

# Elevation System

Variable speed chain hoist and trolley control system.





**Elevation** is a variable speed controller designed to work with customised versions of the most popular models of chain hoist, such as Liftket, Lodestar and EXE. It will also control several different trolley types.



**Array PD-ES** is the perfect marriage of Power Distribution and Emergency Stop control. This distribution and safety module provides a SIL2/3 emergency stop system, individual MCBs for each output and an adjustable RCD with status indicator.



**Elevation Rigger** handset is a smart, user-friendly remote control which allows full variable speed operation during set up of a show. It is available in 8,16 and 24 way versions.



The **Vector Console** is an all-in-one control solution with a built in PC running **Vector** software. Users can build and run cues with a variety of linking options. The number of cues that can be built and channels that can be controlled are limited only by your imagination.

#### KINESYS HAS A SIMPLE GOAL:

TO PROVIDE EXCEPTIONAL AUTOMATION EQUIPMENT THAT ALLOWS VENUES TO BE OUTSTANDING AND AUDIENCES TO BE AMAZED.

KINESYS is focused on being the market leader in providing the perfect combination of features, usability and reliability that complies with or exceeds the many and varied safety standards across the world.

We are a global company with a long history of providing the right solutions to companies worldwide.

We are one of the few companies that provide truly integrated solutions incorporating hoists, winches, load monitoring and control software that can be purchased outright. We look forward to working with you to provide the right solution to take your company, production or venue into a world of automation.



A TAIT Company

## Elevation System

**Elevation** is a truss mounting **variable speed** chain hoist and trolley control solution.

Designed to be located locally to the chain hoist or trolley that it controls, this innovative approach removes the need for large quantities of cabling and permits a number of motors and controllers to be supplied by single power and data cables.

**2-3. System Overview** **4-5. Kinesys Elevation Drive v2** **6-7. Elevation Rigger**  
**8-9. Array PD-ES and Array Mini PD-ES** **10-11. Array IP8 and Array 485**  
**12. Hoists** **13. Trolleys** **14-15. Vector**

# Kinesys Elevation Drive v2



## Elevation1+ vs Kinesys Elevation Drive v2

In order to ensure continued availability of the popular Elevation drive despite global supply-chain challenges, we have re-engineered some of the internal components in this v2 of the drive. The Kinesys Elevation Drive v2 now incorporates a new VFD component, it will start and stop as expected, both accurately and on time, however there may be slight variations in speed during acceleration and deceleration when compared to a v1 unit.

To avoid any undesired outcomes caused by the differences in power delivery curves, it is not recommended to mix V1 and V2 drives when lifting the same object.

Additionally, the 4 pin XLR connector, which was previously included for an analogue load cell connection, is no longer available in the Kinesys Elevation Drive v2. This feature is now unnecessary when using the LibraPRO device.

Finally, we have made a change to the outer metalwork housing to reflect that Kinesys is a TAIT Company. The addition of the TAIT logo not only aligns the product with the TAIT Group's branding, but also reinforces our commitment to delivering high-quality products that meet the expectations of our customers.

Elevation has been a popular range since its launch in 2003. Since that time new industry standards have evolved around the world, and therefore in some territories, and for some applications, our [Apex range](#) may be better suited to your needs.

We have prepared guidance notes [here](#), or speak to any of our technical sales team.

The **Elevation** removes the need for large quantities of cabling and permits a number of motors and controllers to be supplied by single power and data cables.

Elevation together with customised versions of the most popular models of chain hoist and trolley, such as Liftket, Lodestar, EXE and DST, represents the most flexible and reliable **variable speed** 'open system' available in the market.

Easy to install, simple to configure and with an ergonomic and compact design, it has the ability to ramp start, ramp stop, position and vary the speed of a chain hoist or trolley for maximum creative effect.

With the addition of a simple adapter cable, the converted motors can be used as standard fixed speed machines allowing maximum flexibility of motor use.

The Elevation can be controlled by **Vector** consoles and interfaces with other Kinesys products for a **totally integrated** show control system.

Elevation is available in both US and European voltage variants, with multiple fixings for hook clamps or half couplers which allow for a variety of mounting orientations.

## FEATURES

- 32A mains input and output connections allow 'daisy-chain' operation
- Robust multipin connector for hoist connection – includes motor, brake, limit switch and encoder connections
- Remote control input allows full variable speed operation using a Kinesys pendant
- LED display, intuitive menu system and rugged manual control buttons allow for easy setup

### HOIST CONNECTIONS

8 + 24-pin 'Harting' connector

### MAINS INPUT/OUTPUT

5-pin 32A 'Ceeform' type plug and socket to IEC60309

### CONTROL CONNECTIONS

7-pin male XLR connector with female link out

# Elevation Rigger



Designed to mimic industry-standard handheld controllers the **Elevation Rigger** offers an instantly recognisable method of operation with minimal training required.

An Elevation Rigger can operate variable speed chain hoists and trolleys and can be used in place of, or in conjunction with, a computer control system such as Vector.

Using the flexible menu system on the Elevation along with the on-board speed control, the Elevation Rigger can be used as a controller for simple **set up operations** where only basic movements are required.

It is not recommended to run shows using an Elevation Rigger handset unless allowed by your risk assessment.

An Emergency Stop button built into the handset and group halt functionality means that the Rigger provides a safe method of movement for set up purposes.

The Elevation Rigger will **automatically scan** and recognise all connected Elevation units, further enhancing ease of use and operation.

## FEATURES

- The ability to enable and disable the software limits using a bypass key
- Integrated speed control for use with variable speed hoists
- Positive, direct action toggle switches as well as separate Up, Down and Status indicators provide intuitive and instant feedback
- Integrated Emergency Stop button, multifunction key switch and a group halt feature ensure the unit can be operated safely and securely
- A single XLR7 cable provides the power and data connection required to operate the unit

## CONTROL CONNECTIONS

7-pin male XLR connector

# Array PD-ES



This 6U 19" rack module provides 125A of emergency stop switched power through four 32A three-phase Ceeform outlets.

All three-phase outlets are protected with an **adjustable RCD**. A single-phase auxiliary outlet is provided along with **dual XLR7** data outputs for connection to Elevation controllers.

The unit includes Transform 485 functionality providing an interface between Vector or K2 and Elevation.

The front panel features an integrated Emergency Stop button, status indicators, individual MCBs for each Ceeform outlet and an adjustable RCD. 'Power Present' status indicators are provided on both front and back panels.

## FEATURES

- Power distribution and emergency stop system contained in a 6U 19" rack enclosure
- Single-phase auxiliary outlet
- 4 x 32A three-phase individually switched Ceeform outlets
- Adjustable RCD
- Integrated Emergency Stop button

## CONTROL CONNECTIONS

Ethercon for connection to Vector/K2 • 2 x XLR7 outputs

## MAINS INPUT/OUTPUT

Powerlock or CamLok E1016 type single-pole connectors with through outlets • 4 x 32A "Ceeform" type IEC60309 5-pole connectors • 1 X 16A "Ceeform" type IEC60309 3-pole connector • 1 x Outlet suitable for local territory e.g. Schuko/Edison

# Mini Array PD-ES



## SIL2 / SIL3 EMERGENCY STOP

Array PD-ES (excludes Mini) provides a SIL2 PLd Emergency Stop function to an Elevation system.

The Emergency Stop system conforms to the following standards:

**EN ISO 13849-1:2006 Safety of machinery – Safety-related parts of control systems.**

**Part 1: General principles for design**

Emergency stop circuit complies to PLd

**EN 62061:2005 Safety of machinery - Functional safety of safety-related electrical, electronic and programmable electronic control systems**

Emergency stop circuit complies with SIL2 as standard or SIL3 when used in conjunction with an appropriate Kinesys Mentor safety module

This unit provides 32A of emergency stop switched power through two 32A three-phase Ceeform outlets.

A single-phase auxiliary outlet is provided for technical use. The three-phase outlets are protected with an **adjustable RCD**. Along with power and status indicators, the unit includes Transform 485 functionality providing an interface between Vector and Elevation.

Multiple fixing points for hook clamps or half couplers allow for a variety of mounting orientations.

## FEATURES

- Power distribution and emergency stop system contained in a compact case
- Two 32A three-phase Ceeform outlets protected with an adjustable RCD
- Single phase auxiliary outlet
- Adjustable RCD
- Multiple fixing points for hook clamps or half couplers

## CONTROL CONNECTIONS

Ethercon for connection to Vector • 2 x XLR7 outputs

## MAINS INPUT/OUTPUT

5-pin 32A Red 'Ceeform' type plug to IEC60309 • 2 x 5pin 32A 'Ceeform' type socket to IEC60309 • 1 x 16A 'Ceeform' type IEC60309 3 pole connector

## Array 485



**Array 485** is a 1 in 8 out RS485 distribution unit for use with Elevation.

The rear panel features 1 in 8 out XLR7 data connections for outputting RS485 data to Elevation units. The front panel offers link, data and emergency stop status indicators as well as the facility to plug an **Elevation Rigger remote** in for local control.

### FEATURES

- 1 in 8 out XLR7 RS485 distribution unit
- Elevation Rigger input on front panel for local hoist control
- Emergency stop LED indicators on front panel
- 1U 19" rack mountable case

### CONTROL CONNECTIONS

8 x XLR7 female outputs • 1 x XLR7 male input

## Array IP8



**Array IP8** is a rugged 8 port 10/100 Ethernet switch that is designed to work with Kinesys products.

**Ethercon** connectors on the rear of the unit provide increased protection for 8 x RJ45 connections. Standard RJ-45 connectors can also be plugged into these outputs. LEDs on the front panel of the unit indicate if power is present, provide a channel by channel breakdown of activity and whether each channel is operating at 10 or 100 BASE-T.

### FEATURES

- 8 port 10/100 BASE-T Ethernet switch
- Ethercon connectors
- LED activity lights on the front panel
- 1U 19" rack mount unit

### CONTROL CONNECTIONS

8 x 10/100 BASE-T Ethernet Ethercon

## Elevation Hoist (L)



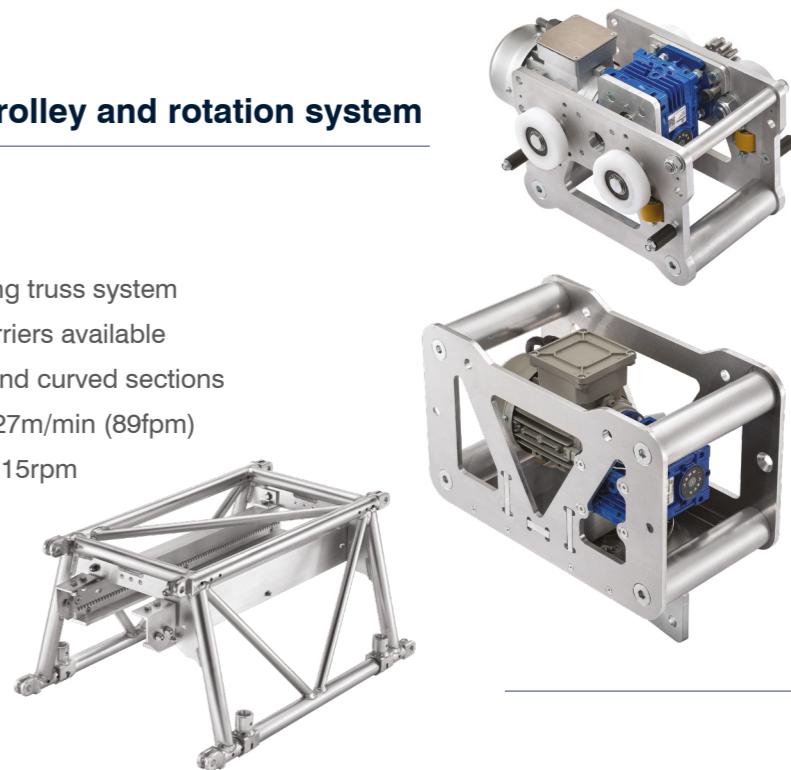
### Variable speed chain hoist system

- Liftket chain hoist
- Use with Elevation 2.2kW
- Fitted with Chain Bag
- Elevation ready
- Double brakes
- Overtravel and Emergency limits
- Completed with Libra Cell and Libra Pro
- 250kg (550lbs) at 24m/min (80fpm) - D8+
- 500kg (1100lbs) at 24m/min (80fpm) - D8
- 500kg (1100lbs) at 12m/min (40fpm) - D8+
- 1000kg (2200lbs) at 12m/min (40fpm) - D8

## DST Trolley & Rotator

### Variable speed motorised trolley and rotation system

- DST Trolley and DST Rotator
- Use with Elevation 2.2kW
- Track integrated into DST stacking truss system
- Secondary trolleys and cable carriers available
- Track truss available in straight and curved sections
- DST Trolley: 600kg (1320lbs) at 27m/min (89fpm)
- DST Rotator: 900kg (1980lbs) at 15rpm
- Other trolley speeds available



## Elevation Hoist (C)



### Variable speed chain hoist system

- CM Lodestar chain hoist
- Use with Elevation 2.2kW
- Fitted with Chain Bag
- Elevation ready
- Double brakes
- Overtravel limits
- Completed with Libra Cell and Libra Pro
- 500kg (1100lbs) at 21m/min (69fpm) - D8+
- 1000kg (2200lbs) at 10m/min (33fpm) - D8

## Beam Trolley

### Variable speed motorised beam trolley system

- VTE Beam Trolley
- Use with Elevation 2.2kW
- Compact, robust frame with low overall height
- Wheels manufactured from fracture-proof steel
- 2000kg (4400lbs) at 19m/min (63fpm)
- 3000kg (6600lbs) at 12m/min (40fpm)



## Vector



The **Vector Console** is an all-in-one control solution with a built-in dedicated PC running our industry established Vector Software.

The user interface includes a 15.6" backlit widescreen LCD with capacitive touchscreen, jog-wheels, joystick and stop/start buttons, as well as a dimmable backlit keyboard and trackpad for direct access to core Vector functions. Designed with ease of use in mind, this is the best and easiest way to operate Vector software, whether you're programming a show, or running it.

### SOFTWARE FEATURES

- Integrates seamlessly with other Kinesys hardware to provide easy setup, operation, real time feedback and remote configuration
- Advanced linking and timing features allow complex cues to be built and run simultaneously with four colour coded playbacks
- Safety features include three levels of login access, 'Dead Man's Handle', group halting and error windowing
- Manual mode allows ease of use during installation or maintenance periods without the need for cues to be written

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Designed in the UK

**Disclaimer:** These specifications are general guidelines only and may not be appropriate for your particular project. All product specifications and data are subject to change without notice. Data, performance features, and images may vary from the final project quote.

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