## Continuous Geared Hinges

### Hinge Construction - Basic Principles

This unique and innovative hinge is of a continuous geared design, manufactured in extruded 6063-T6 tempered aluminium alloy. The hinge consists of three interlocking extrusions in a 'pin-less' assembly intended for fixing to the full height of the door and frame. Each assembly consists of a frame blade, a door blade and a capping piece.

### Tested and Proven

This hinge has been tested successfully under positive pressure fire test conditions to satisfy a wide range of UK fire performance requirements. The hinge also provides for security enhancement features and assists in the attainment of other performance requirements where air infiltration is a consideration (e.g weather sealing). Other variants provide for 'finger safe' features preventing the trapping of fingers in the gap between the heel of the door and the door frame. A Hospital Tip (anti-ligature) feature is available for full mortice versions.

### Flexibility in Design

- All aluminium components are clear or dark bronze anodized after milling and preparation to receive fixings, to provide for a hard and durable surface finish with excellent corrosion resistant properties. (other finishes are available to special order)
- The design of the blades varies to suit a number of applications. Various blade designs are held together using a common capping section providing an extensive range of standard and special designs for full mortice, half mortice and full surface applications
- The load bearing properties of the hinge are varied by the use of Delrin ® - Teflon ® bearings manufactured to a patented process providing medium and heavy duty options
- All hinge designs allow doors to open 180°. However, in some locations wall or frame decoration may prevent use of this facility. Special extended throw options are available for both full mortice and half mortice designs

**Continuous Hinge Selection Guide (for Doors <3048mm x 914mm x 44mm & 54mm)**

| | | Medium Duty | | | |
|---|---|---|---|---|---|
| Class Code Clear or Dark Bronze Anodized | **Adjusted Door Weight / Kilos** (not exceeding) | 127kg | 127kg | 145kg | 182kg |
| | **Hinge Length / Door Height** (not exceeding) | 2108mm | 2159mm | 2413mm | 3048mm |
| **REL.FMF01** Full Mortice - Flanged | | ✔ | ✔ | ✔ | ✔ |
| **REL.FF02** Full Surface | | ✔ | ✔ | ✔ | ✔ |
| **REL.HMS01** Half Mortice - Safety (no UK Fire Certification) | | ✔ | ✔ | ✔ | ✔ |
| | | **Heavy Duty** | | | |
| Class Code Clear or Dark Bronze Anodized | **Adjusted Door Weight / Kilos** (not exceeding) | 245kg | 245kg | 281kg | 354kg |
| | **Hinge Length / Door Height** (not exceeding) | 2108mm | 2159mm | 2413mm | 3048mm |
| **REL.FMF01.HD** Full Mortice - Flanged | | ✔ | ✔ | ✔ | ✔ |
| **REL.FF02.HD** Full Surface | | ✔ | ✔ | ✔ | ✔ |
| **REL.HMS01.HD** Half Mortice - Safety (no UK Fire Certification) | | ✔ | ✔ | ✔ | ✔ |

**All hinges are manufactured to template hole and template bearing positions.**

**UK Fire Certification** in accordance with BS 476 parts 20 & 22:1987 including single action pairs of doors. For use on **FD30S** and **FD60S** fire resisting door sets. WFRC No.139560.

**Performance & Durability**

In the absence of an applicable standard for continuous geared hinges in the UK, we are reliant upon ANSI for confirmation of our hinge's mechanical capabilities – ANSI/BHMA A156.26-2000:

**Medium Duty Hinges** 350,000 cycles (68 kilo door) Grade 3
150,000 cycles (136 kilo door) Grade 3

**Heavy Duty Hinges** 2.5M cycles (68 kilo door) Grade 1
1M cycles (136 kilo door) Grade1
500,000 cycles (272 kilo door) Grade 1

### Creating the Hinge Code

Read off the class code and use the appropriate hinge type, i.e. medium or heavy duty followed by the hinge length as a suffix to the code.

For example:

**REL.FMF01.C.2159** signifies a medium duty full mortice flanged hinge @ 2159mm in length - Clear Coated Anodized Aluminium.

**Finishes**

**C** - Clear Coated Anodized Aluminium
**D** - Dark Bronze Anodized Aluminium