

lighting

Discreet manufacturing

Producing lighting for architecture entails some complex design challenges. **Eve Oxberry** reports

Developing products to be discreet – invisible even – is many designers' idea of a nightmare. Not that design is an egotistical process (heaven forbid) – it's just that it's often a lot easier, and more satisfying, to make a design stand out rather than blend in. And yet a huge percentage of the products we use every day are designed to go unnoticed.

The phrase 'in the spotlight', of course, means to focus a lot of attention on a particular object. The spotlight itself, however, is one of those products that must somehow fade into the background – the source of the limelight, as it

were, must not steal it. Such is the philosophy of London-based lighting design consultant David Morgan Associates (DMA).

Working with lighting companies around the world to create new lighting products and systems, DMA provides a complete design and development service from initial research to project management, working with suppliers and subcontractors in Europe, the US, and Asia. The company's most recent project was a new range of architectural exterior floodlights for Danish lighting company Louis Poulsen.

The Surface Project (SP) range uses high-efficiency metal halide lamps, which produce strong, good quality light that doesn't vary in colour. DMA built an electronic control panel to ensure consistent colour, and even higher efficiency. "The lamp and controls give optimum performance, so the fixtures were all designed around this base," explains managing director David Morgan.

Metal halide lamps produce an immense amount of heat, which emanates from the back. To stop this heat destroying the ballast (the voltage control area) the two have to be kept separate. A plastic moulding ensures that the heat, as it rises through the back, follows the moulding sideways



rather than going directly back into the ballast enclosure.

Built-in vents also drain out any water through the fixture. Keeping water out is vital in an outdoor light and consequently a lot of time is spent developing watertight seals. All die casting has to be copper-free to prevent anodising and stainless steel has to be kept separate from aluminium to avoid possible electrolytic effects.

Another key decision was to ensure all fixings are hidden. While it is customary to have a U-shaped steel stirrup bolted to the side of such lamps, DMA spent a long time developing an internal

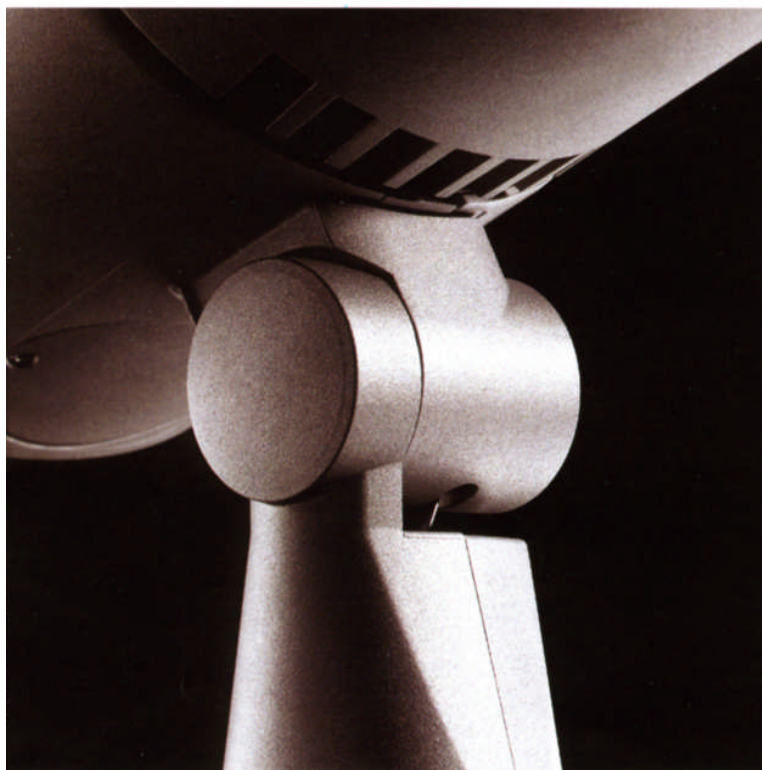
steel structure, covered and hidden with die cast covers. There is also only a single point of entry for the wiring. "Quite often with these sorts of fixtures you have joints, which tend to leak," explains Morgan.

"Again, it was quite a difficult thing to do but we only wanted a single incoming wiring point to protect against rain, as well as to improve the fixture's appearance."

Another key feature of the SP range is the crenel – a device used to create a very long or wide light by moving the position of the lamp. "Each ring of light is part of a continuous arc but a crenel cuts and squeezes them down," explains Morgan. "It's basically an image-forming lens. You move an arm and the lamp moves backwards and forwards: we've got an indicator to show the angle."

Not all lamps in the range feature a crenel and, while those with a fixed reflective point are slightly more efficient, users can't adjust them to ensure the desired lighting effect.

"Use of crenels is rare for exterior lights," continues Morgan. "It's difficult to do with arc lighting. With halogen it's relatively simple, but the arc tube in these lamps is quite large and that makes it much more difficult to



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get a clean, adjustable beam from it."

Users however, are demanding increasing flexibility from their outside lighting. This is due, suggests Morgan, to an onslaught of US-style independent lighting consultants. "These people are very powerful because they can make or break a manufacturer or a product," he says. "They have dictated the way in which we need to increase the benefits and distribution of light."

Nowadays, architects for the majority of prestige buildings will hire a lighting consultant, who will then search for very efficient, precisely controlled, adjustable lights so they can get exactly the effect they want. In addition, suggests Morgan, consultants are looking for an overall aesthetic that does not clash with the building. "It's quite a design challenge to come up with lights that are highly efficient and functional, but also attractive and acceptable for the architect to put on their building," he points out. "They have to be attractive but neutral. The lighting manufacturers, on the other hand, want something that fits in with their brand and can be differentiated from other lights."

Achieving such a balance may be a challenge but it suits the philosophy upon which Morgan built his business. "This 'neutral-differentiated' style fits in with what I think of as good product design anyway, which comes from Braun and Bauhaus," he says. "At college I met Dieter Rams [chief designer at Braun] in Germany. I agree wholeheartedly with his philosophy that good product design should be like an English butler: very quiet, discreet, great at the job, but blending into the background.

"That's always been how I've worked," he concludes, "and it works very well in the architectural lighting market." ■

