

The technology employed by us is based on an exceptionally well defined and flexible modular system which is both advanced in its concept and yet more economical than competitor systems which often require more specialised building work.

In purely practical terms it offers the lift designer a number of options which may be used in order to match the latest technology with customer requirements to produce the optimum solution.

### Standardised Components

In engineering terms, the limit of the lifting capacity of a hydraulic ram is determined by:

- The area of the ram
- The oil pressure in the hydraulic system
- The lift travel (ram length)

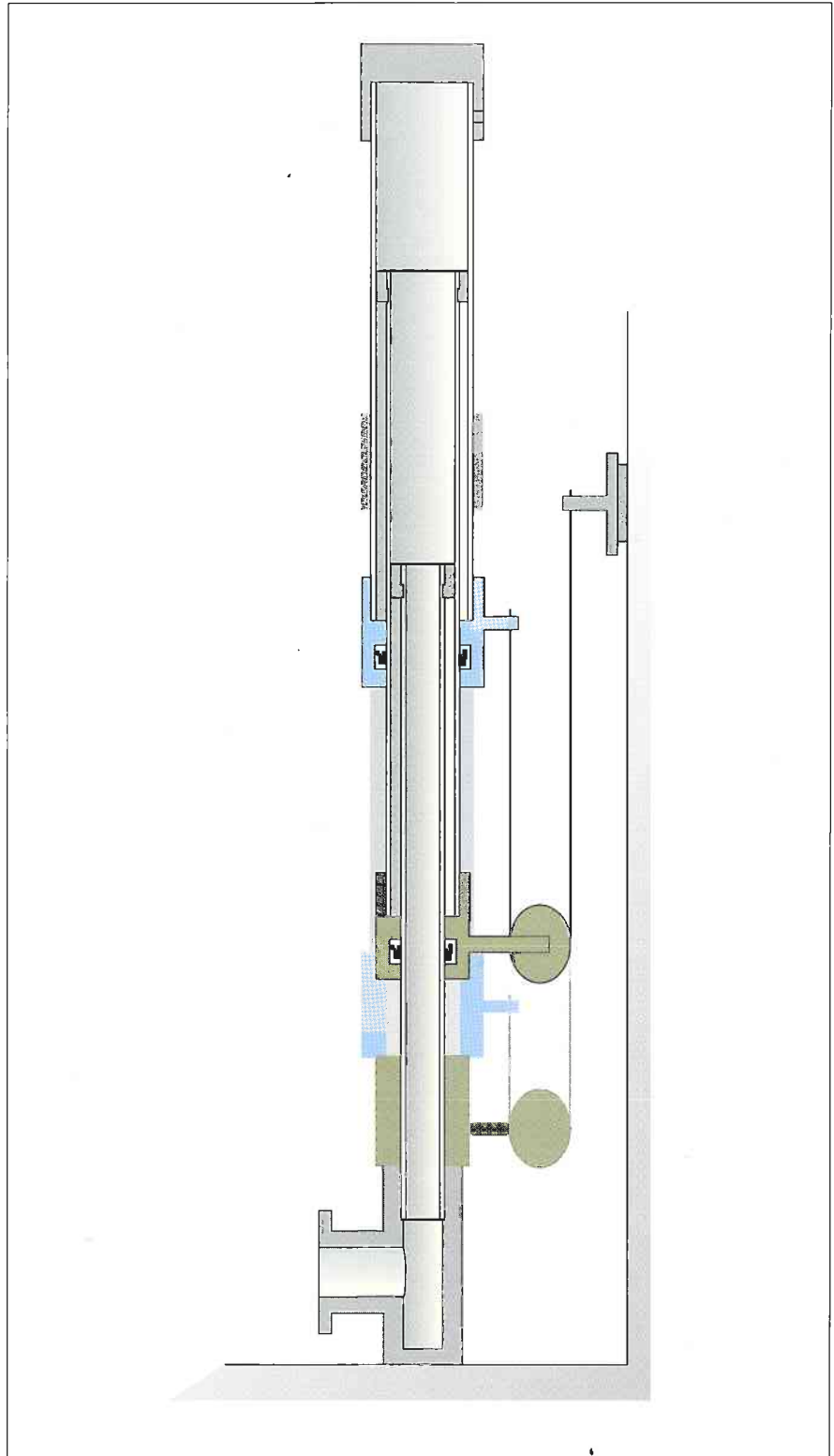
The total load to be lifted is not therefore a factor. Each cylinder carries its own load and is dimensioned accordingly for this load.

The total capacity of the lift is determined by the size and number of the rams. The number of cylinders required is calculated by dividing the total force by the lift force of each ram.

This means that whatever the load required, we can offer a solution using standard components and modules. If, for example, a load of 20 tonnes plus a static load which is assumed to be of the same magnitude, i.e. total load of 40 tonnes is to be lifted through a travel approximately 20 metres and at a speed of 0.2 m/s, there are several possible combinations.

Our designers would endeavour wherever possible, to choose standard rams of the same diameter which are placed in pairs symmetrically around a guide. In this imaginary example 24 four stage rams of the second largest diameter from the standard range have been chosen to give a static hydraulic pressure of 3.2 MPa.

Designing using standard modules enables the designers to produce a quick and proven solution with built in flexibility for further changes to the parameters. For example, lift travel, load etc.



*When a lift starts off from its base position, it is the largest cylinder which moves first. This pulls the chain, which in turn pulls with it cylinder number two steplessly in the ratio 1:2. The movements are fully integrated and smooth. The system offers many advantages including an exceptionally smooth ride, small power losses and high efficiency.*

*The lift can be kept well serviced at all times, since it is easy to check its operation visually, and gain access if any action is to be taken. The whole cylinder with all the peripheral functions is readily accessible for inspection and maintenance.*