2.4. NOISE CHARGES

2.4.1. General

Calculation of the Noise charge is based on objective individual values of the respective aircraft.

For the determination of the basis for assessment as mentioned under section 2.4.2., the aircaft operator / aircraft holder / airline / aircraft owner, respectively, is required to submit the noise certificate of the individual aircraft to the civil aerodrome operator (statistics@viennaairport.com).

The basic claim of the Civil Aerodrome Operator to this fee shall arise from the moment the a/c touches the ground on this Civil Aerodrome. For approaches (also with the purpose of instruction or training) this charge shall apply even if no touch down takes place at Vienna - Schwechat Airport.

If the necessary documentation is not submitted prior to or at the time of landing in VIE to the civil aerodrome operator by the aircraft operator / aircraft holder / airline / aircraft owner, respectively, the aircraft will be classified according to an substitute noise certificate issued by the airport operator. In this case the aircraft with the highest average figure of the noise values “approach”, “lateral” and “flyover” which landed at Vienna Airport within the last 12 months will be used as basis for the substitute noise certificate.

The airport operator will consider reductions of the noise values according to certificates as soon as they are known and documented. Subsequent billing does not apply to noise value reductions.

2.4.2. Basis for Assessment and Values

The basis for assessment and the resulting **noise charge per movement** are divided as follows:

The individual noise values of the aircraft according to the noise certificate (noted in EPNdB) as well as the ICAO-noise limit for the respective aircraft type are the initial values for the calculation of the noise charges. The individual noise values of an aircraft consist of

- **Take Off / Fly Over** (Noise $Value_K$)
- **Approach** (Noise $Value_L$)
- **Sideline / Full Power / Lateral** (Noise $Value_M$)

All values in EPNdB are rounded to 6 decimal digits, all figures in EUR are rounded to 2 decimal digits.

First Step | Calculation Noise $Charge_{Noise\ Values}$

The logarithmically averaged individual **Noise Value of the Aircraft (**(MW_{regi})**)** is subtracted by the **official limits of single sound by night (X)**. The resulting value is now multiplied with the respective **Noise Charge per EPNdB (U).** This results in the individual **Noise $Charge_{Noise\ Values}$ of the Aircraft BEFORE Compensation and WITHOUT Consideration of the Noise Quality (NC_{QUALI}).**

$$MW_{regi} = 10 * LOG ((10^{(K/10)}+10^{(L/10)}+10^{(M/10)})/3)$$

Noise Charge (U): € 1.00

Official limit of single sound by night (X) 81

$$F = (MW_{regi} - X) * U$$

Second Step | Calculation Chapterfigure CH_{regi}

According to the MTOW and the number of engines of the individual AC the **ICAO Noise values** are calculated according to following **ICAO rules**:

M=Maximum take-off Mass in 1.000 Kg		0	20.2	28.6	35	48.1	280	385	400
Lateral full-power noise level (EPNdB) All aeroplanes		94			80.87 + 8.51 log M				103
Approach noise level (EPNdB) All aeroplanes		98			86.03 + 7.75 log M			105	
Flyover noise levels (EPNdB)	2 engines or less	89			66.65 + 13.29 log M				101
	3 engines	89			69.65 + 13.29 log M				104
	4 engines or more	89			71.65 + 13.29 log M				106

The Chapterfigure **CHregi** the linear **difference between the ICAO noise values and the individual noise values according to the noise certificate in EPNdB**:

CH_{regi} = **ICAO**(Noise $Value_K$ +Noise $Value_L$ +Noise $Value_M$) – **AC certificate** (Noise $Value_K$ +Noise $Value_L$ +Noise $Value_M$)

Third Step | Calculation Noise $Charge_{Quality}$

The Noise $Charge_{Quality}$ **NC_{QUALI}** is calculated as follows:

if CH_{regi} < 1, then NC_{QUALI} = **€ 1.000,--**

if CH_{regi} > 1, then NC_{QUALI} = **€ 500,--/ CH_{regi}**

FourthStep | Bonifications

Following **bonifications** for voluntary measures to avoid noise lead to a 15% bonus of the calculated Noise Charge for the Landing and/or for the Take Off.

⇒ **Bonification technical equipment: e.g.VORTEX**

-) AC must be equipped with VORTEX

-) if installed, **15% Bonus from Noise Charge for Landing and for Take Off is deducted**

-) installation must be proofed by official documents

⇒ **Bonification CURVED APPROACH:**

-) not implemented yet

-) information will be received from TANOS-system

-) if curved approach is flown, **15% Bonus from Noise Charge for Landing is deducted**

Fifth Step | Calculation Noise Charge$_{TOTAL}$

This results in the following **Noise Charge$_{TOTAL}$ BEFORE Compensation and WITH Consideration of the Noise Quality (NC$_{TOTAL}$)** for an aircraft:

$NC_{TOTAL} = (NC_{Noiselevel} + NC_{Quali}) – Bonifikation$

Sixth Step | Calculation Noise Charge AFTER Compensation

Vienna International Airport will calculate the Noise Charges NC_{TOTAL} BEFORE Compensation for all considered aircraft movements according to the described model. The average Noise Charge per movement is calculated from the sum of all noise charges and forms the **Compensation Value (W).**

W = (∑ G of all movements in the given period) / ∑ of all movements in the given period)

The resulting and payable **Noise Charge after Compensation (H)** is calculated as follows:

$NC_{FINAL} = NC_{TOTAL} – W$

The given period under consideration of the compensation is at least 6 months. The currently applicable **Compensation Value (W)** as of September 16th , 2021 is € 41.57.