|  |  |  |  |
| --- | --- | --- | --- |
| **ITB 2023/EURO/MDA/0008 Annex 1 List of requirements and specifications Portable ventilator for mechanical pulmonary ventilation during critical patient transport** | | | |
| Parameters | Minimum requirements | Proposed Specificacion (to be completed by the bidder) | Reference document / brochure / page where provided information may be verified by the evaluation committeepcs |
| **Diagonal color display minimum 5 inches** | **Yes** |  |  |
| **Integrated air turbine** | **Yes** |  |  |
| **Maximum weight of the item 7 Kg.( included carried bag, internal battery)** | **Yes** |  |  |
| **Minimum available vetilation modes** |  |  |  |
| Volume assist/control (Volume assist/control) | **Yes** |  |  |
| Pressure assist/control | **Yes** |  |  |
| Bilevel Positive Airway Pressure | **Yes** |  |  |
| Continuous Positive Airway Pressure | **Yes** |  |  |
| Pressure Support Ventilation | **Yes** |  |  |
| Pressure Synchornize Intermitent Mandatory ventilation | **Yes** |  |  |
| Volume Synchornize Intermitent Mandatory ventilation | **Yes** |  |  |
| nCPAP | **Yes** |  |  |
| Non-Invasive ventilation functionality | **Yes** |  |  |
| **Diplayed parameters** |  |  |  |
| Maximum inspiratory pressure | **Yes** |  |  |
| Plateau pressure | **Yes** |  |  |
| Average pressure | **Yes** |  |  |
| Positive end-expiration pressure | **Yes** |  |  |
| Inspiratory Tidal Volume (Tidal Volumes) | **Yes** |  |  |
| Expiration Tidal volume | **Yes** |  |  |
| Total respiratory rate | **Yes** |  |  |
| Spontaneous respiratory rate | **Yes** |  |  |
| Minute Volume | **Yes** |  |  |
| Airway Resistance | **Yes** |  |  |
| Airway compliance | **Yes** |  |  |
| Inspiratory/expiratory ratio | **Yes** |  |  |
| Inspiration time | **Yes** |  |  |
| Expiration time | **Yes** |  |  |
| Pressure-time graph | **Yes** |  |  |
| Flow-time graph | **Yes** |  |  |
| Volume-time graph | **Yes** |  |  |
| Capnography | **Yes** |  |  |
| Pressure-volume curve | **Yes** |  |  |
| Inspiratory triger | **Yes** |  |  |
| Flow-volume curve | **Yes** |  |  |
| **Features** |  |  |  |
| Frequency of ventilation with the minimum interval: | from 1 to 80 breaths per minute |  |  |
| Tidal volume minimum interval: | adult 100-2000 ml |  |  |
| Inspire/Expire ratio with minimum interval: | from 1:4 to 4:1 |  |  |
| PEEP (positive end-expiratory pressure) minimum range: | 0-30 cm H2O |  |  |
| Inspiratory pressure minimum interval: | from 1 to 50 cm H2O |  |  |
| Support pressure minimum range: | from 1 to 50 cm H2O |  |  |
| Trigger flow: closed, minimum interval: | from 1.0 to 5.0 liters |  |  |
| Pressure trigger: closed, minimum range: | from -10 to -0.5 cm H2O |  |  |
| Adjustable O2 concentration: | from 21 to 100% |  |  |
| Inspiratory flow in minimum range: | from 0 to 120 liters |  |  |
| Inspiratory trigger |  |  |  |
| **Minimum set of alarms** |  |  |  |
| Airway pressure maximum/minimum limit | **Yes** |  |  |
| PEEP maximum/minimum limit | **Yes** |  |  |
| Minute Volume maximum/minimum limit | **Yes** |  |  |
| Respiratory rate maximum/minimum limit | **Yes** |  |  |
| FiCO2 maximum/minimum limit | **Yes** |  |  |
| FeCO2 maximum/minimum limit | **Yes** |  |  |
| APNEA | **Yes** |  |  |
| O2 supply pressure low | **Yes** |  |  |
| Lack of tension | **Yes** |  |  |
| Low battery | **Yes** |  |  |
| O2 sensor | **Yes** |  |  |
| The ventilator will be able to be connected to the ambulance's medical gas network and portable oxygen cylinder. | **Yes** |  |  |
| The ventilator will be delivered with a special system intended for anchoring/fixing to the stretcher. | **Yes** |  |  |
| The ventilator will be delivered with a special system intended for anchoring/fixing to the ambulance car. | **Yes** |  |  |
| The ventilator will contain and will be delivered with an integrated and functional capnography module | **Yes** |  |  |
| Power supply: 50-60 Hz AC110 – 240V and DC12V | **Yes** |  |  |
| Autonomous power source with battery for at least 4 hours of work | **Yes** |  |  |
| **The ventilator will be delivered with:** |  |  |  |
| Hose and socket for connecting the ventilator to the oxygen source and cylinder | **Yes** |  |  |
| Oxygen cylinder compatible with the ventilator, which will allow its autonomous operation for at least 30 minutes with maximum flow, pressure reducer included. | **Yes** |  |  |
| Power cords included, compatible with the ventilator mains and ambulance. | **Yes** |  |  |
| Humidifier for the gas mixture delivered to the patient included, compatible with the ventilator. | **Yes** |  |  |
| Fan power battery included, compatible with the fan. | integrity |  |  |
| Flow sensors, compatible with the proposed fan, minimum 5 pcs. Reserve | **Yes** |  |  |
| Reusable, ventilator-compatible circuits for ventilation of a minimum of 10 adult patients | **Yes** |  |  |
| Ambient air filters compatible with the fan in a minimum number of 15. | **Yes** |  |  |
| User's manual in Romanian | **Yes** |  |  |
| Service manual in English or Romanian | **Yes** |  |  |
| Warranty: minimum 24months. | **Yes** |  |  |
| DAP Chisinau, by 31.03.2023 | **Yes** |  |  |
| ISO 9001 certificate; ISO 13485, EU CE Certification  for presented model, IEC-60601-1-2; ISO 15001-2010  si EN 1789. | **Yes** |  |  |