

## **Appendix 'A'**

### **Flexible Illuminated Traffic Bollard Illustrations and Photographs**



# SIMBOL™

## SIMMONSIGNS LIMITED

TRAFFIC ENGINEERS

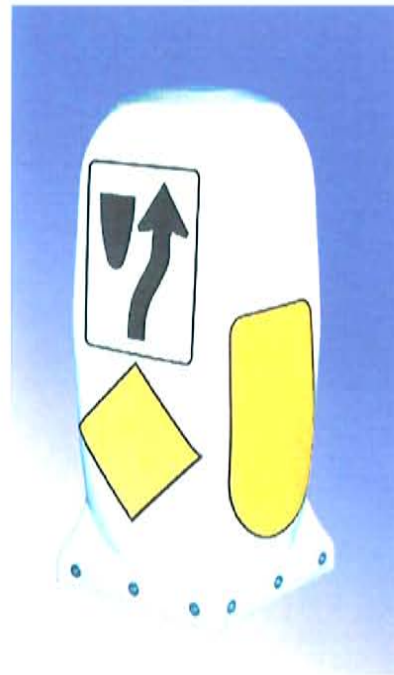
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The SIMBOL is a uniquely styled, totally illuminated flexible bollard designed to provide enhanced driver warning of potential hazards in all weather conditions. Carefully engineered soft lines and a specially developed polymer enable the SIMBOL to recover from repeated vehicle impacts even in extremes of temperature. This maintains its primary function and reduces the need for site visits.

- High visibility from any approach angle.
- Overspill of light illuminates surrounding road geometry and nearby pedestrians.
- Uniquely styled for enhanced durability and performance.
- Exclusive high flexibility polymer reforms with minimum distortion.
- Mold In Graphics guaranteed for 5 years.
- Enhanced surface for easier cleaning.
- Indelible date code.



The SIMBOL is inherently safe with all electrics and lighting mounted below ground level and no hard parts in the vehicle path. The SIMBOL offers maximum visibility and minimum risk to all road users.



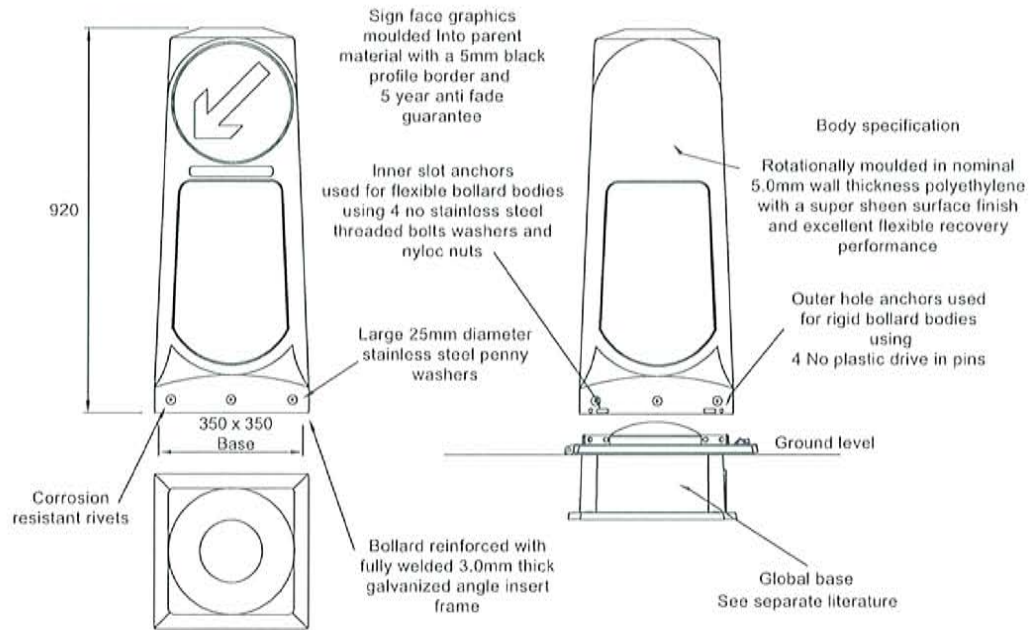
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## SIMBOL Traffic bollard Specification



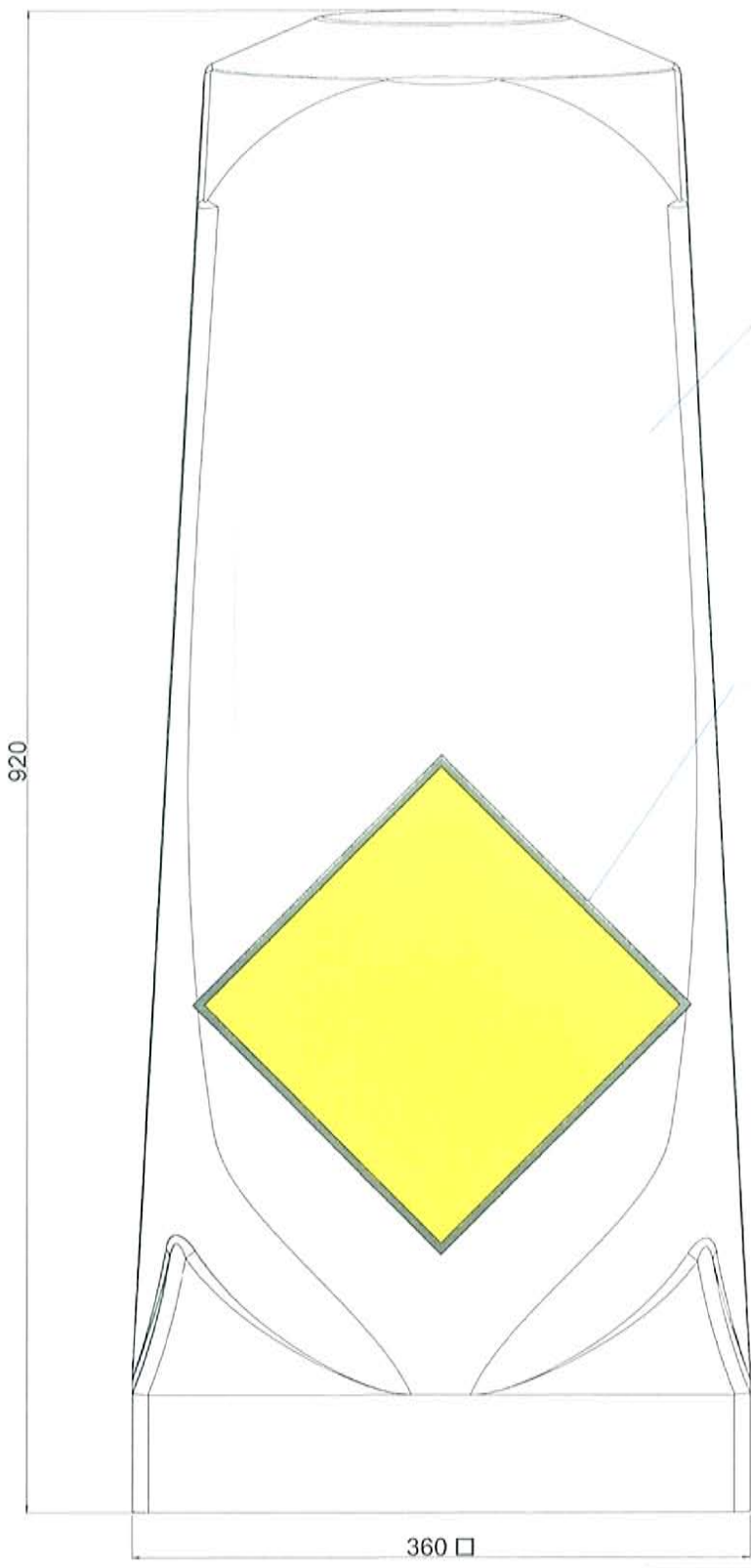
<b>Body</b>	Rotationally moulded, UV stabilised, exclusive Simflex polymer. Special in mould surface treatment for superior easy clean low porosity surface as standard.
<b>Graphics</b>	Integrally moulded graphics carry 5 year guarantee. High profile black borders as standard.
<b>Mounting</b>	Full 3mm galvanised mild steel angle fixing frame, providing fixings to industry standard bases.
<b>Lighting</b>	For maximum performance and durability the SIMBOL should be used in conjunction with the Simmons signs range of baselights.

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Drg No R4-7\_SIMBOL\_VINYL.idw  
 Part No R4-7\_SIMBOL  
 Project No

If In Doubt Ask  
 Sheet 1 Of 1



254mm x 338 Wide R4-7  
 Graphic

300mm Wide Diamond Translucent  
 Yellow Graphic C/W 6mm Black  
 Border

920

360 □



01	11/07/05	Original	
Issue	Date	Modification	
Scale A1		Drawn By	Mark Tudor
( 0.70 : 1 )		Date	11/07/2005
Gen Tol		Checked By	
± 2mm			
Mass		Kg	

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Title  
**Concept Symbol Shell**

Material

Finish



# CAB-EX™

## DUCTED BASELIGHT FOUNDATION & CABLE MANAGEMENT SYSTEM

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LIMITED**

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The CAB-EX is designed as a complement to the new generation GLOBAL+plus+™ baselight to provide a fully ducted, replaceable baselight with many advantages over traditional installation methods.

Once installed the CAB-EX provides a substantial foundation of guaranteed depth and creates a well proportioned ducted chamber for cable management purposes. It is also ready to accept the GLOBAL +plus+ which is simply installed and can be replaced time and time again without disturbing the foundations or electrical connections.

- Quick baselight replacement without excavation.
- Guaranteed foundation depth.
- Fully ducted bollard baselight system.
- Simple knife/knock-outs accommodate 50 & 100mm ducts.
- Stackable and rotatable design for increased depth and differing duct entry paths.
- Moulded-in finished "ground level" indicators.
- Moulded in super high impact UV stabilised black MDP for strength and durability.



The CAB-EX is ideal for new road developments where ground works and cabling can be carried out prior to the fitting of the GLOBAL +plus+ baselight. A special cover plate is available to protect the duct chamber. This can be simply replaced by the GLOBAL +plus+ at the end of the project reducing the risk of vandalism during the construction phase.

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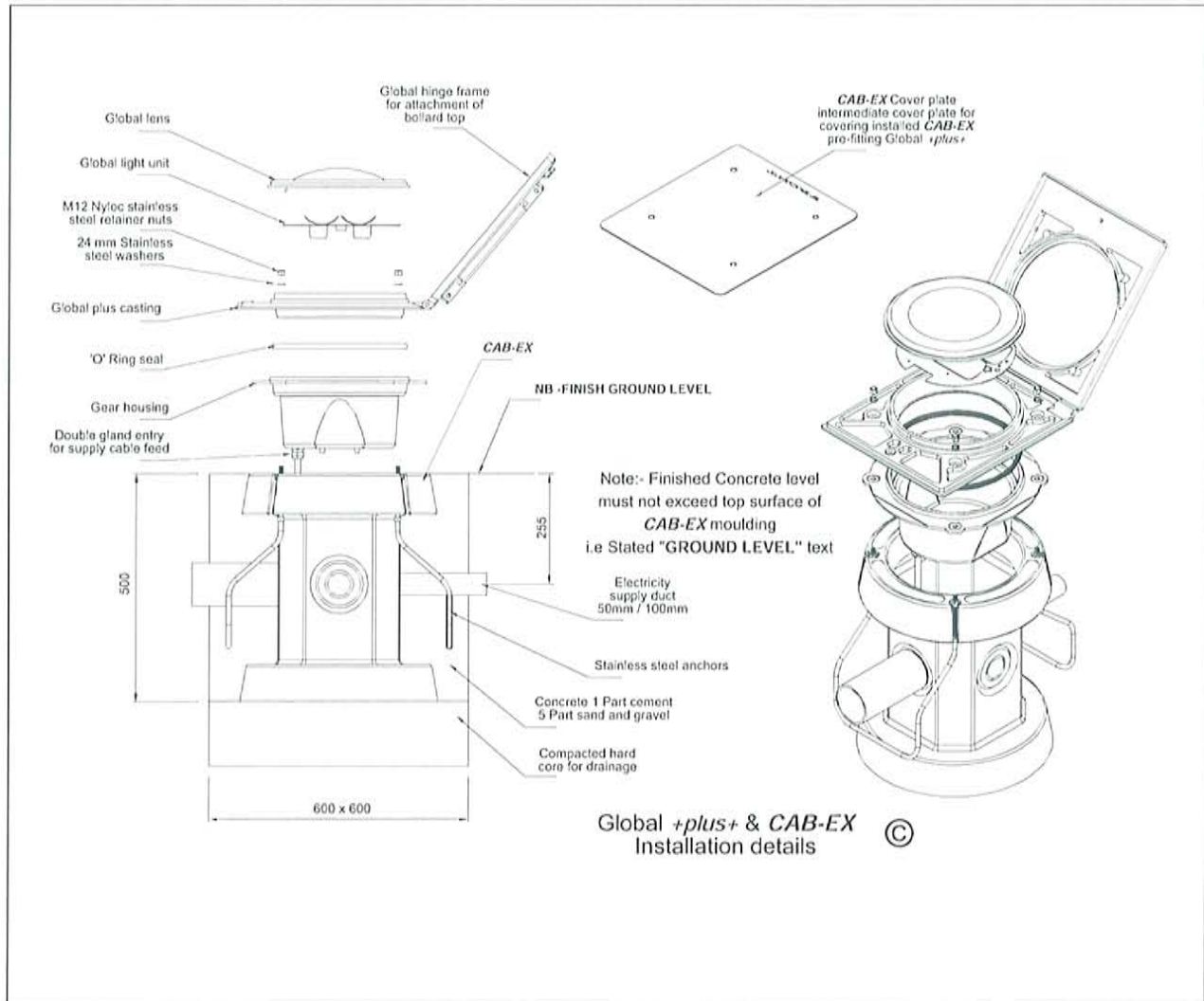
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# CAB-EX™ Cable Management System Specification



<b>Body</b>	Rotationally moulded UV stabilised black polyethylene, 6mm thick (nom.). Stackable, rotatable design enables multiple units to be used together for increased depth and differing duct entry paths.
<b>Duct Entry</b>	4 x knife/knock outs to accept 50mm or 100mm diameter conduit.
<b>Anchors</b>	12mm stainless steel anchors, providing 4 x M12 baselight fixing studs at ground level.
<b>Options</b>	Pre-galvanised cover plate to cap CAB-EX during installation and prior to fitting baselight.

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# GLOBAL *+plus+*™ IP67

## NEW GENERATION BOLLARD BASELIGHT

Inheriting the primary features from the time proven GLOBAL™ baselight, the GLOBAL *+plus+* offers unparalleled durability, performance and ease of maintenance coupled with a unique installation system which redefines the benchmark for future cost saving.

Utilising a separate gear housing and anchor system, the design (patent applied for) enables the vulnerable parts of the base above ground level to be easily replaced without disturbing the foundations or electrical connections. By removing the costs associated with re-excavation and connection, the GLOBAL *+plus+* will eliminate these recurring expensive risks.

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GLOBAL *+plus+* with CAB-EX™ ducted foundation



Freestanding GLOBAL *+plus+* with Stainless Steel Anchors

- Patented fast reinstatement design substantially reduces reinstatement costs.
- Highly robust upper cast aluminium construction using LM6-M marine grade cast alloy for excellent corrosion resistance.
- 2 - PL11 watt energy efficient light units with optional 24 volt AC for enhanced safety and reduced installation costs.
- Compact design for sites where space may preclude the use of larger baselights.
- Direct maintenance compatibility with GLOBAL baselight range components for reduced stock inventory.
- Stainless steel hinge and locking components for durability and minimal maintenance.
- Separate UV stabilised polycarbonate domed lens featuring supreme maintainable sealing detail to IP67.
- Optional instant gear tray power isolation facility on lens removal.
- Non-conductive super strength cut-out enclosure.
- Unique 4 position cable entry facility.
- Secure, easy access, robust hinged design.
- Version available for use in conjunction with CAB-EX™ duct system.

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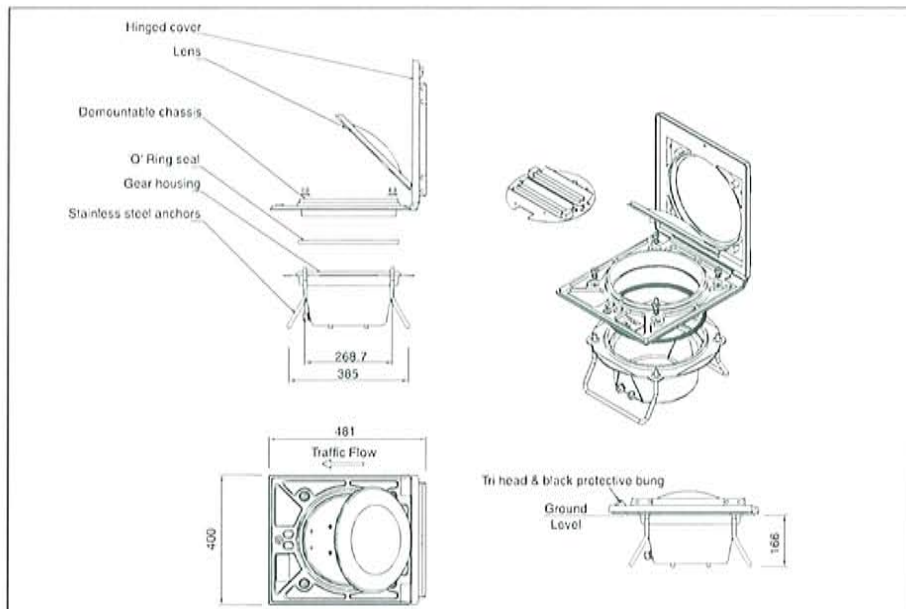
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# GLOBAL+plus+™ Bollard Base



## Specification

<b>Hinge frame and demountable chassis</b>	Die cast LM6-M marine grade alloy. Provides Industry standard bollard fixing points.
<b>Gear Enclosure</b>	Injection moulded UV stabilised glass coupled polypropylene. 2 no. IP68 nylon variable cable glands - cable range 8.00mm -17.00mm diameter - fitted as standard (One blanked).
<b>Hinge System</b>	7.5mm solid stainless steel (316) rod, running in cast-in stainless steel (304) tubular bushes.
<b>Lock</b>	M8 stainless steel (304) Tri-head penetrating cast-in stainless steel (A4) M8 threaded fixing on base casting.
<b>Lens</b>	Domed 5.00mm thick UV stabilised polycarbonate incorporating sturdy moulded double pole isolator actuator and anti-rotational lug. Lens incorporates UV stabilised, high performance, silicon rubber seal.
<b>Gear Tray</b>	Independently fused compact fluorescent circuits complete with power factor correction $\geq 0.9$ (lagging). All gear trays supplied with lamps. Available in the following configurations : 2 x PL11watt (preferred) 3 x PL11watt All components are fitted to a 0.5mm thick stainless steel (304) gear tray and have removable stainless steel fixings for easy replacement. Optional 24v AC version available.
<b>Reflectors</b>	0.5mm thick super polished Anacoil, parabolically formed for optimum light output.
<b>Fuseboard</b>	12.00mm thick non-hygroscopic plywood screw fixed to gear housing bottom.
<b>Anchor System</b>	Available with it's own 12mm stainless steel (316) anchor bars, or for use with the CAB-EX™ ducted mounting system.
<b>Options</b>	Photocell control Automatic Isolation switch 24v AC operation. CAB-EX™ ducted mounting system.

### Upper casting replacement sequence (Bollard body removed)

0



1. Open base and remove lens & gear tray

1



2. Remove retaining nuts



3. Remove casting

2



4. Gear housing remains in place

3 Minutes from start



5. Replace with new casting and tighten retaining nuts



6. Replace gear tray & lens and close cover.

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