



K-CAGE

K-CAGE is Kinsect's proprietary solution for high-performance black soldier fly (BSF) breeding.

Application

Designed for reliability and scalability, this modular cage is ideal for batch production, from research laboratories to industrial farms. It integrates easily into manual or automated production lines. Each K-CAGE is a complete system that maximizes fly comfort and egg yield, ensuring optimal climate control for stable and continuous reproduction. It is built with durable and hygienic materials, making it a sustainable and efficient choice for large scale BSF production.



Technical Key Data

The K-CAGE is designed with precise dimensions to maximize both flight volume and resting area within a compact, industrial footprint, while ensuring optimal internal climate management.

Parameter	Value
Dimensions (L x W x H)	0.90 x 0.90 x 2 m
Total Volume	1.62 m³
Flying Volume	1.20 m³
Resting Fly Area	0.81 m²
Gross Weight	15 kg

Working Principle

The K-CAGE operates on a batch process principle. It is loaded with pupae ready for metamorphosis and, under controlled environmental conditions, consistently produces eggs for approximately 10 consecutive days. Female flies lay eggs on specially designed collectors, which are regularly gathered either manually or by an automated system. Optimal environmental conditions, including appropriate lighting and air conditioning, are essential. While these systems are not provided with a single K-CAGE, Kinsect can supply them for a complete turn-key solution. Please contact us for more details.

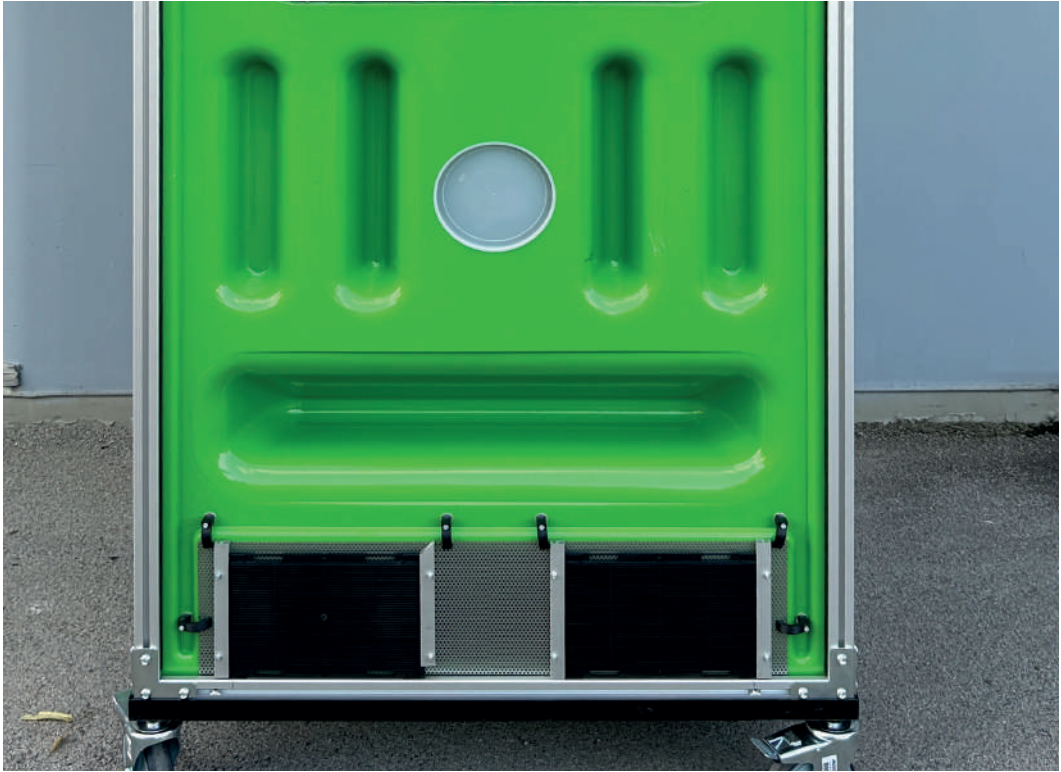
Design

The K-Cage features five distinctive elements:

- 1 A dual-ovipositor system that slides along aluminum guides on both the front and back panels.
- 2 Circular openings on the front and rear for convenient pupae loading.
- 3 Corrugated surfaces (ridges) designed to expand the resting area for flies and provide shaded zones for oviposition.
- 4 A removable, easily washable side grill.
- 5 A top mesh that allows ultraviolet light penetration to enhance reproduction.







Production and Cycle

The K-CAGE is optimized to ensure efficient and predictable breeding cycles, maximizing egg production sustainably. The integrated design supports a continuous workflow, facilitating the monitoring and management of each phase of the cycle.

Parameter	Value
Input	2 to 5 Kg pupae (16k to 40k individuals)
Suggested Density	30,000 flies
Output	50 to 200 grams of eggs/cycle
Cycle Time	10 to 12 days

Infrastructure and Installation

The installation of the K-CAGE requires a controlled environment to ensure optimal performance. It is advisable to place the units in an area with access to adequate ventilation, a stable electrical supply, and, if possible, an air quality management system. Each K-CAGE is designed for plug-and-play installation, minimizing setup time and costs. Kinsect offers comprehensive technical support for infrastructure planning and installation, ensuring that the system is correctly configured for the customer’s specific operational needs, whether in laboratory or industrial settings.

Material and Quality

The K-CAGE is made from high-quality materials to ensure durability, hygiene, and safety. The supporting structure is made of anodized aluminum, which is corrosion-resistant and easy to clean. The walls are made of non-toxic, smooth ABS, which prevents dirt accumulation and facilitates sanitization. All internal components in contact with flies or eggs are selected to be safe and inert, minimizing contamination risks. The robust design and attention to construction details ensure a long operational life for the cage, reducing the need for frequent replacements and guaranteeing reliability over time.

Maintenance

The K-CAGE is designed for minimal and simplified maintenance, thanks to durable and easy to clean materials. Routine tasks include cleaning surfaces, checking climate control, lighting, and egg collection mechanisms. Kinsect provides a detailed maintenance manual, assistance, and spare parts to ensure efficient and long-lasting operation.

Scope of Delivery

Included	Available
Aluminum frame, walls, nets, roof	Reproduction lights
Four egg-collector supports	Climate cell
Four egg-collectors	Pupa boxes
Four attractant containers	extra egg-collectors

Commercial Options

The K-CAGE is available in various configurations to meet the needs of any production scale, from research laboratories to large industrial installations. Each model is designed to offer maximum performance and reliability in its specific context of use.

Model Code	Description	Option
K-Cage_01	Individual Cage (partially assembled) + 4 egg collectors	Fully Assembled
K-Cage_01_plus	Cage + K-Mating-Lights + 16 egg collectors	Fully Assembled + 16 spare collectors



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