

Uniclass L384:P314:N32	EPIC C44:X342:Y42
CI/SfB (22.3) + (31.5)	Ro (K2)+(K3)

April 2004



PROMAT® SYSTEMGLAS

Fire Rated Glazing



PROMAT® SYSTEMGLAS under fire test conditions



1



2



3

- 1 System NF3 prior to start of fire test.
- 2 Unexposed face of System NF4 20 seconds into test.
- 3 Exposed face of System NF4 after removal from furnace.

3



For Promat UK Limited, the aesthetics of glazing systems go hand-in-hand with the vital aspect of fire safety offered by passive fire protection systems.

PROMAT® SYSTEMGLAS is a patented system that allows glazed screens to provide the maximum possible light transmission by replacing intermediate mullions and joining adjacent glass panes with a simple butt joint. The system is unique in providing both insulation and integrity in a butt-jointed system.

Recent projects include:

- 1 *BBC White City, London*
- 1 *Discovery Museum, Gateshead*
- 1 *Round Foundry, Leeds*
- 1 *National Portrait Gallery, London*
- 1 *BT Tower, London*
- 1 *Global Switch, London*
- 1 *Oval Project, Warwick*
- 1 *Cadogan Mansions, London*
- 1 *Hampstead Theatre, London*
- 1 *Mater Hospital, Belfast*



PROMAT® SYSTEMGLAS Type	PROMAT® SYSTEMGLAS 30			PROMAT® SYSTEMGLAS 60			PROMAT® SYSTEMGLAS 90		
Fire resistance	30 minutes integrity & insulation			60 minutes integrity & insulation			90 minutes integrity & insulation		
Glass type	Type 1	Type 2	Type 3	Type 1	Type 2	Type 3	Type 1	Type 2	Type 3
Areas of use	Internal & protected from ultraviolet	Internal but exposed to ultraviolet	Double glazed	Internal & protected from ultraviolet	Internal but exposed to ultraviolet	Double glazed	Internal & protected from ultraviolet	Internal but exposed to ultraviolet	Double glazed
Thermal transmittance W/m ² K	5.2	5.0	2.8	5.1	5.0	2.7	4.9	4.7	2.6
Sound reduction (Rw) Index ³	39dB	41dB	42dB	41dB	42dB	44dB	43dB	44dB	45dB
Safety rating (BS 6206) ¹	Class B	Class A	Class A	Class A	Class A	Class A	Class A	Class A	Class A
Butt joint applications (NF)	Yes	Yes	No	Yes	Yes	No	No	No	No
Maximum tested pane size ⁴	2700mm x 1400mm			2700mm x 1400mm			2300mm x 1400mm		
Pane size tolerance	±2mm			±2mm			±2mm		
Glass structure	Laminated	Laminated	Double glazed	Laminated	Laminated	Double glazed	Laminated	Laminated	Double glazed
Pane thickness (mm)	17mm	21mm	35mm	25mm	29mm	43mm	37mm	41mm	58mm
Thickness tolerance (mm)	±2mm	±2mm	±2mm	±2mm	±2mm	±2mm	±2mm	±2mm	±2mm
Alternative option ²									
Thickness				21mm	25mm				
Thickness tolerance				±2mm	±2mm				
Weight (kg/m ²)	40	48	64	60	68	83	80	88	103
Light transmission (clear)	ca 85%	ca 83%	ca 74%	ca 83%	ca 82%	ca 73%	ca 80%	ca 78%	ca 70%
Colour options	Clear – – – – – – –	Clear Bronze Grey Green Patterned Opal Reflective –	Clear Bronze Grey Green Patterned Opal Reflective Low -E	Clear – – – – – – –	Clear Bronze Grey Green Patterned Opal Reflective –	Clear Bronze Grey Green Patterned Opal Reflective Low -E	Clear – – – – – – –	Clear Bronze Grey Green Patterned Opal Reflective –	Clear Bronze Grey Green Patterned Opal Reflective Low -E
Surface finish	on application			on application			on application		
Identification	Promat Ltd Type 1 SYSTEMGLAS 30	Promat Ltd Type 2 SYSTEMGLAS 30	Promat Ltd Type 3 SYSTEMGLAS 30	Promat Ltd Type 1 SYSTEMGLAS 60	Promat Ltd Type 2 SYSTEMGLAS 60	Promat Ltd Type 3 SYSTEMGLAS 60	Promat Ltd Type 1 SYSTEMGLAS 90	Promat Ltd Type 2 SYSTEMGLAS 90	Promat Ltd Type 3 SYSTEMGLAS 90

- Standard Type 3 glass panes provide Class A safety rating to BS 6206 to the PROMAT® SYSTEMGLAS insulating face only. If Class A safety rating is required to both faces please consult Promat UK Limited Technical Department for further information and specification details.
- PROMAT® SYSTEMGLAS 60 Type 1 - 21mm thick and Type 2 - 25mm thick can only be used in door designs.
- Sound insulation in excess of 45dB can be achieved using special PROMAT® SYSTEMGLAS assemblies. Please consult Promat Technical Services Department for further details.
- 10:1 maximum aspect ratio (height: width) for glass panel in screens.



For the optimum transparency area, use any of the following four glazed wall systems NF1 to NF4

Providing full transparency, the vertical and/or horizontal joints between the glass in these systems are filled with PROMAT® SYSTEMGLAS silicone sealant. For normal internal applications, the glass is either 17mm or 25mm thick for 30 minutes or

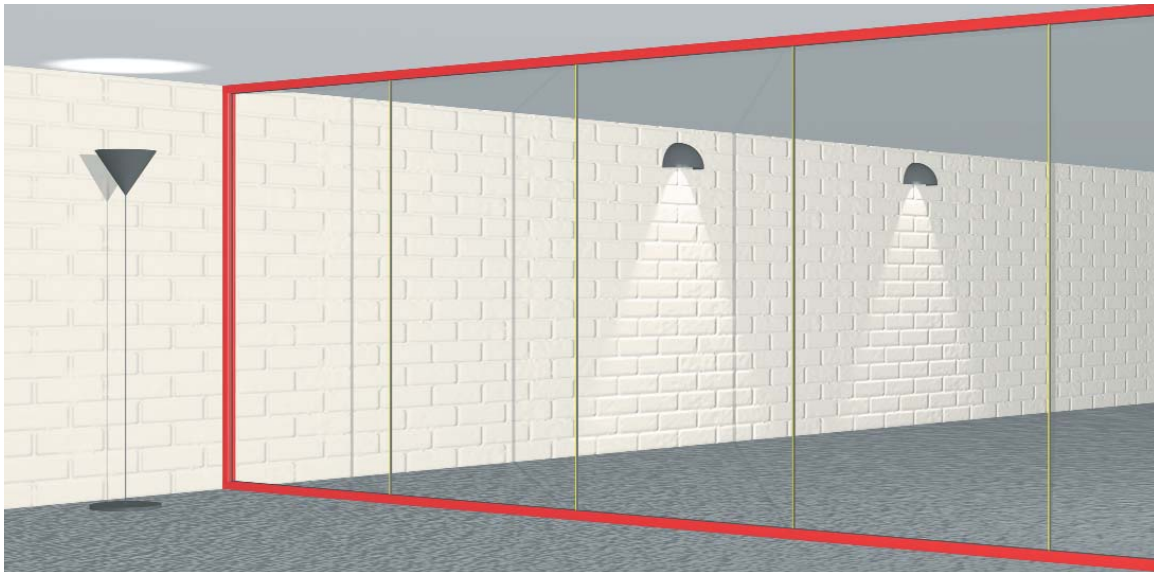
60 minutes fire resisting applications respectively. For areas where no ultraviolet irradiation is expected or sunlight protection required, use Type 1 glass, otherwise use Type 2 for internal screens.

PROMAT® SYSTEMGLAS NF1

System with vertical unframed joints

30 and 60 minutes fire resistance

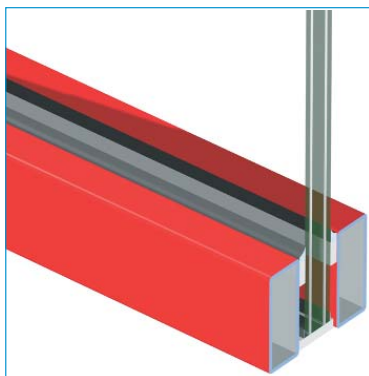
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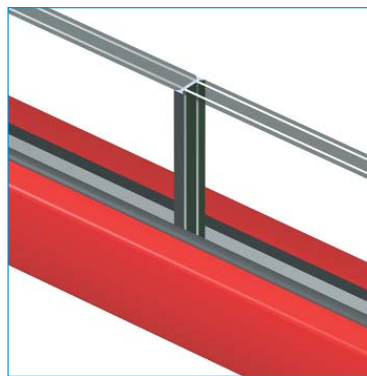
If preferred, the systems can be connected to the masonry surround without the use of the steel hollow profile by concealing the perimeter framing system within the floor and ceiling constructions. The PROMAT® SYSTEMGLAS doors T30-1 (30 minute single door), T30-2 (30 minute double door), T60-1 (60 minute single door) and T60-2 (60 minute double door) can be installed within these screens. Different room designs can be achieved through the use of tinted and/or etched glass.

Note:

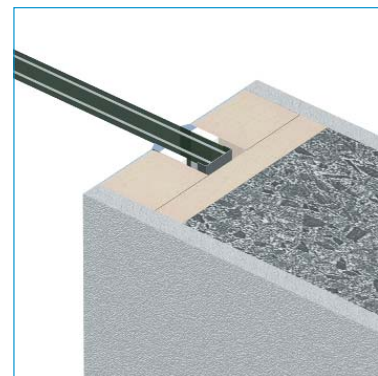
1. Maximum height 2.7m or 4.0m with horizontal transom rail
2. Maximum width – unrestricted



Perimeter detail



Connection between glass panes



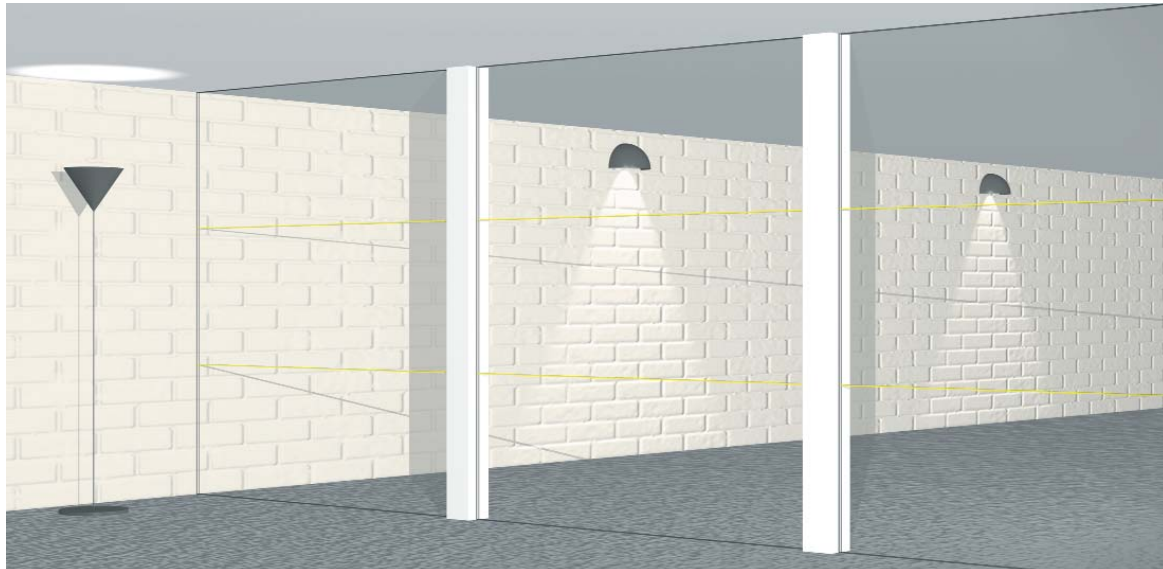
Concealed perimeter option



PROMAT® SYSTEMGLAS NF2

System with horizontal unframed joints

30 and 60 minutes fire resistance



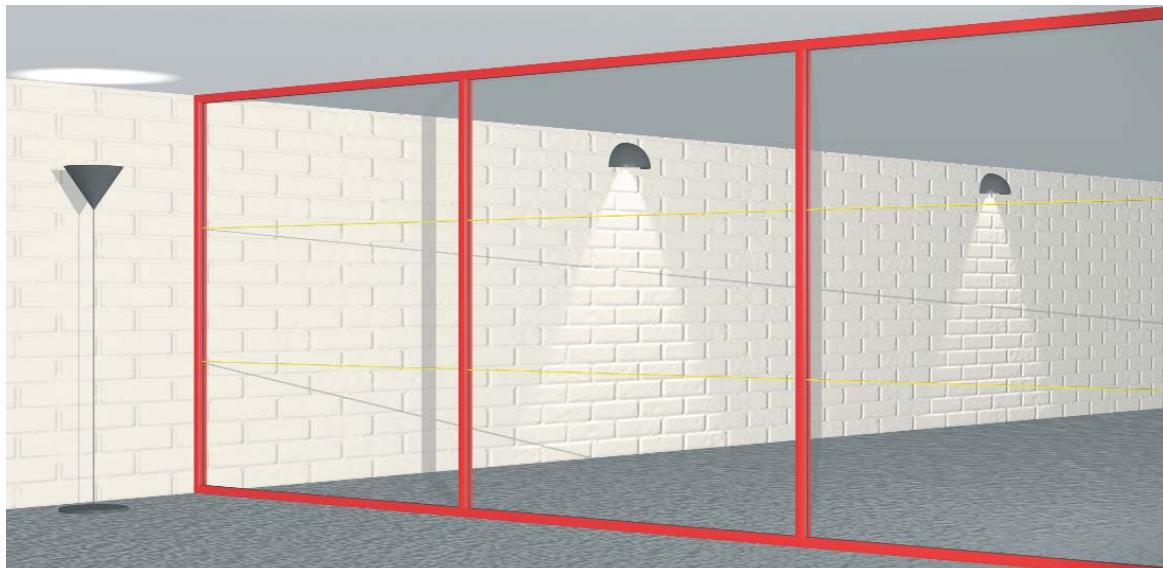
Note:

1. Maximum height 4.0m
2. Maximum width – 2.7m between posts. Posts will either be masonry or fire protected steel sections.

PROMAT® SYSTEMGLAS NF3

System with horizontal unframed joints and vertical cover strips

30 and 60 minutes fire resistance



Note:

1. Maximum height 4.0m
2. Maximum width – unrestricted

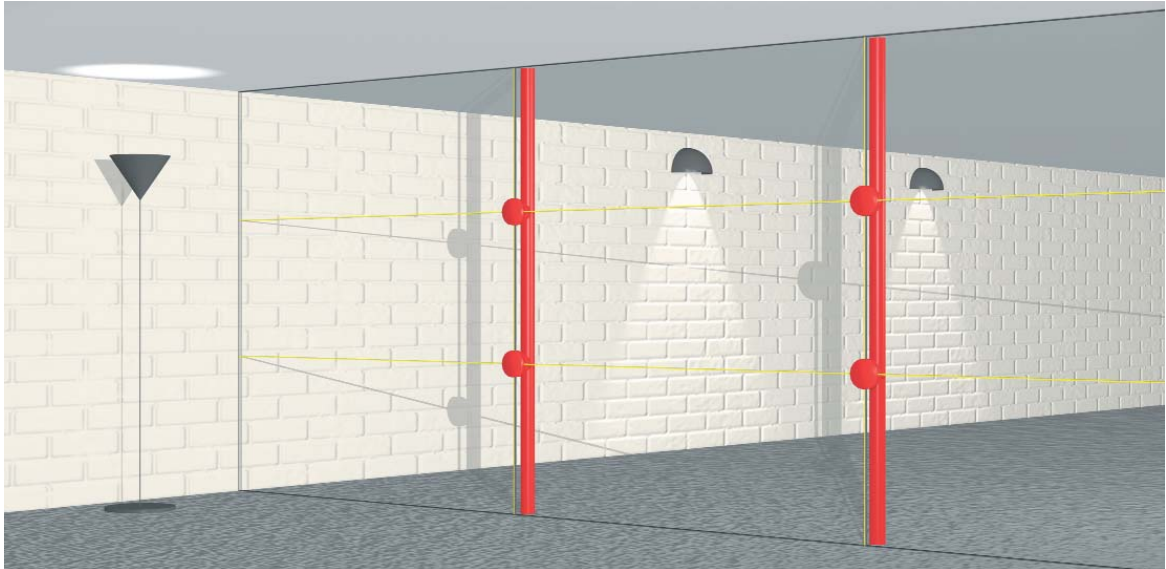
The NF series of PROMAT® SYSTEMGLAS screens offer an exciting range of unique patented fire resisting systems, providing both fire insulation and fire integrity. If visible framing is required, cover strips can be fitted (see the Promat Fire Protection Handbook). For doors, please refer to pages 9-10.



PROMAT® SYSTEMGLAS NF4

System with horizontal and vertical unframed joints

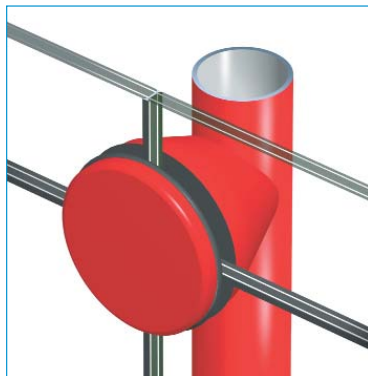
30 and 60 minutes fire resistance



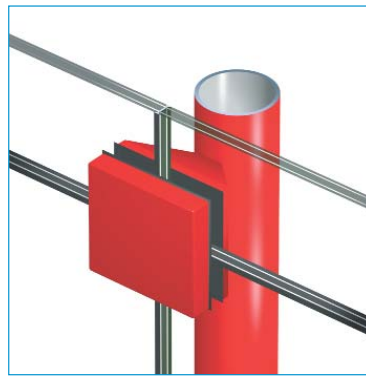
An architecturally pleasing all-glass screen with free-standing support to one side only.

Notes:

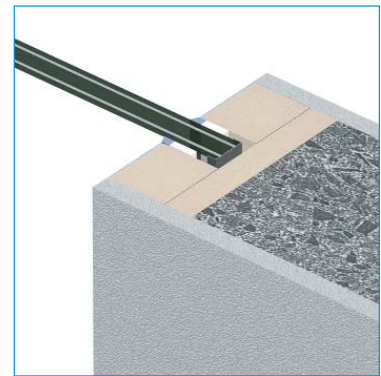
1. Constructed height up to 3000mm x any width
2. The maximum glass pane size is 1400mm high x 2300mm wide
3. The support plates can be circular, square or rectangular
4. Fully transparent construction with vertical and horizontal joints sealed with translucent PROMAT® SYSTEMGLAS silicone sealant
5. The connections to walls, floors and ceilings can be constructed without using exposed perimeter frames



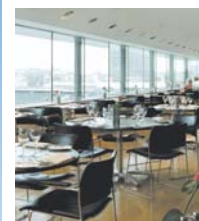
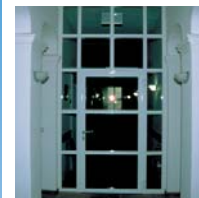
Detail of circular section



Detail of square section



Connection to masonry wall



An integral part of any glazing system are its doors. PROMAT® SYSTEMGLAS has a number of options:

T Doors

Steel framed and providing both integrity and insulation for up to 60 minutes fire resistance.

SR Doors

The nearest to an all-glass door with a 17mm frame around the glass for up to 30 minutes fire resistance .

W Doors

Timber doors in hardwood, with 20mm wide vertical sections for up to 30 minutes fire resistance.

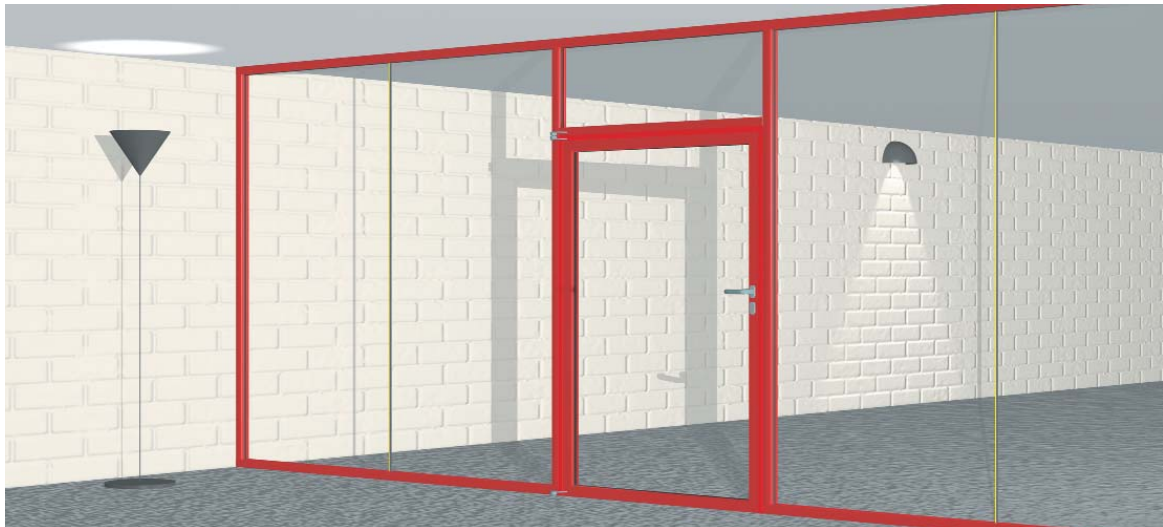


PROMAT® SYSTEMGLAS T30-1 (single door) T60-1 (single door)

Within PROMAT® SYSTEMGLAS screen NF1

30 and 60 minutes fire resistance

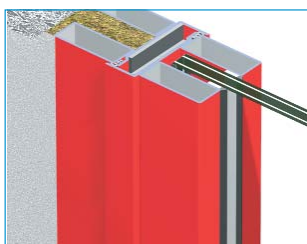
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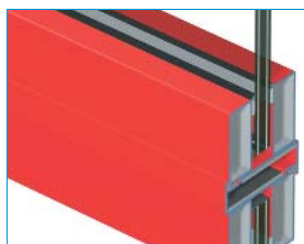
Door frame with small visible profile (60mm x 25mm) without visible glazing beads

Full transparency through the glass screen using the PROMAT® SYSTEMGLAS NF1 silicone frameless construction. Maximum glazing height of screen is 4000mm. Any width can be constructed. For aesthetic reasons, powder coated profiles can be used. The PROMAT® SYSTEMGLAS doors, T30- 1 (30 minute single door) and T30-2 (30 minute double door) use 17mm thick glass and T60-1 (60 minute single door) and T60-2 (60 minute double door) use 21mm thick glass.

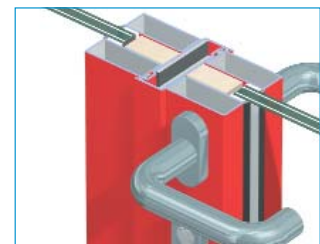
Maximum door opening 2250mm x 1520mm wide (single door) for 30 and 60 minutes fire resistance; 2312mm high x 2370mm wide (double door) for 30 minutes fire resistance; 2200mm high x 2370mm wide (double door) for 60 minutes fire resistance.



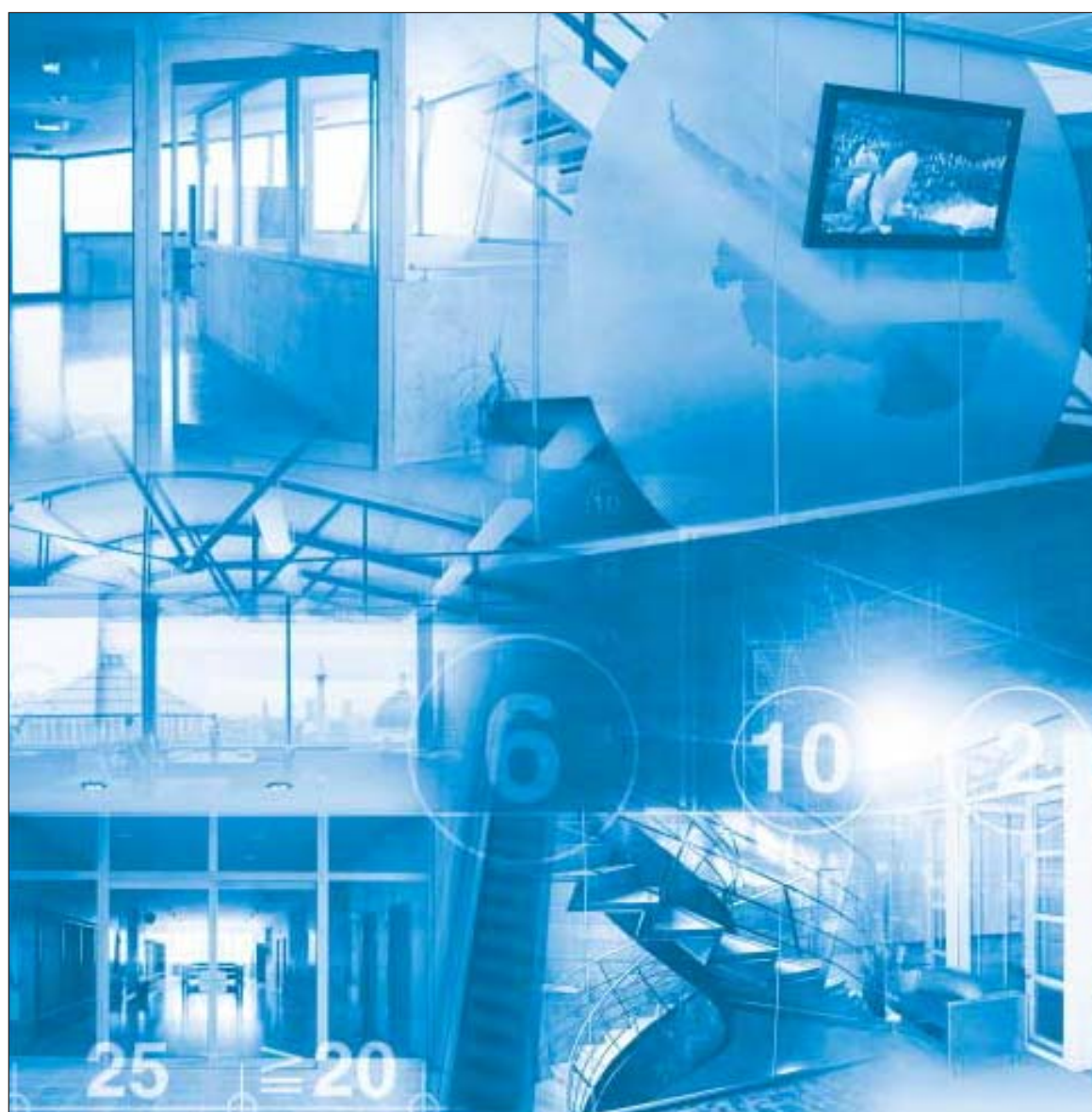
Masonry wall connection



Fanlight connection



Detail at meeting stiles



Promat



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PROMAT UK LIMITED

The Sterling Centre, Eastern Road, Bracknell, Berkshire RG12 2TD
Telephone: 01344 381300 Fax: 01344 381301