

Secure your place to attend the BBE Consulting's **VUMA ventilation network modelling course** 23 – 24 March 2020 & 30 – 31 March 2020

The two-day training will be held at Perth and Brisbane Australia, with a limited number of spots being released for industry professionals. **Course attendees will receive a free copy of the software.**

To register your interest or for more details email christo@vuma3d.com or info@vuma3d.com

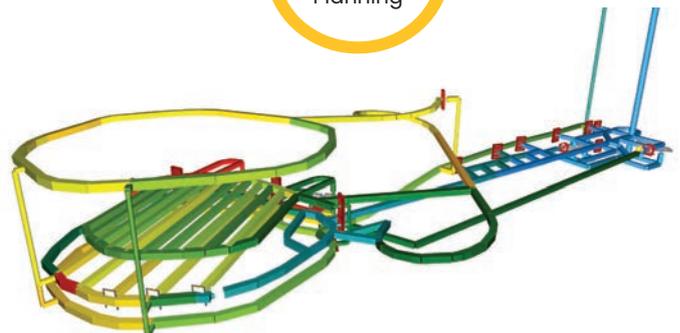
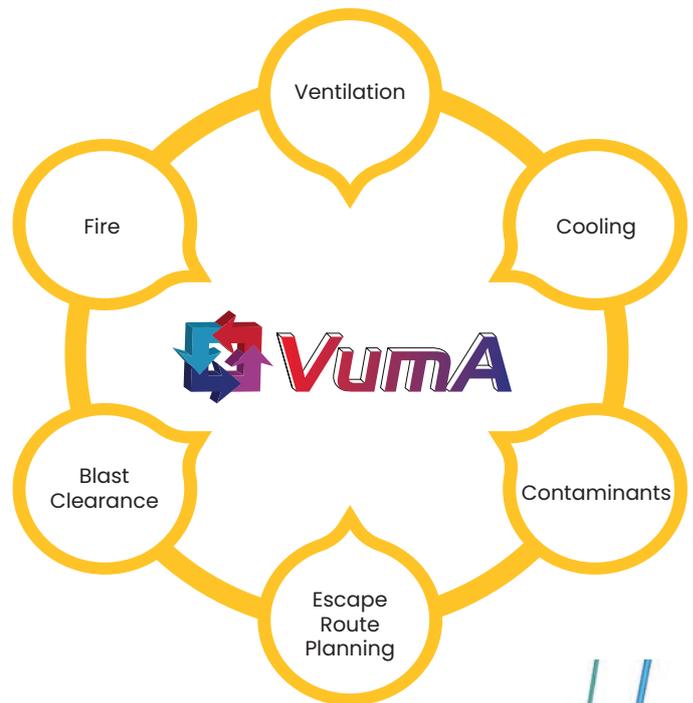
VUMA Software Now available at no cost*

Global leading mine ventilation and refrigeration software program VUMA, is delighted to announce their heat, cooling and ventilation simulation software will now be available **at no cost***

Download it now from
www.vuma3d.com

By supplying our software at no cost, VUMA strengthens our commitment to improving the occupational safety and health of underground mine workers across the world.

Created by BBE engineers, the VUMA software utilises a combination **thermodynamic and aerodynamic** interactive mine network modelling. The team is committed to delivering a user-friendly software package that consistently drives improvements in safety, operation and performance for ventilation engineers.

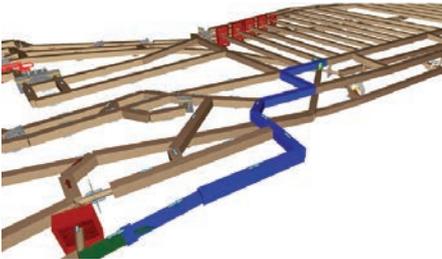


**A nominal annual maintenance fee towards updates and continued support may apply after a year of use.*



Our comprehensive software innovations include:

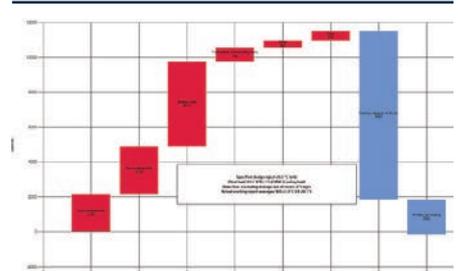
Escape route planning



Allows for safe travel distance planning from working areas to refuge chambers. Includes inclines and slopes (angle of travel) against the capacity of the self-rescue packs.

VUMA is an interactive network simulation program developed to assist mine ventilation engineers and practitioners to plan, design, operate and control cooling and ventilation systems for underground mines.

Energy balance



Shows a graph of all the thermo flows (heating and cooling) in any model, enabling users to determine if an appropriate balance has been achieved.

Capital costing of ventilation infrastructure

Name	Type	Description	Year	Unit
10000 Base	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
5 BAC	(Watt) Open defined resist...	10 Pa/m ² 720'	2020	kgp
10000 No1 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No2 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No3 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No4 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No5 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No6 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No7 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No8 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No9 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No10 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No11 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No12 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No13 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No14 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No15 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No16 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No17 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No18 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No19 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp
10000 No20 Shaft	Tunnel induced area	(Watt) 3.0 m x 3.0 m (Open)	2018	kgp

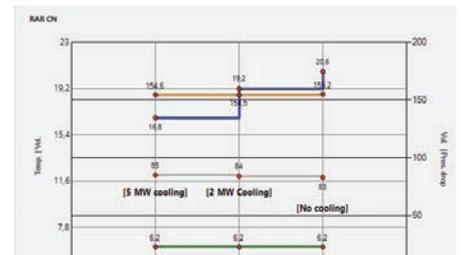
An easy to use cost breakdown dashboard in either monthly or yearly total, available in preferred currencies.

Mass flow dashboard

Allows for users to identify leakages and ventilation issues, as well as view network In-flow Outflow balance as well as an air utilisation graph.

Download it now from
www.vuma3d.com

What-if analysis



Allows for comparison of simulations to see the knock-on effect of any change in input parameters.

VUMA is a strategic, tactical and operational resource for mining businesses, able to fully integrate rapid modelling functionality by enabling direct imports from various mine planning packages (like Maptek, CADSMine, Deswik, DataMine, Surpac etc.).

To find out more about VUMA or register your interest for a training session, email christo@vuma3d.com

