



Blizzard

Outdoor
Projector
Enclosures
5-15K



Blizzard

Outdoor Projector Enclosures

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

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*
- *Stackable*
- *Loads of rigging accessories*
- *Optional Ethernet-based monitoring*
- *New midsize 52.125 models for wider midrange projectors*

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

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

Landscape

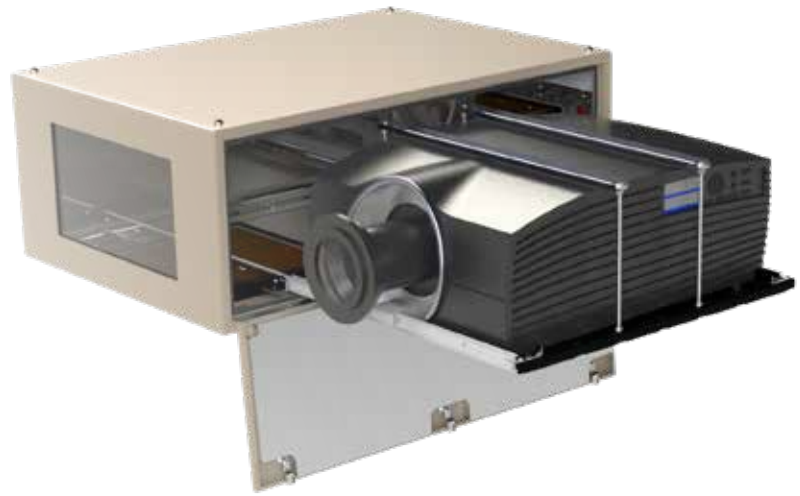
The standard configuration — projector may be configured tabletop or ceiling style, with your choice of fixed or sliding projector mount.

Portrait

Blizzard portrait versions are available in all four sizes. Specify projector and lens 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 52.050.P Portrait enclosure, for most projectors 4-7,000 ANSI lumens that allow portrait orientation.

Tip: most of the enclosures shown here are in Tempest's standard light bronze finish, but black, white, or any RAL color are available to order.



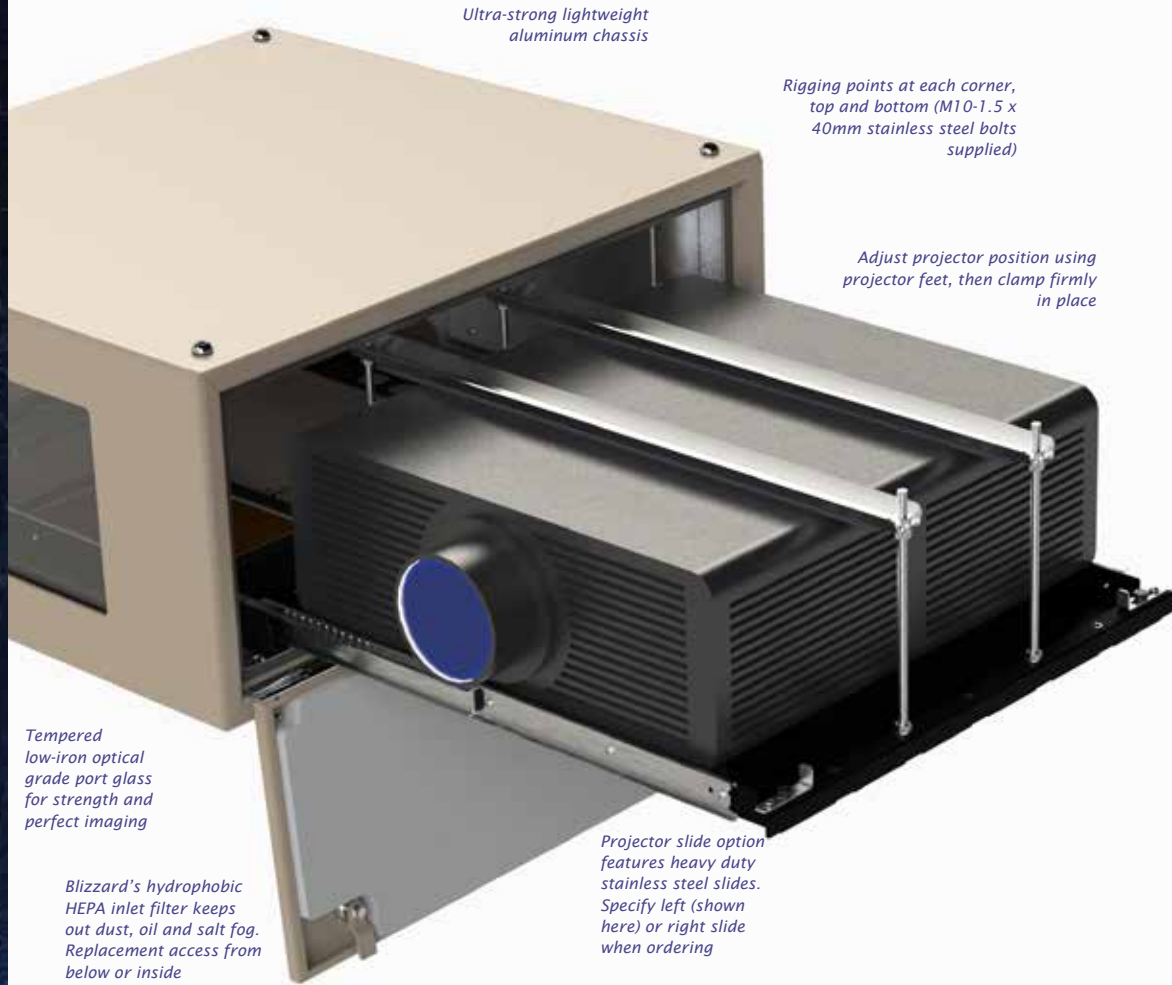
Blizzard 52.150.U Enclosure for most projectors 12-15,000 ANSI lumens fitted with Ultra-Short-Throw lenses.

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

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Landscape



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Portrait



Blizzard Portrait enclosures incorporate an adaptable projector mount to suit most projectors. The projector attaches to the mounting frame with screws provided.

Some tilt adjustment is available (max tilt angle depends on projector size)

Mounting hardware may differ between projectors, so we need to know the projector you're using when you order.

Specify left (shown here) or right projector slide, or fixed projector mount when ordering.

Not all lamp-based 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.

Tip: The thermal insulation option, shown here lines all available top, front, back and side surfaces with high-quality melamine foam with UL94 V-O (EN45545-2) fire ratings.

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 custom or 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 most Blizzard enclosures:

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 52.125 or 150 models.*

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°

Angle Mounting Kit

Use this handy kit to mount any Blizzard enclosure at any angle between 15-55°. Using stainless steel low-profile Unistrut and all-stainless steel fittings, this kit can be used on the ground projecting up, or from above projecting down.

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 52.100/125	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



This all-stainless steel angle mounting kit lets you mount any Blizzard enclosure at any angle from 15-55°.

Use as shown here, projecting up, or on the edge of a flat roof, projecting down with the enclosure reversed.



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

Cyclovator

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 landscape Blizzards on each Cyclovator.

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 Cyclovator) 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 the M10 rigging points, and locking bolts are provided to secure pan angle when aligned.

Rigging Options

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

Note that the bottom Blizzard requires a 52.UR.150 Unistrut kit to mount to the Cyclovator, 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.

Feet Up Kit

Sometimes, you may need to flip the projector feet-up, to get more vertical shift on to an object below the enclosure.

The Blizzard Feet-Up Kit (52.FU) works in any Landscape Blizzard (fixed or slide projector mount), supporting the projector and raising it either 25, 50 or 75mm (1, 2 or 3 inches) to get the projection angle you need.

Be sure to include the height of the Feet-Up kit when choosing the correct Blizzard model for your project.



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Outdoor Projector Enclosures

Sun Shade (52.SH.xxxx)

Pictured above, this 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. Recommended in conjunction with 52.TI thermal insulation in sunny areas with daytime temperatures frequently above 40°C [104°F].

Thermal Insulation Kit (52.TI.xxxx — factory fitted)

The thermal insulation kit adds 25mm of thermal insulation

on 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 sufficient positive pressure to prevent salt or other pollutants entering the exhaust fan when the projector is not running.

Climate Options

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.



*Sakuya Lumina,
Osaka, Japan.
Picture courtesy of
Moment Factory,
Montreal.*



Blizzard Outdoor Projector Enclosures

Tip:

Read the Small Print

The conversion from lamps to laser light sources is now complete, we may never build another lamp-based enclosure, and that's generally a Good Thing.

But you need to study those laser projector specs very carefully — for example:

Environmental

The spec says 45°C (113°F) so we're good, right? Not necessarily.

Read on and you may well find that light output is limited above, say, a 25°C (77°F) ambient. This might not be a big deal if it only happens a few nights of the year in your location, but if it's hot where you are, then it might...

Altitude

Most outdoor jobs are at or not far from sea level, but what if you're in the mountains? Check the effect of altitude on light output and environmental specs...

Doing your homework at the planning stage can save a lot of time and trouble on the job site...

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.xxxx). 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 aluminum cover, that protects the enclosure from the midday sun and creates a 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.

What to do when it's HOT

Showtime — Tempest AC Assist

Tempest has traditionally 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, or:
- 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 technology to blend cool 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 not running, we avoid the condensation 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.

Our 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 your next project.



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.

**Download the
ACassist data
sheet from
www.tempest.biz**

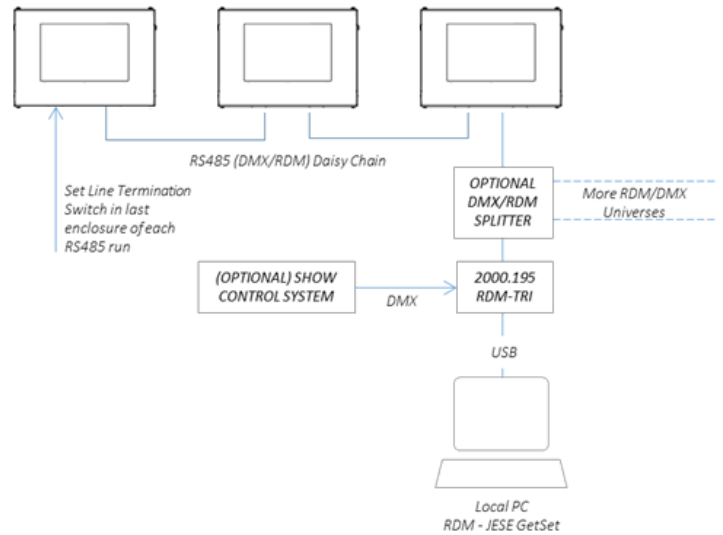


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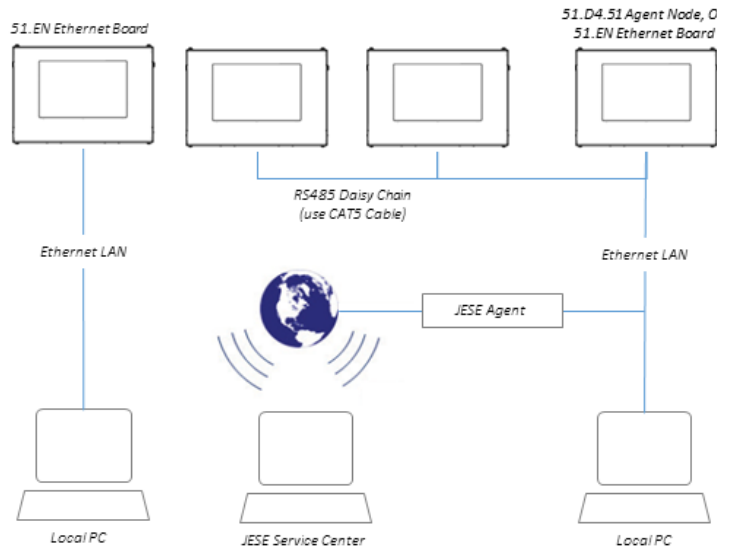
RS485 Comms (standard)

Daisy-chain a group of Cyclone enclosures together with Blizzard's native DMX/RDM comms — and monitor using a JESE RDM-TXI interface (Tempest part # 2000.195) connected to any Windows PC.



51.EN Ethernet Comms

Use this Ethernet adapter to connect one Cyclone or a group of Cyclones connected using RS485 to a PC, and monitor using Tempest TEMP protocol. Download the TEMP Developer Guide from www.tempest.biz/tech-support.



JESE Agent - Global Monitoring

Now, there's Agent, from Tempest partner JESE — monitor larger systems in the site control room, or worldwide, from our UK-based control center — see more below...

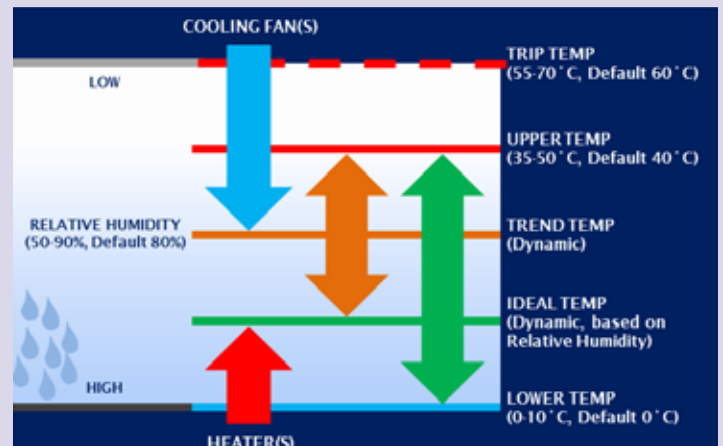
Goldilocks™

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 every few seconds.

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



And Goldilocks tracks temperature and humidity 24/7, keeping relative humidity inside your enclosure just right by using

heaters to raise the air temperature when needed, adapting constantly to prevent deadly condensation.

Blizzard Outdoor Projector Enclosures

With JESE's groundbreaking AGENT monitoring system, you can see exactly what's going on, in every one of those mission-critical enclosures.

And so can we...

We can log into your AGENT system from JESE's UK support center, and help you identify and fix problems — even upload new firmware to your enclosures if that's what you need.

Low Risk — High Reward

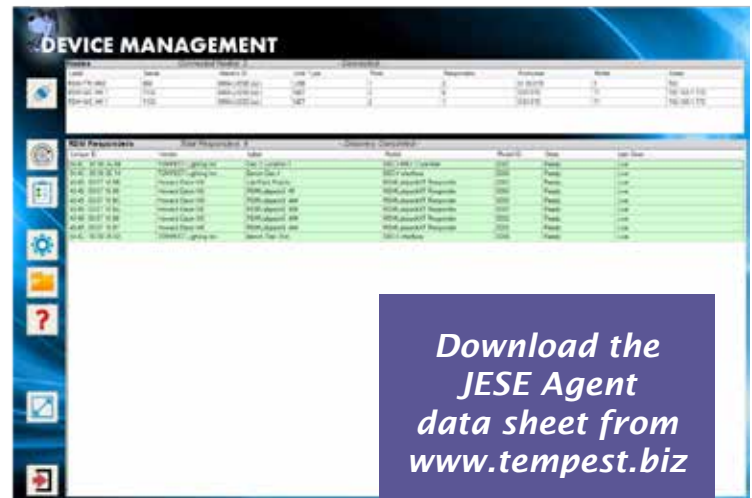
For a very modest initial outlay, and an annual service fee, you can rest assured that your system will alert you to any potential or actual problems, and you will have access to system upgrades and real-time support, from experts who can see right into your system.

Low risk, very high reward.

JESE Agent—Global Monitoring

And there's more...

AGENT supports the published ANSI DMX and RDM standards, so it can be used to monitor any compliant products, seamlessly with your Tempest enclosures.



Download the
JESE Agent
data sheet from
www.tempest.biz



Remote Access
over Internet

Windows PC
running JESE
Agent Client



Blizzard Ordering Guide

Landscape

Portrait

Ultra-Short Throw



52 example: 52.100.LF.IN

Model # (eg: 52.100)	Format L Landscape P Portrait U UST ²	Projector Mount F Fixed S Slide (landscape and portrait only)	Electrical Standard US 100-120V, NEMA standard North America, Japan IN 230V, CE Standard International
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Model	Orientation	Dimensions (lwh)	Weight	Projector Max (lwh) ³	Shipping Dimensions (lwh)/Weight
52.050.L	Landscape	29x28x13.5in 737x711x345	59lb/27kg	22x22.5x9in	36x36x24in/910x910x610 94lb/43kg
52.050.P ¹	Portrait	29x17x27in 737x432x686	64lb/29kg	559x572x229mm	36x36x24in/910x910x610 99lb/45kg
52.100.U ²	Ultra Short Throw	Custom - consult factory		800 Watts	36x36x24in/910x910x610 99lb/45kg
52.100.L	Landscape	34x30x14.5in 867x762x368	85lb/39kg	27x24.5x10in	36x36x24in/910x910x610 120lb/55kg
52.100.P ¹	Portrait	34x17x29in 867x432x737	95lb/43kg	686x622x254mm	36x36x24in/910x910x610 130lb/59kg
52.100.U ²	Ultra Short Throw	Custom - consult factory		1,250 Watts	36x36x24in/910x910x610 130lb/59kg
52.125.L	Landscape	34x34x14.5in 867x867x368	94lb/43kg	27x28.5x10in	36x42x24in/910x1100x610 129lb/59kg
52.125.P ¹	Portrait	34x17x33in 867x432x838	104lb/47kg	686x724x254mm	36x42x24in/910x1100x610 139lb/63kg
52.125.U ²	Ultra Short Throw	Custom - consult factory		1,250 Watts	36x42x24in/910x1100x610 139lb/63kg
52.150.L	Landscape	42x30x16.5in 1067x762x419	106lb/48kg	35x24.5x12in	52x34x20in/1300x840x610 151lb/69kg
52.150.P ¹	Portrait	42x19x31in 1067x483x787	118lb/54kg	890x622x305	52x34x20in/1300x840x610 163lb/74kg
52.150.U ²	Ultra Short Throw	Custom - consult factory		1,800W	52x34x20in/1300x840x610 163lb/74kg

¹ Please specify projector and lens make and model when ordering portrait enclosures

² All UST versions are custom or semi-custom. Please consult factory for details

³ Remember to include lens, plus connectors and cable bend radius in projector dimensions

All Blizzard Portrait and UST products are built to order. Please consult factory for lead times.

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

All Schedule B Export Code: 9405.99.0000



Options

Item #	For Model:	Description
52.TI.xxxx	Any Blizzard	Thermal Insulation Kit, recommended for hot or cold climates
52.PP	Any Blizzard	Blizzard Positive Pressure Option
51.EN	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.AM.xxx	'xxx' = model #	Angle Mount Kit (same item # for landscape and portrait Blizzards)
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.xxxx	'xxxx' = model #	Blizzard Swivel Stacking Kit (Landscape or Portrait)
51.IC.08	Portrait 050-125	Inlet Cowl (Order 2 per enclosure)
51.IC.16	Portrait 150	Inlet Cowl (Order 1 per enclosure)
51.IC.11	Landscape 050-125	Inlet Cowl (Order 1 per enclosure)
51.IC.15	Landscape 150	Inlet Cowl (Order 1 per enclosure)
51.DFB.08	Portrait 050-125	Desert Filter Baffle (Order 2 per enclosure)
51.DFB.16	Portrait 150	Desert Filter Baffle (Order 1 per enclosure)
51.DFB.11	Landscape 050-125	Desert Filter Baffle (Order 1 per enclosure)
51.DFB.15	Landscape 150	Desert Filter Baffle (Order 1 per enclosure)
51.HF.08	Portrait 050-125	Replacement Salt Fog Inlet Filter (Order 2 per enclosure)
51.HF.23	Portrait 150	Replacement Salt Fog Inlet Filter (Order 1 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)

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.



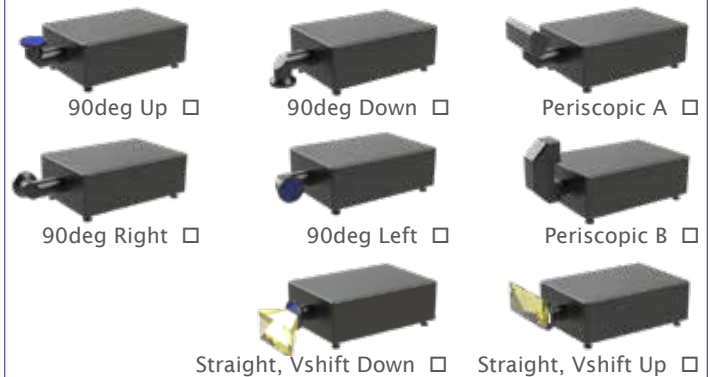
Blizzard Configurator

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	
Enclosure 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 Orientation	Landscape/UST: Feet Down <input type="checkbox"/> Feet Up <input type="checkbox"/> Portrait: Feet Left <input type="checkbox"/> Feet Right <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"/>
Feet-Up Kit	Yes, Qty _____ No <input type="checkbox"/>
Angle Mount Kit	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 Kit	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 Comms	Yes, Qty _____ No <input type="checkbox"/>

Spare Inlet Filter	Yes, Qty _____ No <input type="checkbox"/>
Color	Standard, Light Bronze <input type="checkbox"/> Custom, RAL # _____ Gloss Level _____%

UST Lens Configuration:



Custom Requests:

Factory Use Only:	
SO Number	
Date	
Electrical	IEC <input type="checkbox"/> NEMA <input type="checkbox"/>

