

**This document is good practice guidance provided by Centrum Pile Ltd to assist customers when developing their own risk assessments, lifting plans and method statements.**

The competence of installation personnel and the working environment is outwith the control of Centrum Pile Ltd.

Your piles have been made by Centrum Pile Limited in a factory with an ISO 9001:2015 quality management system under strict quality control (international standard BS EN 12794:2005)

All products have limitations and benefit from considerate use.

Centrum precast concrete piles are designed and made to withstand the loads and stresses from: -

- Lifting, loading and unloading using built in lifting points;
- Transportation on normal vehicles having a flat load bed;
- Stacking / stocking when properly supported.
- Impact from a suitably cushioned pile driving hammer acting through the long axis of pile.

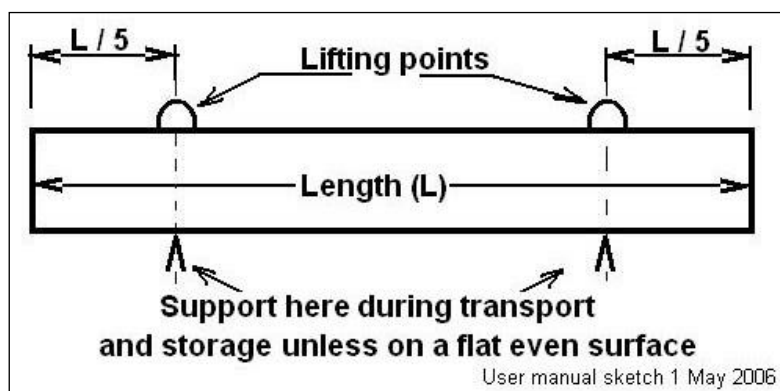
Pile units will be damaged by being: -

- Dropped, colliding with another pile or hard object;
- Dragged, pushed, or knocked sideways (for example by a digger bucket);
- Pulled long distances with one end only raised.

#### HANDLING PILES

##### Loading / unloading/ stacking:

- Lift your piles by both of the built in lifting eyes and
- Support them directly under the eyes when stacking.
- It is not advisable to stack pile units on top of each other at site unless they will be moved again by lifting. *Lifting eyes may be damaged or piles broken when they drop a level if pulled from stack.*



A label is fixed to one end of each pile detailing its size, reinforcement & date cast.

The table below has been prepared to assist with your lifting plans & method statements.

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Section	200	250	300	350	400
Kg / m	99.2	150.3	216.4	288.5	396.1
Nr of bars	4	6	8	12	16
Length m	<b>Pile mass (t)</b>				
3	0.3	0.5	0.7	0.9	1.2
4	0.4	0.7	0.9	1.2	1.6
5	0.5	0.8	1.1	1.5	2.0
6	0.6	0.9	1.3	1.8	2.4
7	0.7	1.1	1.5	2.1	2.8
8	0.8	1.2	1.8	2.3	3.2
9	0.9	1.4	2.0	2.6	3.6
10	1.0	1.5	2.2	2.9	4.0
11	1.1	1.7	2.4	3.2	4.4
12	1.2	1.8	2.6	3.5	4.8
13		2.0	2.8	3.8	5.2
14		2.1	3.1	4.1	5.6
15			3.3	4.4	6.1
16				4.7	6.5
17				5.0	6.9
18				5.3	7.3

Adjustment for main steel variance

Density kg/cu m		1m of 12mm dia = cu m	For each additional 12mm bar ADD kg /m
Concrete	2,400		
Steel	7,851	0.000113097	0.616493576

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THREADING & PITCHING (getting the pile from horizontal to vertical for driving)

The pile should not be

- Pulled a greater distance than necessary  
*Potential risk to other people and traffic*
- Pulled over rough ground or obstacles on the ground  
*Increases risk of damage.*
- Hoisted using a single lifting eye; a reevable sling or other measure is advised.

Care must be taken to

- Maintain control of the pile at all times  
*Rapid movement may cause collision with rig resulting in damage and possible falling debris*
- Review operational practices in high winds or restricted visibility.
- Secure the pile as soon as practicable in the driving helmet and with pile arms or similar.
- Keep the bottom of pile as close to ground as practicable at all times.

DRIVING

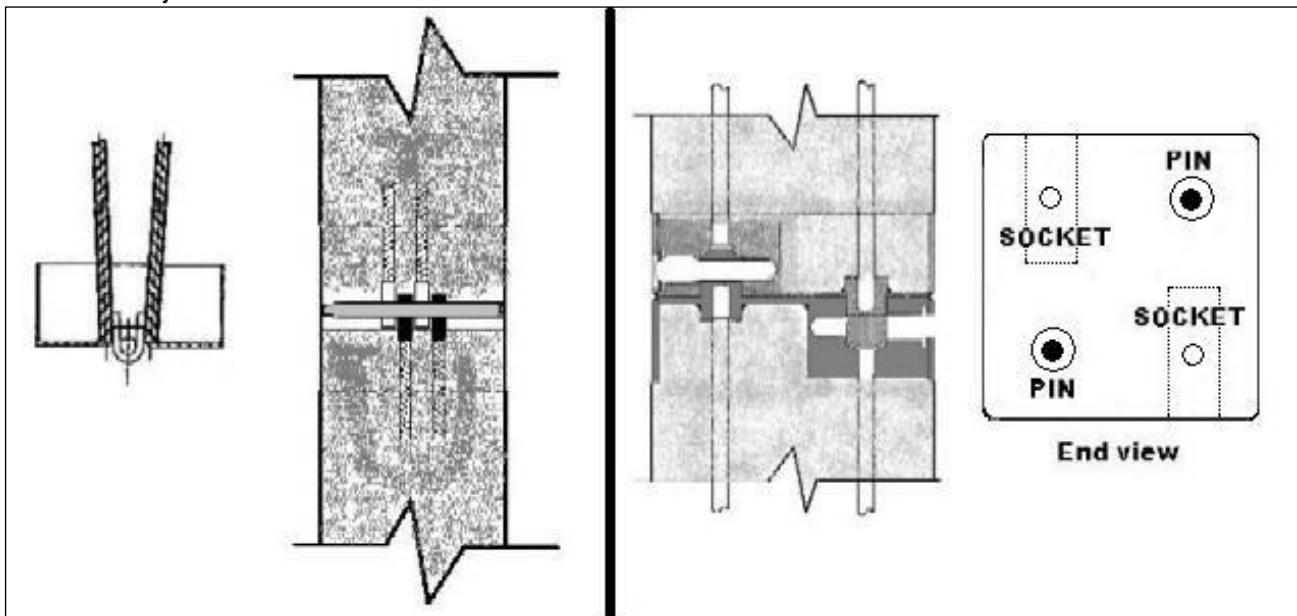
- Avoid forcing piles sideways (any direction) once they are firmly in the ground.  
*High risk of cracking the pile*
- Regularly check alignment of hammer blow and pile shaft  
*Eccentric forces can break piles*
- Check condition of helmet packing (under pack) at start of each pile, replace as required.

JOINTING PILE UNITS

Where longer piles are required units are supplied with a ½ joint.

It is essential to make sure that the pile unit to be added is of the same type and the right way round before threading & pitching.

Sketches of joints



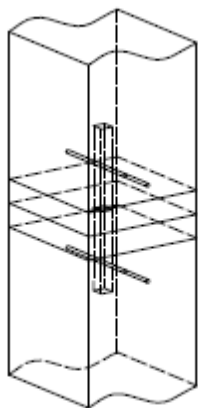
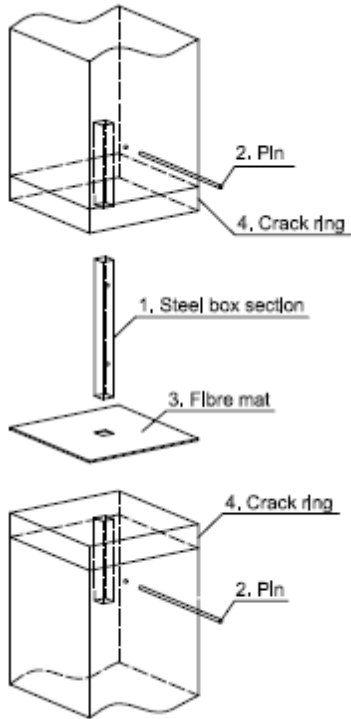
Align hoops & secure with single pin.

Secure with four pins when end plates flush.

JOINTING CD JOINTS

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Line up under and over pile segments - insert common steelbox section into holes and fibre mat between the pile segments, place together and insert joint pins through under and over pile segments to secure.



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