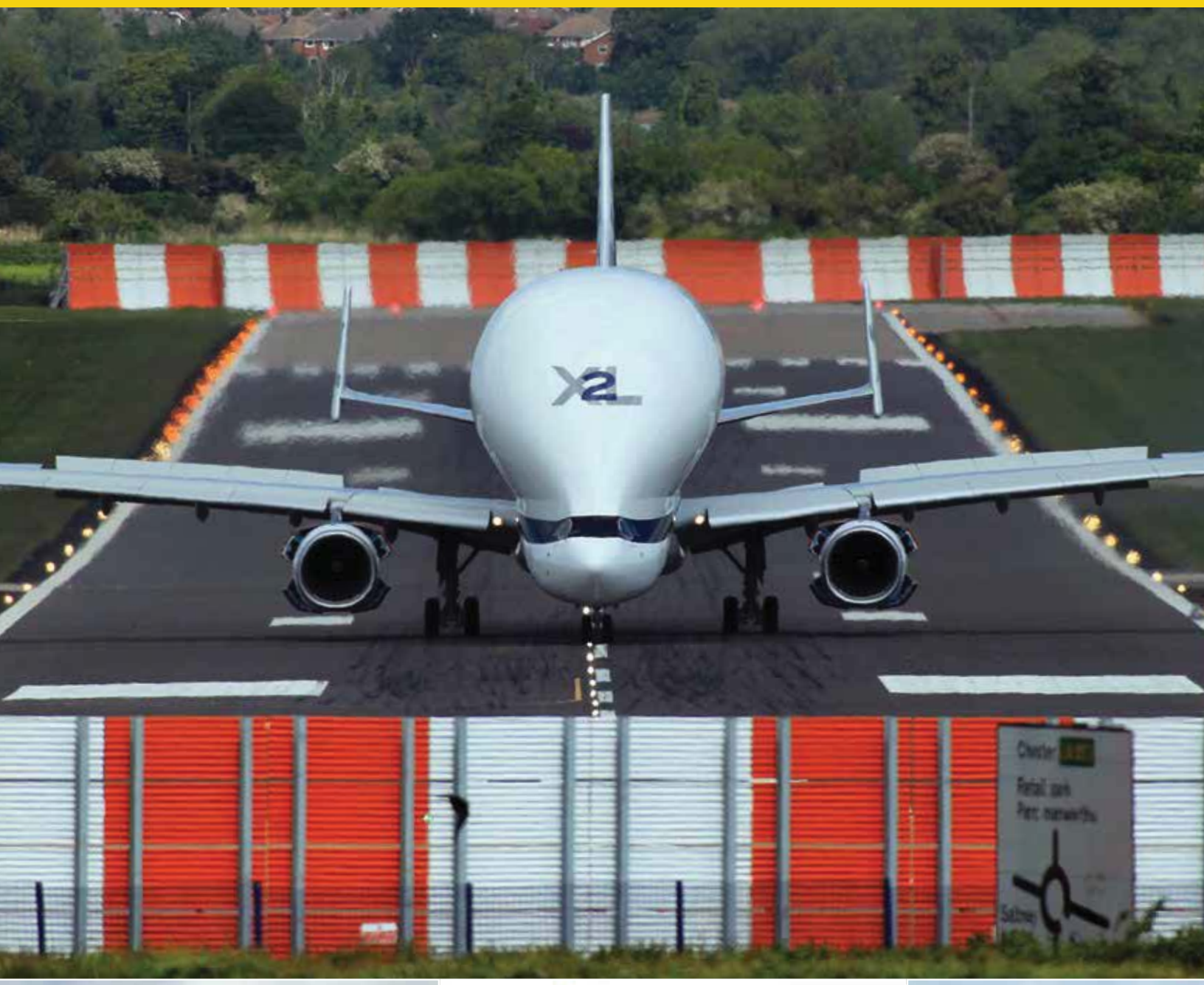
Jet Blast Deflectors for Commercial, General Aviation & Military Aircraft

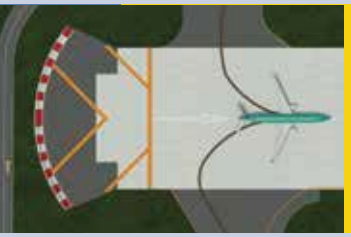
JBD



BDI
Blast Deflectors

Reducing Airport Noise and Improving Safety Since 1957

For more than 60 years, BDI has offered the airport industry a full selection of jet blast deflectors ranging from light-duty for taxi operations to heavy-duty models for engine run-ups. BDI's aim is to provide innovative, customized solutions for jet blast protection that meet customers' budgets. BDI does this with passion and competence, and with the highest levels of technology, quality and safety.



Planning & Design Specification Support

- Jet blast impact assessments to ensure compliance with FAA, CAA and ICAO guidelines
- Photorealistic renderings for communicating concepts to stakeholders
- Support for airspace studies, obstacle free conflicts, aerodynamic usability, etc.

Engineering

- Continuous innovation using computational fluid dynamics (CFD) and finite element analysis (FEA)
- Computer-aided design (CAD) and 3D structural models for BIM integration
- Local code compliance of structural design, including anchoring systems and concrete foundations

Supply

- ISO 9001:2015 certification ensures that the highest quality standards are followed
- Global manufacturing capability offering the highest quality materials and production techniques
- Custom-manufactured solutions to meet unique project requirements

Delivery & Installation

- Jet blast deflector material can be delivered to any location via road, rail, ocean or air freight
- All material is professionally packed in easily-handled bundles, pallets and/or crates
- BDI's staff of field technicians provide site assistance to ensure a smooth and efficient installation

Performance Verification

- BDI can provide field validation of the performance of any blast deflector model
- Field measurements of jet blast exhaust and air flow are compiled into a report
- BDI's R&D department uses field data to develop new products and solutions

Support

- Inspections to check the integrity and evaluate the condition of installation. OEM re-certification available
- Refurbishment and repair programs to extend service life. Spare parts inventory maintained to mitigate lead times
- Archives of documentation and details from more than 1,500 past projects

BDI IS COMMITTED TO MAKING PROJECTS SUCCESSFUL.

SOLUTIONS FOR ALL JET BLAST APPLICATIONS

BDI deflectors are constructed of heavy-duty, hot-dip galvanized steel. All designs are modular and can easily be relocated or reconfigured as requirements change. **The most common type of jet blast deflector is BDI's curved design,** which has been the industry standard since 1957, although BDI offers many other shapes and configurations to meet the requirements of our customers.

Vertical blast fence with solid panels.

Expanded metal (mesh) deflectors for taxi-breakaway applications.

Deflectors rated for full power afterburner testing of fighter aircraft.

Vertical blast fence with both solid and mesh material.

Portable blast deflectors for temporary use during construction projects.

Fiberglass deflectors for use near NAVAIDs.

LIGHT-DUTY JBD FOR TAXI OPERATIONS

These deflectors protect GSE, roadways, parking areas, buildings and personnel from jet blast produced by aircraft maneuvering on taxiways and aprons.

BDI offers many different models to protect sensitive areas from jet blast. The height of the deflector is determined by our engineers based on the aircraft position, aircraft type, power level and any additional specific customer requirements. Most of BDI's models are constructed of heavy-duty, hot-dip galvanized steel. All designs are modular and can easily be relocated or reconfigured when requirements change.

The industry standard is BDI's curved deflector with solid panels, which offers maximum aerodynamic performance. Other versions offered by BDI include vertical and angled deflectors with expanded metal (mesh).

ADVANTAGES

- Proven designs
- Customized to meet project requirements
- Heights from 6' to 35' (2m to 11m)
- Compact footprint
- Designed for dynamic jet blast loads
- Variety of coating options
- Many optional features
- Corrosion resistance for long service life

Dubai, UAE

IMPROVING AIRPORT SAFETY & CREATING USABLE SPACE

LIGHT-DUTY JBD FOR TAXI OPERATIONS

Madrid, Spain

Changi, Singapore

Santiago, Chile

Dublin, Ireland

Mumbai, India

Killeen, USA

Bologna, Italy

Las Vegas, USA

HEAVY-DUTY JBD FOR ENGINE RUN-UPS

A run-up deflector is utilized by airlines, MRO operations and aircraft manufacturers when high-power engine run-ups need to be performed safely. Both **heavy-duty and aerodynamically efficient,** BDI's range of run-up deflectors meet the demands of all aircraft types.

BDI's design team carefully studies each project to determine the optimal deflector type and configuration. When run-up noise is a factor, BDI can offer ground run-up enclosure (GRE) technology, which combines an aerodynamically-shaped jet blast deflector with noise-absorptive acoustic walls.

ADVANTAGES

- Designs available for all aircraft & engine types
- Optimal aerodynamic performance
- Configurations adapted to project requirements
- Heavy-duty anchor system
- Rapid installation
- Lasting durability
- No site welding or field fabrication required
- Outstanding corrosion protection

Boeing Charleston, USA

CREATING A SAFE ENVIRONMENT FOR MAINTENANCE OPERATIONS

HEAVY-DUTY JBD FOR ENGINE RUN-UPS

Buenos Aires, Argentina

Changi, Singapore

Calgary, Canada

Sydney, Australia

Boeing Renton, USA

Paris CDG, France

Victorville, USA

Doha, Qatar

Abu Dhabi, UAE

Battle Creek, USA

SAFETY DURING AIRSIDE CONSTRUCTION

BDI's range of temporary and moveable deflectors provides contractors and airports with flexibility and improved safety in airside construction environments. Various heights and shapes are available to suit any project requirement. A moveable deflector avoids the need for permanent civil work.

MOVEABLE TYPES OF BDI JET BLAST DEFLECTORS FOR TEMPORARY APPLICATIONS:

- Curved or vertical style with solid panels
- Angled or vertical style with expanded metal
- Optional factory finish in high visibility colors
- All types can be mounted onto concrete bases and are moveable by forklift or crane


Manchester, UK


Denver, USA


Dublin, Ireland

SOLUTIONS FOR ALL MILITARY APPLICATIONS


G14M-4 for C-130 Run-ups


G14NB-6 Protecting Structure


GS12-2 for Afterburner Testing

Since the dawn of the jet age, BDI has provided solutions for military applications. BDI's first major military project was to equip all Strategic Air Command (SAC) bases with Lynnco Type E deflectors and, since then, **thousands of BDI deflectors have been installed** at military facilities worldwide.

Models are available for power check pads, aprons and parking positions.

BDI's deflector material can be rapidly dispatched via air or sea shipment to locations around the globe in easily-handled bundles. **Designs comply with USAF, NAVFAC, USACE, and NATO requirements.**


U19-3 for C-17 Run-ups


GS20-2 for B-1B Engine Run-ups

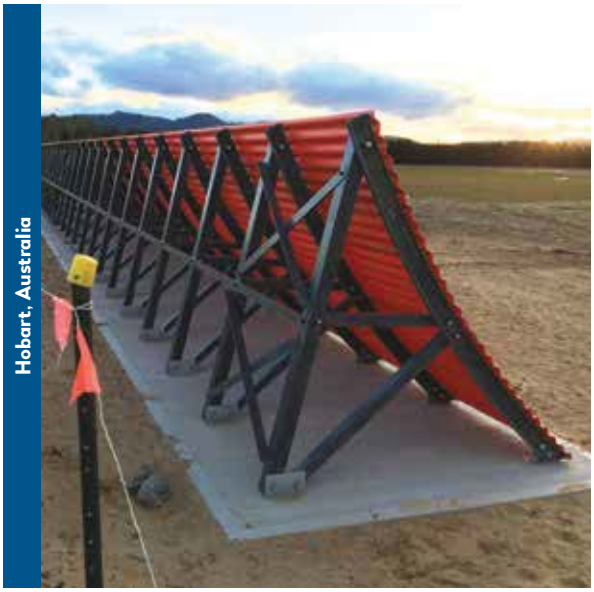
U19-3 for KC-135/KC-46 Run-ups

NAVAID-COMPATIBLE DEFLECTORS

BDI's range of fiberglass blast deflectors is designed for use near airport NAVAIDs such as an instrument landing system (ILS) localizer. These deflectors are constructed **entirely of fiber reinforced plastic** material in order to be transparent, or invisible, to radio signals. BDI's fiberglass design has been **flight tested by the FAA,** which verified that the material and geometry do not interfere with NAVAIDs.

The curved shape of BDI's fiberglass deflector provides optimal aerodynamic performance and provides maximum protection to both personnel and NAVAID structures. The fiberglass panels can also be supplied in a variety of standard colors.

Providence, USA



Hobart, Australia

Providence, USA

FEATURES & OPTIONS

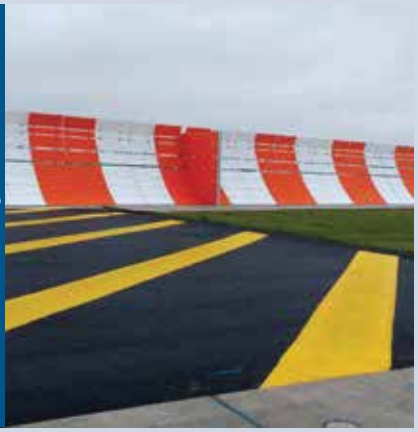
BLAST PANEL OPTIONS

- Solid, hot-dip galvanized steel sheets
- Expanded metal (mesh)
- Hot-dip galvanized coating
- Powder coating or epoxy paint (various colors available)
- Carbon or stainless steel, fiberglass, aluminum or polycarbonate
- Integrated acoustic panels

Dallas Love Field, USA

STRUCTURE OPTIONS

- Hot-dip galvanized coating
- Powder coating or epoxy paint (various colors available)
- Carbon or stainless steel, aluminum, or fiberglass structural members
- Aesthetic landside cladding



Airbus Broughton, UK

ANCHOR OPTIONS

- Mechanical, expansion type
- Chemical (epoxy)
- Cast-in-place
- Frangible (break-away)

SECURITY/SAFETY OPTIONS

- Obstruction lights
- Barbed wire arms
- Perimeter fence integration

A FOCUS ON QUALITY

BDI has a long history of consistently providing quality blast deflectors that meet project requirements. This commitment has been reinforced by receiving registration to ISO 9001:2015 standards.

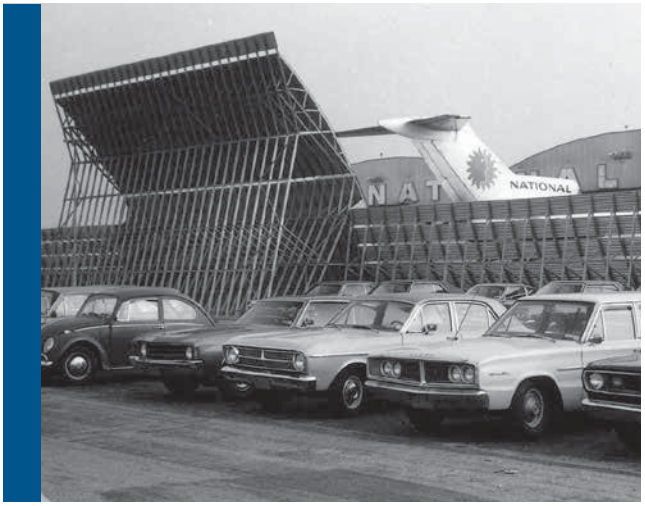
All BDI deflectors are manufactured to the highest standards, and each installation is supervised by a highly trained BDI field technician. BDI deflectors are designed and prefabricated for efficient installation with minimal tools and labor.

Finkenwerder, Germany

THE ORIGINAL EXPERTS

Founded in 1957 in San Francisco, Blast Deflectors, Inc. is a world leader in jet blast deflectors and aircraft acoustic enclosure technology. BDI's innovative solutions have set the standard for the jet blast deflector industry for more than 60 years. BDI safeguards their reputation for excellence through a focus on research and development combined with state-of-the-art manufacturing. The result is a complete range of jet blast deflectors suitable for all applications.

BDI works with aircraft manufacturers, civil aviation authorities and airport consultants to analyze the potential jet blast impacts of aircraft. That, coupled with their years of experience and thousands of successful installations across the world, allows BDI to plan, design and implement the most cost effective and practical solutions. BDI's commitment for customer service and continuous improvement is evidenced by their ISO 9001:2015 certification.



STANDARD MODELS

BLAST DEFLECTORS RATED FOR TAXI/BREAKAWAY POWER OPERATIONS

Model	Nominal Height	Depth	Description	Aircraft
V-6	8' to 14' (2.4m to 4.2m)	17" (43cm)	Cantilevered, vertical blast fence with posts spaced at 6' on center. May be installed on narrow foundations (e.g. piers, stem walls, etc.)	Height-dependent
LCV	14' to 32' (4.2m to 9.6m)	4' to 8' (1.2m to 2.4m)	A-Frame with vertical blast surface for installation on shallow foundations	Height-dependent
G8M-6	8' (2.4m)	7'4" (2.3m)	Curved deflector designed for engines 5 to 6 feet (1.5-1.8m) above ground level	G.A. + some narrow body
G10M-6	10' (3.1m)	8'4" (2.6m)	Curved deflector designed for engines 7 to 8 feet (2.1-2.4m) above ground level	G.A. + some narrow body
G14M-6	14' (4.2m)	9'4" (2.9m)	Curved deflector designed for engines 10 to 11 feet (3.0m-3.3m) above ground level	Most wide-body aircraft
G19M-6	19' (5.8m)	11'2" (3.4m)	Curved deflector designed for engines greater than 11 feet (3.3m) above ground level	All aircraft including A380
G8NB	8' (2.4m)	4'6" (1.4m)	Curved deflector with narrow base, designed for light-duty jet blast protection	G.A. + some narrow body
G10NB	10' (3.1m)	5'2" (1.6m)	Curved deflector with narrow base, designed for light-duty jet blast protection	G.A. + some narrow body
G12NB	12' (3.8m)	5'8" (1.8m)	Curved deflector with narrow base, designed for light-duty jet blast protection	Narrow-body aircraft
G14NB	14' (4.2m)	5'8" (1.8m)	Curved deflector with narrow base, designed for light-duty jet blast protection	Most wide-body aircraft
G20NB	20' (6.1m)	8'2" (2.5m)	Curved deflector designed for engines greater than 11 feet (3.3m) above ground level	All aircraft including A380
JBS-A	6' to 14' (1.8m to 4.2m)	Varies	Angled mesh barrier. Designs available for all aircraft types.	Most commercial aircraft.
JBS-V	6' to 14' (1.8m to 4.2m)	12" (31cm)	Vertical mesh barrier. Designs available for all aircraft types.	Most commercial aircraft.
JBS-P	6' to 14' (1.8m to 4.2m)	Varies	Portable mesh barrier. Designs available for all aircraft types.	Most commercial aircraft.

BLAST DEFLECTORS RATED FOR HIGH POWER OPERATIONS

Model	Nominal Height	Depth	Description	Aircraft
G8M	8' (2.4m)	7'4" (2.3m)	Curved deflector designed for takeoff thrust, typically at the end of a runway	G.A. + some narrow body
G10M	10' (3.1m)	8'4" (2.6m)	Curved deflector designed for takeoff thrust, typically at the end of a runway	G.A. + some narrow body
G14M-3	14' (4.2m)	9'4" (2.9m)	Curved deflector designed for takeoff thrust, typically at the end of a runway or some maintenance facilities	Narrow + some wide body aircraft
G19M-3	19' (5.8m)	11'2" (3.4m)	Curved deflector designed for engines greater than 11 feet (3.3m) above ground level	All aircraft including A380
U19	19' (5.8m)	14'4" (4.4m)	Curved deflector designed for takeoff thrust, typically in a maintenance facility	Wide-body aircraft
U24	24' (7.2m)	15'4" (4.7m)	Curved deflector designed for engines greater than 11 feet (3.3m) above ground level	Wide-body aircraft
U35	35' (10.4m)	25'10" (7.9m)	Curved deflector designed for takeoff thrust, typically in a maintenance facility	DC-10, KC-10 & MD-11

BLAST DEFLECTORS RATED FOR AFTERBURNER OPERATIONS

Model	Nominal Height	Depth	Description	Aircraft
GS12	12' (3.6m)	11'6" (3.6m)	Maintenance testing, full power run-ups with afterburner	Military fighters
GS20	20' (6.1m)	13' (4.0m)	Maintenance testing, full power run-ups with afterburner	Military fighters & bombers

This is only a partial listing of BDI's standard models. Your BDI representative can provide you with more information on BDI's complete range of jet blast deflectors, including:

- Technical specifications
- Concept drawings
- Typical concrete foundation designs
- Installation requirements and durations
- Project schedules
- Complimentary jet blast hazard assessment
- Complimentary run-up noise assessment
- Budgetary pricing
- Project references
- Testing requirements

LET BDI'S 60+ YEARS OF EXPERIENCE BENEFIT YOUR PROJECT

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- **Jet Blast Deflectors**
- **Ground Run-up Enclosures**
- **Visual Screens**
- **FOD Barriers**
- **Acoustic Barriers**

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