



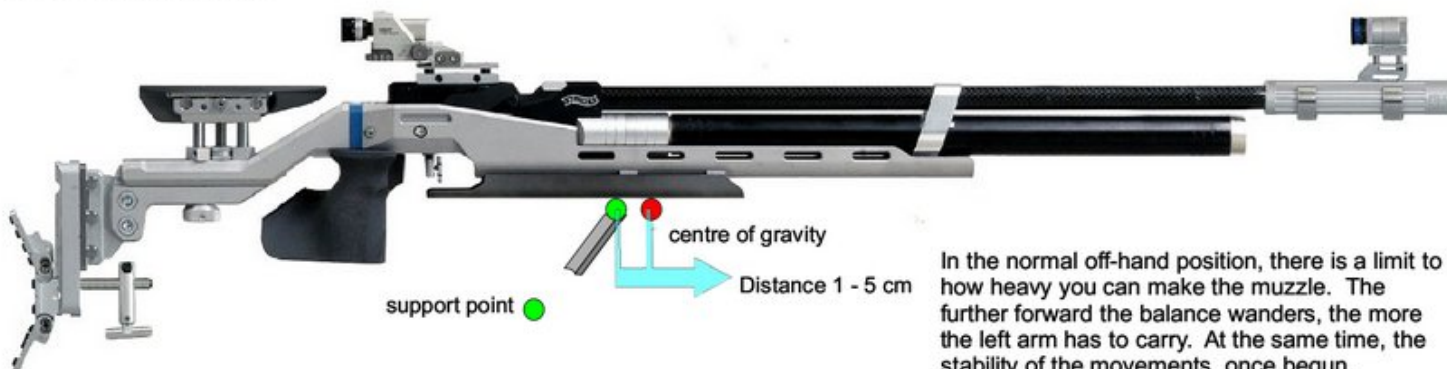
Aluminium tubes for air rifles were first developed and offered by MEC. Since then, almost all top shooters use these extensions. In the struggle for international titles and in the bundesliga, they are just as commonplace as in supported shooting or in performance-orientated clubs.

There are many advantages to using 'tubes'. They extend the barrel and thereby bring greater steadiness to the rifle. By imparting greater inertia to the muzzle, they reduce muzzle movement for a given level of activity in the shooter's body. This effect can be further increased by means of the two stainless steel barrel weights which are also supplied. These rings can be adjusted in position to give a precise balance. The tallest shooters add further weights in order to

achieve the correct 'nose-heaviness' for their needs. And not infrequently, the addition of a tube also has the side-effect of bringing a significant improvement in the grouping capability of the rifle.

Further interesting side-effects of the use of barrel extension tubes concern the issue of aiming. For one thing, the precision of the aiming sequence is improved, because of the increase in the sight-base between iris and foresight ring. In addition, many shooters report a better perception of the foresight when using a tube, probably because the longer sight-base gives an increased depth of field.

Mounting a barrel extension increases the length of the air rifle barrelled action to the maximum permitted length of 85 cm. For most shooters, this leads to an immediate steadying of the sight-picture. A longer 'body' sways more slowly, therefore giving more time to see the movement of the ring on the target. Additional weights give further damping, because the more nose-heavy a rifle is, the more slowly it makes its movements. Those who do supported shooting profit particularly from this characteristic. They can extend their rifles almost as much as they want, because they don't have to carry the weight themselves, the support does the job for them.



MEC and centra have co-operated in recent years, to further refine the basic idea of a barrel tube. As a result, the co-production **TUBE II** has come into being. This includes an integrated foresight tunnel on a T-groove. This tunnel can be easily adjusted, and the narrow foot provides a pleasing sight-picture.

The **TUBE HR** has integrated the principle of an almost continuously adjustable sight-raiser into a barrel extension tube. This lets the shooter raise both the foresight and rearsight in small steps, in order to find the most comfortable position for head and eye. The **centra** foresight tunnel naturally offers a range of possibilities for attachments such as foresight elements, filters or eagle eye lenses in professional quality. It should also be noted that the maximum permitted length of 5 cm for the foresight tunnel has been observed, as has the maximum permitted distance of 6 mm from the barrel axis to the centre of the tunnel.

In the normal off-hand position, there is a limit to how heavy you can make the muzzle. The further forward the balance wanders, the more the left arm has to carry. At the same time, the stability of the movements, once begun, decreases and it becomes therefore more difficult to stop the rifle moving once it has started to do so. Which begs the question, how far and how much weight does the individual shooter need in order to find the optimum set-up?

The **centre of gravity** of the rifle provides us with an aid in this matter. First measure this - it is the point on the rifle at which it can be supported on one finger - and then mark it with a sticker. Now mark the point at which the shooter supports the rifle with the left hand (or fist) when in position. Our experience is that the ideal is reached when the centre of gravity lies between one (beginners) and five (> 390 points) centimetres in front of the support hand. This distribution will now be realised by adding extra weights either at the front or the back end of the rifle, bearing in mind that the permitted maximum weight may not be exceeded. Muzzle weights are well suited to making fine adjustments, because they are easy to move. The total weight of the rifle should be nearer the 5 kg mark for more lightly-built shooters; stronger ones or those shooting with a support can go to the full 5.5 kg limit.

