v-gel® Newsletter

July 2023

Welcome to our newsletter designed to give useful information and tips to clinicians already familiar with the v-gel® or those who are considering adopting it into their anaesthetic protocol.
You will find much more information, including videos and webinars on our website and please consider following us on Facebook

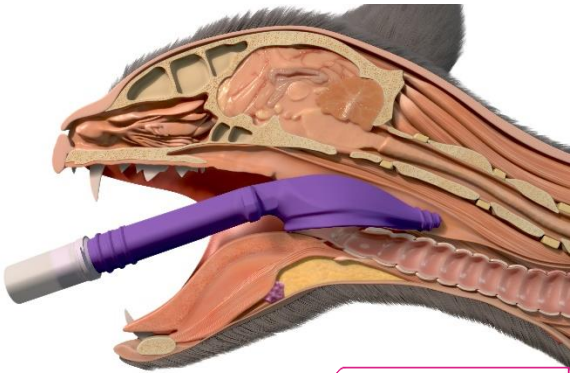
What is a v-gel®?

A v-gel® is simply a supraglottic airway device.

Due to anatomical differences of all species, the v-gel® is designed specifically for each one. As it re-lines the peri-laryngeal space in the hypopharynx, it creates a seal over the whole laryngeal framework rather than passing directly into the trachea.

There is no requirement for inflation and, as the device does not touch the upper airway structures, no trauma or laryngospasms are caused.

The v-gel® is currently available for cats, dogs and rabbits (please check with your country distributor for availability) with more species in the pipeline.



Major Benefits of v-gel®

- Devices that keep a patent airway without touching upper airway structures
- No narrowing of airway and therefore no increase in airway resistance
- No tracheal cilia trauma
- No laryngeal trauma
- No laryngospasms caused
- Low dead-space connectors
- No Inflation required
- Protection against regurgitation & aspiration
- Suitable for most head shapes!
- Comfortable for patients post-operatively - smooth recovery, no stridor and coughing
- Staff health and safety - minimal leakage of anaesthetic gas into environment
- Quick and easy to place so airway can be established quickly

v-gel® Newsletter

July 2023

"I don't use an airway device in all surgical procedures"

We do hear some clinics will often perform quick procedures without any airway device being used... However, once anaesthetised, even for a short time, patients have no protective control of their airway

- Patients, especially placed in dorsal recumbency, have a risk of the tongue and/or food obstructing the airway.
- If sub-optimally anaesthetised, material touching larynx can cause laryngospasms
- No airway protection against reflux aspiration

It is easier to place an airway device whilst there is no pressure of an emergency situation.

Time and added costs are two common reasons for the lack of airway device. The v-gel® can certainly save time & money with its speedy placement and often lives too!

"I don't need the v-gel® - I can intubate?"

Sadly, common endotracheal tube issues are often accepted as normal: coughing and stridor over the anaesthesia recovery period for example. But **v-gel® airway devices** are not all about whether you can or cannot intubate.

The speed of v-gel® placement can be advantageous in emergencies and, for those species that are difficult to intubate, perhaps consider a v-gel® if the recommended two attempts of endotracheal intubation fail. The biggest advantage for most patients is the post-anaesthesia comfort and the lack of trauma. We know both the larynx and tracheal wall is damaged to varying degrees with endotracheal intubation: the v-gel® not only avoids this but is much more comfortable as the patient recovers. The v-gel® also isolates the upper airway and so protects this against fluid aspiration of dental coolant water or reflux/regurgitant. Both the cat and rabbit versions will seal off the upper oesophagus, whereas the dog version has an integral gastric channel to give various treatment protocols to the anaesthetist.

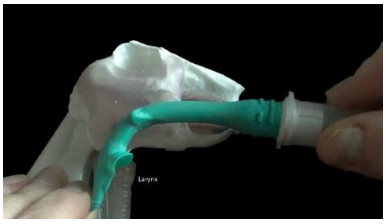
v-gel® Newsletter

July 2023

Size selection

The key to a successful v-gel® anaesthesia is the correct size and proper placement. Base your choice on the largest size available for the ideal body weight of your patient (also the head shape for rabbits and dogs), decrease the size if necessary.

RABBIT v-gel® Sizing Guide	
Size	Ideal body weight of rabbit
R1	0.6 – 1.5kg (1.3 – 3.5lb)
R2	1 – 2kg (2 – 4.5lb)
R3	1.8 – 3.5kg (4 – 8lb)
R4	2.5 – 4kg (5 – 9lb)
R5	3.5 – 5kg (8 – 11lb)
R6	4.5kg+ (10lb+)



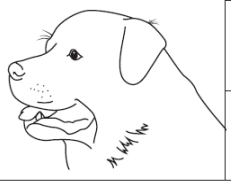
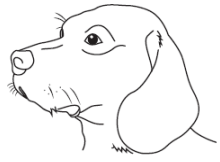
Whilst the rabbit is conscious, place the bowl level with the externally palpated larynx, bend it round, following the airway path, to the incisors. Ideally the incisors should fall level with the widening/first tying in ridge of the connector. If the device is too large, too much airway channel will protrude from mouth. If too small, connector wings will be too close to incisors. Having this oropharyngeal measurement will give you confidence whilst placing the device.

Easy to Give isfm Approved

CAT v-gel® Sizing Guide	
Size	Ideal body weight of cat
C0	0.5 – 1kg (1 – 2lb)
C1	1 – 2kg (2.5 – 4.5lb)
C2	1.5 – 3.5kg (3 – 8lb)
C3	3 – 5kg (6.5 – 11lb)
C4	4.5 – 6kg (10 – 13lb)
C5	6kg+ (13lb+)

v-gel® advanced

This table is intended to be a guide only. The right size v-gel® will be determined by the size and shape of a dog's pharynx, which varies depending on the breed, size and head and neck shape of the dog.

Head shape – Brachycephalic	Lean weight of dog	Head shape – Mesocephalic	Lean weight of dog	Head shape – Dolichocephalic	Lean weight of dog	Size/ Product code
	6 – 10kg 13 – 22lb		4 – 7kg 9 – 15lb		2 – 4kg 4.5 – 9lb	D3 = D20003
	9 – 15kg 20 – 33lb		6 – 10kg 13 – 22lb		4 – 7kg 9 – 15lb	D4 = D20004
	14 – 20kg 30 – 45lb		9 – 15kg 20 – 33lb		6 – 10kg 13 – 22lb	D5 = D20005
	19 – 26kg 42 – 57lb		14 – 20kg 30 – 45lb		9 – 15kg 20 – 33lb	D6 = D20006

Select head shape of the patient. Include the muscular heads of the fighting breeds, eg Staffordshire bull Terrier, Rottweiler, within the Brachycephalic group, as they often have slimmer internal structures due to this muscle mass. Determine the ideal body weight for that patient within the head group, and the chart above will indicate the Dog v-gel® size best used for that patient.

v-gel® Newsletter

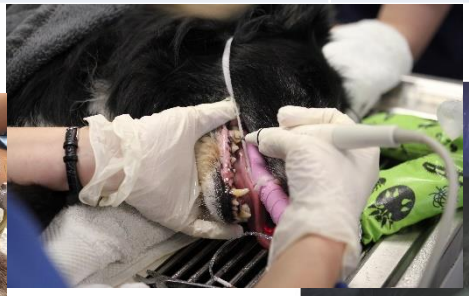
July 2023

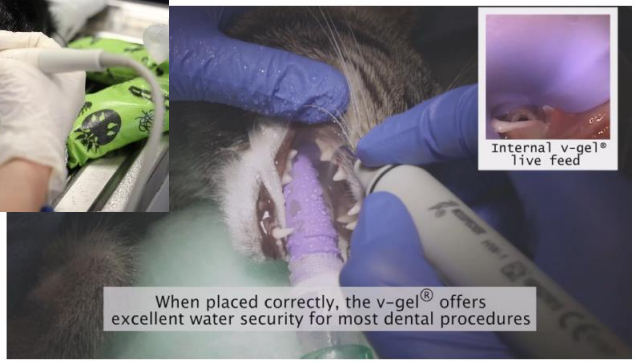
What airway device would you choose ?

v-gel® airway devices are suitable for most anaesthesia procedures, but there are some circumstances whereby different airway devices should be used. Here are some examples This list is not limited.

Facemask	Endotracheal tube	v-gel® Advanced
Pre- anaesthesia Oxygenation	Procedures whereby access to pharynx is required. eg. pharyngeal feeding tube placement, access behind soft palate or BOAS surgery,	Procedures whereby endotracheal placement would extend time or risk trauma.
For anaesthesia maintenance with volatile gases ONLY when there is no other safer option for the species	Passing of gastroscope	Passing of bronchoscope or bronchial lavage catheters
	Compromised airway such as collapsed trachea or full/partial paralysed arytenoids (larynx)	Dental procedures in cats and dogs whereby water coolant is used, preventing potential aspiration
	GDV – initial decompression of stomach during passing of stomach tube	GDV – post decompression with now increased risk of reflux/regurgitation
	Neuromuscular block used in GA protocol	Emergency resuscitation when a quick secure airway is required for CPR
		Facial or Jaw trauma limiting visualisation of larynx

v-gel® in dentistry





- v-gel® gives excellent water seal
- v-gel® can be moved side to side for access to both sides of teeth
- Excellent for Xray plate support

Size selection is ideally C4 or C3 for smaller adult cats

Easy to Give isfm Approved

v-gel® Newsletter

July 2023

Do you have to use a capnograph?

Although considered the most useful of all technical anaesthesia monitors, not all clinics have the luxury of owning a capnograph. This does not mean you cannot use the v-gels®.

On initial placement, it is essential to be confident the v-gel® has been sized correctly and is sited giving a good patent airway. This can be done very simply, without any expensive tools by

- Listening for a clear patent airway. Any noise detected, when listening with a stethoscope against the pharynx, will indicate a potential problem. The patient anaesthesia plane, the v-gel® size and placement should all be re-assessed. Noise heard could be from a fold of the v-gel® skirt if not splayed out on tongue during placement, or a laryngospasm if the patient is too lighter plane of anaesthesia.

- Placing fur or cotton wool to the adaptor and watching for air movement as the animal breathes spontaneously

- Connecting to the breathing circuit or ambu-bag and gently giving the patient a positive pressure breath, watching the chest rise.

This last bulleted technique is very useful to ascertain there is no gas leak and the seal pressure is sufficient if assisted ventilation is required.
Whilst the chest is raised, hold the patient's breath for a few seconds. watching for any uncontrolled drop or listen for leakage with a stethoscope against the pharynx. If there is leakage and the chest cannot be held, then the size and/or positioning needs to be reassessed before manual or mechanical ventilation is started

Capnography is, of course, useful to assess active ventilation of the patient but also a continuing patent airway should the patient be moved, during anaesthesia. But this too can be completed or confirmed without the need of a capnograph. The anaesthetist should always be alert of any potential issues and a simple positive pressure breath performed regularly during maintenance will, not only confirm placement, but also inadvertently assist patient's ventilation should it actually be required.