

## **ENR 1.5 HOLDING, APPROACH AND DEPARTURE PROCEDURES**

### **1. GENERAL**

Valid holding, approach and departure procedures are based on the regulations contained in ICAO Doc. 8168 (PANS-OPS).

Holding areas are generally constructed over the radio navigation points of aerodrome (terminal area) or arrival routes to provide order of priority for arriving and approaching aircraft.

Aircraft flights within the holding area are carried out according to established holding procedures and instrument approach and landing charts published in the AD 2.

Flight level in a holding area may be changed only after clearance of the appropriate ATC unit controlled.

### **2. ARRIVING FLIGHTS**

Following instructions shall be obtained from ATC during IFR flight with landing in TMA:

- Clearance for a flight to a specific waypoint (boundary) designated as navigation fix;
- To establish radio contact with appropriate ATC unit and receive flight level instructions.

These instructions shall be observed until further instructions from the ATC unit are received. Flight to destination aerodrome shall be carried at the last authorized FL if additional instructions have not been received before reaching of clearance limit.

It is important to execute entering and holding procedures as precisely as possible due to the limited airspace available. Pilots are strongly advised to inform ATC if for any reason the approach and/or holding cannot be performed as required.

The following approach procedures are applied in the aerodromes of the Republic of Kazakhstan:

- standard instrument arrival routes – STAR (traditional);
- precision approach procedures using ILS;
- non-precision approach procedures (VOR, NDB).

STAR RNAV 1 procedures are applied in Astana aerodrome.

Aircraft flight from the route point to IAF is performed by STAR or along the flight paths set by the ATC controller.

Control points' passing during approach is performed at the authorized heights and by IAS restrictions specified in the instrument approach charts, except for receiving the other instructions from ATC unit.

The RNAV routes may be used if the aircraft has certified RNAV equipment and the crew is allowed to use it for the RNAV procedure execution.

The indicated air speed regulation may be applied to provide aircraft separation intervals and to adjust approach priorities by the ATC unit. If an aircraft crew cannot execute the speed instructions, they shall inform the ATC controller about it.

Aircraft landing shall be cleared by TWR. The aircraft crew shall obtain the landing clearance from TWR before passing of decision height (altitude) and at the distance not less than 1000m from the RWY threshold.

The pilot-in-command of the aircraft is responsible for final landing decision as for its results.

In case of aircraft deviating from conventional STAR the ATC provides vectoring to return aircraft on route.

Continuous Descent Operation general information

1. For the purpose of fuel-saving, noise abatement and atmospheric emissions reducing during arrival and approach the CDO (Continuous Descent Operation) procedures are implemented.

2. Continuous descend operation (CDO) is an operation, enabled by airspace design, procedure design and ATC facilitation, in which an arriving aircraft descends continuously, to the greatest possible extent, by employing minimum engine thrust, ideally in a low drag configuration, prior to the FAP.
3. CDO can be performed only in connection with an ILS final approach.
4. CDO will be performed exclusively under radar surveillance.
5. The vertical profile of CDO takes the form of a continuously descending trajectory, with a minimum of level flight segments only as needed to decelerate and configure the aircraft prior to an ILS final approach.
6. CDOs are available for all users, which are approved for ICAO RNAV 1 GNSS navigation specification.
7. ATC may at any time cancel the execution of a CDO due to traffic situation. In this case the alternate instructions will be issued to the pilot.
8. Procedures and radiotelephony phraseology are contained in AD 2 for aerodromes, where CDO had been implemented.

### 3. DEPARTING FLIGHTS

After pre-flight preparation and getting ATC permission, the pilot-in-command make a decision of possibility for take off from the aerodrome and he is fully responsible for the decision taken.

The TWR of the departure aerodrome gives initial clearance for terminal and en-route VFR and IFR flights. Normally the boundary of such clearance is a destination aerodrome.

Detailed instructions regarding climb, turns and joining the route are given before take-off.

Engine start-up and taxiing are permitted only after clearance from the appropriate ATC unit.

Taxiing on the maneuvering area is carried out according to aerodrome ground movement chart or ATC instructions. The pilot-in-command is responsible for execution of taxiing rules established for the type of aircraft.

During a taxiing, the pilot-in-command shall monitor the space ahead and take measures to prevent collisions with aircrafts, vehicles and other obstacles. An aircraft crew shall taxi on or cross the RWY only with a clearance from the appropriate ATC unit.

Taxiing from the holding position to the line-up and take-off shall be performed only after obtaining a clearance from the TWR controller.

An aircraft crew shall take-off within one minute after the ATC clearance obtaining. A new clearance shall be requested if the aircraft did not take-off within above time.

Take off and climb procedures shall be performed in accordance with appropriate ATC unit instructions. The aircraft crew maintains the approved standard instrument departure route (SID) or the flight path designated by the ATC unit. SID routes are applied in the aerodromes of the Republic of Kazakhstan. Additionally, SID RNAV 1 procedures are used in Astana aerodrome.

Control points' passing during departing is performed at the authorized heights and by IAS restrictions specified in the departure charts, except for receiving the other instructions from ATC unit.

### 4. OTHER RELEVANT INFORMATION AND PROCEDURES

After entering to terminal control area, the pilot shall report:

- a. about chosen system for landing approach or visual approach execution;
- b. about receiving of ATIS information or weather forecast through broadcast channel.

If an aircraft crew cannot use assigned RNAV arrival or departure charts due to RNAV equipment or other operational circumstances, the crew shall immediately notify the ATC unit of it. In this case, ATC unit provides a radar vectoring.

If the RNAV characteristics are degraded or in the event of their failure during the RNAV arrival or departure procedures:

- the aircraft are directed to the ATS routes defined by VOR/DME; or
- the aircraft are directed by conventional navigational aids in case of absence above routes; or
- the aircraft are vectored (radar vectoring) until they can continue flight navigation using their own aids.

In the case of high-intensity flights, arriving aircraft may be instructed to fly the specific headings or to holding area.

The ATC procedures applied in the Republic of Kazakhstan require establishing communications with RADAR, TWR or APP at the height of 200 m. If the communication with a next following ATC unit is not established at the height of 200 m, the flight crew continues to climb the circuit altitude or the last allowed FL (height) and at the same time establishes a contact with one of the RADAR, TWR or APP.

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