

Linkflote™ pontoon setup excavators

Assumptions made by VolkerMarine Services in the compilation of the table below

1. Excavator pontoon operations are within inland/ protected waters
2. Excavator is positioned with tracks a minimum of 500mm away from pontoon edge
3. The pontoon is ballasted to ensure level trim
4. Deck is protected with timber mats to spread the loading imposed by the excavator
 - a. Excavators up to 20t = 70mm mats
 - b. Excavators 20t and above = 150mm mats

VolkerMarine Services recommended excavator setup

Excavator <5t	=	2 wide x 1 long	=	5m x 5m
Excavator <10t	=	2 wide x 2 long	=	5m x 10.6m
Excavator 10 –13t	=	3 wide x 3 long	=	7.5m x 16m
Excavator 20t	=	4 wide x 3 long	=	10m x 16m
Excavator 24t LR	=	4 wide x 3 long	=	10m x 16m
Excavator 30t	=	4 wide x 3 long	=	10m x 16m
Excavator 40 – 45t	=	5 wide x 4 long	=	12.7m x 21.5m
Excavator 60t	=	5 wide x 4 long	=	12.7m x 21.5m

Considerations to be made by the hirer when determining the pontoon size

1. Excavator weight and duties (see above table)
2. The working requirements from the deck of the pontoon are within the range / radius of the excavator (check minimum / maximum reach)
3. Determine the mooring system required and consider deck space required to accommodate it
4. Determine other equipment and storage required on board and the deck space required
5. Be aware of crush zones created by the excavator tail swing

Stability calculations

In every case, the hirer must ensure by calculation that the particular configuration “set up” complies with BS 6349-6:1989 (Code of practice for maritime structures – Part 6: Design of inshore moorings and floating structures) and the Bailey and Uniflote Handbook, 3rd edition (Hathrell, 1968). All imposed loadings are to be within the structural capacity of the Linkflote™, taking into account the potential breakout forces created by the machine. Checks should be made to ensure that the stability criteria meets the requirements of the excavator manufacturer.