



AUTOCRON

By,
Gasoline Fuel Systems India .

“TECHNOLOGY FOR HEALTHIER AIR “

Who are we?

- Gasoline Fuel Systems India leads the way in gas conversion systems, with extensive experience in the automotive industry. Our specialization lies in manufacturing AUTOCRON LPG/CNG conversion kits for three-wheeler autorickshaws, cars, heavy trucks, and buses. We proudly distribute AUTOCRON branded Indian kits for four-wheelers, a trusted name both in India and international markets.
- Our commitment stems from the alarming rise in pollution, especially in three-wheeler autos and taxis. We aspire to make a positive impact by reducing pollution and advocate for government policies to promote the use of LPG (Liquid Petroleum Gas) and CNG (Compressed Natural Gas), especially in three-wheeler autos and taxis. With a robust marketing network and a strong dealer presence in India and overseas, Gasoline ensures the distribution of complete LPG/CNG systems that adhere to European standards (ECER-67-01 norms & ISO-15500), specifically designed for three-wheeler autorickshaws and four-wheelers.
- Our dedicated team of professionals with automotive engineering backgrounds handles sales and services, while our R&D ensures cutting-edge technology in our products. Gasoline Fuel Systems India is on a mission to expand and provide cleaner and healthier air to humanity, supplying our kits across India and abroad.



Why Autocron?



- Our track record speaks volumes, with over 10 million CNG/LPG Kits sold worldwide and more than 1 million CNG Sequential Kits seamlessly operational on a global scale.
- Our products are manufactured and rigorously tested in accordance with European Standards and have received approval from ICAT/ARAI, esteemed government testing agencies in India.
- With a 15-year presence in India, we've established an exceptional after-sales service network across the nation, ensuring customer satisfaction.
- Gasoline Fuel has proudly distributed over 1 million Autocron Kits in India and successfully installed over 12,000 CNG Sequential Kits in the past year alone.
- Our qualified and experienced technical team is dedicated to providing top-notch after-sales service.
- We offer competitive pricing without compromising on product quality, and our sound financial background guarantees the availability of adequate stock to fulfill orders promptly.

Benefits of converting to CNG

- Compliance with regulations: In Mumbai and Delhi NCR, commercial vehicles older than 8 years are restricted to reduce pollution.
- Extended engine life: Switching to CNG can add extra years to your vehicle's operation, totaling 16 years of service.
- Cost savings: Avoid the expense of purchasing a new vehicle.
- Indirect advantages: CNG offers non-adulteration, reduces fuel theft, and helps meet the 2% CSR expenditure mandated by the Companies Bill of 2012.
- Environmental contribution: By adopting CNG, you actively participate in promoting a cleaner and greener environment.



Advantages of CNG as a Fuel

- Non-adulteration and theft resistance: CNG cannot be tampered with or stolen like diesel.
- Easy mixing with air: Being a gaseous fuel, CNG blends smoothly with the surrounding air.
- Reduced auto-ignition risk: CNG's high auto-ignition temperature and limited inflammability range make it less likely to auto-ignite on hot surfaces.
- Lower fire hazard: CNG, being lighter than air, rises in case of a leak, reducing the risk of fire compared to other fuels.
- Cylinder safety: CNG cylinders are safer than petrol and diesel tanks due to their design, size, and placement within the vehicle. They feature safety devices to release gas in case of abnormal pressure or temperature.

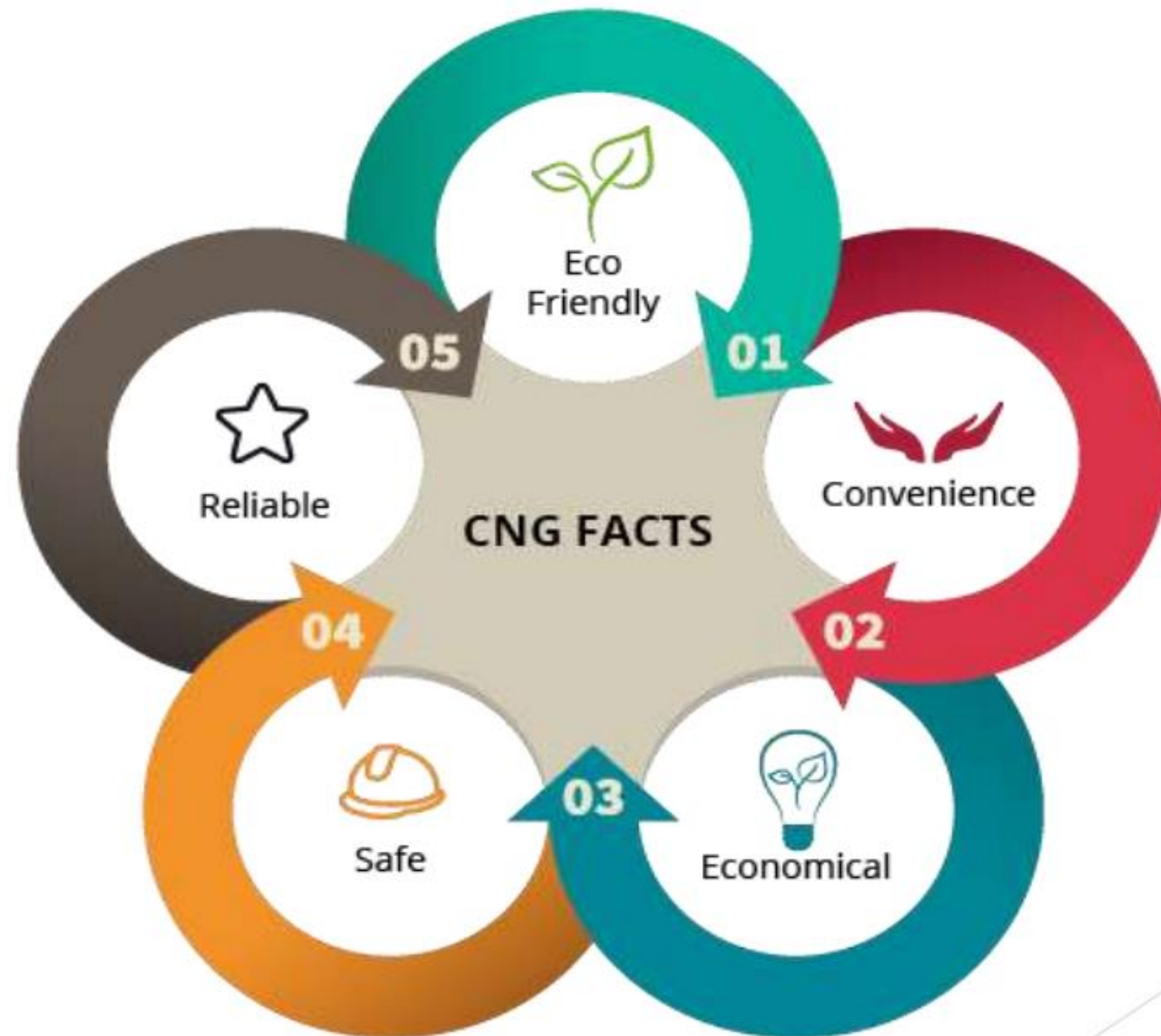


Necessity of CNG

- The only city in India to be most impacted by vehicular pollution, 60-70% of the emissions originate from vehicles.
- High price for congestion and traffic jams lead to fuel wastage, more pollution and serious economic losses.
- According to the World Health Organization and Republican Pollution Control Board, 14 areas in Pune and Mumbai have harmful particulate matter levels exceeding the national standards by a significant margin.
- Particulate pollution is responsible for the fifth highest health burden in India. The PM2.5 levels have been found to be high during winter months in the city.



CNG FACTS





Emission Benefits of CNG vs Diesel

Fuel	C0, g/Km	NOX, g/Km	PM, g/Km
DIESEL	2.4	21	0.38
CNG	0.4	8.9	0.012
Reduction	84%	58%	97%

Flow Chart for modifying Existing Diesel Vehicle to CNG



☐ Following are the aspects of Bus CNG Fitment at Green Energy Solutions.

- ☐ Vehicle Received in Work shop
- ☐ Verify / Inspect over all vehicle body / chassis for any damage
- ☐ Dismantle the Engine
- ☐ Send Engine for Re-boring, Honing, Fitment of Piston Sleeve
- ☐ Assemble Engine with new CNG Pistons & modified CNG head
- ☐ Installation of Sparkplugs, Ignition coil, Distributor etc
- ☐ Fitment of Front CNG Kit - Reducer, refueling valve including electrical connections
- ☐ Fitment of CNG Cylinders on the chassis with complete bracket
- ☐ Tubing - CNG Cylinders with front Kit
- ☐ Cranking the engine, setting engine timing, safety checks etc
- ☐ Check emissions through any approved PUC centers
- ☐ Test run the vehicle - for normal operations



Savings Petrol/ Diesel Vs CNG

Description	4 - Wheelers	
Fuel Type	Petrol	Diesel
Price Unit	per Ltr	per Ltr
Price	109.00	98.00
Mileage with Petrol	18.00	22.00
Cost per Km	6.06	4.45
CNG Price	87.00	67.92
Mileage with CNG	28.00	28.00
Cost per KM	3.11	2.43
Savings in Rs. per Km w.r.t CNG	2.95	2.03
Savings in Rs. Per 100 Km w.r.t CNG	294.84	202.88
% Savings	49%	46%

Savings from CNG Vehicles is almost 50% at current prices of Petrol & Diesel

Bus Conversion & Commercials

Daily Kms	300
Days in Month	30.00
Monthly Kms	9,000.00
Diesel Mileage/lit	5
Diesel in liters	1,800.00
Diesel cost/lit	98.00
Cost Montly Diesel usage (Rs.)	1,76,400.00
CNG Mileage/Kg	5
Monthly CNG in Kgs	1,800.00
CNG Cost/Kg	87.00
Cost Montly CNG usage (Rs.)	1,56,600.00
1 Month total savings per Bus	19,800.00
Yearly savings per Bus	2,37,600.00
Conversion cost per Bus Rs	4,00,000.00
Payback period Years	1.68

Maintenance cost will be reduced in comparison to Diesel bus, which will be additional saving

Note*:- Prices are in INR



Product Approved For



ASHOK LEYLAND



EICHER



Mahindra



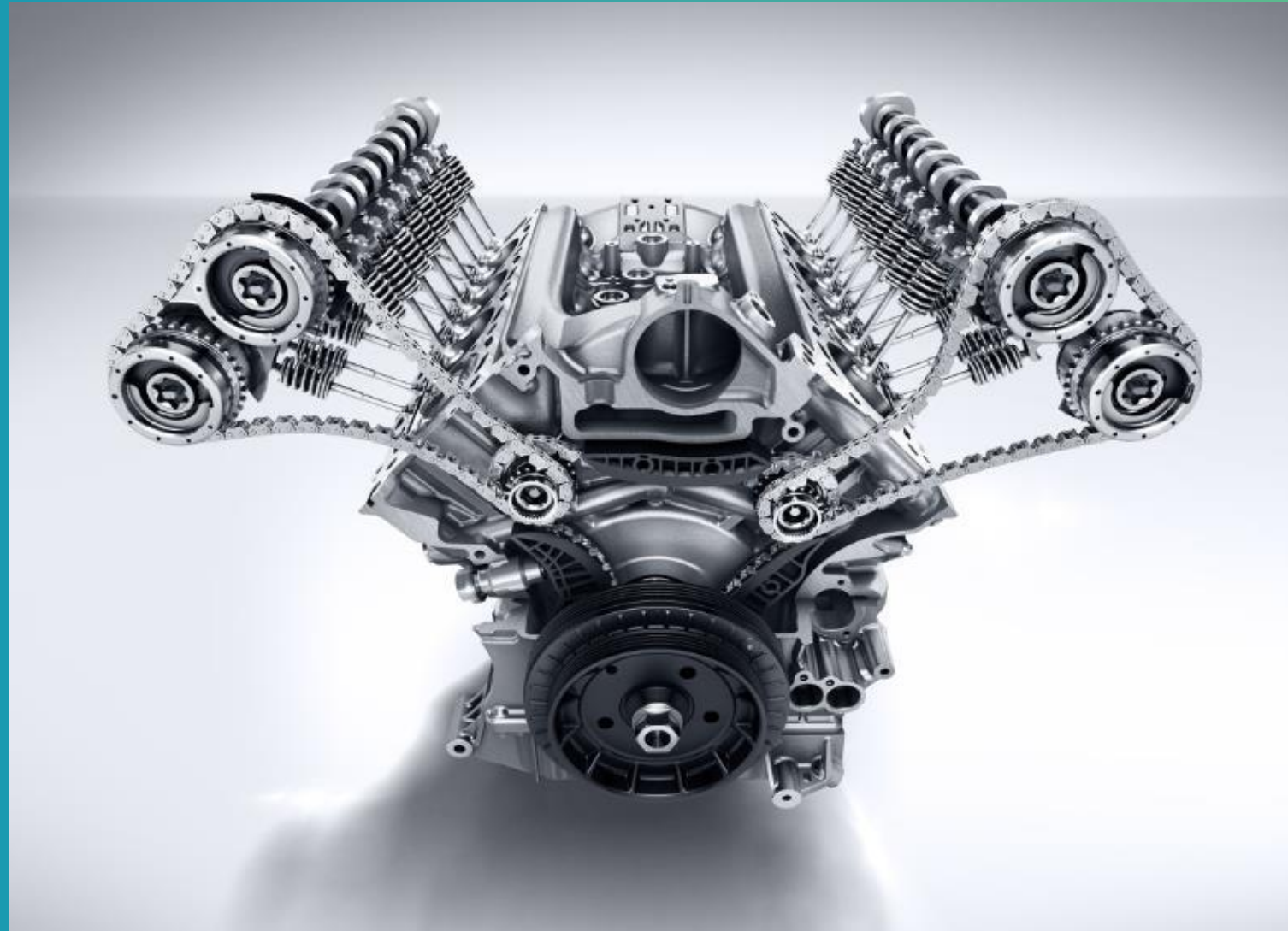
TATA MOTORS



Product Approved By :-

ARAI
Progress through Research





The logo for Autocron features a stylized green and yellow swoosh above the word "AUTOCRON" in a bold, green, sans-serif font. Below this, the word "RANGER" is written in a large, white, serif font, underlined by a thin black line.
AUTOCRON
RANGER

Fuel Support



Petrol/Ethanol

E5 **E10** **E85**

BIO-fuels

B7 **B10** **XTL**

Gasoleus-fuels

H2 **CNG** **LPG** **LNG**

BHARAT IV/VI

Full range Emission Support

Euro4 > Euro5 > Euro6

Bharat 4 > Bharat 6

China4 > China5 > China6

EGR SYSTEM SUPPORT



- **ELECTROMAGNETIC EGR VALVES**



- **VACUM PRESSURE EGR VALVES**

DOUBLE CONTROL



- REGULATION LAMBDA SENSOR
- WBO ACTIVE CONTROL FOR CLOSE LOOP



- CATALYST EFFICIENCY CONTROL
- NBO ACTIVE CONTROL



HIGH FLEXIBILITY SOLUTION



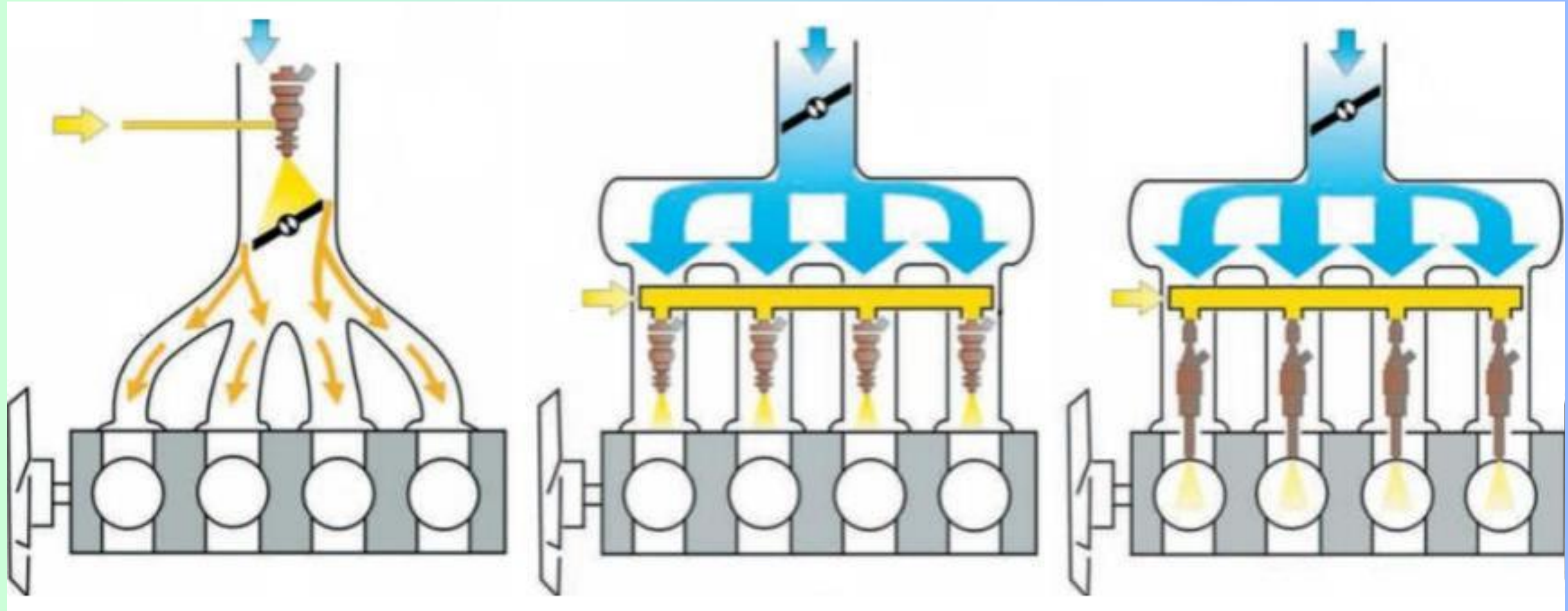
- VARIABLE TYPE MIXERS



- VARIABLE TYPE FUEL INJECTORS

HIGH FLEXIBILITY SOLUTION

SINGLE INJECTION / MULTI PORT / DIRECT
INJECTION



MEET HIGH STANDARD REQUIREMENTS



- **OBD II SYSTEM (HIGH SPEED CAN)
COMPATIBLE WITH BHARAT 4**



- **SUPPORTS DBW SYSTEMS
COMPATIBLE WITH BOSCH/CONTI/VDO**

UNIQUE ECU ADAPTIVE ALGORITHM

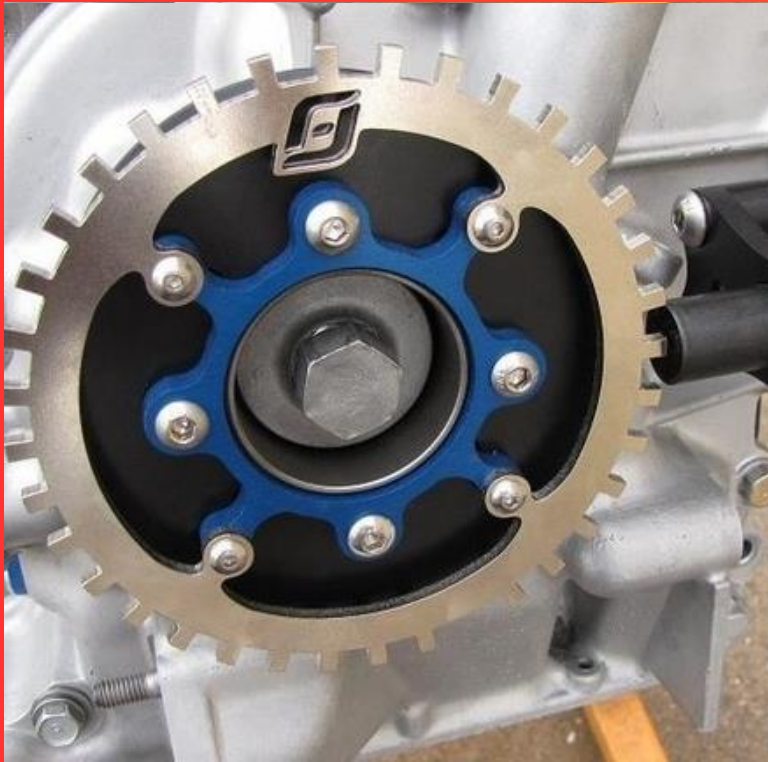


- MAP SENSOR BASE ON



- MAF SENSOR BASE ON

MULTI TYPE TRIGGER ON CKP & CAM

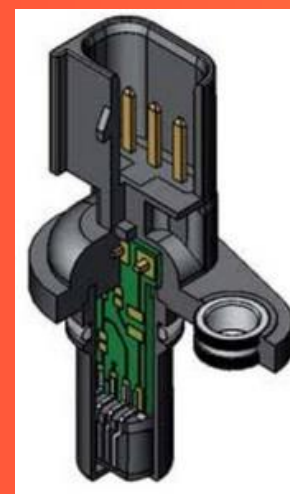
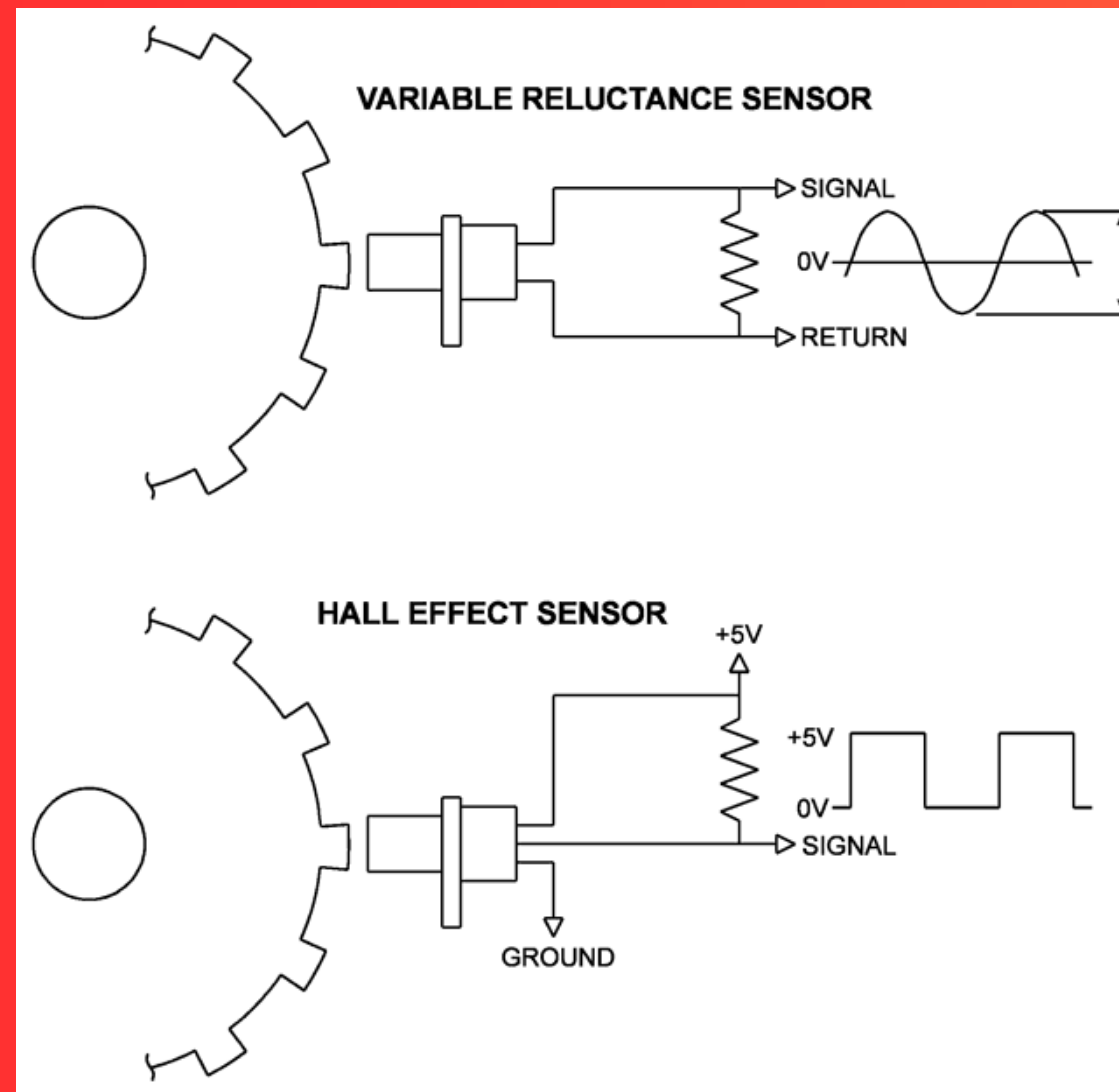


- **ENCODER CKP : $N-1, N-2, N-3, N+1$
($60-2, 36-1, 24-2 \dots$)**



- **ENCODER CAM : $2N-1, 2N+2, N-1, N+1$**

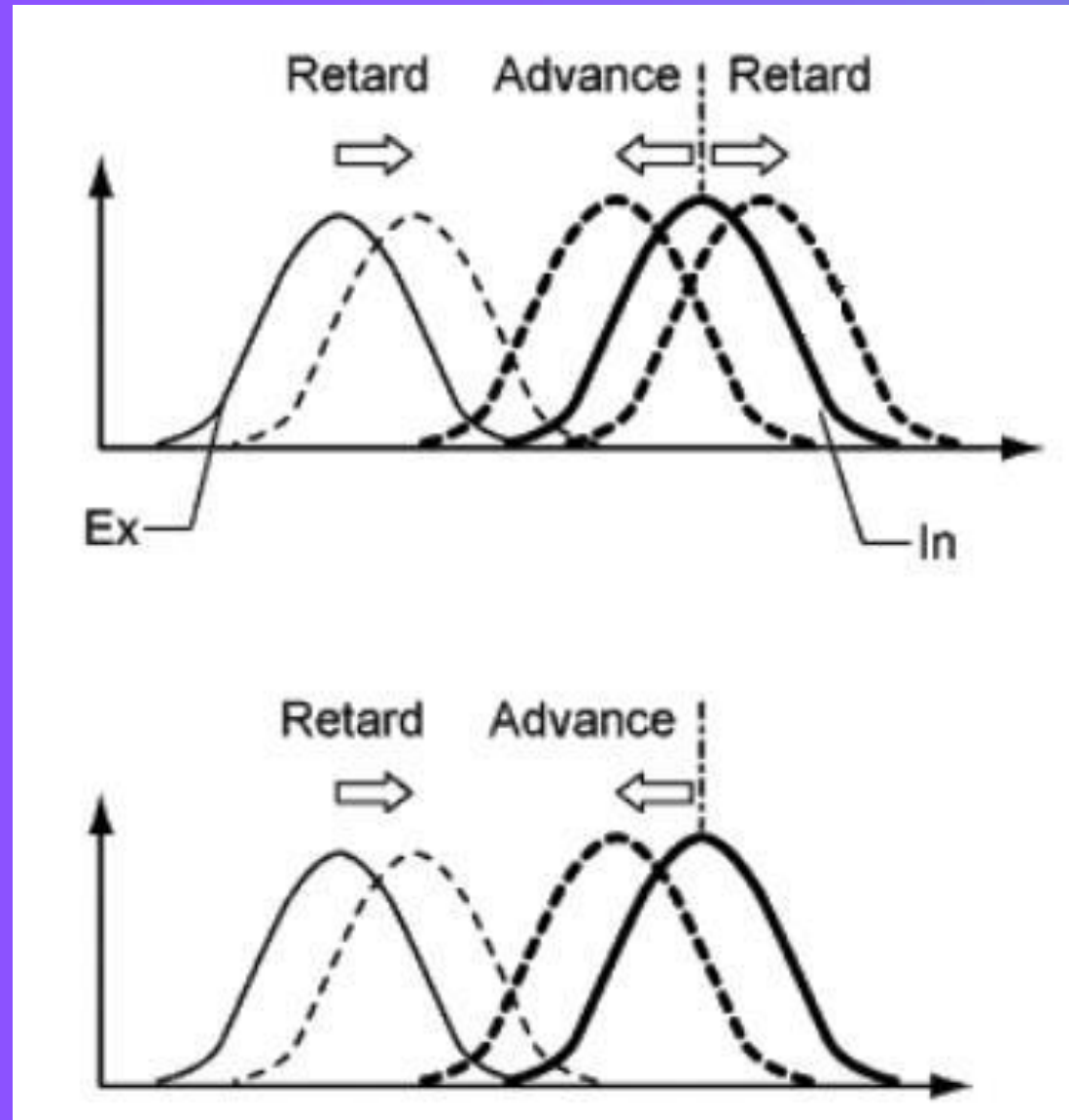
CRANKSHAFT SENSOR VR OR HALL SENSOR



- **INDUCTIVE SENSOR**

- **HALLOTRONIC SENSOR**

CRANKSHAFT SENSOR VR OR HALL SENSOR



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ENGINE SAFETY

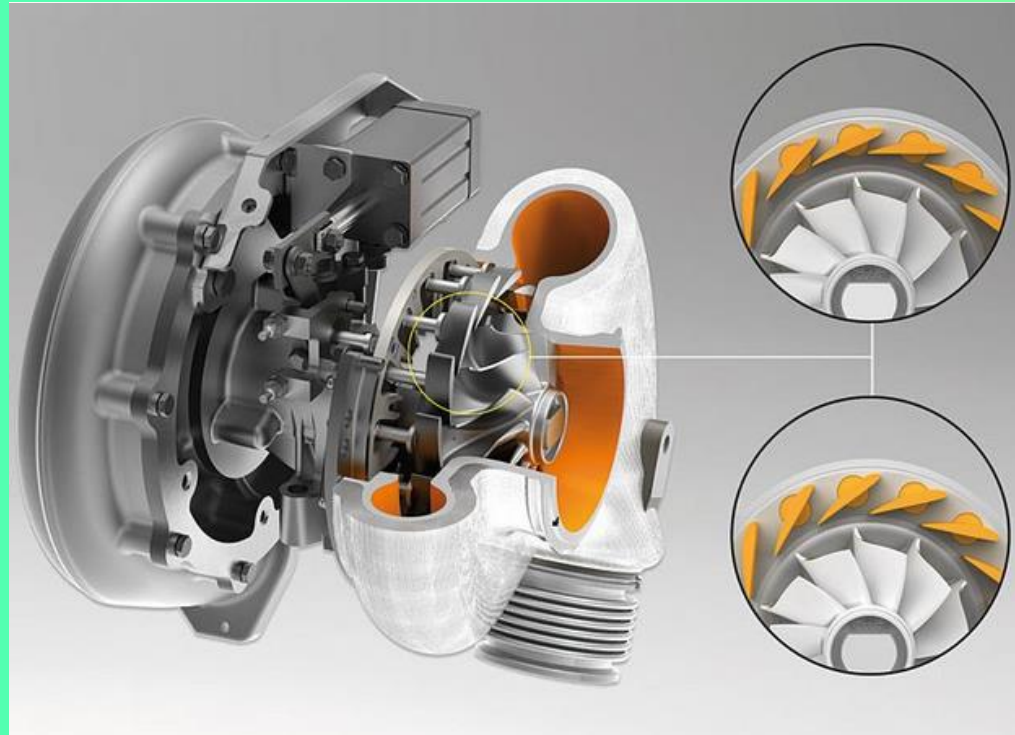


- **KNOCK SENSOR ACTIVE SUPPORT**

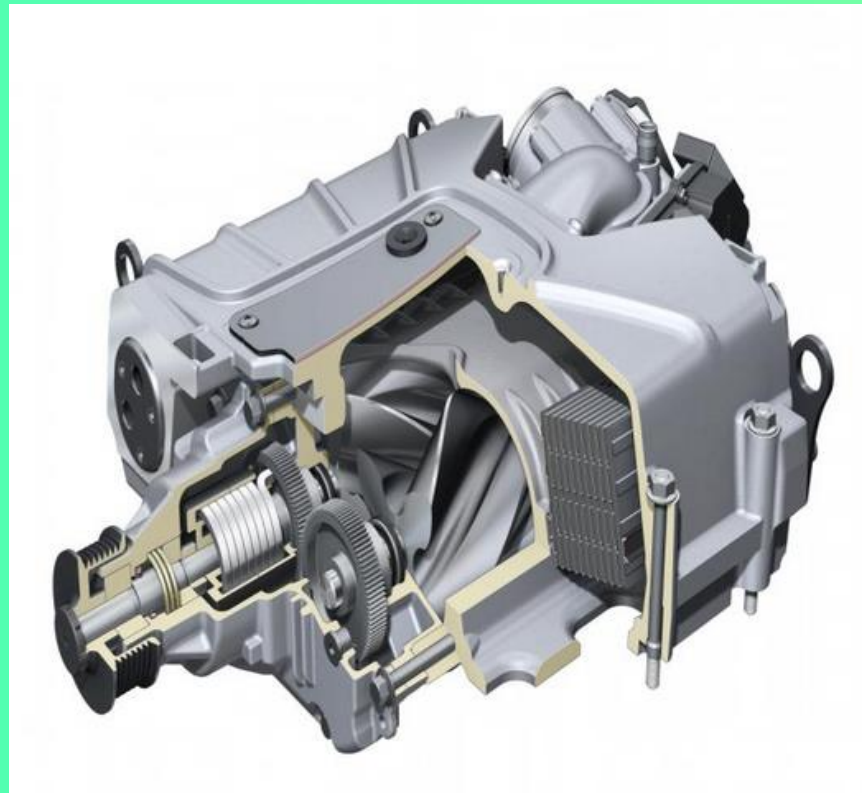


- **EGT SENSOR ACTIVE SUPPORT**

TURBOCHARGER OR COMPRESSOR



- **ELECTRIC ACTUATOR WITH VARIABLE GEOMETRY STEERING**



- **SUPERCHARGER WITH SELENOID**

IGNITION SYSTEM



- **ACTIVE COILS SUPPORT**



- **PASSIVE COILS SUPPORT**

IGNITION SYSTEM



- **ACTIVE COILS SUPPORT**



- **PASSIVE COILS SUPPORT**

ENGINE



- **WANKEL (ROTOR)
PISTON**



- **CLASSIC**

Business Interests & Plans



Integrated Automotive Technologies & Fuel Solutions



ELECTRONICS FACILITY



- **10,000 Sq.ft. ESD Flooring Space**
- **2 fully automatic SMT Lines**
- **150,000 components per hour with an accuracy of 10 microns.**
- **Automatic Insertion Machine for through hole components.**
- **Capable of mounting components viz**
- **QFP, SOIC, SOT, BGA & Chip from 0402**
- **Automatic Insertion Machine for through hole components**





AUTO RICKSHAW BUSINESS



CNG, LPG & Gasoline
Integrated Fuel Injection & Ignition
BSVI OBD2 Compliant
Local Manufacturing





MEDIUM & HIGH DUTY VEHICLES

MEDIUM DUTY

TO

HIGH DUTY

COMMERCIAL

VEHICLES



Ashok Leyland



Mahindra

SML
ISUZU



SMALL COMMERCIAL VEHICLES

4 Cyl	
3 Cyl	
2 Cyl	
1 Cyl	

- 150K vehicles on road
- Single Point (pre/post throttle) or
- MPFI (high/low pressure) Injection technology
- Turbo or Super-charged
- Mechanical or Electronic Throttle
- Customized & turnkey solutions
- EuroV upgradeable with no hardware changes
- Integrated component solutions
- Integrated CNG safety logics
- Bi-fuel options package protected

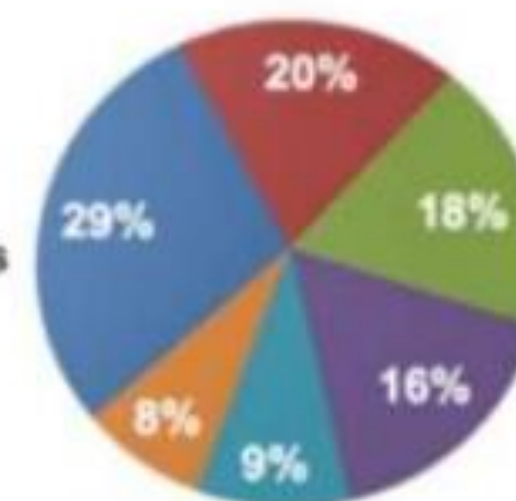
Technology Partner



Alternative Fuels



Patent Portfolio
Total >750
Patents/applications



- HPDI On-Engine
- Control Systems
- Cryogenics
- Spark-Ignited Direct Injection
- Other Technology
- Aftermarket Components

Broad Applications





Specialized Stationary Applications

- Mahindra , TATA Cummins 6BTA engines
- 100 kVA to 2 Mega Watt Gensets in India
- Objective – run on natural gas / pipe natural gas





National / International Retrofit Applications

- **1000 State Transport Buses in Maharashtra**
- **830 Buses & Trucks in Thailand**
- **Intercity Buses in India**
- **100 kVA to 2 Mega Watt Gensets in India**
- **Contract with major India OEM for CNG Retrofitment**

globally

Supplier of the Year Award

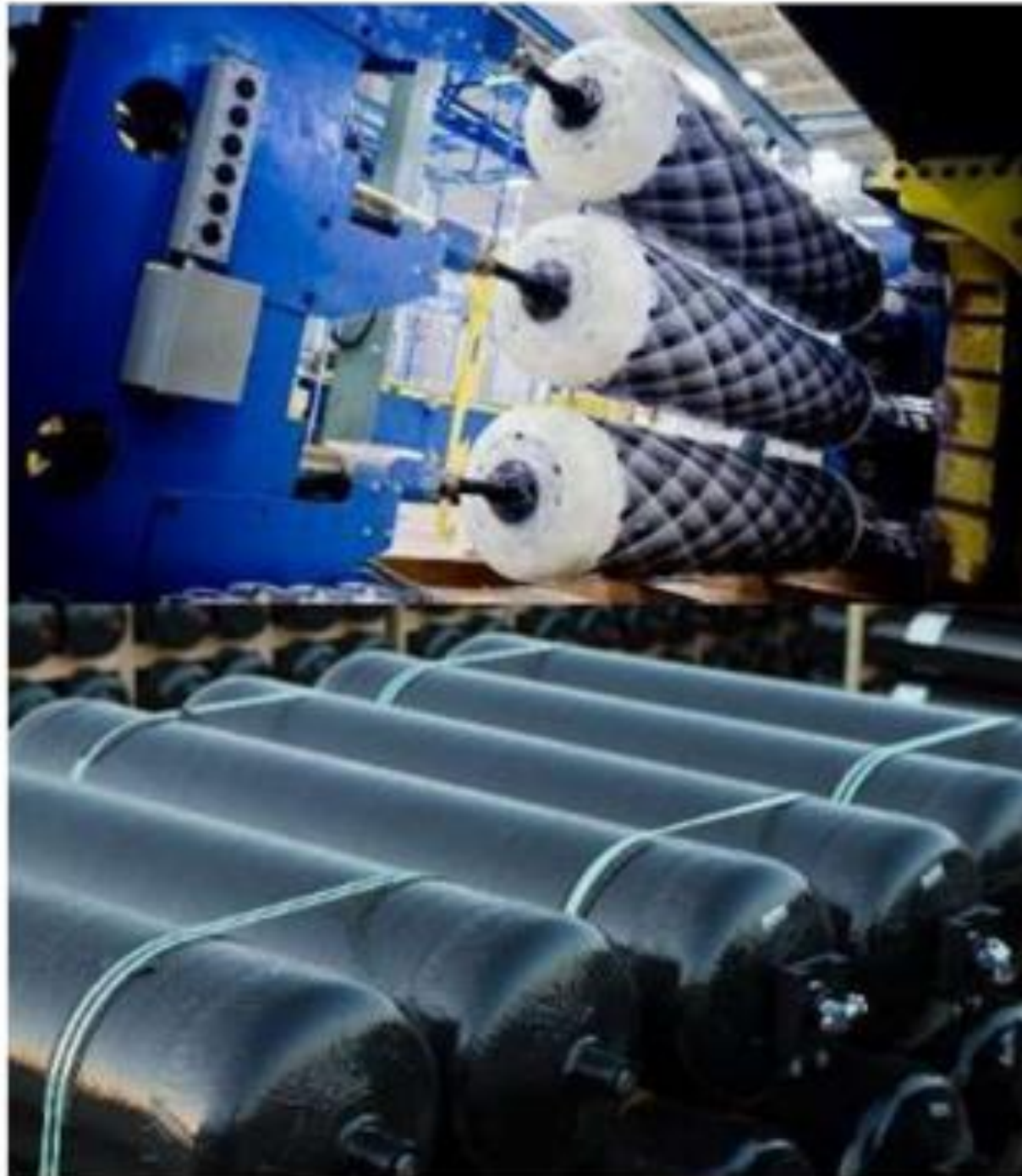
Supplier of the year Award

**Siddheshwar
Transport.
Linde PraxAir.
Year 2020-21**





TYPE 4 CYLINDERS



**Over 50 years of
manufacturing
experience**

**25+ year operating
service history with
Type 4 cylinders**

**Type 4 in operation
globally since 1993**



TYPE 1 CYLINDERS



TYPE 4 CYLINDERS PLACEMENT

Longitudinal



Transverse



In-Body



Frame Rail



GO GREEN WITH AUTOCRON

Better Enviornment , Better Tomorrow .

YOU!! Are the change , which nature
requires .



CHOOSE CNG TODAY

Gasoline Fuel Systems India



Facebook



LinkdIn



Instagram



L o o k F o r U S
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Thank You!

Contact us

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