

# Morphology and aesthetics of the Spanish mastiff

## Graphic analysis of the standard – *Ángel J. Gambín Pallarés*



The standards recognized by the F.C.I. and by R.S.C.E. are a literary description of how a breed of dog should look in its morphological aspect and at the same time a description of other characteristics of the breed, its behaviour, its usefulness and its defects.

As every literal description sometimes suffers from a graphic expression that facilitates a better understanding of the standard. This is the starting point of this study which aims to complement the description of the standard with graphics that analyse the morphology of the Spanish Mastiff and facilitate with visual analysis. At the same time we try to see if the proportions and anatomical harmonies of our Spanish Mastiff have a functional logic in addition to aesthetics.

This graphic analysis of the morphology is going to be done in a didactic way, which allows to find the parallelism between the literal description and the graphic, adding the comments that allow linking the official text of the standard and the graphics obtained from the visualization of the proportions and characteristics of this one, however, at the end of everything there is always the appreciation of the judge in the ring, because there are always features and expressions that qualify and define each mastiff in each moment. But this is not an obstacle for the standard is not met above all when judging in a ring.

Of the objectivity in the judgments, that is not more than the strict application of the standard, it pays the improvement of the aesthetics and the morphology of the breed, frequent defects must be eliminated although in a given moment they have been generalized as it is the case of the front and rear direction of the members in relation to a horizontal floor, overly large and poorly placed ears or the colour of eyes that alters the expression of the Spanish Mastiff.

Do not forget that we are in morphological analysis and these are completely linked to the formal appearance and therefore to the aesthetic, this is what conveys the first impression of the mastiff and is the one that we must select through compliance with the standard. Without detriment to health characteristics and more important character if possible than purely aesthetic.

A proportionate and harmonic dimension are also the basis of good health. The structure of the mastiff must be as balanced as it is solid, with a distribution of body weight and a balance that transmits the loads and facilitates the momentum in the phases of movement and here also has much to do with the proportions of each part of the body of the Spanish Mastiff. The anterior and posterior supports must transmit with the least possible effort the load of the body and this must be strong and balanced in static and movement, always horizontal and with a horizontal dorsal line assimilated to a structure composed of two pillars and a beam. The more vertical the supports the less the weight suffers and the sturdier and straight the body is, the better and more vertically it transmits its load to the legs. These purely physical concepts have a direct reflection on the construction of the Spanish Mastiff and its health as well as on the important movement in a transhumant dog designed for guarding but also for long journeys through Spain in difficult conditions of cold, heat, orography, etc. .

This study is conducted on a Spanish Mastiff, male, adult and depending on the standard and reference on current mastiffs.

In conclusion, the morphological composition of our Spanish Mastiff has its consequence in:

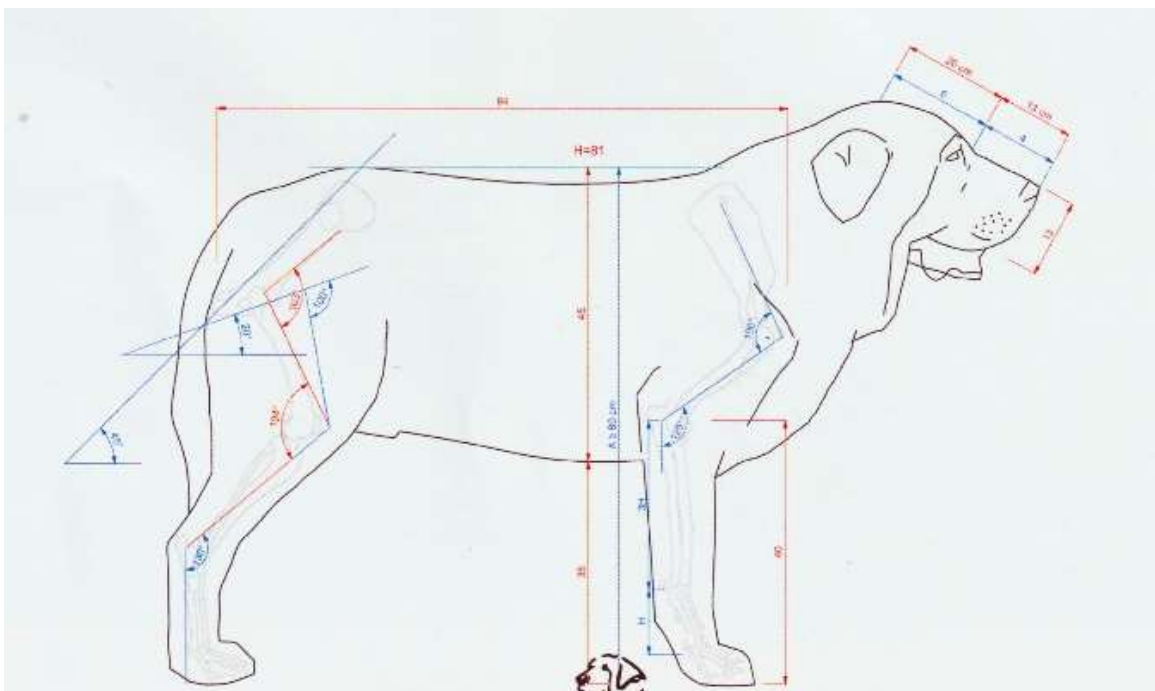
- Its aesthetic composition
- Its formal harmony
- Its functional capacity
- Its health

In this analysis we will focus on the first two points seeing their role in the standard, since in addition to the aesthetic foundation of the breed they contribute to functional capacity and health, since the bone structure of the Spanish Mastiff is fundamental both in its formal harmony as in its functional capacity. From all this we can deduce the importance of the harmony of the different issues described in the standard and especially the direct relationship between aesthetic composition, functionality and health. Consequently, in the harmony of the Spanish Mastiff.

All parts of the Spanish Mastiff can be assimilated to elements and geometric figures that help us to see their proportions better and how the structure of bones and muscles that holds the formal totality we see and that ultimately convey the imprint of the Spanish Mastiff, its morphology, expression and its harmony.

These geometric elements that we will comment on are based on studies on beauty that throughout our history and our culture have been the foundation of formal compositions in many facets of art, architecture, music, painting, etc. And they have even had their application to the analysis of human beauty. Let us think that the standard aims to define the ideal form of the mastiff. The forms are related to visual perception and this with beauty and harmony, so the geometric study of the Mastiff based on the standard will allow us to understand it better.

Figure 5: Dimensions of the Spanish Mastiff



### I. General appearance

Moloss .....	Weight greater than 65 kg
Mountain Type.....	Morphology adapted to rustic activity
Great Size.....fig.1..	> 80 cm males, > 75 cm females
Hypermetric.....	Large, whether moloss or not.
Medium Proportions.....fig.5..	Body index about 87
	BI = (length/perimeter) x 100 = (94/108)x100 = 87
	>88 long
	<85 short
Sub-long line.....fig.1..	Body slightly longer than the height at the withers. longitudinal index * 1.16
Well proportioned.....fig.1..	Harmonic as a whole = Harmonic proportions of all the parts and these with the entirety
Powerful.....fig.2..	Formally it transmits balance and strength and this requires to be constructed in a harmonic way.
Muscular.....fig.2..	Necessary to support its weight and activity and that its bone structure articulate correctly.
Big head.....fig.2-7.	In proportion and harmony to the whole; If this is big, the head too.
Proportionality .....	From the parts to each other and from each one to the whole.
Functional Harmony .....	From the proportion and formal equilibrium, we will obtain the functional balance that enables the Spanish Mastiff, besides walking through the ring, to perform his ancestral work for which it was selected by the pastors. The rigor of the functional selection is the same that we now have to apply for its morphological selection.

## II. Important proportions

Length of the upper body to the cross.....fig.5...  
Longitudinal index = Body length / Height to the cross  
= 1,16 = 94 cm/81 cm

Skull / Muzzle = 3/2..... fig.6.7.9..  
3/2 = 1,5 - A size of skull and muzzle of 20/13 cm are very close to the ideal and in proportion with a mastiff of 81 cm at the withers and a length of 94 cm.  
(Body + Neck + Head) / Height at withers = 131/81 = 1,617 Harmonious proportions

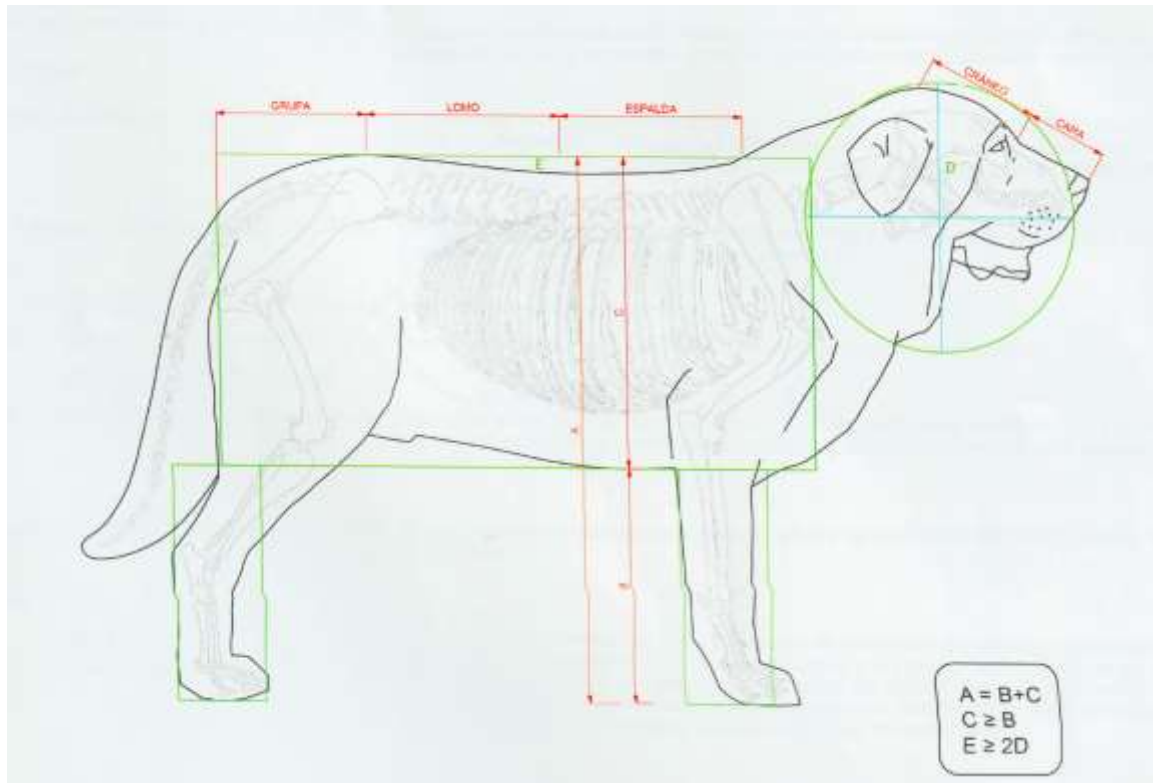


Figure 2 Visual side view of the Spanish Mastiff

### III. Head

Big and strong.....fig. 2-7.

Large but proportionate to the body and the whole. 33 cm long x 20 cm wide in skull.

Pyramidal trunk.....fig.7.

Skull width = 20 cm, muzzle width = 11-12 cm

Skull and muzzle = square and well linked.....fig.7.

Better said trapezoidal with cranial base of 20 cm and base in muzzle of 12 cm with total length of 33 cm.

No marked dimension between muzzle and temple...

Sides almost straight

The faciocranial axes are moderately divergent.....fig.7.

Moderately - Approximately 20 °

#### Cranial region

profile sub-convex.....fig.3-7.

Slightly, front and profile, curved. Not bulged or flat.

Width > Length.....fig.7.

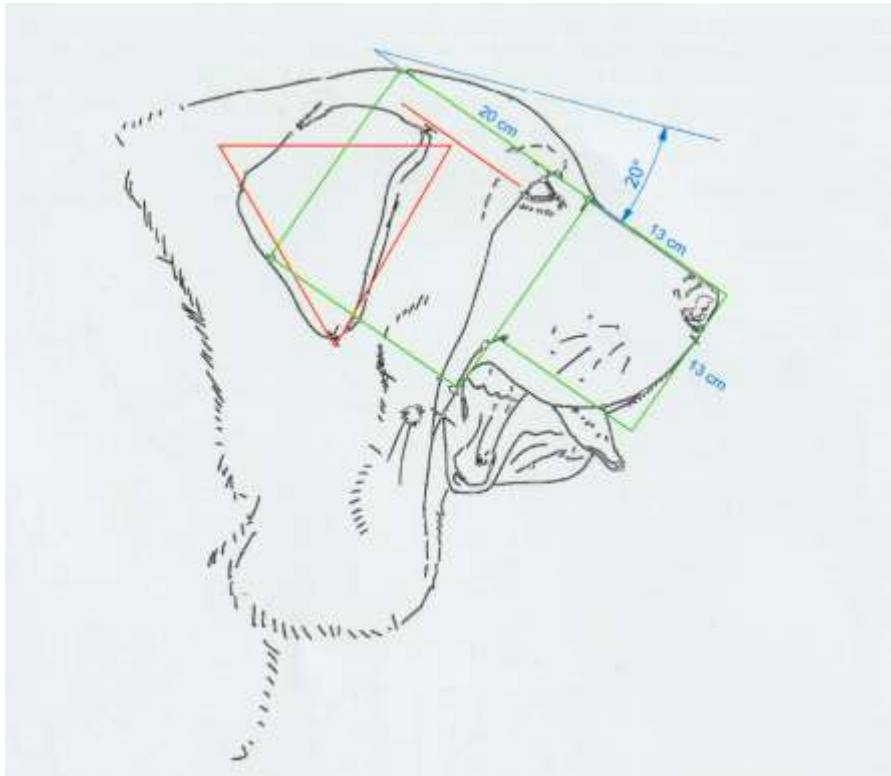
The correct proportion is the square. If it is wider, the proportion with the face and width of the muzzle is broken.

Accented frontal sinuses.fig.3.

This description I think is not lucky because the pointed frontal sinuses blur the stop and confer an expression of lack of security and serenity.

Stop slightly sloping.....fig.7.

Wide angles. Between 150 ° and 160 ° and with smooth and rounded encounters.



*Figure 7. Dimensions of the head of the Spanish Mastiff*

### **Facial region**

Nose big and broad

Muzzle:

- Straight profile.....fig.7.

The length of the upper line is 13 cm and this line is straight. Seen laterally, the depth of the lip is similar to the length of the muzzle and form a square although the lip is picked up to the labial commissure.

- Moderately rectangular viewed superiorly.....

Seen from above the muzzle is a rectangle of 13x8 cm with a slight decrease towards the nose.

- In no case pointed .....

The muzzle with triangular shape confers a weak aesthetic to the structure of the head.

Lips:

- The superior broadly covers the lower.....fig.7.
- Very loose labial commissure .....fig.7.

If the upper lip exceeds the laterally viewed side in length, a rectangle is formed in a vertical position that distorts the characteristic expression of the mastiff.

Jaws / Teeth:

- Scissor bite.....

The jaw establishes the correction of the coupling of the teeth, which must be in scissors. Pincer bites deteriorate teeth prematurely. The prognathism in addition to hindering the bite of the Spanish Mastiff modifies its expression by configuring an improper gesture to the breed.

#### Eyes:

- Small..... In proportion to the head and inconspicuous by the thickness of the skin that surrounds it.
- Preferably dark..... It must always be dark. The lighter and more yellow destroys the expression of the Spanish Mastiff, which is noble and severe but not aggressive.
- The lower eyelid shows part of the conjunctiva..... This characteristic must be moderate, it helps to soften the expression.

#### Ears:

- Of medium size..... Length: 13-14 cm - Width: 12-13 cm Attached to the profile of the head.
- Hanging..... Attached to the profile of the head.
- Triangular..... And slightly rounded at the bottom.
- Flat..... Does not stand out in the frontal or lateral profile of the head.
- Inserted above the eye line..... The insertion must be at the level of the eye and the lower tip does not exceed the line of the labial commissure.

#### IV. Neck

Trunk shaped..... As a continuation of the skull and opening linearly to insert in the trunk of the mastiff without angles or marked jumps.

Double dewlap (papada) amply developed..... The dewlap (papada) form the frontal and lateral profile of the head in its union with the body, endowing it with majesty and sobriety as a whole, enhancing its severe and noble aspect.

#### V. Body

Rectangular. Stocky and robust.....

The body is a rectangle of harmonic proportions with a length of about 94 cm and height of 45 cm. Bearing in mind that the mastiff with a height at the cross of 81 cm is of a suitable size, the body is somewhat higher than the free space that remains to the ground.

Top line: Straight, horizontal... Both in static and in motion, a straight upper line implies that all the angles and lengths of the limbs are correct.

Withers: Well marked..... Start of the upper dorsal line.

Back: Powerful, muscled..... They form the upper dorsal line, the straighter and more horizontal, the better.  
Loin: Long, broad and powerful .....

Croup: Broad and solid, 45° ... In order for the Spanish Mastiff to be well-proportioned, the rump must be inclined 45 ° and the dorsal line parallel to the ground. This builds the rectangle in which the body of the Spanish Mastiff is framed.

Rump height = Cross height....

Consequence of this is that the rump and the cross are at the same height. Without any inclination.

Chest :

- Broad, deep .....
- The point of the sternum marked.....

The frontal composition of the Spanish Mastiff is that of two superimposed squares. The lower one delimited by the forearms. The metacarpals and hands with a height of about 40 cm and a width determined by the space between the hands that approximates 38-40 cm. The upper rectangle frames the body, although depending on the abundance of skins, these slightly invade the chest giving it more depth.

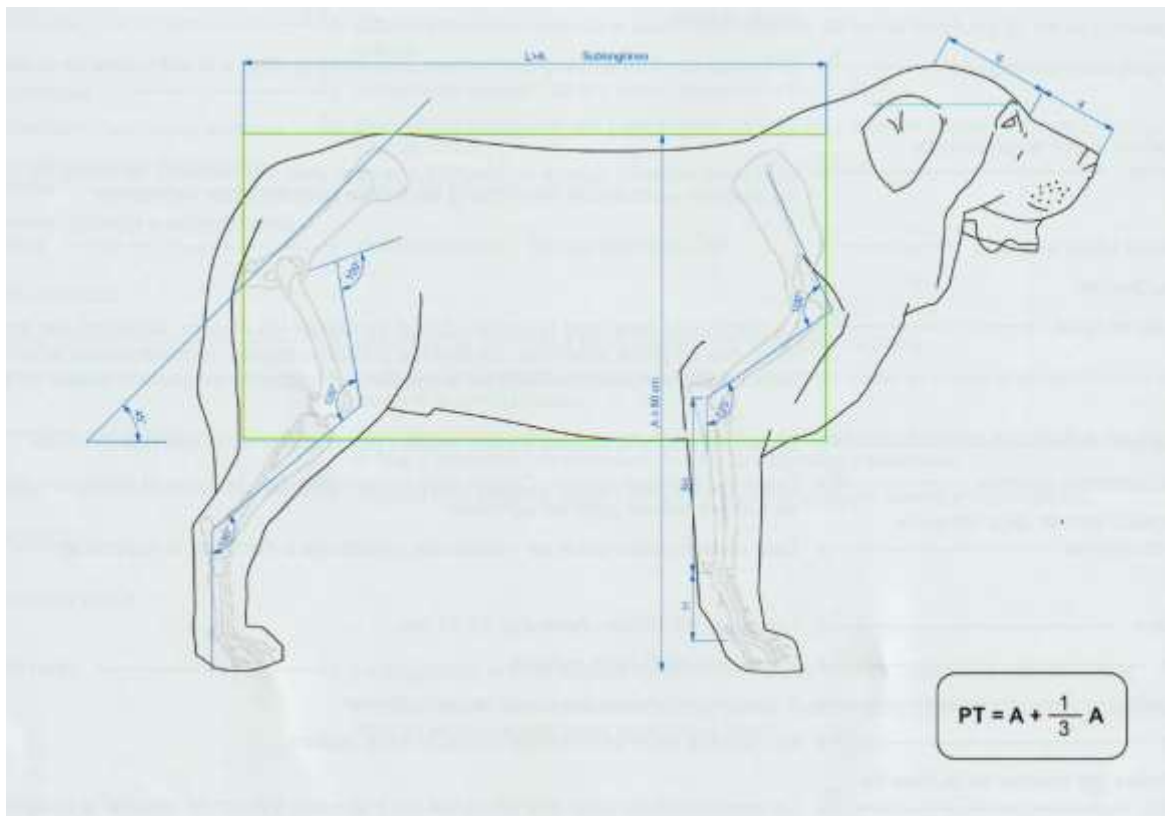


Figure 1. Spanish Mastiffs' proportions according to the standard

- Rounded, not flat rib.....
- The height at the withers/  
thoracic perimeter =  
height + 1/3 .....

Determine the thoracic perimeter

It mainly determines the frontal volume of the Spanish Mastiff and its proportions. As we have mentioned, forms the front of the Spanish Mastiff with two superimposed squares.

Belly and flanks:.....

- Little picked
- Flanks descended
- Wide flanks

Along with the chest, the belly and the flanks determine the lower line of the body that must be parallel to the upper line, thus constructing the rectangle that describes the standard in which the body of the Spanish Mastiff is framed. This lower line is below half the height at the withers, slightly below it, thus giving solidity to the whole but not making the mastiff seem stuck to the ground, leaving an important free lower space.



## VI. Tail

Very thick at its root .....fig.3.

Set at medium height..fig.1-3.

At rest tail is carried low,  
Distinctly reaching the hock.....

Sometimes layered,  
In motion lifts in sabre fashion  
With a curve at its tip.....

With great aesthetic and visual presence.

The appearance of solidity and construction of the posterior aspect of Spanish Mastiff depends on the insertion.

The tail is wide and long but proportionate.

As a deterrent by increasing body volume.

## VII. Limbs

### Forequarters

Forelegs perfectly vertical,

Referred to the forearm, the metacarpals and the phalanges. The metacarpals are a practically straight continuation of the forearm and retaining a good section. This contributes to give solidity and harmony in static and movement

Straight and parallel seen from the front.....fig.3.

Frontally they constitute a square given that the height of the forearm and the metacarpus is similar to the horizontal separation of the front legs.

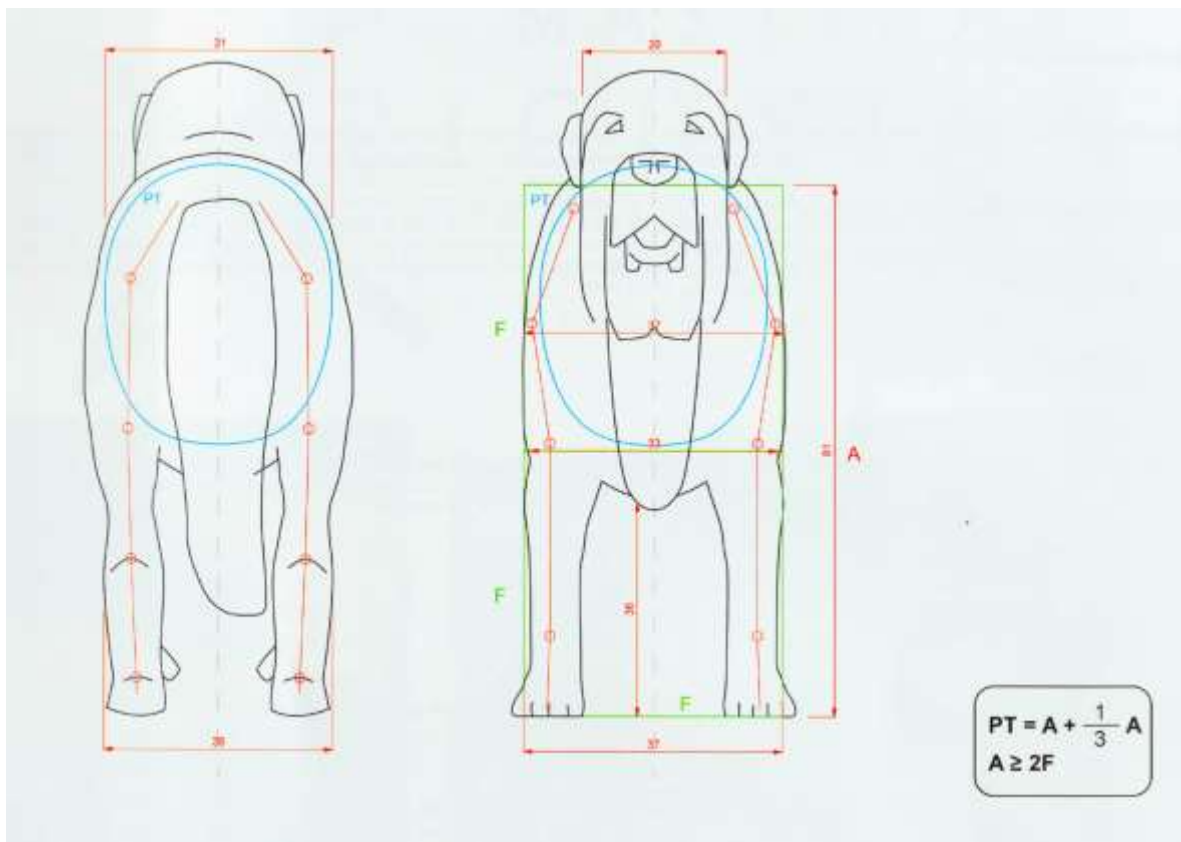


Figure 3. Frontal and posterior visual perception of the Spanish Mastiff.



The length of the forearm should be 3 x metacarpus.

Shoulder:

- Oblique, very muscular,
- Longer than the forearm.  
.....fig.3.
- The scapular-humeral angle is near the 100° .....fig.5.

Upper arm: Strong, similar length to that of the shoulder blade.

Elbows: .....fig.5.

- Close to the thorax.
- Humeral radial angle close to 125°

Forearm: .....fig.5.

- Solid, with vertical bone.

Pastern: .....fig.5.

- Seen from the side slightly oblique.
- Is practically in the extension of the forearm.

Front feet:

- Cat feet.
- Toes close, solid, well arched.
- Nails and pads strong and resistant

### **Hindquarters:**

Adequate angulations in form of big articular angles.

Correct limbs, seen from behind and from the side;

Hocks not deviated;

This proportion and the solidity of the carpus cause that in static and in movement the dorsal line remains straight and horizontal and the angles of the articulations do not change to compensate the weight.

It is the height of the rectangle where the body is framed.

Angle coinciding with the checks carried out for this study =100 °

The calculated length for the arm and shoulder blade is 24 cm.

Angle coinciding with the checks carried out.

The estimated perimeter for a Spanish Mastiff male and adult is 28 cm at the bottom of the elbow.

Side view slightly inclined, should not be bent. It is practically the continuation of the forearm and must be a strong bone.

They produce a compact and rounded footprint, has an approximate area of 54 cm<sup>2</sup> considering a total weight of 96 kg mastiff and considering that the anterior part of the body, which unloads on the forelegs, accounts for 60% of the total weight we have:

$$T = 96 \text{ kg}, T_A = 60\%/96 \text{ kg} = 57,6 \text{ kg}$$

This implies that each hand supports 28.8 kg and that each cm<sup>2</sup> of the hands transmits a weight of 0.533 kg / cm<sup>2</sup> to the ground. This data is related to the resistance of a soft soil, that is to say, a humid earth, a semi-compact clay. From this we can conclude that the dimension of the footprint is made to be able to transmit the weight of the mastiff so that it can; walk through the countryside without difficulty, without sinking into the ground and without overloading your extremities.

It depends on vertical line that the impulse to walk and jog is transmitted efficiently to the ground.

#### Thighs:

- Solid and muscular.  
Femoral-coxal angle  
nearly 100°.

#### Stifle:

- Femoral-tibial angle  
nearly 120°.....fig.5.

#### Lower thigh:

- Long, muscular, solid  
bone structure.

Analyzing the anatomy of the Spanish Mastiff (Checking structural profiles of current outstanding specimens) this angle is excessive since it forces the rump angle to be very close 20° -25° when the inclination of the rump is 45° and the angle coxo-femors out of 120° - 125° actually considering the angle that determines the pelvis and the hip area, its 100° angle with the femur is correct. The angle formed by the tibia and the metatarsals also correspond to the 130° that defines the standard. So to maintain the structure of the Spanish Mastiff the femoro-tibial angle must be more closed, approximately between 103 ° -105 °

#### Hocks:

- The open angle of the  
hocks is nearly 130°.

#### Metatarsus:

- Well-marked, with the  
Achilles tendon clearly  
visible.

#### Hind feet:

- Cat feet.....fig.5.

The feet bear less load than the hands but on the contrary they make the effort of the impulse of the mastiff in movement. This makes the footprint of the hind limbs even greater than those of the forelimbs.

### **VIII. Gait /**

#### **Movement**

### **IX. Size**

#### Height at the withers:

- Minimum.....  
Males 77 cm  
Females 72 cm
- Desirable.....  
Males >80 cm  
Females >75 cm

Although admissible, today they are scarce although the proportions remain

This study is done considering an adult mastiff more than 80 cm to the cross. Here we have considered a mastiff 81-82 cm high. Improving the indicated height is adequate and desirable if the remaining proportions of length, perimeter, etc. They also increase to maintain harmony and proportion.

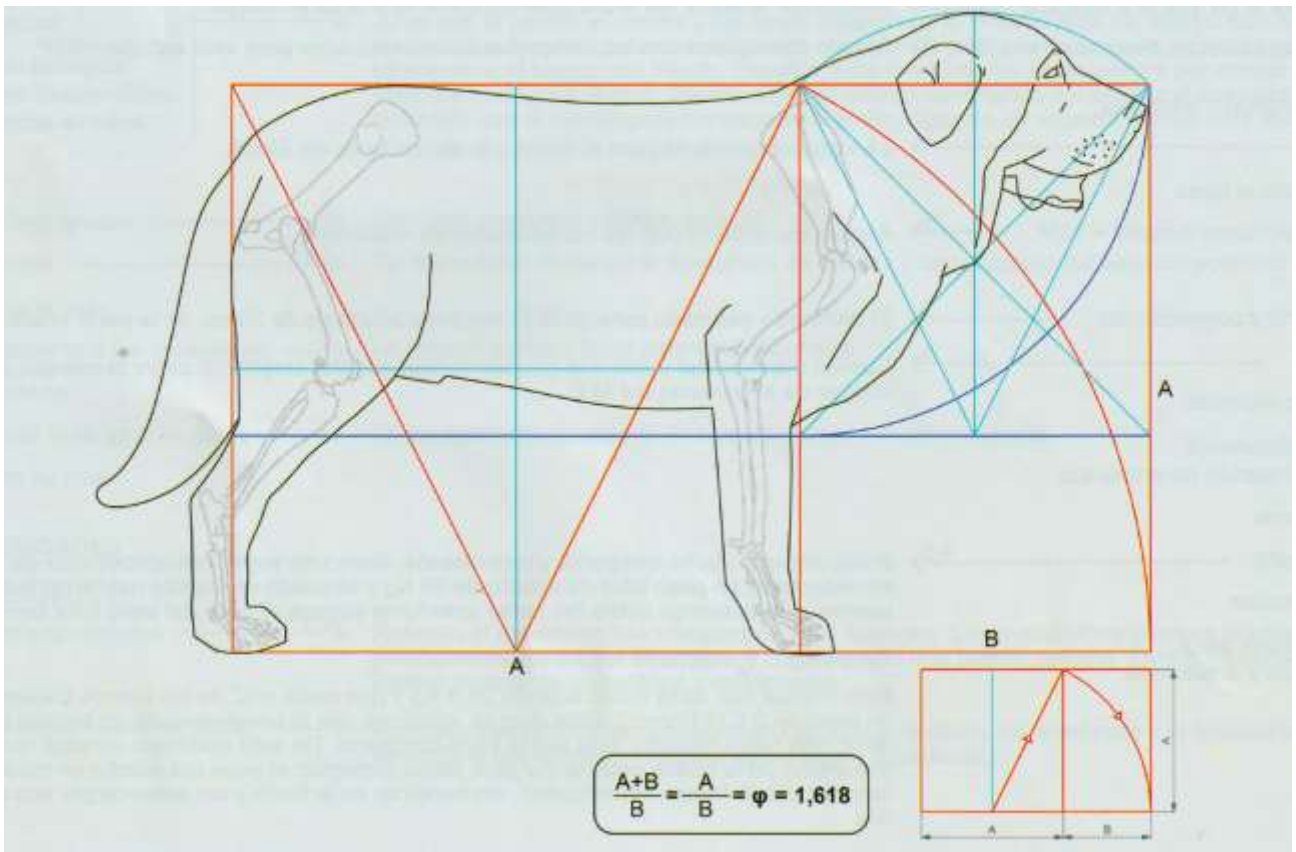


Figure 9. Harmonic proportions of the Spanish Mastiff