

# VORTX

## Technical Document



## Control Zone products – FliBlade LLC

Based in Yorkshire in the UK and Atlanta GA in the USA. Control zone products/FliBlade are an independent manufacturer of Insect Light Traps. The management team have been involved in the design and manufacture of insect light traps for over 40 years and have been working with pest controllers to provide a new patented product called VortX.

For many years since gluetraps were designed for the commercial market manufacturers continued to design their product in the old fashioned “box” style. This came from the old zapper designs where fingers had to be protected so a box like cage was purposely put around the electric killing grid. Unfortunately, the same manufacturers simply swapped the killing grid for a harmless glueboard???

Why is the “box” design so bad? Well the most important part of the insect light trap is allowing as much light out as possible. The more light, the quicker and larger the catch and by combining direct UV light with Reflective light the results are even better! The problem with the box design is that it only allows direct UV light and the metal case prevents the light for obvious reasons!

This meant part of our design brief was to change the way light traps were built, to allow as much direct and reflective light as possible. This also has other knock on effects such as:

VortX metal is reduced by 90% making it cost less and more environmentally friendly.

The glueboard can be changed tools free in 5 seconds.

VortX is light weight and can be positioned in 3 different ways.

Another problem that VortX addresses is the fact that different style lights are needed in different locations! VortX starts as a simple patented bracket and can be transformed for either a back of house/prep area, Front of house serving area and any eating area – this is simply done, not by using a different model but by changing the cover! Very simply, VortX is designed to be positioned anywhere by giving it a change of coat.

Finally, your brand is worth a massive amount in today’s commercial market. Why put a cheap sticker on the product? when you can have a professional laser cut logo as part of the front cover range. So now you have:

The most effective light Trap

The easiest to service

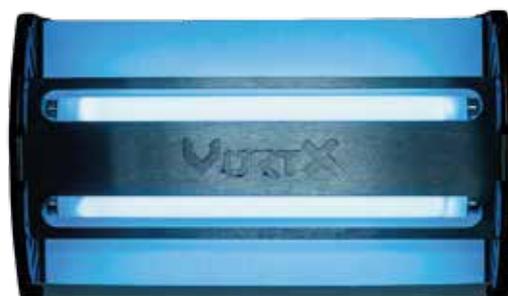
The most adaptable

The most stylish

Oh and if you check out the price it’s probably the most competitive priced quality product on the World market!

We have designed VortX with both the technician and the end user in mind, our people are on hand to answer any of your questions and we look forward to teaming up with you soon.

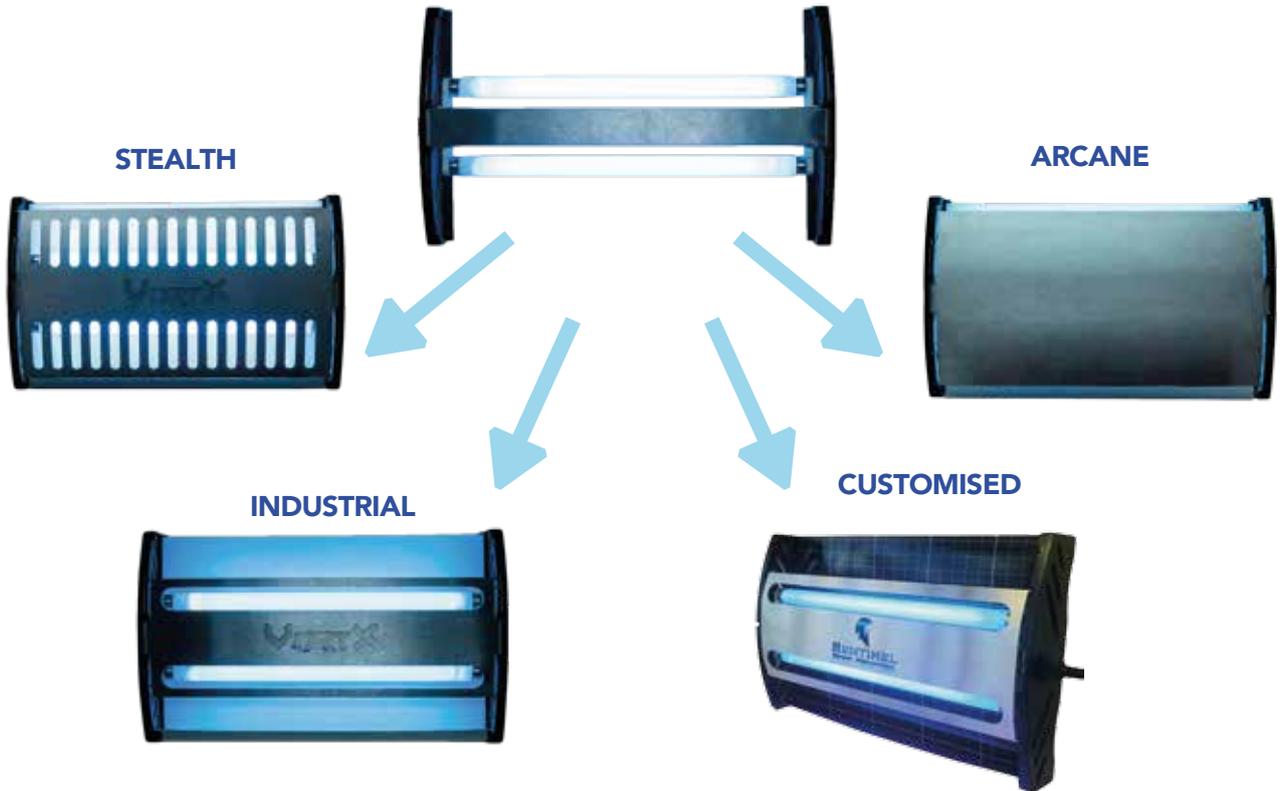
Matt Haslam – 770-500-5166



A brand new concept in insect control!

**VortX has been independently tested to catch more and by stocking a bracket and up to 3 fronts it enables the PCO company to reduce capital and servicing costs.**

- Made in the UK with quality components
- 3-year warranty
- 5 second tool free service
- 4 way mounting options
- Independently tested to catch more flies
- Interchangeable fronts to fit any area effectively
- 90% less metal used in production
- IP65 option available



### STEALTH

The stealth package transforms the VortX unit, to blend into any front of house application. It's contemporary designed armour front will mask dead flies away from the naked eye.

### INDUSTRIAL

The industrial package will enhance the look of your unit when suspended. The removable stainless steel tray will give the VortX unit the robust industrial look you desire. Optional personalised trays to promote your company's logo wherever the VortX lands.

### ARCANE

The VortX arcane package transforms your bracket into a decorative up light. The arcane offers both up and down reflective light offering you an amplified catch rate compared to traditional up lights.

### OPTIONAL TRAY

The addition of the optional tray gives the VortX the complete industrial look. The tray gives the unit optimal stability and hides the glue board whilst offering even more customised branding.



MODEL	BULBS	DIMENSIONS (MM)	COVERAGE	GUARANTEE	CODE
VortX 30	2 x 15 watt 18"	W500 x H300 x D90 mm	80 M <sup>2</sup>	3 Years	VX01
VortX 30 Metal	2 x 15 watt 18"	W500 x H300 x D90 mm	80 M <sup>2</sup>	3 Years	

## Introduction

The innovative VortX is uniquely designed around the glue board, to provide pest controllers the most effective unit at the most economic price on the market. The VortX saves you money on unnecessary metal on the unit, whilst emphasising the glue board increasing its overall catch dramatically. To prove the effectiveness of the VortX we tested the unit on 3 of the leading light traps on the market and compared the catch rate. Each of the tests were conducted under strict scientific testing conditions by a renowned impartial testing company 'I2L Research'.

### Test 1

UNIT	RESULTS*	WINNER
<b>VortX 30</b> 2 x 15 watt bulbs, wall mounted	61.5 Flies	<b>VortX</b> by 250%
<b>Competitor A</b> 2 x 15 watt bulbs, wall mounted	17.5 Flies	

### Test 2

UNIT	RESULTS*	WINNER
<b>VortX 30</b> 2 x 15 watt bulbs, wall mounted	75.5 Flies	<b>VortX</b> by 4933%
<b>Competitor B</b> 2 x 20 watt eco bulbs	1.5 Flies	

### Test 3

UNIT	RESULTS*	WINNER
<b>VortX 30</b> 2 x 15 watt bulbs, suspended	60.5 Flies	<b>VortX</b> by 266%
<b>Competitor C</b> 2 x 15 watt bulbs, suspended	16.5 Flies	

## Conclusion

As clearly highlighted in each of the thorough tests conducted with each of the competitor's units, the VortX out performs each of the leading fly control units on the market. The ground breaking results prove that the VortX can offer the market the highest catch rate.

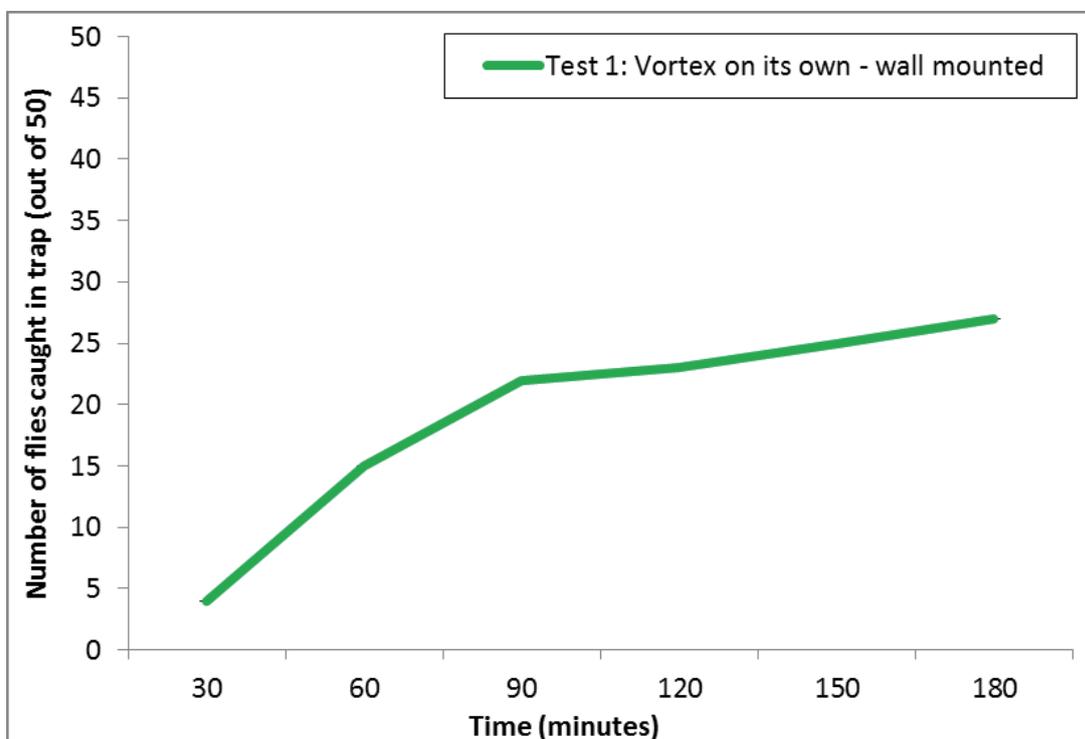
## Test 1: Vortex (wall mounted) – single trap test.

The Vortex fly trap caught 27 out of 50 flies over the 3 hour experimental period. Results are summarised in Table 2 and Figure 1 below:

**Table 2:** Number of houseflies (*M.domestica*) trapped by the Vortex fly trap over a three hour experimental period (n = 1) – out of 50 flies.

Time (mins)	Vortex fly trap
30	4
60	15
90	22
120	23
150	25
180	27

*Figure 1.* Number of houseflies (*M. domestica*) trapped by the Vortex fly trap over a three hour experimental period (n = 1) – out of 50 flies.



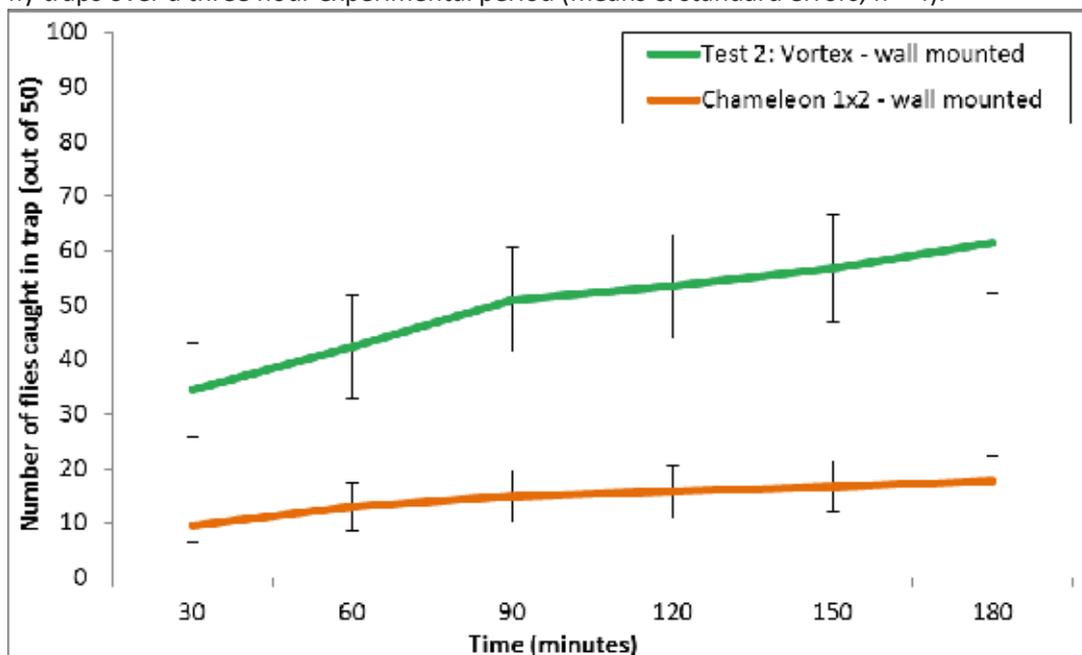
## Test 2: Vortex (wall mounted) vs. Chameleon 1x2 (wall mounted) head-to-head test.

The Vortex fly trap caught significantly more flies than the Chameleon fly trap (average of 61.5 % of flies caught by the Vortex vs. an average of 17.8% caught by the Chameleon unit) over the 3 hour experimental period ( $F = 71.41$ ,  $P < 0.05$ ). Results are summarised in Table 3 and Figure 2 below:

**Table 3:** Percentage mean of houseflies (*M.domestica*) trapped by the Vortex & Chameleon fly traps over a three hour experimental period (means & standard errors,  $n = 4$ ).

Time (mins)	Vortex (wall mounted)	Chameleon 1x2 (wall mounted)
30	34.5 ( $\pm 8.7$ )	9.8 ( $\pm 3.4$ )
60	42.5 ( $\pm 9.4$ )	13.0 ( $\pm 4.4$ )
90	51.0 ( $\pm 9.5$ )	15.0 ( $\pm 4.7$ )
120	53.5 ( $\pm 9.5$ )	15.8 ( $\pm 4.8$ )
150	56.8 ( $\pm 9.8$ )	16.8 ( $\pm 4.6$ )
180	61.5 ( $\pm 9.2$ )	17.8 ( $\pm 4.6$ )

**Figure 2.** Percentage mean of houseflies (*M.domestica*) trapped by the Vortex & Chameleon fly traps over a three hour experimental period (means & standard errors,  $n = 4$ ).



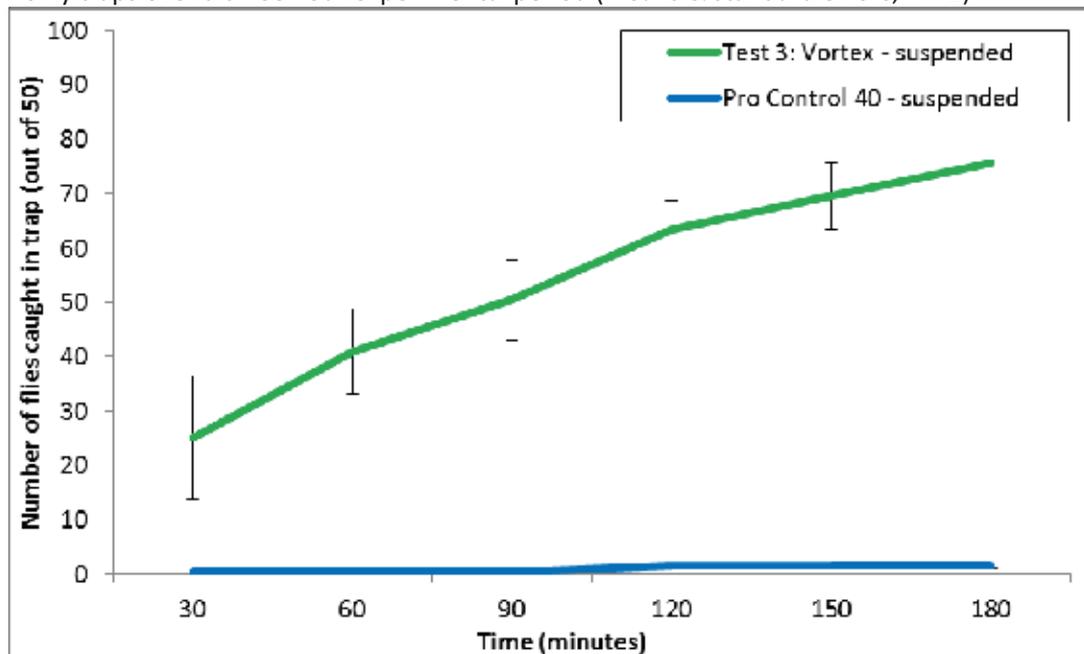
### Test 3: Vortex (suspended) vs. Pro Control 40 (suspended) head-to-head test.

The Vortex fly trap caught more flies than the Pro Control 40 fly trap (average of 75.5 % of flies caught by the Vortex vs. an average of 1.5% caught by the Pro Control 40 unit) over the 3 hour experimental period. Results are summarised in Table 4 and Figure 3 below:

**Table 4:** Percentage mean of houseflies (*M.domestica*) trapped by the Vortex & Pro Control 40 fly traps over a three hour experimental period (means & standard errors, n = 2).

Time (mins)	Vortex (suspended)	Pro Control 40 (suspended)
30	25.0 (± 11.3)	0.5 (± 0.4)
60	41.0 (± 7.8)	0.5 (± 0.4)
90	50.5 (± 7.4)	0.5 (± 0.4)
120	63.5 (± 5.3)	1.5 (± 0.4)
150	69.5 (± 6.0)	1.5 (± 0.4)
180	75.5 (± 4.6)	1.5 (± 0.4)

**Figure 3.** Percentage mean of houseflies (*M.domestica*) trapped by the Vortex & Pro Control 40 fly traps over a three hour experimental period (means & standard errors, n = 2).



### Test 4: Vortex (suspended) vs. Pro Control 30 (suspended) head-to-head test.

The Vortex fly trap caught significantly more flies than Pro Control 30 fly trap (average of 55% of flies caught by the Vortex vs. an average of 30.8% caught by the Pro Control 30 unit) over the 3 hour experimental period ( $F = 12.82$ ,  $P < 0.05$ ). Results are summarised in Table 5 and Figure 4 below:

**Table 5:** Percentage mean of houseflies (*M.domestica*) trapped by the Vortex & Pro Control 30 fly traps over a three hour experimental period (means & standard errors,  $n = 4$ ).

Time (mins)	Vortex (suspended)	Pro Control 40 (suspended)
30	20.3 ( $\pm 7.3$ )	12.8 ( $\pm 4.6$ )
60	35.0 ( $\pm 8.0$ )	21.3 ( $\pm 6.6$ )
90	42.3 ( $\pm 9.4$ )	24.0 ( $\pm 7.2$ )
120	47.8 ( $\pm 9.5$ )	26.8 ( $\pm 7.7$ )
150	52.0 ( $\pm 9.6$ )	29.5 ( $\pm 8.8$ )
180	55.0 ( $\pm 9.0$ )	30.8 ( $\pm 8.9$ )

**Figure 4.** Percentage mean of houseflies (*M.domestica*) trapped by the Vortex & Pro Control 30 fly traps over a three hour experimental period (means & standard errors,  $n = 4$ ).

