

GRID EXPANSION  
AND ENERGY  
TRANSITION



**TRANSFORMER  
BUSHINGS**  $\cong$  **ERA OF GRID  
EXPANSION  
AND ENERGY  
TRANSITION**



*A conversation with Nirav Patel - Executive Director, Yash Highvoltage Limited*

As power networks evolve worldwide, transformer component manufacturers are increasingly expected to balance engineering depth with global responsiveness. In this article, Nirav Patel sheds light on how Yash Highvoltage® - a well-known global player in the transformer bushings segment - is strengthening its portfolio, expanding international footprint, and aligning with long-term grid demands.

*Power infrastructure is evolving rapidly worldwide. How does this changing landscape influence expectations from transformer components such as bushings?*

Power networks today are expanding and modernizing simultaneously. Utilities and industries are integrating renewables, upgrading ageing assets, and operating under tighter performance and reliability expectations. In this environment, transformer components are expected not only to perform reliably at commissioning but to remain predictable over decades of service. Transformer bushings, in particular, must accommodate varying load profiles, thermal cycling, environmental exposure, and evolving maintenance philosophies without introducing uncertainty into transformer operation.

*How does Yash Highvoltage® approach this requirement for long-term predictability?*

Predictability is built through scale and continuity. With tens of thousands of transformer bushings operating across utilities, industries, and renewable installations, we have a clear understanding of how insulation systems behave over long service periods. That insight allows us to design products with predictable electrical behavior, stable ageing characteristics, and consistent performance across varying operating regimes. Our focus is to reduce uncertainty for asset owners by supplying transformer bushings that provide reliable performance, regardless of application, design standards, or geography.

*Can you describe the breadth of Yash Highvoltage's bushing portfolio and how it supports OEMs and diverse applications?*

We offer a comprehensive portfolio covering condenser graded OIP, RIP, and RIS bushings across various ratings for high voltage bushings up to 245 kV and high current up to 25000 A, with porcelain and composite housings selected based on environmental exposure, mechanical demands, pollution severity, and customer maintenance strategies. Our pioneering Retrofit Solutions segment specializes in design and manufacturing of interchangeable solutions for extending transformer service life. This allows us to support both new installations and asset upgrades across power generation and transmission.



Each product family is developed with close attention to electric field control, insulation stability, mechanical strength, and sealing integrity. These factors are critical for predictable performance, especially where bushings operate under combined electrical, thermal, and mechanical stress.

Our designs support oil to air, oil to oil, and air to air interface applications, ensuring compatibility with all major transformer makes. This allows customers to maintain consistency across fleets while still accommodating different design philosophies based on site demands.

*Yash Highvoltage® often emphasizes application driven engineering supply. What does that mean in practice?*

We do not view transformer bushings as catalogue items alone. Dimensional coordination, interface compatibility, and insulation design are treated as core engineering parameters. Our teams engage with customers deeply during specification and selection stages to align designs with system voltage, current rating, insulation levels, mechanical loading, and environmental exposure.

*How important are retrofit solutions in today's transformer landscape?*

Compliance with IEC, IEEE, EN, and other applicable standards is combined with practical considerations such as installation access, handling constraints, and long-term serviceability. This reduces downstream risks during commissioning and operation, particularly for customized transformer designs or retrofit projects.

Globally, a large portion of transformers continue to operate well beyond their original designed life. In many cases, replacing transformer bushings offers a practical and economical way to bring continuity without major intervention. Our retrofit solutions focus on dimensional matching, equal or improved electrical performance, and installation practicality.

We have supported many end users across geographies who faced challenges with discontinued transformer bushing designs and ageing bushings by providing ditto interchangeable engineered replacements. Importantly, this does not position us as a maintenance provider. It reinforces our role as a manufacturer supporting the full life cycle of transformer assets through engineered product solutions.



*Yash Highvoltage® has also undertaken a joint acquisition of Sukrut. How does this move align with your company's strategy and long-term portfolio vision?*

The acquisition of Sukrut, jointly with Quality Power, is a deliberate step in building a stronger, more integrated transformer component portfolio. While Yash Highvoltage® has strong in-house engineering capabilities of transformer bushings as a product, this collaboration allows us to deepen application coverage and accelerate scale by combining complementary strengths. Sukrut brings a well-established product range of accessories for power and distribution transformers, strong credibility with utilities and OEMs, and proven manufacturing capability. The alignment across engineering focus, customer base and long-term outlook made this a natural fit for us.

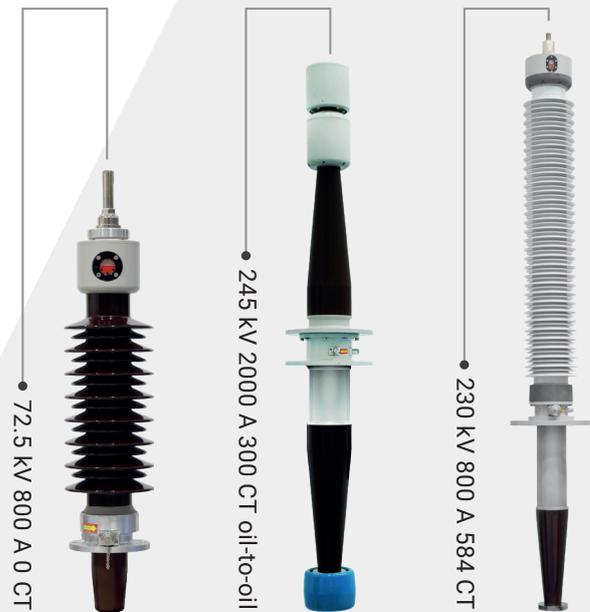
From an application driven perspective, the acquisition strengthens our ability to support customers who increasingly look for a comprehensive solution-oriented engagement with their suppliers. It expands our portfolio reach across wide transformer components with evolving grid requirements. This collaboration provides Sukrut with a clear pathway for expansion, enabling access to strategic partnerships and global market networks to extend beyond its current footprint. Overall, this move reinforces our long-term portfolio vision by expanding capability depth while remaining firmly anchored in transformer focused engineering and disciplined growth.

*Can you tell us about any of Yash Highvoltage's recent product developments?*

Product development remains closely aligned with evolving transformers and grid requirements. A recent milestone is the introduction of a new range of short tail transformer bushings designed specifically for European requirements. These have been engineered to support compact layouts and ease of integration, particularly where space constraints exist.

In parallel, we have expanded our oil-to-oil bushing range with the addition of 245 kV 2000 A 300 CT OIP bushing. This extends our oil-to-oil portfolio from 24 kV up to 245 kV, enabling broader coverage across transmission and sub transmission applications. After successful completion of all prescribed electrical and mechanical performance tests, these bushings are now part of regular supply programs.

To address the growing demand in the US market, Yash Highvoltage® has expanded its product development to fully comply with region-specific IEEE standards. These transformer bushings are designed and type-tested in accordance with IEEE C57.19.00, C57.19.01, and C57.19.04. The IEEE-compliant OIP condenser bushing portfolio currently spans ratings from 15 kV to 230 kV and has been successfully supplied to leading transformer OEMs, including projects for US utilities, with proven in-service operating performance.



**How is Yash Highvoltage® strengthening its international presence?**

As global sourcing and specification alignment increases, proximity to customers becomes critical. We have a well-established global agent network and have further strengthened international engagement through expanded export operations and the establishment of a sales and marketing office in the United States.

This allows closer coordination with utilities, EPCs, consultants, and OEMs across the Americas, enabling earlier technical discussions and faster responsiveness during project execution. It reflects our long-term commitment to international markets as a consistent global supplier.

**How has the transition to public ownership influenced the company?**

Our listing on the BSE SME in December 2024 was a natural progression in our growth journey. The company's continued focus on disciplined execution, operational stability, and transparent governance has underpinned this transition. Alongside this, we have maintained steady order inflows, expanded engagement across domestic and export markets, and delivered consistent operational performance.

IPO proceeds are being deployed toward localizing RIP/RIS core manufacturing capabilities in a new upcoming greenfield facility dedicated to RIP and RIS bushing technologies. We already have robust international reach for our OIP bushings and this new facility will help us penetrate the international market for RIP/RIS bushings. This facility is designed to improve consistency and support scalable growth while aligning with sustainable manufacturing practices.

**Looking ahead, how does Yash Highvoltage® see its role in future power networks?**

As power networks evolve toward higher voltages, greater renewable penetration, and longer asset life expectations, Yash Highvoltage® sees its role as a specialist partner enabling reliability in the critical component that is transformer bushing. By investing in advanced RIP and RIS technologies, high current solutions, and condition stable designs, we aim to support utilities and OEMs in building grids that are not only larger, but measurably more resilient, safer, and easier to maintain over decades of operation.

**Any closing thoughts for utilities and industry stakeholders?**

Whether supporting new infrastructure or extending the service life of installed assets, we remain committed to delivering well engineered transformer bushings and retrofit solutions aligned with evolving grid requirements and long-term operational expectations. With a comprehensive product range which will include international supply of RIP and RIS bushings in very near future, expanding global presence, and continued investment in advanced manufacturing, Yash Highvoltage® is positioned to support the next phase of power infrastructure development with reliability and consistency across the world.