Volume Flow Unit Converter (m³/h, L/min, gpm, cfm, MLD)

Convert a volume flow between m³/s, m³/h, m³/min, m³/day, ML/day, litres per second and per minute, US and imperial gallons per minute, cfm and cubic feet per hour.

Method: NIST SP 811 (2008); Appendix B conversion factors

Input parameters

Unit system: SI

Parameter	Value	Unit
Volume flow (choose its unit)	83.333	m³/h

Calculated results

Parameter	Value	Unit
cubic metre per second	0.023148	m³/s
cubic metre per hour	83.333	m³/h
cubic metre per minute	1.3889	m³/min
cubic metre per day	2,000.0	m³/d
megalitre per day (MLD)	2.0000	ML/d
litre per second	23.148	L/s
litre per minute (LPM)	1,388.9	L/min
US gallon per minute	366.91	US gal/min
imperial gallon per minute	305.51	imp gal/min
cubic foot per minute (cfm)	49.048	ft³/min
cubic foot per hour	2,942.9	ft³/h

Notes for this case

- A volume flow of a gas depends on its pressure and temperature; convert gas flows to normal conditions with the gas flow normal/actual calculator.

Formula and method

$$1\ \text{US gal} = 231\ \text{in}^3 = 3.785\,411\,784\ \text{L}, \quad 1\ \text{imp gal} = 4.546\,09\ \text{L}$$

$$1\ \text{ft}^3/\text{min} = 1.699\,011\ \text{m}^3/\text{h}$$

Variables

Q	Volume flow (choose its unit)	m³/s

Method and standards

Exact definitions of the gallon and the foot (NIST SP 811).

Assumptions and limits

- Volume flows of gases depend on pressure and temperature; this converts units only.

References

- NIST SP 811 (2008)
- Appendix B conversion factors

Report details

Report reference	FCC-GKBM-3ZM6 (the same inputs always give the same reference)
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Calculator	Volume Flow Unit Converter (m³/h, L/min, gpm, cfm, MLD)
Method last reviewed	12 November 2026
Software release	FireCAD Calc, release of 17 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/general/unit-conversions/flow-unit-converter

Open this case on calc.firecad.com →

Reopens the calculator with the inputs of this report.