

Published based on [Tata Nano Official Product Preview](#)

Tata Nano Official Product Preview

design...

8% shorter, 21% more interior space than Maruti 800

Monovolume design
Rear engine
Wheels at corners



In this post you are going to see slides from the PowerPoint presentation meant only for Tata officials. The presentation has loads of information on the [Tata Nano](#) and was meant to prepare the dealers for the launch of the Nano. There are lots of factors which Tata Motors considered while designing the Nano and the PPT helps us to see just that and more.

the applause..

“ This is a fantastic effort”

- Dr. Norbert Reithofer, Chairman, BMW

**“ This is a spacious car,
Not really a small car”**

- Tadashi Arashima, President & CEO, Toyota
Motors, Europe NV/SA

**“ This is really fantastic. This is
what we should try and achieve”**

- Carlos Ghosn, CEO- Renault- Nissan

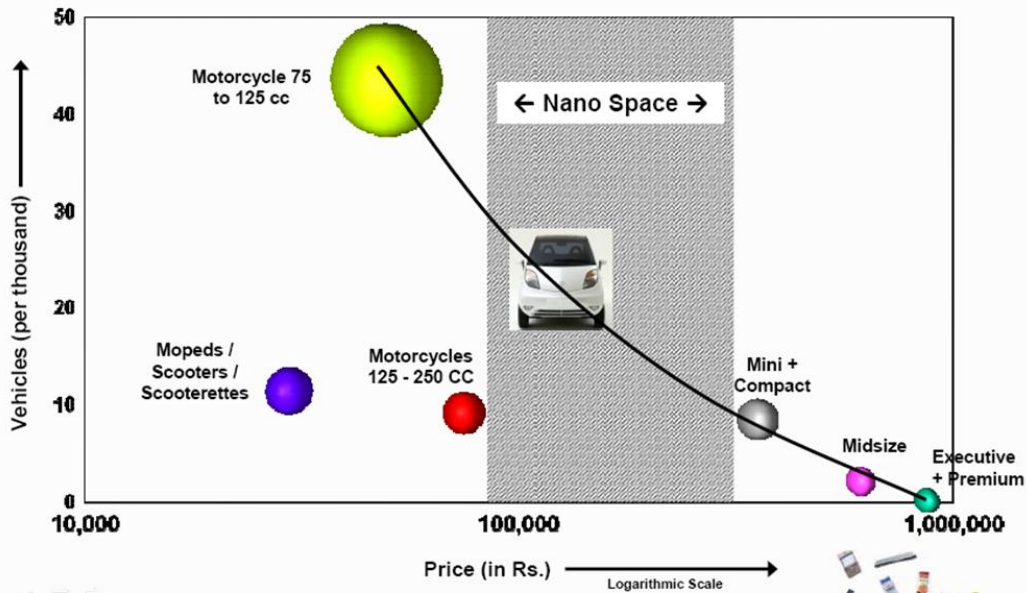
*“ This is a benchmark kind of model.
You Indians always make us think”*

“ We like this car”

- Jean Todt, CEO- Ferrari

- Rick Wagoner, CEO- General Motors

the gap..



the brief..

❖ Vision

- Safe & Comfortable means of transport for the masses.
- Low cost products can be effectively designed and developed in India
- Low cost is a universal challenge

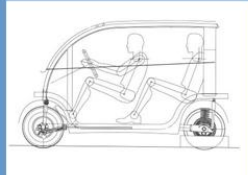
❖ Product Brief

- Cost of Acquisition – Rs 1 Lakh
- To carry four Adults
- Intracity transport
- Weather proof
- Comply all Indian Safety Norms



the drawing board..

 Mini Eter 1,200 1,400 1,600 1,800 2 passengers 1000cc, 1000cc, 1000cc, 1000cc engine	 Mini Nova 1,200 1,400 1,600 1,800 2 passengers 1000cc, 1000cc engine	 Mini Talo 1,200 1,400 1,600 1,800 2 passengers 1000cc, 1000cc, 1000cc, 1000cc engine	 Mini Pava 1,200 1,400 1,600 1,800 2 passengers 1000cc, 1000cc, 1000cc, 1000cc engine	 Mini Smart 1,200 1,400 1,600 1,800 2 passengers 1000cc
 Mini 500 1,200 1,400 1,600 1,800 2 passengers 1000cc, 1000cc	 Mini DIVANE 1,200 1,400 1,600 1,800 2 passengers 1000cc, 1000cc	 Mini Yoda 1,200 1,400 1,600 1,800 2 passengers 1000cc, 1000cc	 Mini Media 1,200 1,400 1,600 1,800 2 passengers 1000cc, 1000cc	 Mini Prestige 1,200 1,400 1,600 1,800 2 passengers 1000cc, 1000cc
 Mini City 1,200 1,400 1,600 1,800 2 passengers 1000cc, 1000cc	 Mini FT 1,200 1,400 1,600 1,800 2 passengers 1000cc, 1000cc	 Mini NEW 1,200 1,400 1,600 1,800 2 passengers 1000cc, 1000cc	 Mini Neighbor 1,200 1,400 1,600 1,800 2 passengers 1000cc, 1000cc	 Mini Car 1,200 1,400 1,600 1,800 2 passengers 1000cc, 1000cc



Highlights..

- Stylish looks
- Mono volume design
- Roomy passenger compartment
- Best in class leg space and head room
- Comfortably seats four persons

- Powertrain at rear
- Rear wheel drive
- Minimum weight in its class
- High fuel efficiency
- Meets all safety regulations
- Environment friendly - Low on emissions (CO₂ <= 110gms/km)

mechanical engineering..

Engine, Clutch

- Nano is a **rear engine – rear wheel drive car**
- This layout helps in having maximum passenger space in smaller overall vehicle dimensions
- This layout also helps in reducing NVH at driver seat

All Aluminium

Two-cylinder 624 cc Gasoline unit

- Making it light weight and high performance engine

Max Power of 35PS@5500rpm

Max Torque of 48Nm@3000rpm

- Combined with the low weight gives a benchmark power to weight ratio of 0.058 which is more than any entry level car

CLUTCH

- **Hydraulic clutch system** for reduced effort
- **Zero vibration** Pedal

mechanical engineering..

Transmission, Suspension

TRANSMISSION: Gear Box

- **4 forward speed & 1 reverse**
- **All forward gears are synchro-mesh** for smooth gear engagement.
- **Cable operated Gear Shift** for smooth gear shifting

The gear ratios are a perfect combination of city and highway driving

Gear ratios: 1st gear: **3.45** 2nd: **1.95** 3rd: **1.26** 4th: **0.838** reverse: **3.08**

Gear	Speed (km/h)	Gear	Speed (km/h)
1st	10	3rd	30-50
2nd	20-30	4th	50-70

SUSPENSION

Suspension is assembly of spring & damper mounted between body & axle to

- control vertical vehicle oscillations
- Absorb road shocks & give comfort (Ride quality)
- Safe maneuvering (handling quality)

Nano rides on **Mc pherson strut at front** and **semi-trailing arm susp. at rear.**

mechanical engineering..

Brakes/ Performance

BRAKES

- Braking is through drum brakes at front & rear.
- Parallel split, vacuum (booster) assisted
- hydraulic brake system.

PERFORMANCE

- **Acceleration – 0-60 km/h – 8 seconds**
- **Emissions – BS III/ BS II**
- **Top Speed – 105 km/h**

the competition?...

	Tata Nano	Maruti 800	Alto
Engine			
Engine type	2 cylinder in line , 624 cc	3 cylinder inline, 796 cc	3 cylinder inline, 796 cc
	Petrol MPFI BS-III, II	Petrol MPFI BS-III, II	Petrol MPFI BS-III, II
Max Engine Output	35 PS @ 5500 rpm	37 PS @ 5000 rpm	47 ps @ 6200 rpm
Max Torque Output	48 Nm @ 3000 RPM	59 Nm at 2500 rpm	62 Nm @ 3000 rpm
Transmission			
Drive	Rear-wheel drive	Front-wheel drive	Front-wheel drive
Gearbox	4+R-speed manual	4+R-speed manual	4+R-speed manual
Suspension			
Front	McPherson strut (Gas filled) & coil spring	McPherson strut (Gas filled) & coil spring	McPherson Strut with torsion type roll control device
Rear	Coil spring with gas filled shock absorbers	Coil spring with gas filled shock absorbers	Coil spring gas filled shock absorbers with three link rigid axle and isolated trailing arms

the competition?...

	Tata Nano	Maruti 800	Alto
STEERING			
Steering type	Mechanical rack & Pinion	Mechanical rack & Pinion	Mechanical rack & Pinion
Turning circle diameter (m)	8.0	8.8	9.2m
WHEELS & TYRES			
Tyres	Tubeless tyres Front: 135/70 R12 Rear: 155/65 R12	Front & rear: 145/70 R12	Front & rear: 145 / 80 R12
Wheel Rims	Front & Rear: 4B x 12	Front & Rear: 4B x 12	

Nano - Lowest Turning Circle diameter- Best in class maneuverability

the competition?...

	Tata nano	Maruti 800	Alto
DIMENSIONS			
Overall Length	3099 mm	3335 mm	3495 mm
Max Width	1495 mm :Over Body, 1620mm: Over ORVM	1440 mm	1475 mm
Overall Height	1652 mm	1405 mm	1460 mm
Wheelbase	2230 mm	2175 mm	2360 mm
Ground Clearance	180 mm	170 mm	160 mm
WEIGHT			
Kerb weight	600 Kg	655 Kg	720 – 735 Kg
PASSENGER CAPACITY	1 Driver + 3 passengers	1 Driver + 3 passengers	1 Driver + 4 passengers

the competition?...

	Nano	Nano CX	Nano LX	Maruti 800 Std	Maruti 800 AC	Alto	Alto LX	Alto LXi
EXTERIORS								
Bumpers	Grey	Grey	Body Coloured	Grey	Grey	Grey	Grey	Body colour
Wiper	2 speed	2 speed	3 speed	3 speed	3 speed	3 speed	3 speed	3 speed
Steering wheel w/o wheel covers	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ORVM	Black	Black	Body coloured	Black	Black	Black	Black	Body Colour

mechanical engineering..

Wheels & Tyres

Specification

Front : 135/70 R12

Rear : 155/65R12

Pressure

Front :26 psi

Rear: 28 psi

Spare tyre

Front : 135/70 R12

These specifications ensure optimum vehicle performance

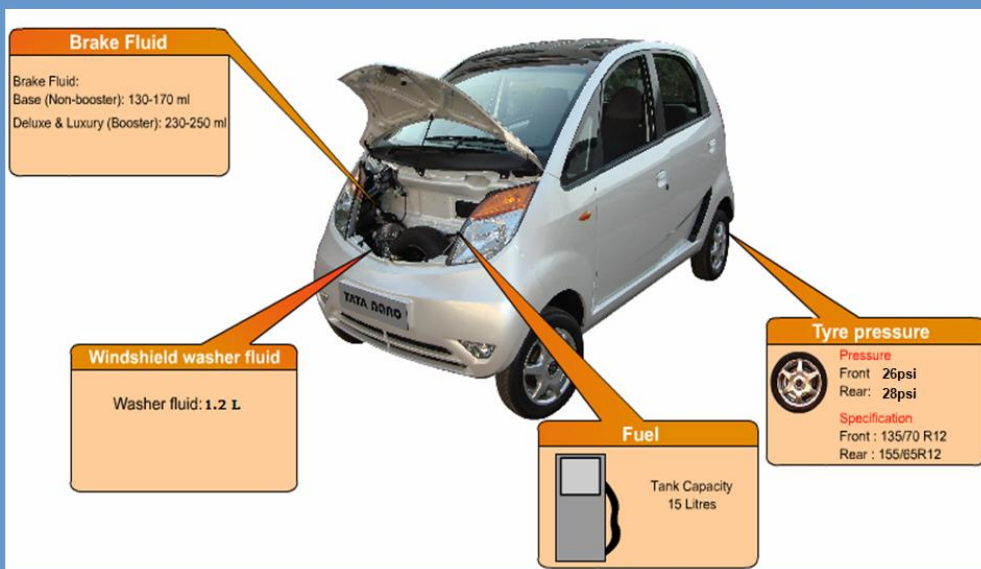
Incase of a flat tyre following instructions and caution must be strictly followed:

- It is recommended to drive vehicle with spare tyre at a speed limit of 40-60 km/hr
- Drive cautiously while running on spare wheel, especially on sharp turns on ghat
- It is recommended to replace the spare tyre with standard tyre at the nearest service service station

electronic engineering..

- **MPFI** - multi point fuel injection system.
- **ECU** - with an internal state of the art EPROM (erasable programmable read only memory)
- MAPS are Stored after extensive road / dynamometer trials.
- **SENSORS** with a a state of the art **32 bit microprocessor**.
 - Manifold absolute pressure sensor
 - Air temperature sensor
 - Lambda (oxygen) sensor
 - Throttle position sensor
 - Engine rpm / TDC sensor
 - Vehicle speed sensor
 - Coolant temp. sensor

@ the filling station..

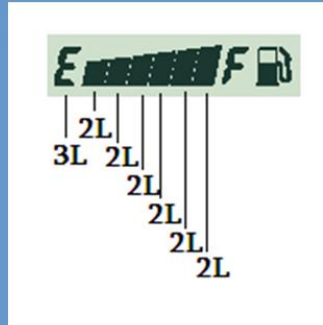


electronics – fuel..

Total capacity of the fuel tank is 15 litres. Each bar indicates 2 Litres of fuel. 'E' starts blinking when 3 Litres remain in the tank

For the safety of the power train, **the fuel gets cutoff at 5600rpm** at each gear and thus urges the driver to move to a higher gear if he keeps on revving the car in the same gear at high rpm

The fuel also gets cut off when speed touched 105 kmph with temp indicator lamp glowing.



Customer need to **fill fuel when 2 LEDs are glowing**

When all the LEDs are off, then **E starts blinking indicating immediate attention by Customer** for fuel filling

Battery Checking :

1. Open circuit voltage of fully charged battery : 12.4 to 13.2V
2. Specific gravity of fully charged battery 1.24 +/-0.1
3. Electrolyte level is above specified "Min" level.

The battery need to be checked once in a year at authorized workshop

Kindly use only following genuine oils, coolants , lubricants , anti rust & sound deadening coats, windscreen sealant, branded by TATA motors for optimum performance of your car...

Engine	Specification	Company & Brand	Qty
Engine Oil	SAE 15W40 API-SJ or higher grade	Castrol – Castrol GTX compact 15W40 API SJ	2.2L
Coolant (50:50) Antifreeze agent+ soft water	Class 2 Non Amino base/ JIS K2234	Sunstar: Golden cruiser premium 1400 NA	2L w/0 HVAC
		HPCL- HP Kool gard 'P' CASTROL- Control long life coolant BASF- Glysantin G3742 Henkel- Frostox SF D-12 IOC- Servo Kool Blue	3.6L with HVAC
Transaxle	EP80	IOCL	1.2L
Brake Fluid	IS 8654, DOT3	HPCL- Super duty brake fluid DOT-3 CASTROL- Universal Brake Fluid DOT-3	As Req.
Antirust treatment & sound deadning		DINITROL- Dinitrol, 3M- 3M, WUERTH- Wuerth	—
Wind Screen Sealant		WUERTH- Wuerth, 3M-3M, CAR SYSTEM	—

the three leads are...

nano

In BS II and BS III



nano CX

In BS II and BS III



nano LX

In BS III



features...

Nano

- BS II/ BS III compliant
- 3 colour options
- Seats with slider and recliner
- Grey bumpers & ORVM

Nano CX

Plus - -

- HVAC
- Metallic Option
- New Central Fascia
- Spoiler
- Tinted Glasses
- 2 Tone Door Trims
- Front Seats with Slider and Recliner
- 2 Tone Seats
- Vacuum Booster
- Parcel Shelf
- AB Pillar Trims
- High end headliner

features...

Nano LX

Plus - -

**Central Locking
Front Power Window
Body Colour Bumpers
Fog Lamps
(Front & Rear)**

- Antiglare IRVM
- Seats with Fabric
- 3 Spoke Steering Wheel
- Floor Console
- Instr Cluster w' Trip-meter
- Double Stalk Combi-switch
- Tip-tap Body Colour ORVM
- Roof Beading
- Co-driver Lock
- Gear Shifter Knob
- Long Reflector Head Lamp
- Moulded Door Trim

front.

Large headlamps are set high with turn indicators on top of head lamp unit. They give nano a distinct identity

As you stand in the front of the car, the first thing you notice is the sloping bonnet with a spine running in the middle. The 'Tata' Logo sits proudly in the centre of the bonnet in the middle



Wraparound bumper which is painted in body colour and houses fog lamps

side.

nano side profile has been called "egg shaped"
This gives tall stance to nano with ample space inside

Standing on the side of the car, you can see the mono-volume design with wheels set at four corners. This shape gives very generous passenger compartment with lot of head room and legroom

Body coloured door handles adds a touch of class to nano exteriors

Front quarter glass adds to overall feel of roominess in the nano

Outer rearview mirrors are stylish and placed for easy visibility of traffic following you.

Large & wide opening doors help in easy ingress egress for all passengers

The scoop on the body not only adds to unique style of nano, it helps providing air to cool the engine

Another unique style feature is Style-in-steel wheels. The wheels look like alloy wheels and give very sporty look to nano.



back.

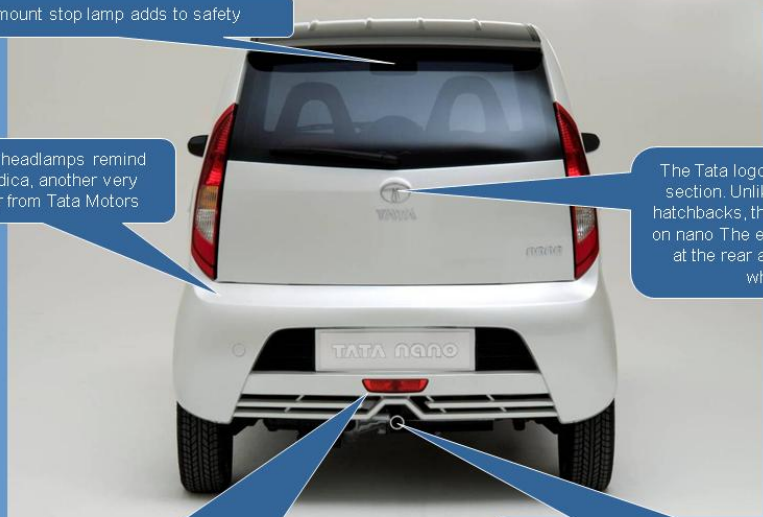
The high mount stop lamp adds to safety

At the rear, tall headlamps remind you of Tata Indica, another very successful car from Tata Motors

The Tata logo sits on the rear section. Unlike conventional hatchbacks, there is no tailgate on nano. The engine is mounted at the rear and drives rear wheels

The reflector (brake light /Fog lamp) aids in visibility during night and bad weather

Another first on nano is central exhaust



the biggies!!!

- INNOVATIVE
 - **34 listed PATENTS**
- LIGHT
 - **Minimum weight in its class**
- EFFICIENT
 - **Delighting fuel efficiency – 23.6 kmpl by ARAI**
- SAFE (Meets all Safety regulations)
 - **Full Frontal Crash**
 - **Roof Crush (Roll Over)**
 - **Side door intrusion for doors etc.**
 - **Tata Nano design is also package protected for European safety tests like offset frontal & side impact.**
- GREEN
 - **BS III compliant, emissions much less than the requirements**
- FAST Top Speed **105 kmph**
- POWERFUL Gradeability **30%**

We got our hands on the presentation thanks to our cool friends at [IndianAutosBlog](#).

You can also find this article published on [Tata Nano Official Product Preview](#), and on the tag pages [Tata Nano](#).