Fuel Tank Range and Reserve Distance

Driving range on a full tank and on the fuel now in the tank, and the distance available on the reserve, from tank size and fuel consumption in L/100 km.

Method: Fuel consumption arithmetic

Input parameters

Unit system: SI

Parameter	Value	Unit
Usable tank volume	55.000	L
Current fill level	35.000	%
Reserve volume (warning light)	7.0000	L
Fuel consumption (L/100 km)	6.8000	

Calculated results

Parameter	Value	Unit
Range on a full tank	808.82	km
Range on the fuel now in the tank	283.09	km
Distance on the reserve	102.94	km
Fuel economy	14.706	

Notes for this case

• Range is fuel volume divided by consumption per kilometre: s = V/(c/100) with V in litres and c in L/100 km. The economy output is the same consumption expressed in kilometres per litre. Use the consumption for the type of driving ahead (motorway, city, towing); gauges and range estimators are approximate near empty.

Formula and method

$$s = \frac{V}{c/100}$$

Variables

V_t	Usable tank volume	m³
f	Current fill level	-
V_r	Reserve volume (warning light)	m³
c	Fuel consumption (L/100 km)	-
s_{full}	Range on a full tank	m
s_{now}	Range on the fuel now in the tank	m
s_{res}	Distance on the reserve	m
η	Fuel economy	-

Method and standards

Tank range.

Assumptions and limits

- Constant consumption.

References

Fuel consumption arithmetic

Report details

Report reference	FCC-T6VY-N8KT (the same inputs always give the same reference)
Generated	23 November 2026, 18:00 UTC
Calculator	Fuel Tank Range and Reserve Distance
Method last reviewed	17 November 2026
Software release	FireCAD Calc, release of 22 November 2026
Release checks	3 reference cases of this calculator, computed independently, are checked on every release

Results are for engineering estimation. Verify critical designs against the referenced standards and your own data.

This calculator online

https://calc.firecad.com/automotive/vehicle-dynamics/fuel-tank-range

Open this case on calc.firecad.com →

Reopens the calculator with the inputs of this report.