	300	25	10.0
027.500.E	WH-BC5W	5.0	150 - 305	12	130	12	116	422	264	410	413	360	25	15.0
027.600	WH-BC6	6.0	203 - 457	24	140	12	116	608	267	560	511	402	25	18.8
027/1000	WH-BC10	10.0	203 - 457	24	140	20	118	608	267	560	530	421	32	28.0
027/1500	WH-BC15	15.0	203 - 457	54	170	20	116.5	648	400	660	684	608	40	49.5
027/1500.E	WH-BC15W	15.0	406 - 610	54	170	20	116.5	800	600	810	812	706	40	58.5

# WH BC Fixed Jaw Super Clamp

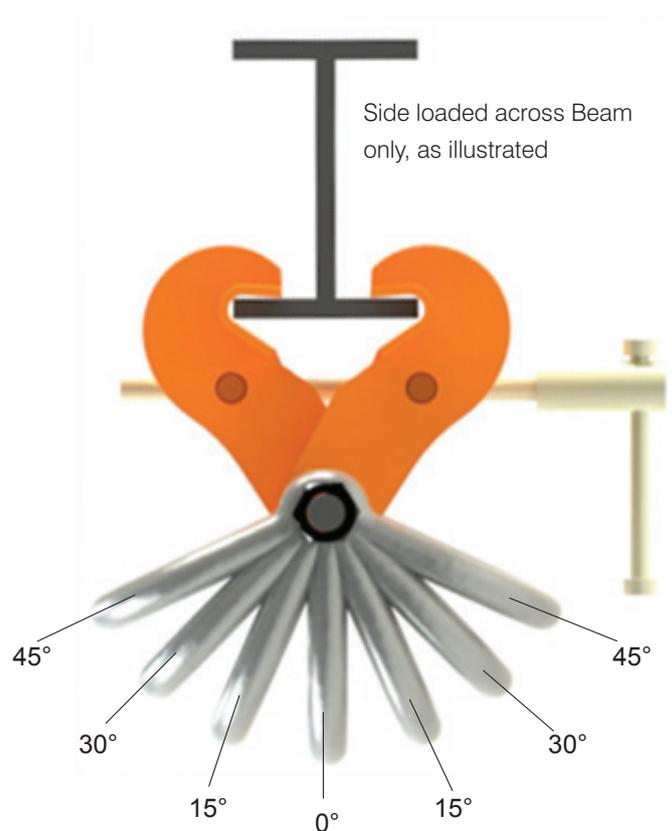
The working load limits below and derations have been established specifically for William Hackett clamps and only apply in overhead beam attachment i.e: DO NOT apply if clamps are to be used for lifting beams.

The tables apply to our clamps only (selected models) and we strongly advise that stress calculations should be carried out (by the user's engineering department) for all support steelwork.

**WARNING:** All clamps must be correctly applied to the beam by a competent person and fully hand tightened. If in doubt, contact the manufacturer for their recommendations.

**NOTE:** Clamp model WH-BC2 (027.200) is not suitable for any side loading as it is of lightweight design.

Although William Hackett is confident that our beam clamps could operate at 90 degrees without any reduction in efficiency, William Hackett do not recommend this type of use in application, as there will be a significant overturning moment generated on the beam flange and this could result in the actual supporting structure failing or being permanently deformed and or damaged. If clamps are used in any other way than that indicated above William Hackett will not accept any liability and would strongly recommend that this unsafe practice is not adopted.



## Reduction in Working Load Limits when Side Loads are Applied

Angle From Vertical	0°	0° to 15°	15° to 30°	30° to 45°
Reduction Factor	Nil	17%	34%	50%
Models	WLL	WLL	WLL	WLL
027.200	2 tonne	N/A	N/A	N/A
027.320, 027.320.E	3.2 tonne / 3.2 tonne	2.7 tonne	3.2 tonne	1.6 tonne
027.400	4 tonne	3.3 tonne	2.6 tonne	2 tonne
027.500, 027.500.E	5 tonne	4.1 tonne	3.3 tonne	2.5 tonne
027.600	6 tonne	5 tonne	4 tonne	3 tonne
027/1000	10 tonne	8.3 tonne	6.5 tonne	5 tonne
027/1500, 027/1500.E	15 tonne	12.4 tonne	10 tonne	7.5 tonne

# WH UBC Universal Beam Clamp

## Specifications and Dimensions

The William Hackett WH-UBC Universal Beam Clamp has been designed not only for vertical use, but also for side load applications, where conventional clamps are not suitable.

The Universal Beam Clamp is suitable for pulling and lifting at angles across the beam or as a semi-permanent anchor point.

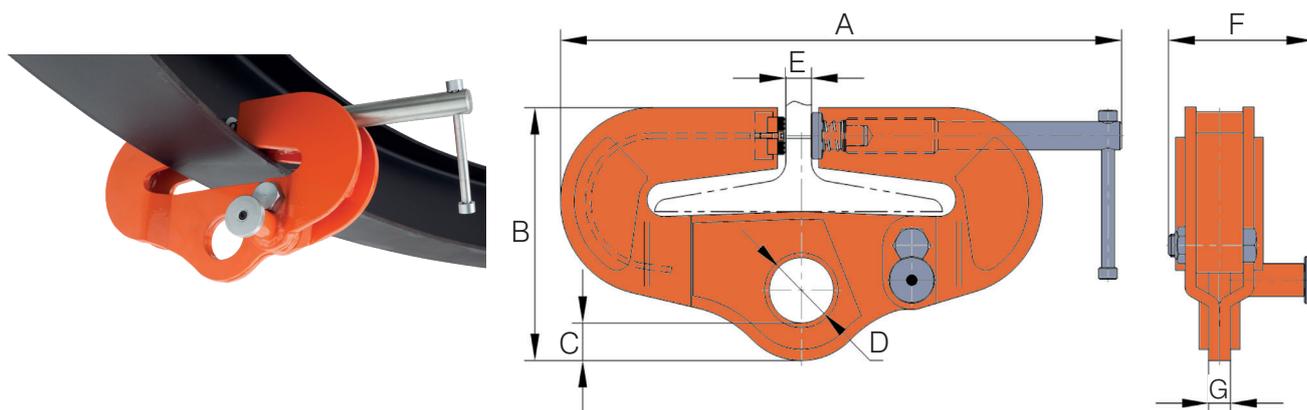
It can be **loaded at any angle** and eliminates the use of spreader beams in various lifting operations.

Fitted with an adjustable locking mechanism, ensuring secure clamping to the beam.

Built-in suspension point for low headroom design.

Ergonomic design allowing for quick clamping and unclamping.

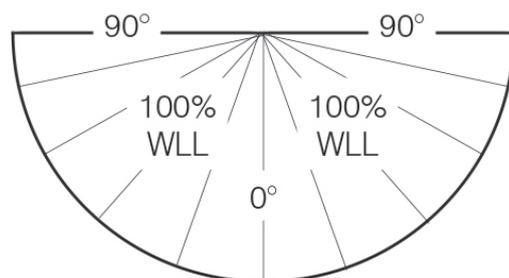
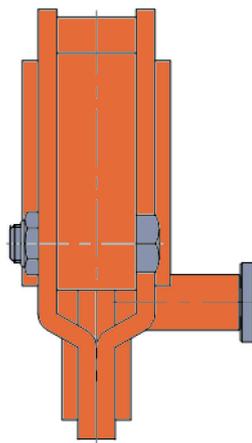
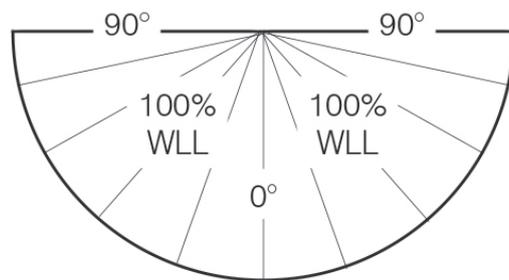
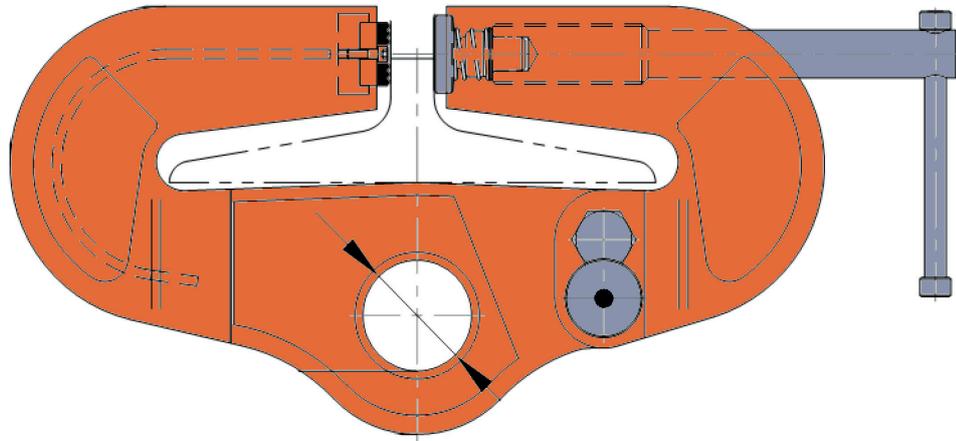
W.L.L. capacities available at 3.2 tonnes, 5.0 tonnes and 10.0 tonnes and designed to accommodate a range of beam widths.



Part Code	WLL tonnes	A mm	B mm	C mm	D mm	E mm	F mm	G mm	Beam Width mm	Mass kg
028.200	2.0	450.0	203	22.5	Ø58	32.5	118	16	125 - 204	9.5
028.320	3.2	550.0	235	28.0	Ø60	33.0	133	20	125 - 204	14.7
028.500	5.0	618.5	270	37.5	Ø75	36.0	157	24	125 - 305	28.3
028.1000	10.0	618.5	270	35.0	Ø80	36.0	225	44	125 - 305	37.8
028.1000.E	10.0	700.0	298	38.0	Ø80	70.0	230	44	225 - 405	47.0

# WH UBC Universal Beam Clamp

William Hackett Universal beam clamps can be used in all directions in all lifting applications at 100% of the Universal beam clamp Working Load Limit (WLL).



# **Super Clamp / Universal Beam Clamp Selection**

1. William Hackett beam clamps are manufactured in accordance with British and European Standard BS EN 13155:2003+A2:2009.2.
2. William Hackett beam clamps are available in a range of sizes and are suitable for both temporary and permanent load attachment applications.
3. The configurations of the William Hackett beam clamps are in accordance with the product specification, dimensions and working load limit recorded in the relevant tables on page 4 and 5.
4. William Hackett beam clamps can be used within an operating temperature range of -10°C to +55°C.
5. The WLL of William Hackett beam clamps should be determined by reference to the relevant specification tables detailed in pages 4, 5, 6 and 7.
6. In accordance with statutory requirements (e.g. The Lifting Operations and Lifting Regulations 1998), all lifts using beam clamps should be planned by a competent person; require risk assessment and the production of a task method statement; and be subject to execution by suitably trained operatives under the supervision of a responsible person. The specification of the beam clamp required to achieve a safe lifting operation must be determined by a competent person.
7. Careful consideration should be given to the mass of the load being lifted and any dynamic factors that may be likely to affect the load on the beam clamp. Select the beam clamp capacity equal to or greater than the load.
8. It is not intended that the recommendations in this manual take precedence over existing plant safety rules and regulations or OSHA regulations. In the event that conflict exists between a rule set forth in this publication and a similar rule already set by an individual company, the more stringent of the two should take precedence.
9. A thorough study of the information in this manual should provide a better understanding of safe operating procedures and afford a greater margin of safety for people and equipment.

# Storage and Control Procedure

The equipment should ideally be stored in a purpose designed facility where it can be kept secure from unauthorised use. A responsible person should control the issue and receipt of all lifting appliances and accessories, and a system to manage statutory inspections should be in place.

Storage would normally be on suitable racks within a container a manner that prevents accidental damage.

1. Never return damaged beam clamps to storage. The equipment should be dry, clean and protected from corrosion.
2. Store beam clamps on a rack and not lying on the ground. The storage area should be dry, clean and free from contaminates which could harm the equipment.
3. If a beam clamp is permanently installed on a beam, it should be protected from the elements as far as possible.

During transport to the worksite and whilst in store at the worksite, the equipment should be protected from exposure to any conditions which may affect its ability to operate safely. In particular, it should be protected from exposure to:

- water/sea water;
- temperatures higher than can be comfortably tolerated by the hand
- temperatures below freezing point
- solvents
- corrosive chemicals or fumes
- grit, sand and wind-blown dust.

Any defects should be reported to the responsible person and damaged trolleys should be quarantined.

Duty holders and actual users of lifting equipment, including beam clamps and associated components can obtain more detailed information and guidance on safe use and compliance with statutory requirements from the following publications;

HSE Publication L22 (2014) Safe Use of Work Equipment.

HSE Publication L113 (2014) Safe Use of Lifting Equipment.

HSE Publication INDG422 (2008) Thorough Examination of Lifting Equipment.

HSE Publication L23 (2004) Manual Handling.

HSE Publication L25 (2005) Personal Protective Equipment at Work.

# Pre-use Procedure

Before issue from the designated storage location the certification supplied with the beam clamp should be confirmed as within date.

The label on the beam clamp should be fully legible and it should correspond with the relevant certification.

## Inspection, maintenance and discard criteria

1. Lifting equipment, including beam clamps, should be thoroughly examined before first use and at periodic intervals in accordance with statutory requirements (i.e. the Lifting Operations and Lifting Equipment Regulations 1998).
2. Only competent qualified people should carry out maintenance and repairs of lifting equipment including William Hackett beam clamps.
3. The user should inspect the equipment before each period of use for distortion, nicks, gouges, weld splatter, heat discolouration, and effective rotation of the threaded adjustable connection bars and wheels, all of which are quarantine criteria.
4. The identification and WLL information must be clearly visible on the beam clamp accompanied by the UKCA and CE mark.
5. William Hackett beam clamps should be kept lubricated.

Conducting thorough and consistent checks on a beam clamp immediately prior to use will help identify problems due to accidental damage, corrosion, or inappropriate storage. Recommended checks include:

1. If necessary the beam clamp should be cleaned before inspection.
2. Check all fixings and fasteners are present, of good condition and secure.
3. Check for damage, excessive wear and signs of overloading.
4. Examine the beam clamps for wear distortion, damage and cracks.
5. Examine the beam clamp attachment point.

**If any of these points are not satisfied the beam clamp MUST NOT be used.**

NB: All personnel involved in using lifting equipment in any of its many forms must be provided with suitable training. This is a specific requirement highlighted in the Health & Safety at Work etc. Act 1974 and ancillary legislation and is of particular concern given the risk to individuals and equipment due to incorrect use.

# Safe Use Information

1. Do not install lifting equipment or attempt lifting operations unless you have been properly trained and you understand the use of the equipment.
2. A competent person must ensure that the load and the material from which it is constructed has the adequate strength and capability to with stand the forces imposed during the lifting operation.
3. Inspect the beam clamp prior to use. If any damage is apparent the beam clamp should be quarantined for inspection by a competent person.
4. Ensure that the beam and structure has sufficient load bearing strength and the capacity to support the load.
5. Ensure that the lifting appliance is compatible with the beam clamp and that the hook or other attachment component is free to articulate within the attachment point.
6. Never shock load beam clamps. Take up the tension in the lifting appliance in a controlled manner and apply the same principle when landing the load.
7. Do not expose beam clamps to chemicals or corrosive solutions (whether immersed in such solutions or used in atmospheres in which fumes are present), particularly acidic or strongly alkaline environments without consulting the supplier or manufacturer.
8. Do not leave suspended loads unattended. In an emergency, cordon off the working area and establish safe exclusion zones.
9. Never return a damaged beam clamp to stores, it should be reported to a competent person.
10. Beam clamps shall not be used for transporting people.
11. Beam clamps shall not be used to suspend loads over or near people.
12. Always read the instruction manual prior to use.
13. Ensure pre-use inspections have been performed prior to use.

# ***Assembly Instructions for the Fixed Jaw Super Clamp***

## **Installation of the William Hackett Fixed Jaw Super Clamp**

1. Check that the beam width is within the beam clamps stated range. NEVER use a beam clamp on a beam outside of its range of adjustment.
2. Using the adjustment bar, open the beam clamp so that it can be passed over the beam flange.
3. Using the adjustment bar close the beam clamp until the beam clamp jaw gussets have securely gripped the beam flange.
4. Once the correct engagement of the beam clamp jaw gusset with the beam flange is achieved the threaded adjustment bar should then be secured by hand tightening until resistance is felt and then adjustment bar handle will no longer rotate. This is important to ensure the beam clamp remains safe and secure in use.

# ***Assembly Instructions for the Universal Beam Clamp***

## **Installation of the William Hackett Universal Beam Clamp**

1. Check that the beam width is within the beam clamps stated range. NEVER use a beam clamp on a beam outside of its range of adjustment.
2. To prepare the universal beam clamp to be attached onto the beam pull the locking pin out to allow the release the right clamp assembly articulating arm. The right clamp assembly articulating arm will then rotate 90° down and sit in the open position.
3. Place the left clamp assembly fixed arm onto one side of the beam flange with the fixed jaw placed against the beam web. Then rotate the right clamp assembly articulated arm back into position until you feel the locking pin click back into position.
4. Rotate the adjustment bar until the beam clamp Cam has engaged with the beam web.
5. Once the correct engagement of the beam clamp Cam with the beam web is achieved the threaded adjustment bar should then be secured by hand tightening until resistance is felt and then adjustment bar handle will no longer rotate. This is important to ensure the beam clamp remains safe and secure in use.



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