



SCFM versus Nm³/hr

Standard Air Flows in English and Metric Units

Conversions Between the Two Systems

Standard Conditions*

	English / USA	Everyone Else / Metric
Temperature:	70 °F / 530 °Rankin	0 °C / 273 °Kelvin
Pressure:	1 atm / 406.8" WC	1 atm / 101.3 kPa

Examples

1,000 ACFM (actual ft³/min)

@ 95 °F and -10" WC

What is this Air Flow in SCFM?

$$\left(\frac{1,000 \text{ ft}^3}{\text{min}} \right) \left(\frac{(460 + 70 \text{ standard ft}^3)}{(460 + 95 \text{ actual ft}^3)} \right) \left(\frac{406.8 - 10" \text{ WC}}{406.8" \text{ WC}} \right) = 931.5 \text{ SCFM}$$

1,000 Actual m³/hr

@ 35 °C and -2.5 kPa

What is this Air Flow in Nm³/hr?

$$\left(\frac{1,000 \text{ ft}^3}{\text{min}} \right) \left(\frac{(273 \text{ Normal m}^3)}{(273 + 35 \text{ actual m}^3)} \right) \left(\frac{101.3 - 2.5 \text{ kPa}}{101.3 \text{ kPa}} \right) = 864.5 \text{ Nm}^3/\text{hr}$$

And what is 1,000 SCFM as Nm³/hr

$$\left(\frac{1,000 \text{ ft}^3}{\text{min}} \right) \left(\frac{(60 \text{ min/hr})}{(3.281 \text{ ft/m})^3} \right) \left(\frac{273 \text{ Nm}^3}{273 + 21 \text{ m}^3} \right) = 1,577.4 \text{ Nm}^3/\text{hr}$$

*Please check that your standard temperature and pressure values are the same!

Other 'standards' do exist. If needed, adjust to your standard values.

Contact: info@raschig-usa.com call 817-695-5680 www.raschig-usa.com