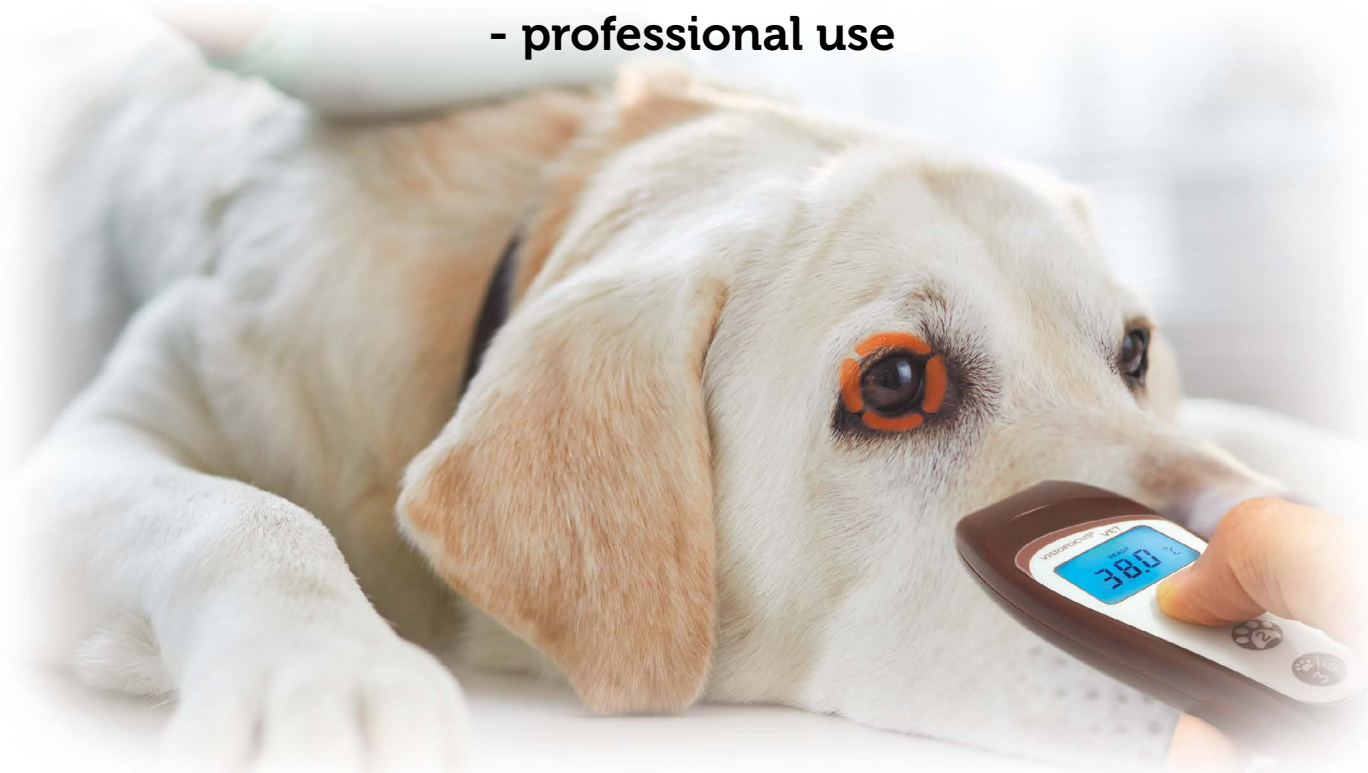




MADE IN ITALY

VISIOFOCUS® VET

**infrared non-contact thermometer for animals
- professional use**



- Product name:** VisioFocus® VET
- Model:** 06610
- Description:** infrared medical thermometer for professional use, intended to measure body temperature of animals without touching their body. It allows instantaneous, hygienic and accurate temperature measurement without any contact with the animal.
- Designed by:** Tecnimed srl, Vedano O. (VA) Italy
- Manufactured by:** Tecnimed srl, Vedano O. (VA) Italy
- Technology:** thermometers belonging to the VisioFocus family are the most advanced result of the technology developed by Tecnimed, which has been manufacturing non-contact infrared thermometers for 22 years: Tecnimed is the company that invented forehead body temperature measurement and non-contact measurement.
- Classification:** VisioFocus VET is not a medical device, according to European regulations.
- Tecnimed patents:** US 7,001,066 - US 7,651,266B2 - US 8,128,280 - US 8,821,010 - EP 1.283.983 - EP 1.886.106 - EP 2577242(B1) - KR 10-1898897 - CN 10302619 and other international patents pending.
- Quality system:** ISO 9001:2015, ISO 13485:2016
- Product compliance:**
- LVD (2014/35/UE) and EMC (2014/30/UE) directives
 - standards EN 60601-1, EN 60601-1-2, EN 60601-1-6, EN 60601-1-11, EN 62471, EN ISO 80601-2-56, ASTM-E 1965-98:2016
 - directive RoHS (Pb-free)

TECHNICAL BACKGROUND

All living beings and objects emit infrared radiation of wavelength that varies depending on the characteristics of their surface. In particular, the human body emits infrared radiation at wavelengths between 5 and 14 micrometres.

VisioFocus VET is the evolution of Thermofocus®, the world's first non-contact thermometer intended for human use and also the evolution of Thermofocus Animal. With Thermofocus, Tecnimed introduced, in 2000 and first in the world, the non-contact measurement, thus revolutionizing and simplifying the way of measuring human body temperature; subsequently, with Thermofocus Animal first, and now with VisioFocus VET, also thought about measuring body temperature in animals. The Tecnimed's thermometers, designed and produced in Italy, are provided with a technology protected by international patents, constantly improved and upgraded, and are unsurpassed leaders on the market. They use a sensor (thermopile) that emits an electrical signal when excited by infrared radiation. This signal is amplified and processed by a sophisticated microprocessor depending on the ambient temperature, until a temperature value comparable to the animal's core temperature is obtained.

The measuring system was developed by Tecnimed and tested in collaboration with the "De Marchi" Paediatric Clinic (University of Milan). Tecnimed thermometers are currently used in a number of qualified centres in Europe, America, Asia, Africa, and Oceania.

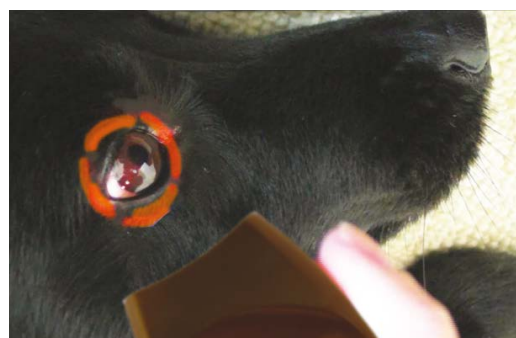
MEAN FEATURES

• MEASUREMENT AT DISTANCE

Usually, animals' internal temperature is taken by introducing a traditional thermometer in their rectum, a procedure which is invasive and annoying for the animal, and uncomfortable for the person taking the measurement.

VisioFocus VET is able to take the body temperature of animals at a distance and without touching their skin, without bothering them, in few seconds and in an extremely simple way.

Measurement can be taken on the eye (recommended) or in the auricle or in the gums or rectal area, always at a distance if, for any reason, it is not possible to detect the temperature in the eye.



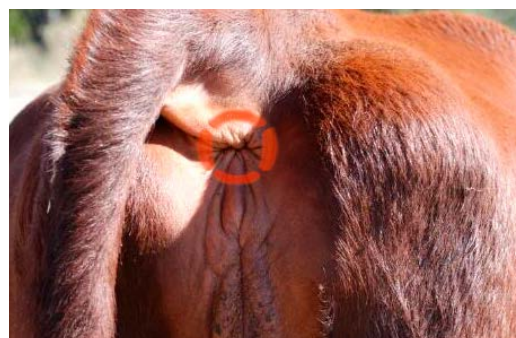
eye



auricle



gums area



rectal area

• NO LASER

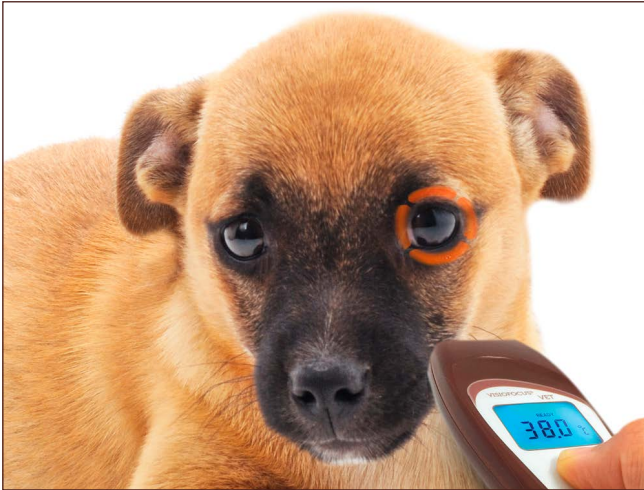
VisioFocus VET does not use laser radiations, it is safe and harmless even when pointed into the eye. The aiming lights are normal LED lights, whose photobiological safety is verified according to EN 62471.

SUGGESTION: as indicated above, the lights of VisioFocus VET are absolutely harmless and are tolerated very well by most animals. However, it is important to approach the animal gently. If you suddenly approach the eye with the thermometer (or with any other object or even with your hands), the animal could get frightened and move its head making it difficult to take the measurement. It is therefore suggested to first stroke the animal's head with one hand and then gently approach it with the thermometer in the other hand. Sometimes it may be helpful to approach from the side rather than the front.

• MULTIFUNCTIONALITY

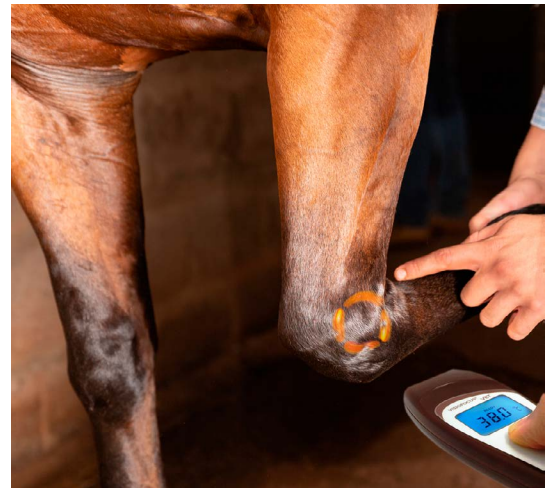
VisioFocus VET can read:

- 1) body temperature of pets and farm animals
and the temperature of any object and liquid with a temperature between 1 and 80°C, for example:
- 2) food
- 3) bathwater
- 4) ambient (for example inside the dog's house).



VisioFocus VET can also be used to take the temperature of wounds, inflammation, scars, burns, circulations problem or to monitor the temperature of stimulated muscles, for instance on racing horses.

These measurements must be considered as relative rather than absolute values. If taken on the skin, they will show the difference between two neighbouring or symmetrical areas. In these cases, the presence of fur, as long as equally spread on the concerned areas, is not critical.



FUNCTIONAL FEATURES

• MEASURING AREA

Any animals' body is subject to heat dispersion and, depending on their race, it is more or less covered with fur and vascularized.

Nonetheless, eyes are not covered with fur, they are always highly vascularized, and moreover their temperature is correlated to the actual internal body temperature. **They are therefore the ideal point for an accurate body temperature to be taken.**

The measurement from the eye is an exclusive and patented technology of Tecnimed.



• AIMING SYSTEM

One of the most important things in measuring the body temperature at a distance is that the distance from the skin is correct. If the distance is correct, the temperature is correct. If the distance changes the temperature changes accordingly, in a way that cannot be controlled at all.

Thanks to its patented aiming system, made of a LED system projecting two pair of arches, VisioFocus VET clearly indicates the correct distance and the correct point for an accurate measurement to be taken.

When you press one of the buttons, approaching and moving the thermometer away from the eye, the two pairs of arcs move relative to each other. When the arcs form a circle, it means that the distance is correct and the one at which the thermometer is calibrated.

As this system is patented, no other thermometer in the world can use it, apart from Thermofocus and the other thermometers in the VisioFocus family.

• TEMPERATURE MEASUREMENT SYSTEM

Temperature measurement is performed in a few simple steps:

- press one of the measuring buttons and hold it down;
- while keeping the thermometer **perpendicular to the eye** (or chosen measuring area), move it in or back away from the eye until the arcs converge to form a circle on the hair around the eye. If the thermometer is too far away, the two side arcs will be to the right of the lower and upper arcs; if it is too close, they will be to the left.
- **When a complete circle formed by the 4 arcs is displayed**, the thermometer is at the right distance for an accurate measurement: release the button and keep the device steady while the lights flash.

IMPORTANT: directing the pointing lights in the eyes is not dangerous. They are harmless! THEY ARE NOT LASERS, but normal Leds, conforming to EN 62471.

Should the measurement on the eye be not possible, you can take the temperature on the animal's rectum area, auricle or on the gum, with no contact and in a non invasive way. You can search for the more comfortable area for both you and the animal.

• ROOM CALIBRATION SYSTEMS

Each animal's individual temperature varies according to the measurement's site and throughout the day, also in response to physical effort, and **is affected by the outside temperature** and other factors.

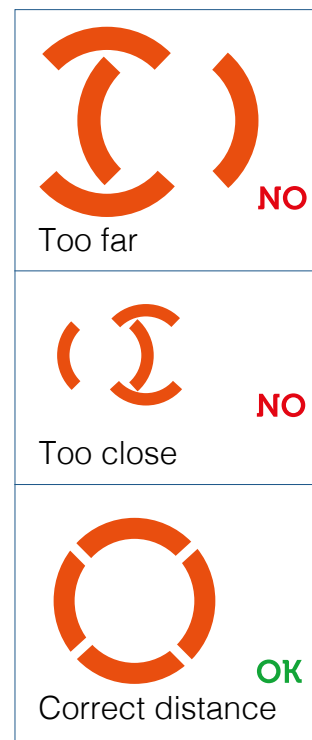
Therefore, when one of the buttons is pressed to take a body temperature reading, the VisioFocus VET software **automatically applies a correction factor according to the ambient conditions**, thus giving a resulting value comparable to the animal's internal temperature.

All infrared thermometers have to know the ambient temperature, for this reason all the manufacturers indicate to wait a certain time (usually from 10 to 30 minutes or even longer, depending on the temperature difference) before using the thermometer in the case it is brought from one room to another with different temperatures.

VisioFocus VET eliminates this waiting time thanks to two exclusive quick stabilization systems: the AQCS and MQCS.

If the device notices a sudden temperature change, a countdown will appear on the display indicating the time required for stabilisation: simply wait until the end of the countdown for the thermometer to stabilise automatically. This system is called **AQCS (Automatic Quick Calibration System)** and is normally able to stabilise the thermometer in approximately 3-4 minutes.

As an alternative, it is possible to use the **Manual Quick Calibration System (MQCS)**, which allows the thermometer to immediately stabilise its temperature at room temperature in just 3 seconds. The MQCS consists of having the thermometer acquire the temperature of the room where it is to be used and is performed by pointing it to a surface with a temperature representative of that of the environment in which the animal is located. If you take the reading indoor, do not focus the thermometer on perimeter walls, windows, sources of heating or cooling (radiator, air conditioner, lamp, computer, surface in contact with the human or animal body, etc.). If you are taking the temperature outdoor do not make the MQCS on the walls of a heated house. You can make the MQCS on the trunk of a tree or on the grass, the floor, the soil, no matter if asphalt, concrete or tile.



• ALIGNMENT SYSTEM and VISIOVET APP

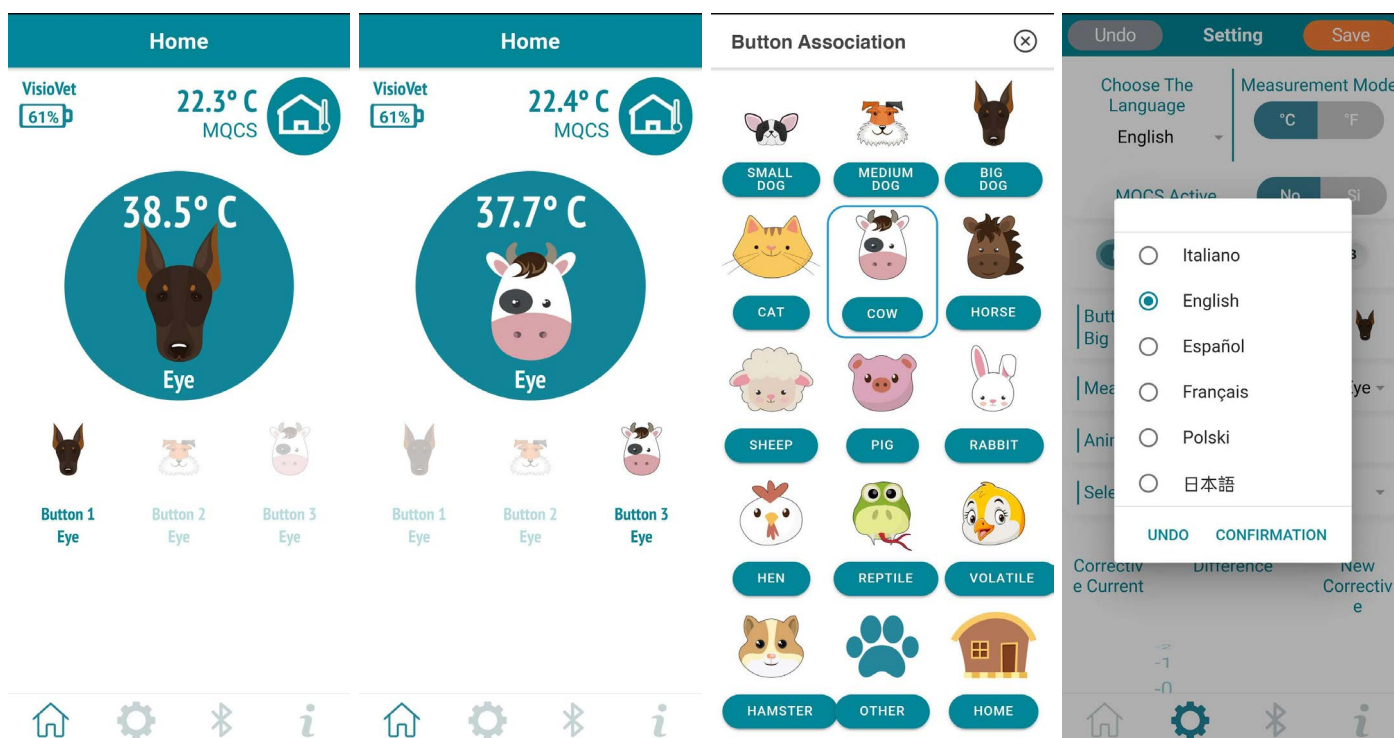
It is important to know that there is no single “normal” body temperature common to all animals, but that the body temperature of animals also changes according to type, breed and size, which is why VisioFocus VET is designed to be able to adapt to all animals.

Indeed, VisioFocus VET has been set according to averages statistically obtained from several tests made on animals of different races.

Additionally, if necessary, the settings of the VisioFocus VET can be changed according to the type of animal and the chosen measurement area via the **VisioVet app**, which allows each of the three buttons to be aligned to a specific animal and measurement area and is recommended for use by veterinarians. Indeed, through the VisioVet app it is possible to record a large amount of data and easily change the setting of each button.



We suggest associating the three buttons with the animals whose temperature is taken most frequently. For example: button 1 for large dogs, button 2 for small dog, button 3 for cats. Then, if necessary, via the VisioVet app each button can be quickly re-associated with any other animal, e.g. horses, cows, hamsters, reptiles and so on.



NOTE: to read the temperature of objects, liquids and surfaces, proceed in the same way as for a body temperature measurement, but by pressing the third button 3 after setting it to “HOME”: in this way, a surface and actual temperature value is obtained (not adapted to any animal).

MANUFACTURING AND CERTIFICATIONS

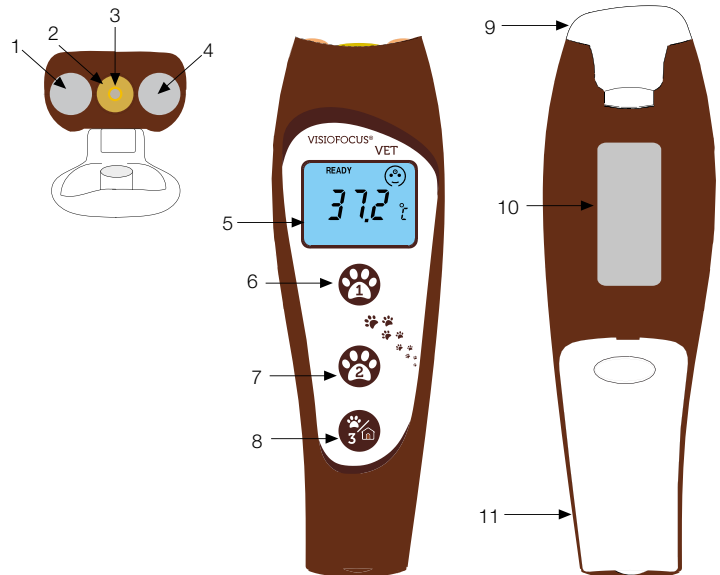
VisioFocus VET is manufactured by Tecnimed in its factory, located in Vedano Olona (VA), ITALY, according to a Quality System ISO 9001:2015 and ISO 13485:2016 certified. Production, calibration and testing of VisioFocus VET are carried out in a Temperature Controlled Clean Room, by means of purpose-built machines.

VisioFocus VET is not considered a medical device within the meaning of European regulations, but complies with the technical standards for medical devices.

The VisioFocus® trademark is registered in Italy and extended internationally.

DEVICE DIAGRAM

1. Aiming light
2. Waveguide
3. Sensor (at the bottom of the waveguide)
4. Aiming light
5. LCD display
6. Button  for measuring body temperature
7. Button  for measuring body temperature
8. Button  for measuring body temperature or for other readings
9. Protective cap
10. Label with serial number
11. Battery door



AVAILABLE PACKAGING

Packaging in white box containing:

- 1 VisioFocus VET 06610
- 1 instruction manual
- 1 protective case
- 1 lanyard
- 4 AAA batteries



TECHNICAL CHARACTERISTICS

Number of buttons:	3
Room temperature detection:	√
AQCS (Automatic Quick Calibration System):	√
MQCS (Manual Quick Calibration System):	√
Batteries (included):	4, AAA/LR03 (preferably alkaline)
Lifespan of high quality batteries:	up to 3 years or 30.000 readings
Distance from the animal during measurement:	indicated using an optical aiming system (approx. 6 cm/2.36 inches)
LED lights colour:	Amber
Protective cap:	Yes
Display backlighted:	Yes, in 5 different colours
Dimensions:	mm 144 x 43.5 x 21.5 (5.66 x 1.71 x 0.85 inches)
Weight:	gr. 98 (3.45 oz.) - with batteries

Measuring specifications:

Resolution:	0.1			
Body temperature readings range:	from 32.0 to 44.5°C (89.6/112.1°F)			
Other readings range:	from 1.0 to 80.0°C (33.8/176.0°F)			
Laboratory accuracy:	from 1.0 to 33.9°C =	±1.0°C	from 33.8 to 93.1°F =	±1.8°F
ASTM E1965-98-(2016) laboratory accuracy requirements in the display range of 37 to 39°C (98 to 102°F) for IR thermometers is ±0,2°C (±0.4°F), whereas for mercury in-glass and electronic thermometers, the requirement per ASTM Standards E 667-86 and E 1112-86 is ±0,1°C (±0.2°F)	from 34.0 to 35.9°C =	±0.3°C	from 93.2 to 96.7°F =	±0.5°F
	from 36.0 to 39.0°C =	±0.2°C	from 96.7 to 102.2°F =	±0.4°F
	from 39.1 to 42.5°C =	±0.3°C	from 102.3 to 108.5°F =	±0.5°F
	from 42.6 to 80.0°C =	±1.0°C	from 108.6 to 176.0°F =	±1.8°F
Room temperature working range:	-7,0/45,0°C (19.4/113.0°F) ⁽¹⁾ ⁽¹⁾ When the room temperature is below 16°C (60.8°F) or above 40°C (104°F) accuracy and the operating range are not guaranteed and the message “Lo.5” or “Hi.4” respectively, and the temperature value are displayed alternately.			
Correction factor range:	-9,9/+9,9°C Dynamic range with reference to the correction factor set by the manufacturer			