



RAY PRECICOMP



Next-Gen Pipe Assemblies for the Indian Automotive Industry



Lightweight. Leak-Proof. EV-Ready.



**Presented by: Ray Precicomp
Company Profile**

Executive Summary

Ray Precicomp specializes in the design and manufacturing of **3D-formed plastic pipe assemblies** for fluid, air, coolant and urea transfer applications in passenger and commercial vehicles.

Our solutions support **BS6 emission systems and EV thermal management**, enabling reliable routing in compact installation spaces with:

- Lightweight and chemically resistant constructions
- High dimensional repeatability
- Weld-free assemblies with high pressure integrity



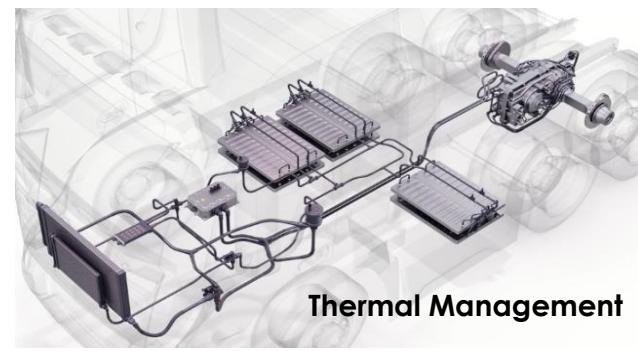
Fuel Lines



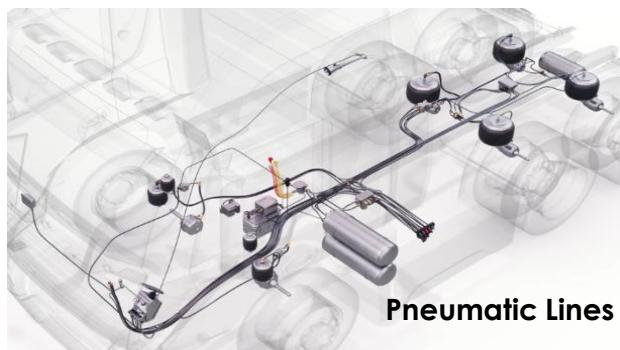
Urea Lines



Thermal Management



Thermal Management



Pneumatic Lines

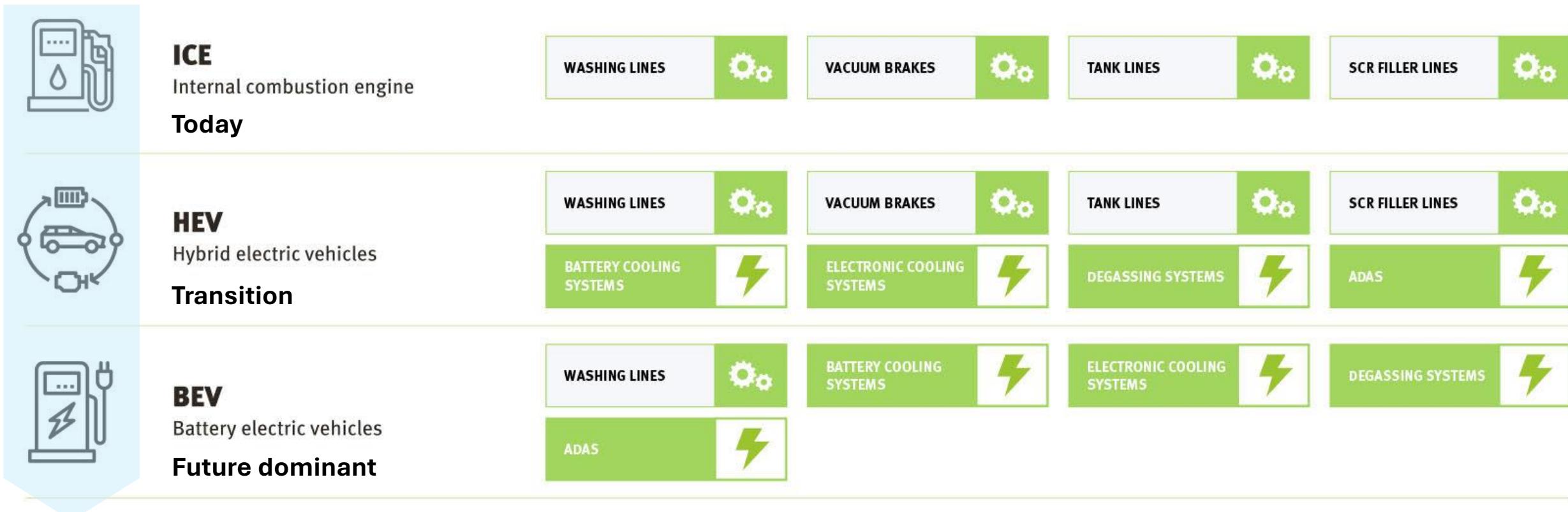


Air Suspension Lines

Comprehensive Solutions for ICE, HEV & BEV Platforms

Ray Precicomp is a focused manufacturer of precision pipe-formed plastic routing solutions for air, coolant, urea and fuel applications.

We serve OEMs and Tier-1 suppliers across **Fuel, SCR and EV thermal systems**, supporting BS-VI and future mobility platforms.



To build a reliable, zero-defect and localized pipe forming and assembly capability for future-ready vehicle platforms.

Next-Gen Pipe Assemblies for Future Mobility

Who We Are

A reliable, zero-defect and scalable pipe-forming and assembly capability

— enabling future-ready routing solutions for Air, coolant, Urea and Fuel

- BS-VI / EV positioned
- Serving **OEMs & Tier-1s** in Fuel, SCR & EV thermal systems
- Combining global expertise with precision forming

Vision

To build A reliable and scalable pipe-forming and assembly capability. Delivering **zero-defect**, **localized**, and **future-ready** routing solutions

- EV & BS-VI aligned product portfolio
- Ready for PPAP + OEM qualification
- Scalable, process-controlled manufacturing capability

Ray Precicomp is industrializing India's first Precision forming of Polymer routing solutions at scale

Product Portfolio

Ray Precicomp supplies **precision pipe-formed plastic assemblies** for use within fluid, air and thermal routing systems supplied by OEMs and Tier-1 integrators.

Our product portfolio includes:

- **Fuel Lines**

Formed plastic pipe assemblies for fuel feed, return and vent routing, supporting gasoline, diesel and ethanol-blend applications.

- **SCR / Urea Lines**

Pipe assemblies developed for urea dosing and delivery applications, suitable for both heated and non-heated layouts as defined by customer requirements.

- **Thermal Management Lines**

Coolant routing pipes for engine, power electronics and battery thermal management, designed for compact packaging and controlled flow paths.

- **Pneumatic Lines**

Formed plastic pipe assemblies for compressed air routing in braking and auxiliary pneumatic systems.

- **Air Suspension Lines**

Plastic pipe assemblies supporting air suspension circuits, optimized for dimensional consistency and ease of vehicle installation.

Products are supplied as **formed pipe parts or routed sub-assemblies**, designed to integrate into customer-defined system architectures.

Material Selection

Property	Nylon 6 Tube	Nylon 11 Tube	Nylon 12 Tube
Strength	High	Moderate	Moderate
Flexibility	Moderate	High	V.High
Chemical Resistance	Good	Excellent	Excellent
Moisture Absorption	High(3-4%)	Low 0.8-1.2	V.Low
Temperature Range	-40 to 100 C	-40 to 120 C	-40 to 120 C
Cost	Low	High	High

Summary

- Choose Nylon 6 for applications where cost is a primary concern and high strength is needed, but be cautious about its moisture absorption.
- Choose Nylon 11 for better chemical resistance, moderate flexibility, and applications requiring lower moisture absorption.
- Choose Nylon 12 for premium applications demanding high flexibility, dimensional stability, and resistance to challenging environments

Material-Wise Line Pipe Capabilities

Raw Material	Typical Applications	OD Range (mm)	Minimum Bend Radius (mm)	Remarks / Notes
PA12 (Polyamide 12)	Fuel lines (Diesel, Gasoline, Ethanol), SCR / Urea lines, Brake booster lines	4 – 25	15 – 60	High flexibility and chemical resistance. Suitable for high-pressure systems.
PA11 (Polyamide 11)	Fuel & air lines, vacuum brake lines	4 – 15	20 – 45	Excellent thermal & UV stability; preferred for bio-based options.
PA6 / PA66	Pneumatic systems, air suspension, HVAC, coolant return	6 – 25	25 – 60	Higher mechanical rigidity; used in structural routing.
Multilayer Tubes (PA / EVOH / PA)	Fuel & hybrid cooling systems, ethanol blends (E10–E100)	6 – 18	25 – 50	Outer layer: PA; barrier: EVOH; inner conductive layer optional. Ensures ultra-low permeability.
Bio-Based Polyamides (PA11-R / PA1010)	Green fuel & EV coolant lines	4 – 15	20 – 45	100 % bio-based; drop-in replacement for PA12.
Custom Multimaterial Assemblies	Fuel return, degassing, thermal management modules	–	–	Includes connectors, manifolds, clamps & sensors integrated.

Solutions for Automotive and Industrial Applications

- **Monolayer Tubes**

Available for a wide range of applications across both **automotive** and **industrial** segments. High-temperature variants can withstand temperatures up to **180–200°C**, ensuring durability in demanding conditions.

- **Multilayer Tubes (MLT)**

Structure and material composition are **application-specific**. Solutions are readily available for fuel blends ranging from **E10 to E100**, meeting the stringent requirements of modern fuel systems.

- **Bio-based Solutions**

100% bio-based tubing options are available for both **fuel** and **air** applications. These are offered in both **monolayer** and **multilayer** constructions, supporting sustainability without compromising performance.



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Thank You

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