



# MAGAVISION

MACHINE LEARNING



# Artificial vision system

Evaluates motility, concentration and abnormal forms quickly, accurately and easily.

The 4th generation of Magavision, a CASA artificial vision system exclusively for boars. Developed entirely by our IT team with Machine Learning and Artificial Intelligence technology to optimise its accuracy and speed of analysis. Adaptable to each user thanks to the different versions available.



## The most intelligent analysis

Software built to be accurate and fast.

It optimises analysis patterns due to the use of Artificial Intelligence, providing highly accurate and precise results in the identification of normal and progressive motility, concentration, abnormal forms and kinetic parameters.

New and very intuitive interface, with improved visualisation of reports and videos, allowing spermatozoa to be marked and unmarked according to their condition.



## The most powerful analysis

Magavision analyses 300 million real pixels per field.

Equipped with a real 5mpx high-resolution camera that allows a large area to be analysed with superior image quality, improving the sperm saturation limit per field.

The analysed video time is 1 second, in which it is able to analyse 60 frames, so a more accurate analysis of the sperm trajectory can be performed.



## The most flexible analysis

A multitude of configuration options for fully customised reporting.

It allows the useful concentration to be adjusted from a minimum %, as well as the type of abnormal form, breed or genetic line.

Adaptable to the needs of any boar stud due to its versatility. It also offers different types of user for different uses (admin and user), facilitating its integration into any work environment.

## 3 versions, maximum versatility

The most accurate artificial vision system on the market



**MAGAVISION**tech

### TECHNICAL VERSION

Magavision TECH analyses concentration, motility and total abnormal forms with high velocity and accuracy.



**MAGAVISION**prem

### PREMIUM VERSION

With Magavision PREM, you also get the quality of movement and the breakdown of drops, tails and heads.



**MAGAVISION**elite

### ELITE VERSION

The most powerful version completes the analysis by taking into account all the kinetic parameters of the movement.

# All you need in a single device

What does Magavision tech, prem & elite include?

Trinocular Microscope

- With negative phase contrast
- Heated plate
- Microscope video camera

CPU with Magavision software

- Processor: Intel Core i7 2.10GHz
- RAM Memory: 16GB DDR5
- Hard disk: 2TB

Analysis accessories

- 1 box of counting chambers
- Micropipette 0,5 - 10 microlitres and tips
- Micropipette 100 - 1000 microlitres and tips
- Metal rack for heating samples
- Dilution tubes

Compatible with Smart Stage (Optional)



\*A stable electrical connection is required. If this cannot be guaranteed, Magapor recommends the use of a UPS for protection.

Full connectivity to optimise information flows

Perfectly integrated with Gesipor for an integral management of the process, as well as with other management software to get the most out of the boar stud.

Calculate and maximise the number of doses according to the configured parameters. You can adjust each batch of doses according to the breed, genetic line or quality parameters you define in each case.

Configure, view and export all the reports you need to take full control of production and streamline decision-making.

## Smart Stage, the ideal complement

Motorised, heated and auto-focusing stage.

Magavision optionally includes a **motorised, heated and auto-focusing stage**.

The motorised stage enables **multi-tracking and multi-analyses**, allowing up to 20 samples to be loaded at the same time and perform their analysis simultaneously and fully automatically.



20 samples in less than 5 minutes






Automatic focus



Multi-tracking and multi-analyses up to 20 samples

## Which Magavision best suits you?

	 <b>MAGAVISION tech</b>	 <b>MAGAVISION prem</b>	 <b>MAGAVISION elite</b>
Individual, total and progressive motility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Concentration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identifies motile and normal spermatozoa	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Total abnormal forms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Classifies drops morpho-anomalies (proximal and distal)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Classifies tails morpho-anomalies (Folded and Curled)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Classifies head morpho-anomalies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Excludes agglutinations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calculates agglutinations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Classifies speeds (fast, medium, slow and static)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Movement speed (VCL, VSL, VAP)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Movement trajectory (STR, LIN, WOB)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Displacement amplitude (ALH)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Beating frequency (BCF)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Distances (DCL, DSL, DAP)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mean angular displacement (MAD)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>With Smart Stage (Optional)</b>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Auto-focus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Automatized analysis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Multi-analysis (up to 20)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Multi-tracking (up to 20)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Counting chambers

High precision cell counting chambers.

- 5 analyses per chamber.
- 25 chamber box (125 analyses).

