

AEROPLANE DEICING-PLAN

**FOR HANNOVER AIRPORT
AGREEMENT ON OPERATING COURSE AND
COORDINATION PROCEDURE**



1. General

During procedures of winter services (Deicing/Anti-Icing) coordination and close cooperation of all handling of air-traffic at Hannover Airport is essential. Especially the observance of take-off times in connection with de-icing/anti-icing of aeroplane causes a great deal of coordination and possibly leads to delay or to increased charges for a single flight.

Assuming that other areas are affected by these weather phenomena, too, when carrying out winter services at Hannover Airport with the result of already existing numerous flow control measures for air traffic, the following plan for Hannover Airport will be effective to improve this procedure. All regulations regarding aeroplane deicing at Hannover Airport are based on the Deicing Global Standard AS6285, latest revision.

This Deicing-Plan describes the equipment and procedures for aeroplane deicing. Hereby a fair and efficient procedure of aeroplane deicing on the described de-icing-areas in close coordination with the other winter services of the airfield shall be guaranteed. All regulations and arrangements shall be developed in cooperation as mutually agreed between the Airport Operator (Flughafen Hannover-Langenhagen GmbH (FHG)) and the German Air Navigation Services (DFS Deutsche Flugsicherung GmbH). This agreement will be valid as of 01. October 2023 until 30. April 2024. The AOC Hannover has been informed about this Deicing-Plan.

1.1 Deicing-Equipment

FHG is operating 6 trucks for aeroplane de-icing on the deicing-areas (Pads) at the airport. These deicing units (Type Elephant Beta) are manufactured by Vestergaard, DK.

1.2 Deicing-Locations

Deicing at Hannover Airport will be performed on dedicated areas with running engines in principle and will be performed in single-man operation.

The deicing/anti-icing-procedures at Hannover Airport have to be done in the area between parking positions 53 and 61 only. **Deicing on other positions at the airport is strictly forbidden.** The deicing-pad will be assigned by the ICEHOUSE.

Deicing on deicing-pad 1 and 2 will be determined as standard procedure. Due to better site-conditions pad 1 will be used as favourite deicing-area. If there is more than one deicing in progress the larger aeroplane will be guided to Pad 1. During peak hours deicing or preparation of an aeroplane for deicing on an additional deicing position is also possible. In these cases position 57R should be used preferably. In these cases it may happen that the amount of deicing-units can be reduced and the deicing procedure could last longer than usual. Usage of an additional deicing position depends on availability of staff.

Taxi clearances to the deicing-pads will be issued on HANNOVER GROUND Frequency. Standard taxiing to the deicing areas should lead via taxiways A and D1. In case of bad recognition of taxi-guidance lines a Follow-Me-car can be requested by flight-crews.

1.3 Deicing/Anti-Icing Fluid

For Aeroplane Deicing Cryotech Polar Plus LT (80) (ADF Type I) and Cryotech Polar Guard Advance (ADF Type IV) will be used.

2. Procedures

2.1 Coordination of Aeroplane Deicing

According to the current weather situation the estimated duration of a deicing process has to be consulted between TOWER and ICEHOUSE. Based on the information received from Apron-Control, the TOWER will assign an appropriate taxi time. In consideration of the slot-times the deicing sequence may change.

The Aeroplane-Operator is responsible for consulting a CTOT.

Non-compliance of the EOBT/CTOT may result in rejection of start-up or taxi-clearance and the aeroplane-operator has to request a new take-off time.

The taxi-controller will issue taxi-clearances in compliance with the time-sequence stated in the list of the Network Manager to observe the times of departure. Before leaving the deicing-pad the pilot is obliged to request a new taxi-clearance or, if necessary, a new start-up clearance.

2.2 Deicing Capacity and Performance

In accordance with deicing equipment available at Hannover Airport and the estimated duration of a deicing/anti-icing process in extreme weather conditions, it could be possible to reduce the amount of processes to 6 aeroplanes per hour.

2.3 Request for Deicing

A request for deicing has to be transmitted in due time (at least 30' prior OFB/CTOT) to ICEHOUSE via telephone +49-511-9771415 or at latest on Channel 121.955 MHz when requesting start-up clearance for engines.

The sequence of the announcements has no influence on the current order for the deicing/anti-icing-process. This sequence will exclusively be determined by the Ground Controller of DFS in consideration of OFB (or in case of CTOT)-Times. On request of an airline it is possible to change flight-numbers one with another for the same carrier. This has to be announced by the airline to ICEHOUSE and the flight-crews concerned as soon as possible.

2.4 Information on Holdovertime

The flight crew is responsible for the definition of the HOT exclusively. No Anti-Icing-Code will be transmitted if on pilots request not every surface is treated in the same manner, e.g. vertical and horizontal stabilizer. If no ATT (Actual Fuel Tank Temperature) will be announced by the cockpit crew the highest mixture of ADF Type I will be used.

2.4.1 Communication

The communication will be performed on specific VHF-frequencies. The primary frequency reads 121,7750 MHz (Channel 121,780), the back-up frequency 121,6000 MHz (Channel 121,605). The name of the ground radio station is **HANNOVER DEICING**. An example for the communication during the deicing-procedure can be found in the attachment.

While being in contact with ICEHOUSE crews shall insure that ATC is able to establish contact at any time, if required. Frequency change to Icehouse shall only be performed when stopping on Deicing Pad and if advised by ATC Ground Control. When deicing has finished flight crews have to wait until Icehouse advises to change back to ATC Ground Control.

Important note:

As there is no solid knowledge about emission of onboard Satellite Communication Systems (SatCom) deicing will only be performed after disconnection of installed systems by the flight crew. To make sure this disconnection Hannover Icehouse will ask for that during communication (see attachment Communication Procedure).

2.4.1.1 Special Arrangements

All special treatments (e.g. underwing deicing) have to be done on the deicing-positions only. Therefore the engines have to be switched-off. **Deicing of propellers with fluid will not be performed !**

The employees of AGS will not provide any fan-blade-deicing. This extends to mechanical deicing.

Checks for dried residues in aerodynamically quiet areas will not be performed by deicing staff. This has to be arranged or done by the aeroplane owner or another ordered third party on the aircraft stand. This includes removal of ice ridges in the vicinity of the radome.

Hannover Airport performs the aircraft de-icing/anti-icing treatment principally in accordance with the **EASA SIB 2022-11** (Application of the Anti-Icing Fluid SAE Type II/III/IV), **which requires the treatment till the fluid starts to run-off from the leading and the trailing edge of the wings.**

A deviation from this procedure requires the provision of the operator de-icing/anti-icing documentation giving an instruction on spraying techniques and fluid application, and customized for each operated aircraft type. **The full responsibility for an alternative procedure lies with the operator.**

Without the provision of operator documentation the application per EASA SIB 2022-11 is mandatory.

2.4.1.2 Procedure for Tactile-Check

Tactile-Check has to be done by employees of the handling agent, requesting airline or by a crew-member of the aeroplane being deiced on the deicing pads only. Tactile-Checks

have to be requested by handling agents on behalf of flight crew exclusively. On instructions by ICEHOUSE, an aeroplane may be towed to another position for a Tactile-Check or de-icing.

When a Tactile-Check is needed ICEHOUSE has to be informed at latest 15 minutes prior off-block time via phone, airport extension -1415, including naming call-sign or flight number. Support (car, ladder etc.) has to be arranged by handling agents on principle.

The employee of the airline has to inform the pad controller **before** moving to the aircraft

When de-icing/anti-icing is finished the pad controller will inform the employee of an airline or handling agent personally that the Tactile Check may be carried out. The employee of an airline or handling agent performs the Tactile-Check and the pad controller will stay in front of the aeroplane with his car.

When the Tactile-Check is finished the employee of an airline or handling agent has to inform the flight crew about the result of the check first and thereafter the pad controller personally that the check was successful by using the words: "check without finding".

In case of detecting contamination deicing/anti-icing procedures have to be repeated from beginning.

The employee of an airline or handling agent has to leave the de-icing position as soon as possible. Thereafter the pad controller is also leaving the pad, checks the pad is free of obstacles and informs ICEHOUSE that the position is clear of obstacles and the aeroplane is able to vacate the pad.

If it becomes necessary to support the employee of an airline or handling agent with equipment (ladder etc.) this has to be announced during initial call for Tactile-Check.

In respect of SAE Standard AS 6285 REV. E (P. 7.1 "Contamination Check to establish the Need for De-icing") all airlines are requested to provide qualified staff for possible "Tactile-Checks".

The employees of FHG and AGS will not provide any Tactile-Checks as well as aircraft specific inspections. This includes removal of ice ridges behind the radome.

In general deicing/anti-icing of rotor-driven aircraft will not be performed.

2.4.1.3 Deicing before and after official deicing season

If necessary due to weather conditions aeroplanes could be deiced before 1st of October and after the 30th of April. All involved partners will coordinate accordingly and ATC will be informed by FHG. In case of deicing request before or after end of season a longer waiting time has to be accepted.

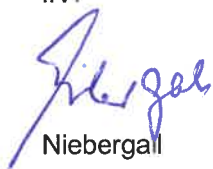
3. Adjustment of procedures

If it turns out that the capacity of the deicing-equipment is exceeding or falling short during the application of the procedure, departure rate and taxi-time are to be adapted to the current situation. The operations manager of air-traffic control has authority to do this after consultation with FHG.

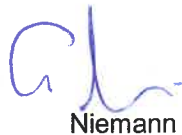
Exceptions to this procedure are allowed only if useful for the improvement of traffic flow and provided all institutions concerned have come to an agreement before.

Hannover, 18.09.2023

DFS Deutsche Flugsicherung GmbH
i.V. i.A.



Niebergall



Niemann

Flughafen Hannover-Langenhagen GmbH
ppa. i. A.



Altemöller




Selle

Hannover Aviation Ground Services GmbH



Seidler

ppa.

Heyne

Attachment



**ANLAGE / ATTACHMENT
COMMUNICATION PROCEDURE COCKPIT / ICEHOUSE ON DEICING-FREQUENCY 121,7750 MHZ (CHANNEL 121,780)
BACK UP 121,6000 MHZ (CHANNEL 121,605), CALL-SIGN: "HAJ DEICING"**

| Circumstances | Crew | Phraseologies |
|--|--------------|--|
| Initial contact aircraft to Hannover ATC | Cockpit | Hannover Ground, XX 123 request start-up for Deicing. |
| | Tower/Ground | XX 123 start-up is approved, expect HAJ-Deicing on Deicing-Frequency when on deicing pad |
| Deicing request on Icehouse frequency | Cockpit | Hannover Deicing, XX 123 request deicing |
| | Icehouse | XX 123 confirm parking brake set and SatCom-system if on-board is de-activated. |
| | Cockpit | Affirmative, parking brake is set and SatCom-system is de-activated |
| | Icehouse | XX 123 which parts of your aircraft require deicing, what is your current aircraft fuel tank temperature and what kind of treatment do you request? |
| | Cockpit | XX 123 request wings and stabilizer (alternative: rudder, fuselage, complete aircraft), current fuel tank temperature is X C° |
| | Icehouse | XX 123 wings and stabilizer confirmed. Expect Anti-icing with Type I (alternative Type IV 100%) Confirm aircraft is configured for deicing. Set propeller-brake (ATR 42/72 only) |
| | Cockpit | XX 123 Affirm, A/C configured for deicing |
| | Icehouse | XX 123 hold position, deicing starts (now) |
| After deicing communication: | Icehouse | XX 123 deicing/ anti-icing of (parts of aircraft) has now been completed. Your Anti-icing Code as follows Type I 40/60 %, 00:00 h or current ADF Type IV, product name, 100%, 00:00 h Cockpit should read-back anti-icing code |

| Circumstances | Crew | Phraseologies |
|---|----------|---|
| | | Post de-icing / anti-icing check completed, Excludes "Tactile-Check" , deicing equipment is safely away, hold position, contact Hannover Ground CH 121,955. (on crew request state amount of sprayed fluid) |
| | Cockpit | XX 123 roger (changing to CH 121,955) |
| In case of removal of local area contamination | Icehouse | XX 123 "Local area deicing only. Holdover times do not apply". (or "Underwing deicing only. Holdover times do not apply") XX123, deicing completed, deicing equipment is safely away, hold position, contact Hannover Ground CH 121,955. |
| | Cockpit | XX 123 roger (changing to CH 121,955) |
| Interrupted operations (groundcrew related) | Icehouse | XX123 be advised equipment proximity sensor activation on (location of aircraft). Either - No visual damage observed or - Damage (describe damage) observed (advise your intentions) Actions to be taken in consultation with cockpit |
| | | XX123 Treatment interrupted: - Reason for interruption; (truck inoperative, low on fluid, etc.) Actions to be taken in consultation with cockpit |



| Circumstances | Crew | Phraseologies |
|-----------------------------|--------------------|--|
| In case of emergency | Cockpit / Icehouse | Actions to be taken in consultation between cockpit / icehouse |