

Handling Technology

Traditionally designers had to use conventional cylinders to provide movement/force and then select guide units or design mechanisms to carry the load that was being moved.



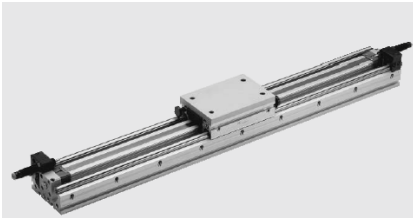
Using an integrated cylinder/guide assembly reduces design and assembly time. Also maintenance becomes simpler because complete sub-assemblies incorporating bearings, guide systems and the actuator are quickly and easily replaced.

The Metal Work Handling Range

The Metal Work range includes grippers, slide units, guide units, rotary actuators and rodless cylinders. Plus there are guide units for standard cylinders, non-rotating cylinders and much more to make it easier to design your handling application.

Rodless Cylinders

A rodless cylinder saves space compared to a conventional cylinder and the force in either direction is the same (with a conventional cylinder the retraction force is reduced).



Metal Work rodless cylinders are available in bore sizes 25, 32, 40 & 63 with strokes up to 5.7 metre.

There is the option of two different integrated guide systems, depending on the load being carried, plus a double rodless design. End stops with shock absorbers can also be included along with numerous mounting options

Rotary Actuators

Metal work can offer the larger rack & pinion style rotary actuators in sizes 32mm to 100mm and rotations 90°, 180°, 270° and 360°.



There are also two styles of compact double rack & pinion rotary actuators. The R2 is available in 90° or 180° rotation in 12, 16, 20 & 25. The R3 is adjustable from 0° to 180° and available in sizes 16, 20, 25 & 30.

End position shock absorbers can be installed on the R3

Grippers

Nine different styles of grippers are available covering parallel jaw, hinged jaw and three jaw designs.

For lightweight applications we offer technopolymer grippers weighing as little as 36g.



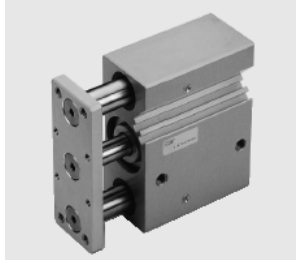
Non-Rotating cylinders

Compact cylinders have the option of a guide system to stop rotation.

ISO cylinders have a separate guide system as an option. Sizes 32 to 63mm are available in a two-flat non-rotating design and there is a twin piston rod version from 32 to 100mm.



Guided compacts (picture right) are available in 16 to 100mm diameter. With either a plain bush guide or re-circulating ball bearing guide.



The option of either plain bush or re-circulating ball bearing guide appears on a lot of our handling products. As a rule-of-thumb the bush type guidance will carry a heavier load and the re-circulating ball bearing gives a higher degree of accuracy.

Slide Units

Metal Work offer a number of products that can be termed 'slide units'. These range from guided rodless cylinders, guide units for standard ISO cylinders and Special designs incorporating guide systems.



The picture left shows precision slide units which are available in bore sizes from 8 to 40mm. These are available with either in-line or recirculating ball bearing guide systems.



Twin piston slides are available either with a moving body or moving end plates in sizes 12 to 30mm diameter.



Both are available with either plain bushes or recirculating ball bearings.

The aim of this article is to give an overview of the comprehensive range of handling products available from our range, full information is available on-line or from our full technical catalogue.

On-line you will find 2D & 3D drawing files available for all Metal Work equipment so you can quickly insert our parts into your designs.

Whatever your handling application Metal Work can provide a cost effective solution

New Product

Just launched is a range of miniature slides (S13).



These slides have a hardened & ground slide running on recirculating ball bearing cartridges

This minimises play and removes load from the piston rod.