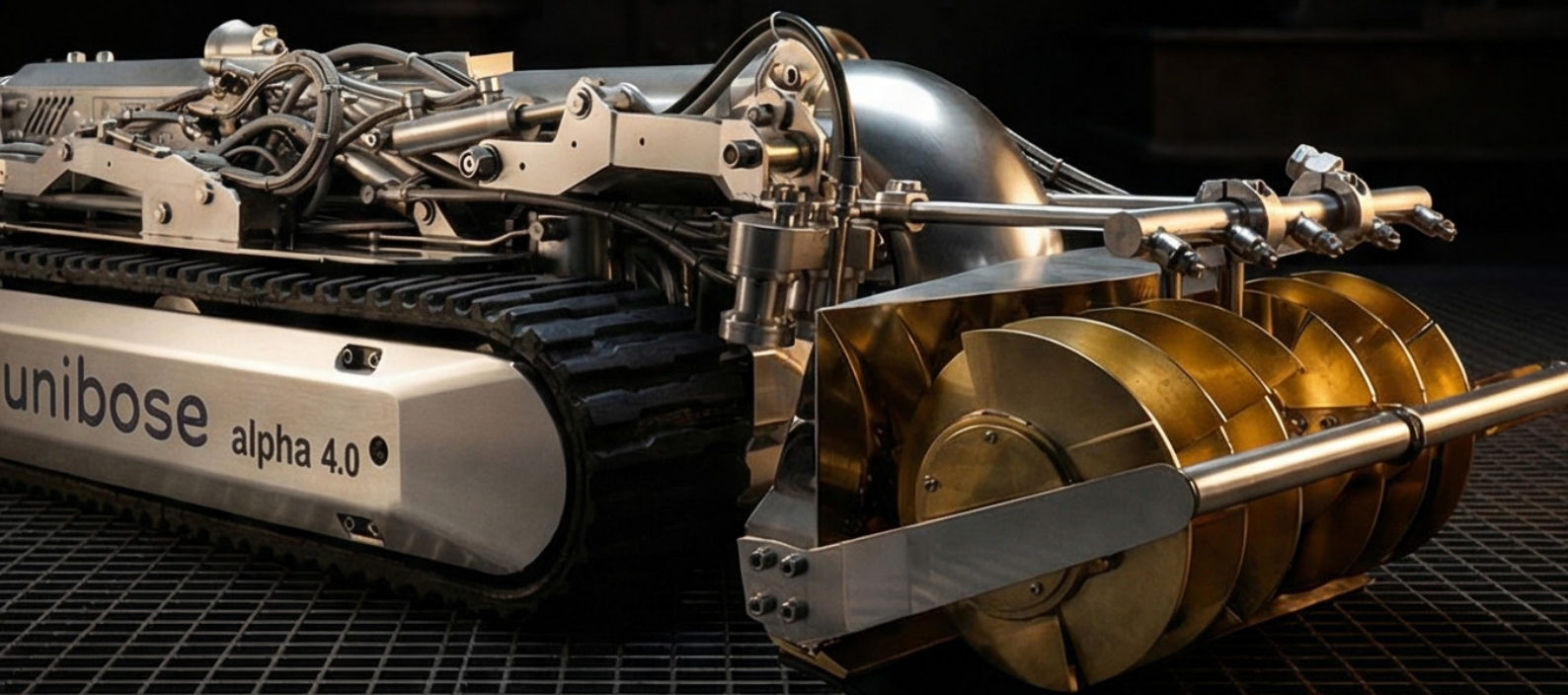


Pioneers in No-Man Entry Deep Tech Robotics for Confined and Explosive Spaces

Asia's 1st EU ATEX Zone-0 (IIC) Certified Robotic Solutions



**BUILT IN INDIA.
ENGINEERED FOR GLOBAL STANDARDS.**

UNIBOSE TECHNOLOGY

Leading Hazardous Space Robotics from India to the World.

Unibose Technology was built to solve one problem: people still risk their lives inside confined, explosive spaces while technology stays outside.

Founded by industry veterans with 45+ years of combined experience in oil and gas, plant engineering, and robotics, Unibose combines ground reality knowledge with advanced robotic engineering that is on par with global standards.

We are focused on no-man entry confined space robotics, with:

Asia's first and only
EU Type ATEX
Zone-0 (IIC)
certified robotic
systems



World's first ATEX Zone 0 onboard
pump system, powered by over 45
years of combined field experience in
hazardous environments.



A **globally rare capability** with in house
engineering and development of a **fully
integrated ATEX Zone 0 certified ecosystem**
covering robotics, vision, and safe lighting.



Global benchmarks with
proven performance
inside live refineries

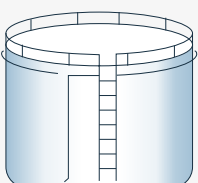


Operating from our 10,000 sq.ft advanced manufacturing facility in Chennai, we engineer and deploy certified systems for refineries, petrochemical complexes, marine terminals, and heavy industrial operations globally.

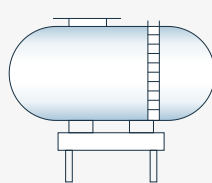
A Robotic Ecosystem for All Tank Geometries

Decades of field experience and rigorous engineering have established Unibose as a leader in confined-space automation. Our modular robotic platform addresses the industry's most critical challenge: seamless operation across **all three primary tank geometries, flat bottom, horizontal curved, and vertical configurations**, representing approximately 90% of global industrial storage infrastructure.

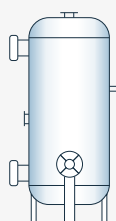
Flat Bottom



Horizontal Curved



Vertical



Our mandate is clear: to **replace human vulnerability with engineered certainty** in the world's most unforgiving spaces.



A robot cannot replace humans, but it should, and it must replace hundreds and thousands of fellow human beings entering confined spaces daily for their livelihood.

Manikandan Dakshinamoorthy
Founder & CEO at Unibose



Certified No-Man Entry Robotic Solutions

Using deep tech to protect people in hazardous spaces.

For decades, people have entered toxic, explosive, oxygen-starved spaces to clean and inspect tanks and confined areas.



2M+ workers enter confined spaces globally every year -

Health & Safety Internal, Aug 2019

Downtime costs millions; one life lost is priceless

Unskilled contractors take highest risk for lowest pay

Every week, two workers don't return home

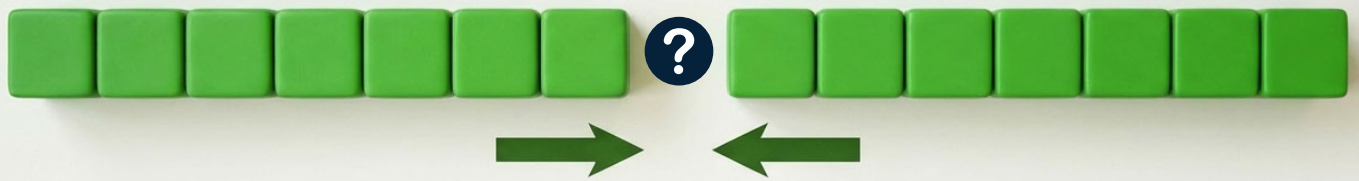
This has become a generational curse. The dirtiest, most dangerous jobs have been done by those with the least choice. This not only impacts lives but also becomes a major cost to the company. Kimberlite Study says that “1% downtime (3.65 days) can cost over \$5M a year; 27 days can mean about \$38M lost.”

Unibose is committed to end this cycle with No-Man Entry robotic systems engineered to eliminate human confined space entry.

We are confident these solutions will transform the safety landscape of hazardous industries. But we also recognize a critical barrier: price!



The Adoption Gap



Industries have automated most processes, yet the most dangerous task of confined-space tank cleaning remains manual. Every entry places a life in jeopardy.

The barrier to adoption is not capability but hesitation. Leadership must build confidence that automation will deliver when safety is critical. Relying on manual entry may feel familiar, but when certified safer technology exists, every confined-space entry becomes an avoidable risk,

one the industry should no longer justify. Safety begins with a simple rule: no person should enter where a robot can operate. Only a handful of companies worldwide can meet this standard.

Unibose's ATEX Zone-0 systems are engineered to be one of them, built to earn trust in the most demanding environments.

The choice is clear: accept avoidable risk or adopt technology designed to protect human life.

OEM + RaaS – Bridging the Technology Access Gap

Access to life-saving technology should never depend on capital availability. This belief defines Unibose's market approach.

Unibose uniquely operates as both an **Original Equipment Manufacturer and a Robotics-as-a-Service (RaaS) provider**—an integrated capability that directly addresses the capital barrier that has constrained industry-wide adoption for decades. Organizations prepared to invest can procure ATEX Zone-0-certified robotic systems outright, gaining full asset ownership and operational control.

For those facing capital constraints, Unibose's OEM-led RaaS model provides an alternative pathway, delivering the same certified technology through

operational expenditure without upfront capital investment.

Across both models, customers deploy identical systems with no compromise on safety, performance, or compliance. As the manufacturer, Unibose deploys, operates, and maintains all equipment directly, ensuring continuous technical upgrades, regulatory updates, and innovation advancements.

The acquisition model should never limit access to proven safety solutions—Unibose ensures world-class confined-space robotics reach every operation where they are required.

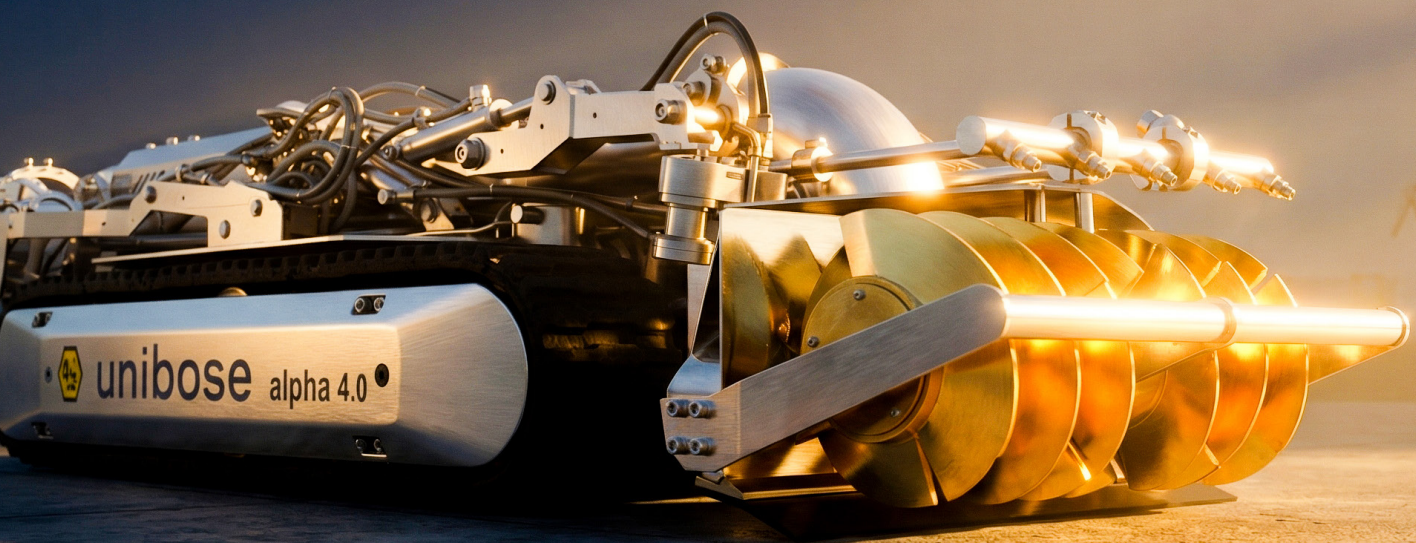
Made in India, Built for the World

Asia's 1st EU ATEX Zone 0 (IIC) Certified



N-MER

No-Man Entry Robots for
storage tank cleaning in
Confined, Hazardous Spaces



45%

OPEX Reduction

40%

Downtime Reduction

0%

Life Threat

Meet ATEX Zone-0 N-MER

The global benchmark for safe robotic tank cleaning.

N-MER is Unibose's patented flagship No-Man Entry robot and Asia's first EU ATEX Zone-0 certified solution for confined space tank cleaning. It is built for large oil and gas tank farms and heavy industrial assets, handling liquids, sludge, oils, fuels, chemicals, and acids

without sending a single person inside. Designed for continuous operation in real tank conditions, N-MER sets a new benchmark for safety, speed, and cost-efficiency in hazardous tank cleaning across India and international markets.

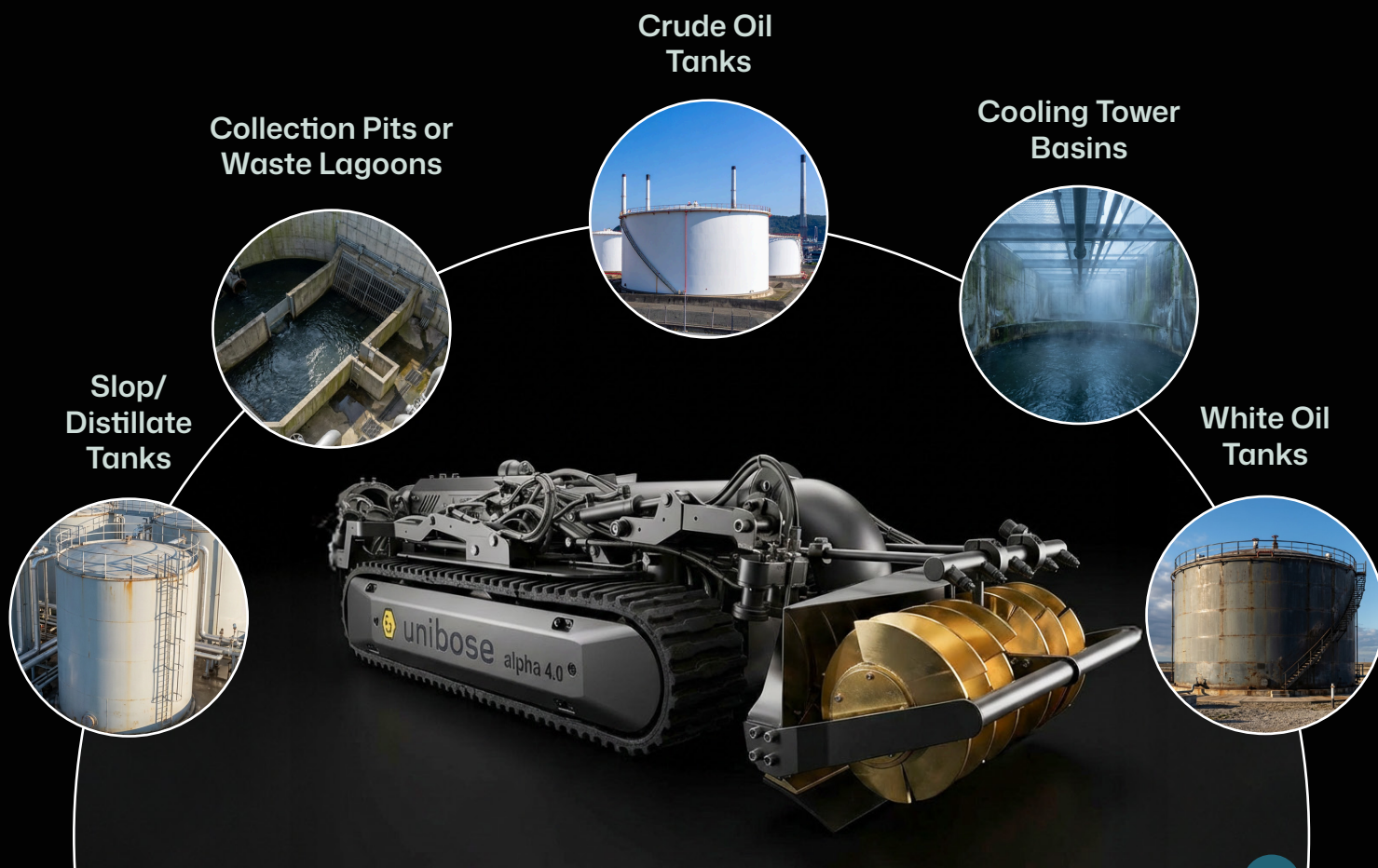
Asia's 1st EU ATEX Zone-0 (IIC) certified Robot and CCTV Cameras & LED Lights.

Globally proven in live refinery operations

Field tested by Fortune 500 companies in real business conditions.

A globally rare capability: Among very few globally, Unibose engineers and develops the complete ATEX Zone-0 certified ecosystem in-house - robotic platform, vision systems, & intrinsically safe lighting as a unified, customizable solution.

Where N-MER works



What Makes N-MER Rare Globally

Breakthrough Autonomous Capability



An industry-first, patented onboard pump module enabling autonomous sludge extraction with minimal external vacuum suction dependency.

Revolutionary Two-Line Architecture



A revolutionary two-line hydraulic architecture that eliminates hose entanglement with internal roof legs—overcoming the complexity and handling risks of multi-hose (10–16 line) competitor systems.

Exclusive Fail-Safe Protection



A first-of-its-kind automated fail-safe evacuation system that ensures robotic recovery during critical breakdowns—addressing a fundamental risk left unresolved by conventional systems.

Architecturally Engineered Cutter Stock Infusion System



A deeply engineered cutter stock infusion system designed for close-encounter sludge engagement, actively diluting & transforming hard, compacted, & high-viscosity sludge into a pumpable, flowable state.

Industry-Leading 360° Vision

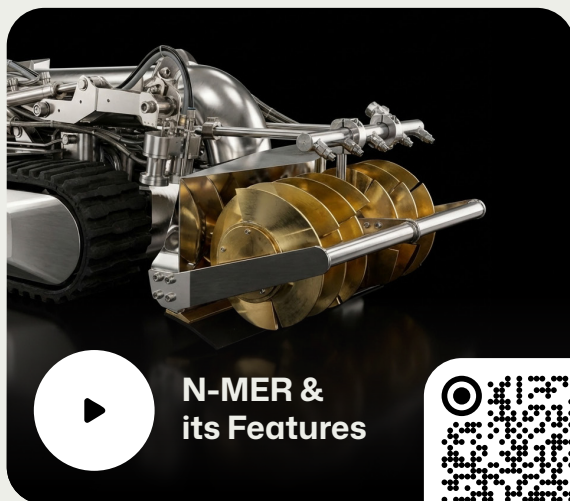


ATEX Zone-0 certified pan-tilt cameras and LED lights deliver complete in-tank visibility, giving operators precise robotic control with uninterrupted vision through an integrated self-cleaning system.

Advanced Automated Handling



An Automated and Effortless hydraulic hose winder eliminates manual labor in managing the heavy hoses.



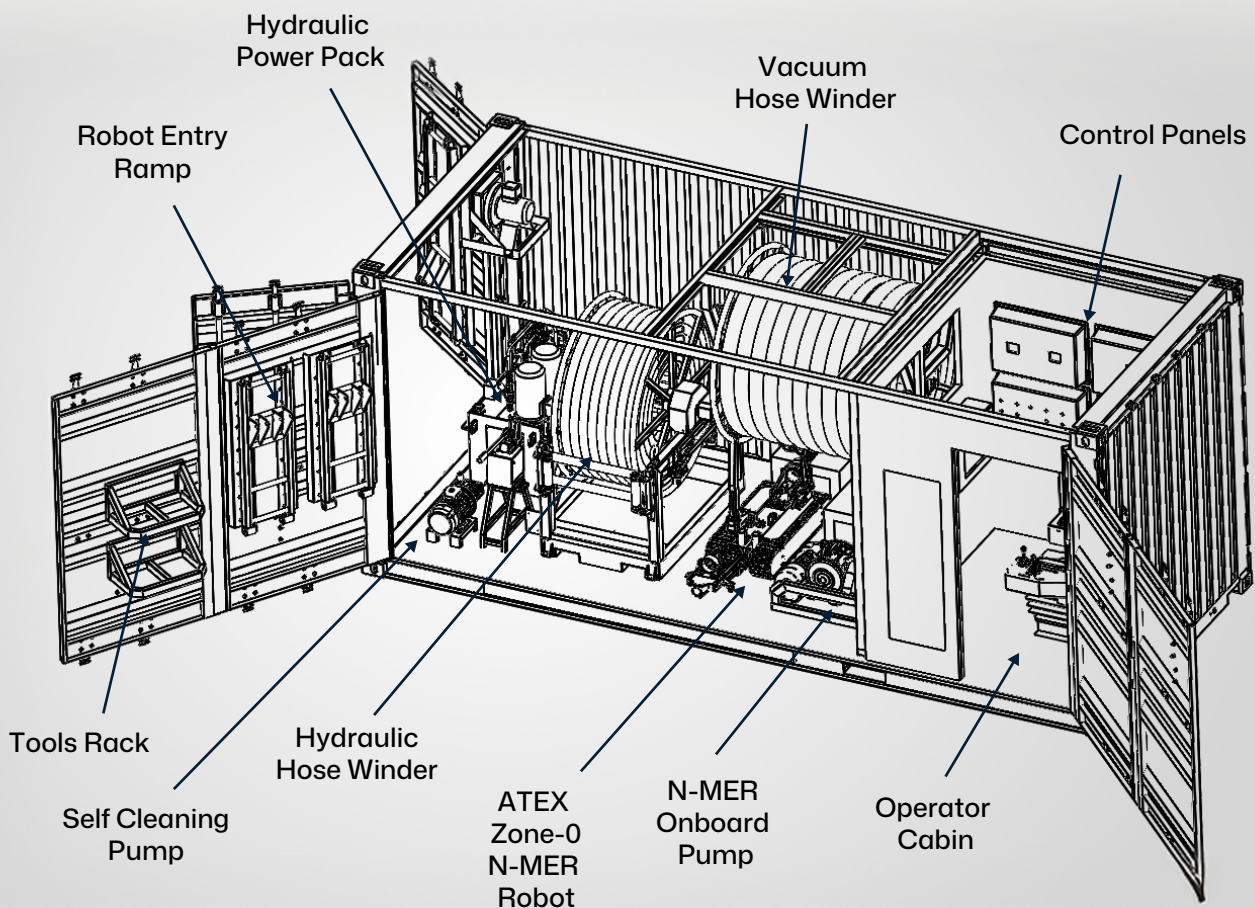
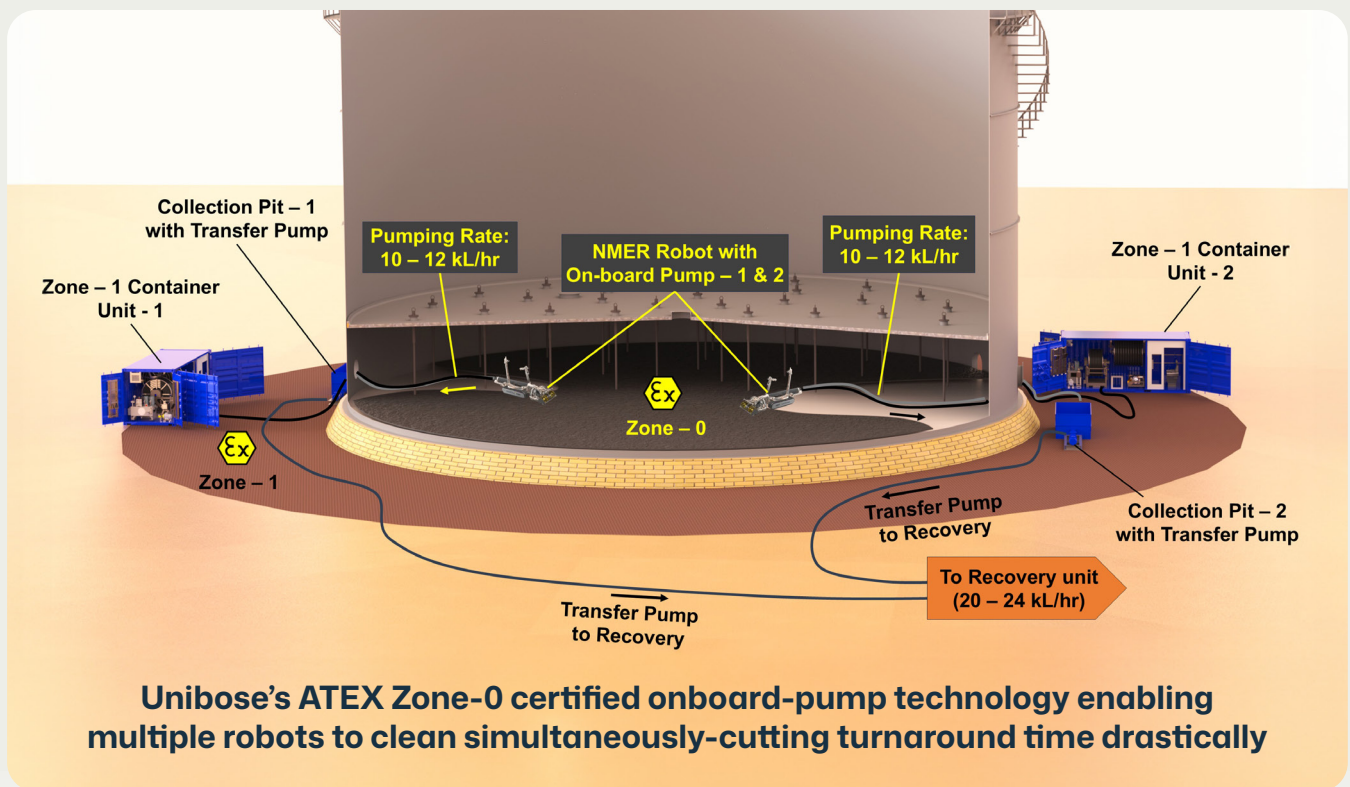
N-MER & its Features



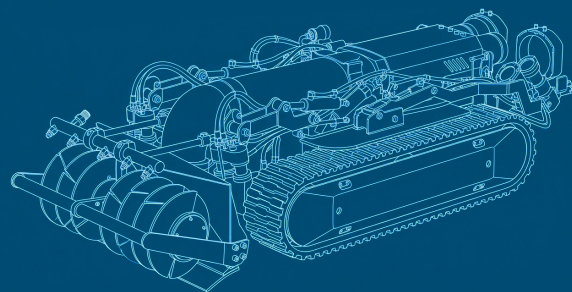
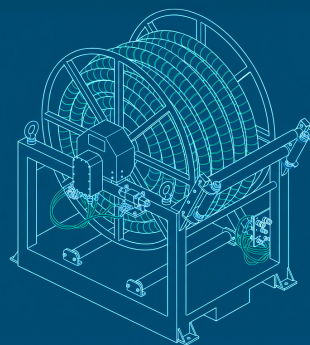
N-MER in Action



Inside The N-MER System

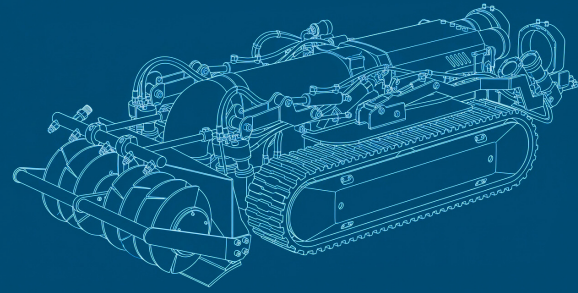
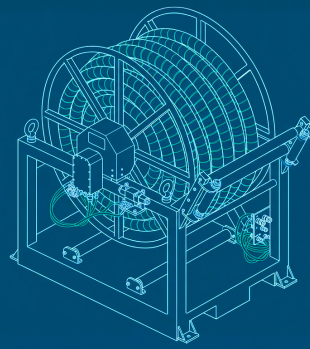


Technical Specifications



Parameter	Specification
Robot with On-board Camera & LED Light Classification	EU Type ATEX Zone 0, Gas Group IIC, Category 1G Robot with tools : II 1G Ex h IIC T4 Ga (Maximum Protection) ATEX Certificate No. : TI23 ATEX 1679X Camera & LED Lights : II 1G Ex ia IIC T4 Ga (Maximum Protection) ATEX Certificate No. : TÜV CY 24 ATEX 0207053 X
Standards Followed	ATEX directive-2014/34/EU EN80079-36/ EN80079-37/ EN60079-0/ EN60079-11
Operating Temperature	-20°C Up to +60°C
Robot Material	Body & Tools: Stainless Steel SS 316L Drive Track Belt: Custom Chain Track with Anti-static NBR Shoes/Magnetic Shoes
Dimensions (LxWxH)	1960x510x400mm (Camera arm in closed condition) Height with elevated camera arm: 1150mm
Manhole entry size	Minimum 600 mm
Weigh of Robot	400 kg
Type of Operation	Joystick operated with hydraulic operation (P & T lines)
Performance	Speed: 5 to 10 m/min; Approach & Departure angle: 40°/30°
Operational Length	Up to 100 meters
Submergence	Continuous Fully operational in submerged conditions
Add-on Tools	Sludge cutter attachment/ Standard Wiper/ Expandable Wiper/ Water Canon/ High Pressure Rotary Surface Cleaner
Onboard pump with Sludge cutter (ATEX-ready)	Flow: 10 – 12 m³/hr; Maximum Delivery Head: 3.0 Bar, Maximum particle size: 25mm
Emergency Systems	Automated emergency evacuation/retrieval system
Camera & Lighting	3 × ATEX Zone 0 CCTV Cameras & 3 × ATEX Zone 0 Flood Lights along with slipring (standard)
Camera & LED Light Specification	Camera Type: VGA with Resolution of 640x480 Flood LED Light: 200 Lumens Cools White Range: 100 m
Vision	360° coverage with self-cleaning spray nozzles

Technical Specifications



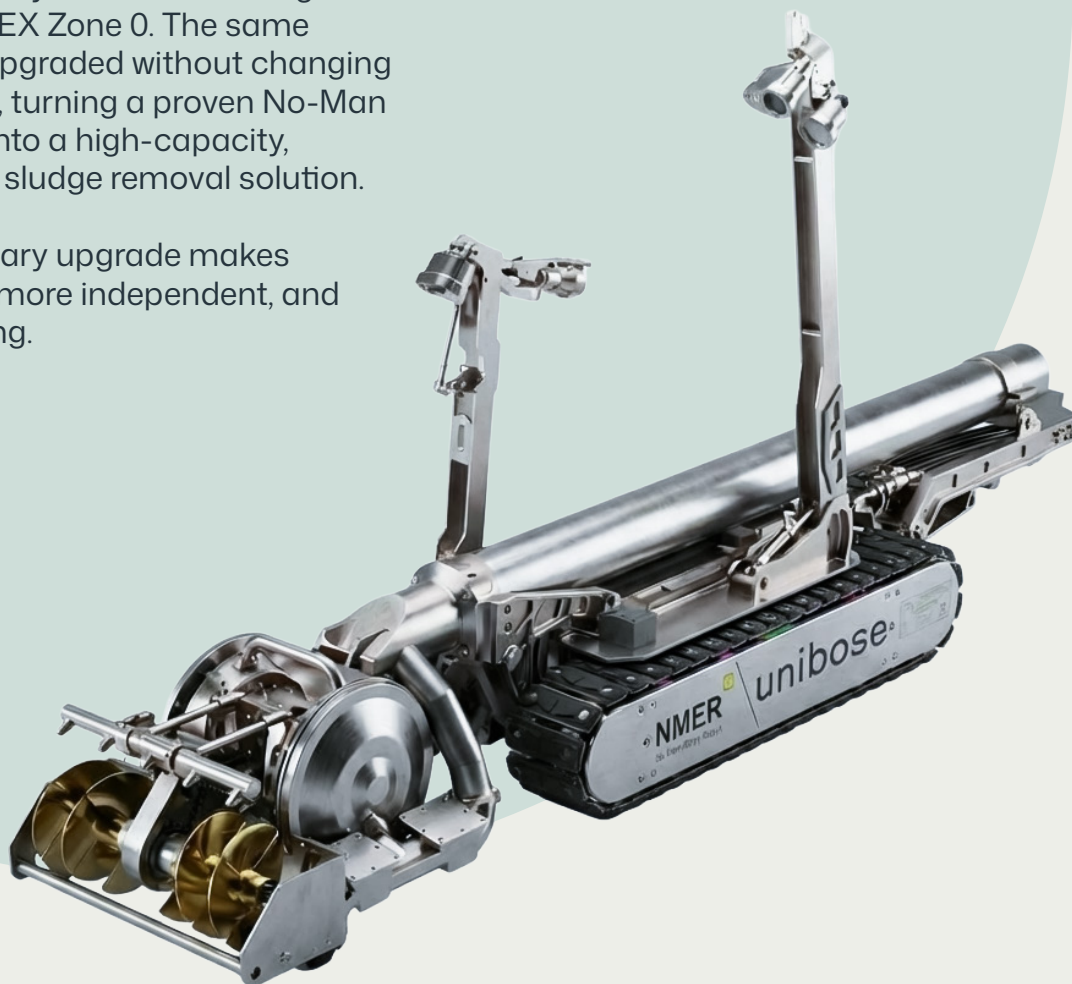
Parameter	Specification
Container System	20ft integrated container (ATEX Zone 1/Zone 2/ Safe Zone compliant) Or 2 x 10ft container (ATEX Zone 1/Zone 2/ Safe Zone compliant)
Operating Temperature	-20°C Up to +60°C
Overall size (L×W×H)	6060x2490x2600 mm (20ft Std. Container)
Weight	7500 kg (for 20ft Std. Container)
Power Supply	16 KW (Max.) Electric / Diesel Operated
Control System	Remote joystick operation from operator chair
Display unit	2 x Nos. 19-inch LED Display with Explosion Proof Enclosure for Zone-1 4 x Camera feed per display unit 1 TB Storage for recording videos per display unit
Electrical Panels	5 x Explosion proof enclosure with terminal blocks for Zone-1 2 x VFD Drives with PLC Controllers and other isolation switches
Hydraulic Power Pack	Pressure : 80 to 120 Bar Flow : 8 to 20 Lpm Oil Capacity : 200 litres
Hydraulic Hose Winder	Coiling length : 100 m Camera & LED Cables length : 100 m
Vacuum Hose Winder	Coiling length (4-inch hose) : 100m

World-first ATEX-ready onboard pump integrated with a N-MER robot

A breakthrough no competitor has achieved globally.

N-MER is engineered to house an onboard pump system that is being certified for ATEX Zone 0. The same robot can be upgraded without changing its core design, turning a proven No-Man Entry system into a high-capacity, self-contained sludge removal solution.

This revolutionary upgrade makes N-MER faster, more independent, and industry-leading.



Why this is a game changer

- World-first ATEX-ready onboard pump integrated with a No-Man Entry robot
- Up to 10-12 m³/hr pumping capacity for high-volume sludge extraction
- Allows multiple autonomous robots to operate in parallel without vacuum system dependency
- Sharply reduces dependency on external pumps and vacuum suckers
- Delivers a more compact, efficient on-site setup with fewer support units
- Cuts tank downtime by up to 30% more compared to the vacuum-based N-MER configuration

Unibose Product Line

Built on years of R&D, Unibose's modularized core mechanisms enable us to rapidly develop new robotic solutions for diverse confined space applications, delivering shorter time-to-market while maintaining our stringent global standards.

ATEX Zone-0 Camera & LED System

ATEX Zone-0 certified vision and lighting for manless monitoring inside explosive spaces.

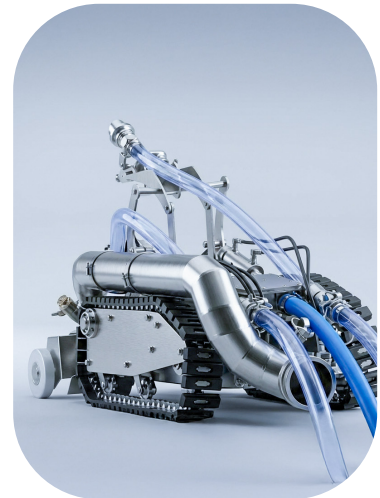
- EU Type ATEX Zone-0 (IIC) certified for maximum protection, including hydrogen
- Industry-leading intrinsically safe ATEX Zone-0 certified camera technology
- Designed for crawler mounting and fixed setups to give clear live view and audit-ready proof



Rail Wagon Bot

No-man-entry robotic cleaning for curved tanks such as rail tankers, curved chemical wagons, horizontal underground and bullet tanks even with Zone-0 environments.

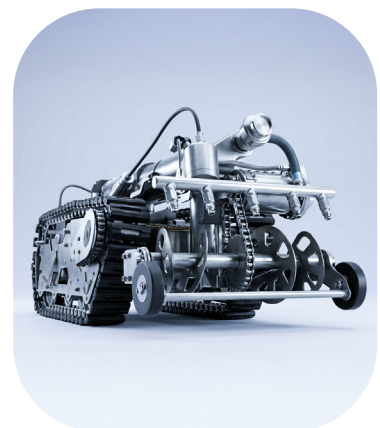
- Built for Petroleum, acids, detergents, and other hazardous media in horizontal and curved vessels
- Proven in live pilot with a global client; scalable across similar fleets and applications



Acid Cleaning Bot

Robot designed for highly corrosive concentrated HCl, Sulphuric Acid cleaning

- Constructed with acid resistance materials for extreme corrosion resistance
- Handles the most aggressive chemical environments



Unibose Product Line

Vertical Tank Cleaning Robot

Specialized robot for high vertical, small-diameter tanks including Catalyst Vessels, silos and flash tanks

- Engineered for non-flat-bottom tanks and challenging geometries
- Precision cleaning in confined vertical environments
- Product Stage: R&D



ATEX Inspection & Maintenance Robot

Comprehensive maintenance solution for hazardous zone applications

- Climbs vertical walls for inspection and maintenance activities like Surface Preparation and Painting, etc.,
- Bottom plate inspection of Storage Tanks.
- Multiple application capabilities with heavy payload capacity
- Product Stage: R&D



PROOF & CERTIFICATIONS

International Standards. Field-Proven. Industry Validated.

Stringent Global ATEX Zone-0 Certifications



N-MER Robot

- EU Type ATEX Zone 0 (II 1 G Ex h IIC T4 Ga) rated for -20°C to +60°C
- Built for explosive atmospheres, safe even around hydrogen



ATEX Camera & Light System

- EU Type ATEX Zone 0 (II 1 G Ex ia IIC T4 Ga) rated for -20°C to +60°C
- Certified for mass production for live use in Zone-0

ISO & Systems



Quality management



Environmental management



Occupational health and safety

Field-Proven Deployments



Made in India, built for the world



Save lives. Save time. Save money.

For Product and RaaS enquiries

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Asia's 1st EU ATEX Zone 0 (IIC) Certified
ISO 9001, 14001 & 45001 Certified



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