**Annex 5a to the Contract pursuant to DE-UZ 78**

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| **Determination of the Sound Power Level in accordance with DE-UZ 78 in connection with ISO/FDIS 7779:2010 and ISO 9296:1988** |

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| **Testing Laboratory accredited under DIN EN ISO/IEC 17025 and ISO/FDIS 7779** | | | |
| Testing facility |  | | |
| Test report number |  | | |
| Customer |  | | |
| Task | Determination of the sound power level in accordance with DE-UZ 78 in connection with ISO/ FDIS 7779:2010 and ISO 9296:1988 | | |
| Device under test | Computer (see "Scope" of DE-UZ 78) | | |
| Model / Manufacturer |  | | |
| Year of manufacture |  | | |
| Serial number |  |  |  |
| Date of measurement |  | | |

Engineer Head of the Testing Facility

Attachment: current Certificate of Accreditation   
pursuant to ISO/IEC 17025 and ISO/ FDIS 7779

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| **Measurement Rules and Standards** |
| The noise measurements were carried out to meet the requirements of the following rules and standards. |
| DE-UZ 78: Computers and keyboards (desktop computers, integrated desktop computers, notebook computers, workstations, mobile workstations, small-scale servers, desktop thin clients, keyboards) – Basic Criteria for Award of the Blue Angel Environmental Label, 01/2017 |
| ISO/ FDIS 7779: Acoustics - Measurement of airborne noise emitted by information technology and telecommunications equipment, 2010 |
| ECMA-74: Measurement of airborne noise emitted by information technology and telecommunications equipment, December 2008 |
| ISO 9296: Acoustics - Declared noise emission values of computer and business equipment, 1988 |

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| **Measurement** | | | | | | |
| Test site | |  | | | | |
| Environmental correction K2 [dB] | |  | | | | |
| Background noise [dB(A)] | |  | | | | |
| Equipment dimensions [m] | |  | | | | |
| Measuring surface [m²] | |  | | | | |
| Measurement surface ratio [dB] | |  | | | | |
| **Operating mode (1): The device is in idle mode. The noise emission measurement is made in accordance with ISO/ FDIS 7779:2010,  ECMA-74:2008, Annex C.15.3.1.  Operating conditions: 23+1 oC** | | | | | | |
| Sound power level [dB(A)] | LWA1 = | | LWA2 = | | LWA3 = | |
| Mean value [dB(A)] |  | | | |  | |
| Declared A-weighted sound power level LWAd [dB(A)] |  | | | |  | |
| Verification of compliance with the criterion for award of the Blue Angel eco-label  **Personal computers, small-scale servers,  thin clients** | | | |  | |  |
| Verification of compliance with the criterion for award of the Blue Angel eco-label  **Notebook computers** | | | |  | |  |
| Verification of compliance with the criterion for award of the Blue Angel eco-label  **Workstations, small-scale servers with  more than 2 mass storage drives** | | | |  | |  |

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| **Operating mode (2): The hard disk drive is enabled. The noise emission measurement is made in accordance with ISO 7779:2010,  ECMA-74:2008, Annex C.9.3.2 Operating conditions: 23+1 oC** | | | | | |
| Model / Type of hard disk drive (HDD) |  | | | | |
| Sound power level [dB(A)] | LWA1 = | LWA2 = | | LWA3 = | |
| Mean value [dB(A)] |  | | |  | |
| Declared A-weighted sound power level LWAd [dB(A)] |  | | |  | |
| Verification of compliance with the criterion for award of the Blue Angel eco-label  **Personal computers, small-scale servers,  thin clients** | | |  | |  |
| Verification of compliance with the criterion for award of the Blue Angel eco-label  **Notebook computers** | | |  | |  |
| Verification of compliance with the criterion for award of the Blue Angel eco-label  **Workstations, small-scale servers  with more than 2 mass storage drives** | | |  | |  |

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| **Operating mode (3): An optical drive in a typical configuration is enabled. Optical drives are to be tested in accordance with ISO/ FDIS 7779:2010,  ECMA-74:2008, Annex C.19.3.2. Operating conditions: 23+1 oC** | | | | | |
| Model / Type of optical disk drive (ODD) |  | | | | |
| Sound power level [dB(A)] | LWA1 = | LWA2 = | | LWA3 = | |
| Mean value [dB(A)] |  | | |  | |
| Declared A-weighted sound power level LWAd [dB(A)] |  | | |  | |
| Verification of compliance with the criterion for award of the Blue Angel eco-label  **Personal computers, small-scale servers,  thin clients** | | |  | |  |
| Verification of compliance with the criterion for award of the Blue Angel eco-label  **Notebook computers** | | |  | |  |
| Verification of compliance with the criterion for award of the Blue Angel eco-label  **Workstations, small-scale servers  with more than 2 mass storage drives** | | |  | |  |