

### Promat SYSTEMGLASS™ Screen 90 minutes Fire Resistance

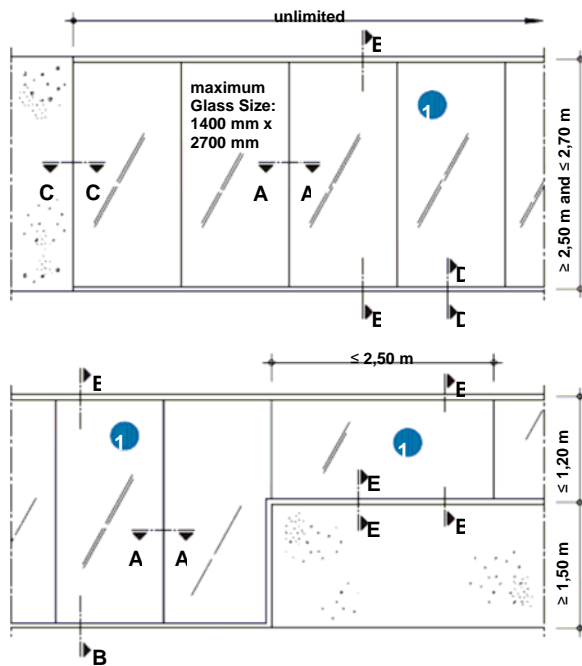
#### All Glass Screen with Vertical Butt Joints

This unique design concept for a fire rated glass wall is a revolutionary technical breakthrough in the passive fire protection industry. Exciting design concepts are now possible with Promat SYSTEMGLASS®. The system offers superior passive fire protection quality using innovative methods of construction, providing fully fire insulated construction across the screen and glass joints without the need for additional insulating cover strips.

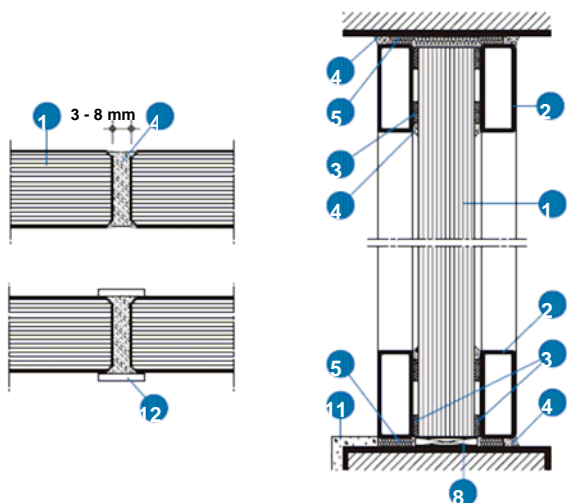
This performance is made possible using the specially developed Promat SYSTEMGLASS®, and is available in a number of tints and coating finishes for a variety of applications as insulating laminated glass.

#### TECHNICAL DATA

90 minutes fire rating, integrity and insulation in accordance with the criteria of DIN EN 1364-1



Detail A – Elevations



Detail B – Silicone Joint

Detail C – Vertical Section

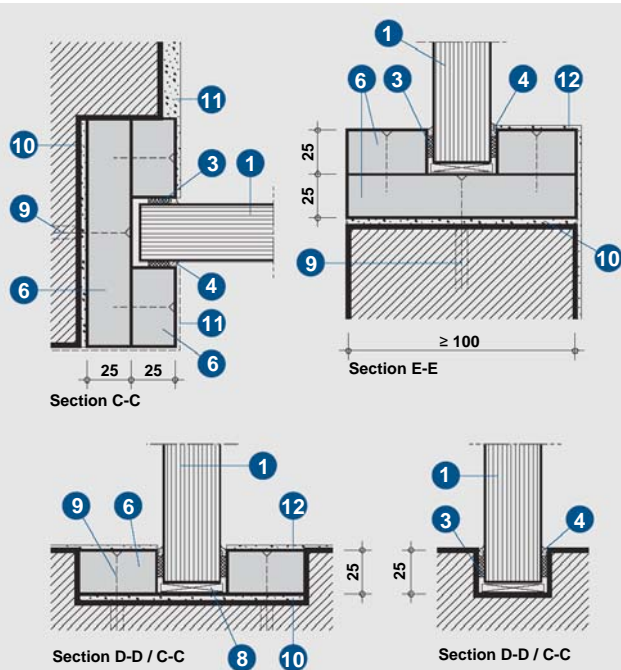
- (1) Maximum pane size:  
Vertical: Promat SYSTEMGLASS® 90, chamfered edges 42mm thick maximum pane size: 1400mm x 2700mm. (minimum height 2500mm)  
Horizontal: Promat SYSTEMGLASS® 90, chamfered edges 42mm thick maximum pane size: 2500mm x 1200mm.
- (2) Hollow steel section framing, minimum 50mm x 25mm x 2mm thick.
- (3) Self adhesive ceramic glazing tape, 12mm x 3mm.
- (4) Promat SYSTEMGLASS® silicone adhesive.
- (5) Rock wool, 15mm thick compressed.
- (6) Minimum SUPALUX® 50mm x 25mm thick fixed using 50mm screws at nominal 200mm centres, or 50mm x 10mm x 1.5mm steel wire staples at nominal 100mm centres.
- (7) SUPALUX® strips, minimum 20mm thick.
- (8) SUPALUX® setting blocks.
- (9) Expansion bolt masonry fixing, or similar at nominal 500mm centres into solid wall, floor or ceiling with a fire resistance equal to, or greater than, that of the glazing system.
- (10) Levelling (bedding) mortar.
- (11) Plaster or cement rendering.
- (12) Optional covering made of stainless steel, aluminium, wood or plastic profiles.
- (13) Fire rating marked on Promat SYSTEMGLASS®.
- (14) PROMASEAL® – PL strip.
- (15) Structural steel member protected with PROMAT® structural steel protection of appropriate thickness.
- (16) Profiled steel channel to provide a deflection head connection. (the specification dependent on deflection).

NOTE 1: Under no circumstances should the edging tape be removed from the glass. It is there to prevent ingress of moisture or acetate from the silicone sealant entering the intumescent layer and causing discolouration.

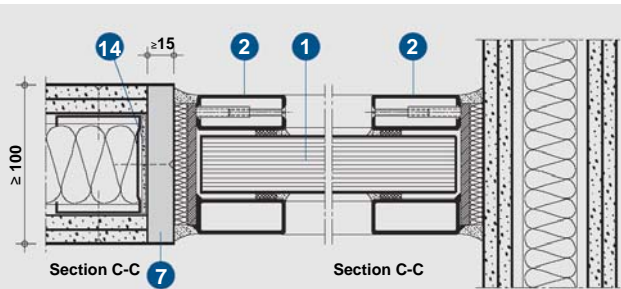
NOTE 2: Promat SYSTEMGLASS® is designed for use in internal applications. It should not be used in high humidity, semi exposed or external applications.

NOTE 3: For SYSTEMGLASS® doors refer to TDS 147 (August 2011).

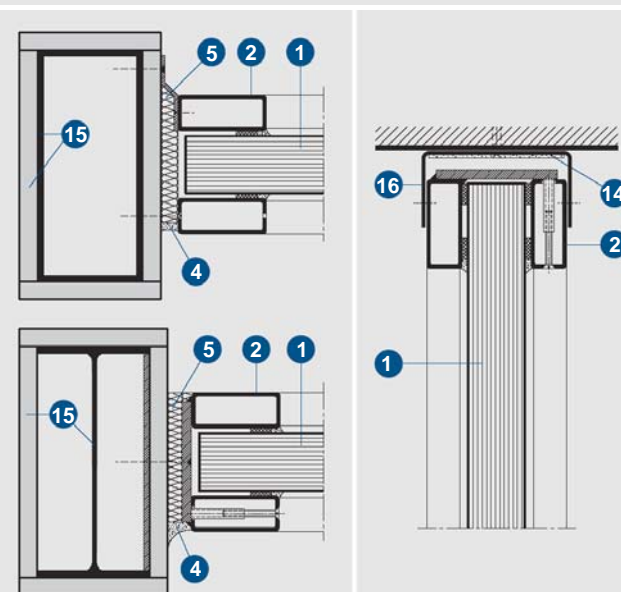
NOTE 4: Refer to TDS121 (August 2011) for more details on the Promat SYSTEMGLASS® system.



**Detail D – Connection to masonry and concrete construction**



**Detail E – Connection to lightweight partition**



**Detail F – Connection to fire protected structural members**

**Detail G – Connection to deflection head detail**

### Detail A

Glazed screens up to 2.7m high may be formed to unlimited length. The maximum permitted glass pane size is 1400 mm x 2700 mm (1). The width of a pane at a wall junction must not be less 855 mm. A minimum height from floor level of 2.50 m is required, else the screen must become the glazing on a parapet wall, formed from brick-work or reinforced concrete (see also detail D). When the SYSTEMGLASS® 90 is used in landscape format, the maximum pane size is 2500 mm x 1200 mm.

### Detail B

The silicone joints have a fine polished chamfered edge (*kantenfein*), the appropriate butt jointed pane edges must to be specified at order. The width of the vertical glass butt joints is between 3 - 8 mm. The joints are filled with Promat® SYSTEMGLASS® silicone sealant and smooth finished (4). After installation, any surplus silicone is removed.

If for aesthetic reasons the joints are required to be emphasised, a cover strip can be provided (12). This strip is of arbitrary thickness and width, and is fastened using the silicone (4) as used in the joint itself.

### Detail C

Each pane of glass stands on two non-combustible setting blocks (8) and is supported at the head and base by two steel hollow sections (2). Different attachment methods are possible where the hollow sections are fastened to structural elements. The transverse force on the connections must be given appropriate consideration.

### Detail D

Alternatively the fire protection glazing can be installed as a frameless system, without using any perimeter steel hollow sections.

Using a levelling mortar (10) and SUPALUX® strips (6) where necessary, a smooth base surface is created. The glazing panes are inserted into the opening and SUPALUX® glass retaining strips (6) are used to lock the glass into position. The wall surface, inclusive of the glass retaining strips, can be painted or skimmed (11).

Alternatively covering sections (12) can be glued onto, or screwed in place, without affecting the fire performance.

In special cases, the glass panes (1) can be installed into prepared slots in high-quality natural stone surfaces.

An edge glass cover of at least 25 mm must be provided. At floor level particular care is required with the connection to avoid mechanical damage caused by cleaning equipment and materials.

### Detail E

The fire protection glazing can be installed within, and against, transverse lightweight partitions. A PROMASEAL® -PL strip (14) is installed at the back of the stud web and secured in place using a SUPALUX® strip (7). The Promat SYSTEMGLASS® (1) is secured in place with the steel hollow sections.

### Detail F

The fire protection glazing can be installed between fire protected structural steel elements (15).

### Detail G

Typical deflection head detail provided to give head restraint and avoid additional vertical loading to the glass in fire conditions. A PROMASEAL® - PL strip (14) is incorporated to maintain fire separation across the head of the screen. Exact detail dependent on specific screen installation,

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