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An Exclusive Interview

K. Nirmal Kumar
Managing Director
Roca Bathroom Products Pvt. Ltd.

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MY PAGE

Dear Readers

IPA wishes its readers, their families, and team members a very happy and successful 2026.

In 2026, IPA will be adding several new and interesting activities to its events, beyond the regular programmes conducted at the National and Chapter levels. As in previous years, together we will continue to move forward, redefining Water, Plumbing, and Sanitation standards, as all three are interconnected and directly linked to human health, hygiene, and environmental issues.

The IPT January issue focuses on your dream room—the Bathroom—which has evolved from a purely functional, personal space into a comfort zone that reflects your personality. It addresses comforts hygiene and body-care needs while also emphasizing sustainability and user needs.

This is an area where a simple touch of water can transform your mood, bringing freshness to your thoughts and a renewed energy.

The Centre of International Plumbing Practices (COIPP) at Goa is scheduled to open in 2026, adding a new dimension to the building industry. IPA shall keep you informed through periodic updates. The IPA Summit 2026 is scheduled for February 2026, followed by Plumbex India in April 2026—both to be held in Bengaluru. The Indian Plumbing Conference will take place in November 2026. Please watch out for the dates and programmes and ensure your active participation.

A heartfelt thank you for participating in and supporting the various IPA activities throughout 2025. Your involvement and support have helped keep the Water, Plumbing, and Sanitation industry high on the agenda for health, equity, and resilience.

We encourage you to introduce IPA to your friends and team members across the trade and industry, helping strengthen the organisation as we work together to promote and uphold good plumbing practices.

With best regards for the season and the year ahead!

Chandra Shekhar Gupta
IPA National Vice President & Founder Member
IPT Editorial Board Member

CONTENTS

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Your DREAM ROOM IN 2026

- Chandra Shekhar Gupta

The bathroom—Your most personal space—has transformed into a wellness retreat in modern homes. As lifestyles become more demanding and the need for mental and physical relaxation increases, bathroom design in 2026 focuses on comfort, functionality, and rejuvenation.

Wellness-driven features are now in trend. Larger walk-in showers are preferred over traditional bathtubs, offering a more spacious and spa-like experience. Steam systems, aromatherapy, chromotherapy, saunas, and built-in seating elevate daily routines into calming rituals. These elements turn the bathroom into a space for unwinding, not just washing.

Designing with aging in mind ensures long-term comfort for every family member. Safety and accessibility have also become key priorities. Bathrooms today demand thoughtful planning with grab bars, barrier-free entries, wider doorways, and outward-opening shower enclosures essential for easier access and safer emergency handling.

Technology continues to redefine bathrooms. Smart, AI-enabled fixtures and water-conserving fittings are becoming standard. Floor and Wall finishes are shifting toward large-format tiles to minimize grout lines and reduce dirt and bacteria buildup. Durable, low-maintenance surfaces in natural colours and textures remain highly preferred for their timeless appeal. The new water closets come with a built-in bidet for washing, hot air for drying, and automatic flushing. They also feature a built-in urine analysis sensor that provides deeper insights into a user's overall health. This information can be displayed on a nearby screen or sent as alerts to a pre-decided contact for further action.

Proper lighting and mood illumination, efficient ventilation, and energy-efficient gadgets complete the modern bathroom's design language. Electrical integration such as charging points inside cabinets, smart mirrors, and dedicated drawers for grooming tools and medication is now expected. Storage solutions are cleaner and more thoughtful, with integrated shelving designed for everyday accessibility.

A bathroom is more than a utility space—it is a personal room you begin and end your day with. In 2026, your dream bathroom is a harmonious blend of wellness, safety, technology, and designed to create a daily experience of comfort and calm.

Chandra Shekhar Gupta
National Vice President and Founder Member, IPA
Owner and Founder, Gem Bathroom Fittings

Chandra Shekhar Gupta is a Founder Member of the Indian Plumbing Association (IPA) and is currently serving as IPA's National Vice President. He has worked closely with President Emeritus S. G. Deolalikar and other stalwarts, contributing significantly to IPA's foundation and growth. His relentless dedication to the industry earned him IPA's Lifetime Achievement Award in 2012. He is also the Owner and Founder of Gem Bathroom Fittings and has played a pioneering role in transforming the Indian plumbing industry, became one of the leading bath fittings manufacturing companies in India along with becoming the first Indian company to establish foreign collaborations to manufacture world-class plumbing products, including water-efficient fixtures that met international standards.

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Nanobubble-Enabled Bathrooms:

Engineering Luxury, Hygiene and Water Efficiency

- Amit Kapur, Anant Kapur and Aman Kapur

1. Introduction

Bathrooms are the most intimate water-use spaces in a building. It is a place where end users judge comfort, cleanliness, and odour immediately, and where a large share of indoor water is consumed. Nanobubble technology support to enhance the bathing feeling by conditioning water with ultra-fine gas bubbles, that influence how water behaves at the skin, on ceramic and metal surfaces, and inside drains and greywater systems. This opens up possibilities for better cleaning, lower odour, improved microbial control and more efficient reuse all from within the bathroom envelope. Users typically describe nanobubble water as feeling softer and "silkier" on the skin, with soap and body wash rinsing off more quickly and leaving less tightness or dryness. For hair and scalp, they report faster shampoo/ conditioner rinse-out, a lighter, cleaner feel with less product buildup, and smoother, easier-to-comb hair. ***Overall, the shower experience is often perceived as more "spa-like" even at moderate flow rates.***

2. What are nanobubbles?

Nanobubbles are gas bubbles typically smaller than 200 nanometres in diameter. They are several thousand times smaller than the millimetre-scale bubbles seen in an aerator or jacuzzi. This extremely small size gives rise to three key properties that are relevant to bathroom applications:

1. **High specific surface area:** For the same gas volume, nanobubbles provide a far larger gas–water interface. This improves gas transfer and interaction with dissolved and suspended substances.
2. **Long residence time in water:** Conventional bubbles rise quickly and burst at the surface. Nanobubbles rise very slowly; they can stay dispersed for hours or even days, providing a lasting effect in storage tanks, pipes and drains.
3. **Surface charge and stability:** Nanobubbles typically carry a surface charge (zeta potential) that stabilizes them against coalescence. This charge also influences how they interact with suspended particles, biofilms and surfaces.

In practice, nanobubble generators draw in gas (such as air or oxygen) and disperse it into the water at very high number densities. The result is a clear-looking water, but with a very different internal "microstructure" and behaviour.

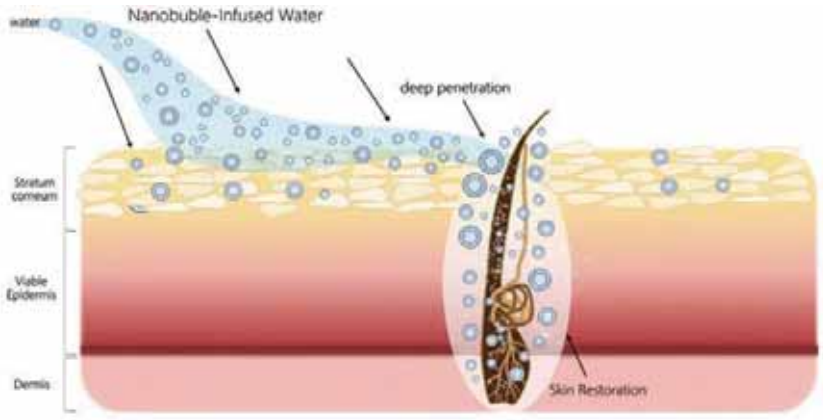
2. Taps and showers: Higher perceived comfort at lower flow

Users experience a bathroom primarily through the shower and basin. Any technology that claims to save water must not compromise the feel of water on the body or the effectiveness of rinsing. Nanobubble water plays a critical role here.

2.1 Interaction with skin and hair

Beyond hydraulic and treatment performance, nanobubble technology has a direct impact on how end users experience water on their skin and hair. Preliminary

user feedback from residential and hospitality applications consistently describes nanobubble-conditioned water as "softer" and "silkier" compared to conventional tap water at similar temperature and flow. During bathing, users report that body wash and soap lather spreads more evenly and rinses off more quickly, leaving the skin feeling clean without the tightness or dryness often associated with aggressive washing. This is plausibly linked to improved wetting and interfacial behaviour: the very high gas–water interfacial area created by nanobubbles can assist in loosening and transporting surface oils, sweat and surfactant films, thereby enhancing cleansing at a given water volume.



Similar perceptions are observed for hair and scalp care. When nanobubble water is used for shampooing, many users note that shampoo and conditioner appear to rinse out faster and more completely, with less need for prolonged flushing under the shower. Hair is often described as feeling lighter and less "coated" after drying, with improved combability and reduced tangling. From a physical perspective, finer droplet formation and improved penetration along the hair shaft and scalp may help detach product residues and redistribute surfactants more effectively, leading to reduced buildup over repeated wash cycles. Users also frequently remark that the overall shower experience feels more "spa-like" despite operation at moderate flow rates, indicating that nanobubble conditioning can partially decouple perceived luxury from high water consumption.

These observations are currently based on qualitative user feedback rather than controlled dermatological or trichological studies, and should therefore be interpreted as perceived comfort and sensory benefits, not as medical or therapeutic claims. Nevertheless, they are important from a design and adoption standpoint: if nanobubble systems can deliver a subjectively superior skin and hair experience while enabling lower flows and shorter rinse times, they directly support higher acceptance of water-efficient bathrooms in both residential and commercial buildings.

From a design perspective, this allows showers in the range of about **6–7 litres per minute** to achieve a comfort level closer to that of higher-flow showers, supporting the water-efficiency targets of green buildings.

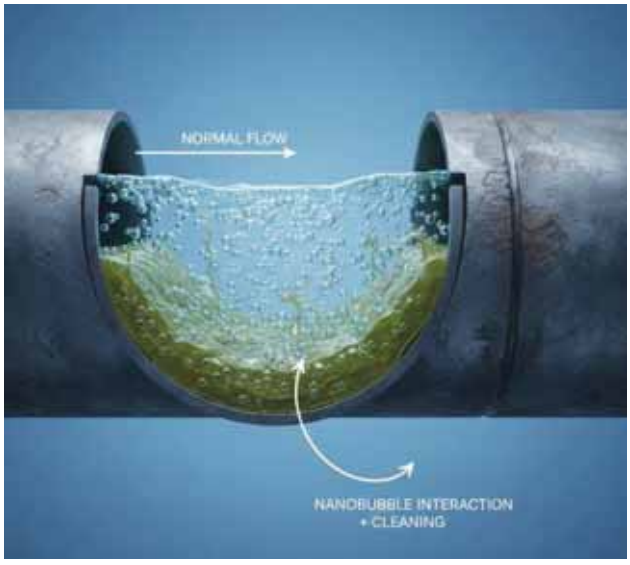
2.2 Synergy with low-flow fixtures

Aerators and low-flow showerheads shape the macro-scale spray pattern. However, nanobubbles modify the micro-scale behaviour of water as it contacts skin and surfaces. Together, these effects help maintain perceived luxury while reducing total litres per person. The user does not need to change behaviour; the quality of water itself is improved.

3. Hygiene and anti-microbial support in bathroom plumbing

Bathrooms have many zones where biofilms can form such as inside hoses, behind shower plates, in seldom-used outlets, and in small branch lines. While chemical disinfection and temperature control remain important, nanobubbles can support overall hygiene.

3.1 Biofilm and deposit management in pipes



Air or oxygen nanobubbles maintain elevated dissolved oxygen levels in sections of the system where water might otherwise stagnate. Create micro-scale shear and interfacial disturbances that can **weaken biofilm structure** when combined with normal flow and periodic cleaning. Alter the local environment in ways that are less favourable to strictly anaerobic organisms.

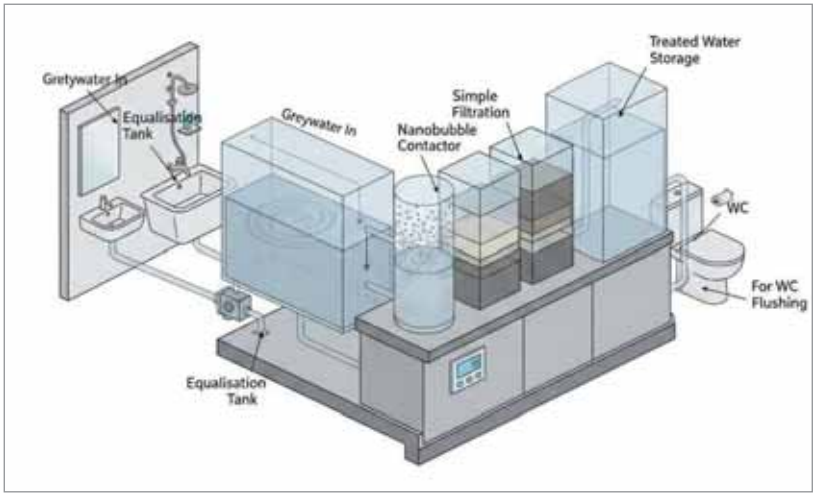
This is particularly useful in:

- Long horizontal runs with low velocities
- Branch lines serving guest rooms with seasonal or variable occupancy
- Sections close to outlets where mechanical cleaning is difficult

3.2 Visible surfaces and fittings

Nanobubble water can assist routine cleaning of tiles and grout, shower enclosures and glass, and metal and ceramic fittings

Improved wetting and micro-scale gas interfaces help detach films and residues, meaning a given cleaning protocol can achieve more with the same or less water. Over time, this can translate into reduced effort and better visual cleanliness.



4. Odour control in drains, traps and floor channels

Floor traps, shower channels and branch drains are common sources of odour complaints. These odours usually arise when organic matter accumulates and decomposes under low-oxygen conditions.

Nanobubble systems mitigate these by periodically introducing nanobubble-rich water into the **trap manifold** or selected branches. Maintaining higher dissolved oxygen levels in the water standing in traps and short horizontal sections. Supporting more aerobic pathways, which are typically less odorous than anaerobic breakdown.

Simple configurations include:

- Routing a small, controlled side-stream from a nanobubble module to the floor trap manifold.
- Programming short "drain conditioning" cycles during low occupancy periods (for example, night hours in commercial buildings).

Over time, buildings can see a clear reduction in odour incidents, especially in high-use public washrooms and locker areas.

5. Nanobubbles in bathroom-level greywater treatment and reuse

Greywater from showers and basins is relatively low in contamination compared to blackwater and is a logical source for reuse, especially for flushing and landscaping. However, compact greywater systems located near bathrooms must be robust, low-odour and easy to maintain.

Nanobubble technology strengthens these systems in several ways:

5.1 Clarification and filtration

Nanobubbles can act as micro-flotation aids, attaching to fine particles and helping them rise. This supports **clarification in small tanks**, reducing suspended solids before filtration. Filters downstream then see lighter duty, extending their service life.

5.2 Oxidation and stability

Nanobubbles assist in the oxidation of certain dissolved organics, improving colour and odour. Oxygen nanobubbles in storage tanks help maintain aerobic conditions, reducing the risk of sulphidic odours and unwanted colour changes.

This enables floor-level or zone-level greywater reuse systems with smaller footprints and more predictable performance. As more buildings aim to cut fresh water use and reduce discharge, such compact systems become important design elements.

6. Potential scope for nanobubble-enabled bathrooms

While nanobubble technology can be applied in many settings, certain building types stand to benefit particularly:

- **Premium residential and serviced apartments:** Higher expectations for shower quality and odour-free bathrooms align well with nanobubble water at taps and drains, while water savings improve operating costs and sustainability credentials.
- **Hotels and resorts:** Guest satisfaction is strongly influenced by the bathroom experience. Nanobubbles help maintain a "spa-like" feel with more efficient water use and reduced odour complaints.
- **Healthcare and wellness facilities:** Hygiene, odour control and patient comfort are critical. Nanobubble systems can support existing disinfection and cleaning protocols in washrooms, bathing areas and therapy spaces.

- **Grade-A commercial buildings and public facilities:** High-use washrooms benefit from better odour management and robust greywater reuse schemes, improving the building's environmental performance.

In all these cases, the core idea is the same: use nanobubbles to get more performance in comfort, hygiene and reuse from each litre of water.

7. Conclusions

The theme "The Bathroom – Luxury & Need" captures a tension that plumbing professionals face every day. Users want comfort and a sense of indulgence; cities demand conservation and better hygiene. Nanobubble technology helps align these objectives.

By conditioning bathroom water with ultra-fine gas bubbles, designers and installers can:

- Enhance the feeling and rinsing performance of showers and taps at lower flows
- Support biofilm and odour management in pipes, traps and drains
- Strengthen compact greywater treatment and reuse close to the bathroom
- Integrate all of this into familiar plumbing layouts with manageable levels of complexity

Nanobubble-enabled bathrooms therefore represent not just a new product, but a shift in how we engineer water inside the most personal spaces of a building making luxury and necessity work together instead of against each other.

Amit Kapur
Founder and Director, Everest Group
Chairman and Managing Director,
IOTA GROUP CO.

Amit Kapur, a seasoned entrepreneur with over 29 years of experience, stands as a beacon of innovation and leadership in the Indian industrial landscape. With a B.Tech in Mechanical Engineering and an MBA in Marketing & Finance, along with certification as a Quality Professional, his credentials underscore his multifaceted expertise. Amit has earned National Awards for Excellence in Research & Development in 2012 and 2013, solidifying his reputation as a Visionary Leader.

Anant Kapur
Director,
NICO Nanobubble India Co.

Anant is a visionary leader with expertise in finance, mergers and acquisitions (M&A), and product innovation. With a degree in Finance and Investment Analysis from SP Jain School of Global Management, Anant is equipped with a deep understanding of financial markets. His experience in cities like Singapore, Dubai, and Sydney has honed his ability to anticipate and adapt to shifting market dynamics.

Aman Kapur
Director,
NICO Nanobubbles India Co.

Aman is a dynamic and innovative leader with a strong background in mechanical and aerospace engineering. He graduated from the University of California, Irvine (UCI), where he not only excelled academically but also embraced opportunities for leadership, innovation, and community engagement.

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STUDENTS CORNER

Biodegradable Toilets in Indian Railways: A Sustainable Sanitation Solution

- Hari Bhatasana

Abstract: Serving millions of people every day, Indian Railways runs one of the biggest train networks in the world. Conventional train restrooms dumped human excrement straight onto railroad tracks, causing serious environmental contamination, health risks, and cruel working conditions for sanitation workers. Indian Railways and the Defense Research and Development Organization (DRDO) developed biodegradable bio-toilets based on anaerobic digestion technology to address these problems. The design, operation, social and environmental effects, operational difficulties, and potential future developments of biodegradable restrooms in Indian Railways are all examined in this study. The study demonstrates how bio-toilets have improved rail sanitation by fostering human dignity, sustainability, and cleanliness.

Keywords: Biodegradable toilets, Bio-digester, Indian Railways, Sustainable sanitation, DRDO, Waste management

1. Introduction

Because Indian Railways operates on such a large scale, sanitation has always been a major concern. The handling of human excrement became a major environmental and public health issue as millions of passengers traveled over thousands of kilometers of track every day. Untreated trash from conventional railway restrooms was dumped straight onto the tracks, causing unpleasant smells, deterioration of the railway's infrastructure, and the spread of illness. Sustainable sanitation methods underwent a radical change with the advent of biodegradable toilets.

2. Sanitation Challenges in Traditional Railway Toilets

Indian Railways had serious sanitation issues prior to the implementation of bio-toilets. Every day, massive amounts of untreated trash were dumped onto railroad tracks, damaging water and land. Additionally, this method resulted in track and fitting corrosion, which raised maintenance expenses. Additionally, waste had to be cleaned from tracks and stations by hand scavenging, which exposed workers to dangerous and dehumanizing working conditions.

3. Development of Bio-Toilets in Indian Railways

The Defence Research and Development Organization (DRDO) and Indian Railways worked together to create the bio-toilet technology. The technology makes use of specially cultivated anaerobic bacteria that can survive in a variety of climates. Human waste is broken down by these bacteria into innocuous byproducts including carbon dioxide, methane, and water. The program was in keeping with national objectives for sustainability and cleanliness.

4. Design and Components of Bio-Digester Toilets

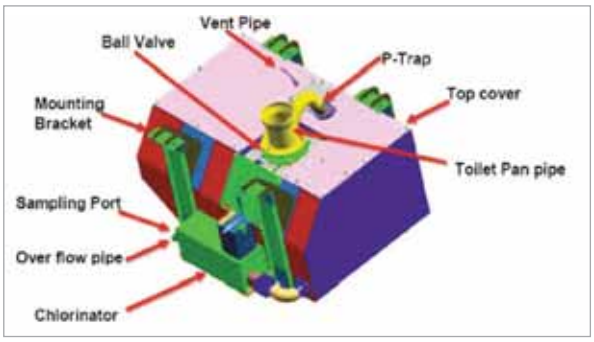
A bio-digester tank installed underneath the coach is connected to a stainless-steel toilet unit in a normal bio-toilet. A bacterial inoculum is put into each of the digester tank's several chambers. The system is built to endure the operational strains, temperature changes, and vibrations that occur during train travel.

5. Working Principle of Biodegradable Toilets

Anaerobic bacteria decompose organic matter in the absence of oxygen when human waste enters the bio-digester tank. Solid waste is broken down into liquid effluent and gases during the digestion process. While trace amounts of gasses are released into the atmosphere, the treated effluent is securely discharged after being disinfected with chlorine.

6. Environmental Impact

The use of bio-toilets has greatly decreased the pollution that railroad activities generate to the environment. The



elimination of open garbage disposal onto tracks has resulted in cleaner surroundings and less soil and water contamination. By regulating waste breakdown in a controlled environment, the system also contributes to the reduction of greenhouse gas emissions.

7. Social and Health Benefits

The elimination of manual scavenging in railroads is one of the most significant results of bio-toilets. Sanitation workers' safety and dignity have been restored as a result. Additionally, passenger comfort and public health standards have increased due to better onboard hygiene and fewer offensive odors.

8. Operational Challenges

Bio-toilets have certain operational difficulties in addition to their advantages. Blockages and disruption of bacterial activity can result from improper disposal of non-biodegradable materials including fabric, sanitary napkins, and plastic bottles. Smooth operation depends on routine maintenance, passenger awareness programs, and the usage of suction equipment at depots.

9. Technological Advancements: Vacuum Bio-Toilets

Indian Railways has installed hybrid vacuum bio-toilets in high-end trains to further increase efficiency. These systems rely on vacuum suction to move waste into the bio-digester tank and use very little water per flush. Better hygiene, water conservation, and lower maintenance needs are all provided by vacuum bio-toilets.

10. Future Scope and Expansion

In the upcoming years, Indian Railways hopes to install bio-toilets in every passenger carriage. Water efficiency, system durability, and bacterial strains are all being improved through ongoing study. For other nations looking for sustainable sanitation solutions in public transportation, India's bio-toilet success serves as a model.

11. Conclusion

Indian Railways' biodegradable restrooms are a significant accomplishment in the development of sustainable infrastructure. Bio-toilets have revolutionized railway sanitation standards by fusing scientific innovation with social responsibility. The method maintains human dignity, improves passenger pleasure, and safeguards the environment. The impact of this program will be further strengthened by further technical advancements and awareness campaigns.

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Hari Bhatasana
Civil Engineering Student
CEPT University, Ahmedabad

Hari Bhatasana is an undergraduate student of Civil Engineering from the 2023 batch, Faculty of Technology, CEPT University, Ahmedabad. He has successfully completed the 5th semester, including the Plumbing Design Studio, under the guidance of Dipen Mehta and Dipsha Shah. His academic interests include civil engineering design, construction practices, building services, and the practical application of engineering concepts in real-world projects.

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SCAN FOR MORE DETAILS

IPA Neerathon Bengaluru 2025 – Water Awareness Festival, Run for Water.

The IPA Neerathon Bengaluru 2025, held on Sunday, 12th October 2025, at St. Joseph's Indian High School, Bengaluru, organized by the Indian Plumbing Association (IPA) Bengaluru Chapter, this annual initiative once again underscored IPA's enduring mission of "Plumbing for a Better Living" was a resounding success — bringing together around 2000 citizens, professionals, and industry leaders to champion the cause of water conservation and sustainable plumbing.

Distinguished Presence and Leadership

The event was graced by the presence of several dignitaries from IPA's national and local leadership, including Gurmit Singh Arora, IPA National President; Chandra Shekhar Gupta, IPA National Vice President; Balkrishna Mehta, IPA Bengaluru Chapter Chairman; and Krishna Prasad, Chairman of IPA Neerathon Bengaluru 2025, BSA Narayan, former National Vice President.

Their guidance, vision, and enthusiasm played a vital role in making the event a memorable one, further strengthening the association's commitment to uniting professionals and the public under the banner of sustainable development.

Run Categories and Flag-offs

The IPA Neerathon Bengaluru 2025 featured three categories designed to engage participants of all ages and fitness levels — the 10K Run, 5K Run, and 3K Fun Run/Walk.

Each flag-off was led by a prominent industry leader, symbolizing the collaboration between the construction, real estate, and plumbing sectors for a common cause:

- 10K Run – Flagged off by Manjunath Prasad, COO, Brigade Group
- 5K Run – Flagged off by Jagadish Nangineni, Managing Director, Sobha Limited
- 3K Fun Run/Walk – Flagged off by Geetha Nair, Chief Design Officer, Sobha Limited

Notably, both Nangineni and Nair joined the participants in the 3K run.

Before the run, an "I Save Water" pledge was administered. This collective pledge set a deeply meaningful tone for the event, uniting all participants under the shared commitment to conserve water in their daily lives.

Sponsors and Partners

The success of IPA Neerathon Bengaluru 2025 was made possible through the generous support of sponsors and partners who share IPA's vision of a water-secure future:

- Medal Sponsor: Brigade Group
- T-Shirt Sponsors: NVR Valves, Birla Nu Pipes and Ashirvad by Aliaxis
- Bib Sponsors: Astral Pipes & Bathware and Honeywell
- Prize Sponsor: Schell
- Associate Partners: Curtains 'n' More, Kitec, Leader Valves Limited, Zoloto Valves, Sudhakar Pipes, Anantha Restaurant, Prince Pipes, Manipal Hospitals and Nirmala Enterprises,

Each sponsor's contribution underscored the collective responsibility of the plumbing and building industry in addressing the challenges of water scarcity and conservation.

A special highlight of this year's event was the remarkable support extended by M/s Sobha Limited. The company sponsored 350 employee registrations and went above and beyond by organizing medical and media assistance, including an ambulance with medical personnel and comprehensive photo and video coverage of the event. Various Companies like Brigade, SNN Builders, Egis, Ashirvad Pipes, Nirmala Enterprises supported the event by registering their Company employees for the run.

Event Experience and Grand Finale

The event was professionally managed by Radiant Sports, ensuring seamless coordination from registration to finish line and celebrations. All the IPA Bengaluru committee members gave their whole hearted support in organizing the event.

A Step Toward a Water-Secure Future

The IPA Neerathon Bengaluru 2025 once again proved that when communities unite for a shared purpose, meaningful change follows. By blending sport, social responsibility, and professional collaboration, the event amplified a powerful message:

"Run for Water, Run for Change."

Modern Drainage Technology for Buildings

Flat bathroom drains make renovation easier

- Raman Kapur and Michael Feigl

Drains are used to ensure safe drainage of a building. However, each location, such as in the bathroom or basement, also places specific technical demands on a drain. Only when these are met can the building structure be protected from damage caused by leaks.

In addition, it is important that not only does the drainage function properly, but that there are no unpleasant odors, that drains provide fire protection where necessary, and that they prevent pests from entering living spaces.

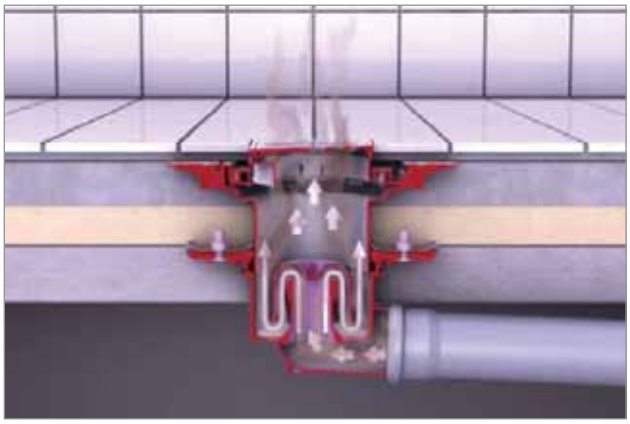
Flat bathroom drains make renovation easier

When renovating bathrooms, it is not uncommon for a drain to have to be installed where there is no suitable recess in the raw ceiling. In such cases, it is best to install the drain within the floor structure between the raw ceiling and the upper edge of the floor, rather than creating a costly new recess. In older buildings in particular, the floor structure is sometimes very low, which is why only the flattest bathroom drains with a total installation height of well under 10 cm are suitable for such renovation projects.

Bathroom outlet with a minimum installation depth of 63 mm Though flat as possible, an outlet should have a removable odor trap to protect against unpleasant odors from the sewer.

Permanent protection with alternative odor traps

The water seal can dry out or be sucked dry due to faulty ventilation of the pipe system. This can cause unpleasant odors. Alternative odor traps protect against odors in buildings—even in floor drains that are rarely exposed to water, such as in utility rooms, boiler rooms, or laundry rooms. This solution can be planned directly into the design or retrofitted at any time.



Water evaporates, odors, vermins and rodents can escape

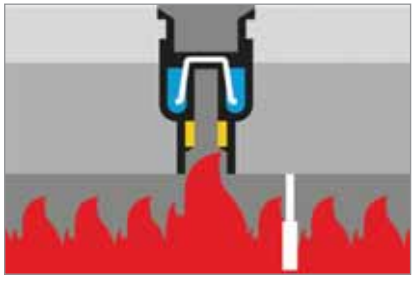
The flap opens when water accumulates, then closes again

Fire protection for floor drains

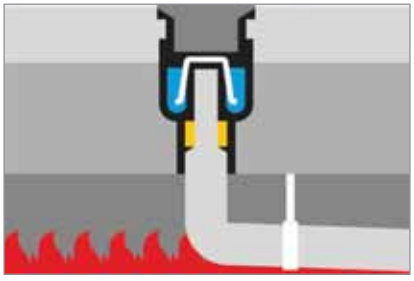
Floor drains are protected against fire on the one hand with smoke-tight odor traps and seals between the core hole and the drain body (using suitable filling material or a passage seal). On the other hand, special fire protection inserts are used. These block the path of flames, smoke, and toxic gases from one room to the next in the event of a fire.

How does a fire protection insert work?

A fire protection insert is inserted into the pipe connection on the underside of a floor drain. It consists of a heat-sensitive material that swells upon initial contact with fire, thereby closing the drain.



Pipe loosens due to extreme heat exposure



Fire protection insert swells as soon as it comes into contact with fire

Drain is closed, preventing further fire damage

The fire protection insert inside the drain ensures that the drain is sealed in the event of a fire, while the passage seal is an easy-to-install alternative to conventional filling materials for sealing the core hole. The integrated fire protection compound seals any leaks between the drain body and the core hole in the event of a fire.

1. Drainbody with fire-protection insert
2. Passage seal for core drillings including fire-protection

Standard-compliant composite sealing

Floor drains and shower channels in damp and wet rooms can be sealed economically and permanently with composite sealing. This involves applying a special sealant that can be brushed or troweled onto the screed, which remains flexible when hardened and therefore does not crack.

The best solution for this is drains and shower channels with integrated sealing collars.

Installed shower channel

Shower channel with integrated sealing collar

Wall drain

A wall drain is a modern alternative to a conventional floor drain – ideal for floor-level showers and barrier-free bathrooms. It is installed directly into the wall, leaving the floor level and free of trip hazards. This is particularly practical for barrier-free or age-appropriate bathrooms.

Thanks to various connection options (front, left or right side), there is no need to move the drain pipe away from the room, and underfloor heating can be installed without any problems.

Here, too, it is important to seal the drain with the integrated sleeve.

Complete basemant drainage

A lifting station installed underfloor takes over the complete basement drainage. The lifting station pumps the wastewater, black water or grey water or both, into the sewer located above – even after a pipe burst or flooding – thanks to the floor drain integrated into the cover.

1 Lifting station 2 Pressure pipe set 3 Extension section 4 Gasket set 5 Control unit

The lifting station can be almost invisible if it is installed in the floor slab. The integrated drain in the cover handles basement surface water even in the event of a pipe burst or flooding, keeping the basement dry.

It is also possible to install it in waterproof concrete ensures reliable protection against moisture damage. An extension section with central flange and elastomeric waterproofing membrane enable implementation also in deeper installation situations.

Raman Kapur
Joint MD of KESSEL INDIA &
MD, Nugreen Building Technologies

Raman Kapur is an entrepreneurial executive who is a Civil Engineer and post graduate from IIM Calcutta. He has extensive & varied experience of more than 31 years in Organizational Operations & Strategic planning within the SAARC Region with rare distinction of exploring new markets across SAARC region for expanding businesses from scratch and scaling them specially on a Pan India level.

Michael Feigl
Joint MD of KESSEL INDIA &
Head, Joint Ventures in Kessel Germany

Michael Feigl has more than 35 years of experience in establishing business in international markets. He previously worked as the Export Director at Kessel Germany (Worldwide) and is currently the Joint Managing Director of Kessel India, as well as the Head of Joint Ventures in Kessel Germany.

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CHAPTER NEWS

CHAPTER ELECTIONS

Surat Chapter

Elections for the Indian Plumbing Association (IPA) Surat Chapter were conducted at BM – 3, Shila, Samarth Park, Adajan, Surat on Thursday, 9th Oct 2025, in conjunction with the General Body Meeting. The election process was duly supervised by the Returning Officer.

Some of the members were elected unopposed, while others were elected through voting, as detailed in the table below. All the elected members were subsequently administered the oath of the office by the Returning Officer.

Returning Officer: Amish Mehta, Chairman- IPA Mumbai Chapter

Election Date: 9th Oct 2025

Sl No	Name of Candidate	Elected for the post	ELECTION MODE
1.	**Mehta Nimish**	Chairman	UNOPPOSED
2.	**Anil Kumar Venilal Sorathia**	Vice Chairman	UNOPPOSED
3.	**Zabir Mohmed Choksi**	Hon. Secretary	UNOPPOSED
4.	**Ahmed Amla**	Hon. Joint Secretary	UNOPPOSED
5.	**Bhatt Vijaykumar V**	Hon. Treasurer	UNOPPOSED
6.	**Ankit R Bhatt**	Exe. Committee Member	VOTING
7.	**Rajnikant Nanubhai Patel**	Exe. Committee Member	VOTING

L-R: Ahmad Amla Hon Jt. Secretary, Anil Sorathia Vice Chairman, Amish Mehta - Chairman Mumbai, Nimish Mehta - Chairman IPA Surat Chapter, Jabir Choksi - Hon. Secretary, Vijaykumar Bhatt – Treasurer – IPA Surat Chapter

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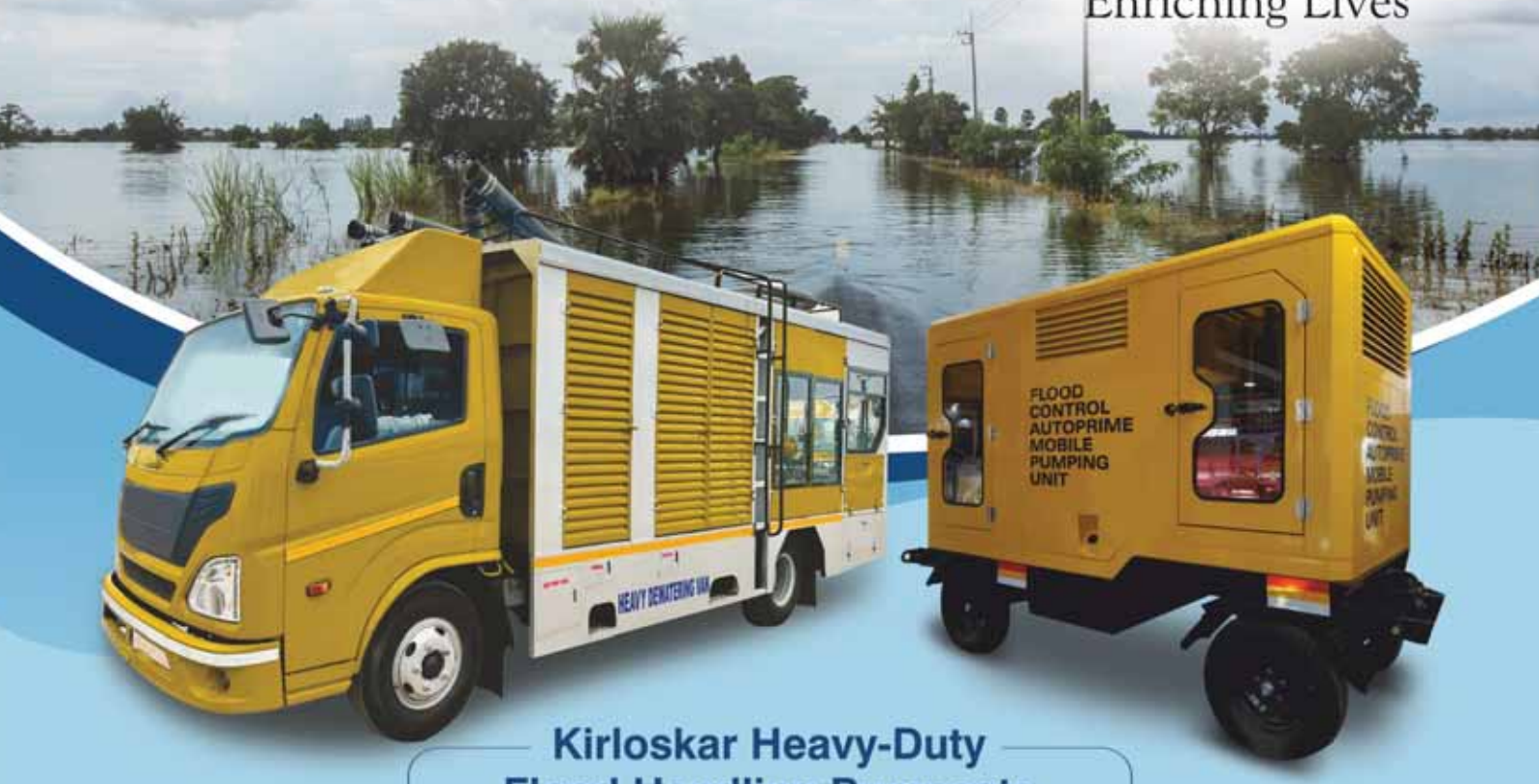

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Drainage Redefined:
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- Yashovardhan Agarwal

Water is not just a resource—it is the foundation of life, industry, and progress. Yet today, as water scarcity deepens across geographies, we find ourselves at a critical crossroads. The traditional "use-and-dispose" model of water management can no longer sustain our growing population and industrial needs. To build a truly water-secure future, we must rethink how we treat, reuse, and revalue every drop of water — including wastewater and storm water.

As cities face the dual challenge of water scarcity and urban flooding, the way we manage both wastewater and drainage needs a fundamental rethink. Wastewater treatment and storm water management can no longer be seen as separate silos — they are two ends of the same cycle that defines a water-secure, climate-resilient future.

Across the world, wastewater management is undergoing a quiet but profound transformation—one that blends technology, sustainability, and systems thinking. From energy-efficient treatment systems and AI-driven process control to decentralized reuse models and resource recovery, innovation is redefining wastewater not as waste, but as a resource waiting to be reclaimed.

The most significant shift in wastewater management is the transition from a linear to a circular economy. Instead of viewing wastewater and stormwater as an end-of-pipe challenge, the circular model reimagines it as the beginning of a new cycle—where every drop can be reclaimed, repurposed, and reintegrated.

Across urban India, this shift is already visible through modular sewage treatment plants (STPs), greywater recycling systems, and advanced membrane technologies. These innovations not only conserve freshwater but also recover energy and nutrients, transforming what was once a liability into a valuable asset.

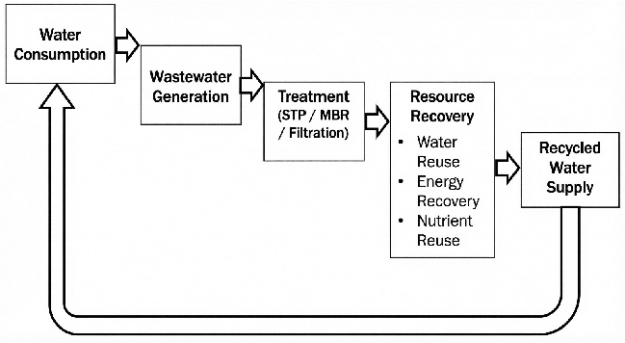
Innovation in wastewater management is increasingly driven by digital technologies. Artificial Intelligence (AI), the Internet of Things (IoT), and data analytics are enabling real-time monitoring and predictive maintenance of treatment systems. Smart sensors can instantly detect leaks or variations in water quality, while AI-driven algorithms optimize energy use and chemical dosing—ensuring that every litre is treated with precision and efficiency.

In the near future, such intelligent systems will redefine the very architecture of urban water management. For India's Smart Cities, these digital-first solutions are not a luxury—they are essential infrastructure. They promise

not just operational efficiency, but resilience, especially in megacities grappling with aging pipelines, rising demand, and the growing pressures of climate change.

One of the most practical and scalable innovations in wastewater treatment is decentralization. Smaller, modular plants integrated into residential complexes, industrial parks, and commercial developments can drastically reduce the burden on centralized municipal systems. These decentralized systems are cost-effective, space-efficient, and capable of recycling water at the point of use—whether for flushing, landscaping, or industrial reuse.

Modern drainage systems can adopt the same philosophy. By integrating storm water capture, filtration, and reuse within local treatment setups, cities can reduce flooding, recharge aquifers, and close the loop between drainage and reuse. When equipped with smart controls, these systems become self-regulating, transparent, and easy to maintain—ideal for the dense, data-driven cities of tomorrow.



India's diverse urban landscape requires solutions that are technologically advanced yet practical, durable, and easy to operate. In many Tier 2 and Tier 3 cities, water infrastructure is still developing. Here, the challenge is not just innovation, but accessibility—creating systems that are scalable, affordable, and suited to local conditions. As an industry, we must approach water and drainage management the way we view renewable energy: decentralized, democratized, and data-driven. By blending indigenous innovation with global technological partnerships, India can leapfrog traditional models and set new global benchmarks for sustainable water reuse.

Innovation in this space cannot thrive in isolation. It demands deep collaboration between government, industry, and communities. Public–private partnerships, incentives for water reuse, and recognition for circular water initiatives can accelerate adoption at scale.

For industry leaders like us, the responsibility lies in leading by example—by integrating recycling and drainage solutions within our own operations, investing in research and development, and demonstrating that sustainability and profitability are not opposing forces, but powerful allies.

At its core, water innovation is not only about technology—it is about mindset. We must move from treating wastewater and stormwater as problems to be managed, to viewing them as resources that can power progress. Every litre we reuse is a litre saved for the future. Every system we modernize reduces our dependence on depleting freshwater sources. This transformation will not happen overnight, but with intent, innovation, and collaboration, it is well within our reach. The future of water is circular, smart, and sustainable—and every step we take toward that future brings us closer to a truly water-positive world.

YASHOVARDHAN AGARWAL
MANAGING DIRECTOR – WELSPUN BAPL | DIRECTOR – SINTEX

Yashovardhan Agarwal is a dynamic business leader spearheading growth and transformation across the plastics, automotive, and water management sectors. He holds a Bachelor of Science in Managerial Economics from Bentley University and an MBA from the University of Notre Dame. He is an active member of ACMA, ASSOCHAM, YBLF, and the Harvard Clubs of Boston and India.

CHAPTER NEWS

CHAPTER ELECTIONS

Indore Chapter

Elections were held in IPA Indore Chapter for the 3 years term 2025 – 28 on Saturday, 4th Oct 2025 at Brilliant Convention Centre Indore with the General Body Meeting. All the candidates who filed nominations were elected unopposed and have been administered an oath of office by the Returning Officer.

Returning Officer: Apurva Shah, Chairman - IPA Ahmedabad Chapter

Election Date: 4th Oct 2025

Sl No	Name of Candidate	Elected for the post
1.	**Kapil Prakash Bairagi**	Chairman
2.	**Alkesh Pathak**	Vice Chairman
3.	**Prem Kumar Parmar**	Hon. Secretary
4.	**Saurabh Malviya**	Hon. Joint Secretary
5.	**Nitin Bagaddeo**	Hon. Treasurer
6.	**Shiv Kumar Soni**	Exe. Committee Member
7.	**Manish Agarwal**	Exe. Committee Member

L-R: Shiv Kumar Soni – EC Member, Nitin Kumar Bagaddeo – Hon. Treasurer, Saurabh Malviya – Hon. Joint Secretary, Prem Parmar – Hon. Secretary, Alkesh Pathak – Vice Chairman, Kapil Bairagi – Chairman, Manish Agrawal – EC Member, & Apurva Shah -Returning Officer, Chairman, IPA Ahmedabad

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This evolution signifies our expanded responsibility across the entire water cycle, strengthening IPA commitment to sanitation excellence, safe and best plumbing practices, and sustainable, resilient development for India's growing built-in space.

Launch of IPA – Villupuram Sub-Chapter

Launch of the First Sub-Chapter of the Indian Plumbing Association (IPA) on 10th November 2025 at Villupuram District by parent Chapter- IPA – Puducherry Chapter in the presence of the South Zone Director and the Chapter Chairman. Sincere thanks to K. Bhaskar, IPA Hon. Treasurer, Rahul Dhadphale, IPA South Zone Director, Jose A. Mathew, IPA NEC Member, Dr. Nagakarthigan, Chairman, IPA Puducherry Chapter and all participating members for their support.

Er. Madura Muthu, Chairperson of the Villupuram Sub-Chapter—the first sub-chapter of the Indian Plumbing Association provided valuable leadership and guidance throughout the initiative.

The program was graced by the distinguished presence of Er. A. Marilama Muralidharan, the first transgender civil engineer and entrepreneur, who served as the Chief Guest.

Distinguished Guests:

Rahul Dhadphale - IPA South Zone Director, **Dr. S.Virapan** - IPA Chairman, Chennai Chapter, **Jose A. Mathew** - NEC Member, **Dr. Nagakarthigan** - Chairman, IPA Puducherry Chapter, **T. Gandhi** - Secretary, IPA Puducherry Chapter and other esteemed members of both Chennai and Puducherry Chapter.

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Gurmit Singh Arora, IPA National President, and Chandra Shekhar Gupta, IPA National Vice President, along with Rohit Srivastava, Manager- Outreach, met V. K. Chaurasia, Joint Adviser (Public Health & Environmental Engineering – CPHEEO), along with Dr. Ramakant and Rohit Kakkar, Deputy Advisers (Public Health & Environmental Engineering), Ministry of Housing and Urban Affairs (MoHUA).

Gurmit Singh Arora, IPA National President, and Chandra Shekhar Gupta, IPA National Vice President, along with Rohit Srivastava, Manager- Outreach, met Parveen Jain, President, NAREDCO and CMD, Tulip Group.

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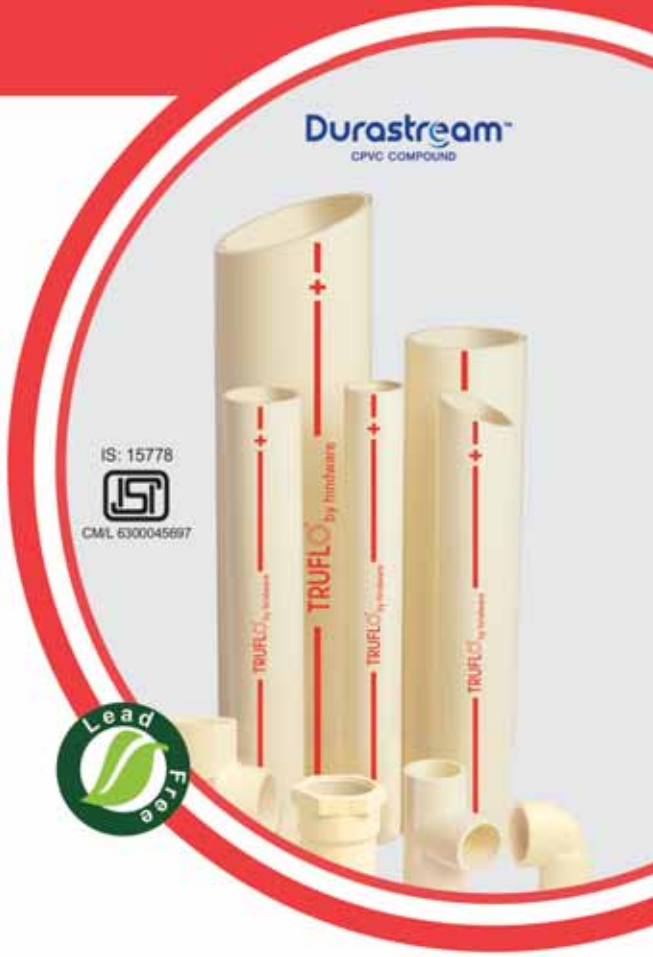

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IPA Trivandrum Chapter Hosts Technical Talk on "Plumbing Systems"

The IPA Trivandrum Chapter organized a technical talk on "Plumbing Systems" on 18th December 2025 at College of Architecture Trivandrum (CAT). The programme was presided by Er. K. Nandakumar, Chairman, IPA Trivandrum Chapter. Vice Chairman, Er. Thomas Job, Secretary, Er. Shajeer Basheer, EC Member, Er. Asger A.S, and Er. Dinu Krishnan, Convener, CAT Student Chapter were present.

The Technical Talk was handled by Er. Shajeer Basheer, Managing Director, ACE consultants and engineers, MEP consultant with 18 years of experience and Er. Asger A.S, Managing Director, Eurotech, Plumbing consultant with more than 20 years of experience. The talk was attended by 82 participants, including faculty members and students from College of Architecture Trivandrum and members of the IPA Trivandrum Chapter.

In their talk, the speakers detailed the architectural requirements for effective plumbing in various building categories. They talked about the plumbing system in star hotels in detail. The hydropneumatic systems, solar-assisted water heating systems, hot water circulation systems, sewage treatment plants and reusing recycled water for flushing systems, independent treatment of sullage and sewage systems, horizontal and vertical shaft piping in hotels, proper air exhausting techniques, sizing and spacing of fixtures in toilets, flow rate of fixtures and the importance of low flow rate fixtures, the advantage of aerator usage in taps, channel drains introduction, and the benefits of using silence pipe, etc., were covered. The pressure calculation, pump selection - HP calculation, setting of pressure, usage of PRV and pressure gauge, pump panel with VFD and without VFD, and automatic water level controller were also briefed.

The talk was followed by a lively and engaging Q&A session which was well received by the participants. The programme ended with vote of thanks by the Convener, CAT Student Chapter, Er. Dinu Krishnan.

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IPA Nagpur Chapter

Shankar Ghime, Chairman, IPA Nagpur Chapter along with other IPA team members.

FIRST RNG – IPT
(Read and Grow - Indian Plumbing Today)
SESSION.

The IPA Nagpur Chapter successfully conducted its first RNG–IPT (Read and Grow – Indian Plumbing Today) session, based on the November issue of the magazine, with the active participation of 16 members. The programme was designed as a knowledge-sharing platform, wherein members collectively read and reviewed selected articles from Indian Plumbing Today, covering a range of relevant technical and industry-focused topics. This was followed by an interactive and thought-provoking discussion that encouraged participants to share professional insights, practical experiences, and viewpoints on contemporary plumbing practices.

The session also included an engaging quiz which enhanced participant involvement and interaction.

IPA Surat Chapter

IPA Surat Chapter conducted a live demonstration on water conservation on 2nd December 2025 at SVP secondary School, Ichchanath, The session highlighted how high-quality water aerators can significantly reduce water consumption without compromising everyday utility. The session was attended by Er Nimish Mehta, Er Anil Sorathia, Er Zabir Choksi, Er Rajnikant Patel, who actively supported and guided the initiative.

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PART 1

- Chandrashekhar Hariharan

As another year turns, we look back at reflections we have shared with you, dear reader, over the last two years. There are times when the discussion has engaged conceptual frameworks, and the more rarefied air of policy formulation. This is indeed necessary in a Journal that is for discerning professionals who understand the challenges of water. However, when I rapid-scanned some of the previous columns in this space at IPT, I realized it would make sense to have some specific cases of such net zero water solutioning offered, for an MEP Designer to consider emulating them in the multiple professional contexts that you serve across different geographies, if you are such a designer. The window to the water world of industry I secure from the opportunity to mentor a clutch of water startups offers rich insights on the challenges that industry faces.

In recent months at most meetings this writer is invited to engage in, the agenda has revolved mostly around net zero solutions, AI-led Sustainability solutions, or ESG and improving of bottom lines for companies that are by mandate or voluntarily compliant. I see speakers—particularly architects—focus on new buildings that are yet to come on the Indian urban horizon. I am always hastening to point out that India's building stock today exceeds 200 billion Sft, and out of this, about 80 billion Sft account for commercial buildings, with the rest being residential. I urge them to look at efficiencies in the broad segments of urban water demand of residential and commercial segments [8%], industrial water demand [12%] and cultivation water demand [80%]. The next challenge into the future is the enormous water that AI-based Data Centres will consume.

It is obvious to anyone that if we brought focus on agriculture, watershed development and management, and 'Factor 4 Farming' [where you halve cultivation water-use and ideally double the tonnage of produce per acre], it will bring a dramatic drop in agricultural water demand, and perhaps help to ease the deficits of water supply for residential, commercial or industrial water needs across Urban India. Having said that, I will confine myself in today's discussion to examples within the urban setting with 3 Case Study narratives I offer.

Most often it helps to build a simple story line. Narrative is so much easier to read, than a set of impersonal conceptual statements. Here are three 'stories' of how and what you can do when you have a large water bill confronting your company or institution.

The first Case Study is a Hospital which paid a bill of ₹2.4 Cr last year [2023-24] on water purchase alone—120 million litres a year at 20 paise per litre. All of the water was, and is being, bought from the municipal grid. And the story unfolds on how this was transformed with a bunch of solutions that added up to making the hospital into a Net Zero Water campus. Additionally, the hospital spends about ₹40 lac on treating the waste water discharge in compliance with the laws of the State PCB. With about half of this 28-acre campus being open to sky, and after accounting for roads and other

hard-surface areas, the soft scape is no more than 6-7 acres. Usage of the treated wastewater in full is therefore a challenge, for landscape water does not claim any more than 40 per cent.

The second Case Study is a story of a secondary steel manufacturing company, which required, and continues to demand, about half-a-million litres of water every day, and of how a set of water professionals have value-engineered systems and solutions to bring this annual consumption down by 70% with a massive reduction in financial operating cost, too, from ₹1.4 Cr to under ₹50 lac.

The third is an account of a Government School, which went about solving its challenge of requiring about 1.5 million litres a year, with the simple expedient of some demand-side solutions and other supply-side solutions that were designed and installed at this campus of less than a half-acre.

And so we go now to the Case studies in brief.

Case Study: From Water-Stressed to Water-Positive—A Bengaluru Hospital's Blueprint for Resilience

This is a well-known hospital in the city's heart in Bangalore, over 140 years old. A CSR support was raised for bringing in a slew of water solutions to address the big cost of water purchase… With no data on purchase, barring the bills from the water supply board, the consumption was seen to be averaging at 330,000 litres a day. The water cost was posing a serious operational and financial crisis. The hospital campus has a resident population of about 500, and daily OPD patients of about 700, with patients in wards of this 550-bed charitable hospital serving the underprivileged. Every rupee saved means precious money available for the poor and the needy patients.

The first action was to install a system to measure, monitor and manage data on a real time basis. Next came an elaborate plan to reshape the distribution plumbing lines to harvest and upgrade rainwater to drinking grade water. The next step was to treat-and-use wastewater, followed by an overhaul of every faucet and shower in the wards, public toilets, at a college within the campus, and at two hostels.

At over **300,000 litres of water daily**, the hospital was spending nearly **₹2.4 Crore annually** on water purchases with an additional cost of about ₹40 lac on treating Used Water with an STP operational, in compliance with state PCB Norms. The team of water professionals from two organisations set out to create a strategic plan for transitioning the 28-acre campus into a **Net Water-Positive** entity and thus to eliminate this dependence on external water—a model where more water is replenished than consumed. The entire plan is setting a bold standard for healthcare sustainability across Bangalore as a pioneering effort.

This transformation was initiated through a multi-phased collaborative effort. The first critical phase focused on **digital efficiency**. Leveraging **AI and IoT-powered sensors** and real-time dashboards, the hospital digitized its entire water consumption profile, allowing for granular monitoring and immediate identification of leaks, overflows, and usage anomalies. Within the initial phase of 4 months, this data-driven governance resulted in a **20% drop in daily water demand**, translating to an annual operational saving of about **20 million litres**, or **₹40 lacs** of purchase cost, money that the hospital could redirect usefully to patient care.

The core innovation driving this demand reduction was an integrated system leveraging **sensor fusion, AI, and a specialized GenAI tool**. Unlike traditional metering, this technology now in place at the hospital provides **prescriptive analytics**, shifting water management from a reactive, labour-intensive process to a proactive, automated one. For instance, the system doesn't just report total consumption; it detects a specific "leak in the RO return line" and instantly recommends a precise, actionable solution like a "valve inspection". This continuous, granular data flow ensures that water-saving measures are sustained and that potential wastage is addressed within hours, not weeks.

The **second phase** involved a major infrastructure overhaul: **Rainwater Harvesting (RWH)** of 19 buildings on the campus and about 20,000 sq meters or rooftop areas these buildings offered. A comprehensive **phased plan** was designed to capture **20 million litres** of water [or a recurring annual saving of ₹40 lakhs] with a redesign of the **storage, distribution of lines and the disposal of excess rainwater through a network of percolation pits and open wells—all of it was designed** specifically and crafted to ensure **zero rainwater runoff**. Being a hospital, extra measures were taken to treat the rainwater with a full-spectrum Water Treatment Plant along with UV Filtration and Automated Level Controls for easy management of water flow during times of heavy rains.



There are regular, periodic lab test reports to confirm that water quality parameters are within permissible limits.

The third phase was a clearly defined initiative to introduce dual-plumbing with a series of group meetings and discussions with the nurses, attendants, and doctors on the safety of using treated 'used water'; explaining to them what the world has done in this area of upgrading to quality water; how such treated water has proven to be safe for use in other facilities in the city that they could visit, and by showing them physically what was being installed in the hospital to ensure that the treated waste water had no odour or colour, or organic contamination. At a very small one-time cost, up to 40 million litres of Used Water was put back into a loop with all the water 'returning' to the STP for further tertiary treatment and reuse. This means a chunk of savings, of a hefty ₹80 lac, while 'releasing' the Hospital from its dependence on external water supply and the monthly payout of costs that it could not afford.

The fourth phase ensured a complete rehaul of all the faucets and fixtures at the hospital, and that brought in an additional 15 million litres of a drop in demand for freshwater [[and a ₹30 lac recurring annual savings].

Between these 4 sets of solutions, a staggering 100 million litres a year would not be required to be purchased by the hospital. That is about ₹2 crore of the current water bill of ₹2.4 Crore. There were a few more interventions on husbanding surface water and channelling them to well-located network of percolation pits, infiltration trenches, and traditional open or dug wells.

St Martha's, today, serves as a high-impact, replicable **demonstration model** for institutional water stewardship across Bangalore, starved as the city is for fresh water, with only 40% of the city's daily demand [or about 100 crore or one billion litres] met by the Municipal Water Supply System. The rest—1.5 billion or 150 crore litres—is groundwater that city water-users indiscriminately draw, for they do not have a choice.

Chandrashekar Hariharan

The writer is founder-trustee at AltTech Foundation and Prem Jain Memorial Trust, and a Senior Fellow at CII IGBC. As a green building pioneer and a Net Zero exponent, he currently mentors startups to harvest over 5 billion litres of low-carbon, low-TDS water every year for a variety of commercial and industrial projects. He can be reached at Hariharan@AltTech.Foundation

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mastering **water**

Good, Bad & Ugly

Water, Sanitation & Plumbing Installation in the Surroundings

All of us visit various buildings for both professional and personal reasons. As plumbing professionals, it is only natural that our eyes and minds are drawn to the plumbing installations—both visible and those we imagine hidden behind walls and ceilings.

A thought that often comes to mind is: *"Is this as per code?"*

At times, we admire the ingenuity of the designer and the skill of the installer; at other times, we are left wondering, *"How could this have been done?"*

A few years ago, **Indian Plumbing Today (IPT)** regularly featured a popular series titled **"Good, Bad and Ugly"**, which highlighted plumbing installations from the field. IPT now wishes to revive this series and seeks your support and creativity to make it impactful once again.

With the advantage of high-quality cameras available on mobile phones today, capturing such installations has become easier than ever. You are invited to click photographs of plumbing **product installations** and share them with us. These images will be featured in IPT under suitable headings.

Please note:

- Only **product installation photographs** are required.
- The **name of the building, installer, or designer should not be mentioned.**
- This initiative is purely educational in nature and aims to promote good installation practices for the overall betterment of the building fraternity. Selected photographs will be appropriately grouped and published, subject to the approval of the **IPT Editorial Board,** and contributors will be **suitably rewarded.**
- We look forward to your enthusiastic participation in making this initiative a success. Kindly submit your entries to **ipt.ipahq@indianplumbing.org**

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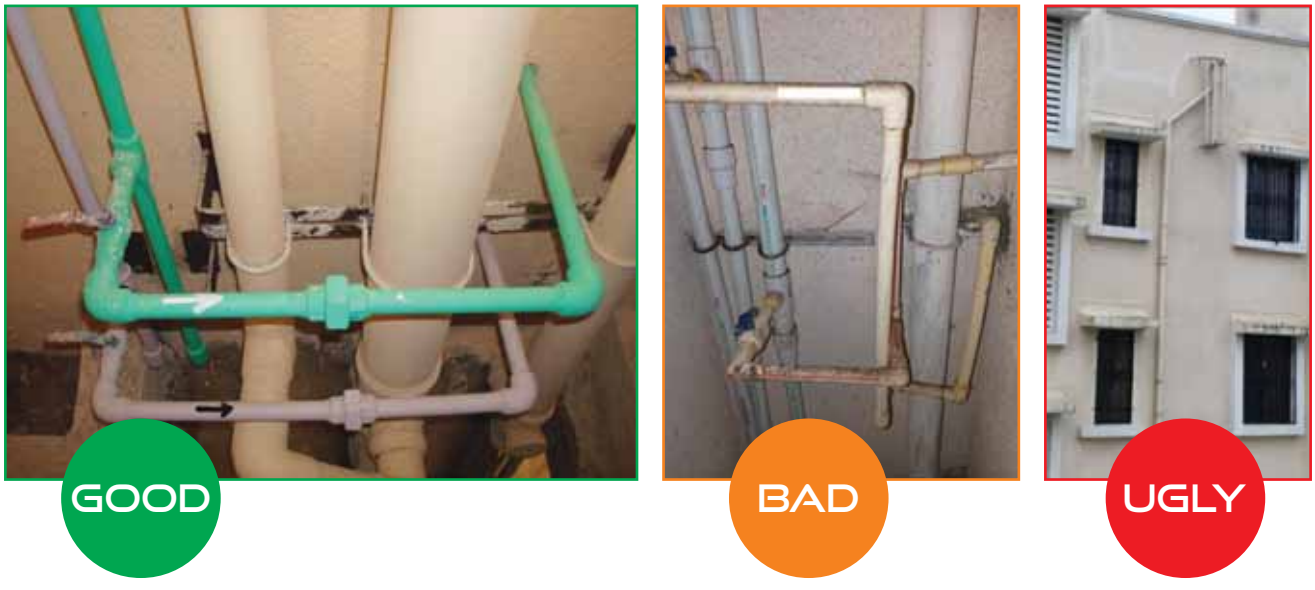

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Member's Recognition

The Quality Achievements Award 2025
WINNER

IPT Editorial Board extends heartfelt congratulations to KiTEC Industries (India) Pvt. Ltd. on being conferred with the prestigious ESQR International Quality Award 2025 by the European Society for Quality & Research (ESQR) at an international ceremony held in Dubai. This global recognition reflects KiTEC's unwavering commitment to quality excellence, innovation, and world-class manufacturing standards. It further reinforces the company's strong international reputation and its customer-centric approach, positioning KiTEC as a benchmark for quality-driven manufacturing in the global plumbing and piping industry.

IPT Editorial Board extends best wishes to Sh. Sudershan Sharma, Managing Director and Sh. Rishi Raj Sharma, CEO, Vijay Cycle and Steel Industries for their associate company - Proxima Steel Forge Pvt. Ltd. on being honoured as Top Exporter in India with Highest Export Award by EEPC India.This honour reflects Proxima Steel Forge Pvt. Ltd.'s consistent focus on quality manufacturing, customer satisfaction, and operational excellence. It further affirms the company's robust global standing and its significant role in strengthening India's export performance across international markets.

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Giving Life to WATER

Plumbex 2026 will address and showcase ways and means for Giving life to Water which is both a technical challenge and a collective responsibility. Through engineering innovation, perfect installations and collaborative stewardship, we can begin to reverse decades of neglect WATER into a forge sustainable system that would sustain both People and Planet.

What "Giving Life to Water" Means in Practice

At its core, giving life to water means a transition:

- **From pollution and unmanaged disposal to purification, reuse, and recycling:** Expand sewage and effluent treatment infrastructure to reduce pollutants entering natural water bodies, while increasing wastewater treatment capacity for reuse in industrial applications and groundwater recharge—thereby minimizing freshwater extraction and promoting a circular water economy.
- **From degradation to restoration:** Rejuvenate lakes, rivers and wetlands through scientific monitoring and engineering interventions coordinated by government agencies under regulatory frameworks.
- **From runoff to resource through rainwater harvesting:** Institutionalize rainwater harvesting across buildings, campuses, and urban infrastructure to capture and store rainwater, enhance groundwater recharge, reduce stormwater runoff, and strengthen local water security, making rainfall a planned and reliable component of sustainable water management.
- **From isolated actions to integrated planning:** Align urban planning, community engagement, and government policy to treat water as an ecological and societal asset.
- **From low-flow fixtures to water-sensitive design:** Encourage efficient water use at the source while embedding conservation into building, urban infrastructure, and everyday consumption habits.

Conclusion: Reimagining Water Systems Together

Water's journey, from rainfall to river flow, from groundwater recharge to city tap, illustrates a delicate balance disturbed by urbanisation and pollution. But as sewage treatment efforts gain momentum, there is hope for reclaiming water's life-giving roles.

Visit Plumbex 2026 and ensure GIVING LIFE TO WATER in your all built up spaces.

Aditi Mishra
Executive - Content Writer & IPT Editorial
Indian Plumbing Association

Aditi Mishra is a Content Writer at the Indian Plumbing Association and a member of the Indian Plumbing Today (IPT) editorial team. She plays a key role in managing and coordinating editorial content, showcasing strong publishing, editing, and content curation skills. Blending creativity with strategy, she delivers impactful content across print and digital platforms. With a background in English (Hons) and an MBA in Marketing, she brings more than four years of professional experience spanning content creation, editing, and communication strategies. She can be reached at ipt.ipahq@indianplumbing.org

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An Exclusive Conversation with

K. Nirmal Kumar

An interview by
Team IPT

K. Nirmal Kumar, Managing Director, Roca Bathroom Products Pvt. Ltd.

IPT: As the MD of Roca India Group, your brand Roca - Parryware has witnessed the growth of the bathroom and sanitaryware industry in India since the middle of 19th Century. With India's luxury real estate segment expanding rapidly, how do you see this sector evolving in the next decade to meet both aspirational lifestyles and essential infrastructure needs?

K. Nirmal Kumar: India's bathroom and sanitaryware industry has moved far beyond basic functionality to become a reflection of lifestyle, wellness, and conscious living. Over the next decade, this evolution will accelerate, driven by premiumization, smart technologies, and sustainability becoming non-negotiable.

As luxury real estate grows, bathrooms will turn into experiential spaces—focused on design, personalization, and advanced hygiene solutions. At the same time, water efficiency and environmentally responsible products will shift from being value-adds to absolute necessities.

Equally important is the expansion of essential infrastructure across Tier 2 and Tier 3 cities, affordable housing, and public sanitation. The real opportunity for the industry lies in balancing aspirational design with scalable, sustainable solutions that serve India's diverse needs.

At Roca Bathroom Product Private Limited, we see our role as shaping this dual journey—bringing global design excellence to India while supporting the country's long-term infrastructure and sustainability goals

IPT: IPA has been working to build quality and performance in the sanitaryware sector and bathroom fittings segment. From your perspective, what kind of knowledge-sharing is most crucial for India's plumbing workforce today?

K. Nirmal Kumar: The most critical knowledge-sharing need for India's plumbing workforce today is technical upskilling—particularly around modern sanitaryware products, water-efficiency, sustainability practices, and standardized quality and safety norms.

As products become more advanced, plumbers must be equipped to install and maintain them correctly while ensuring minimal water wastage. This makes structured training and certification essential.

IPA's focus on professional training plays a vital role in building a skilled, reliable, and future-ready plumbing workforce—one that supports both India's infrastructure growth and its sustainability objectives.

IPT: With water stress being a pressing challenge, how do you see industry balancing consumer aspirations for luxury with the need for conservation?

K. Nirmal Kumar: Water stress is a serious and growing reality and addressing it cannot come at the cost of consumer comfort or aesthetics. The solution lies in innovation-led efficiency—creating premium bathroom products that significantly reduce water usage while delivering equal or superior performance.

Technologies such as low-flow and aerated fittings,

smart flushing systems, and intelligent controls make it possible for consumers to enjoy luxurious bathroom experiences in a responsible way.

Equally important are strong standards, greater consumer awareness, and responsible design practices. Together, they ensure that sustainability becomes an integral part of luxury—embedded by design, not treated as an afterthought.

IPT: How can industry leaders like Roca and associations like IPA collaborate more strongly to promote sustainable water practices nationwide?

K. Nirmal Kumar: Stronger collaboration can come through defining standards, training, and awareness initiatives. Roca Bathroom Products Private Limited can bring global best practices and innovation, while IPA can help scale them through certification programs, plumber training, and compliance guidelines.

Together, industry and associations can drive adoption of water-efficient products, correct installation practices, and consumer awareness, creating measurable impact on sustainable water use nationwide.

IPT: Smart homes are becoming mainstream in luxury housing. How is Roca integrating smart technologies in its bathroom and wellness solutions and products, to meet these emerging demands?

K. Nirmal Kumar: As smart homes become mainstream in luxury housing, Roca is integrating intelligent, user-centric technologies into its bathroom and wellness solutions to enhance comfort, hygiene, and efficiency. This includes smart toilets, sensor-based faucets, digitally controlled showers, and touchless systems that improve convenience while optimizing water and energy use.

Roca's cutting-edge and sophisticated smart toilet provides maximum comfort and hygiene through advanced digitalized and personalised functions.

IPT: Finally, as someone steering a brand that is synonymous with innovation and trust, what message would you like to give to the next generation of industry professionals and IPA members about the future of plumbing and sanitation in India?

K. Nirmal Kumar: For the next generation of industry professionals and IPA members, the message is clear: plumbing must be seen not just as a trade, but as a profession that has a direct impact on public health, sustainability, and overall quality of life.

Continuous learning, adoption of new technologies, and pride in doing things the right way will be essential. Those who combine technical excellence with a strong sense of purpose will play a defining role in building a more hygienic, water-efficient, and sustainable India.

IPT: Which have been your best-selling products and why?

K. Nirmal Kumar: This year, our best-selling products have been Thermostatic Diverters and Smart Toilets, reflecting a clear shift in consumer preferences toward comfort, safety, and intelligent design.

Thermostatic Diverters have gained strong traction because they offer precise temperature control, enhanced safety, and a seamless showering experience—meeting the growing demand for convenience and premium comfort.

Smart Toilets, meanwhile, are seeing high demand due to their superior hygiene, water efficiency, and advanced features such as automatic flushing, bidet functions, and touchless operation. They bring together luxury and sustainability, making them ideal for today's modern, connected homes.

K. Nirmal Kumar
Managing Director, Roca Bathroom Products

K. Nirmal Kumar, based in Chennai, Tamil Nadu, India, is currently the Managing Director at Roca India (RBPPL). He holds a Master of Business Administration (MBA) in Finance from Bharathiar University. With a robust skill set that includes Financial Accounting, Costing, Financial Reporting, Treasury Management, Capital Project Analysis and more, he brings experience from previous roles at Roca Bathroom Products Private Limited and EID PARRY (INDIA) LTD.

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