



BS EN ISO 9001: 1994
For Door Closers
Registration No. Fm/09441
SIC No. 3269.3

Samuel Heath & Sons plc

Perkomatic™ concealed door closer (R85)

May 2001

- Suitable for latched $\frac{1}{2}$ and 1 hour fire doors up to 75 kg
- Concealed - improved aesthetics
 - reduced vandalism opportunities
- Fire tested - incorporated in doors that were successfully fire tested to BS 476: Part 22: 1987; does not affect latched $\frac{1}{2}$ hour and 1 hour fire door integrity

GENERAL

Introduction The Perkomatic automatic door closer (R85) incorporates a combined hydraulic mechanism and spring assembly and offers a controlled rate of closure and good fire resistance making it suitable for use on latched fire doors. It incorporates a latching action to overcome the resistance of the latch even when the door has been opened by only a small amount. The latching action is controlled by adjusting the point at which this action takes effect. If required, the door can be closed manually more quickly than by the Perkomatic, for instance to prevent heat loss from a room.

The Perkomatic is completely concealed when the door is closed and only the chains and end plates are visible when it is open. It can be fitted where lack of space prevents the use of a surface-mounted door closer, for instance where the door opens against a right-angle wall. Little force is needed to open the door, making it suitable for use by elderly people and young children. Further advantages are that the closer may be used on doors with shaped heads, when a surface mounted closer could not be accommodated, and one model is suitable for all sizes and weights of door within the limits specified under **Applications**, making specifying and stocking simpler.

Cover plates in alternative finishes (e.g. Chrome, B.M.A., Satin Chrome) are available and can be supplied as an additional feature. The Perkomatic is protected by many patents worldwide.

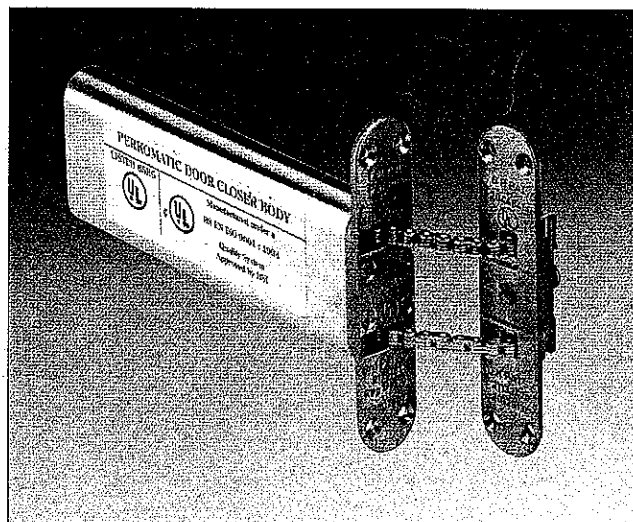
Applications Suitable for use on light and medium weight internal doors, except those fitted with rising butts, Parliament or projecting hinges or where limited air displacement conditions exist. The distance between the centres of the two fixing plates must not exceed 45 mm when the door is opened to its maximum. Should this distance be exceeded, e.g. through the use of wide-knuckled hinges, a door stop should be fitted at the appropriate distance. May be used on latched fire doors subject to approval by appropriate authorities. Principal applications are for all specific purposes and, because of the innovative aspects of the units, it is felt that there will be greater demand for the product in domestic use than has been the case with surface-mounted closers. Restricted ventilation or the fitting of door seals can affect the performance of the Perkomatic as with other closers.

Authority The Perkomatic is manufactured under a BS EN ISO 9001:1994 Quality System. The closer also has cUL and UL approval and its listing control number is 85R6.

DESCRIPTION

Composition, manufacture The four main springs and the hydraulic unit are contained in an extruded aluminium housing which is let into the butt stile of the door, retained in position by the brass end plate, using brass-plated screws provided. Twin chains

- Smooth controlled closing mechanism with latching action
- Durability - manufactured under BS EN ISO 9001: 1994 Quality System; tested to withstand 500,000 open and close cycles
- Minimal maintenance required
- Full technical back up available.



(1) Perkomatic door closer

terminated by shanks pass through apertures in the anchor plate and through the springs to be rivetted to a further plate at the far end of the springs; this plate is bolted to the rod of the hydraulic cylinder. The other ends of the chains are secured to the anchor plate which is let into and screwed to the door frame. The chains have withstood breaking loads of 0.214 metric tonnes. British Patent number is 8522665.

Dimensions Main casing is 168 mm long, 60 mm high and 22.5 mm wide. Anchor plates are 121 mm long and 25 mm wide.

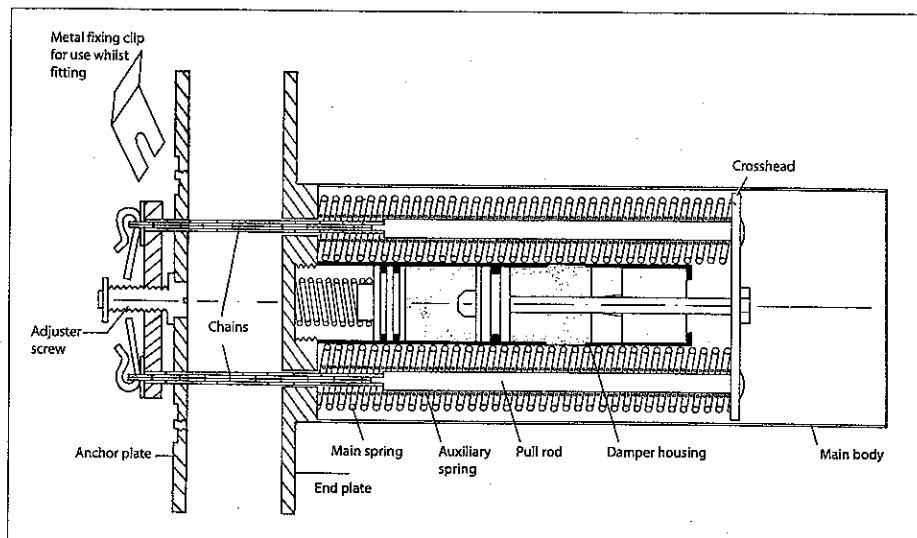
Appearance The only parts that are visible when the door is open are the anchor plates, which are of solid brass, and the chains, which are made from mild steel with brass rivets.

PERFORMANCE

Mechanics Suitable for use on doors up to 75 kg and with adjustable latching action.

Fire The Perkomatic was included in fire door tests by the Warrington Fire Research Centre to BS 476: Part 22: 1987. At the end of the tests, the integrity of the doors in the vicinity of the closers was maintained. A copy of the report is available on request. The hydraulic fluid has been specially formulated to resist high temperatures and has a flash-point of 225°C.

Durability The Perkomatic is designed to withstand at least 500,000 opening and closing cycles. Several closers on test have withstood 750,000 cycles. Possibilities for vandalism are diminished by the concealment of the closer.



(2) Perkomatic - cross section showing general assembly

OPERATION

The hydraulic unit closes the door at a controlled speed, with the latching actions provided by releasing the four main springs from a damped to an undamped state. The point at which the latching action takes effect is adjusted by turning the screw on the anchor plate on the door stile, and can be regulated from a point 230 mm from the frame down to no latch action.

SITWORK

Fixing It must be ensured that the door is hung plumb so that the over-riding facility, which allows the door to be pushed open and closed, will function satisfactorily. A template is provided to assist with positioning the holes which are drilled in both the door edge and the frame to accommodate anchor plate and casing, in a similar manner to that used for fitting a mortice lock. When the main casing has been let into the door edge, temporary clips are inserted to prevent the chain withdrawing into the casing, once sufficient lengths of chain have been extracted to provide enough slack for the anchor plate to be screwed to the frame. The point at which the latching action operates can be adjusted by turning the screw provided for the purpose.

MAINTENANCE

Chains should be oiled periodically to maintain smooth operation. The hydraulic unit is sealed and does not require attention.

SUPPLY

Availability Through architectural and builders' ironmongers, hardware and ironmongery factors, and builders' merchants.

SERVICES

Sales and technical For details of stockists and technical information please contact the company at the address below. Full technical representational back-up services are also available.

REFERENCES

The company also manufactures the **Perko™** concealed door closer and a wide range of general architectural, builders' and marine brassware together with the Samuel Heath range of bathroom & kitchen fittings and bath and kitchen taps. Details can be obtained from the address below. For further information on Perko, see RIBA KeyFile Library section (31.59).

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