

Door Controls - Our Formula for Success

Long Term Economics

Door hardware can receive more use and abuse (per £1.00 of investment) than any other building component. Physical interaction with the fabric of the building (with the exception of the floor!) is often restricted to doors exclusively. Factors influencing specification decisions are sometimes based around initial investment cost comparisons and aesthetics rather than the life cycle costs of the whole installation over 20 years.

Who picks up the maintenance bill and lives with the consequences of such a short term approach? Ultimately, of course, it is the owner or occupier who picks up the bill and, in the long term, those using and working in the facility live with the consequences and inconvenience. But for a small amount of foresight and a little extra initial investment these problems can be avoided.

In our endeavours to offer long term, economically sound solutions we have become (almost) exclusively reliant upon one source for our door control components:

Our partners at LCN Closers have been manufacturing door closers in the USA since 1925. They concentrate their engineering expertise on designing and manufacturing door controls to outlast and outperform anything else on the world market. The secret of our ongoing success lies in these areas.

Materials Choice

We select cast iron cylinders and forged steel working components (hardened where necessary) in all of our closer designs. There isn't a stronger, harder, more reliable material for door closers that are expected to deliver millions of cycles than cast iron. It is compatible with high-grade steel components and is highly resistant to wear from millions of opening and closing cycles.



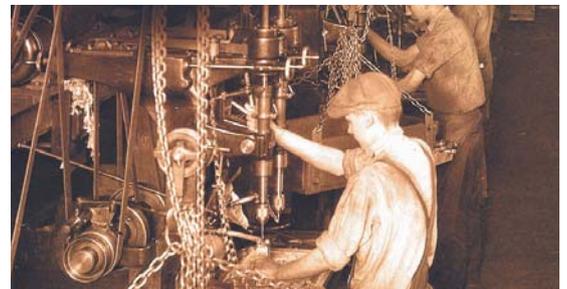
The closing power and control generated within LCN closers is transferred to the door through forged steel arms. Forged steel arms have considerably greater strength than stamped steel or similar alternative materials. LCN forged steel pinions have larger, stronger teeth and are double heat treated for the greatest possible strength on the shaft. Heat treating makes the pinion harder and better able to resist wear after years of service and results in less stress on the cylinder.

A special formula hydraulic fluid is used that acts as an insulator to keep closer components working smoothly. This unique all weather, fire resistant hydraulic fluid eliminates the need for seasonal adjustments. Many closer manufacturers use less expensive oil tempered springs but we know that such a spring loses up to 20% of its power after a few thousand cycles. The chrome silicone springs used in our closers have the strength to perform beyond 10 million cycles.

Piston & Shaft Detail

The larger the cylinder (i.e. piston diameter), the better the closer. A larger cylinder creates less hydraulic pressure in operation, reducing the possibility of damage or leaking. Larger pistons also displace larger volumes of hydraulic fluid giving greater overall control.

The larger the shaft (or pinion) the greater the strength. A large shaft accommodates larger bearings, providing a longer and more durable life. LCN heavy duty closers' shaft teeth are large and the journals are double heat treated to provide the strength without brittleness required for good, durable closer operation.

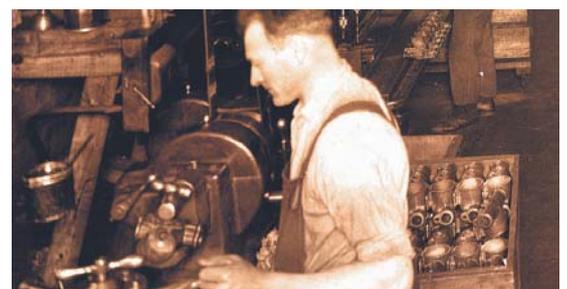


Arms, Fluid & Valve Technology

All LCN closers feature a forged steel main arm and a forged steel forearm on EDA (Extra Duty) options. Forged arms are superior in strength to stamped arms of equal size and generally look better.

LCN's Liquid X is an all-weather hydraulic fluid unsurpassed in the industry. It will accommodate temperature variations down to -34° C. without requiring closer adjustment.

All LCN Closers incorporate V-Slot valves. A V-Slot valve has a much better regulation capacity than the more usual tapered valve. The V-slot valve permits non-critical adjustment for fine tuning of the closer speed, back-check and latching action.



Design, Engineering and Service

Relcross is constantly developing and improving solutions. The amazingly low incidence of faulty units is evidence of the success of this programme. In addition to ensuring our product is right we can support you with unrivalled service and technical assistance. Our 'specials' department welcomes 'problems' and can offer solutions in the most obscure and demanding situations.