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## CERTIFICATE OF APPROVAL

### No CF 370

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This is to certify that, in accordance with  
TS00 General Requirements for Certification of Fire Protection Products  
The undermentioned products of

## SAMUEL HEATH & SONS PLC

Leopold Street, Birmingham, B12 0UJ  
Tel: 0121 772 2303 Fax: 0121 772 3334

Have been assessed against the requirements of the Technical Schedule(s)  
denoted below and are approved for use subject to the conditions  
appended hereto:

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#### CERTIFIED PRODUCT

R100 Perko-Powermatic &  
R106FS Perko-Powermatic Free  
Swing Vertical Edge-Mounted  
Controlled Door Closers

#### TECHNICAL SCHEDULE

TS34 The Contribution of  
Controlled Door Closing  
Devices and Accessories to  
Fire Resisting Doorsets

Signed and sealed for and on behalf of Exova (UK) Limited trading as  
Warrington Certification

Paul Duggan  
Certification Manager



Issued:  
Revised:  
Valid to:

22<sup>nd</sup> September 2004  
8<sup>th</sup> January 2019  
5<sup>th</sup> October 2019

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## CERTIFICATE No CF 370 SAMUEL HEATH & SONS PLC

### Samuel Heath & Sons Perko-Powermatic vertical edge-mounted controlled door closers

1. This approval relates to the use of the following Perko-Powermatic concealed vertical edge-mounted controlled door closers:

Reference	Description
R100	Perko-Powermatic
R106FS	Perko-Powermatic Free Swing

2. This certification is provided to the client for its own purposes and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose.
3. This approval relates to their use with the following door assemblies: -
- R100 and R106FS - latched and unlatched, intumescent sealed door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores in timber frames having a fire resistance up to 60 minutes (Code ITT).**
- R100 - Latched and unlatched, door assemblies consisting of uninsulated or insulated metal door assemblies in metal frames with or without intumescent seals having a fire resistance up to 240 minutes (Code IMM/MM).**
4. Where R100 closers are to be fitted to insulated steel-based doorsets the doors must have been proven with an edge mounted device of at least the same rebate and body size.
5. The closers are approved on the basis of:
- Initial type testing to BS EN 1154, BS EN 1155 (as relevant) and BS EN 1634-1.
  - A design appraisal against TS34.
  - Inspection and surveillance of factory production control.
  - On-going audit testing in accordance with EN 1154 requirements.
6. The Samuel Heath & Sons R100 and R106FS Perko-Powermatic closers have a power size 3 in accordance with EN 1154.
7. Where the closers are fitted to door leaves or frames that are manufactured from mineral composite-based materials, or low-density cellulosic- based material, the door assembly shall have previously been shown capable of accommodating the installation of concealed closers, without detriment to the door assembly's performance.
8. The closers shall only be fitted using the fixings supplied by the closer manufacturer.



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#### Samuel Heath & Sons Perko-Powermatic vertical edge-mounted controlled door closers

9. This approval relates to the R100 and R106FS Perko-Powermatic concealed vertical edge-mounted door closers used with latched or unlatched single-leaf or double-leaf door assemblies of up to 60 minutes integrity and insulation, consisting of timber faced and edged leaves with timber, cellulosic or mineral cores and in timber frames (Codes TT and ITT)
- i. Door leaves shall be not less than 44 mm thick for up to 30 minute applications and not less than 53 mm thick for 60 minute applications.
  - ii. The door frame shall consist of timber with a minimum density of 450 kg/m<sup>3</sup> for FD20, FD30, E30 and EI30 applications, or alternatively MDF having minimum dimensions of 70 mm by 25 mm with a minimum density of 700 kg/m<sup>3</sup> (with leaf to frame gaps up to 3mm), for FD20 and FD30 applications.
  - iii. Leaf to frame gaps up to 3mm
  - iv. For FD60, E60 and EI60 applications the door frame shall be hardwood with a minimum density of 550 kg/m<sup>3</sup> (with leaf to frame gaps up to 3mm).
  - v. For intumescent protection please refer to the Scope of Approval on page 7 and 8.
10. Additionally this approval relates to the R100 Perko-Powermatic concealed vertical edge-mounted door closers used with latched or unlatched single-leaf or double-leaf door assemblies of up to 240 minutes integrity, consisting of insulated and uninsulated steel-based leaves with steel-based frames (Codes MM and IMM)
- i. Door leaves shall be not less than 45 mm thick.
  - ii. The door frame shall consist of steel.
  - iii. Leaf to frame gaps up to 3mm
  - iv. Insulated steel-based doorsets must have been proven with an edge mounted device of at least the same rebate and body size.
11. The R100 closers may be fitted within flush door leaves, moulded or panelled door leaves and tubecore and panelled door leaves subject to the requirements given the Scope of Approval on page 7.
12. The closers may only be fitted to previously tested timber door assemblies when fitted in the manner described in this certificate and when particular aspects of the door assembly detailed in this approval are maintained.



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#### Samuel Heath & Sons Perko-Powermatic vertical edge-mounted controlled door closers

13. The doorset, including door frame and associated building hardware, should be either CERTIFIRE approved for the relevant application and classification or the doorset, including door frame and associated building hardware, should have achieved at least 20, 30 or 60 minutes (as appropriate) fire resistance when tested, as required, or subsequently assessed to BS 476: Part 22: 1987 or EN 1634-1. In either case regard should be paid to the maximum door mass permitted to be used with the closer (see classification)
14. Timber and mineral-based doorsets shall be installed in accordance with BS 8214.
15. The approval relates to on-going production. Product and/or its immediate packaging is identified with the manufacturer's name, the product name or number, the CERTIFIRE name or name and mark, together with the CERTIFIRE certificate number and application where appropriate.

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### Samuel Heath & Sons Perko-Powermatic vertical edge-mounted controlled door closers

16. The following table shows acceptable doorset types and fire resistance periods for the concealed closer:

Class	Approved Door Type				
	MM	IMM	ITT	ITM	ITC
FD20	✓#	✓#	✓	✗	✗
FD30	✓#	✓#	✓	✗	✗
FD60	✓#	✓#	✓	✗	✗
FD120	✓#	✓#	✗	✗	✗
FD240	✓#	✓#	✗	✗	✗
E 20	✓#	✓#	✓*	✗	✗
EI 20	✓#	✓#	✓*	✗	✗
E 30	✓#	✓#	✓*	✗	✗
EI 30	✓#	✓#	✓*	✗	✗
E 60	✓#	✓#	✓	✗	✗
EI 60	✓#	✓#	✓	✗	✗
E 90	✓#	✓#	✗	✗	✗
EI 90	✓#	✓#	✗	✗	✗
E 120	✓#	✓#	✗	✗	✗
EI 120	✓#	✓#	✗	✗	✗
E 240	✓#	✓#	✗	✗	✗
EI 240	✓#	✓#	✗	✗	✗

# Excludes R106FS

\* Subject to the restriction on door construction types detailed in the Scope of Approval.

**Key:**

✓ - Approved

✗ - Not approved





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#### Samuel Heath & Sons Perko-Powermatic vertical edge-mounted controlled door closers

17. Doors are classified as the following types:

**Type MM** - 20 minute to 240 minute doorsets that consist of metallic leaves in metallic frames that do not contain intumescent materials in the frame to leaf gap.

**Type IMM** - 20 minute to 240 minute doorsets that consist of metallic leaves in metallic frames that contain intumescent materials in the frame to leaf gap.

**Type ITT** - 20 minute to 120 minute doorsets containing intumescent seals and consisting of non-metallic faced and edged leaves hung in timber frames

**Type ITM** - 20 minute to 120 minute doorsets containing intumescent seals and consisting of non-metallic faced and edged leaves hung in metal frames.

**Type ITC** - 20 minute to 120 minute doorsets containing intumescent seals and consisting of non-metallic faced and edged leaves hung in proprietary composite frames, of which the principal material is other than timber or metal but which may include any other materials.

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Samuel Heath & Sons Perko-Powermatic vertical edge-mounted controlled door closers

**Scope of Approval:**

***R100 - Alternative Door Constructions***

- The R100 closer may be fitted to doorsets without intumescent protection for up to 20 minutes integrity.
- The closer units shall not be fitted higher than 1000 mm from the base of timber/mineral-based door leaves, and not be fitted higher than 800 mm from the base of steel-based door leaves.
- For FD30 doorsets only, the closers may be fitted to tubecore door constructions for performances up to 30 minutes the door leaves shall have timber lippings with a minimum density of 450 kg/m<sup>3</sup>.
- The door closers may be fitted to moulded or panelled doors and glazed doors for performances of 30 minutes and 60 minutes, subject to the requirement that any part of the mortise cut out being positioned not closer than 10 mm from the mould detail, panel edge groove or glazing aperture.
- In situations where the installation of the closer cannot comply with the above requirement, i.e. the installation would need the mortise cutting closer than 10 mm from a panel edge, it is possible to fit the closer in reverse such that the closer body is mounted through the door frame and projects through the back of the door frame and into either the wall cavity, or an aperture specifically provided to accommodate the closer body within the supporting wall construction. All other aspects of the approved use, i.e. door gaps and use of intumescent protection shall be maintained. This application is only approved for use on fully latched doorsets.

***R100 - Intumescent Protection Requirements***

- The R100 closer unit shall be bedded upon intumescent mastic which shall be provided by the manufacturer and is detailed within the manufacturer's product data sheet. Alternatively, the R100 may be fitted with the manufacturer's R97-XX intumescent protection kit which comprises pre-cut, self-adhesive intumescent sheet material.



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***R106FS - Additional Intumescent Protection Requirements***

- The R106FS closer unit shall be bedded upon intumescent mastic which shall be provided by the manufacturer and is detailed within the manufacturer's product data sheet. Alternatively, the R106 may be fitted with the manufacturer's R97-FS-XX intumescent protection kit which comprises pre-cut, self-adhesive intumescent sheet material. The unit is also provided with factory fitted pads of intumescent material fitted to the flanges of the door fixing plate and rear face of the terminal block cover plate; these must not be removed regardless of which intumescent protection option is used.
- The free swing function of the unit requires it to be connected to a power supply. The unit will be connected via a wired connection from the closer body to a suitable conductor hinge.
- The routing of the wires and the placement of a terminal connection block within the door leaf edge is designed such that the wires and block are mounted behind the door leaf standard intumescent seal. For 30 minute doorsets the seal must be a minimum of 15 mm wide by 4 mm thick and be mounted within the door leaf edge. For 60 minute applications the standard door seal must be a single, centrally positioned seal such that it covers the wires and groove.
- In situations where the standard door intumescent seals are frame mounted (both 30 and 60 minute applications), the intumescent seal fitted over the wires shall be additional to the doorset's standard seals and shall extend from the edge of the door fixing plate to the mortise for the terminal block and from the terminal block mortise to abut against the conductor hinge.
- In situations where 60 minute doorsets include two separate seals mounted about the centreline of the door leaf edge, it is acceptable to plant the length of additional intumescent seal between the two standard seals. The width of the additional seal shall be determined by the gap between the standard seals and its thickness shall remain as 4 mm. The following table summarises the additional seal requirements.

<b>30 or 60 minute doorset - frame mounted seals</b>	<b>60 minute doorset – door mounted twin seals</b>
Additional seal minimum 15 mm by 4 mm fitted to the leaf edge between the closer and terminal block mortises and between the terminal block mortise and the conductor hinge.	Additional seal minimum 4 mm thick fitted between the standard seals fitted to the leaf edge between the closer and terminal block mortises and between the terminal block mortise and the conductor hinge.

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E/018

Issued: 22<sup>nd</sup> September 2004  
Revised: 8<sup>th</sup> January 2019  
Valid to: 5<sup>th</sup> October 2019





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**Samuel Heath & Sons Perko-Powermatic vertical edge-mounted controlled door closers**

**Classification code**

The approval provides the following classifications:

R100 Perko-Powermatic – Maximum leaf weight 79 kg:

<b>3</b>	<b>8</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>3</b>
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R106FS Perko-Powermatic Free Swing – Maximum leaf weight 79 kg:

<b>3</b>	<b>5</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>3</b>
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**Further Information**

Further information regarding the details contained in this certificate may be obtained from Samuel Heath & Sons PLC (Tel: 0121 772 2303).

Further information regarding CERTIFIRE certification and other approved products can be obtained from CERTIFIRE (Tel: 01925 646777).