

BLR SERIES

Blast Resistant Doors

ABOUT THE PRODUCT

The BLR-Series offers a wide range of blast resistant door and frame products in swinging or sliding construction. Included are pre-engineered, third party certified blast-resistant doors in the range of 0.5 to 25 PSI (3.45 to 172.4 KN/m²). Lower range offerings include standard 1 ¾" thick door models with the possibility to use standard or slightly modified door hardware.

PRODUCT RANGE:

- LBLR / Low Blast Range:
0.5 PSI up to 3.0 PSI
- MBLR / Medium Blast Range:
3.0 PSI up to 10.0 PSI
- HBLR / High Blast Range:
10.0 PSI up to 25.0 PSI
- EHBLR / Extra High Blast Range:
Above 25.0 PSI

In addition to pre-engineered door models, custom designed doors are available for any applications. Extensive work has been done in this regard for government, chemical, pharmaceutical oil, gas and petrochemical projects.

TESTING & SPECIFICATIONS OF COMPLIANCE – BLAST & FIRE

BLR-Series flush doors are designed and manufactured to meet the international requirements of positive blast pressure based on design calculations and certified by independent engineering consultancy offices in accordance with industry standards.

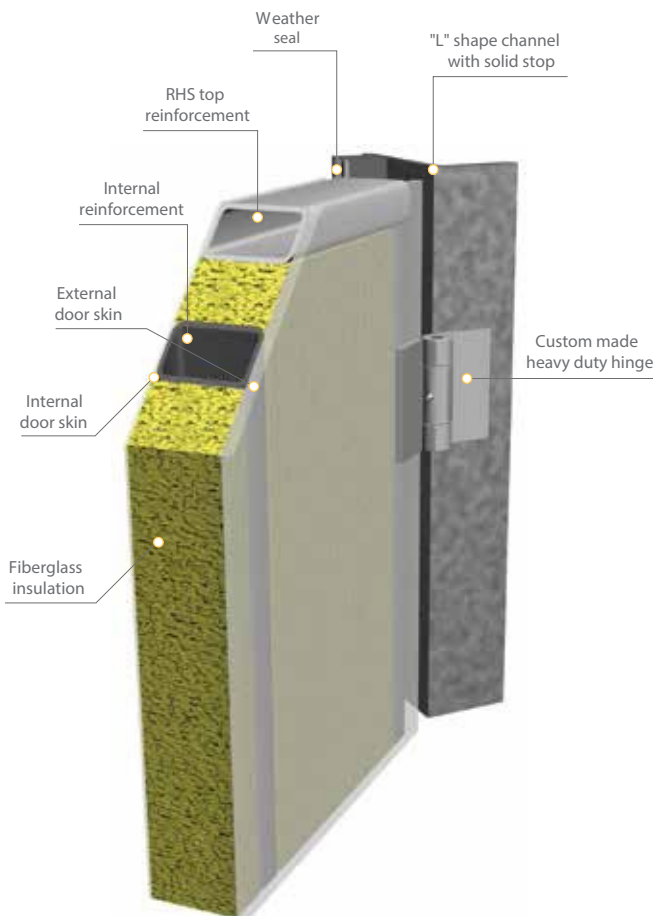
According to ASCE 97 Report (American Society of Civil Engineers), static load tests are performed on prototype assemblies of low range blast doors in order to demonstrate ability to resist the blast overpressure specified. Structural integrity of mid and high range blast resistant doors, is then substantiated by design calculations. Blast resistant doors are designed to withstand dynamic pressure loads depending on location, equipment protection necessities, and above all life safety requirements.

STANDARD SIZE

- Swinging Blast Doors: 3.00m W x 3.50m H @ 25 PSI
 - Sliding Blast Doors: 4.00m W x 4.00m H @ 51 PSI
- Larger sizes and higher blast pressures are also available.
- BLR-Series doors are tested and certified by Intertek Testing Services / USA, according to ASTM E 330 – 84 for static pressure and have achieved 3 PSI, 4.25 PSI and 6 PSI positive pressures, 3.0 PSI negative pressure with three hours fire rating.

FIRE RATING

Fire labeling available in single and double swing styles for low-and mid-range blasts as listed and labeled by Intertek-Warnock Hersey according to UL 10C, UL 10B, UBC 7-2-1997, NFPA 252-1995, ASTM E152-81a, CAN4-1980, and BS 476 Part 20.



Typical Blast Door Details

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BLAST PRESSURE LOAD / FIRE RATING DETAILS:

Steel Skin Face Sheets Thickness (mm)	Frame Steel Sheet Thickness (mm)	Blast Pressure Load (PSI)	Fire Rating in Hours
3.0 mm / 3.0mm	3.0 mm	3.0 PSI	3 hrs
3.0 mm / 3.0mm	3.0 mm	4.25 PSI	3 hrs
3.0 mm / 3.0mm	3.0 mm	6.0 PSI	3 hrs
10.0 mm / 3.0 mm	9.0 mm	15.0 PSI	3 hrs

PHYSICAL ENDURANCE TEST

BLR-Series doors, installed with extra heavy duty locking device model L900 and extra heavy duty hinges Model H800, have been tested according to ANSI A250.4 – 1994 and ANSI A250.5 – 1994, and have passed 1.2 million cycles as certified by BUREAU VERITAS.

FEATURES

CORE:

- Spaces between stiffeners are insulated with fiberglass to the full height of the door.
- Standard infill nominal density 24 Kg/m³.
- Thermal Conductance (50 mm): U = 0.123 Btu/hr.ft.²/°F/Btu. (ASTM C177).
- Thermal Resistance: R – Factor = 8.11 hr.ft²/°F/BLR. (ASTM C518-63T).
- Combustibility: None / IMO Resolution – ASTM E 136-82, BS 476 part 4, ISO R1182.

OPTIONS:

- Rockwool core infill.
- Alkyd or polyurethane RAL color paint finish (factory applied).
- Supplied with custom made hinges, drop bolt, and exit device.
- Available in stainless steel leaf and frame finish.
- Sliding assemblies are available manual or power operated.
- Can be manufactured for multiple performance requirements including acoustical, bullet resistance, thermal protection, radio frequency shielding or any combination thereof.
- BLR-Series doors are offered with standard frame designs, special frame profiles can be engineered to complement wall construction and architectural style.

LEAF CONSTRUCTION

- Formed of heavy gauge steel face sheets constructed around a custom engineered steel rib core with interior construction as required to protect against specified blast level.
- Factory applied epoxy prime base coat.
- All other construction details, as skin and frame sheet thickness, reinforcement details, and frame anchoring details, depend solely on the calculation design of the specified blast pressure according to ASCE report and recommendations.

HARDWARE

BR-Series Swing door hardware includes modified builders hardware or factory manufactured locks and hinges as required by blast rating. Sliding door hardware includes low friction tracks and rollers, low voltage control circuitry for electrical operators, and a variety of operator actuation devices.



Typical Sliding Blast Resistant Door