Fusion FE-165
Elevation Unit

Up to 75 kg (165 lbs)

NEW

PHASE ®

FE-165

Class-leading on-air height control for maximum flexibility:

+ Superior on-air performance
+ Rapid high to low transitions
+ Extensive height range for added creativity
+ Compact solution for large camera packages
+ Remote and local control available
+ Cost effective, professional solution with upgrade options

www.vintenradamec.com

ice

Incorporating Vinten Radamec's **Intelligent Control Engineering (ICE),** for premium motion control within IP based studio automation systems.

Vinten | **RADAMEC**
BROADCAST ROBOTICS

Fusion FE-165
Elevation Unit

Up to 75 kg (165 lbs)

NEW

Technical Specification

Fusion FE-165	
Part Number	**V4127-0002**
Height Range	741-1631 mm (29.2-64.2 in)
Max. speed	150 mm/s (5.9 in/s)
Max. Payload	75 kg (165 lb)
Width	690 mm (27.2 in)
Ground clearance	25 mm (1 in)
Power Inlet	100-240 V AC Autoranging 50/60Hz
Power Outlets	Dual 100-240 VAC AC Autoranging 50/60Hz

Accessories & Upgrades

Pan-bar mounted elevation controller	V4127-1114
VR upgrade for FE-55 / FE-165	V4127-VRI
Accessory mounting plate	V4127-1111
Cable management net	V4127-1115

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Certificate No: Q09508
V1/14

The Vinten Radamec FE-165 Elevation Unit offers class-leading on-air height control for maximum flexibility in large fully automated, and small production studios.

The elevation unit leverages the column construction of the hugely popular **FP-188** Fusion robotic pedestal paired with a brand new drive and transmission design. Every shot is captured with a high level of accuracy and the ultra-smooth slow movement ensures precise shot trimming.

Utilising Vinten Radamec's **ICE** control architecture, the **FE-165** benefits from superior start/stop motion control, allowing on-air shot trimming. Its extensive height range and exceptional speed enable rapid high to low transitions that deliver a level of creativity previously only achievable through the use of small-arm jibs. In addition, the FE-165 can be upgraded for virtual reality functionality, to deliver extra versatility to the studio.

The **FE-165** comes with robotic and local control functionality. When local control is required, the elevation unit is operated using a pan bar mounted height controller which is available as an optional accessory. Combined with an **FH-145** manual and robotic head, this allows a camera operator to raise and lower the column whilst manually controlling the head.

Designed to ensure maximum studio flexibility, the **FE-165** works on standard IP networks and features an integrated power supply which allows direct mains power connection. The compact elevation unit features a small base diameter that will pack into a flight case for transportation if needed and is able to be moved through standard doorways and over door thresholds with ease. To save space on the studio floor, mounting adapters are available to support large talent monitors that would usually require a seperate stand. In addition, a cable management net is supplied with the unit, which will fit between the legs to suspend the cables above the studio floor.

The **FE-165** supports large camera packages up to 75 kg (165 lbs), offering a full broadcast solution for a competitive price. Class-leading on-air height control for maximum flexibility.

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Fusion FE-55
Elevation Unit

Up to 25kg (55 lbs)

NEW

Quality height control for on-air creativity and efficiency:

+ On-air movement performance
+ Wide height range for added creativity
+ Small footprint saves studio space
+ Easily transportable between studios and locations
+ Cost effective with upgrade options

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Compatible with **FHR-35 robotic head** and **CP4 Controller** for complete 'plug and play' robotic solution for PTZ and height adjustment on air.

Vinten **RADAMEC**
BROADCAST ROBOTICS

Fusion FE-55
Elevation Unit

Up to 25kg (55 lbs)

NEW

The Vinten Radamec FE-55 Elevation Unit offers high performance on-air height control for maximum flexibility in small production studios.

The elevation unit leverages the column construction of the hugely popular **FP-188** Fusion robotic pedestal paired with a brand new drive and transmission design. Every shot is captured with a high level of accuracy and the ultra-smooth slow movement ensures precise shot trimming.

Utilising Vinten Radamec's **ICE** control architecture, the **FE-55** benefits from superior start/stop motion control, allowing smooth on-air shot trimming. The 2-stage column design offers an extended operating range for added shot creativity. In addition, the **FE-55** can be upgraded for virtual reality functionality, to deliver additional versatility to the studio.

The compact elevation unit will pack into a flight case for transportation if needed and is able to be moved through standard doorways and over door thresholds with ease.

To save space on the studio floor, mounting adapters are available to support large talent monitors that would usually require a separate stand. A cable management net is supplied with the unit, which will fit between the legs to suspend the cables above the studio floor. The elevation unit also features an integrated power supply which allows direct mains power connection and eliminates the need for a separate power supply unit.

The **FE-55** has been designed to support smaller camera packages up to 25 kg (55 lbs). It offers broadcast quality performance, height range, and speed, at a competitive price. Quality height control for on-air creativity and efficiency.

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Fusion FHR-35 Remote Pan and Tilt Head

A compact solution with exceptional performance

NEW

In remote locations, where a pan and tilt head must be as unobtrusive as possible, the Vinten Radamec Fusion FHR-35 provides a high quality solution. Locations such as legislative buildings, conference and educational centres, houses of worship and financial institutions can utilise broadcast quality camera and lens packages up to 16kg / 35lbs in remote locations, supported by this flexible and versatile pan and tilt head.

The Fusion FHR-35 is the first to incorporate Intelligent Control Engineering (ICE), a new platform which delivers unprecedented control and accuracy in an innovative and highly compact form. In addition to moving under robotic control, the FHR-35 also provides precise position reporting back to the controller, together with zoom and focus data from a digital lens. This unrivalled capability is provided by ICE inside the head: there are no external interface boxes or power supplies, making it the most compact head in its range.

Key Features and Benefits

+ **Control of broadcast quality camera and lenses**

+ **High repeatability and accuracy**

+ **Accurate, smooth movement at a wide range of speeds**

+ **No external interface box or power supply required**

+ **Ultra-reliable communications protocol, running over a standard Ethernet network**

Technical Specification

Fusion FHR-35

Part Number	V4096-0001
Height	247.5 mm / 9.7" (including lens connections)
Width	182.5 mm / 7.2" (with cradle 322.5mm / 12.7")
Length	188 mm / 7.4" (including power & data)
Weight	6.85 kg / 15.1 lbs (not including cradle) (cradle 1.25 kg / 2.75 lbs)
Maximum Payload	16 kg / 35 lbs
Pan Range	720° with end stops 319°
Maximum Speed - Pan/Tilt	60° / second
Minimum Speed - Pan/Tilt	0.01° / second
Repeatability	<60 arc sec
VR output	Optional
Fixing Details	4 x M6 on 84 PCD 6 x 10-32 UNF on 1.875 inch PCD
Tripod Adaptor	AM-VMA-105
Integral Power Supply Unit	90 – 250V AC 50/60Hz Auto-ranging
Maximum Peak Power	100 Watts
Lens Control Outputs	Digital, Analogue or Hybrid control
Auxiliary	12V out, GPIO (wash wipe, camera on/off etc)
Hard stops	Yes, also range limits set via software interface

"The 'Intelligence' in ICE is a major advance in technology. It's not just the electronics but the complete engineering that provides a very accurate solution.

This is a completely new concept in camera robotics and it has been incorporated into a surprisingly compact head. Both the design and the technology is different to anything else on the market and a remarkable leap forward."

- Karen Walker, commercial manager for Vinten Radamec.

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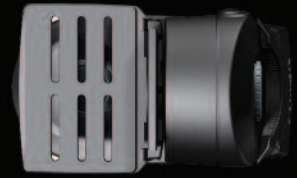Toll Free Sales: 1 888 2 Vinten

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Fusion FH-145 Robotic and Manual Head

Exceptional Broadcast Robotics

Vinten / RADAMEC BROADCAST ROBOTICS

NEW

FH-I45

FH-I45

+ Produce Exceptional High Quality Broadcast Output + Simple to set up, operate and service
+ Flexible to switch between pre-programmed and freeform show structure
+ Provides total confidence – the next generation of technology from **the** trusted robotics market leader.

The latest in Vinten Radamec's next generation of heads, the FH-145 demonstrates the future of broadcast robotics. The exceptional performance of the head stays true to the Vinten Radamec brand providing operators with the highest quality broadcast output.

The Fusion FH-145 is the latest head to incorporate Vinten Radamec's Intelligent Control Engineering (ICE), a forward-thinking technology that delivers unprecedented control and accuracy in an innovative and highly compact form.

Broadcasters can have total confidence in the head's capabilities operating in manual or robotic mode, as ICE will deliver remarkable accuracy and repeatability at high and low speeds using an ultra-reliable ethernet communications protocol.

Designed to support typical camera and lens packages up to 66kg/145lbs, the FH-145 provides broadcasters with the ultimate flexible yet simple solution. Easy to set up, operate and service, every element of the versatile head has been engineered with the user in mind.

Key Features and Benefits

+ **Manual or robotic modes facilitate switch between freeform or pre-programmed show format. Quality fluid drag system delivers broadcast quality manual operation**

+ **Smooth camera motion control making use of high resolution absolute encoders and delivering accuracy of +/-0.03 degrees**

+ **Ultimate user friendly aesthetics and ergonomics including tilt lock for added security, and a re-configurable mounting cradle to suit a wide range of camera, lens and accessory payloads**

+ **No external PSU or lens drives.**

Technical Specification

Fusion FH-145

Dimensions	H: 500 L: 440 D: 245 (Including cradle)
Weight	23.4Kg, cradle 2.9Kg
Pan Range	720 deg (No end stops)
Tilt Range	100 deg (+/- 50 deg)
Payload	66Kg / 145lbs
Rated load inertia	7.5Kgm2
Speed	0.01 - 60deg/sec
Maximum acceleration	60 deg /sec^2
Position resolution	22 Bit
Repeatability	<0.03 deg, 2 mins of arc
Indoor durability	100,000 cycles (27 moves per day for 10 yrs)
Pan encoder	> 2 mil counts / rev
Tilt encoder	> 2 mil counts / rev
Operating Temp	indoor: 5-50deg 90% humidity non condensing Storage: -40-60 deg
Movement on start up	None
Power	175W
Voltage	100-240V ac 50.60Hz auto-ranging
Power	Neutric "True 1" Power input Fused Unfused power output using Neutric "True 1" outlet
GPIO Lens	D-type for digital, zoom and focus
Indication	Power, communications & VR data
Power	on/off switch (brightness of light can be adjusted)
Profile Control interfaces	Fusion VRC, FCS16 and LCS. Own interface to setup and diagnose faults
NLD	All Fujinon and Canon full servo lenses
Tilt lock on top of unit	Software indication of lock on
Cable restraint Mounting	4 bolt Mitchel fixing, Quickfix
Diagnostic/set-up tool	Limits, feedback on shot status, GPIO, position, save data to transfer to another head, error reporting

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BROADCAST ROBOTICS

Fusion **FHR-145** Robotic Head

Exceptional Broadcast Robotics

NEW

+ Produce Exceptional High Quality Broadcast Output + Simple to set up, operate and service
+ Flexible to switch between pre-programmed and freeform show structure
+ Provides total confidence – the next generation of technology from the a trusted robotics market leader.

The latest in Vinten Radamec's next generation of heads, the FHR-145, demonstrates the future of broadcast robotics. The exceptional performance of the head stays true to the Vinten Radamec brand and provides operators with the highest quality broadcast output.

The Fusion FHR-145 is the latest head to incorporate Vinten Radamec's Intelligent Control Engineering (ICE), a forward-thinking technology that delivers unprecedented control and accuracy in an innovative and highly compact form.

Broadcasters can have total confidence in the head's capabilities, as ICE will deliver remarkable accuracy and repeatability at high and low speeds using an ultra-reliable ethernet communications protocol.

Designed to support typical camera and lens packages up to 66kg/145lbs, the FHR-145 provides broadcasters with the ultimate flexible yet simple solution. Easy to set up, operate and service, every element of the versatile head has been engineered with the user in mind.

Key Features and Benefits

+ Smooth camera motion control making use of high resolution absolute encoders and delivering accuracy of +/-0.03 degrees

+ Ultimate user friendly aesthetics and ergonomics including tilt lock for added security, and a re-configurable mounting cradle to suit a wide range of camera, lens and accessory payloads

+ No external PSU or lens drives.

www.vintenradamec.com

Technical Specification

Fusion FHR-145

Dimensions	H: 500 L: 440 D: 245 (Including cradle)
Weight	23.4Kg, cradle 2.9Kg
Pan Range	720 deg (No end stops)
Tilt Range	100 deg (+/- 50 deg)
Payload	66Kg / 145lbs
Rated load inertia	7.5Kgm2
Speed	0.01 - 60deg/sec
Maximum acceleration	60 deg /sec^2
Position resolution	22 Bit
Repeatability	<0.03 deg, 2 mins of arc
Indoor durability	100,000 cycles (27 moves per day for 10 yrs)
Pan encoder	> 2 mil counts / rev
Tilt encoder	> 2 mil counts / rev
Operating Temp	indoor: 5-50deg 90% humidity non condensing Storage: -40-60 deg
Movement on start up	None
Power	175W
Voltage	100-240V ac 50.60Hz auto-ranging
Power	Neutric "True 1" Power input Fused Unfused power output using Neutric "True 1" outlet
GPIO Lens	D-type for digital, zoom and focus
Indication	Power, communications & VR data
Power	on/off switch (brightness of light can be adjusted)
Profile Control interfaces	Fusion VRC, FCS16 and LCS. Own interface to setup and diagnose faults
NLD	All Fujinon and Canon full servo lenses
Tilt lock on top of unit	Software indication of lock on
Cable restraint Mounting	4 bolt Mitchel fixing, Quickfix
Diagnostic/set-up tool	Limits, feedback on shot status, GPIO, position, save data to transfer to another head, error reporting

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CP4
Simply Robotics
out of a box

NEW

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BROADCAST ROBOTICS

FHR-35

FHR-35

+ Auto recognition and configuration

+ Simple plug and play design

+ Out of the box and operational in minutes

Key Features and Benefits

+ **Ethernet enabled**

+ **Expandable up to eight cameras**

+ **No specialist knowledge required for set-up**

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Vinten RADAMEC
BROADCAST ROBOTICS

CP4
Simply Robotics out of a box

NEW

Vinten Radamec has created a unique solution to entry-level robotics with the CP4, its brand new control solution. Meeting the needs of operators regardless of their level of robotics knowledge, the product is straightforward to install, and can be out-of-the-box and operational in minutes.

Supporting lightweight camera configurations, the CP4 offers an ideal, cost-effective control solution for a variety of applications - from non-studio environments such as conference centres, houses of worship and legislatures through to the remote studio environments of regional news programmes.

The sleek and compact desktop design utilises flexible Ethernet network architecture, incorporating a unique touchscreen user interface that can be configured to control up to four heads and store up to 40 pre-set shots. Upgrading the solution to include a user configurable option provides operators with the capability of controlling up to eight heads and 200 pre-set shots.

The CP4 ensures every user is ready for robotics in minutes.

Technical Specification

Vinten Radamec CP4

Part Number	
V4110-0001	**Core System**
V4110-0002	**Additional Camera Upgrade**
V4110-0003	**System Upgrade**
Dimms	L:374 W:283 D:57 (excl. Joystick)
Controls	Adjustable Focus Wheel Zoom Rocker Switch 3 Axis Joystick

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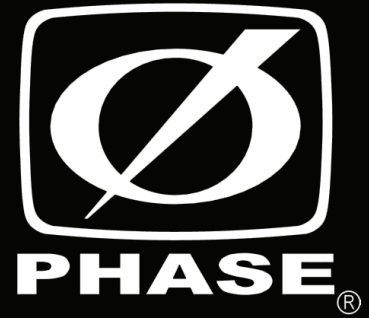
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APS

Fusion Absolute Positioning System

Accurate Automated Pedestal Navigation

Across the entire studio floor

APS

Fusion Absolute Positioning System

Unrivalled accuracy of studio robotic pedestal movement wherever you want to go

Fusion Absolute Positioning System (APS) is a unique, precise pedestal positioning technology that further reduces time, maximises studio flexibility and allows greater on shot accuracy from your robotics system.

Fusion APS enables the freedom of moves continuously across the entire studio floor. Pedestal pre-set shots are as consistently reliable as head only moves and can accurately enhance different show styles with more pedestal movement. APS allows almost instant targeting and can be greater than 50 times faster than traditional floor targeting routines.

Maximise studio flexibility:

+ Fast start-up
+ Exact movement to pre-set shots
+ Fits any studio layout
+ Immediate positional data

Enhanced Freedom:

+ Smooth on-air movement
+ Camera moves across the whole studio floor
+ Discreet targets, no light reflection

Fusion Absolute Positioning System

Instantly ready from the moment it is switched on, **Fusion APS** eliminates the need for tracks or traditional floor target positional referencing. The precise and consistent positional updating removes the need for manual trimming. No need to be concerned about the pedestal orientation.

Fusion APS targets can be discreetly fixed to the wall and matched to the studio size and layout. Targets can be colour matched to discreetly blend within the studio. A simple mapping procedure allows targets to be moved at any time to suit changing requirements of the studio or expansion plans.

+ Fits to existing fusion pedestal

+ Manual performance unchanged

+ Track free

+ Constant referencing from any position

+ Instantly ready when switched on

+ Zero accumulated error

Saves Costs:

+ **Retrofit APS to existing Fusion pedestals**

+ **Reliable shot recall, no manual trimming**

+ **Enhances automated playout systems where there is no operator to trim shots**

+ **Simple and quick to use; no specialist knowledge or tools required**

How Fusion APS works

The **Fusion APS** infra-red laser-scanner identifies targets within the studio environment and communicates its positional information back to the pedestal electronics. Targets can be free standing posts or wall mounted and modified to colour match the studio.

Fusion APS requires a minimum of three targets to be seen at any time by the laser scanner to determine its position. These must be within a 30m range. Larger studios are accommodated by simply adding more targets. The system is more accurate when more targets are seen by the laser scanner; the average studio is recommended to have a total of 6 to 10 targets.

The Fusion APS fits on any Fusion pedestal

During installation the targets are auto-mapped and saved for up to 10 different studio layouts.

The pedestal is designed to keep working if the laser scanner is unable to determine the position because of target occlusion. It automatically and seamlessly brings the laser scanner back online when the targets become visible again.
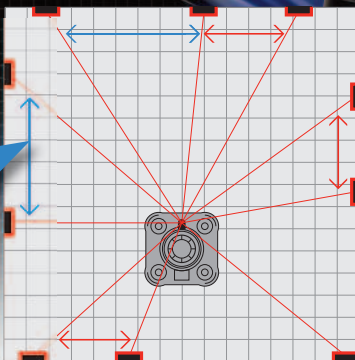
Example of a good target layout

+ Discreet, flexible target placement

Flexible Installation Options

Existing Fusion Vinten Radamec pedestals **FP-145** and **FP-188** can be easily upgraded with **Fusion APS** either locally on site or at our factory. It is available as an option on all new **FP-188+** and **FP-210+** pedestals.

To find out more about **Fusion APS** get in touch with us now.

First Class Global Service and Support
Vinten Radamec robotic systems are backed by Vinten Radamec global support.

Installation:

+ Configuration via web browser makes the APS system easy to install

+ Choice of APS upgrade on site or factory fit

Service and Support:

+ Dedicated local support to keep you on air

+ Extended hours (24) remote support

+ Super-fast swap out options

+ Dedicated stock of spare parts

ice

Vinten Radamec's exclusive **ICE** technology combines acclaimed software and mechanical Engineering, to deliver the highest viewing standards.

Vinten | **RADAMEC**
BROADCAST ROBOTICS

Technical Specifications:

APS scanner

Dimensions:	H: 257 mm (10.1 in) L: 211 mm (8.3 in) W: 177 mm (7.0 in)
Weight:	W: 3.7 kg (8.2 lb)
Power:	
DC power input	24V DC (supplied directly from the pedestal)
Environmental:	
Temperature range (operation)	0°C to +40°C (32°F to +104°F)
Pedestal Accuracy:	
Pedestal X/Y accuracy	±25 mm (1.0 in.)
Pedestal angular accuracy	±0.1°
Laser Scanner:	
Laser light wavelength	905 nm, infrared, eye safe

Laser Compliance:
• Complies with laser class 1 in accordance with IEC 60825-1
• Complies with 21 CFR 1040.10 and CFR1040.11 except for deviations pursuant to laser notice No.50 dated June 24th, 2007

System Compatibility:	
Supported VRC versions	V1.60 upwards
GUI	web browser based
Internet protocol	TCP/IP Version4
Network software	Windows XP, Windows 7

Part Number - Pedestal

V3952-0007	FP-188+ pedestal (85kg (188lbs) payload) pre-installed with APS
V3952-0005	FPR-210+ pedestal (95kg (210lbs) payload) pre-installed with APS

Part Number - Fusion APS upgrade for FP-145 and FP-188 pedestals:

V4109-0001	Fusion APS upgrade kit - Upgrade existing pedestal

Part Number - Target Reflectors

V4109-1012	Cylindrical floor standing APS target (for colouring)
V4109-1013	Cylindrical floor standing APS target - black
V4109-1014	Flat wall-mounted APS target (for colouring)
V4109-1015	Flat wall-mounted APS target - black

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Technical Datasheet

Fusion APS Targets
Wall & Floor Mountings
Reflective Area

Types of Fusion APS Targets

There are two types of targets:

• flat for wall mounting
• cylindrical for floor mounting (temporary or permanent)

Both come in black as standard when pre-assembled or as a kit for colouring (colour gels are not included and need to be sourced by the user).

The reflective surface of the target can be covered with a coloured optically clear lighting gel filter which is available in a wide variety of colours. The filter must be optically clear so that the infra-red beam from the APS scanner can pass through the filter.

V4109-1012 Cylindrical target kit with unpainted aluminium post for painting
V4109-1013 Standard pre-assembled cylindrical target, post painted black and gel filters are black
V4109-1014 Flat target kit (for colouring)
V4109-1015 Standard pre-assembled flat target.

Flat Targets
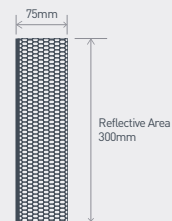
The pre-assembled flat targets are supplied ready to be placed in the studio. The entire front surface area of the flat target is reflective, visible through 120º.

Flat Target Kit (for colouring)

The flat target kit comes with the reflective material and a layer of optically clear adhesive tape already fitted to the base plate ready for the coloured gel filter applied on top.
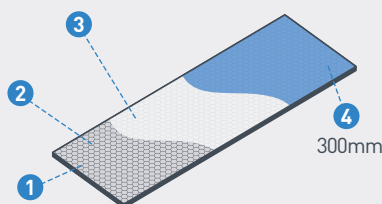
1. Base plate
2. Reflective material
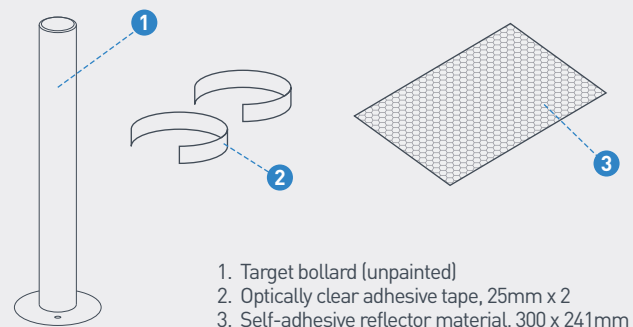3. Double-sided optically clear tape
4. Coloured gel filter

Cylindrical Targets

Cylindrical targets have the advantage of being reflective at any angle.
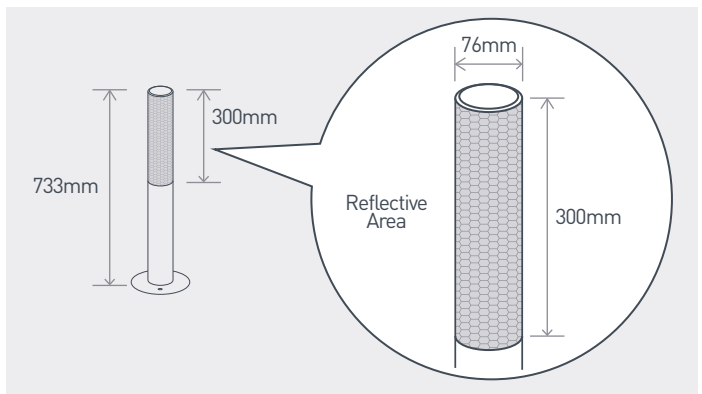
## Cylindrical Target Kit (for colouring)

The target bollard can be painted as required before the reflector material is applied. This is then covered by the coloured gel filter.

1. Target bollard (unpainted)
2. Optically clear adhesive tape, 25mm x 2
3. Self-adhesive reflector material, 300 x 241mm

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Fusion APS Targets Wall & Floor Mountings

Installing Targets within a Studio Environment

### Installing Flat Reflective Targets
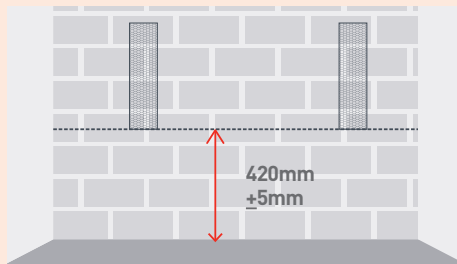
420mm
+5mm

The flat targets must be installed at a height of 420 mm to the bottom edge of the target, as measured from floor level. This is so the APS scanner mounted on the robotic pedestal can have maximum coverage.

Installing Cylindrical Reflective Targets
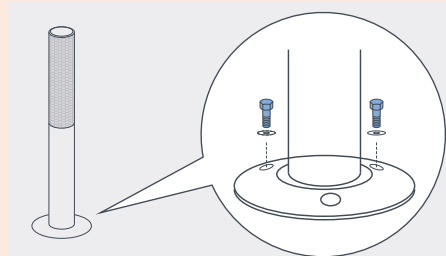
The cylindrical targets can be positioned free standing or with self-adhesive Velcro pads. It bolted it uses three 6 or 8 mm floor bolts to attach the base of the cylinder to the floor through the holes provided. The target must be mounted on a level surface.

Key to the following section:
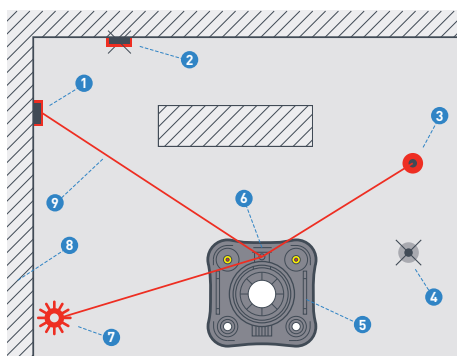
Key:
1. Detectable flat target
2. Undetectable flat target
3. Detectable cylindrical target
4. Undetectable cylindrical target
5. Fusion pedestal with APS
6. APS scanner unit
7. Reflective object or surface
8. Wall or solid object

Where To Place Targets in a Studio

x6✓
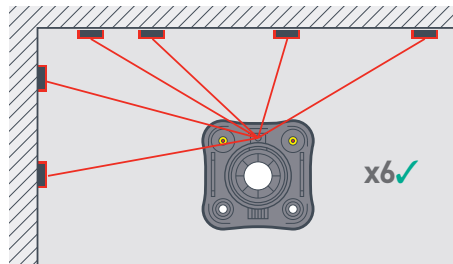
A minimum of three reflective targets is required. It is recommended that the Fusion pedestal with APS maintains contact with six targets at any one time to ensure reliable absolute positioning.
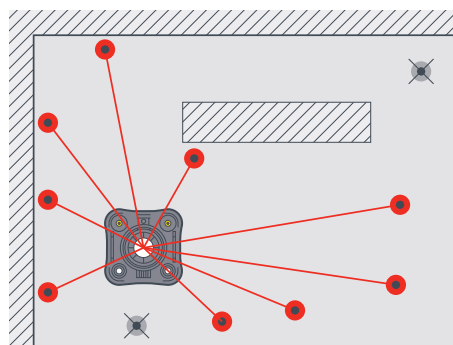
270⁰
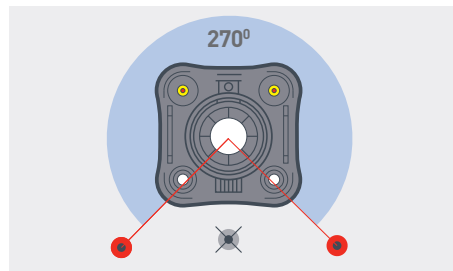
The scanner is capable of detecting targets in a large field of view of 270°. This means that targets can and should be placed to the rear of the studio.
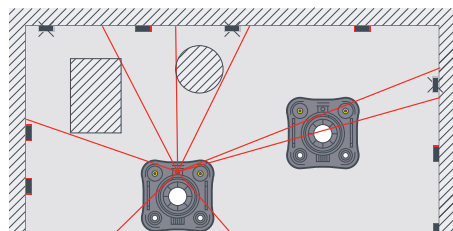

The columns of other pedestals and tall solid objects in the studio will also block the laser beam and this should be taken into account during target installation.

Example Correct Target Layouts

🗍 Cylindrical targets used in this installation
✓ More than 6 targets in view in any position
✓ Assymetric/random target spacing
✓ Even target numbers on each side of the studio
✿ Cylindrical targets chosen due to the absence of suitable installation walls.
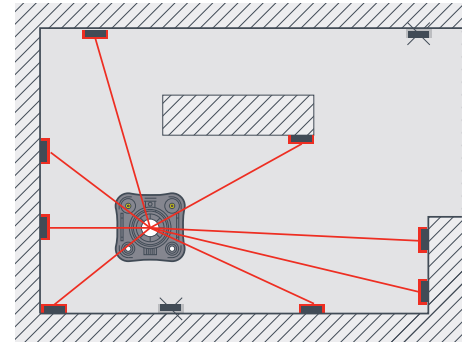
◇ Flat targets used in this installation
✓ More than 6 targets in view in any position
✓ Assymetric/random target spacing
✓ Even target numbers on each side of the studio
✿ Flat targets installed onto studio furniture

Multi-Pedestal Studios

Studios using multiple pedestals can use the same targets.

Pedestal 1
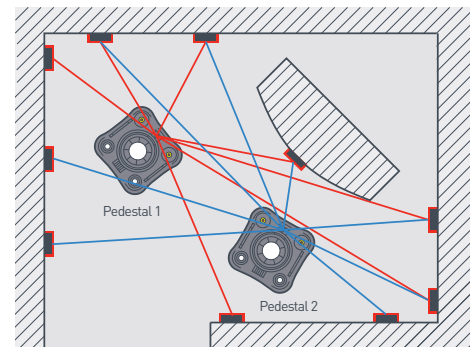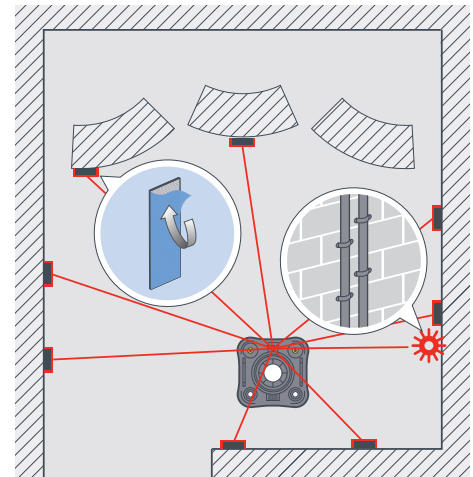
Pedestal 2

✓ Both pedestals can make contact with at least six targets in any position. This is despite the potential for the columns of each pedestal to mask targets.

✿ Disguise targets on studio sets by colouring.
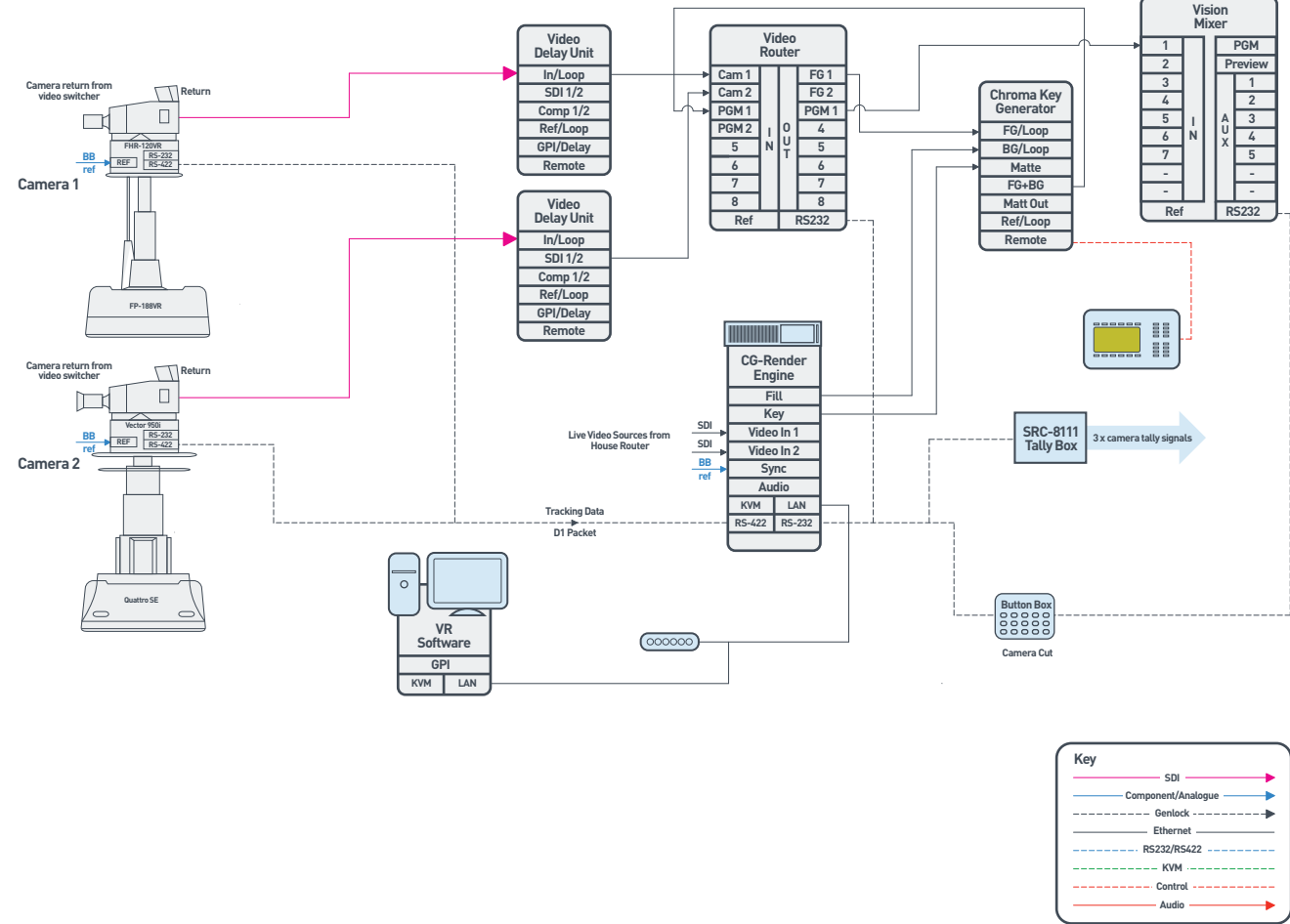
— Pedestal 1 laser beam
— Pedestal 2 laser beam

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Virtual Studio System Overview

Two Camera 3D Virtual Studio

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Virtual Tracking
2010 - 2011

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Vinten / **RADAMEC** BROADCAST ROBOTICS

Robotic Camera Control Systems

Vinten / **RADAMEC** BROADCAST ROBOTICS

Vinten Radamec Virtual Tracking Product Range

Today's program makers push technical and creative boundaries in an effort to reduce costs and offer a more attractive content to their viewers. One of the key tools at the disposal of the modern television producer is computer generated graphical elements; these vary from simple foreground stationary graphics to immersive 3D virtual environments.

In order for the virtual graphics to relate and correspond to the real objects in the video, any camera movement needs to be tracked. This tracking data must be communicated to the computer rendering the graphic so the graphic is rendered from the correct viewpoint.

Tracking can be broken down into two basic types, 2D and 3D and Vinten Radamec offers a wide range of products tailored to each application:

2D Tracking Solutions

These products are capable of reporting pan and tilt, and lens zoom and focus positions. In simple 2D tracking applications these devices are mounted on a static tripod or post, however the devices can also be mounted on moveable supports including pedestals to provide 3D tracking solutions.

3D Tracking Solutions

These devices are capable of reporting a floor position in relation to a fixed point (a home or target) in X and Y coordinates, and height from the floor to top platform (Z axis). Devices can be paired with a 2D tracking product to give full freedom to move the camera within the virtual studio.

Vinten Radamec 2D and 3D tracking products can be found in studio and OB environments worldwide where they offer excellent physical and tracking performance.

Product	Pan Counts / 360°	Tilt Counts / 360°	Height Resolution	Floor Accuracy	Lens Feedback	Manual	Robotic	
Vision 250E Encoded Manual Head	641,280	638,030	-	-	Direct/Bolt on	✓		2D Tracking
Vector 430i Encoded Manual Head	1,480,000*	1,480,000*	-	-	Direct/Bolt on	✓		
Vector 750i Encoded Manual Head	1,800,000*	1,600,000*	-	-	Direct/Bolt on	✓		
Vector 950i Encoded Manual Head	1,800,000*	1,800,000*	-	-	Direct/Bolt on	✓		
Fusion FHR-120VR Robotic only Head	1,800,000*	1,800,000*	-	-	Direct/Bolt on		✓	
Fusion FH-100VR Robotic and Manual Head	819,200*	819,200*	-	-	Direct/Bolt on	✓	✓	
Autocam HS-102 IT Pan and Tilt Head	1,040,384	1,040,384	-	-	Direct/Bolt on		✓	
Autocam HS-105 IT Pan and Tilt Head	479,625	479,625	-	-	Direct/Bolt on		✓	
Autocam HS-2010 IT Pan and Tilt Head	2,097,152	2,097,152	-	-	Direct/Bolt on	✓	✓	
Vinten Radamec Quattro SE Encoded Manual Pedestal			1mm	< +/-70mm & +/- 1 degree ◊		✓		3D Tracking
Fusion FP-188VR Robotic and Manual Pedestal			1mm	< +/-100mm & +/- 1 degree ◊			✓	
Free-D 3D Camera Tracking System	Equivalent >36,000	Equivalent >36,000	1mm	< 10mm	Bolt on encoders	✓	✓	

* These heads feature encoders which can be simply upgraded to higher counts if necessary   ◊   After 4 circuits of 6m x 4m triangle
Colour shading indicates compatibility. All heads supplied with four bolt fixing for compatibility with manual products.