



MobiMaster

A high-performance milking system
for your flock.

The ideal solution for farmers who move their
animals to different locations during the lactation
period

www.agromasters.gr



The Company

Agromasters is a leading manufacturer and exporter of innovative, high-quality dairy farming equipment, specializing in milking parlors, automation systems, feeding equipment, and manure handling solutions.

Since 1978, Agromasters has been significantly contributing worldwide to the dairy farming sector by offering custom-made and technologically advanced products for cows, calves, sheep, goats, lambs, and buffaloes.

Through our extensive expertise, we support thousands of dairy farmers in optimizing milk yields while maintaining excellent animal welfare standards.

With complete in-house design and manufacturing capabilities, we ensure superior quality control across our entire product range.

MobiMaster is a complete milking parlour solution renowned for its exceptional versatility. Whether operating in mountainous terrains, open fields, or confined indoor spaces, MobiMaster adapts seamlessly to meet your needs.



MobiMaster Trailer

Mobile Trailer



Key Benefits of MobiMaster

- > **Autonomous:** It is a self-sufficient and ready to use milking system for goats and sheep.
- > **Tailored Milking Solution:** It is a custom-made solution manufactured to meet the unique needs of each farmer.
- > **Cost Effective:** Eliminates the need for building infrastructure, resulting in cost savings.
- > **Low Maintenance:** Accompanied by high-quality milking technology that requires minimal servicing.
- > **Efficient Milking Speed:** Features a rapid exit stall capable of efficiently handling up to 300 animals in just 1 hour and 30 minutes.
- > **Build to Last :** It is constructed on a heavy-duty mobile platform known for its robustness and durability.
- > **Ease of Transport:** It can be effortlessly pulled by a tractor, enhancing its mobility and usability.

MobiMaster Platform

- > **Chassis:** Heavy duty constructed chassis painted in yellow paint finish.
- > **Towbar:** Painted yellow for enhanced durability.
- > **Gates:** Hot galvanized for superior rust resistance.
- > **Mobility:** Equipped with four tires with bearing hubs and leaf springs for smooth movement.
- > **Roofing:** Milker & animal areas are covered with sheet material for protection against weather conditions.
- > **Milk Room:** Constructed with 3 cm panels for optimum insulation.
- > **Flooring:** Constructed with a 2 mm thick aluminum surface for both durability and easy maintenance.
- > **Utilities:** Equipped with lighting and a water boiler.
- > **MobiMaster Panel:** Features a user-friendly Power supply control Panel.
- > **Total Weight :** 3,5 tones
- > **Dimensions :** 11,7 m x 2,2 m x 3,6 m
- > **Total power Requirements :** 18 KW

MobiMaster Control Panel

Mobile Trailer

The MobiMaster control panel serves as the primary electrical hub for the Agromasters mobile milking system, providing power to crucial automation components within the parlour, including: Air compressor, Milk Pump Controller, Automatic Feeding Panel, Feed Conveying System Panel, Zeus Pulsation Control Unit, Boiler, Poseidon Washing Unit I, Hermes ACR Controller, Lights.

Upon receiving the MobiMaster for the first time, the farmer only needs to connect the 3-phase electrical socket to the MobiMaster Control Panel. Since the MobiMaster comes preassembled from our factory, the milking system is ready for use without requiring the presence of an electrician or installer.



Air Compressor 150-Litre



Hermes ACR Controllers



Milk Pump Controller



Automatic Feeding
Panel



Feed Conveying
System Panel



Zeus Pulsation
Control Unit



Boiler 90-Litre



Poseidon Washing Unit I

MobiMaster

Pictures



Rapid Exit Stall & Automatic Feeding

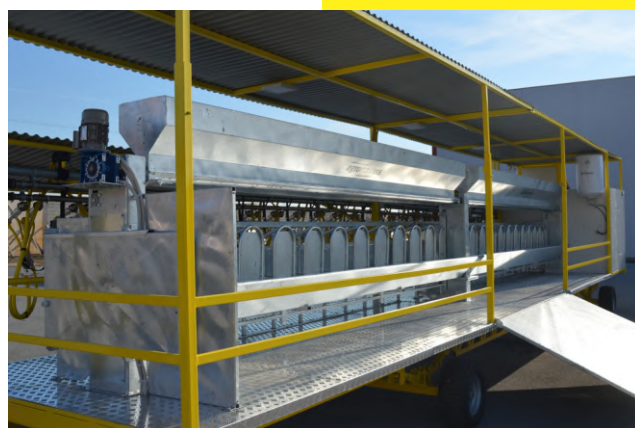
Stall System

How it Operates

- Animals enter the milking parlour one by one, taking their places in the stalls.
- Simultaneously, the end-user fills the feeding troughs with cereal by activating the auto-feeding system.
- While the animals are being fed, the dairy farmer attaches the 24 milking clusters.
- After the milking process is completed, the rapid exit stall is pneumatically lifted, and the animals are released.
- Subsequently, the next group of 24 animals enters the parlour for their turn in the milking process.

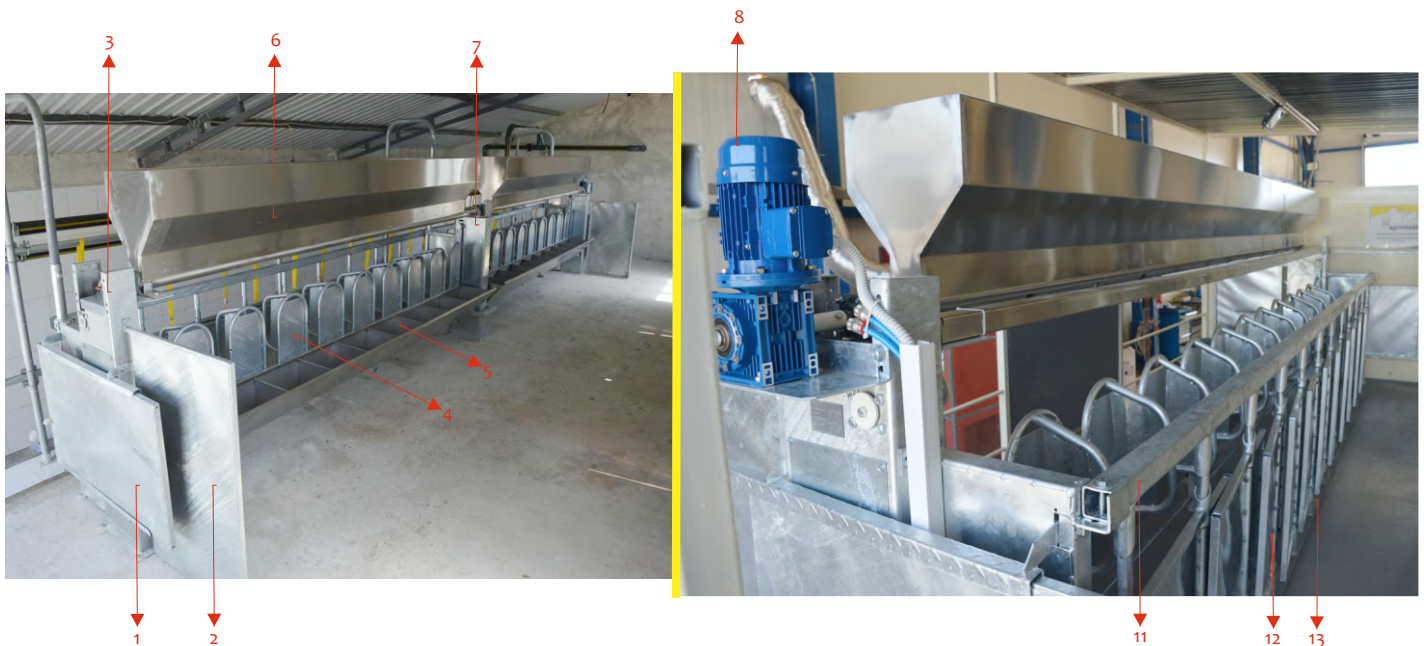
Stall Technical Specification

- Available in configurations of 1x12 or 1x24
- Hot-dip galvanized coating
- Rapid exit frames designed to accommodate 12 or 8 animals each and capable of lifting up at a 180° angle
- Side columns with integrated pneumatic cylinders
- Middle columns with integrated pneumatic cylinders
- Separate individual animal doors
- Stainless steel protection edge
- Manual entry gate
- Feeding tank with an electrically operated auger
- Feeding trough with separations
- Automatic Feeding Panel
- Air compressor 150-Litre



Rapid Exit Stall Parts

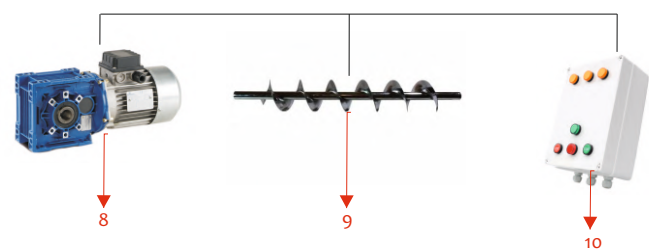
Stall System



Pneumatic System Parts



Automatic Feeding System Parts



- | | | | |
|---|--|----|---------------------------|
| 1 | Entry Gate (manual operation) | 9 | Internal Auger |
| 2 | Protection Frame | 10 | Electrical Panel |
| 3 | Side Column (with integrated air cylinder) | 11 | Upper Door Support |
| 4 | Rapid Exit Frames (12 animals per frame) | 12 | Movable Doors |
| 5 | Feeding Trough | 13 | Downward Door Support |
| 6 | Feeding Tank | 14 | Air Compressor 150 Litres |
| 7 | Mid column (with integrated air cylinder) | 15 | Air cylinder |
| 8 | Worm gear reducer (automatic feeding) | 16 | Level |

Feed Conveying System

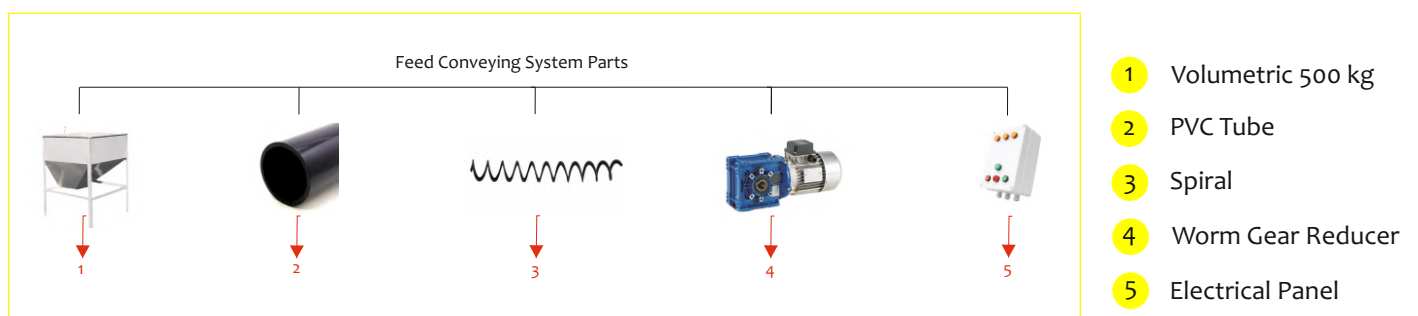
Stall System



Agromasters manufactures feed conveying systems designed to optimize the management of loading/unloading operations & transport of various types of feed to the milking parlor or feeding belt.

Key Benefits

- Excellent feed conveying capability.
- Easy and quick assembly.
- Breakage risks are significantly reduced, ensuring low maintenance.
- Adaptable to any dairy farm.



Hektor Terminal Unit



Milk Receiver

- The Hektor I Milk Receiver, with a capacity of 30 liters, is designed to ensure optimum hygiene through its durable glass construction.
- The glass construction enables the observation of both the milking and washing processes.
- The top and bottom lids are constructed from stainless steel and come with the necessary gaskets to ensure a perfect seal.
- The unique design of the level control system allows it to operate continuously for up to 30 years without the need for maintenance.
- The stainless steel shutter allows the user to easily empty any remaining milk.

Sanitary Trap

- **Sanitary trap** is constructed entirely from stainless steel.
- It separates the milking from the vacuum side of the milking system.
- Additionally, it serves to protect the vacuum pump from moisture and dirt that could potentially be drawn into the vacuum lines.

Milk Pump

- The Apollo Milk pump is self-cleaning, exclusively made from 100% 304 stainless steel components, and comes with an electrical panel.
- **Automatic Operation.** The Agromasters milk pump starts operating when the milk in the glass receiver reaches a certain level, as determined by the level control system.
- **Manual Operation.** When there is a small amount of milk left in the receiver after the milking process is complete, the user can manually activate the function to transfer the milk to the cooling tank.

Milk Filter

- Agromasters manufactures various types of milk filters in terms of length, width, Whether they are single or double depending on the size of the milking parlour.

Milk & Washing Line

Milk & Wash Assembly



- All agromasters milking parlors are equipped with stainless steel milk & water pipes of various diameters , depending on the size of the installation.
- All the necessary stainless steel components, including connections, supports, milk taps, and curves, are used to create the proper closed milk and wash circuit.

Triton III Washing Cups

Milk & Wash Assembly



- The Triton III washing cups are high-quality products designed for sheep and goats to effectively clean and disinfect milking clusters.
- They are positioned on the milking system's washing line and are suitable for both low and high-line systems
- It is a lightweight stainless-steel product with an integrated stainless steel milk inlet.
- The specially designed product ensures quick and precise positioning of the milking cluster into the wash position with minimal vibrations.
- Provides easy removal of milking clusters when the parlour is being prepared for milking.



Poseidon Washing Unit I

Washing Units , Wash Tanks & Others



- > The Poseidon I Washing Unit is a high-quality electronic device designed by Agromasters for the automatic cleaning of milking parlors.
- > It serves as the main control panel of the installation and provides an efficient and economical solution for medium-sized parlors.
- > The unit is housed in a stainless steel enclosure, which contains all the electronic and hydraulic components necessary for operation.
- > It is electrically connected to the vacuum pump and drain valve, enabling the management of both the milking and cleaning phases.
- > The Poseidon Washing Unit comes with a plastic bottle for manual dosing of detergents, offering a cost-effective alternative solution.

Technical Features

- ▣ The Poseidon Washing Unit I controls both the milking and cleaning processes of the parlor with a single switch.
- ▣ It is electronically connected to the Aeolus Service Monitor, vacuum pump, drain valve, and air injector.
- ▣ Provides flexible adjustment of washing program parameters.
- ▣ The unit provides two washing program options :
 - > **1st program - 1 phase** (rinsing with cold water)
 - > **2st program - 4 phases** (circulation washing with alcalic or acid)
- ▣ Displays each operation on the LCD display during cleaning.
- ▣ Indicates the total washing time and the washing temperature.
- ▣ Offers protection against short circuit & voltage overload.



Poseidon Washing Unit II

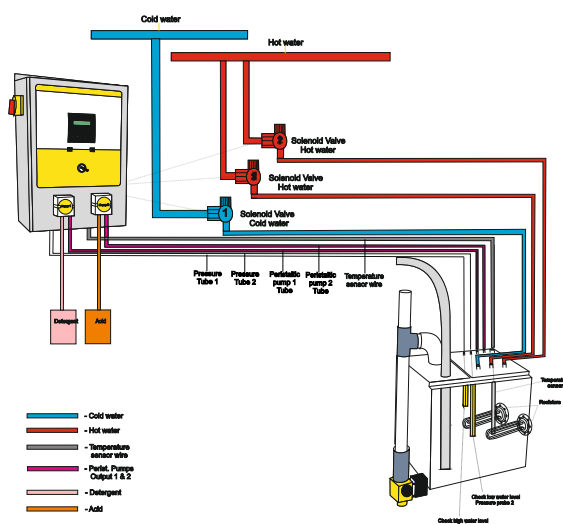
Washing Units , Wash Tanks & Others



- The Poseidon Washing Unit II, designed by Agromasters, is a high-quality electronic device specifically developed for the automatic cleaning of large goat and sheep milking parlours.
- Serving as the central panel of the milking system, it is housed in a stainless steel enclosure that contains all the electronic and hydraulic components of the appliance.
- Electrically connected with the vacuum pump and drain valve, it enables the management of both the milking and cleaning phases.
- The Poseidon Washing Unit II is equipped with two peristaltic pumps for the automatic dispensing of detergents, offering an advanced cleaning solution.

Technical Features

- The Poseidon Washing Unit II simplifies the control of the parlour's milking and cleaning processes with a single switch.
- It is electrically connected to the Aeolus Service Monitor, vacuum pump, drain valve, and air injector.
- Offers flexibility in adjusting parameters for washing programs
- The unit provides four washing program options:
 - **1st program - 1 phase** (rinsing with cold water)
 - **2st program - 4 phases** (circulation washing with acid)
 - **3st program - 4 phases** (circulation washing with alkalic)
 - **4st program - 5 phases** (circulation washing with alkalic & acid)
- Displays each operation on the LCD display during cleaning.
- Indicates the total washing time and the washing temperature.
- Provides protection against short circuit & voltage overload.
- **An optional automatic water heating system is available, complete with two 6 kW resistors and an electrical panel.**



Zeus PCU

Vacuum Assembly

The Zeus Pulsation control unit is designed for the precise synchronization of electric pulsators in a milking parlour for sheep and goats. It has the capacity to power up to 24 electric pulsators



NT 24 Pulsator

Vacuum Assembly

NT 24 pulsators have been designed with meticulous attention to detail to facilitate rapid, complete and uniform milking, preserving udder health and making the dairy farmer's job easier. They are available in 2 or 4 exits



Technical Features

Zeus Pulsation Control Unit

- The Zeus Pulsation Control Unit is equipped with an LCD display that indicates:
 - The total current consumption on each channel .
 - The Voltage supplied to pulsators.
 - Front and rear pulsation ratio.
 - Phases configuration.
 - Pulsation rate configuration (10-190 pulses / min).
 - Pulsation ratio configuration (10:90 – 90:10).
 - It offers a choice of 2 different groups of settings.
 - The enclosure is constructed of aluminum & stainless steel.

Technical Features

NT 24 Electric Pulsator

- The NT 24 pulsator offers a unique milking experience and ensures highly reliable operation.
- It is easy to install & requires no maintenance .
- It delivers intermittent vacuum during milking to mimic the natural movements of a lamb during lactation.
- The NT 24 pulsator has minimal vacuum requirements and very low energy consumption (200 mA).
- There is no need to disassemble the unit if milk escapes into the pulsator; water can be easily flushed through the pulsation tubes to clean the unit.

Aeolus Service Monitor

Vacuum Assembly

Aeolus service monitor is a multifunctional vacuum measuring device and, at the same time, an essential tool for dairy farmers looking to monitor and control the proper operation of their milking system.

It features an illuminated liquid crystal display that continuously and accurately shows the real-time vacuum level within the milking system.

The monitor provides visual and audible indications to alert the user if the vacuum levels approach or surpass the minimum and maximum values predefined by the user (adjustable).

Additionally, it serves as a reminder for a) liner replacement, b) vacuum pump service, and c) general service.

Furthermore, it has the capability to remotely transmit vacuum measurements to other instruments, such as the frequency regulator of the vacuum pump.



Technical Features

- Aeolus service monitor provides continuous, real-time monitoring of the system's vacuum level.
- It features built-in alarms for both low & high vacuum indications & can be connected to an external siren for added alerts.
- The vacuum level is displayed with decimal digit accuracy.
- In the event that the vacuum level becomes too high, a red LED intermittently flashes, and if the vacuum level is too low, a purple LED flashes to draw attention.
- The monitor also serves as a reminder for when:
 - The vacuum pump needs servicing (based on operating time).
 - The liners need replacement (based on total hours of milking operations).
 - The General servicing for the entire milking parlour will be required.
- It displays the time remaining until the upcoming service is needed.
- This proactive approach reduces the risk of unplanned emergency service and helps maintain peak system.
- The memory of the monitor stores data from up to 200 events, retaining information even in the event of a power failure, and resuming operation when power is restored.
- Additionally, the monitor has the capability to remotely transfer vacuum measurements to Agromasters' frequency regulator, enabling control of the vacuum pump to maintain a constant vacuum at desired levels, thereby saving energy.

Vacuum Pump

Vacuum Pump Assembly



Optimum Performance During Milking

The rotary vane vacuum pump is essential for the efficient operation of the milking system, and with over 25 years of expertise in vacuum system production,

Agromasters provides a diverse range of belt-driven vacuum pumps tailored for sheep and goat parlours, ensuring efficient and stable vacuum levels with minimal fluctuations due to the precise and high-quality construction of the pump rotor and housing.

Each vacuum pump includes a base plate, a vacuum tank with an integrated non-return valve, a belt stretcher slide, a protection cover, a silencer, an oil can, a belt, a pulley, an electrical motor, and a vacuum regulator.

Agromasters Vacuum pumps are available in capacities of 350 liters, 750 liters, 1500 liters, 2000 liters, and 3000 liters.

Vacuum Regulator

Vacuum Pump Assembly



Athena Milking Clusters

Milking Units

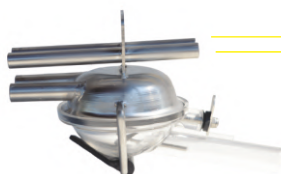


The Athena milking cluster is our standard solution for efficiently and quickly milking sheep and goats.

- **Milk Claw:** The Odysseus stainless steel milk claw is meticulously handcrafted and exclusively manufactured by Agromasters. It is a high-quality product designed for a lifetime of use.
 - Its circular shape and ergonomic design contribute to quick and easy handling, while the polycarbonate lid allows for observation of the milk flow.
 - It is effortless to clean as it can be disassembled with a single movement.
 - The Odysseus milk claw is designed for:
 - Alternate milking (double pulsation outlet)
 - Simultaneous milking (single pulsation outlet)
- **Automatic Valves:** This automatic milking component, combined with the stainless steel shut-off spring of the milk claw, ensures optimal vacuum shut-off, preventing unnecessary vacuum consumption and the intake of dirt.
- **Silicone Liner:** The softness and elasticity of our silicone liners provides superior performance & gentle milking.
- **Shell:** The transparent shells allow for easy observation of the pulsation process



Alternate Milking



Odysseus Milk Claw



Simultaneous Milking



Hermes

ACR System

Entry Level Automation



The Hermes ACR controller is a high-quality solution designed for the automatic removal of milking clusters from sheep and goats with precision when the milk flow volume falls below a pre-configured minimum flow rate.

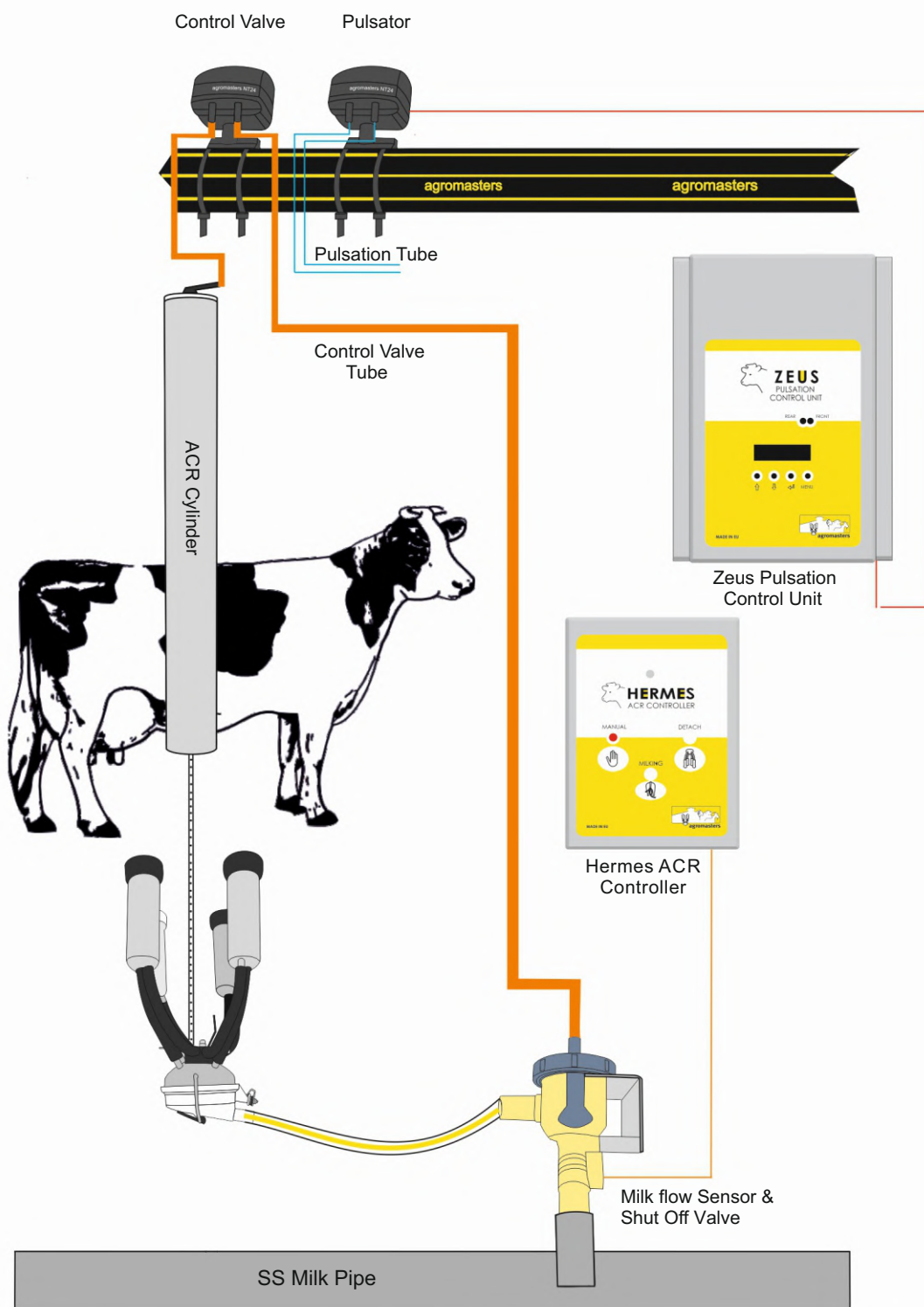
Incorporating HERMES ACR controllers into any milking system type can have several benefits, including maintaining milk quality, enhancing milking efficiency, and reducing potential animal health issues that can arise from prolonged milking.

Technical Features

- **Simplicity & Efficiency.** It offers straightforward push-button control with options for Manual, Milk, and Detach modes.
- **Led Indications.** The presence of a red LED provides indication for all available operating modes.
- **Easy Configuration.** The HERMES Controller provides a variety of adjustable settings based on the type of animals being milked (cows, goats, or sheep). These settings, including Vacuum On & Off Delay, Initial & Final Delay, Sweep Delay, and Resistance Sensing, can be conveniently configured using an external programmer.
- **Stainless Steel Enclosure.** The ACR PCB is seamlessly integrated into a specially designed stainless steel enclosure, providing optimal sealing and protection against moisture and water. This design ensures maximum durability.
- **Udder Stimulus Function.** When an animal exhibits delay in milk withdrawal, the initial Stimupulse is automatically activated to encourage milk release. To ensure any remaining milk residues are effectively drawn out, the final Stimupulse is activated.
- **Pulsation.** The HERMES ACR Controller is equipped with extra outputs designed for driving pulsation solenoids.
- **Sweep Function.** This function activates the vacuum to the cluster after the detachment sequence, effectively clearing the milking line of any remaining milk residue.
- **Soft Start & Takeoff.** soft start permits the operator to position the unit before vacuum activation, while soft takeoff refers to the timeframe between vacuum deactivation and cluster removal.
- **Sleep Mode .** In cases of unit inactivity, the HERMES ACR Controller will enter sleep mode, effectively maximizing power savings.

Wiring Diagram

Entry Level Automation



Rapid exit

Performance Table

ROTARY PARLOURS

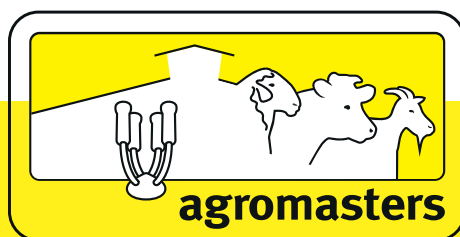
Milkers	Rotary Parlour	Number of Places	Milking Clusters	Entry Time	Milking Time	Exit Time	Time per Group	Animals per Hour
2	18	18	18	*	*	*	3,0 min	360
2	24	24	24	*	*	*	3,0 min	480
2	36	36	36	*	*	*	3,0 min	720
2	48	48	48	*	*	*	3,0 min	960
2	60	60	60	*	*	*	3,0 min	1200
2	72	72	72	*	*	*	3,0 min	1440

- When Automatic cluster remover System is integrated on a Rotary installation, only 1 milker is needed for milking process.
- Rotary is the type of milking parlor with highest yields & minimum required milkers (1-2) for its proper functioning no matter what is the size of the parlour.
- Rotary parlors can milk twice the number of animals comparing to Rapid exit & Linear parlors with the same number of milking units.

RAPID EXIT PARLOURS

Milkers	Rapid Exit Parlour	Number of Places	Milking Clusters	Entry Time	Milking Time	Exit Time	Time per Group	Animals per Hour
1	1x12x6	12	6	1,0 min	4,0 min	0,1 min	5,1 min	140
1	1x12x12	12	12	1,0 min	3,5 min	0,1 min	4,6 min	155
1	1x24x12	24	12	1,5 min	5,5 min	0,1 min	7,1 min	202
2	1x24x24	24	24	1,5 min	3,5 min	0,1 min	5,1 min	282
2	1x32x16	32	16	2,0 min	6,0 min	0,2 min	8,2 min	237
3	1x32x32	32	32	2,0 min	3,5 min	0,2 min	5,7 min	320
2	2x12x24	24	24	1,0 min	3,5 min	0,2 min	4,7 min	306
2	2x24x24	48	24	1,5 min	5,5 min	0,2 min	7,2 min	390
4	2x24x48	48	48	1,5 min	3,5 min	0,2 min	5,2 min	553
6	2x32x32	64	32	2,0 min	6,0 min	0,2 min	8,2 min	468
6	2x32x64	64	64	2,0 min	3,5 min	0,2 min	5,7 min	673

- When Automatic cluster remover system is integrated on a Rapid exit installation, only half milker are needed for the milking process (from the shown numbers).
- The total milking time of the flock must not exceed 75 - 90 minutes for each milking.
- In practice, the estimated performance of each Milking parlor diverges approximately -10%.
- Factors that affect the performance of each Milking parlor is: a) Type of Milking parlor, b) Lactation period, c) Ability of milker.
- Compliance with ISO 5707: 2007 for the design, manufacture and installation of milking parlors constitutes an integral part of its proper functioning.



Office

+30 2310 520 820, 550 992
Esopou 22, Thessaloniki, 54627
Greece

Production

+30 23330 41123
Korifi Imathias, 59300
Greece

info@agromasters.gr
www.agromasters.gr

