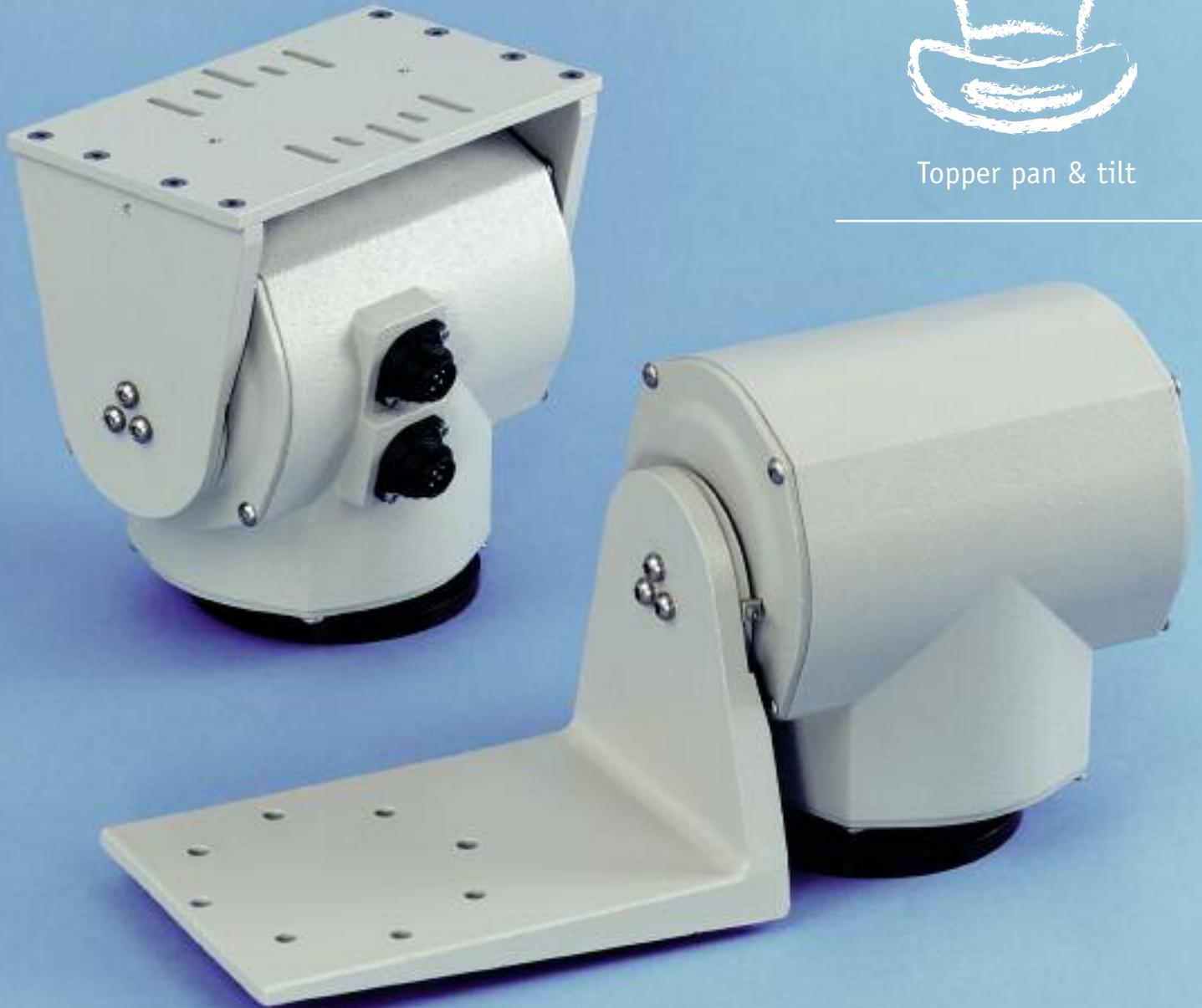




Topper pan & tilt



- |                                       |  |
|---------------------------------------|--|
| Strong lightweight construction       | Dual process heat treated gravity die cast aluminium casing  |
| Highly reliable with minimal backlash | Precision turned and milled internal components with ball races on major axes  |
| Built to last                         | Stainless steel fastenings   |
| Weatherproof                          | 'O' rings and lip seals. IP rating 68 (assuming the supplied mating connector is used and fitted to the manufacturers specification) |
| Long operational life                 | Maintenance free, two year warranty  |
| Easy to install                       | Simple external limit switch adjustment to 350 degrees travel  |
| Universal mounting plate              | Suitable for all housings  |
| Corrosion resistant finish            | Colour options available   |
| Regenerative braking                  | Aids rapid deceleration  |



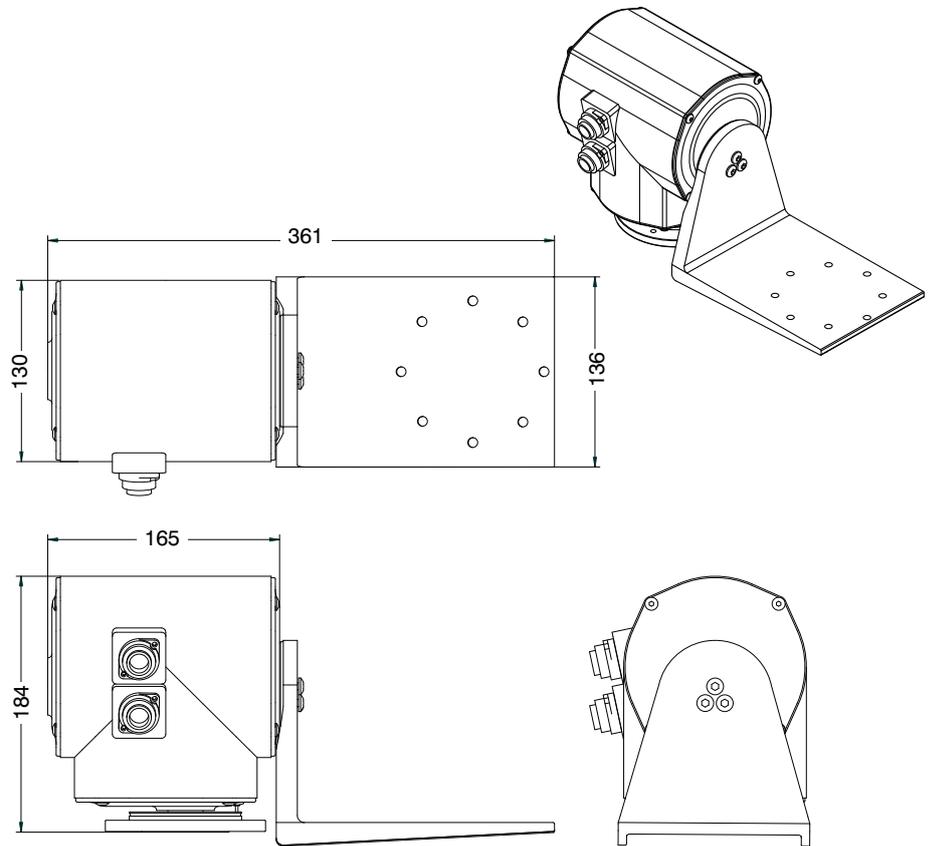


## Topper pan & tilt

The topper range of pan and tilt heads consists of 230/24VAC and 24VDC units in both over the top and side mount configurations.

The units are extremely compact, externally robust and aesthetically designed to an IP68 rating providing a rugged and stable mobile camera platform for use in most CCTV applications.

A fresh design approach has introduced a simple but effective limit switch facility and larger bearings with a broader spread to allow a much higher load capacity on side arm configurations. The gearbox has been designed to provide higher gear ratios which give lower speeds without costly modifications.



<b>Dimensions (mm nominal)</b>		Side mount	Over the top
Height		184	201
Width to platform face		190	183
Width to platform outer edge		366	N/A
Depth (without plugs)		130	130
<b>Weight (kg)</b>		< 6	< 6
<b>Fixing centres</b>	Base	4 holes tapped M6 on 4" (101.6) PCD plus 4 holes 6.35 Dia on 4" (101.6) PCD	
	Platform	4 holes 6.5mm dia. on 101.6mm (4") PCD/square 4 holes 6.35mm dia. on 101.6mm (4") PCD/diamond 4 slots, 6.35mm wide x 30mm long in pairs In line with camera axis	
<b>Voltages</b>		12VDC, 24VDC nominal, 24VAC, 110VAC, 240VAC	
<b>Speeds (°/sec)</b>		<b>AC</b>	<b>DC</b>
	Pan	3, 6, 12	12, 18, 24, 32, 48,
	Tilt	3, 6	12, 18
<b>Capacity</b>		25 kg in side mounting configuration, any speed 16 kg in over the top configuration (maximum load can only be achieved by using a slow speed gearbox and a balanced load)	
<b>Operational Angles (°)</b>		Pan	Tilt
	Side Mount	350	±180
Over the Top	350	-90 to +25	
<b>Backlash</b>		Less than 0.15°	
<b>Control cable</b>		Mating connectors supplied	
<b>Recommended cable</b>		16/0.2 (rated at 230v for AC version)	
<b>House colour</b>		Goose Grey, Textured, Semi Gloss (BS4800 00 A05)	
<b>Maintenance</b>		None required	
<b>Temp. range (°C)</b>		-20 to +50 (heater available)	



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615 PCR  
Topper



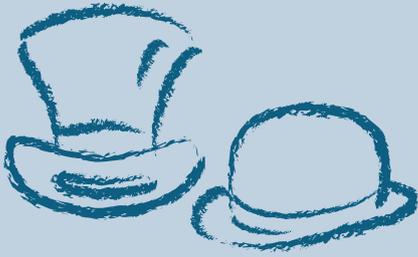
620 PCR  
Bowler  
(available with standard  
or shortened column)



Topper and Bowler  
continuous rotation  
pan & tilts

- |                                       |  |
|---------------------------------------|--|
| Strong lightweight construction       | Dual process heat treated gravity die cast aluminium casing  |
| Highly reliable with minimal backlash | Precision turned and milled internal components with ball races on major axes  |
| Built to last                         | Stainless steel fastenings   |
| Weatherproof                          | 'O' rings and lip seals. IP rating 68 (assuming the supplied mating connector is used and fitted to the manufacturers specification) |
| Long operational life                 | Maintenance free, two year warranty  |
| Versatile                             | 24 way slip ring assembly for all cabling requirements and power   |
| Easy to install                       | No external pan limit switch to set  |
| Mounting plate                        | Suitable for all housings  |
| Corrosion resistant finish            | Colour options available   |
| Regenerative braking                  | Aids rapid deceleration  |





## Topper and Bowler continuous rotation pan & tilts

The Continuous Rotation option has been designed to complement the highly successful Homburg, Topper and Bowler pan and tilt heads.

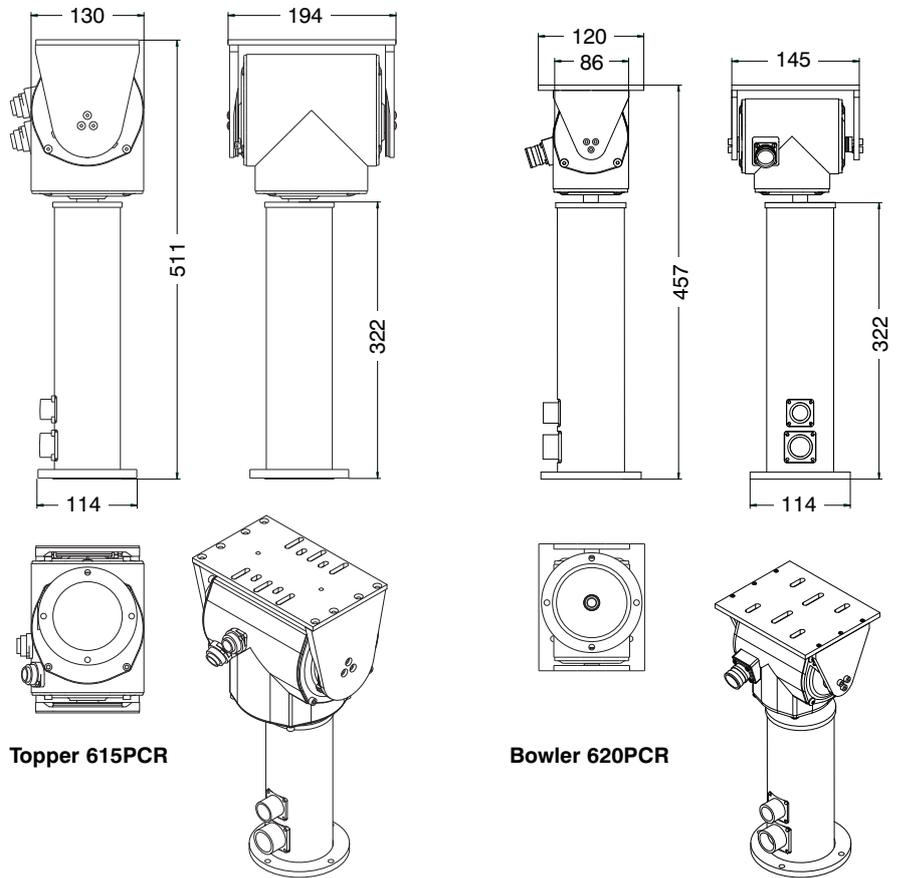
The head incorporates an extruded aluminium column, which houses the slip ring assembly and connectors and also acts as a column spacer.

The slip ring assembly provides a 24 way slip ring with 4 contacts per ring providing all necessary cable management and power.

There is also some spare capacity for user defined requirements.

The shaft is fixed to the column by utilising a locking taper and the column itself is fully adjustable in rotation to allow orientation of the connectors. As in all MAD heads, the limit stops are externally accessible for ease of set up.

The gearbox has been designed to provide higher gear ratios which give lower speeds without costly modifications.



Topper 615PCR

Bowler 620PCR

	615PCR		620PCR	
<b>Dimensions (mm nominal)</b>	Side mount	Over the top	Side Mount	Over the top
Height	493	511	441	457
Width to platform face	183	183	145	145
Width to platform outer edge	347	N/A	307	N/A
<b>Slip ring</b>	24 way with 4 contacts per ring. ( 240v AC 2Amps)			
<b>Weight (kg)</b>	< 8kg	< 8kg	< 4.3kg	< 4.3kg
<b>Fixing centres</b>	Base	4 holes 6.35 dia on 4" (101.6) PCD		
	Platform	4 holes 6.5mm dia on 101.6mm (4") PCD/square 4 holes 6.35mm dia on 101.6mm (4") PCD/diamond 4 slots 6.35mm wide x 30mm long in pairs In line with camera axis		
<b>Voltages</b>	24VDC, 12VDC nominal, 240VAC, 24VAC		24VDC, 12VDC	
<b>Speeds (°/sec)</b>	AC		DC	
Pan	3,6,12		12,18,24,32,48 30,10	
Tilt	3,6		12,18 10	
<b>Capacity</b>	25 kg in side mounting (Maximum load can only be achieved by using a slow speed gearbox and a balanced load)		6 kg in over the top 10 kg in side mounting	
<b>Operational Angles (°)</b>	Pan	Tilt		
Side Mount	Cont 360	+/- 180		
Over the Top	Cont 360	-90 to +25		
<b>Backlash</b>	Less than 0.15			
<b>Control cable</b>	Mating connectors supplied			
<b>House colour</b>	Goose Grey, textured, semi gloss (BS4800 00 A05)			
<b>Maintenance</b>	None required			
<b>Temp. range (°C)</b>	-20 to + 50			



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