

# Fusion FHR-155E

## Robotic Head

Weatherproof heavy payload robotic pan and tilt head



Technical Specification	FHR-155E
Part number	V4155-0003
<b>Physical Data</b>	
Max. payload	90 kg (200 lb)
Height	490 mm (19.3 in.)
Length	436 mm (17.2 in.)
Width	235 mm (9.3 in.)
Weight	25 kg (52 lb)
Rated load inertia	7.5 kg m <sup>2</sup> (178 lb ft <sup>2</sup> )
<b>Electrical Data</b>	
Power consumption	175W
Power input	Autoranging 100–240V AC, 50/60 Hz

Operating Data	
Temperature range	+4°C to +55°C (+39°F to +131°F)
IP rating	IP65
Motor noise	41dBA @ Max Speed
Tilt range*	±30° (standard) ±179° (with optional extended cradle arm)
Pan range	359°
Angular velocity (min)	0.05° /s
Angular velocity (max)	45°/s
Angular acceleration (typical)	30°/s <sup>2</sup>
Angular acceleration(peak)	60°/s <sup>2</sup>
Shot Recall Repeatability	+/-90 arcseconds (+/-0.025°)
System Resolution Accuracy	19 Bit, 0.2°
Lens control	Full-servo Canon and Fujinon digital lenses
Network	IP Ethernet, RJ45
Aux port	Selected I/O only subject to connectors.

\*May be limited by camera setup. Please note inclusion of cooler module on weatherproof camera enclosure will limit upward tilt to +30°



FHR-155E with extended cradle arm and weatherproof camera enclosure

### Weatherproof heavy payload robotic pan and tilt heads

- + Weatherproof head suitable for outdoor use
- + High repeatability and accuracy
- + Smooth camera and lens motion control deliver high quality output
- + Integrated lens interface
- + Ultra-reliable communications protocol
- + High payload with flexible mounting solutions

V4155-0031	FHR-155E, no cradle (to use with V4165-000x)
V4155-0032	FHR-155E, no cradle, with extended tilt axis (to use with V4165-000x)
V4155-0033	FHR-155E, including cradle
V4155-0034	FHR-155E, including cradle and extended tilt axis
V4165-0002	Weatherproof camera enclosure for FHR-155E, including thermoelectric cooler (AC)
V4165-0003	Weatherproof camera enclosure for FHR-155E, including cooling fan
V4165-0004	Weatherproof camera enclosure for FHR-155E
V4165-1900	Washer nozzle kit

# Weatherproof Camera Enclosure

Technical Specification	Weatherproof Camera Enclosure
Part number	V4165-0002 - fitted with thermoelectric cooler V4165-0003 - fitted with cooling fan V4163-0004 - passive enclosure
External dimensions [L/W/H]	851 x 241 x 320 mm (33.5 x 9.5 x 12.6 in.) exc. sun shade and thermoelectric cooler
Max camera/lens size	740 mm (29.1 in.) long [eg. Hitachi SK HD1200 with Fujinon UA46X]
Weight	27 kg (59.5 lb)
Temperature range	+4°C to +55°C (+39°F to +131°F) Ambient (internal max 45°C with cooler)
IP rating	IP65
Sunloading spec	DEF STAN-00-35, Desert A1
Colour	RAL 7047 Tele Grey Texture (painted Stainless steel)
Wiper/Washer control	Controlled via FHR-155E head
Internal services	24V DC PSU; Lens connection for Fujinon or Canon Digital lenses; Wash / wipe; 12V or 24V DC supplies.
Internal cooling	Optional filtered fan or thermoelectric cooler module
Power supply	90-240V AC 50Hz (earthed) via cable into box with IEC termination to PSU



Enclosure installed on FHR-155E with extended cradle arm

## Weatherproof Camera Enclosure

- + Weatherproofed to IP65 and insulated against extreme temperatures
- + Remote controlled wiper and optional wash jet ensure clear field of view
- + Sealed cable entry enables use of standard cable terminations for quick installation
- + Compact design reduces mass inertia, weight and wind loading to ensure good balance
- + Internal thermostat controls filtered and pressurised fan to cool to ambient temperature
- + Simple integration with fixed air conditioning systems or optional cooler module



Enclosure with optional cooler module installed on FHR-155E with extended cradle arm

Technical Specification	Cooler Module
Part number	Fitted to V4165-0002
Dimensions [L/W/H]	340 x 208 x 165 mm (13.4 x 8.2 x 6.5 in.) as fitted to enclosure
Weight	3 kg (6.6 lb)
Operating temperature	+4°C to +55°C (+39°F to +131°F) Ambient
IP rating	IP65
Temperature control	Thermostat PWM controller fitted in enclosure
Max. cooling	166W, typically 100W @ 10°C Δt
Power consumption	8.6A startup, 6A typ, powered from 24V DC Enclosure PSU
Power input	From enclosure PSU (24V)

## Cooler Module

- + Thermoelectric cooler requiring no operating fluid or pipework
- + Best in class design customised for outdoor use
- + Independently regulated by internal thermostatic control