

# BLOCKS



## Applications

Blocks are used in lifting systems, to change load direction or to drag a load. Blocks and the wire ropes they contain make a connection between a load and a lifting device.

## Range

Green Pin® offers a wide range of blocks. Blocks are available for head loads ranging from 2 tons up to 30 tons. Other types of blocks can be offered upon special request.

## Design

There are different types of blocks with specific designs to suit particular purposes. All types are fitted with conical roller bearings. These can be used for applications with different frequency of use and line speeds. Snatch blocks can be opened up to fit the wire rope easily. There is no need to thread the wire rope through the block.

All types are generally marked as follows:

- Working Load Limit - e.g. 8 t
- manufacturer's symbol - e.g. GP
- wire rope diameter in mm and inches - e.g. 20-22mm  $\frac{3}{4}$  -  $\frac{7}{8}$  inch
- serial number - e.g. 1234567
- CE conformity code - CE

## Finish

Green Pin® Blocks are painted.

## Certification

Specific details of certificate availability can be found on each product page. Please verify your certification requirements at the time of order.

## Instructions for use

Blocks should be inspected before use to ensure that:

- all markings are legible;
- a block with the correct WLL has been selected;
- the WLL applies to static loads only, the possible occurrence of shock loading must be taken into account when selecting a block;
- the block may never be side loaded but may only be used for in-line use;
- always make sure that the hook, eye or shackle of the block is supporting the load correctly;
- the pin, nut, cotter pin, or any other locking system cannot vibrate out of position;
- the sheaves are functional and rotate easily;
- blocks are free from nicks, gouges and cracks;
- blocks may not be heat treated as this may affect their WLL;
- never modify, repair or reshape a block by machining, welding, heating or bending as this may affect the WLL.

Blocks must be regularly inspected in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. which may lead to deformation and alteration of the material structure. Inspection should take place at least every six months and more frequently when the blocks are used in severe operating conditions.

## Loads on blocks

The WLLs of our blocks are the maximum loads to be applied to the blocks and their connecting fittings. The load on a sheave or block varies with the angle between the lead and load line. See figure 1. When the two lines are parallel, 1 t on the lead line results in a load of 2 t on the fitting. As the working angle between the lines increases, the load on the fitting is reduced by the angle factor as per table 1. All loads shown ignore frictional losses in the lifting system.

Table 1

working angle	angle factor
0°	2
10°	1.99
20°	1.97
30°	1.93
40°	1.87
45°	1.84
50°	1.81
60°	1.73
70°	1.64
80°	1.53
90°	1.41
100°	1.29
110°	1.15
120°	1
130°	0.84
135°	0.76
140°	0.68
150°	0.52
160°	0.35
170°	0.17
180°	0

Figure 1

