

4. Weight and Balance Information

4.1 Center of gravity (CG) range and determination

Aircraft handling and performance have been determined for this range of CG positions.

Centre of gravity limits	Front limit (mm)	Rear limit (mm)
For 450 kg 80 HP version (nose and tail wheel)	260	410
For 472.5 100 HP version (Nose wheel only)	260	385

The CG position of the empty aircraft is determined by weighing. The procedure is described in the Maintenance manual and in BMAA publications. The whole procedure must be repeated and new **Aircraft weight and balance statement** be prepared whenever a modification or repair having an impact on the weight of the aircraft occurs.

Use the BMAA form BMAA/AW/028 to calculate the weight and balance

Weighing attitude: The aircraft longerons on the base of the entry doors, must be level 0 degrees

4.1.1 Weight and balance determination for flight

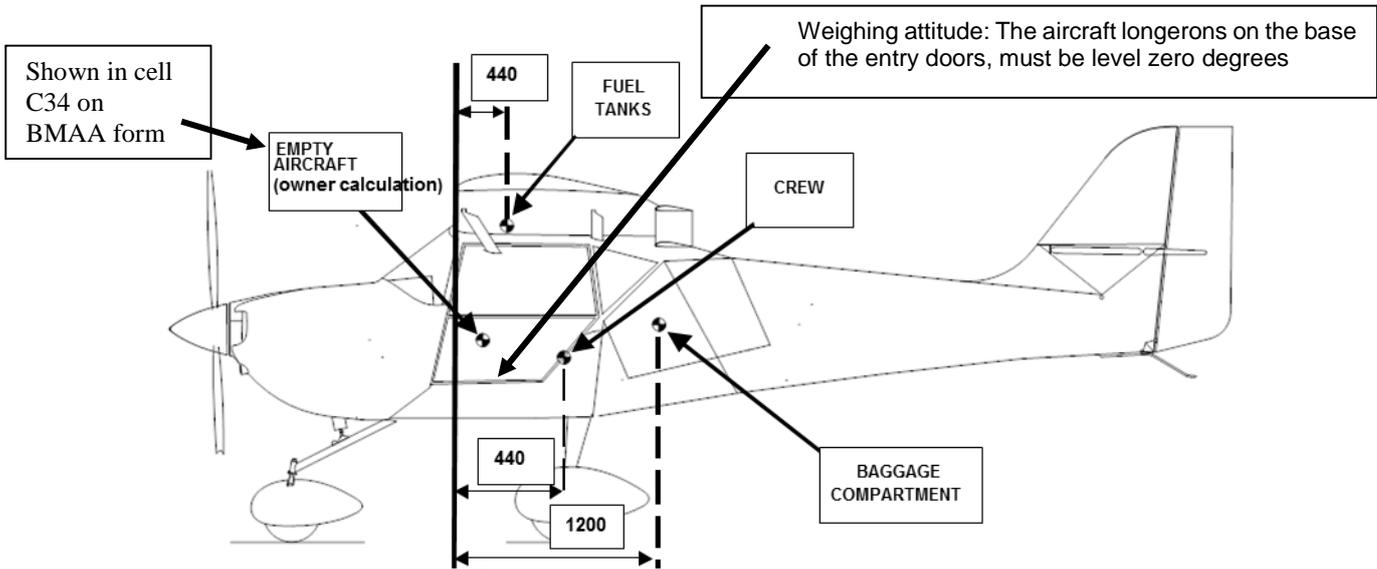


The aircraft must not be operated outside of its approved weight and balance limitations to assure safe flying.

Providing that the pilot does not load the aircraft outside the placarded weights, then the aircraft will always be inside the aircraft CG range.

It is imperative that the pilot knows exactly the real empty weight of his or her aircraft.

4.1.2 Detailed calculation of CG position (applies to nose or tail wheel versions)



As all reference points are located behind the leading edge of the wing at the root, the leading edge was selected as the reference plane. The table below shows a typical calculation including an example.

The datum point (50 mm forward of the wing leading edge at the root) to wheel centre line distances on all EuroFOX aircraft are as follows: (these figures take into account the wing forward sweep of 50 mm and simply go into the BMAA form BMAA/AW/028)

Nose wheel:

- From datum point to nose wheel centre line = -919 mm
- From datum point to main wheel centre line = 503 mm

Tail wheel

- From datum point to main wheel centre line = -21 mm
- From datum point to tail wheel centre line = 4289 mm

These measurement values are to be used in the BMAA form BMAA/AW/028 to calculate the weight and balance