



Automation

## ARES™ Cage Handling

- Modular solution - allows you to phase in automation
- Processes up to 300 rodent cages per hour
- Return On Investment in 3-5 years
- Effective reduction of allergen exposure



*"Ares is easy to use and the controls are straightforward."*

**mw**t

a **TECNIPLAST** company

ARES™  
CAGE HANDLING



# Automation

## ARES™ Cage Handling

### 1/Introduction

Many large animal facilities are already enjoying the benefits of embracing cage handling automation in their wash areas. However, the issues they solve of manual handling, allergen protection and logistics should by no means be exclusive to very large animal facilities. It is for this reason that the ARES system has been developed. The ARES cage handling system provides tangible automation benefits to those facilities with limited footprint and budget, allowing a modular approach to automating your cage wash area.

### 2/Modularity & Reliability

Ares can process up to 300 rodent cages per hour when fully integrated with an IWT rack washer, no-clog waste disposal system and an accurate bedding dispensing system. At IWT we have long used similar Fanuc robots in our own manufacturing process - so we can vouch for their reliability and the service level provided by our partner. As to performance, IWT AUTOMATION equipment has been extensively validated in recent years and the data comes straight from the field - 97% UPTIME is guaranteed. In any event, the system is designed to be operated in MANUAL MODE.

### 3/Versatility & Flexibility

ARES can handle cages from all manufacturers in the lab animal market, as well as allergen lids and trolleys. Flexibility means the option to install initially just one ARES in the dirty side wash area together with a waste disposal system, then, a few years later (when other budgets are available), to install another ARES in the clean side wash area.

### 4/Financial Break even

Subject to minimum cage processing numbers, investment in this type of robotic system can be paid back in the short term (2-4 years). The positive impact is felt in terms of reduced staff, compensation costs, personnel recruitment/training and absenteeism, as well as a reduction in spares and component stock levels and storage occupancy.

### 5/Footprint

ARES is extremely compact and therefore ideal for medium-small size facilities where space is a constraint. This means that you can fit an automated system into the same sort of space already used for manual cage handling.

### 6/Allergen Protection

The introduction of articulated robots for cage handling and vacuum technology for bedding delivery and waste disposal offers significant productivity gains, whilst addressing serious occupational health issues. A study carried out in Europe (Sweden) focused on Airborne Rat Urinary Allergen (RUA) showed that the safe level of exposure or maximum exposure limit (MEL) for laboratory animal allergens is below 5ng/m<sup>3</sup>. A comparative study of manual cage emptying in the washing area versus a robotic system confirmed that the automated system brings the level of exposure down to around 1ng/m<sup>3</sup>.

### 7/Integration

Our long experience serving the lab animal market teaches us that the optimum solution is an integrated approach embracing washing, handling and logistics, all provided by a "single source responsibility" supplier under a long-term partnership of mutual trust and respect.

### 8/Ergonomics & Logistics

The most costly health problems such as musculo-skeletal disorders-MSD (i.e. back injuries, carpal tunnel syndrome) and rodent allergen sensitisation are chronic in nature. With this in mind, IWT has recently designed different types of logistics trolleys to cover the various ways of transporting cages:

- disassembled components;
- integral cage setup (cage bottom, wire lid and filter top).

These solutions ensure a smooth flow with a minimum of manual handling.

## Introduction



## Modularity & Reliability



## Versatility & Flexibility



**Financial Break even**

**4**



**Footprint**

**5**



**Allergen Protection**

**6**



**TECHNICAL SHEET**

**9ARD** Dirty Side Semi-automated cage processing.  
Overall dimensions 3000 x 2500 x 2200 mm / 119" x 99" x 87" inch.  
**9ARC** Clean Side Semi-automated cage processing.  
Overall dimensions 3000 x 2500 x 2200 mm / 119" x 99" x 87" inch.

**Ares dirty side**

SERVICE	CONNECTION	SERVICE REQUIREMENTS
Electrical supply	Electrical Box	400V 50Hz / 480V 60Hz three-phases + n + earth Max installed power: 16kW
Compressed air	1/2" gas	Dynamic pressure: 6 bar (87 PSI) Quality: filtered, dry and oil free Max flow: 50 l/min (1.76 CFM) at 6 bar (87 PSI)

**Ares clean side**

SERVICE	CONNECTION	SERVICE REQUIREMENTS
Electrical supply	Electrical Box	400V 50Hz / 480V 60Hz three-phases + n + earth Max installed power: 16kW
Compressed air	1/2" gas	Dynamic pressure: 6 bar (87 PSI) Quality: filtered, dry and oil free Max flow: 50 l/min (1.76 CFM) at 6 bar (87 PSI)

**Integration**

**7**



**Ergonomics & Logistics**

**8**



## Options

- Teleservice package including digital mode and software upgrading (9ARTSPD).
- Video-Surveillance package including digital telecameras to be installed in the dirty and clean side of the washing area to remote the digital video signals to the slaved control panel, and software upgrading (9ARVSF).
- Self-start package (9ARSSF).
- Real View™ purpose hardware and software set-up to remote cycle data, inclusive of the self-diagnostic package (9VIEWAR).
- Real View™ - dedicated Data Storage PLC for receiving data from up to #6 IWT units, channelling them to the customer's PC. Inclusive of electrical-box, receiving PLC and licensed software (9VIEWAPS01).
- Factory Acceptance test validation protocol (9ARFAT).
- SAT - IQ - OQ - PQ - Validation protocol (9ARVAL).
- Factory microbiological challenge test (9ARMBT).

## Accessories

- Universal transport trolley to accommodate cage bases (9ARUTTRA01).
- Drop-in allergen lid for 9ARUTTRA01, autoclavable and automatically processed by the system (9ARLID01).
- Presentation rack for cage bases (9ARUPRM01).

## Related Products

To maximise operational efficiency and learn more about these products contact your local representative.



**900 Series Rack Washer.** Designed specifically to meet the throughput needs of medium to large size facilities, these machines will live up to your highest expectations in terms of maximum cleaning efficiency, safety, environmental impact and quality construction.



**Logistic trolleys** offer safety and ergonomic features that enable high load-density for moving cages and bottles, crates, pallets and covers.



**Pegasus:** the most reliable, versatile automated cage processing system for modern laboratory animal facilities housing large numbers of valuable rodents.



**BHS:** highly reliable automated system using a combination of proven technologies to ensure totally smooth and simple material disposal and dispensing operations, cutting operator exposure and effort to a minimum.



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