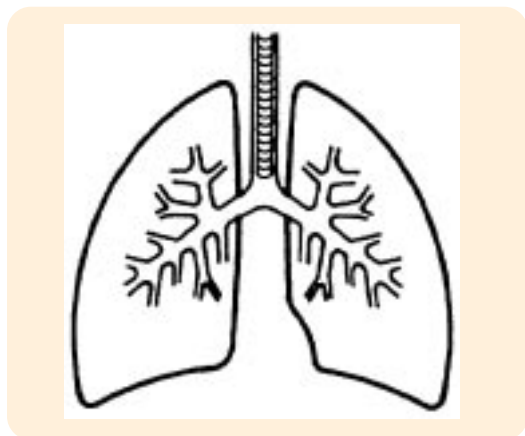


Selecting an Animal Ventilator



- Over 75 years of animal ventilator experience
- Thousands of Harvard Ventilators in use worldwide
- Numerous styles from which to choose
- Pressure controlled and volume controlled ventilators
- Advanced Microprocessor-controlled ventilators
- Reliable, Durable, Rock Solid Construction

Animal ventilators have been manufactured by Harvard Apparatus for more than 75 years. These ventilators are based on the original designs of Dr. William T. Porter, who was a Professor of Physiology at Harvard Medical School, a strong proponent of physiology education and training through The American Physiological Society and the founder of Harvard Apparatus. A range of animal ventilators is available for species from mice to large dogs (15 g to 50 kg).

We now offer the most advanced animal ventilators on the market, the new Inspira, Advanced Safety Ventilators. Two models of the Inspira ASV ventilator are available, volume controlled (Inspira ASV_v) and pressure controlled (Inspira ASV_p). Both Inspira ventilators offer microprocessor control, easy-setup and operation, alphanumeric display, airway pressure monitoring, assist mode, sigh breath, variable Inspiratory:Expiratory (I:E) ratios, digital rate and digital volume. The Inspira ventilators also feature SafeRange™, a rapid setup system which uses the animals weight to calculate 'average' ventilation parameters such as rate and tidal volume. The ventilator defaults are set, but can be changed by the user. A 'safe range' around these average values is computed and the user is warned whenever a respiratory value entered by the user is outside of the SafeRange™, for more details. We now offer an updated version of our Starling ventilator which has an improved user interface, digital rate display and three models with different volume ranges. Also new are the HSE-Harvard MiniVent for mice, and the Multi-Channel Ventilator for rodents. Our traditional volume controlled ventilators have become the industry standard for research animal ventilation. Most will deliver a lifetime of service when properly maintained. The table below provides some quick reference information to help you locate the ventilator which best suit your research needs.

Harvard's Animal Ventilators

Model	Species	Pressure Controlled	Stroke Vol Range (CC)	Rate Range (BPM)	Digital Rate Display	Phasing (I:E Ratio)	110 V	220 V	Page(s)
ASV _v	Mice to Rabbits		0.1 to 100 cc	5 to 150	Yes	1:4 to 4:1	CGS-8498.68	Same	F3 to F5
ASV _p	Mice to Rabbits	Yes	NA	5 to 150	Yes	1:4 to 4:1	CGS-8499.68	Same	F3 to F5
687	Mice, Small Birds		0.1 to 1 cc	18 to 150	Yes	1:1	CGS-8500.68	Same	F6
683	Rats to Rabbits		0.5 to 5 cc 3 to 30 cc	18 to 150	Yes	1:1	CGS-8501.68	Same	F6
MiniVent	Mice, Small Birds		0.03 to 0.35 cc	60 to 400	No	1:1	CGS-8502.68	8508.68	F7
MultiVent	Mice to Guinea Pigs	Yes	NA		No	Insp Time: 10 to 80 %	System*	System*	F8
665	Rabbits, Cats, Dogs		4 to 100 cc		No	Insp Time: 35 to 65 %	CGS-8503.68	55-0806	F9
Starling	Rats to Rabbits		0.25 to 2.5 cc 1.0 to 10 cc 3.0 to 30 cc		Yes	1:1	CGS-8504.68 CGS-8505.68 CGS-8506.68	CGS-8509.68 CGS-8510.68 CGS-8511.68	F9
613	Cats to Large Dogs		30 to 750 cc		No	Insp Time: 25 to 50 %	CGS-8507.68	CGS-8512.68	F10

In addition to our line of animal ventilators we also offer virtually all of the other accessories necessary to make your animal ventilation safe and reliable. Anesthesia machines are available in several different styles and form factors suitable for a wide range of animal sizes including: the top of the line CDS-2000, to a non-rebreathing table top system.

The multi-station ventilator, and the Coax rebreathing system, offer larger research groups the opportunity to anesthetize multiple animals using a single anesthesia setup. Our vaporizer line has been expanded to include the three most popular

styles of anesthetic vaporizers, Tech 3, Tech 4 and Ohio 100 with a choice of Isoflurane, Halothane and now Sevoflurane. Intubation tubes and cannulae have been expanded to include sizes suitable for mice, rats and guinea pigs. A range of respiratory gas monitors, including many pulse oximeters, is available to assist in monitoring the animals physiological state during anesthesia and ventilation. Accessories and supplies for large animal physiology are also available including spirometers, gas collection bags respiratory valves and many others.