Automatic Door System
Besam ADS Blast

ASSA ABLOY Entrance Systems

Tested and reliable blast protection for a wide range of automated entrances

The Besam ADS Blast Protection automatic entrance system creates a spacious and attractive entrance which combines the benefits of proven blast protection with the convenience and safety of a sliding door. Protecting life and property does not mean compromising appearance.

In line with global demands for construction products to provide protection from blast hazard, ASSA ABLOY Entrance Systems has developed and tested a blast protection entrance solution which sets new standards for performance and scope.

The main advantages of the unique Besam ADS Blast are:
- A range of blast categories
- Variety of design choices and options
- Robust design optimises operational reliability
- Purpose designed door leaf & side screen system
- High performance tested swing door solution
- Standardised door rail and stile sight lines
- Shared aesthetic possible for mixed entrance systems on a single façade

Technical Options

<table>
<thead>
<tr>
<th>Technical Options</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Height</td>
<td>non-standard (2000 - 2400mm)</td>
</tr>
<tr>
<td>Clear Walkthrough</td>
<td>single door width 1200mm (Max)</td>
</tr>
<tr>
<td>Clear Walkthrough</td>
<td>bi-parting pair width 2400mm (Max)</td>
</tr>
<tr>
<td>Side Screens</td>
<td>option</td>
</tr>
<tr>
<td>Pocket Screens</td>
<td>option</td>
</tr>
<tr>
<td>Powder Coated Finish</td>
<td>RAL colours</td>
</tr>
<tr>
<td>Blast Categories</td>
<td>EXV 45, EXV 25, EXV 19, SB4</td>
</tr>
</tbody>
</table>

Tested to the most demanding requirements
- All product development and testing is carried out to exceed the most demanding standards.
- Includes a number of features to ensure life and property is adequately protected.

Large High Performance Entrances
- Combining custom built, robust and versatile Besam automatic door operators with a high performance cleated and tie rodded door system.
- Unique design extends maximum opening widths and heights beyond the capacity of any other comparable system.
- Besam door operators manage the increased door weights associated with blast performance glazing, without hampering speed or reliability.

Design Choice
- Offers options for bi-parting and single sliding doors, side screens and pocket screens.
- Options for high performance swing doors.
- Integrates seamlessly into a certified blast protection curtain wall system.

Aesthetics
- The mechanism which restrains door leaves under blast load is cleverly concealed under a standard operator cover, offering attractive, clean aesthetics.
- Each glazed side screen features concealed fixings.

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Door leaf restraint
With a design brief to produce a high performance entrance solution that maintains the excellent aesthetics of the standard range of ADS products, Besam’s ground breaking ADS Blast Protection system exceeds this demand through the novel application of a lateral carriage restraint mechanism, that is concealed beneath the standard UniSlide cover with its distinctive profile.

Designed to absorb the energy of the blast shock wave, in much the same way as the crumple zone in modern cars, the lateral carriage restraint is one of three key components that enables the system to achieve the best hazard rating of any comparable system on the market.

Each door leaf is fitted with three enhanced carriage wheel assemblies that include heavy duty anti riser plates.

At floor level, a brushed stainless steel floor guide bracket and door heel restraint ensures the door leaf remains engaged with the door guide under blast load. The door guide track is concealed in the door leaf bottom rail, as in the standard ADS systems, thereby allowing a clear and level threshold.

UniSlide functionality
Featuring the proven robust UniSlide automatic operator, Besam’s ADS Blast Protection system provides all the functionality and performance of the standard range.

Framing system
Developed from an existing high performance commercial door system, ADS Blast Protection door leaves and side screens provide the best hazard rating of any comparable system available.

A purpose designed glass carrier profile provides 32mm of “edge bite” for the glazing and reinforces the overall door construction. The minimum glazing specification to achieve the blast protection is 15.02mm clear five ply laminate single glazing. However, the glass carrier is designed to also accommodate suitable double glazed units.

All corner joints are made with concealed cleats and tie rods, with the effect that in blast testing all joints remained securely connected to each other.

The side screens are mounted over heavy duty perimeter rails and secured in place with concealed fixings.
Configuration and options

**ADS BP 2+2 Bi-parting with side screens wall mounted**

FW = Frame Width  
COH = Clear opening height  
FH = Frame Height  
DW = Door leaf width  
OH = Overlight height  
DH = Door leaf height  
CL = Cover length  
SW = Side screen width  
COW = Clear opening width  
WTW = Walk through width

**Blast Test Performance Data:**

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Test Readings</th>
<th>ISO EXV 25 Pass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak Reflective Pressure</td>
<td>99 kPa</td>
<td>80 kPa</td>
</tr>
<tr>
<td>Peak Reflective Impulse</td>
<td>414 kPa.msecs</td>
<td>380 kPa.msecs</td>
</tr>
</tbody>
</table>

**Test requirement:** Car Bomb - 100 kg TNT at 23.5m standoff

**Result:** Pass. ISO EXV 25 Hazard Rating B

(Full test data and results for all other categories, available on request)

**Maximum Dimensions:**

<table>
<thead>
<tr>
<th>Configuration</th>
<th>FW</th>
<th>FH</th>
<th>CL</th>
<th>COW</th>
<th>COH</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADS BP 1 Single Sliding</td>
<td>1340</td>
<td>2400</td>
<td>2745</td>
<td>1200</td>
<td>2400</td>
</tr>
<tr>
<td>ADS BP 2 Bi-parting</td>
<td>2680</td>
<td>2400</td>
<td>5360</td>
<td>2400</td>
<td>2400</td>
</tr>
<tr>
<td>ADS BP 1+1 Single Sliding with side screens</td>
<td>2793</td>
<td>2400</td>
<td>2855</td>
<td>1200</td>
<td>2400</td>
</tr>
<tr>
<td>ADS BP 2+2 Bi-parting with side screens</td>
<td>5590</td>
<td>2400</td>
<td>5590</td>
<td>2400</td>
<td>2400</td>
</tr>
<tr>
<td>ADS BP PS Hinged Pocket Screen</td>
<td>1381</td>
<td>2384</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

NOTE:
Secure structural steel fixing base (indicated in red) required by others for all perimeter junctions.
Your local representative has access to professional tools designed to provide our customers with reliable and relevant data for choosing the entrance products that best fit their specific circumstances and sustainability needs.

Sliding door operator with one sensor installed on the operator cover and one sensor on the door header on the other side. Specific sensors providing energy saving on interior climate by minimizing unnecessary openings of the door, and by reducing the total opening time on each of the cycles adapting them to the real traffic needs.

Less unnecessary opening + reduced opening time in each cycle X thousands/millions of openings a year = much reduced energy waste = big energy/cost saving on interior heating/climate.

NOTE:
Secure structural steel fixing base (indicated in red) required by others for all perimeter junctions.

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**ADS BP Curtain Wall 2+2 Bi-parting with side screens and over light**

![Diagram of ADS BP Curtain Wall 2+2 Bi-parting with side screens and over light]

**ADS BP Curtain Wall Maximum Dimensions:**
- ADS BP CW 1+1: Single Sliding with one side screen and two over lights (FW: 3300, FH: 3500, CL: 3300, WTW: 1200, COH: 2400)
- ADS BP CW 2+2: Bi-parting with two side screens and three over lights (FW: 6410, FH: 3500, CL: 6410, WTW: 2400, COH: 2400)

**MC's:**
- Side Screen Mullion Centres – 1800
- Entrance Mullion Centres - 2745

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**ADS BP Swing Door Maximum Dimensions:**
- ADS BP SW1: Single Swing door with door frame (FW: 1120, FH: 2400)
- ADS BP SW2: Pair Swing doors with door frame (FW: 2170, FH: 2400)

**EXV 25 Tested Automation**
- Single SW200i heavy duty swing operator
- Pair SW200i heavy duty swing operators

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