



Sealmaster Continuous Geared Aluminium Hinges

Part of the Dixon
International Group Ltd
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Introduction

Sealmaster Continuous Geared Aluminium Hinges are designed to maintain the alignment of fire resisting doorsets which are subject to excessive impact and stress. In many high traffic areas of a building, doorsets, more than any other building element are subject to unacceptable levels of punishing treatment.

Sealmaster Continuous Geared Aluminium Hinges provide a proven and obvious answer to maintaining the functional aspects of such doors in their daily use.

With conventional knuckle type hinges the door weight is concentrated in three hinge locations causing downward weight overload on the bottom hinge and pulling away of the top hinge often resulting in damage to the floor and door frame. Sealmaster continuous geared hinges support the door weight over the entire length of hinge so that it is evenly distributed throughout the door leaf and door frame.

Description

Sealmaster Continuous Geared Aluminium Hinges consist of two full height, paired and geared hinge leaves. Each leaf rotates evenly from top to bottom. Riding on multi Delrin bearings, which provide for extremely low friction operation. The geared leaves are protected by a full length channel cap and include specially formulated intuescent seals which protect the entire length of the hinge and which are discretely fitted.



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Performance

Sealmaster continuous geared hinges exceed the requirements of BS7352:1990 in ensuring alignment of the door with no drop or binding after 1.5 million cycles on 75kg doors. The gearing avoids the need for undue force to open heavy doors of up to 245kg and eliminates repetitive maintenance of hinges, lippings and frames arising from hinge failure.

Description

Sealmaster continuous hinges have been successfully tested with FD30 and FD60 single action double leaf door sets to BS476: part 22. They have also successfully met the smoke leakage requirements of BS476: part 31.1 in independent tests at Warrington Fire Research.

WARRES Test No. 106217	Dated 11.2.1999	FD30S 39 Minutes
WARRES Test No. 110251	Dated 6.10.1999	FD60S 82 Minutes
WFRC Assement No. CI 13604	Dated 6.6.2000	FD30S & FD60S Doorsets

Product Range

Sealmaster continuous geared hinges are available in four versions for upgrading new door sets.

- Full Surface Hinge (type FS)
- Half Surface Hinge (type HS)
- Full Mortice Hinge (type FM)
- Full Surface Centre Pivot (type FSCP)

Each hinge is available in standard or heavy duty version according to the weight of the door, extent of expected impact and stress. Standard hinges contain 14 bearings distributed down the height of the door which absorb weight, impact and stress and are suitable for doors up to 245kg in weight.





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Full Surface Hinge (type FS)

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Half Surface Hinge (type HS)

Sealmaster continuous hinges have been successfully tested with FD30 and FD60 single action double leaf door sets to BS476: part 22. They have also successfully met the smoke leakage requirements of BS476: part 31.1 in independent tests at Warrington Fire Research.



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Full Mortice Hinge (type FM)

This hinge can only be used on new door sets because it requires an 8mm gap at the hanging stile to accommodate both leaves and this is more satisfactorily achieved when the new door can be produced to fit the frame.



Full Surface Centre Pivot (type FSCP)

The centre pivot variant of the full surface hinge has a smaller 'foot print' and is suitable for use on a wide range of frame details including narrower frame (29mm) or frames set close to an adjacent wall reveal.



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Intumescent Seal Protection

Full Mortice Hinge (type FM)

For existing fire door sets, no additional intumescent seal to those already installed is required with this hinge. For new fire door sets, intumescent protection should be specified in the normal way.

Half Surface Hinge (type HS)

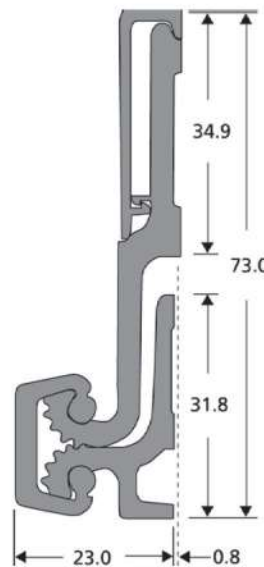
On existing door sets, intumescent seals fitted into the frame will be covered by the hinge leaf and so additional intumescent protection is necessary by installing the special intumescent fire and smoke seal, supplied by Sealmaster, alongside the hinge leaf on the frame.

Full Mortice Hinge (type FM)

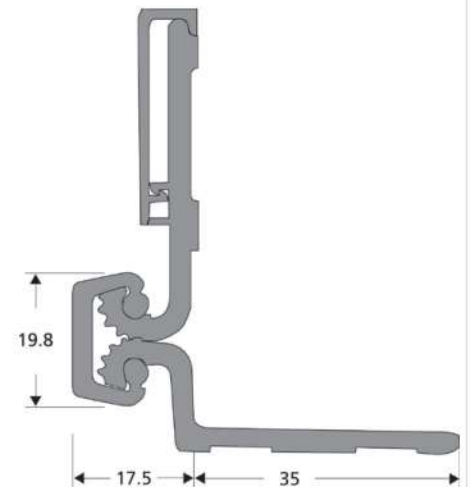
On new door sets, a surface mounted intumescent fire and smoke seal, supplied by Sealmaster, is installed along side the hinge leaf on the frame. Intumescent protection for the other stiles and head should be specified in the normal way.

Full Surface Centre Pivot (type FSCP)

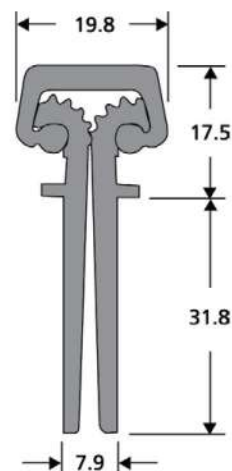
On new fire resisting door sets, intumescent protection should be specified in the normal way. For existing door sets no additional intumescent protection, other than that specified in the normal way, is required with this hinge.



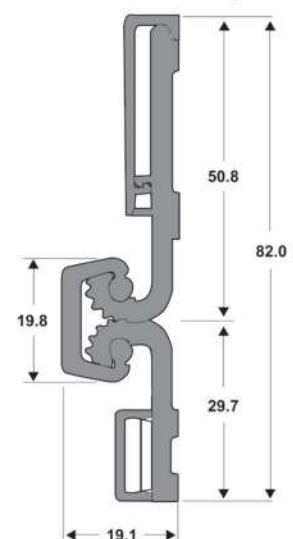
Full Surface Hinge



Half Surface Hinge



Full Mortice Hinge



Full Surface Centre Pivot