**Commodity Specification for ARF Cage&Rack washer**

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| **품목번호Item No.** | **관세분류번호HSK No.** | **정부물품분류번호**  Korean Government Commodity Classification Code | **품 명**  **Description** | **단위**  **Unit** | **수량**  **Q'ty** |
| **1** |  |  | **Cage&Rack washer** | **SYS** | **1** |

**Ⅰ. Purpose (End-user's Use)**

1. A Cage and Rack washer system is generally used for animal housing and experiments in the laboratory animal facilities which is essential for maintaining the laboratory environment and operator safety.
2. This system shall be used where biological decontamination is needed. As an equipment to wash cages and lids used in an animal laboratory, this washer is for heating water, making it go through wash and rinse pipe of each, cleaning and drying of the load without dead zone.

**Ⅱ. Configurations of Goods**

1. **General Specifications**
2. Description: Double door Rack & Cage washer
3. Universal presentation rack or cage/water bottle loading carts should be included.
4. The Cage washer should be a system can use the steam supplied from the building steam.
5. **Performance**
6. Double door should be double safety-glass with interlock which makes easy to observe and should be completely enclosed to prevent burning by heat, and has a completely airtight function by using the Air Gasket.
7. Chamber should be completed with external stainless-steel jacket, optimal energy saving and even distribution of temperature, reduction of noise dissipates in the washing area, and waterproof LED lamp shall be equipped to easily observe inside the chamber. Besides, the positioning guide shall be installed on the chamber floor to load items safely.
8. The water used for washing and rinsing is supplied by separate pumps and pipes which should avoid the possibility of cross contamination. The clean water used for rinsing should be allowed to be re-used as washing water and heat source.
9. The machine should be equipped with a filtering system which filters water used for rinsing. The system shall be operated after finishing rinse cycle and remove residue in washing water.
10. Different size of cages, cage filter tops and accessories, water bottle and rack should be washed, and PLC controller should be able to be used to designate each standard cycle.
11. The touch screen which can be able to observe overall washing cycles and save alarms should be equipped. The performance of washer and user safety should be secured throughout this.
12. The rinse tank should be sealed and maintain water clean for rinse cycle. The circulation pump should be equipped and supply rinsing water to nozzles and pipes consistently.
13. All utilities shall be in enclosed area and be managed easily thanks to the sliding panel.
14. Each dedicated pump should be installed; Circulation pump should return the water of the chamber floor to washing tank, and Wash pump and Rinse pump should apply the water with high pressure and spray into the chamber.
15. Supply pump which supplies suitable dosage of detergent shall be equipped and user can check state of detergent and alarm through the touch screen.
16. The washer with PLC control has self-diagnosis system which should mark the present state and different alarms visually (luminous lamp, display, etc) and acoustically.
17. The water supply valves are fitted with pneumatic ball valves or sol valves which are always closed.
18. Emergency Bars positioned in the chamber and emergency push button positioned on both sides of chamber.
19. The supplied steam pipes shall be equipped with water hammer protectors to prevent noise and protect the pipes.
20. The washing machine should be capable of monitoring the amount of water, steam, and electricity used.
21. **Specification**

1. Overall dimension (W×D×H): about 2500(W)× 2500(D) × 2200(H) (mm) with double door

2. Chamber dimension (W×D×H): about 1100 × 2440 × 2230 (mm)

3. Pit depth: max 200 mm

4. Operating weight: about 2000 kg

5. Material (Frame cover, pump, nozzle, pipe etc): ANSI 304 or 316L Stainless steel

6. Temperature

① Standard wash: 50℃ ~ 60℃

② Standard rinse” 60℃ ~ 90℃

1. **Remarks**
2. 3-year warranty service for spare parts and 15-year warranty for the chamber will be provided.
3. Installation and maintenance for sterilizer will be performed by an accredited engineer.
4. Training is provided for the users.
5. The installation and operation test must be performed at IVI by supplier.
6. Acceptance Test Run must be confirmed by final user at IVI.
7. Concise user instruction shall accompany all units in the form of a user manual.
8. International accreditation such as ISO 9001, ISO 14001, CE (Conformité Européene) should be provided.
9. The supplier must submit data and documents including product catalogue, specification etc. in order to prove that the submitted description and specifications are accurate. The submitted documents and data will be reviewed and analyzed by the users to judge validity.
10. Delivery date: within 7 months from the date of contract
11. 장비의 설치를 위하여 납품자는 국제백신연구소 실험동물실 내 세정실 B213호에 사전 현장 보양작업 이후 기존에 설치되어 있는 세척기를 철거하고 그 자리에 납품한 제품을 설치하며, 유틸리티연결, SUS판넬 및 바닥면 에폭시 마감 및 철거한 멸균기의 운반 및 폐기처리를 포함한다.
12. 납품자는 도면을 확인하고, 현장 여건에 맞게 납품/설치/시운전하여야 하며, 제반 사항(운반비, 설치비, 폐기물 처리비 등 각종 부대비용)은 납품자의 부담으로 한다.
13. 입찰에 응하는 업체는 견적과 함께 아래와 같이 아래 항목의 cycle 당 소비량을 제출해야 한다.
14. Electrical
15. Water (Standard cycle)
16. Steam (Standard cycle)
17. Compressed air
18. Cage 적재량 (mouse IVC cage body 기준)
19. Detergent (Standard cycle)
20. Cage cycle 당 소요시간

**F. ‘위 규격서에서 명시한 제품과 동등 이상의 다른 제품 납품이 가능한 업체는 입찰에 참가할 수 있음’.**