



Blizzard^{G4}

Outdoor
Projector
Enclosures
5-15K



Blizzard

Outdoor Projector Enclosures

Blizzard is the world's most popular outdoor projector enclosure for permanent installation in any climate, for video mapping, outdoor attractions, advertising and outdoor movies.

Blizzard comes in three standard sizes, for projectors between about 5,000 and 15,000 ANSI lumens.

Now Blizzard comes with all the new features you've asked us for:

- *Optional Projector Tray slides out either side for easy installation and service access*
- *Tabletop or ceiling projector mount*
- *Rear door opens for lamp access*
- *Stackable*
- *Loads of rigging accessories*
- *Optional Ethernet communications*

All Blizzard models feature Tempest's patented Digital Enclosure Control system (DEC4™), now available with optional remote monitoring over your TCP/IP network.

Blizzard models come in three sizes, and three configurations, to suit any outdoor projection application:

Landscape

The standard configuration — projector may be configured tabletop or ceiling style, with your choice of fixed or sliding projector mount.

Portrait

Blizzard portrait versions are available to special order in all sizes. Specify projector type when ordering.

Ultra-Short-Throw

Blizzard is ready for the UST revolution! Now you don't need to own the plot across the street to project on the front of your building! UST models may be configured to project either up or down, for ground or roof-level installation. Specify projector and lens type when ordering.



Blizzard 52.150.LS with projector slide. Use 52.150 models for most projectors 12-15,000 ANSI lumens.



Blizzard 52.100.LF Landscape, with fixed projector mount. Suitable for most projectors 8-10,000 ANSI lumens.



Blizzard 52.100.P Portrait enclosure for most projectors 8-10,000 ANSI lumens that allow portrait orientation.



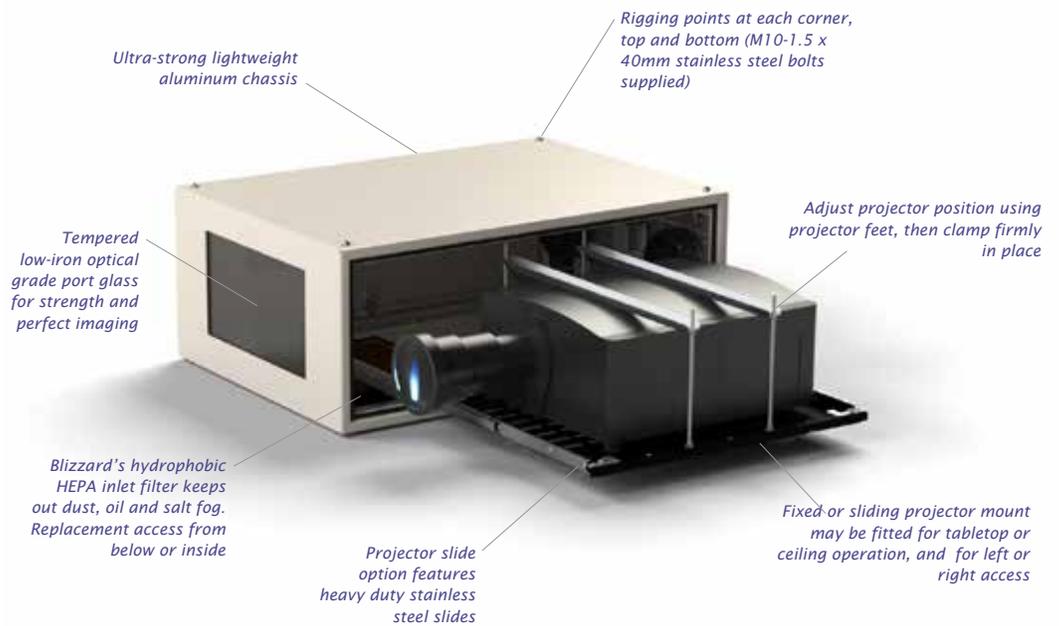
Blizzard 52.100.U Enclosure for most projectors 8-10,000 ANSI lumens fitted with Ultra-Short-Throw lenses.

Blizzard UST enclosures may be installed to project either up or down.

Blizzard

Outdoor Projector Enclosures

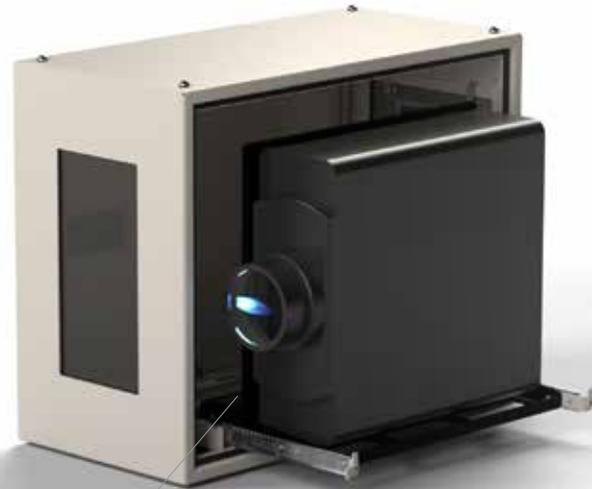
Landscape



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Portrait



Blizzard Portrait enclosures incorporate a customized mounting frame for the desired projector.

Projector attaches to the mounting frame with screws provided.

Use projector feet to adjust projector angle, then tighten mounting screws to lock.

Blizzard Portrait enclosures are customized for the intended projector mount, so we need to know the projector you're using when you order.

Not all projectors may be used in portrait mode. Some may be used in portrait mode but only in one orientation — check with your projector manufacturer before ordering.

Ultra Short Throw



Blizzard UST outdoor enclosures allow you to paint a wall with video without having to own the block across the street!

UST enclosures are typically wider than standard landscape enclosures, to allow for the extreme width of the projection beam without clipping.

Blizzard UST enclosures may be configured to mount above the image (projecting down) or below it (projecting up).

Please note that, due to the differing characteristics of available UST optical systems, all UST enclosure orders are treated as semi-custom. Tempest will collaborate with the projector manufacturer in each case to arrive at the optimal solution.

There are several different optical solutions competing for your ultra-short-throw business. Tempest works with all major projector manufacturers to create effective solutions that work for you. This one takes the innovative Epson periscopic lens.

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All Blizzards come with four M10 threaded sockets — one at each corner — top and bottom. See the CAD drawings and 3D CAD blocks at Tempest.biz for precise dimensional data.

Stainless steel bolts are provided for attachment to any suitable support structure.

Tempest recommends only the use of stainless steel hardware for installing enclosures outdoors.

The following rigging options are available for any Blizzard enclosure:

Blizzard Vertical Pole Hanger Kit

Hang Blizzard safely on a vertical pole 50mm [2"] OD. Allows up to 30° tilt, 5° roll and unlimited pan adjustment. *Note: Not recommended for Blizzard 52.150 models.*

Blizzard Horizontal Pole or Truss Kit

Hang Blizzard safely on any truss or horizontal pipe with OD 50mm [2"]. The Truss kit allows you to:

- Tilt the enclosure by pivoting on the supplied truss clamps, +/- 30°
- Pan the enclosure up to 45° left or right
- Roll the enclosure +/- 5°

Stacking Kit

Stack two or more Blizzard enclosures of the same type using this stacking kit.

Male and female parts attach to the threaded corner holes, and are simply joined together using a stainless steel clevis pin.

See also Swivel Stacking Kit, next page)

Drop Arms

Use with a Stacking Kit to hang a lower Blizzard enclosure at an angle up to 60 degrees down.

Max Angles:

- Blizzard 52.050 60°
- Blizzard 52.100 51°
- Blizzard 52.150 41°

Rigging Options



Blizzard 52.100 Portrait with 52.XV.100P Vertical Pole Hanger Kit



Blizzard 52.150 Landscape with 52.XH.150L Horizontal Pole/Truss Hanger Kit



A pair of Blizzard 52.150 Landscape enclosures with 52.SK Stacking Kit. The kit maintains the required 75mm airflow gap between the two enclosures

...just add the 52.DA Drop Arms Kit to angle the lower enclosure



Blizzard Outdoor Projector Enclosures

Cycloator

Set a projection angle up to 60° up or down. Perfect for rooftops when shooting down or at ground level when projecting up at a tall building. Stack up to two Blizzards on each Cycloator.

Requires Unistrut Kit 52.UR.xxx.

Unistrut Kit

Easy attachment to any structure using these two Unistrut rails. Simply use industry standard channel nuts to bolt to your structure, without worrying about precise hole locations.

Unistruts may be mounted bottom (shown here with Cycloator) or top.

Swivel Stacking Kit

Stack two Blizzard enclosures (must be the same model), and angle them up to 40 degrees apart (20° either side of center) — great for short-throw edge blending jobs.

Stainless steel stacking kits attach to M10 rigging points, and locking bolts are provided to secure pan angle when aligned.

Sun Shade (52.SH.xxxx)

Pictured above, this reflective aluminum panel mounts easily on the top of any Blizzard enclosure to provide extra daytime protection in hot, sunny climates. The cover not only deflects sunlight, but also provides a 75mm air gap between the shade and the enclosure top, promoting convective air movement. Use in conjunction with 52.TI thermal insulation in sunny areas with daytime temperatures frequently above 40°C [104°F].

Thermal Insulation Kit (52.TI — factory fitted)

The thermal insulation kit adds 25mm of thermal insulation



A pair of Blizzard 52.150 Landscape enclosures mounted on a Cycloator.

Note that the bottom Blizzard requires a 52.UR.150 Unistrut kit to mount to the Cycloator, and for angles more than about 35 degrees an Inlet Cowl (51.IC.15 here) keeps rain off the inlet filter.



52.SH.xxxx Sun Shade attaches easily to the Blizzard's top rigging points. Note that the xxxx matches the enclosure part number, eg 52.SH.100L for the Blizzard 52.100 landscape enclosures shown here.

Swivel Kits work with either Landscape or Portrait enclosures, and come in three sizes, for .050, .100, and .150 Blizzard models.

Rigging Options

Climate Options

all around the inside of the enclosure, conserving heat and reducing energy costs in cold climates, and moderating daytime temperatures in hot weather.

Positive Pressure and Salt Air (52.PP - factory fitted)

We do a lot of cruise ship jobs, as well as beach resorts and attractions where salt air can be a real problem. Now all Tempest G4 outdoor enclosures can be supplied with a Constant Positive Pressure setting that runs the enclosure fan(s) all the time at low power, maintaining just enough positive pressure to prevent salt or other pollutants sneaking in the back door when the projector is not running.

Desert Filter Baffle (51.DFB.xx)

Wind-blown dust and sand can rip a filter apart in no time in a bad dust storm — so slow it down with this handy accessory.

The Desert Filter Baffle replaces the filter clamp under the enclosure body, and requires 100mm (4") clearance plus 75mm (3") airflow clearance below the enclosure.



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Don't panic!

Tempest enclosures have been in use for years in some very warm places — think Singapore, Dubai, Las Vegas. In most cases our standard enclosures will protect your equipment without problems.

Outdoor projection, by definition, is used at night. So you need to think about daytime and showtime temperatures quite separately:

Daytime — Warm Locations

In hot locations (anywhere with daytime temperature regularly exceeding 30°C), we strongly recommend specifying the Blizzard Thermal Insulation option (52.TI). This is a factory-fitted thermal insulation lining to the enclosure that effectively moderates daytime temperatures, reducing stress on your equipment and prolonging fan life.

Daytime — Hot Sun

If your enclosures will be regularly exposed to hot sun, the Blizzard Sun Shade (52.SH.xxx) is a simple, low-profile semi-reflective aluminum cover, that protects the enclosure from the midday sun and creates a

What to do when it's HOT

75mm (3in) air gap above the enclosure body. This protects the enclosure and its contents from the worst of the sun anywhere in the tropics or in desert conditions.

Showtime — Tempest AC Assist

Tempest has always avoided the use of active air-conditioning to cool video projectors, due to the high risks of damaging condensation. But there are cases where some help is needed, and that's where Tempest AC Assist comes in:

Tempest AC Assist

We now offer AC Assist to lower projector operating temperatures for projectors with low temperature limits and for extremely hot locations.

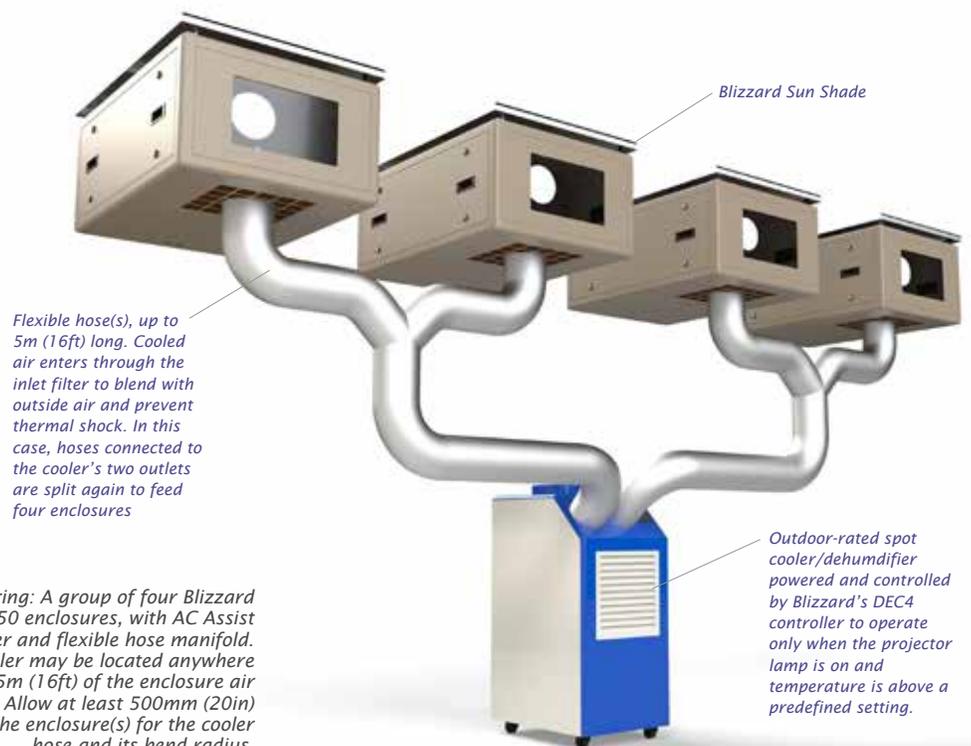
Consider AC Assist if Showtime temperatures are either:

- Normally very high, >35 °C
- Within 5 °C of your projector's environmental limit. So, for a projector with 35 °C environmental limit, consider AC Assist if showtime temperatures regularly exceed 30 °C

We use the latest in spot cooling and dehumidifying technology to blend cold air with local ambient air, and bring down the temperature of projector environment by as much as 15°C. By blending incoming air in this way, and by controlling the cold air source so that it is never operating when the projector lamp is running, we avoid the risks associated with traditional closed-circuit AC systems.

This means that during the day the enclosure is kept to a safe temperature using a combination of thermal insulation, sun shade and forced air cooling, while at night when the projector is running, AC Assist actively reduces the projector temperature and assures a long, trouble-free operating life in the hottest (and the most humid) environments.

No two systems are alike, and there are many variables to be considered. Tempest's System Engineers will design your AC Assist installation on a project-by-project basis. Contact Tempest with specifics for your project and we will be happy to design an AC Assist system for you.



Flexible hose(s), up to 5m (16ft) long. Cooled air enters through the inlet filter to blend with outside air and prevent thermal shock. In this case, hoses connected to the cooler's two outlets are split again to feed four enclosures

Rendering: A group of four Blizzard 52.150 enclosures, with AC Assist Cooler and flexible hose manifold. The cooler may be located anywhere within 5m (16ft) of the enclosure air inlet. Allow at least 500mm (20in) below the enclosure(s) for the cooler hose and its bend radius.

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Goldilocks™

How do we keep projectors from roasting when it's 50°C and there's no shade?

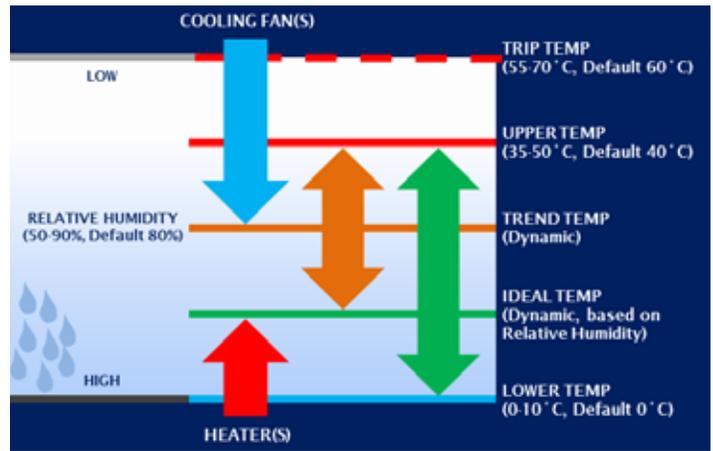
And prevent condensation from destroying your projector overnight?

Tempest's unique Goldilocks™ Operating System (patents pending) brings enclosure control to a new level.

Goldilocks keeps the air temperature inside your enclosure just right, removing heat from the projector when the lamp is on or when the enclosure is heated by the sun. We're changing the air about every second.

Goldilocks uses a heater to maintain a minimum temperature in cold climates.

And Goldilocks tracks temperature and humidity 24/7, keep-



ing relative humidity inside your enclosure just right by using heaters to raise the air temperature when needed, adapting constantly to prevent deadly condensation.

Data Logging

Also new with G4, Goldilocks

logs all system events for a week, providing invaluable insights in the event of a field service issue. Data logs will be recorded longer term in the G4 System Manager (see below) and will be available locally via USB or remotely over a network or the internet.

Remote Monitoring

It's important to understand that most Blizzard installations are running on factory default settings and are not connected to any kind of network. In many cases that's just fine, but in larger systems or mission-critical applications a remote monitoring system is a lifesaver.

Blizzard reports everything it knows on the user interface display on the back door. Now you can get the same information remotely, in several different ways:

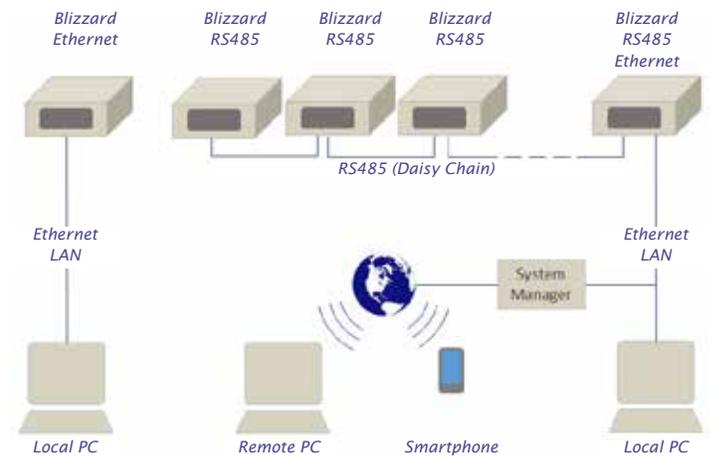
TCP/IP Direct

Plug in an Ethernet bridge to your Blizzard, and now you can find out what's going on in the enclosure. Temperature, humidity, line voltage, current, projector, fan and heater status are just some of the data you can monitor using this feature.

Use Tempest's prepackaged front end, write your own, or integrate with many popular projector control protocols.

RS485 to TCP/IP

For larger systems we offer a simple RS485/Ethernet adapter so you can daisy-chain between groups of enclosures, bridging to Ethernet at one or more enclosure locations. Either way, you get all the information we know about back in the control room.



Web-based Monitoring

With the addition of a Tempest G4 System Manager (coming soon), the system now serves up a web page that can be monitored anywhere.

With the G4 System Manager, Tempest will offer a real-time system monitoring service, alerting you by email if anything happens to your system.

And on your Smartphone!

Not cool enough for you? System Manager will also feature a smartphone app, so you can stay connected to your Tempest enclosures anytime, anywhere.

*For more on
DEC4, Goldilocks
and remote
monitoring,
download the
Blizzard User
Manual from
www.tempest.biz*

Enclosure Ordering Guide

Landscape

Portrait

Ultra-Short Throw



Model	Type	Projector Max: Dimensions in [mm]	Power (W)	Enclosure: Dimensions in [mm]	Weight lb [kg]	Shipping*: Dimensions in [mm]	Weight lb [kg]
52.050.Lx.xx	Landscape	24x20.5x9 [610x521x229]	800	29x26x13.5 [737x660x343]	59 [27]	36x36x24 [910x910x610]	77 [35]
52.100.Lx.xx	Landscape	28x24.5x10 [711x622x254]	1200	34x30x14.5 [864x762x368]	70 [32]	36x36x24 [910x910x610]	90 [41]
52.150.Lx.xx	Landscape	35x24.5x12 [890x622x305]	1800	42x30x16.5 [1067x762x419]	92 [42]	52x34x20 [1300x840x480]	110 [50]
52.050.Px.xx	Portrait	24x20.5x9 [610x521x229]	800	29x17x23 [737x432x584]	65 [30]	36x36x24 [910x910x610]	87 [40]
52.100.Px.xx	Portrait	28x24.5x10 [711x622x254]	1200	34x17x27 [864x432x686]	78 [36]	36x36x24 [910x910x610]	101 [46]
52.150.Px.xx	Portrait	35x24.5x12 [890x622x305]	1800	42x19x30 [1067x483x762]	104 [47]	52x34x24 [1300x840x610]	120 [55]
52.050.Ux.xx	Ultra-short-throw	Consult Factory	800	Consult Factory			
52.100.Ux.xx	Ultra-short-throw	Consult Factory	1200	Consult Factory			
52.150.Ux.xx	Ultra-short-throw	Consult Factory	1800	Consult Factory			

* All Schedule B Export Code: 9405.99.0000

* Shipping weights and dimensions may vary, depending on options and accessories ordered

All Blizzard Portrait Enclosures are built to order. Please consult factory for lead times.

All Blizzard Ultra Short Throw Enclosures are custom or semi-custom. Please consult factory for details.

All sales are subject to Tempest Lighting, Inc. Standard Terms and Conditions of Sale, available for download at www.tempest.biz.

Build a Part Number

52. _ _ _ _ _ eg: 52.100.LS.IN

050

100

150

(see above)

Fixed Projector Mount
Projector Slide (Land-
scape and Portrait only)

International, 200-250V

US Electrical, 100-125V

Custom Colors

All the enclosures in this brochure are shown in our popular standard light bronze finish.



White, Black or any RAL color are available to special order.

Landscape

Portrait

Ultra-short-throw



Options and Accessories

Options

Item #	For Model:	Description
52.TI	Any Blizzard	Thermal Insulation Kit, recommended for hot or cold climates
52.PP	Any Blizzard	Blizzard Positive Pressure Option
51.ENB	Any Blizzard	Ethernet Communications
55.AC	Any Blizzard	AC Assist Option - Consult Factory
0000.CL	Any Blizzard	Custom Color - specify black, white or any RAL #, plus desired gloss %

Accessories

Item #	For Model:	Description
55.C2	Blizzard 150	Tempest Cycloator Tilt Kit
52.UR.xxx	'xxx' = model #	Unistrut Mounting Rails (required with 55.C2)
52.XH.xxxL	'xxx' = model #	XYZ Hanger Kit for horizontal pole/Truss, Landscape Blizzard
52.XH.xxxP	'xxx' = model #	XYZ Hanger Kit for horizontal pole/Truss, Portrait Blizzard
52.XV.xxxL	'xxx' = 050 or 100	XYZ Hanger Kit for vertical pole, Landscape Blizzard 050 or 100 only
52.XV.xxxP	'xxx' = 050 or 100	XYZ Hanger Kit for vertical pole, Portrait Blizzard 050 or 100 only
52.SK	Any Blizzard	Blizzard Stacking Kit
52.DA	Any Blizzard	Blizzard Drop Arms Kit (requires Stacking Kit)
52.SH.xxxL	Landscape 050-150	Blizzard Sun Shade Kit, Landscape
52.SH.xxxP	Portrait 050-150	Blizzard Sun Shade Kit, Portrait
52.SS.xxx	'xxx' = model #	Blizzard Swivel Stacking Kit (Landscape or Portrait)
51.IC.08	Portrait, UST 050, 100	Inlet Cowl (Order 2 per enclosure)
51.IC.11	Portrait, UST 150	Inlet Cowl (Order 2 per enclosure)
51.IC.11	Landscape 050, 100	Inlet Cowl (Order 1 per enclosure)
51.IC.11	Landscape 150	Inlet Cowl (Order 1 per enclosure)
51.DFB.08	Portrait, UST 050, 100	Desert Filter Baffle (Order 2 per enclosure)
51.DFB.11	Portrait, UST 150	Desert Filter Baffle (Order 2 per enclosure)
51.DFB.11	Landscape 050, 100	Desert Filter Baffle (Order 1 per enclosure)
51.DFB.15	Landscape 150	Desert Filter Baffle (Order 1 per enclosure)
51.HF.08	Portrait, UST 050, 100	Replacement Salt Fog Inlet Filter (Order 2 per enclosure)
51.HF.11	Portrait, UST 150	Replacement Salt Fog Inlet Filter (Order 2 per enclosure)
51.HF.11	Landscape 050, 100	Replacement Salt Fog Inlet Filter (Order 1 per enclosure)
51.HF.15	Landscape 150	Replacement Salt Fog Inlet Filter (Order 1 per enclosure)



Blizzard Configurator

Please complete one sheet for each Blizzard type required and email to us at info@tempest.biz

Name	
Company	
Email	
Phone	
Project Name & Location	
Projector type	
Blizzard Model	52. _____
Quantity	
Destination Country	
Install Date	
Type	Landscape <input type="checkbox"/> Portrait <input type="checkbox"/> Ultra Short Throw <input type="checkbox"/>
Projector Mount	Slide <input type="checkbox"/> Fixed <input type="checkbox"/>
Projector Mount	Feet Down <input type="checkbox"/> Feet Up <input type="checkbox"/>
Options & Accessories	
Thermal Insulation	Yes <input type="checkbox"/> No <input type="checkbox"/>
Inlet Cowl	Yes, Qty _____ No <input type="checkbox"/>
Desert Filter Baffle	Yes, Qty _____ No <input type="checkbox"/>
Positive Pressure	Yes, Qty _____ No <input type="checkbox"/>
Sun Shade	Yes, Qty _____ No <input type="checkbox"/>
Cyclovator	Yes, Qty _____ No <input type="checkbox"/>
Unistrut Kit	Yes, Qty _____ No <input type="checkbox"/>
Stacking Kit	Yes, Qty _____ No <input type="checkbox"/>
Drop Arms	Yes, Qty _____ No <input type="checkbox"/>
Swivel Stacking Kit	Yes, Qty _____ No <input type="checkbox"/>
XYZ Kit, Horizontal	Yes, Qty _____ No <input type="checkbox"/>
XYZ Kit, Vertical	Yes, Qty _____ No <input type="checkbox"/>
Ethernet Bridge	Yes, Qty _____ No <input type="checkbox"/>

Color	Standard, Light Bronze <input type="checkbox"/>
	Custom, RAL # _____
	Gloss Level _____%

Custom Requests:



 Made in the USA
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 In the interest of continuous product improvement, specifications are subject to change without notice



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