ON TEST

BeamZ BTM Series

James Simpson reviews the BTM Series, including the 50W Mini Fresnel, a 100W full-colour model, and a 250W fixed warm-white unit . . .

ABOUT THE EXPERT
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The brand BeamZ has only crossed my radar in the last few years, primarily due to its strong presence at trade events such as PLASA Show, where the company presents an enormous catalogue of products capable of lighting almost anything - from theatre to live music and beyond. Recently, I've taken a growing interest in manufacturers targeting emerging markets, where budgets are tight and purchasing decisions must be made with long-term value in mind.

So, when BeamZ asked if I would review its BTM Series of theatrical Fresnels, I was genuinely excited. Not only is this a product category I enjoy testing, but it was refreshing to see a company with plenty of eye-catching fixtures choosing instead to highlight a less glamorous, but far more essential, part of its range.

For this review, BeamZ kindly loaned three fixtures from the BTM range in different sizes and configurations, allowing me to evaluate how the range performs as a whole.

In total, the BTM Series comprises 14 different models, offering various combinations of LED engines, output levels, physical sizes, and internal features. It's a broad and well-considered lineup, designed to let users select a fixture that closely matches their specific needs.

Before diving into specifications, it's worth addressing the budget question upfront, as it provides important context. Had I not researched the pricing beforehand, I would have expected these fixtures to cost two or even three times more than they do. The build quality, attention to detail, and high-quality packaging immediately reminded me of the first time I opened an ETC Source Four or a Selecon Acclaim - both of which I used as direct comparisons during testing.

Dealer pricing naturally varies, so I won't quote exact figures here, but as a guide, the smallest units in the range start at around £250, rising to roughly £700 at the top end.

LIGHT OUTPUT

For testing, I selected three fixtures: the 50W Mini Fresnel, a 100W full-colour model, and a 250W fixed warm-white unit. On paper, these appeared to align well with the Selecon Acclaim fixtures already in my inventory. The 50W Mini roughly equated to a 650W compact Fresnel, the 100W sat somewhere below a 1.2kW Rama Fresnel, and the 250W suggested performance beyond that.

Describing the 250W fixture as 'above' the Rama isn't really accurate. Visually, it took four of my ageing Rama Fresnels to match the output of a single BTM 250W unit. Even accounting for lamp age, dirt, and general wear, the comparison made the tungsten units look distinctly underwhelming next to the crisp output of the warm-white LED. In practical terms, I'd consider the BTM250WW a viable replacement for an older 2kW Fresnel - and it's worth noting that a 300W white version exists for even greater output.

The BTM100FC

Facing page: The BTM100FC is ideal for small to mid-sized venues, and is easy to rig and power

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The 100W full-colour model can't be compared in quite the same way, as a white created through additive colour mixing will never match the output of a dedicated white emitter. What it offers instead is an extensive colour palette that compares directly to a tungsten Fresnel using filters. In most colours tested, it still outperformed the 1.2kW units with equivalent gels. In mixed white, it stood toe-to-toe with the Rama in open white, while drawing roughly 12 times less power.

I didn't expect the 50W Mini Fresnel to impress me. On paper, a tunable CCT source has little business competing with an Acclaim rated at over 13 times the wattage. Yet the result was much the same: compact, capable, and more than adequate as a replacement for legacy small Fresnels. If you're still running CCT Minuettes, Source Four Fresnels, or even P123s, swapping them for the BTK050Z-5 would present no practical issues.

FEATURES

Discussing features on what is, fundamentally, a conventional Fresnel can be challenging, but there are several design choices here that deserve attention.

First, the control wheel. This is genuinely one of my favourite user-interface features I've encountered on any fixture. Alongside the standard control panel, the wheel allows immediate manual access to the fixture regardless of DMX state. A simple nudge provides intensity control; pressing the wheel cycles through zoom, CCT, or other parameters depending on the fixture. Returning control to DMX is as simple as pressing a menu button, with a discreet indicator confirming signal status.

It's difficult to convey in writing just how intuitive this feels in practice. When working at height or leaning out over a perch, being able to locate the wheel by touch and take instant control without calling the desk is invaluable. You can adjust zoom, colour, or intensity almost instinctively, without needing to look at the display.

Motorised zoom is becoming increasingly common on professional Fresnels. While I've never felt a strong need to automate zoom during a performance, there are clear benefits to eliminating manual lens movement. On tungsten fixtures, rapid zoom changes often result in visible lamp flare; LEDs avoid this issue entirely. On the BTM Series, I found the motorised zoom particularly satisfying when paired with the control wheel - a small, precise adjustment with a fingertip, then leave it locked in place. The dual locking knobs may be overkill, but they certainly ensure the focus stays put.

BeamZ has also sensibly included both 3-pin and 5-pin DMX connections on most models, acknowledging that their market sits between professional venues and smaller spaces where DJ-style infrastructure still exists. It would have been easy to choose one or the other, but supporting both increases flexibility. The exception is the BTK Mini, which only accommodates 5-pin due to space constraints. The absence of RDM may be a drawback for some venues, though at this price point many users may not have the wider infrastructure to take advantage of it.

Power distribution is handled via True1 connectors on all but the BTK Mini, which uses Neutrik Powercon. This is forward-thinking, as many new installations are moving towards True1, though it may feel less convenient for schools and small venues still running 15A or 16A

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From top: The BTM250WW; the BTK050 Mini Fresnel

systems. That said, pass-through power and selectable plug options at purchase make this largely a non-issue. Even the most powerful unit draws around 0.5A, allowing extensive daisy-chaining without stressing supply circuits.

COLOUR

I deliberately tested three different LED configurations: a fixed warm white, a tunable CCT engine ranging from 2800K to 6000K, and a full-colour engine capable of extending from 2800K to 10,000K alongside full RGB colour mixing.

For general theatrical use, CCT engines offer a significant advantage. Most fixtures in this role would traditionally carry a colour-correction filter, immediately sacrificing output. Having these tones built in removes that compromise while retaining strong intensity. Fixed white sources deliver maximum output, but once you start correcting colour with filters, that advantage quickly diminishes. That said, the warm-white single emitter produces an excellent tone, particularly flattering on skin.

The real surprise was the full-colour engine. In 18-channel mode, it offers 16-bit control across six emitters: red, green, blue, amber, lime, and cyan. The inclusion of lime is increasingly common in high-end theatrical fixtures and demonstrates a clear intention to appeal to that market. The choice of cyan rather than white is unusual; a white emitter may have improved pastel rendering, but even so, the colour performance was impressive.

Using an ETC Eos console, I was able to generate a wide range of accurate colours and explore alternative colour paths using different emitter combinations. This level of control is more typical of fixtures at significantly higher price points, where extensive calibration and R&D underpin colour science. Whether this performance was driven more by the fixture or the console is difficult to say, but the end result met the expectations of a theatrical environment.

HONOURABLE MENTIONS

There are numerous additional features worth noting: selectable PWM frequencies, an external configuration app, wide zoom ranges reaching up to 8-60° on larger models, and adjustable yokes that allow offset positioning from the pivot point.

I initially expected the BTM Series to appeal primarily to schools, colleges, and smaller venues upgrading from ageing tungsten stock. That remains true, particularly when details like thinner yoke metal on the BTK Mini or the functional-but-basic LED display are considered. However, none of this undermines the fixture's core strengths. For professionals who prioritise light quality, reliability, and value, the BTM Series shouldn't be dismissed.

Personally, the 100W full-colour BTM100FC stands out. It strikes an ideal balance of size, versatility, and performance for small to mid-scale venues. With six-colour mixing, 16-bit control, and motorised zoom, it offers exceptional flexibility while remaining easy to rig and power. Its low heat output is an added bonus for both performers and technicians.

While I remain sceptical of claims that reducing stage lighting power alone will significantly impact our industry's carbon footprint, it's hard to ignore the practical benefits. Replacing nearly 3.6kW of tungsten with a single 250W BTM250WW has clear implications for power consumption, cooling costs, and performer comfort. In permanent installations or venues with long operating hours, those savings quickly accumulate.

WHAT'S NEXT

It's easy to become overwhelmed by the number of manufacturers targeting the emerging market. If, like me, this review marks your first real encounter with BeamZ, I hope it conveys why this range is worth attention. Small venues now have more choice than ever without sacrificing quality or exceeding budgets.

The theatrical sector has seen relatively little disruption since the introduction of the Source Four in the 1990s. It's encouraging to see products like the BTM Series helping to reintroduce innovation at accessible price points, giving those entering the industry a genuine opportunity to explore and learn the craft of lighting.

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