Windhond

Wind Flags

Chase the breeze!

User Manual

Thank you for purchasing the ***Windhond Wind Flag***! This is a custom made, high quality item which will give you years of pleasure, and add a new level of accuracy to your shooting game. Only the best materials and techniques have been employed to ensure a top-quality product. Although all the materials used are weather-proof, we suggest that you always take good care of your ***Windhond Wind Flag*** by keeping it clean and dry. The construction features precision-fitted parts and ball bearings, so a little bit of care will go a long way to ensure that your product will give you years of trouble-free service. The hardware choices include 304-grade stainless steel, engineering plastics, and UV-resistant vinyls, so your ***Windhond Wind Flag*** should be nearly impervious to the elements. We do recommend wiping any dust off after use, especially around the pivot area, and that you dry all parts with a soft cloth if you have been shooting in the rain. Store in a cool, dark place.

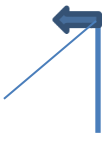
1. To begin with, set up your tripod as near to vertical as possible on a level area on your shooting range. You may use your own tripod (fitted with a standard ¼ x20 UNF thread, standard on most tripods), or the ***Windhond Tripod*** (included with the flag). Set the tripod roughly chest high, and screw the spindle mount **(A)** onto the threads of the tripod. Figer-tight is tight enough!
2. Now you can assemble your new ***Windhond Wind Flag***. Ensure that the yellow-and-black sight ball **(B)** is fully seated on the spine **(C)**. A light, firm press with the palm of your hand is all it takes. Don't force it. Now place the flag onto the spindle shaft **(P)**. It will simply drop into place. Take care not to lose the 8mm ball bearing **(M)** inside the plastic sleeve.
3. Next, unwrap your ***Windhond's*** tail **(H)**. Gently pull the narrow ends of the tail spring **(J)** apart, and insert them into the pivot hole**(D)** near the bottom rear of the flag from either side. The tail spring will close, and the tail should swing easily back and forth without binding on the flag vane. **(K)**
4. Your ***Windhond Wind Flag*** is precision designed to be ultra-smooth in operation, and will "sniff out" the slightest breeze once you've set it up properly. It is important that the flag be properly balanced and set level in all directions. To this end, you will find a small bubble level **(F)** mounted atop the sleeve **(G)**. Adjust your tripod or mounting bracket until the flag spar is level, then rotate the flag 90 degrees, and check for level again. Repeat as necessary, making small adjustments to the stand, until it is level all around. As long as the bubble is roughly positioned within the alignment ring, you are fine. Don't obsess about it.
5. You may now proceed to balance the flag spar laterally by sliding the stainless steel counterweight **(E)** and sliding it the forward or back to achieve the proper balance. Take

your time and be patient – this usually has to be done only once. To make fine adjustments, we recommend "spinning" or twisting the counterweight between your fingertips whilst sliding. This allows for very small lateral shifts. Gently lift or "tap" either the front or the back of the spine from underneath (it will "rock" slightly) until you can see that it is level and near the centre of its balance point. You will immediately see the spindle "free up" when it's correct. Again, don't obsess about it. The spindle is very nearly friction-free. Double-check the balance, and adjust again if necessary.

6. Now for the fun part – the PK test*! This test is best done indoors, or in a completely wind-still environment. Standing next to the flag, swipe your hand, palm open, about 10cm past the flag, from front to back, as if handing out a big PK. Take care not to strike the flag! If you've done everything right, your ***Windhond Wind Flag*** will faithfully "follow" your hand as it is "sucked" into the slipstream, rotating smoothly *towards* you. This may initially seem counter-intuitive, but you'll soon see that it works like a bomb! Congratulations - you are now ready to shoot!

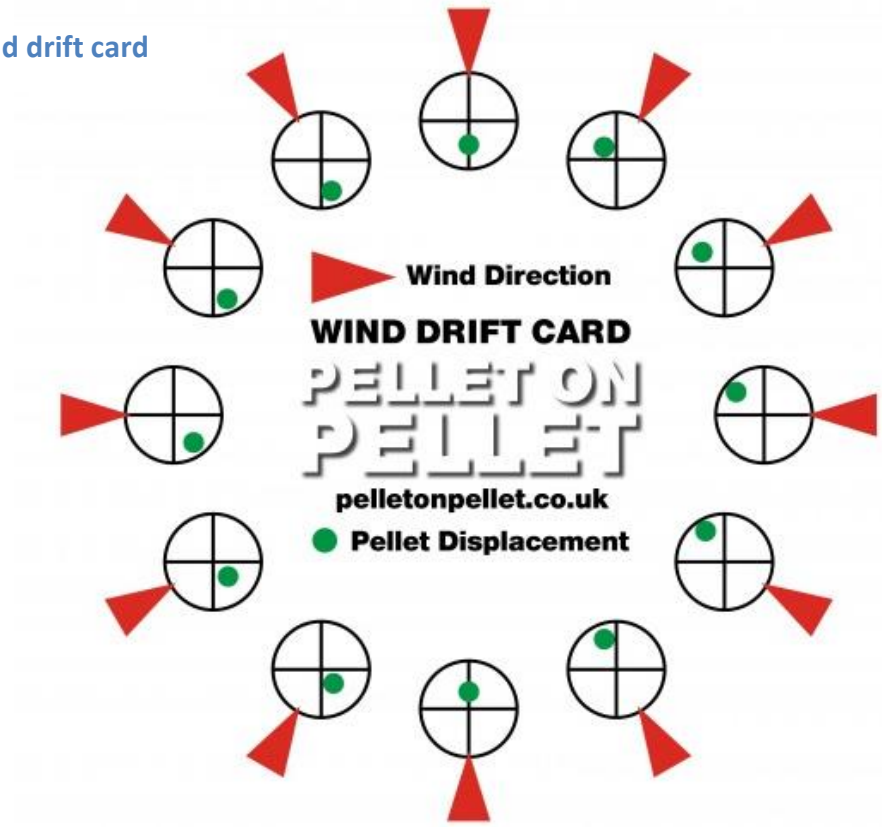
   **For reasons of decency, the abbreviation "PK" will not be translated here. Most good South Africans will understand what we mean…*

7. Place your ***Windhond Wind Flag(s)*** down-range close to the line of fire, taking care that the shots you will fire will miss the flag(s). You ***Windhond*** is very helpful in helping determine not only the direction of the wind (the black dog-shaped "arrows" show the direction the pellet or slug will drift), but also its strength. The table below will help you gauge the wind strength:

Tail position	**Wind Speed**	**Correction**	**What to look for**
Tail hanging loosely down, either motionless, or just barely moving.	0-3 Km/H	Not much needed	
Tail slowly swinging just off the vertical, occasionally lifting the tip up.	3-6 Km/H	Make small adjustments to counter wind effect	
Tail flying out around 30 degrees, lazily flicking about.	7-10 Km/H	Larger adjustments may be needed to stay on target. Dial or hold for wind – your choice.	
Tail flying out between 30 and 50 degrees from vertical, dancing and fluttering	11 -15 Km/h	Be awake – you will need to make meaningful adjustments or hold more for the wind	
Tail dancing and flapping, and near 60 degrees from the vertical	16 – 25Km/h	Significant adjustments required to stay on target.	
Tail horizontal, and dancing strongly	>30Km/h	Pack up your gear and head for the bar! If you live in Cape Town, just keep shooting!	

8. Shooting accurately in the wind takes a lot of practice, and is a great skill to master. Don't be discouraged, especially if this is your first experience using a wind flag. The wind may appear to be swinging around randomly, now coming from the left, then from the right. This is not abnormal. In fact, using multiple flags, one may see each flag in the shooting line behaving in a different manner. You will soon see patterns emerge, and will be able to "time" your shots better. Make good use of your allotted time, and avoid rushing.
9. The colours on the main flag body and the sight ball are not random. They have been designed to help you determine wind direction and make the necessary corrections. When the flag is **Green**, the wind is pushing to the **Left** (the Windhond-shaped "arrow" will confirm this). You must hold **Right**, or "into" the wind. When the flag is Orange, the wind is pushing to the **Right**. Hold **Left** to counter the effect of the wind.
10. When the wind is pushing toward you or away from you at a narrow angle (called quartering), it can be difficult to determine exactly which way the flag is oriented. This is where the yellow-and-black orientation ball comes in very handy. If you can mainly see the **Black** portion of the ball, the wind is pushing away from you toward the target, and the projectile will be "carried" to a higher point of impact.
11. If you can mainly see the **Yellow** portion of the ball, the wind is blowing toward you, and your point of impact will drop.
12. When the wind is square to the line of fire, around 90 degrees (also known as "full wind"), you will see roughly equal parts of **Black** & **Yellow** showing. Baie slim, né? ☺
13. You may make use the "wind drift card" below (courtesy of www.pelletonpellet.co.uk) to help determine how the wind will affect your point of impact on the target - a very useful tool indeed! Take note of the slight *vertical* displacement of the projectile, which is most notable with a "full" cross wind. You will have to take this into account for extremely accurate shooting, such as in the benchrest discipline. Hunters can generally dismiss this as negligible.

Wind drift card

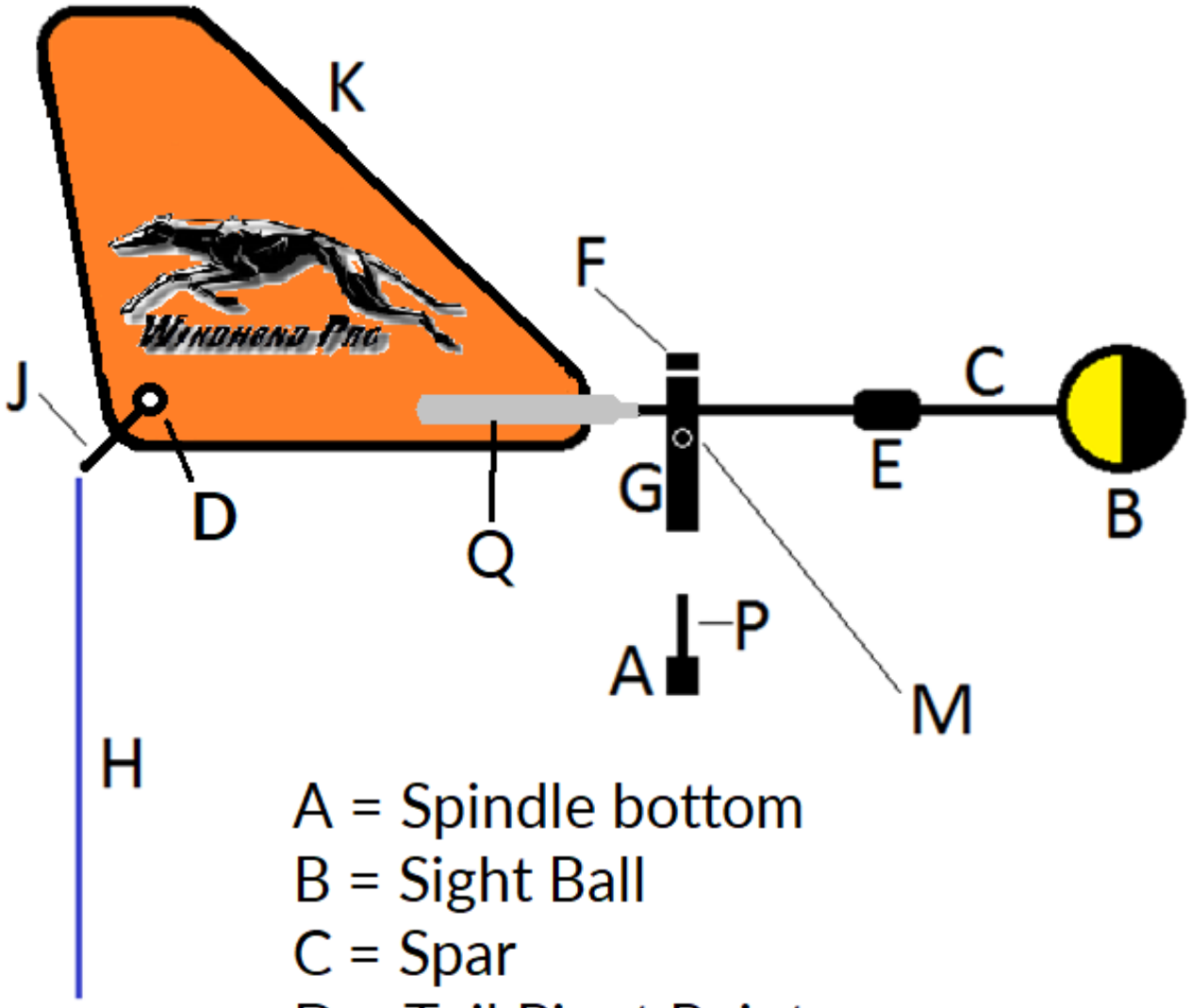


Troubleshooting and repair:

1. If you notice that your ***Windhond Wind Flag*** is not as sensitive as it should be, check the following: make sure your tripod is vertical. Confirm this with the bubble level on the spindle sleeve. Sometimes the spindle shaft can collect dust which is whipped up by the wind, and this can impede the smooth movement of the spindle. Wipe the spindle with a soft, clean cloth, and do the same to the inside of the sleeve. You may also have to adjust the stainless steel counterweight. Check that the ball bearing is in place, and clean. Your ***Windhond*** relies on clean, smooth contact of the ball on the top of the spindle shaft.
2. In severe cases, you may need to strip the assembly down and clean out the inner sleeve and ball bearing. Lift the flag from the spindle shaft, and slide the sight ball and stainless steel counterweight off the spar. Remove the bubble level by unscrewing it anti-clockwise, and then loosen and remove the set screw under the level using a 3mm Allen Key. The ball bearing can then be pressed out with a thin object (such as a 4mm or 5mm Allen Key), and cleaned. You may need to tap the Allen key sharply with your palm to dislodge the ball bearing. Apply a small amount of Silicone spray to the inner sleeve and spindle shaft, and wipe off the excess. We do not recommend using any oil in this joint, since it is likely to attract dust which may cause the smooth bearing surface to bind and wear prematurely. Reassemble in the reverse order. When tightening the set screw onto the spar, never use much force - **finger tight is enough! You risk cracking the fibreglass spar if you overtighten this screw.** It needs only be tight enough to prevent the vane from flopping over!
3. Should any part of your ***Windhond Wind Flag*** become lost or damaged, spares parts are available for order. Spare vanes (different shapes are available), spars, yokes, ball bearings, sleeves, spindle shafts, counter-weights and balls are all available. Check the website for pricing of the various items.

Please see the following page for a complete parts description of your ***Windhond Wind Flag***. Be sure to keep this manual in a safe place for future reference, or visit us on www.windhond-flags.co.za to download the latest version.

Windhond Wind Flag parts description:



A = Spindle bottom
B = Sight Ball
C = Spar
D = Tail Pivot Point
E = S/S Counterweight
F = Bubble Level
G = Spindle Sleeve
H = Tail
J = S/S Tail Hook
K = Vane
M = Ball Bearing
Q = Yoke