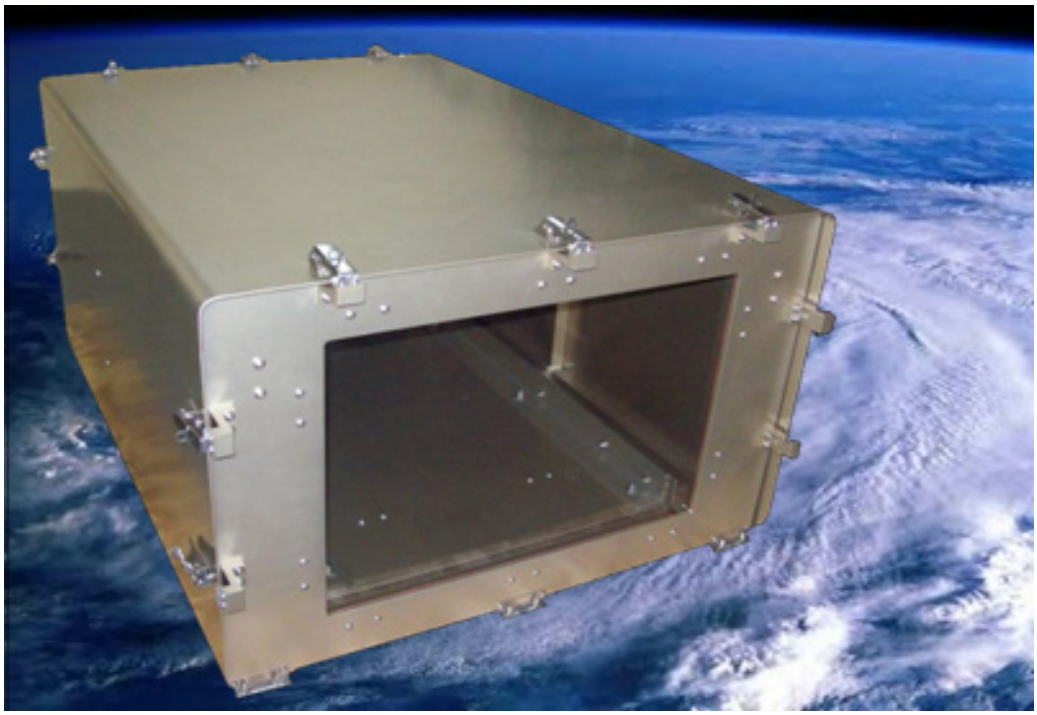
TEMPEST lighting inc.

Cyclone 8000 Series Projector Enclosures



This Cyclone blows in and protects your high-power digital projector for use outdoors, and in smoke or dust inside. Cyclone enclosures are semi-custom, and are tailored to projector type used. Cyclone models are available for projectors from 10,000 to 35,000 ANSI Lumens.

Cyclone models can protect digital projectors from 10,000 up to 35,000 ANSI lumens, in all climates. See the selection guide over the page

Cyclone 8000 Series projector enclosures are designed specifically for the largest digital projectors, and come with Tempest Lighting's patented Digital Enclosure Control (DEC3.2™) technology, to maintain optimum projector and lamp life in the harshest conditions. Cyclone sets the standard for engineering quality, elemental protection, low maintenance, and long equipment life.

Cyclone is available in three sizes, accommodating a range of large-format projectors up to 35,000 ANSI Lumens. Tempest's patented DEC™ System offers intelligent control of temperature, airflow and humidity, maintaining optimum operating temperature in all climate conditions, and eliminating deadly condensation.

All Cyclone enclosures feature easy access for relamping – the whole projector slides out for complete accessibility – and tempered, optical glass projection windows.

Your projector is a big investment. Cyclone protects that investment, typically enabling longer lamp and equipment life outdoors than in many projection booths.

Cyclone, by Tempest – world leader in outdoor enclosures. Nothing else comes close, when it comes to protecting your projection investment.

Enclosure

Exterior grade powder coated aluminum and stainless steel. Wide, tempered optical glass projection window caters for offset-lens projectors.

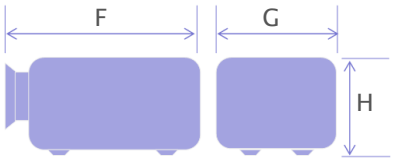
Finish

Exterior grade powder coating: epoxy primer, Cardinal T391-BG290 Bronze Texture. Custom colors to special order.

Ordering Guide:

Model #	Description	Control	Voltage	Projector Maximum Lamp Power
8200.IN	Cyclone 8200	DEC3.2	230	5,000W
8200.US	Cyclone 8200	DEC3.2	208	5,000W
8210.IN	Cyclone 8210	DEC3.2	230	5,000W
8210.US	Cyclone 8210	DEC3.2	208	5,000W
8400.IN	Cyclone 8400	DEC3.2	230	6,500W
8400.US	Cyclone 8400	DEC3.2	208	6,500W

Maximum Projector Dimensions



** Be sure to include the lens in your length calculation!*

Enclosure Dimensions

Designed to fit:

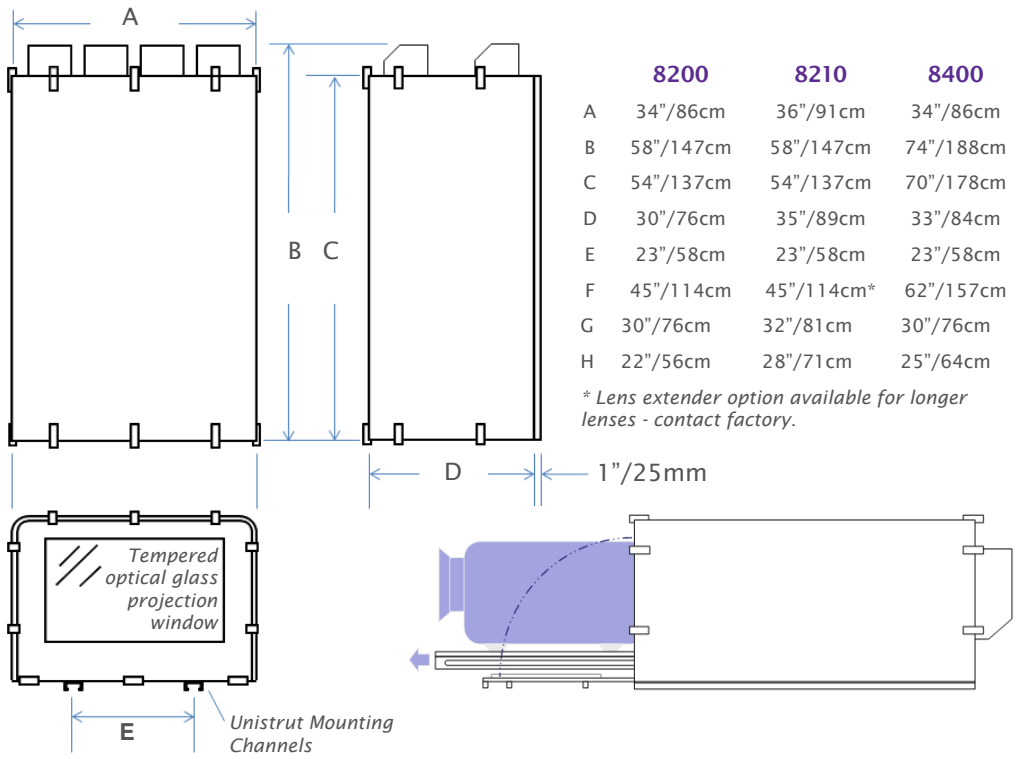
8000
BARCO SLM-R12
BARCO CLM-R10+
Christie HD10K-M
DP Titan Pro Srs. II
Sony VPLFX52

8200
Christie HD+18K
Christie HD+20K

8210
BARCO FLM HD18
BARCO FLM R20+

8400
BARCO XLM HD30
Christie HD+35K

...and similar projectors



	8200	8210	8400
A	34"/86cm	36"/91cm	34"/86cm
B	58"/147cm	58"/147cm	74"/188cm
C	54"/137cm	54"/137cm	70"/178cm
D	30"/76cm	35"/89cm	33"/84cm
E	23"/58cm	23"/58cm	23"/58cm
F	45"/114cm	45"/114cm*	62"/157cm
G	30"/76cm	32"/81cm	30"/76cm
H	22"/56cm	28"/71cm	25"/64cm

** Lens extender option available for longer lenses - contact factory.*

Access

Front and back doors open (hinged on bottom edge), and the projector tray slides out of the front of the enclosure, on 500lb (227kg) rated ball-bearing slides.

Projector Mount

Projector is held securely in place with two universal stainless steel projector clamps.

Security

Rings in the cover latches allow for the inclusion of padlocks for security in public areas.

Cooling/Heating

Cooling by four AC axial fans located on the rear panel. Incoming air is filtered using a removable, washable air filter in the rear air intake cowl. Heater is a 500W line voltage strip heater (2 for Cyclone 8200, 8400).

Projector Protection

Projector power supply passes through a 2-pole mechanical relay, which will open in the event of a serious over-temperature event, to protect the projector from heat damage. Threshold levels are user-adjustable.

Digital Enclosure Control?

DEC3.2™ – that's Digital Enclosure Control, 3rd Generation – takes enclosure control to the next level. DEC3 is a an entirely new controller, featuring high-reliability surface-mount electronics, extreme heavy-duty switching components, and a handy waterproof user control panel on the outside of the enclosure. DEC offers communication via DMX and RDM, or may be used in its entirely automatic standalone operating mode. DEC monitors internal temperature, humidity and lamp current at all times, and uses this information to control its lamp relay, fans and heaters, and report back over RDM if desired.

DEC3 works right out of the box – if you don't want to play with its default settings, you don't need to. DEC's mission is to maintain temperature and humidity inside the enclosure within the 'Goldilocks' band – never to hot, never too cold, and never, never, allowing deadly condensation to form. Condensation is fatal to electronic equipment, particularly in polluted areas or saline environments, where it brings not only rust and short-circuits, but also a steady buildup of mineral and salt deposits. Incidentally, this is very hard to control with air-conditioning type systems, which is why we don't use them.

DEC's function depends on whether the fixture/projector lamp is on or off:

Lamp ON

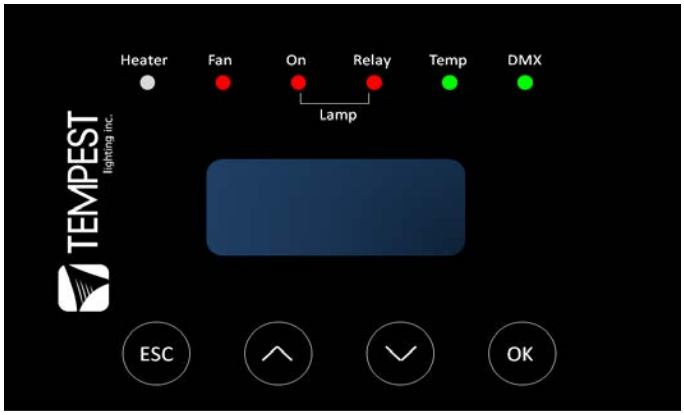
When the projector is running, the heat from the lamp takes care of humidity, and DEC runs the enclosure's fans to change its air every few seconds – ensuring minimal temperature rise above outside ambient.

Lamp OFF

When the lamp is off, DEC goes to work. When conditions are within normal bounds, DEC 3 pulses the heater at a low level to prevent condensation, and gently changes the enclosure air every 30 seconds or so. We call this 'pulse mode', and it is the key to preventing damaging condensation inside your equipment.

If the temperature rises above the top set limit, DEC runs the fans to cool it down. In cold conditions, DEC will run the heater as required to maintain the bottom set temperature.

And while doing all of this, DEC can tell you what's happening over your RDM network – a real boon in larger installations.



DEC3's user interface uses CapSense™ technology for a watertight control panel that's easy to use and easy to read.

LED indicators show the status of all major functions, and the display shows DMX address, temperature, humidity and any error messages you need to know about.

Use the simple menus to optimize temperature and humidity settings, set DMX address, view and reset lamp hour counter, and more.

Large Systems? All this is available over RDM, in your control room, or even over the internet.

Operating Modes

Standalone: The enclosure operates independently, and automatically, requiring no user intervention. User may set parameters such as temperature and humidity thresholds, and monitor sensor information and DEC status at the DEC user interface. Standalone is the default DEC setup mode unless specified otherwise.

DMX: All of the Standalone features, but the user can override the lamp relay over DMX, providing simple on/off control for projector power.

RDM: As above, plus the ability to discover and monitor DEC over RDM.

DEC is why, again and again, users around the world have chosen Tempest enclosures to protect their investment in lighting and projection equipment.

Tempest Lighting and DEC – A combination that keeps you looking good, and saves you money.

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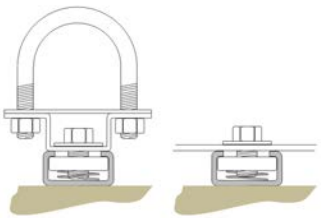
Mounting Hardware (optional)

Two parallel 1 5/8" x 13/16" Unistrut. Use standard Unistrut hardware, or order any of the mounting kits below. Tempest uses and recommends only stainless steel mounting hardware.

4900.MC *Stainless Steel pipe clamp kit, for pipes 1.5" (38mm) to 2" (50mm) OD. Four required per enclosure.*

4925.MC *Stainless Steel pipe clamp kit, for pipes 2" (50mm) to 2.5"/64mm OD. Four required per enclosure.*



4900.MB *Stainless Steel Bolt Kit, for attachment to a (user supplied) mounting plate up to 1/4"/6mm thick.*

Tempest Lighting, Inc. accepts no responsibility whatsoever for damages arising from deficient mounting design or installation by others.

Wiring Information

Two 0.875" (22.2mm) holes and two 1.375" (35mm) holes are provided for wiring access. Installer must provide flexible conduit connections to all access holes used. Plugs are provided for unused wiring access holes.

One power receptacle is provided for projector power connection. Receptacle type may be specified at time of order.

Note that Cyclone enclosures must be powered 24/7. Installer may provide one or two switched feeds as preferred, for projector and enclosure power.

Cyclone 8400 for Christie HD+30/35 models: *the lamp ballast is to be housed separate from the Cyclone enclosure, which is for the projector only. Two CamLok connectors are provided on the rear door for ballast cable connections.*

Electrical

Suffix .IN or .US	Voltage	Max Power	Frequency	Projector Receptacle
.IN	230	1,050W	50/60Hz	NEMA L6-20 or L6-30*
.US	208	1,050W	50/60Hz	NEMA L6-20 or L6-30*

A male plug will be provided with each enclosure to install on the projector power cable

Ordering

The following information is required with each order:

- Projector type, model number and lamp power
- Enclosure color: Standard (light bronze) or custom - provide RAL or Pantone #
- Mounting – on bottom, top or side(s)
- Supply Voltage

Shipping (Crated)

8200	62"x37"x29"(h), weight 350lb* - 150 x 99 x 86cm, 159kg*
8210	62"x43"x35"(h), weight 380lb* - 157 x 109 x 89cm, 173kg*
8400	85"x46"x41"(h), weight 400lb* - 216 x 117 x 104cm, 182kg*
All	*Schedule B Export Code: 8536.30.0000*

** Weights may vary, due to customization and fittings required for different projector types*

Approvals

ETL and cETL listed to UL Standard 50, 508

CE: EN55015, EN61000-3-4, EN61000-3-5, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11, EN60598-1

NEMA Type 3R Enclosure (approximately equivalent to IP54)

This product is protected by US Patent Number 6,352,358.

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