UNIT 8 – AERODROMES

DECLARED DISTANCES

Aerodromes must have declared distances for landing and takeoff performance calculations. These are important in order to determine if the aircraft can have sufficient runway to stop in case of an aborted takeoff or for calculating landing distances in normal and abnormal conditions.

All airports must publish any amendment to the declared distances via NOTAM or on the appropriate aerodrome chart which can be accessed directly via the country's AIP (Aeronautical Information Publication).

Reasons for amending the declared distances can be due to work in progress such as runway resurfacing, extension, or if there is a significant operational reason to do so.

Figure 1 – An example of EFB applications

Calculation of the landing distance required (LDR) must always be below the Landing Distance Available (LDA)[7]. This is calculated by regulated performance charts or via an on-board EFB[8].

This is valid for takeoff performance as well. Factors such as the aircraft mass, surface reported wind, elevation, slope and runway condition (dry, wet, snow, ice) can have a significant impact on the distances required. The performance calculations take this all into account. The performance calculations are based on following the standard company SOP in as far as configuration, procedures and aircraft handling.

Below are the definitions of each of the declared distances:

Designator	Description	
TORA	Takeoff Run Available	The length of runway declared available and suitable for the ground run of an airplane taking off
TODA	Takeoff Distance Available	The length of the takeoff run available plus the length of the clearway, if clearway is provided. *
ASDA	Accelerate-Stop Distance Available	The length of the takeoff run available plus the length of the stopway, if stopway is provided.
LDA	Landing Distance	The length of runway that is declared available and suitable for the ground run of an airplane landing.
EDA	Emergency Distance Available	LDA (or TORA) plus stopway.
DPLM	Displaced Threshold	
* *TODA is the lesser of TORA plus clearway or 1.5 times TORA. (EASA/FAA)*		

Table 2 - Declared distances.

[7] Refer to EASA IR-OPS CAT.POL.A (and EU-OPS 1 Sub-part G)

[8] EFB – Electronic Flight Bag is a portable electronic tablet that contains a complete set of manuals and documents including performance calculation programs, drastically reducing the extra weight of paper manuals on board.

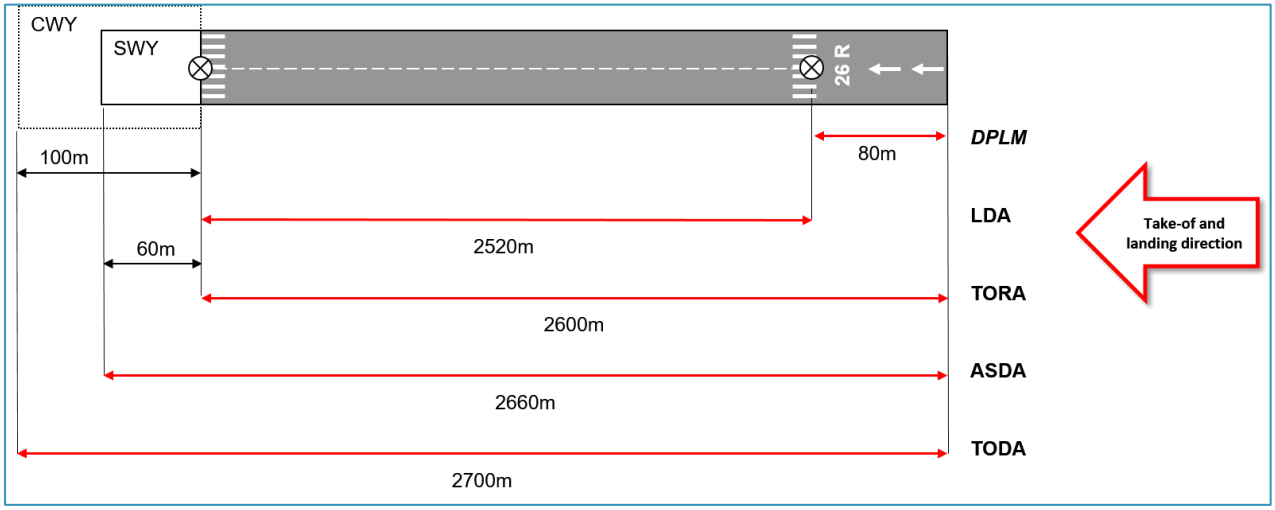

Figure 2 - Declared distances diagram. Source: EUROCONTROL