

Windpost Systems



Product and Specification Manual



IG Windpost Systems

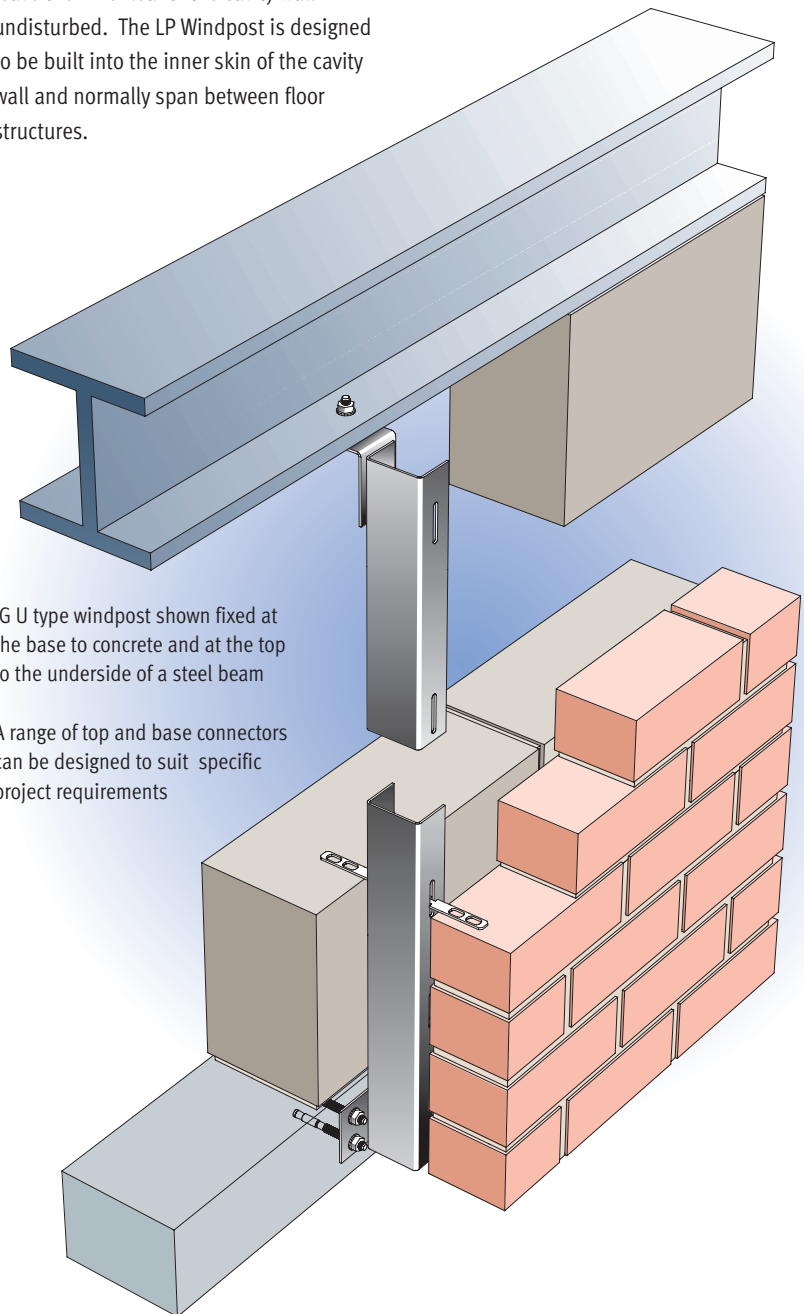
IG design and manufacture high quality products for the construction industry and through enhanced product development and investment, we are committed to maintaining a high level of innovation and service from project conception to completion.

The IG Technical Service Team will provide full product specification and schedules.

IG Windposts span vertically between floors to provide additional lateral support for large panels of brickwork or large panels with openings. It is often difficult to provide suitable justification that masonry walls have lateral stiffness and therefore construction would traditionally be strengthened by the addition of thicker walls or by including columns, to effectively shorten the span of the masonry panel.

IG Windposts are designed to allow a cost effective method of providing additional stiffness to masonry panels where necessary. Each windpost is manufactured on a project-by-project basis so that they meet your exact requirements, and are available in a wide range of size and gauge.

IG manufacture three types of windpost. The U Windpost is installed within the cavity and will normally span between floor structures, with the same principle applying to the DU Windpost. Both designs leave the inner leaf of the cavity wall undisturbed. The LP Windpost is designed to be built into the inner skin of the cavity wall and normally span between floor structures.



IG U type windpost shown fixed at the base to concrete and at the top to the underside of a steel beam

A range of top and base connectors can be designed to suit specific project requirements



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Windpost Design

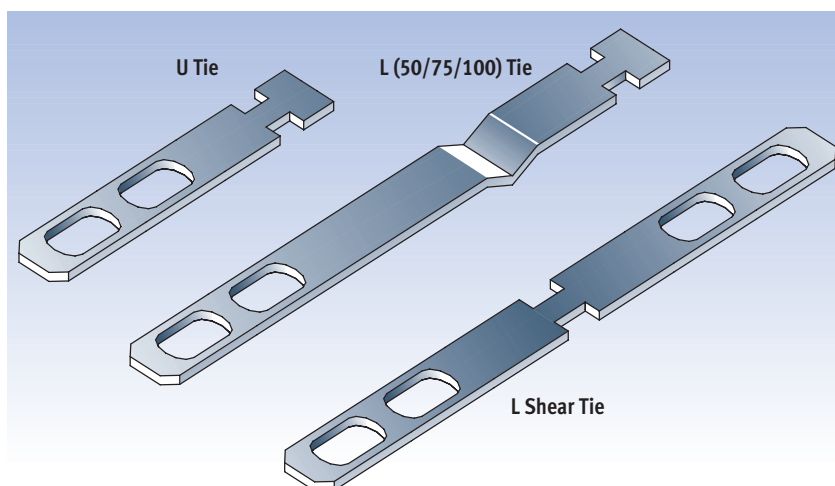
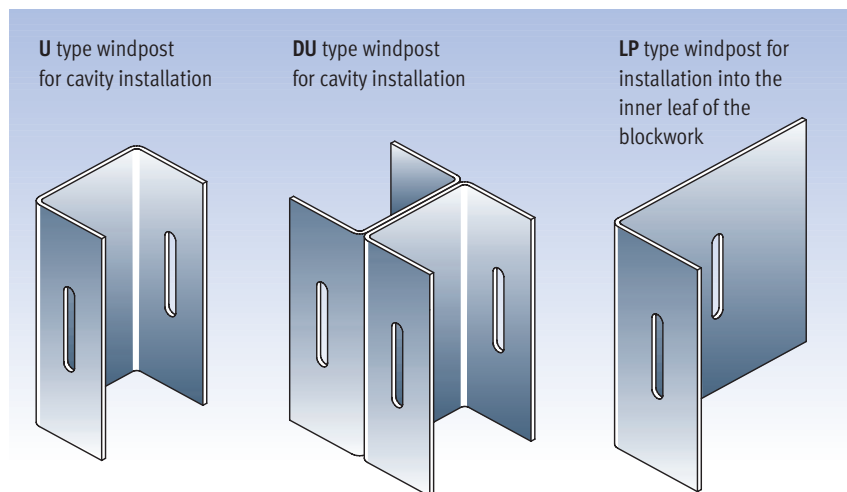
IG Windposts are manufactured from grade 304 stainless steel (grade 316 is available if required).

IG Windposts are designed to span vertically between floors to provide additional lateral support for large panels of brickwork. The windpost will usually be restrained by the brickwork and designed as a 'simply supported beam'.

All three Windpost designs are available in shorter lengths to provide the same level of stability to parapets or below windows, commonly termed Parapet or Spandrel Posts respectively. These posts are designed as cantilevers.

Connections to the frame are designed on a project-by-project basis. The top connection allows for shrinkage or vertical movement of the frame.

For further information or advice on specific applications please contact the IG Technical Services Team at:
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Email: technical@igltd.co.uk.



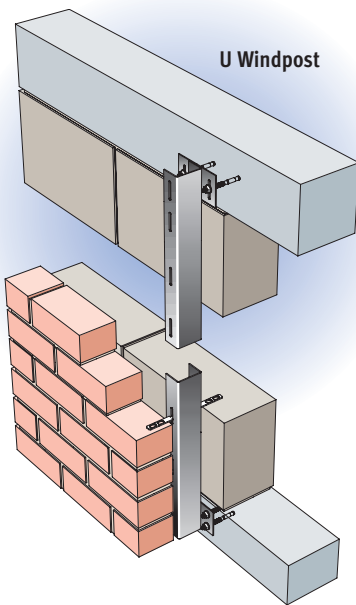
All IG Windposts are supplied with specifically designed base and upper connections (see page 7) and fixings. They are also supplied with a suitable number of wall-ties which will vary in relation to the post type used and the cavity width. There are five types:

- U Tie** – For use with U & DU Windposts.
- L50 Tie** – For use with LP Windposts (50mm cavity).
- L75 Tie** – For use with LP Windposts (75mm cavity).
- L100 Tie** – For use with LP Windposts (100mm cavity).
- L Shear Tie** – For use with LP Windposts.

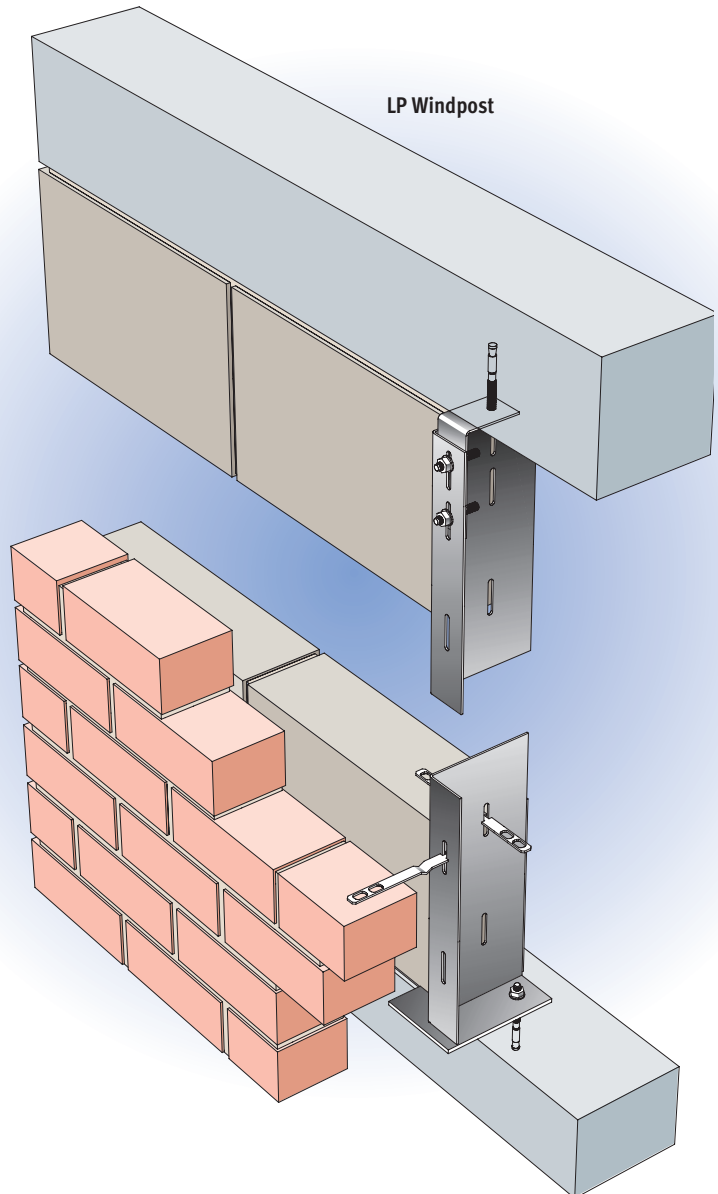
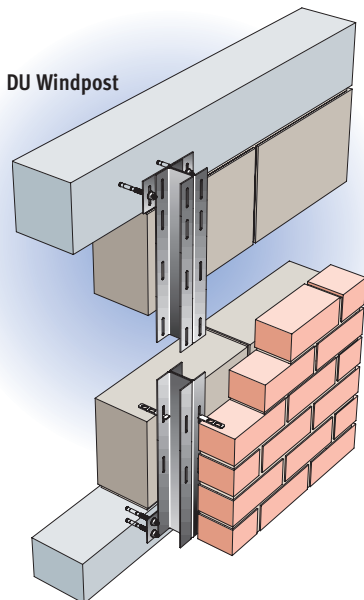
L Shear Tie can be supplied with a de-bonding sleeve if the windpost is positioned at a vertical movement joint.

IG Windpost Types

Often there are design or physical restrictions that render the use of a particular windpost design inappropriate. IG designers have taken this into account and devised a comprehensive range of products to cater for most eventualities.



IG have incorporated three separate types of windposts in an array of section sizes and steel thicknesses to cope with different loading requirements. We have also detailed various base and top fixings to allow for the variety of construction and loading requirements.



The **U Windpost** fits within the cavity and normally spans between floor structures. This is similar to the **DU Windpost** although this is a heavier duty variant of the U Windpost. The U and DU designs leave the inner leaf of the cavity wall totally undisturbed.

The **LP Windpost** is designed to be built into the inner skin of the cavity wall and will normally span between floor structures. As a general rule the LP Windposts are heavier duty than the U Windposts (see loading tables on pages 5 and 6).

Diagrams show a typical wall construction at intermediate floor level showing the three IG Windpost types bolted to a concrete building frame. Examples of attachments to steel can be seen on page 7.

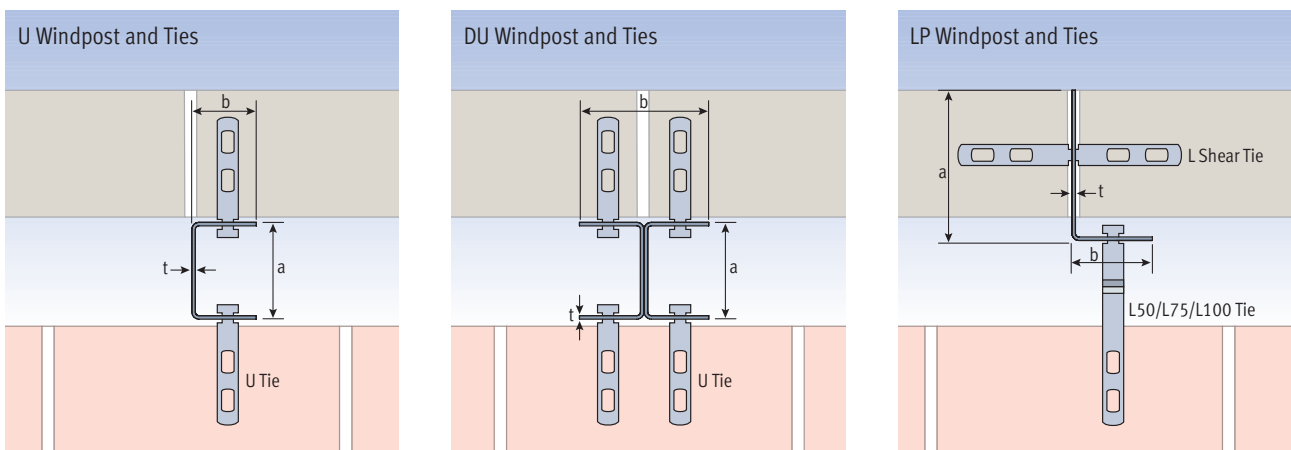
Windpost loadings

The loadings quoted for the windposts are derived from an allowable stress value of 181N/mm² and a deflection limit of span/360 (the lesser of the two resultant

figures is used as the quoted figure).

Please note the quoted loadings are working/characteristic loads.

IG Windpost profiles and dimensions



Proportions and performance of U, DU and LP windposts.

Windposts can be made to order at various sizes on a project basis. Post taken as a simply supported beam.

SWL's quoted are assuming adequate base and top fixing to concrete. For other substrates please contact the IG Technical Services Team.

	Code	Size a x b x t	Maximum unfactored wind load for height of windpost UDL (kN)							
			2500mm	3000mm	3500mm	4000mm	4500mm	5000mm	5500mm	6000mm
	U1	60 x 60 x 4	3.0	2.1	-	-	-	-	-	-
	U2	60 x 60 x 5	3.5	2.5	1.8	-	-	-	-	-
	U3	60 x 60 x 6	5.5	3.8	2.8	2.2	-	-	-	-
	U4	75 x 60 x 4	4.9	3.4	2.5	1.9	-	-	-	-
	U5	75 x 60 x 5	5.9	4.1	3.0	2.3	1.8	-	-	-
	U6	75 x 60 x 6	6.9	4.8	3.5	2.7	2.1	-	-	-
	U7	115 x 60 x 4	13.2	9.2	6.7	5.2	4.1	3.3	-	-
	U8	115 x 60 x 5	16.1	11.2	8.2	6.3	5.0	4.0	3.3	-
	U9	115 x 60 x 6	18.8	13.0	9.6	7.3	5.8	4.7	3.9	3.3
	LP1	125 x 70 x 4	9.0	6.2	4.6	3.5	-	-	-	-
	LP2	125 x 70 x 5	11.0	7.7	5.7	4.3	3.4	-	-	-
	LP3	125 x 70 x 6	13.1	9.1	6.7	5.1	4.1	3.3	-	-
	LP4	150 x 70 x 4	12.5	10.2	7.5	5.7	4.5	3.7	3.0	-
	LP5	150 x 70 x 5	15.5	12.6	9.3	7.1	5.6	4.5	3.8	3.2
	LP6	150 x 70 x 6	18.5	15.0	11.0	8.4	6.7	5.4	4.5	3.7
	LP7	170 x 70 x 4	15.8	13.1	10.5	8.1	6.4	5.2	4.3	3.6
	LP8	170 x 70 x 5	19.0	16.3	13.0	10.0	7.9	6.4	5.3	4.4
	LP9	170 x 70 x 6	19.0	19.0	15.5	11.8	9.4	7.6	6.3	5.3
	LP10	200 x 70 x 4	19.0	17.8	16.3	12.5	9.9	8.0	6.6	5.6
	LP11	200 x 70 x 5	19.0	19.0	18.9	15.5	12.2	9.9	8.2	6.9
	LP12	200 x 70 x 6	19.0	19.0	19.0	18.4	14.5	11.8	9.7	8.2
	DU3	60 x 60 x 6 (2)	11.0	7.7	5.6	4.3	3.4	2.8	-	-
	DU6	70 x 60 x 6 (2)	13.7	9.5	7.0	5.4	4.2	3.4	2.8	-
	DU9	115 x 60 x 6 (2)	27.0	26.1	19.2	14.7	11.6	9.4	7.8	6.5

IG Windpost Fixings

All IG Windposts are supplied with plates or angles for fixing to the structure at top and base. It is important that windposts are fully fixed before commencement of the brickwork.

Although the type of fixing will change on a project-by-project basis, some typical examples of top and base fixings can be seen on this page.

For further information or advice on specific applications please contact :

IG Technical Support

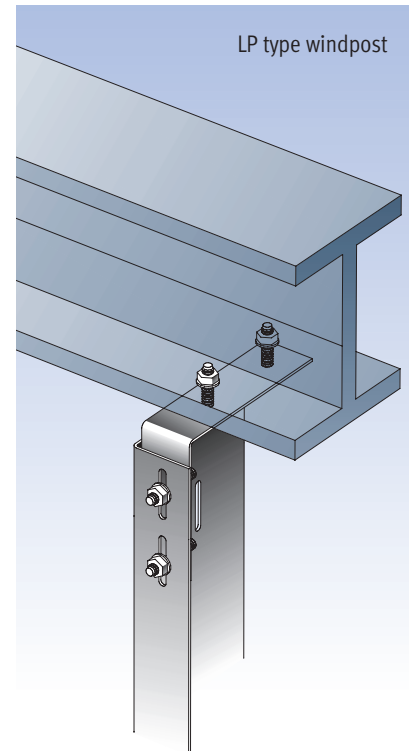
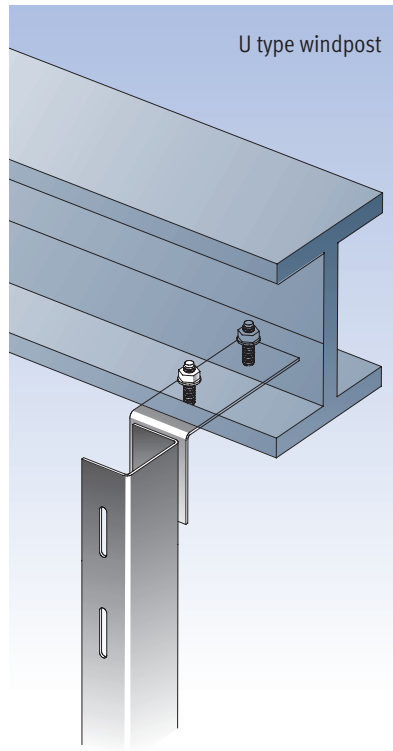
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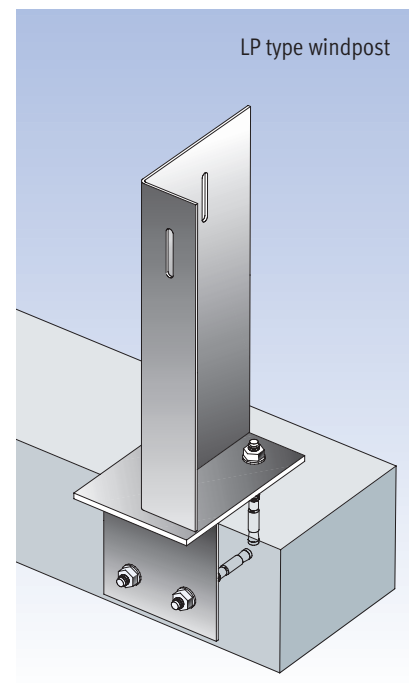
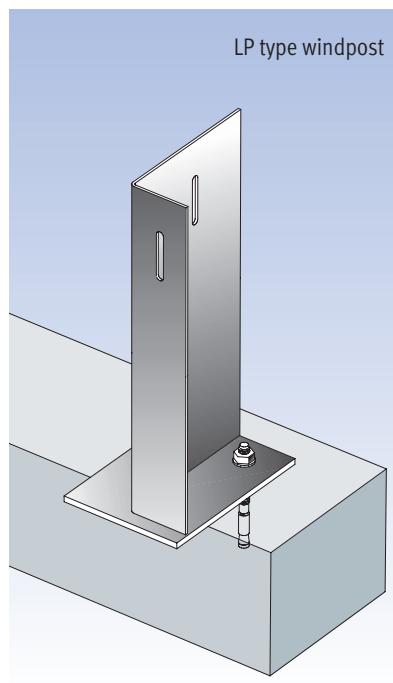
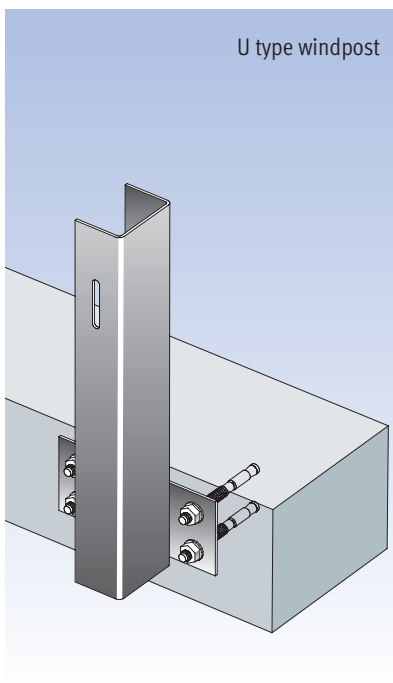
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Above: Typical top fixings to steel. See diagrams on page 4 for typical top fixings to concrete.



Above: Typical base fixings to concrete. Type DU Windpost (not shown) fixing plates and angles are as type U Windpost.

Health and Safety

Hazard Identification

There may be a risk of cuts from sharp edges or projections.

Structural products must be installed in accordance with their specific instructions to prevent the risk of failure.

Handling, Storage and Disposal

Handling of materials must comply with the Manual Handling Operations Regulations 1992.

Protective gloves should be worn when handling or cutting material to prevent injury from sharp edges.

Some products may have a film of mineral cutting fluid after manufacture, therefore carry out personal hygiene including proper washing of hands after contact.

Where structural products are to be removed from an existing installation, care must be taken to ensure that the procedure followed does not compromise the loading/installation restrictions applicable to the product.

COSHH

We are not aware of any risk to the person, arising from chemicals or any other substances present on or in our products.

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The information contained in this brochure was accurate at date of printing. IG Limited reserves the right at any time to introduce specification modifications as may be considered necessary to improve the products described herein.

Whilst every endeavour will be made to bring the information up-to-date at regular intervals, any person interested should enquire of the company as to any material alterations made since the publication of this brochure.



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