

Fusion FHR-155E

Robotic Head

Weatherproof heavy payload robotic pan and tilt head



Technical Specification		FHR-155E
Physical Data		
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 ² (178 lb ft ²)
Electrical Data		
Power consumption		175W
Power input		Autoranging 100–240V AC, 50/60 Hz

Operating Data	
Operating temperature	+4°C to +55°C (+39°F to +131°F) Ambient
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 ²
Angular acceleration (peak)	60°/s ²
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°. Velocity, acceleration and declaration parameters are configurable, and can be changed/limited to suite different payload characteristics.



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

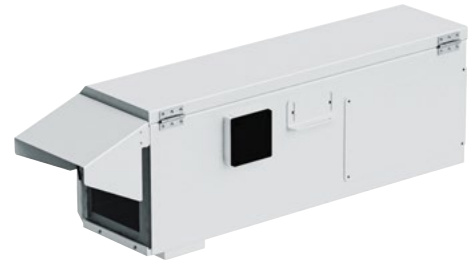
Weatherproof heavy payload robotic pan and tilt heads

- + 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 (suitable for all versions of the camera enclosure)

Weatherproof Camera Enclosure

Technical Specification	Weatherproof Camera Enclosure
Part number	V4165-0002 - fitted with V4165-0002 thermostatic cooler for active temperature reduction. V4165-0003 - fitted with exhaust fan to draw warm air from inside the 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).
Operating temperature	+4°C to +55°C (+39°F to +131°F) Ambient. Internal temperature reduced by up to 10°C with thermoelectric cooler module fitted. With exhaust fan fitted, internal temperature will balance to the external ambient temperature.
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 Supported by Vinten VRC software v2.7 or later, with dedicated function keys on the joystick panel.
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