

# Concrete Pipe Lifter User Instructions

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## 1. Product Description

The Pipe Lifter is a specially designed quick hitch attachment for an excavator for offloading and transportation on site of concrete pipes.

It can eliminate or significantly reduce the need for personnel to work at height on the vehicle load deck and offers a time-saving benefit when offloading products as the need for slinging is removed.



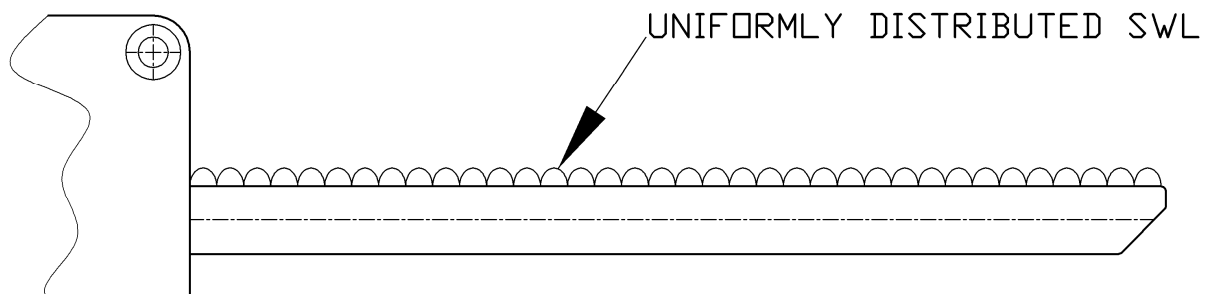
Using the Pipe Lifter is easier, faster and more efficient than traditional methods.

A short video of the Pipe Lifter in use can be viewed on YouTube (search on Stanton Bonna) or on the Stanton Bonna website.

The Pipe Lifter is supplied in accordance with The Provisions and Use of Work equipment regulations 1998 and is CE marked accordingly.

## 2. Application and Fitting

The Pipe Lifter is designed to be quick hitch mounted. Each model is designed for specific quick hitch dimensions and has the uniformly distributed Safe Working Load (SWL) clearly marked.



Pipe Lifter Model	Uniformly distributed SWL (t)	Maximum allowed size of Stanton Bonna Pipe (DN)	Pipe Lifter self wt (kg)
T2-i-A	2.1	900	550
T4-080-A	4.0	1200	650
T12-90-A	12.0	2400	1100

Note: T2-i-A can be supplied with a number of different quick hitch pin diameters.

Users must ensure that the excavator and quick hitch to be used with the Pipe Lifter are of sufficient capacity to lift the combined weight of the product and the Pipe Lifter and that the excavator is suitable for use as a lifting machine, i.e. it has current certification under the Lifting Operations and Lifting Equipment Regulations 1998. For further details of Pipe Lifter quick hitch dimensions please refer to Stanton Bonna.

The Pipe Lifter can be made bespoke for quick hitch variants. Please contact Stanton Bonna for further information.

The Pipe Lifter can be mounted pointing away from or towards the cab, depending on the size of pipe to be lifted and the characteristics of the excavator.

The Pipe Lifter should be attached in accordance with the excavator and quick hitch manufacturer's instructions, paying particular attention to any safety devices for example, fail safe locking pins. Once correctly fitted users should complete any safety checks and procedures to ensure the Pipe Lifter is securely fitted before any lifting operation takes place.

### 3. Operation

Recommended Pipe Lifter for specific pipe sized table.

Pipe DN	Full length (kg)	Rocker (kg)	Rockers per lift	Butts per lift	Model T2	Model T4	Model T12
300	425	135	3	3			
375	505	155	3	3			
450	710	225	3	3			
525	950	300	3	3			
600	1215	375	3	3			
675	1275	650	2	1			
750	1500	750	2	1			
800	1650	775	2	1			
900	2025	925	2	1			
1050	2700	1250	2	1			
1200	3500	1550	2	1			
1400	4550	2275	1	1			
1500	5300	2700	1	1			
1600	5580	2800	1	1			
1800	7100	3600	1	1			
2000	8700	-	-	-			
2200	10400	-	-	-			
2400	12000	-	-	-			

Note: The lifting capacity of the excavator may govern the maximum weight that can be lifted.

The usual precautions in respect of the safe operation of lifting machines and excavators should be in place.

Personnel should be positioned in a safe location. If a banksman is employed, the banksman should not work below or directly in front of or behind the load and should remain visible to the excavator driver at all times.

The area for off loading should provide adequate support for equipment and products and be reasonably flat.

The Pipe Lifter should always be inspected before use (see section 4).

The Pipe Lifter boom should be fully inserted into the pipe(s) to be lifted, until the rubber buffer is in contact with the first pipe end face. The boom should be entered into the pipe(s) as straight as possible to the bore and with a slight back tilt.

Carefully lift the boom until the boom tip is in contact with the pipe crown. Continue the lift so that the boom makes uniform contact with pipe crown along its full length. The pipe(s) may then be lifted clear of the ground or trailer, for example.



When travelling, lower the pipe(s) to as close to the ground as practically possible, whilst maintaining good driver visibility, and secure pipes on the lifter by increasing the back tilt to between 10° and 30° to the horizontal depending on the roughness of the terrain.

Short length pipes (rocker, butt and uni-junction pipes) may be handled in twos or threes according to the following. Users should additionally ensure that the safe working load is not exceeded.

- DN 300 – 600 rocker and butt pipes (0.6m nominal effective length) may be lifted up to three at a time, with a maximum of 100mm\* overhang of the pipe from the tip of the boom.
- DN675-1200 rocker pipes (1.0m normal effective length) may be lifted up to two at a time, with a maximum of 250mm \*overhand of the pipe from the tip of the boom.
- DN 675 – 1200 butt pipes (1.25m nominal effective length). Only one product may be lifted at a time. The boom should be fully inserted into the pipe bore.
- DN 1400 – DN1800 rocker and butt pipes (1.25m normal effective length). Only one produce may be lifted at a time. The boom should be fully inserted into the pipe box bore.

\*Manufacturing tolerances in length may prevent this being possible in some cases and hence the number of pipes lifted should be reduced.

To minimize risk of damage, lift short length pipes with sockets next to each other where possible.

For best load security, lift pipes with the sockets nearest the quick hitch attachment where possible (see cover plate).

When working on sloping ground allow for the slope in assessing Pipe Lifter tilt angle and to ensure stability of the pipe on the lifter.

Products should be carefully lowered onto the ground or appropriate supports for storage. Avoid contact of spigot or socket with hard ground. Refer to Stanton Bonna product information for guidance on storing and stacking pipes.

Pay particular attention to securely storing circular products to prevent them rolling.

## 4. Inspection

The Pipe Lifter is classed as a lifting accessory and should therefore be inspected in accordance with statutory requirements including a thorough examination every six months by a competent person.

Before each use, the following should be checked:

- The quick hitch on the Pipe Lifter is compatible with the quick hitch on the excavator.
- The Pipe Lifter is clear of dirt and debris that prevent inspection and secure connection.
- The Pipe Lifter is free from damage, dents or tears to plates and the quick hitch pins are secure and free from excessive wear.
- On the T2 lifter check that the quick hitch head bolts have not become loose
- The unit is free from cracks, especially at welds.
- The rubber buffers and sleeve are in good condition.
- That all safety devices work with the Pipe Lifter connected to the excavator.

Defects should be referred to a competent person.

## 5. Safety

The Pipe Lifter is an innovation that reduces risks associated with the offloading and transportation of pipes. However as with all construction activities, hazards remain and risks should be appropriately managed.

When using an excavator for lifting, particular attention should be given to the consequences of a mechanical or hydraulic failure. Arrangements to keep personnel at a safe distance should be made by, for example, implementing a cordoned-off area for unloading.

The Management of Health & Safety at Work Regulations 1999, requires employers to carry out risk assessment of hazards and to identify the control measures needed to reduce risks to an acceptable level and comply with other health and safety legislation.

The Lifting Operation and Lifting Equipment Regulations 1998, requires employers to ensure that all lifting such as the unloading of concrete products are all properly planned by a competent person, appropriately supervised and carried out in a safe manner.

Further information on the management of Health & Safety may be found in the Further Information section of this document.

The following practical general safety guidance should be followed when using the Pipe Lifter:

- Do not travel on steep gradients when transporting pipes.
- Do travel slowly over rough terrain to avoid shock loading to lifting equipment and damage to products.
- Never exceed the Safe Working Load of the Pipe Lifter.
- Do not operate the Pipe Lifter with a downward/forward tilt.
- Do not use the Pipe Lifter for purposes other than those for which it was designed.
- Do not use the Pipe Lifter to prod, push or roll products.
- Always ensure the Pipe Lifter is inserted into the pipe before lifting in accordance with the instructions in section 3.
- Never carry a pipe over personnel.
- Do include the weight of the Pipe Lifter in assessing loads to be carried by the excavator.
- Do check the security of fit of the quick hitch connection.
- Keep the Pipe Lifter as clean as practical.
- Do not make modifications to the Pipe Lifter.
- Never leave excavator unattended when using the Pipe Lifter.

The pipe shifter is manufactured, inspected and tested in controlled conditions by the manufacturer and a certificate issued accordingly. If the Pipe Lifter is modified or repaired in any way, it must be subject to further examination and test and a new certificate issued. Failure to do so renders the lifter unusable.

## Further information

*Product Guide, Concrete and GRP.* Stanton Bonna Concrete Ltd.

*Guidance on Lifting Operations in Construction when using Excavators.* Ref CIG 0801 2009, Construction Plant Hire Association.

*Guide for Offloading Deliveries from Concrete Pipeline Product Suppliers.* Concrete Pipeline Systems Association, July 2010.

*Pipe and Manhole Lifting Solutions, A Site Guide for Contractors.* Concrete Pipeline Systems Association, 2011.

*Simple guide to the Lifting Operation and Lifting Equipment Regulations 1998* leaflet INDG 290 HSE Books ISDN 0 7176 2430 7.

*Safe use of Lifting Equipment. Lifting Operations and Lifting Equipment Regulations 1998. Approved Code of Practice and guidance* L113 HSE Books 1998 ISBN 0 7176 1628 2

*Safe use of Work Equipment. Provision and Use of Work Equipment Regulations 1998. Approved Code of Practice and guidance* L22 (Second edition) HSE Books 1998 ISBN 0 7176 1626 6

*Simple guide to the Provision and Use of Work Equipment Regulations 1998* Leaflet INDG291 HSE Books 1999 ISBN 0 7176 2429 3

*Five steps to risk assessment Leaflet INDG163(rev1)* HSE Books 1998 ISBN 0 7176 1565 0

*Managing health and safety: Five steps to success* Leaflet INDG275 HSE Books 1998 ISBN 0 7176 2170 7

*Buying new machinery: A short guide to the law and some information on what to do for anyone buying new machinery for use at work* Leaflet INDG271 HSE Books 1998 ISBN 0 7176 1559 6

*Workplace transport safety: Guidance for employers* HSG136 HSE Books 1995 ISBN 0 7176 0935 9

*Managing vehicle safety at the workplace: A short guide for employers* Leaflet INDG199 HSE Books 1995 ISBN 0 7176 0982 0

*Hiring and leasing out of plant: Application of PUWER 98, regulations 26 and 27* Information Sheet MISC156 HSE Books 1998.

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