

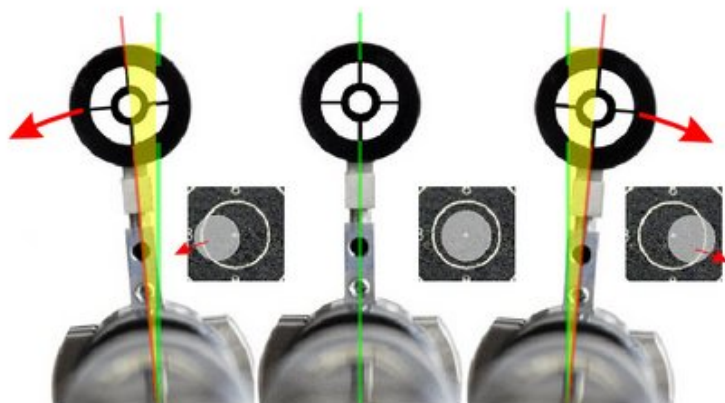
To 'Cant' a gun means to rotate it about the barrel axis. If a rifle is held absolutely upright, the foresight is located exactly above the barrel and the angle of cant is zero. If for example, the rifle is then tilted towards the eye, the sights will be rotated to the left by a certain amount. The amount of tilt can be measured as an angle, the angle of cant.

Canting a rifle plays no role, as long as it is done to the same extent for every



shot. If you angle your rifle 5° for every shot, you can compensate for this by adjusting the sights and your group size will remain constant.

Canting becomes problematic when variations creep in from shot to shot.



Each shot will then be displaced in the direction to which the foresight tunnel has been moved. The greater the rotation, the further the effect. Even quite small amounts, such as the 5 degrees shown in the illustration, cause around 4 - 5 tenths deviation on the air rifle target. This is an error which leads very quickly to points being lost.

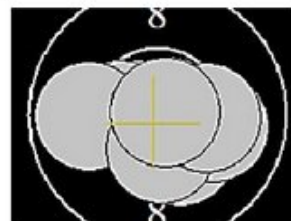
The assumption that the effect of cant increases, the greater the distance between sight-line and barrel (due to sight-raisers) is, by the way, false. So if you want to use the full permitted 60 millimetres (distance between barrel axis and ring centre) for an air rifle, you will not experience any (significantly) increased deviation of point of impact for any given amount of cant.

Lines in the sights and in the field of vision are the means by which the shooter can check the amount of cant. Obviously vertical and horizontal lines are to be preferred, because we can estimate these to a high degree of accuracy.

This is very easy as long as the rifle is held upright and the horizon bars remain horizontal. In this case, you only need to check whether you have begun to tilt in any way.

If the rifle is canted, then it is best to have the desired angle of cant indicated in the sights. This is done by setting the horizon bars, spirit level or cross-hair so that they appear level when the rifle is held at the angle of cant.

Centra offers cant indicators for air rifle in the foresight tunnel and on the foresight element. A spirit level or cross-hair is permitted for the smallbore disciplines and we also build these to high quality standards. We lay special emphasis on ease and repeatability of adjustment, because often the angle of cant will be freshly adjusted every time you shoot. But that is then your job!



Irregular canting is one of the most frequent aiming errors. Anyone who rotates the rifle back and forth by a few degrees, has to accept a significant extra dispersion in their group. Even if the sights were centred exactly on the middle for every shot, the points of impact would be distributed as in the diagram above.

Only careful checks of the angle of the rifle before every shot can help combat such inaccuracies.



This takes place along the following lines:

1. Get into position with the rifle and close the eyes.
2. Relax and find your inner point of balance.
3. Now open the eyes and check whether the sights are leaning to one side.
4. If the rifle is canted, then the horizon bars or spirit level (or cross-hair) should be adjusted until they are once again level.
5. Then check before every shot, that the indicators are exactly level.

Controlling cant is a matter of discipline. Anyone who kids themselves that they can maintain a constant level by using an indicator that is slightly tilted, has over-estimated their abilities. Only a horizontal level can be controlled safely and without excessive concentration over a whole match programme. This is true for air rifle, but even more so for smallbore prone shooting.

