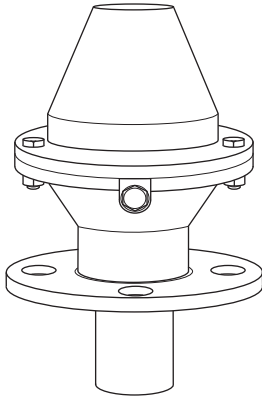




# HAWKER LEVEL CONTROL SYSTEMS

## Electrode Holders & Brackets for Conductivity Type Systems

### Heavy Duty HPE8



**HPE8** Electrode Holder suitable for sewage, water and effluent applications. Moulded in Phenolic (SR4007) for high strength and chemical resistance. Supplied with Stainless Steel clamping collar, rubber gasket and Stainless Steel nuts and bolts to secure the cap to the base. The holders will accept 3/4" pipe electrodes of nominal OD 26.7mm and wall thickness 2.87mm.

Electrodes are available in Galvanised Mild Steel, Stainless Steel type 316, plain or plastic coated, (for latter specify HPE8/1). PPA plastic coating WRAS approved No 1610508

Maximum shipping length;

a) Stainless Steel - 3m

Stainless electrodes can be threaded and coupled (extra charge) to make up lengths greater than 3m.

b) Galvanised - 3.2m

Galvanised is supplied threaded both ends and c/w a one off coupler to make up lengths greater than 3.2m.

Electrode steady brackets (type 85) are advisable every 3 metres.

Electrode adjustment 114mm.

Electrode length is calculated from the underside of the flange plus 92mm.

Rubber bungs are available to insert in the electrode tip.

Plastic touch-up paint for electrodes is also available.

ATEX APPROVED models are available for use with P8/IS level controller.

**HPE8/P** similar to HPE8 but with an insert moulded in, to provide pressure under the flange of 30 psi. Supplied with two rubber gaskets, Stainless Steel nuts and bolts to secure the cap to the base also a Stainless Steel coupler to accept 3/4" pipe electrode.

Also, available for immersion to IP67 and pressure under the flange of 100 psi.

Electrode length is calculated from the underside of the flange less 89mm

Rubber bungs are available to insert in the electrode tip.

We provide a service to thread 3/4" pipe.

Plastic touch-up paint for electrodes is also available.

ATEX APPROVED models are available for use with P8/IS level controller.

**E12** similar to HPE8 but with tall powder coated Aluminium Alloy cap providing an electrode depth adjustment of up to 335mm.

Supplied with Stainless Steel clamping collar, rubber gasket and Stainless Steel nuts and bolts to secure the cap to the base also a Stainless Steel coupler to accept 3/4" pipe electrode.

An **E12/P** version is also available giving adjustment and immersion protection to IP67

If plastic coated electrode is required, specify E12/1.

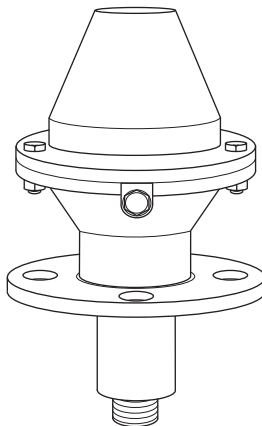
Rubber bungs are available to insert in the electrode tip.

We provide a service to thread 3/4" pipe.

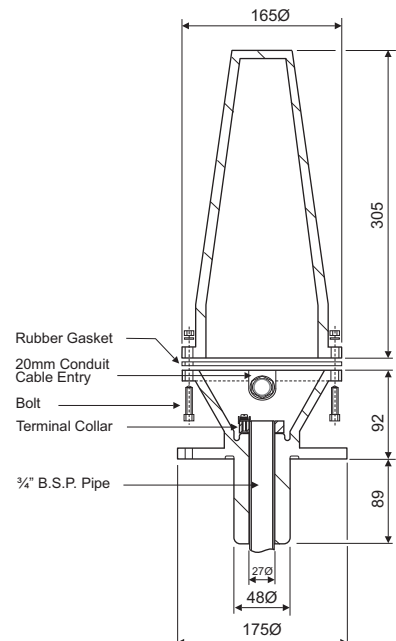
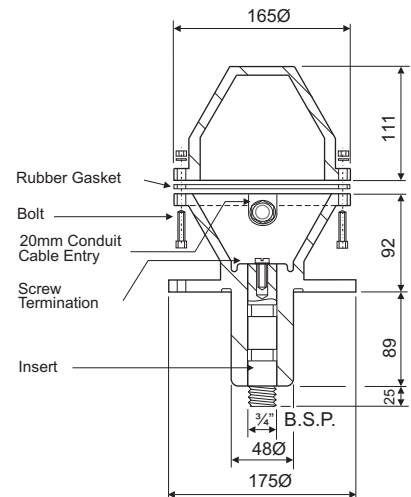
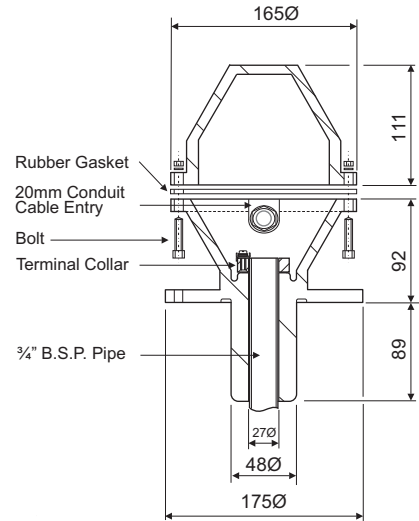
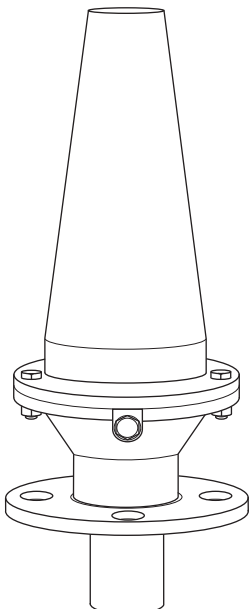
Plastic touch-up paint for electrodes is also available.

ATEX APPROVED models are available for use with P8/IS level controller.

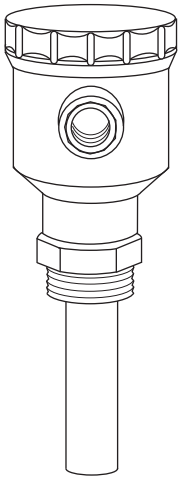
### Heavy Duty HPE8/P



### Heavy Duty E12



## Light Duty HPE7



**HPE7** manufactured in Polypropylene complete with a back nut. Softening temperature 120°C.

Suitable for 8mm diameter rod electrodes, typically Stainless Steel type 316, supplied plain or plastic coated. Plastic coated electrodes are PPA coated WRAS No 1610508. Also available in Hastelloy C, Monel, Titanium.

Maximum electrode shipping length 3m. Stainless Steel couplers are available for extending the electrode length.

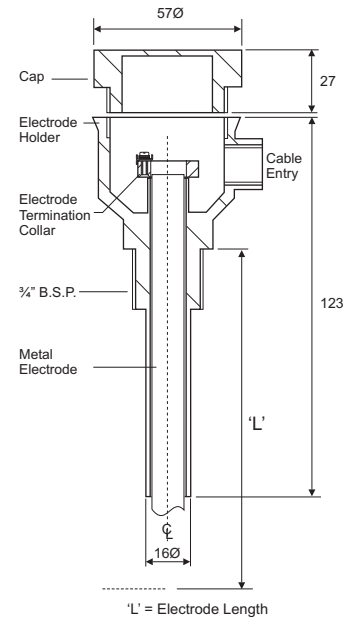
Steady brackets are advisable every 2m if turbulence present.

**HPE7** - Add 32mm to electrode length.

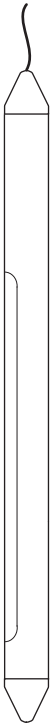
**HPE7/P** - Pressure tight to 300 P.S.I. At 20°C complete with a coupler.

**HPE7/Pa** - Pressure tight to 300 P. S.I. With an 8mm rod moulded in. Maximum length 1m.

ATEX APPROVED models available for use with P8/IS level controller



## Borehole Electrode E4 and E5



**E4 and E5** borehole electrodes used to control pumps etc., between or at specific levels.

Manufactured from UPVC WRAS No 1702511 and Stainless Steel type 316.

E4 is unshrouded.

E5 is shrouded to prevent spurious operation by water in-falls.

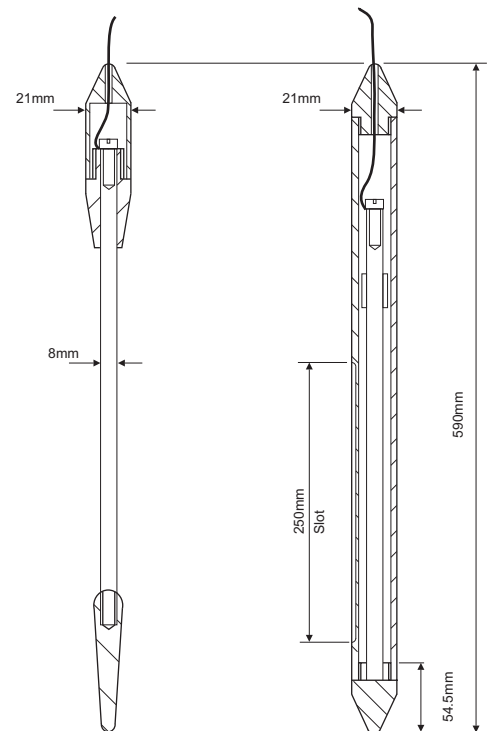
Special electrode suspension cable available

Conductor :- 7 x 7/0. 1mm Stainless Steel Polyurethane Insulated.

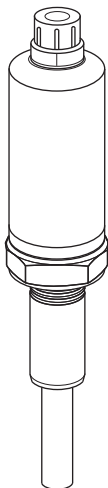
Diameter :- Approximately 5mm. Breaking load approx. 50kgs.

The Stainless Steel cable is used in preference to Copper to reduce the risk of losing the borehole electrode due to galvanic corrosion. It is certified to BS 6920: 2000 WRAS standard

ATEX APPROVED models available for use with P8/IS level controller (E5 ONLY)



## Type E15



### E15 Pressure Tight Mini Electrode

The E15 has been designed for applications where space is restricted and normal small electrode holders cannot be accommodated. By varying the materials of construction, the E15 may be used for applications where higher temperatures and corrosive chemicals are present.

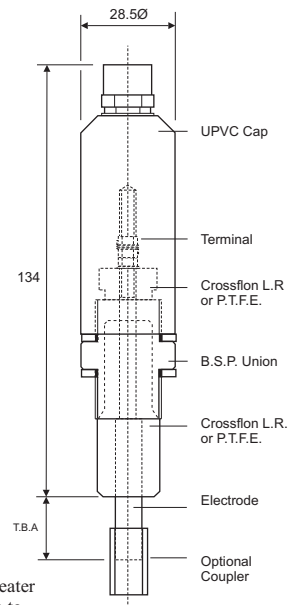
Insulator material: Crossflon or P.T.F.E

Electrode material: Stainless Steel, Titanium, or Monel.

Union material: Stainless Steel sizes available 1/2, 3/4 B.S.P.

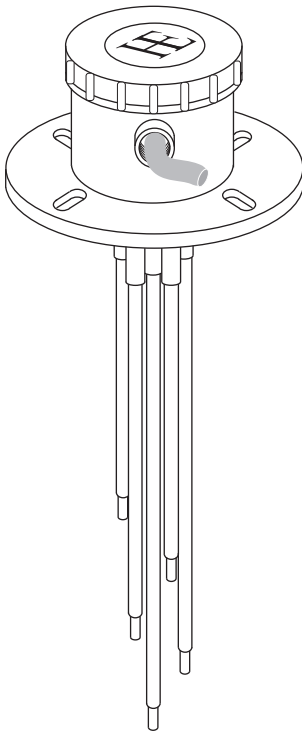
Pressure Rating: 300 p.s.i.(20bar) @ 20°C

The E15 assembly can be incorporated into 3/4" pipe to form a rigid long electrode, e.g., for surge vessels.



Nb For electrode lengths greater than 51mm add on extra to electrode length

## E13A Multi for up to 3m



The E13A Hawker multi electrode holder is moulded in tough glass filled Polypropylene and accommodates up to five coated 8mm electrodes up to 3m long, typically Stainless Steel type 316, supplied plain or plastic coated. Plastic coated electrodes are PPA coated WRAS No 1610508. Also available in Hastelloy C, Monel, Titanium. (Longer lengths are available via threaded couplers), it is ideal for water tanks, chemical storage tanks and bunds. 5 electrodes enable the E13A to be used for pump control with high and low alarms. Use centre hole for earth electrodes. Mounting (type 81/Stainless Steel) and steady (type 218/Stainless Steel) brackets and separators (type 214) are available. Always use the well proven, AC or P3/P4 or DC1 series controllers incorporating CSD circuitry.

The universal flange is suitable for:-

ANSI 3" 150lb

DN 80 PN 16 flush fitting or four holes only.

BS 10 table D 3"

Hawker type 81/Stainless Steel bracket

Fixing kits available (ref 215) to mount E13 bracket

Temp Range:- 20°C to +85°C

Weight:- 0.55 Kg

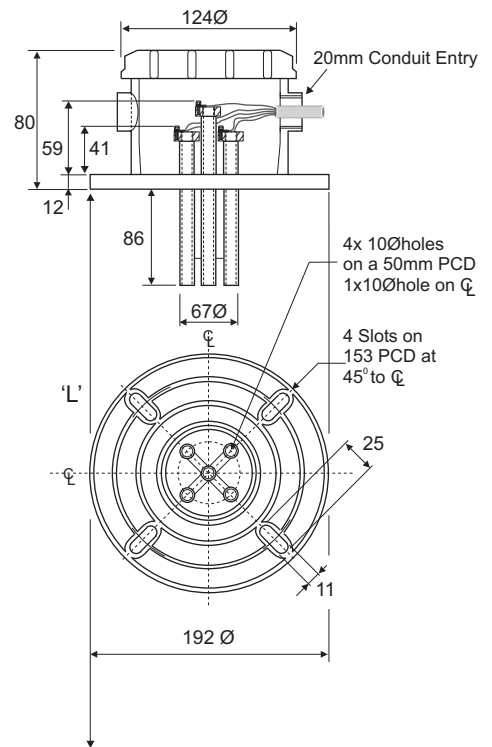
When ordering specify:

N= No of electrodes

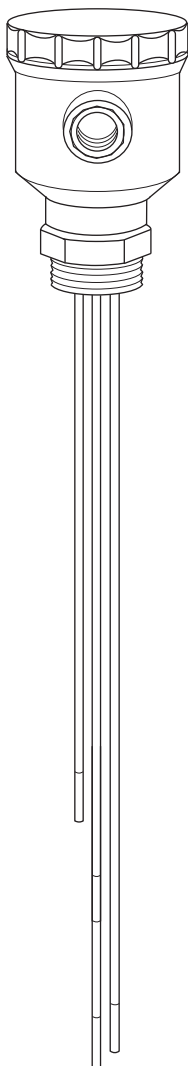
L +70mm = electrode lengths.

ATEX APPROVED models available for use with P8/IS level controller

An E13A/IP67 is available to special order



## E14 Multi for up to 1m



The E14 is available in 2, 3 or four way versions to accommodate up to four 3.2mm diameter electrodes. The body is moulded in polypropylene with a screw on cap. The mounting thread is 3/4" B.S.P. parallel. In addition, a lock nut is provided. The screwed conduit entry is 20mm diameter. Electrodes (other than Hastelloy) are plastic coated to prevent tracking. For applications where excessive moisture is present, a recessed headed version is available and it is possible to have cable connected at works and the terminals potted. Two spacers are included to separate the electrodes. For use at normal atmospheric pressure and temperatures between -20°C and +60°C not suitable for aggressive liquids which attack Polypropylene.

For ordering purposes, the head and electrodes are ordered separately.

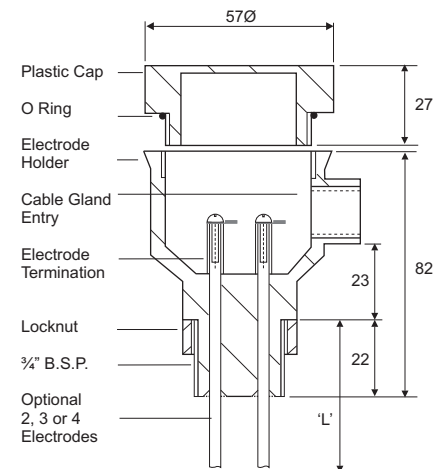
When ordering please specify:

E14/N = No of electrodes 2, 3 or four

L = Length of electrodes below shoulder in mm

E14 electrode holders are normally supplied as fully made up assemblies and c/w the electrodes fitted. If you prefer us not to fit the electrodes please advise when ordering. Additional pairs of spacers/separators are available if required type Ref 216

ATEX APPROVED models available for use with P8/IS level controller

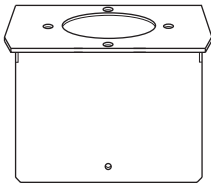


Material - Coating	Order Ref	Dia	Max Length	Coating Colour
Stainless Steel 316L - Epoxy Thermomelt Coated	176	3.2mm	1m	Black
Stainless Steel 316L - Epoxy Fusion Bond Coated	219	3.2mm	1m	Aqua Green
Titanium - Epoxy Thermomelt Coated	207	3.2mm	1m	Blue
Hastelloy - Uncoated/Bare	220	3.2mm	880mm	None

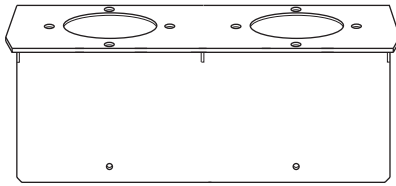
Other coatings are available to special order. An additional type 71/Stainless Steel 304/316L grade mounting bracket is available. The electrodes are push to fit into the body, which should be warmed to approximately 80°C to facilitate or removal.

## Electrode Holder Mounting Brackets

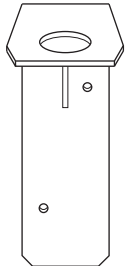
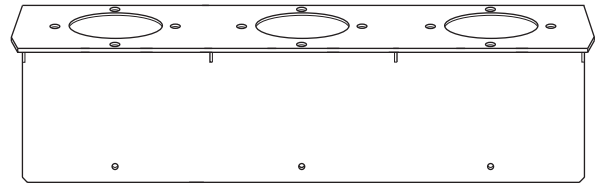
Type 81



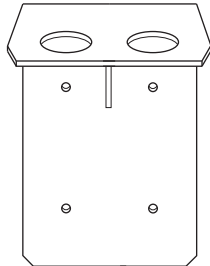
Type 82



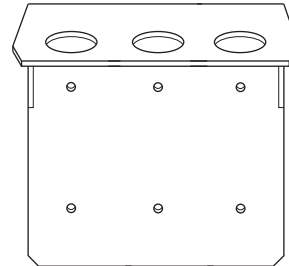
Type 83



Type 71



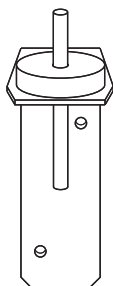
Type 72



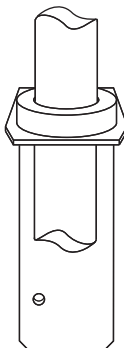
Type 73

Stainless Steel 304/316*	Electrode Holder Type	No of Holders Per Bracket	Distance from $\phi$ of Holder to Wall mm	Centre Distance between Electrode Holder mm
81 SS*	HPE8 E12 E13	1	156	-
82 SS	HPE8 E12	2	156	229
83 SS	HPE8 E12	3	156	229
71 SS*	HPE7 E14	1	156	-
72 SS	HPE7 E14	2	156	114
73 SS	HPE7 E14	3	156	114

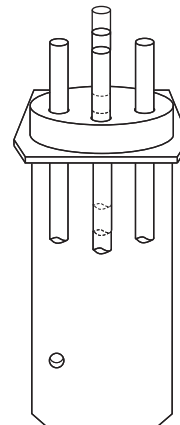
## Electrode Steady Brackets



Type 75



Type 85



Type 218

Type Stainless Steel 304/316*	Electrode Type	No of Insulators Per Bracket	Distance from $\phi$ of Electrode to Wall mm	Centre Distance between Insulators mm
85 SS*	3/4" N.B. Pipe Stainless Steel 316, including PPA coated	1	156	-
75 SS*	8mm $\phi$ Rod	1	156	-
76 SS	Stainless Steel 316,	2	156	114
77 SS	Monel and Titanium including PPA Coated.	3	156	114
218 SS*	Special Steady Bracket for E13 Multiholders for up to five, 8mm $\phi$ Electrodes	1	-	-

*This product has been designed and complies to the relevant standards as listed in its certificate of conformity. The installer/user must ensure compliance. The crossed out bin symbol, placed on the product, reminds you of the need to dispose of the product correctly at the end of its life. Because of continuing development we reserve the right to change the specifications without notice*

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