**Technical Specification**

**3D printer with Selective Laser Melting technology**

The subject of the public contract is the delivery of 1 unit of a 3D printer with Selective Laser Melting (SLM) technology, including SW and accessories.

The performance also includes transport to the place of performance, installation, commissioning including testing of functionality and operators and programmers training. The performance also includes service support and maintenance of the 3D printer for a period of 2 years from the receipt of the goods by   
the Contracting Authority.

**3D printer manufacturer:**  *to be completed by the tenderer*

**Exact type designation of the 3D printer:** *to be completed by the tenderer*

**Number of pieces:**  **1**

**The 3D printer with Selective Laser Melting technology must have at least the following components and must fulfil at least the following parameters:**

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| --- | --- | --- |
| **Basic technical parameters** | **Minimum required values - must be met!** | **Value of the offered equipment** |
| Powder Bed Fusion Selective Laser Melting additive technology | YES | *the tenderer shall indicate YES/NO* |
| state of the starting material | metal powder | *the tenderer shall indicate YES/NO* |
| compact closed design of the device | YES | *the tenderer shall indicate YES/NO* |
| min. number of lasers | 1 | *the tenderer shall indicate YES/NO and the specific value of the offered device* |
| variable laser beam diameter | YES | *the tenderer shall indicate YES/NO* |
| range of beam focus diameters | min. 80-140 µm | *the tenderer shall indicate YES/NO and the specific value of the offered device (note: range from - to µm)* |
| print chamber reduction frame | YES | *the tenderer shall indicate YES/NO* |
| substrates for the reduced chamber | min. 5 | *the tenderer shall indicate YES/NO* |
| laser output | min. 700 W | *the tenderer shall indicate YES/NO and the specific value of the offered device* |
| type of laser | Fiber laser | *the tenderer shall indicate YES/NO* |
| volume of chamber size [mm3] | min. 12,000,000 | *the tenderer shall indicate YES/NO and the specific value of the offered device* |
| basic software (SW) for setup and process control, including provision of licenses | YES | *the tenderer shall indicate YES/NO* |
| SW for traffic monitoring, including provision of licenses for min. 2 years | YES | *the tenderer shall indicate YES/NO* |
| SW updates and technical support for 2 years | YES | *the tenderer shall indicate YES/NO* |
| process parameters for materials supplied by the manufacturer | YES | *the tenderer shall indicate YES/NO* |
| open access to process parameters | YES | *the tenderer shall indicate YES/NO* |
| accessories for powder management | YES | *the tenderer shall indicate YES/NO* |
| unit for sieving powders | YES | *the tenderer shall indicate YES/NO* |
| processable materials | min. Ti64, 316L, AlSi10Mg, Cu, MS300 | *the tenderer shall indicate YES/NO* |
| set of accessories for powder material handling | min. 6 sets of accessories | *the tenderer shall indicate YES/NO and the specific value of the offered device* |
| sieve for sieving powder with a particle size of 63 µm | min. 2 | *the tenderer shall indicate YES/NO and the specific value of the offered device* |
| sieve for sieving powder with a particle size of 90 µm | min. 2 | *the tenderer shall indicate YES/NO and the specific value of the offered device* |
| accessories for powder applicators | YES | *the tenderer shall indicate YES/NO* |
| crane conveyor for substrate handling | YES | *the tenderer shall indicate YES/NO* |
| set for changing the material of the sieving device | min. 2 | *the tenderer shall indicate YES/NO and the specific value of the offered device* |
| set for changing the material of the transport device | min. 2 | *the tenderer shall indicate YES/NO and the specific value of the offered device* |
| spare filters for operation for min. 2 years | YES | *the tenderer shall indicate YES/NO* |
| extension module 1: extension with preheating up to 200 °C | YES | *the tenderer shall indicate YES/NO* |
| extension module 2: extension with preheating up to 500 °C with reduction frame | YES | *the tenderer shall indicate YES/NO* |
| extension module 3: extension with preheating up to 500 °C | YES | *the tenderer shall indicate YES/NO* |
| extension module 4: extension with cooling for copper and conductive materials | YES | *the tenderer shall indicate YES/NO* |
| basic accessories and materials for commissioning and operator training | YES | *the tenderer shall indicate YES/NO* |
| starter set of 316L printing material | min. 100 kg | *the tenderer shall indicate YES/NO* |

*The data shall be completed by the tenderer in accordance with the technical data of the offered device.*