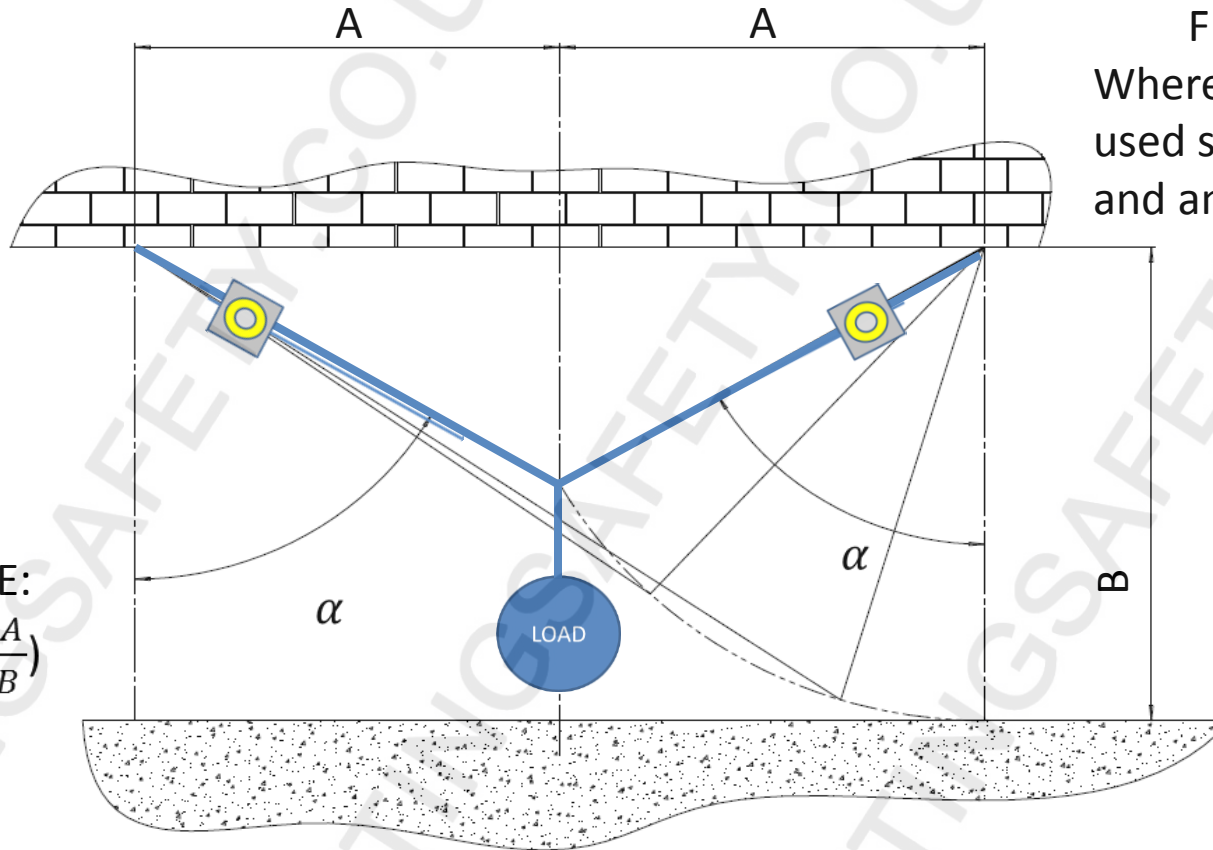




Fleet angle-simultaneous operation for Yale manual chain hoists

March 2015

Maximum fleet angle



FLEET ANGLE
Where 2 hoists are used simultaneously and angle α remains =

FLEET ANGLE:

$$\alpha = \arcsin\left(\frac{A}{B}\right)$$

Example: $A = 2,5 \text{ m}$; $B = 3,5 \text{ m}$ $\alpha = \arcsin\left(\frac{2,5}{3,5}\right) = 45,6^\circ < 60^\circ = \text{No capacity reduction}$

Additional loading through fleeting

$$F = L * \frac{1}{2 * \cos(\alpha)}$$

$F =$ Load on the hoist

$L =$ Load

$\alpha =$ Fleet Angle

Example: Fleeted angle 65°

: Load = 500kg

∴ 500 ÷ 1.18 = 423kg

α	F/L
60°	1,0
65°	1,18
70°	1,46
75°	1,93
80°	2,88

Fleeted use of Yale hand chain hoists

The Yalelift 360 and Yale VS hand chain hoists can be used off centre from the vertical in the Fleeted condition up to a maximum of 60° without capacity reduction. In all cases please ensure that you follow the recommendations set out below.

Conditions

To ensure safe operation of the hoist the following instructions should be observed:

1. Only hoists fitted with swiveling load hooks must be used.
2. The line of force must run straight through the centre of the hoist, the hooks and the connections to the anchorage point and lifting point.
3. When connected, both hooks must be unrestricted and have full articulation.
4. There should be no external force placed on the hoist body that could transfer side loading to the hook and its anchorage point.
5. The anchorage point must be suitable for side loading applications.
6. Ensure the area in which the hoist is to be operated is clear of any obstructions for both the operator and the load path.
7. The maximum loads on the hoist can be calculated using the accompanying table.
8. Do not exceed the maximum load for the angle of operation.
9. During fleeting the resulting loading on the hoist will increase! The diagram on page 2 and the table is only valid for the shown configuration. It assumes that the load is shared equally between the hoist and a second suspension e.g. another hoist.

Fleeted use of Yale hand chain hoists

Operation

In cases where the load is to be lifted by a powered crane there must be a risk assessment in place that identifies any possible overload condition or risk through high dynamic forces generated when using the crane to lift. Deration of at least 15% of the hoist capacity should be applied under these conditions.

In all cases we recommend that a competent person makes a risk assessment of the proposed lifting operation. Any necessary reduction in capacity should also be taken into account when assessing the lift.

During the process of completing the risk assessment it is important to involve the responsible Health & Safety Representative or Site Safety Specialist. Furthermore it is advisable to have a lifting plan showing the positions of the Riggers and Banksman controlling the lift, the load path and the means of communication between themselves.

Additional Guidance

In conjunction with the above guidance we also advise reading the manufacturers operation and maintenance manual, taking into consideration their instructions specific to the product.

Further advice can be found by referring to LEEA Document reference: LEEA 053 edition 2 dated 10.07.13 Guidance on hand chain blocks used at an angle to the vertical.