

DARVALL Smooth-Wall Circuits

Efficient & Responsive Anesthesia Breathing Systems



Corrugated 3/4" hose compared to 1/2" & 5/8" ID smooth wall hose



3/4" molded end connects to circle system



Stress relief protects hose at molded junction



5/8" molded end connects to pediatric Y piece

Reduce breathing hose volume by up to 70%
Use circle systems with smaller animals & Save \$

- Easy to clean & dries fast!
- Molded ends - reliable connection
- **Circle Systems** reduce heat-loss
- **Economical** low gas flows

SWT Sizes for Anesthesia of Dogs & Cats

	Weight lb	Tubing ID "	Length ft
Medium/Large Dog	45lb +	5/8	5
Cat/Small Dog*	5 - 45lb	1/2	5

*use with Darvall Low Volume CO₂ Absorber

Smooth Wall Tubing has Low Resistance & Low Volume You don't need 3/4" (22mm) corrugated hose to anesthetize dogs & cats

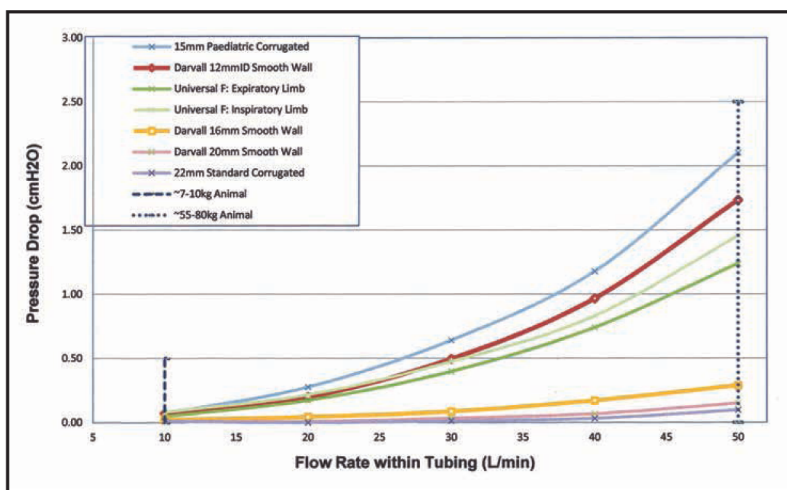
Darvall Smooth Wall Tubing (SWT) reduces tube volume by up to 70% for faster circle system response in very small animals. Tubing accounts for up to 1/2 the resistance of circle absorber systems¹. Darvall's small diameter, smooth wall tubing has been shown to produce less resistance than typical 22mm(3/4") corrugated tubing. Darvall SWT 16mm(5/8")ID x 1.6M(5') long can support animals up to 80kg(175lb) with less than 0.5cm H₂O pressure drop; Darvall SWT 12mm(1/2")ID x 1.6M(5') long can support animals up to 40kg(90lb) [see graph]^{1,2}.

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SWT offers a huge efficiency advantage (volume of gas relative to the size of animal) requiring as little as 63% (SWT 16) and 32% (SWT 12) the volume of 22mm(3/4") ID corrugated tubing or Universal F tubing. SWT reduce volume and enable circle systems to be used on very small animals down to 2kg (5lb) at economical low gas flows.

References

1. CI Dunlop, JS Dunlop, T Wallis et al. Efficiency, volume and flow resistance of anaesthesia circle system breathing hose. Abst. ACVA Ann. Meeting, San Antonio TX, Sept 2012
2. T Wallis, CI Dunlop, JS Dunlop et al. A model for analysis of flow resistance in a circle system designed for small animals to 2kg. Abst. WCVA, Capetown S. Africa Sept 2012



Pressure drop flowing medical air through straightened hoses with 1.6M(5') patient length. Flows between 10 and 50 L/min were used to simulate peak flow rates in animals with weights in the range 7kg-80kg (15lb-175lb).