

# EDDL - Düsseldorf Airport

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# EDDL - Overview

Düsseldorf is the largest airport in the federal state of North Rhine-Westphalia and the fourth largest airport in Germany.

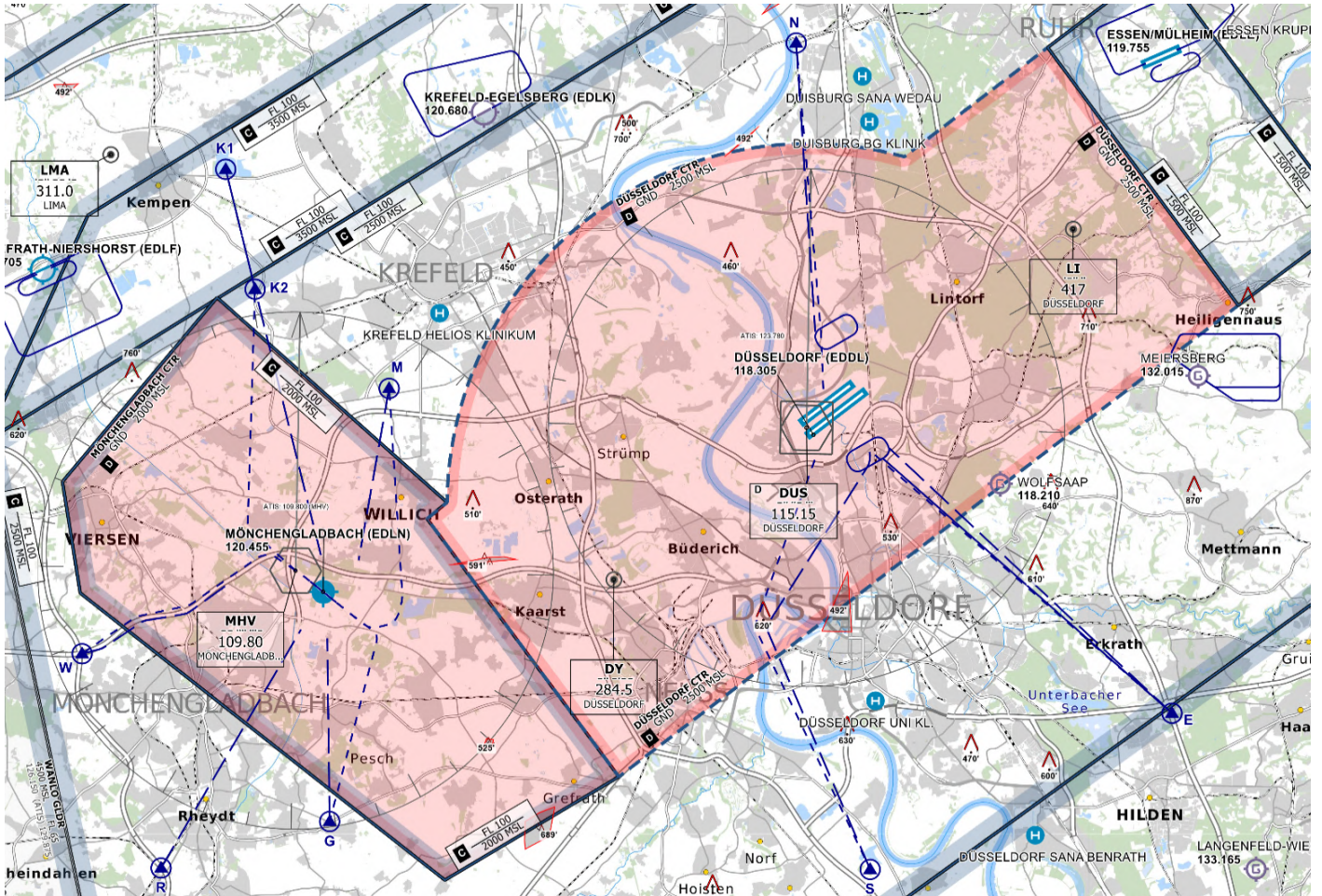
**All stations at Düsseldorf require a Tier 1 endorsement.** DEL and GND positions require the EDDL\_GNDDEL endorsement which can be acquired by all controllers with an **S1** rating or higher. TWR requires the EDDL\_TWR endorsement which can be acquired by all controllers with an **S2** rating or higher. All APP/DEP positions require the EDDL\_APP endorsement which can be acquired by all controllers with an **S3** rating or higher.

**Training:** Controllers with the S1 rating can staff TWR positions during their training (active EDDL\_TWR solo endorsement required). Controllers with the S2 rating can staff APP/DEP positions during their training (active EDDL\_APP solo endorsement required).

## Düsseldorf ATC Stations

| Station             | Station ID | Login        | Frequency | Remarks  | Endorsement                |
|---------------------|------------|--------------|-----------|--|----------------------------|
| ATIS                | ADL        | EDDL_ATIS    | 123.780   | --   | --                         |
| Delivery            | DLC        | EDDL_DEL     | 121.780   | --   | Tier 1: <u>EDDL_GNDDEL</u> |
| East Ground         | DLGE       | EDDL_E_GND   | 121.605   | primary  | Tier 1: <u>EDDL_GNDDEL</u> |
| West Ground         | DLGW       | EDDL_W_GND   | 121.680   | --   | Tier 1: <u>EDDL_GNDDEL</u> |
| Tower               | DLT        | EDDL_TWR     | 118.305   | --   | Tier 1: <u>EDDL_TWR</u>    |
| Approach            | DLA        | EDDL_APP     | 128.555   | --   | Tier 1: <u>EDDL_APP</u>    |
| Arrival<br>(Feeder) | DLAT       | EDDL_F_APP   | 128.655   | --   | Tier 1: <u>EDDL_APP</u>    |
| Sector Bottrop      | BOT        | EDDL_BOT_APP | 119.110   | covers DLD<br>topdown  | Tier 1: <u>EDDL_APP</u>    |
| Departure           | DLD        | EDDL_DEP     | 121.355   | airborne<br>frequency if DLD,<br>DLA, BOT, or<br>PADH is staffed | Tier 1: <u>EDDL_APP</u>    |

# Düsseldorf Controlzone



Düsseldorf Controlzone (D-CTR) - © [openflightmaps.org](http://openflightmaps.org)

# EDDL - Delivery

Düsseldorf Delivery is responsible for enroute and startup clearances for all departing IFR aircraft. VFR aircraft have to call Delivery for departure information. **For all departures (IFR and VFR) Düsseldorf Delivery is the first station to contact**, except for police helicopters, which may also contact Tower initially.

## Enroute Clearance

### Standard Instrument Departures

Runway 23L/05R (SID Designator T and Z) is primary used for all departures. Delivery has to make sure that all SID restrictions are adhered to (Euroscope will display if a route is not correct).

The **SID MODRU #K** shall only be assigned on pilots request when able to comply with climb restriction (9.5%) and RF-Legs. Prior coordination with Tower is mandatory. Decision on short notice to the pilot by Ground or Tower is possible, depending on the preceding traffic (see Tower section).

The **SID NETEX #K, #Y, #X, #U** are **mandatory** for flights to continue via NETEX DCT RASCA or NETEX DCT DELOM.

To ensure an efficient operation within the upper and lower airspace several restrictions should be met (check FPC column in Euroscope). To solve an invalid route, the pilot usually has to **file a completely new route** (valid routes for many destinations can be found on [grd.aero-nav.com](http://grd.aero-nav.com)).

| Waypoint                           | Restriction   | Climb  |
|------------------------------------|---|--|
| <b>COL</b><br><i>Cola</i>          | --  | climb via  |
| <b>DODEN</b>                       | min. RFL 260<br>flights unable for climb restrictions (see charts) shall refile via KUMIK | climb via  |
| <b>GMH</b><br><i>Germinghausen</i> | max. RFL 140  | climb  |
| <b>KUMIK</b>                       | min. RFL 150  | climb via  |
| <b>LMA</b><br><i>Lima</i>          | DEST EDLN only or local IFR flights   | climb  |
| <b>MEVEL</b>                       | --  | <b>23 Ops:</b> climb via<br><b>05 Ops:</b> climb |

|                                |  |   |
|--------------------------------|--|---|
| <b>MODRU</b>                   | min. RFL 210   | climb via   |
| <b>NETEX</b>                   | Only available at night between 2200LT and 0600LT and during weekends and holidays due to military airspace in the north of the EBBU FIR. Information about the activation of the military areas can be obtained from the EBBU controller. | <b>#U, #K:</b> climb via<br><b>all other:</b> climb |
| <b>NVO</b><br><i>Nörvenich</i> | max. RFL 90<br>flights with RFL at or above FL100 shall refile via MODRU   | climb   |
| <b>NUDGO</b>                   | max. RFL 240   | climb   |
| <b>SONEB</b>                   | --   | climb via   |

## Vectored Departure

Usually all RNAV capable aircraft that are available for flight simulators are able to fly a SID and most likely are looking for the wrong runway! If pilots nevertheless are unable to fly any SID (even an older version of the current SID or the LMA SID) a vectored departure can be coordinated between Delivery and Arrival. Alternatively the **LMA SID** can be used with vectors/direct to the first waypoint.

Usually **runway heading** and an initial climb of **5000ft** should be used. Other coordinations are always possible. Select the corresponding "RV" SID for this departure.

## Local IFR

Local IFR flights are preferred via **LMA SID** (radar vector departure on request possible). Coordination with **Arrival (DLA)** prior enroute clearance as well as a **startup release** is required.

Local departures need to be advised to contact **DLA** on 128.555 immediately after departure.

## Datalink Clearance (DCL/PDC)

At Düsseldorf Airport we offer Datalink Clearance to the pilots via the **Hoppie System** and the Topsy Plugin. The airport code EDDL should be used (already preselected).

An example of the DCL message the pilot will receive can be seen below. By default startup always needs to be approved separately.

CLD 2042 220117 EDDL PDC 026 SAS461L CLRD TO EKCH OFF 23L VIA MEVEL3T CLIMB 5000  
SQUAWK 2055 ADT MDI NEXT FREQ 121.780 ATIS H REPORT READY ON 121.780

# Startup

When startup clearance cannot be given immediately or the pilot is not ready for startup within the next 5 minutes, the pilot needs to stay on Delivery frequency until they receive their startup clearance.

**Runway Capacity:** To ensure smooth operations and an acceptable level of workload for following stations, **Delivery has to ensure an appropriate startup rate.** This can either be achieved by use of the **vACDM plugin**, or by adhering to a number of maximum startup clearances.

Delivery should ensure that not too much outbounds in the same area receive startup at the same time.

**Maximum active Startup Approvals** at the same time (status SUG until DEP) per active runway (use the vSID startup counter):

**One active runway:** 10

**Two active runways:** 13

**Outbound Taxi Times:** The average time between startup approval and takeoff clearance is 10 - 15 minutes during 05 operations and 15 - 20 minutes during 23 operations.

## High Traffic at EDDK

During high inbound peaks into Cologne with 13 operations, Cologne Approach may use the Düsseldorf Approach sector. Therefore traffic departing Düsseldorf out of runway 23L/R to the south (COL, DODEN, NUDGO, GMH, KUMIK, NVO) require a **startup release** by Düsseldorf Approach.

In case of startup delays, it might be useful to clear **outbounds to the south via MEVEL SID** and radar vectors to the filed first waypoint (no clearance via datalink for that). Additional coordination with APP required when this procedure should be used!

“ ... cleared XXXX via MEVEL4T, expect radar vectors to DODEN/KUMIK/NUDGO/COL/NVO, flight planned route...”

When the MEVEL SID is used, the flightplan needs to be amended accordingly (e.g. "MEVEL DCT DODEN")

**vSID:** Use the alias command `".nosouth<space><enter>"` to disable the automatic vSID assignment for outbounds to the south.

SIDs via "MEVEL DCT XXXXX" are highlighted.



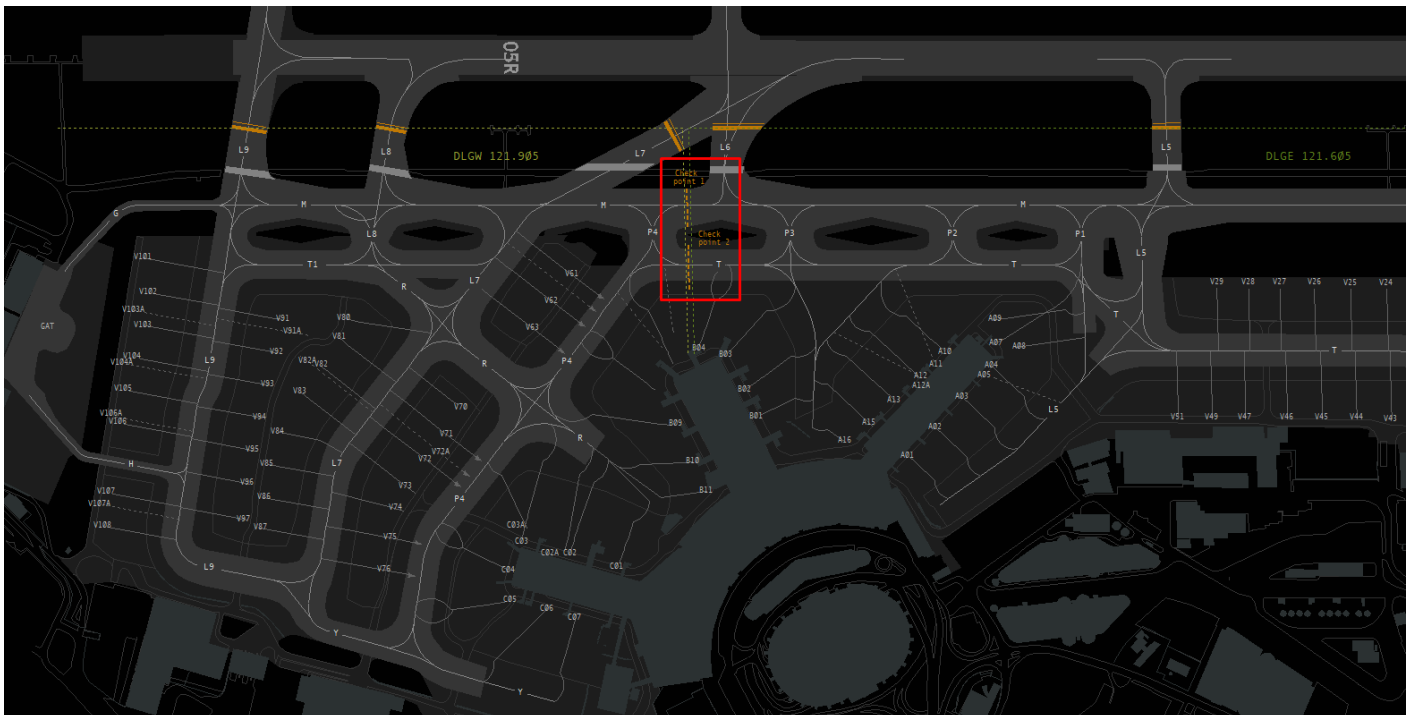
# EDDL - Ground

Düsseldorf Ground is responsible for all ground movements at the airport and can be split into east and west ground. If more than one ground is staffed, Delivery needs to be staffed first.

## Area or Responsibility

The area of responsibility for each ground can be seen on the image below. The handoff between both takes place at Checkpoint 1 (M) or Checkpoint 2 (T).

“EWG1PM, hold short of Checkpoint 1, contact Ground on 121.605.



*Sector Split Düsseldorf Ground West and Ost*

## Parking Positions

Parking positions are assigned automatically for all inbounds according real life conditions by the Groundradar Plugin.

**Terminal A** is used by Lufthansa and Star Alliance Members for Schengen and Non-Schengen flights. **Terminal B** is only used for Schengen flights, while **Terminal C** is only used for Non-Schengen flights.



V01 should not be used as parking position.

The **A380** can only use Gate **C02A**. Stands V08B, V11B (and V38B if all other positions are occupied) are capable for the A388, but are not included in every scenery.

## Pushback

All **Heavy** aircraft are not allowed to push into the "terminal bays". They always have to push on taxiway T or P4.

In general only facings "north, south, west and east" are used. If traffic is instructed push on T or P4 this need to be specified with the clearance: "pushback approved onto P4, facing north".

Conditional pushbacks are not allowed at Düsseldorf.

**Only stands V61 - V72 and V75, V76 are taxi out positions. All other positions (incl. V73 and V74) require a pushback!**

To enable an efficient traffic flow, pushback onto Y, T, P4 and R can be used instead of the "terminal bays" for all medium aircraft.

## GA Apron

**Inbound** traffic to the GA Apron always needs to enter the apron via **taxiway H**. **Outbounds** parked south of the gas station (in the middle of the apron) will exit the GA Apron via **taxiway H**, outbounds parking north via **taxiway G**. The GA Apron is limited to aircraft with a maximum wingspan of 29 m.

## Taxiway restrictions

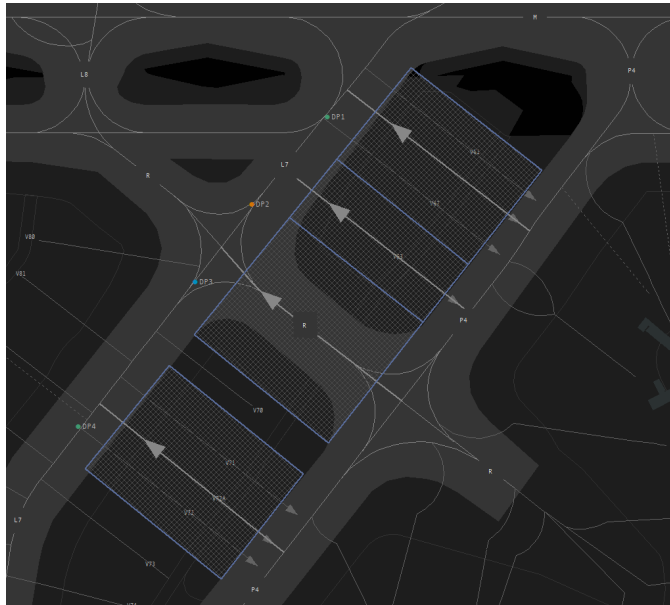
- **Taxiway P1 and L5:** while one of these taxiways is occupied by a B744/B777/A350, the other one is restricted to a maximum wingspan of 60.5 m (largest possible aircraft A330/A343).
- **Taxiway M and T/T1 between P1 and L9:** while one of these taxiways is occupied by an A380, the other one is restricted to aircraft up to a maximum of A310/B757. Parallel taxi is only possible for aircraft with a maximum wingspan of 65 m.
- **Taxiway M and T at L3:** taxiing from taxiway M onto T, and vice versa, via L3, is restricted to maximum code C aircraft.
- **Taxiway L1 and L2:** L2 is restricted to a maximum of code E aircraft, aswell as B777 and A346. Overtaking on L1 and L2 is only permitted for aircraft up to A330/A343
- **A380:** The A380 is limited to specific routings on the apron.

All relevant restrictions, aswell as the A380 taxi routings, are available as a Ground Radar Map (Functions -> Maps -> Restrictions).

## DE-ICING Areas

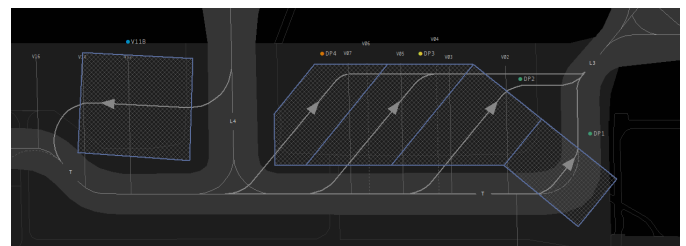
During **23 operations** De-Icing **Area East** (V01 - V11B) is used and during **05 operations** De-Icing **Area West** (V61 - V72) is used. The detailed map is available as Ground Radar Map.

**\*\* DE-ICING Area - West \*\***



**DP1** - max. Code E  
**DP2** - max. Code C  
**DP3** - max. Code F  
**DP4** - max. Code E

**\*\* DE-ICING Area - East \*\***



**DP1** - max. Code E  
**DP2** - max. Code E  
**DP3** - max. Code D  
**DP4** - max. Code C  
**V11B** - max. Code F

## Departing Traffic

Ground will assign the intersections for departing traffic. The pilot **always** needs to be **asked** if able for an **intersection** when not using L1 or L9. This also applies to L2 and L8. Intersections a pilot is able for should be noted in the remarks. Outbounds shall be send to Tower as soon as they are clear of any conflicts.

Tower is always able to change the intersection according to the current traffic situation at the holdingpoint and final.

During **23 operations** **L1** should always be used by default for all departing aircraft due to the "short" runway available. Ground should sequence the outbounds on M by north/south or different SIDs when they are departing into the same direction.

**L2** is only used for "faster following" or WTS if there is no prior possibility to get outbounds in the

best departure sequence on taxiway M. Consider taxiway restriction for overtaking traffic on L2. When there is no benefit (e.g. one inbound between two outbounds), L2 intersection should not be used.

Intersection **L3** can be used for general aviation, prop and turboprop aircraft, after confirmation by the pilot.

During **05 operations** all departures should use **L9**. On Pilots request and if the traffic situation permits, intersections **L6 or L8** can be used as well.

### Usage of Intersections

Only intersections with a published TORA (see charts) may be used for departures, even if the pilot reports that he would be able for a different intersection. As an exception, helicopters may depart from every part of the runway up to the runway end.

Generally, an intersection may only be assigned to a departing aircraft when the pilot either reports by himself that he is able for that intersection or agrees to it after a controller's request - regardless of the aircraft type.

Intersections should **not** be used if there is no benefit for the outbound!

## Arriving Traffic

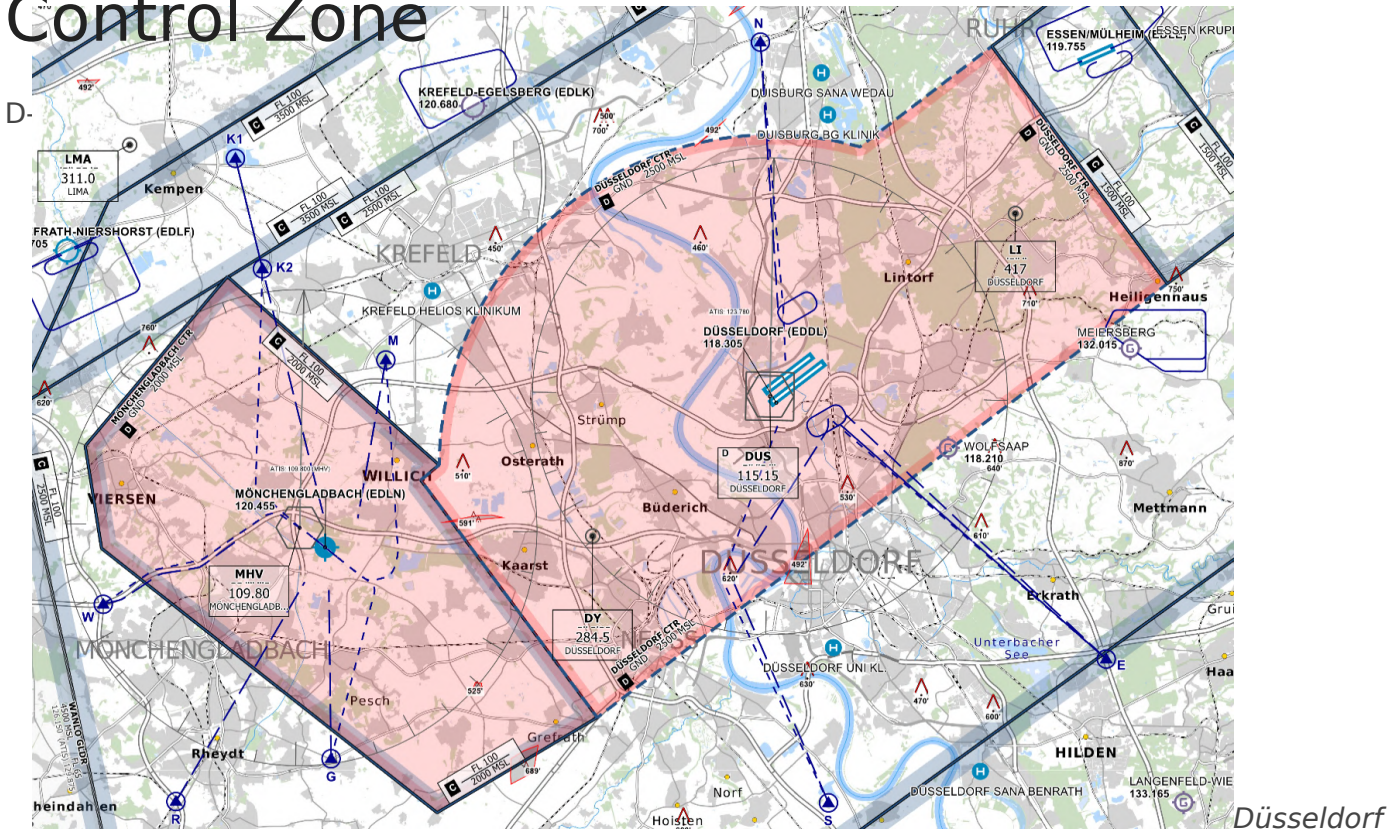
**Vacating RWY 05R:** Traffic vacating RWY 05R via via L1, L3 or L4 (after landing or crossing) are instructed by Tower to turn right on M and to hold short of the next intersection. The handoff to Ground will take place thereafter. This will prevent traffic to stop in the intersection and blocking the runway during frequency change.

It is **not** allowed to vacate/cross rwy 23L **via L7 and turn left on M**.

# EDDL - Tower

**Düsseldorf Tower** is responsible for all runways and the control zone (CTR), as well as Taxiways in between the parallel runways.

## Control Zone



control zone (D-CTR) - © [openflightmaps.org](https://openflightmaps.org)

Düsseldorf has three VFR mandatory reporting points (November, Sierra and Echo) that should be used for all VFR traffic leaving or entering the CTR.

To the west, the Düsseldorf Tower Control Zone is directly adjacent to the Mönchengladbach CTR (EDLN), which extends from GND to 2000 ft AMSL with its own VFR reporting points. All VFR flights from one to the other CTR should be coordinated.

C-Airspace is lowered to 2000 ft AMSL over the Mönchengladbach control zone. At the eastern border of the Düsseldorf control zone, the C airspace is lowered to 1500 ft AMSL due to the proximity to Essen-Mülheim Airport (EDLE).

**VFR Traffic:** Northern traffic pattern is preferred for all VFR flights. Whenever possible VFR traffic should perform a long landing during 23 ops.

**Helicopter:** Directly at the airport there is only one helipad in front of Hangar 10, in the far east, near the long-distance train station, which is used exclusively by the NRW police flight squadron (Hummel) and the federal police (Pirol). These helicopter are allowed to depart/land in front of the hangar and do not need to contact Delivery or Ground. All other helicopters need to use the runway for departure and landing.

South of the control zone, approx. 3 NM north of SIERRA, is the Düsseldorf University Hospital (UKD). The rescue helicopter Christoph 9 (CHX9) is stationed close to the northern border, approx. 2.2 NM south-east of NOVEMBER, at the Berufsgenossenschaftliche Unfallklinik (BGU) Duisburg. Here, a request to fly through the tower control zone can often be expected during missions.

Further information see <https://knowledgebase.vatsim-germany.org/books/practical-procedures/page/runway-change-guide>.

## Runway Usage

Düsseldorf Tower is responsible for the direction of operation. There is no preferred operating direction in Düsseldorf, so you should take a look at the METAR and TAF before making a decision so that you don't have to change runways at the traffic peak, especially during events. If a change is necessary, this should be coordinated with Approach in order to find a good time for the runway change.

Primary only runway 23L/05R should be used for departures and landings. In high traffic situations runway 23R/05L should be used for landing and 23L/05R for departing traffic (VFR and IFR).

**Heavy Traffic:** Runway **23R/05L** is **not** available for the A380! Inbounds always have to land on runway 23L/05R.

If requested by the pilot, other heavy traffic (e.g. B747, MD11 etc.) shall also be given the opportunity to land on 23L/05R, even during high traffic volumes.

## Arriving Traffic

**Missed Approach:** For all published approaches, missed approaches will be executed as published, unless otherwise agreed. In the event of a missed approach, the responsible radar station must be informed (via Topsky or verbally). Any deviating action must be agreed in advance with the relevant approach controllers, except for actions by the Tower to reestablish separation. In this case, the approach controller shall be informed immediately. The handover takes place once separation is established. The next departure requires a departure release.

**Separation:** Düsseldorf Tower is responsible for maintaining separation, if necessary by use of

adequate means (e.g. speed control), of arriving traffic from transfer of communication until touchdown and during the initial part of a missed approach.

**Swingover:** Visual swingover (visual approach) from runway 23R to 23L is possible when traffic permits. Therefore the pilot has to have the runway 23L in sight, before being cleared for the visual approach. With the clearance for the visual approach the pilot has to be given a new instruction how to continue in case of a **missed approach**. Therefore, runway track and a climb to 4000ft shall be used.

**Runway Crossing:** Traffic landing on 05L/23R will have to cross runway 05R/23L, before being handed over to ground. Traffic vacating 23R via K3 shall cross the runway into either L7 and L6, depending on their assigned Gate and shall be handed over to either east or west Ground. This will reduce congestion around the Checkpoints and avoid unnecessary frequency changes. It is not allowed to vacate rwy 23L via L7 and turn left on M.

**Vacating RWY 05R:** Traffic vacating RWY 05R via L1, L3 or L4 (after landing or crossing) are instructed by Tower to turn right on M and to hold short of the next intersection. The handoff to Ground will take place thereafter. This will prevent traffic to stop in the intersection and blocking the runway during frequency change. Traffic vacating runway 05R (or 05L via K1) are not permitted to taxi into L2.

## Departing Traffic

**Separation & Spacing:** All departures must be separated by at least 3 NM or wake turbulence separation, whichever is greater. During 23 Operations, care should be taken not to send them out at exactly 3 NM. As not all of them start their turn at the same time, the radar separation can be undercut.

Tower has to ensure initial separation between departures and between departures and missed approaches.

If separation has to be reestablished, for example in case of missed approach on short final and departing traffic already being airborne, transfer of communication shall take place when Tower has ensured this separation. Therefore it can be necessary to instruct a pilot to "remain on tower frequency" after departure.

Departures with the same SID need to be spaced by at least 5 NM at transfer of communication.

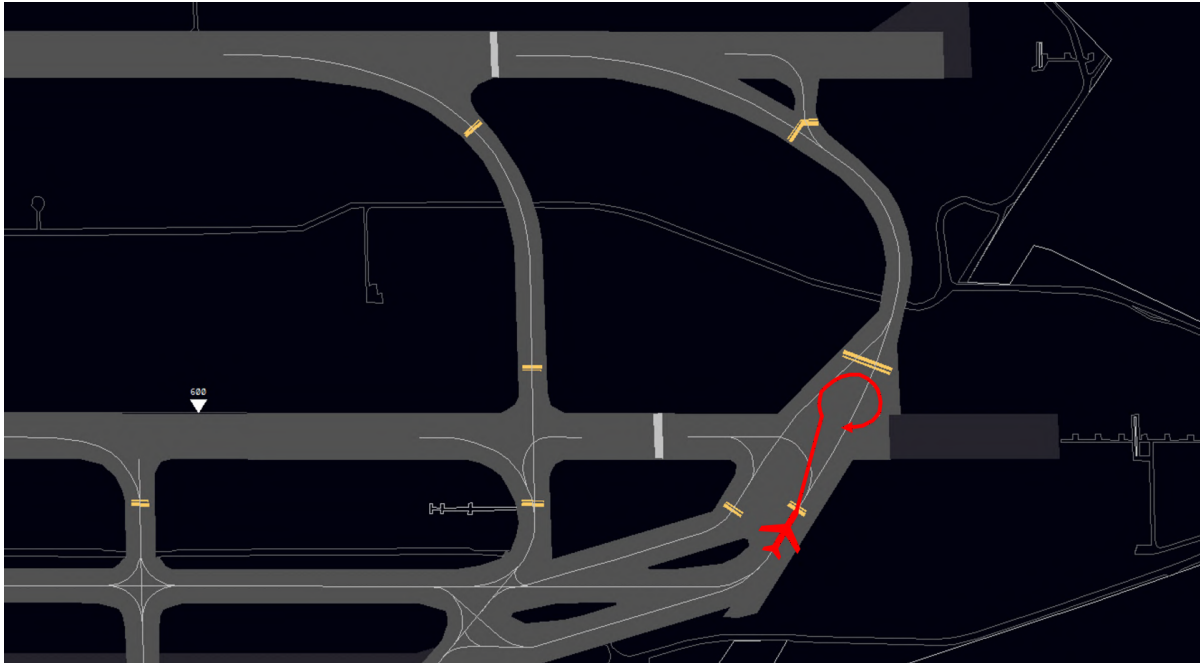
**Transfer of Communication or "Auto Handoff":** Usually all departures on a SID have to contact Langen Radar according charts by it's own when passing 2.000ft AMSL. Departure frequency need to be published in the ATIS.

**MODRU #T** followed by the same SID requires 2 minutes separation. **MODRU/NETEX #T** followed by **#K** requires at least 4 minutes separation due to the shorter routing. The other way around radar separation is sufficient. Depending on the outbound sequence on taxiway M it might be useful not to use **#K** SIDs.



**Lineup:** Independent lineup is possible for all intersections **with traffic information** for the second departure. Intersection L2 should only be used if there is a real benefit for departures (see chapter ground). L2 is not available for lineup for A346, B744, B748, B777 and A388!

**Special Lineup RWY 23L:** In case outbound traffic requires the maximum available runway length for runway 23L, the pilot can request a special lineup via L1 (see image below). This lineup will take longer as the usual one.



**High Traffic at Cologne:** During high inbound peaks into Cologne with 13 operations, Cologne Approach may use the Düsseldorf Approach sector. Therefore traffic departing Düsseldorf out of runway 23L/R to the south **require a startup and departure release** by Düsseldorf Approach.

Tower will be informed by DLA and need to inform Delivery!

## Parallel Runway Operations and Runway Dependencies

Due to the proximity, the parallel runways at Düsseldorf airport have to be considered as one runway in terms of runway separation. Treatment as one runway means that only one aircraft may use either runway at any time. This excludes taxiing, line-up instructions on the parallel runway and clearances to cross the parallel runway.

For example, if there is approaching traffic on runway 23R, a take-off clearance on runway 23L can be given safely until the arriving traffic runway 23R is at approx. 3 NM (provided the departing traffic has already completed line-up). Depending on the approach speed, this 3 NM can also be undercut, but runway separation must be ensured at all times. This means that a previously departing aircraft must either have crossed the end of the runway or initiated a turn before the



landing aircraft crossed the threshold on the parallel runway. The simultaneous use of both runways, e.g. for a northbound takeoff and a southbound takeoff, is never possible, regardless of aircraft type or flight rule!

In the event of a missed approach, radar separation must be ensured between two IFR flights. At Düsseldorf, due to the proximity of the two runways, this requires active action by the tower controller, who must separate potential conflicts and coordinate them with the approach controller.

The procedure "**not withholding takeoff or landing clearance**" can be applied, considering the parallel runways as one. With one exception: Since there are physically two runways and the rejected take-off does not have to be taken into account, the landing clearance can already be given if the corresponding runway is clear. A take-off on the other runway must then be aborted if the runway separation can not be guaranteed. For departures after arriving traffic, the take-off clearance on the parallel runway can be given, as soon as the arriving traffic has touched down and begun slowing down.

Since the runways in Düsseldorf are less than 760 m apart, **wake turbulence separation** must be ensured.

## Reduced Minimum Radar Separation

Minimum separation of IFR flights approaching the parallel runway system (23L & 23R or 05L & 05R) can be reduced to 2.5 NM, according to AIP, if no **wake turbulence separation** has to be applied:

“ Reduced Minimum Radar Separation for Diagonal Staggered Approaches (Based on NfL I - 9/09)

1. The Minimum Radar Separation (MRS) for diagonal staggered approaches to parallel runways at Düsseldorf Airport is 2.5 NM between 10 NM and the touchdown point.

2. The reduced MRS will be applied to landing directions 05 and 23, provided the following conditions are met:

- Preceding and succeeding aircraft are approaching different parallel runways.
- Both aircraft are established on the final approach track.

*Quote from AIP Germany/AD 2 EDDL 1-23 (by the German Luftfahrt-Bundesamt), applicable on VATSIM.*

## Low Visibility Procedures

LVO shall be announced in the ATIS (Code &lvp) and target spacing for arrivals shall be increased. Additionally, all traffic shall be told to hold at the CAT III holding points. RVR values will be given with the landing clearance and in the case of guided take-off ( $RVR \leq 125m$ ) with the take-off clearance.

**Taxiway restrictions:** At runway visibility ranges (RVR) less than 350 m, taxiway K and L5 between RWY 05R and taxiway M are closed. Additionally, it is not possible to vacate runway 05R via L8 and runway 23L via L3 with runway visual ranges of less than 350 m.

Refer to this article for more information: [Low Visibility Operations \(LVO\)](#).

# EDDL - Approach

Düsseldorf Approach is primarily responsible for all arrivals and departures at Düsseldorf Airport **EDDL** and Mönchengladbach Airport **EDLN**. If sector Bottrop (BOT) is not staffed separately, its tasks are also taken over by Arrival, which means that arrivals and departures to/from Niederrhein-Weeze **EDLV** and Geilenkirchen **ETNG** also are within the area of responsibility.

## Sectorization and Airspace

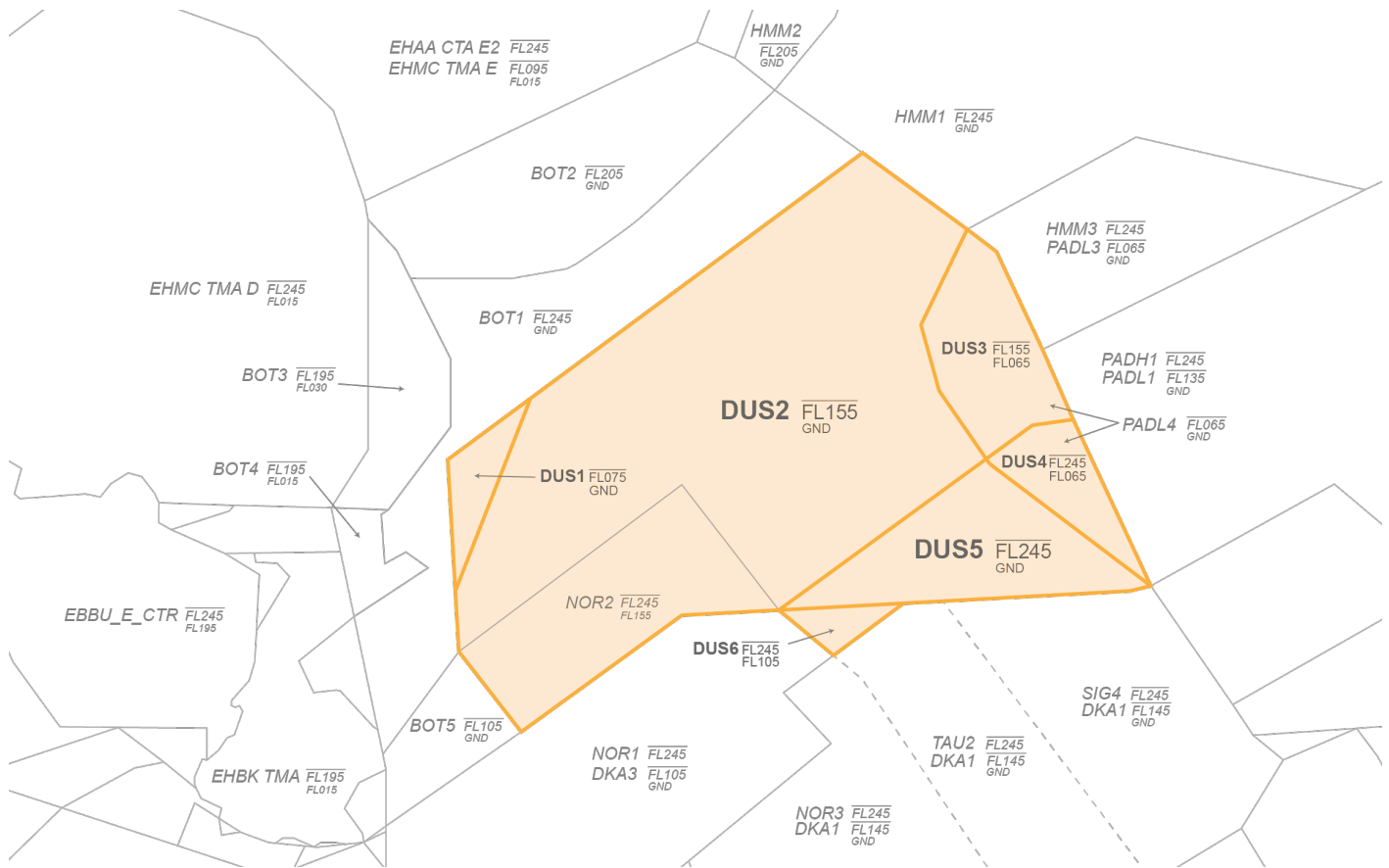
### Düsseldorf Approach (DLA)

**Düsseldorf Approach (DLA)** is the **primary station** and is mainly responsible for the Düsseldorf TMA.

In general, the arriving aircraft should use the transitions, directs or vectors. STARs should not be used as they all lead to DUS VOR close to the airport as initial approach fix.

During a constant arrival stream into Düsseldorf on northern and southern downwind, Approach should hand over traffic with **6 NM or greater spacing per downwind** to enable Feeder to create an efficient final.

The arrival controller is responsible for clearing the procedures, but can also delegate this to the centre controller by agreement (exception: PISAP/LMA arrivals).



*Sector Düsseldorf Arrival (DLA)*

**Winter-MVA:** The 3200 ft AMSL MVA area south of the final runway 23L can be used down to -10 °C with summer MVA (3000 ft AMSL). The 2200 ft AMSL range around the airport can be used down to 0°C with summer MVA (2000 ft AMSL).

**High Traffic at Cologne:** During high traffic situations at EDDK with 13 operations and low traffic at EDDL, DKA can request a general airspace crossing to vector inbound 13L/R through the DLA sector. Traffic need to stay at 5.000ft or below within AoR of DLA and at least 3 NM south of the extended centerline RWY 05R. Further individual coordination for level and extension possible when required.

Düsseldorf outbounds out of runway 23L/R to the south via DODEN, KUMIK, NUDGO, COL, NVO and GMH require a **startup and departure release** by DLA (expect departure around 10 - 15 minutes after startup)! For all waypoints outbounds can be cleared via **MEVEL SID and radar vectors** to the first filed waypoint.

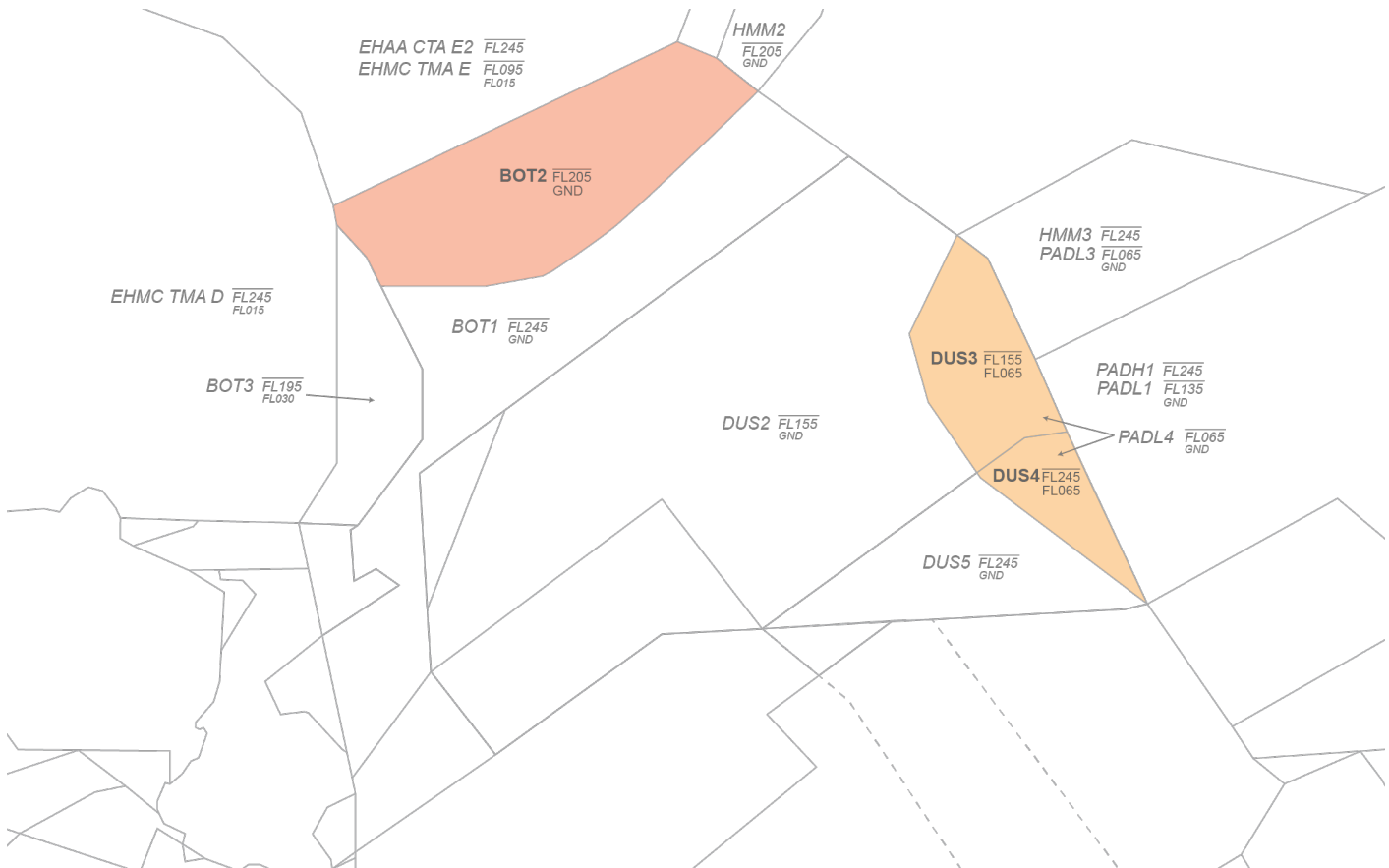
Withdrawing the agreement requires around 10 - 15 minutes for DKA and should be done shortly after a startup release prior the departure release.

DLA has to inform DUS Tower when this agreement is in operation!

## Important Areas

The Dortmund Area (shown in orange) is between GND and FL65 and permanently operates under PADL's responsibility for all Dortmund inbound and outbound flights. Düsseldorf Arrival must keep aircraft at or above FL70 in this area. When operating below this altitude, each aircraft requires an individual release from PADL.

The TEBRO Area (shown in red) spans from FL205 to FL245 and permanently operates under EHAA's control. Amsterdam departures pass through this area.



*Important Areas*

## Feeder - Düsseldorf Arrival (former Director) (DLAT)

Düsseldorf Arrival can be split into two units to distribute the workload along two controllers with a lot of traffic. DLAT takes on the tasks of the feeder, while DLA handles the tasks of the so-called pickup. Both operate within the same airspace, so there are no fixed transfer conditions. However, certain aspects should be taken into consideration:

- The pickup ensures that the aircraft have the correct ATIS, inform a/c about runway to land, and establishes a sequence. This is achieved by using speeds, vectors, or transitions, as well as appropriate and separated levels. Coordination of the sequence between both units is not required, as long as the pickup transfers the aircraft to the

feeder in the order planned for the sequence. Any deviation from this order should always be coordinated.

- The feeder's task is to line up the aircraft on final approach with optimal spacing. The minimum spacing for the same runway is 3.0 NM. If the aircraft are landing on different runways, the separation can be reduced to 2.5 NM within 10 NM of the threshold.
- At the same time, there is a constant effort to balance the workload between both units. The pickup may also be occupied with other problems in the sector, which justifies the presence of a feeder even during heavy inbound traffic. Additionally, a feeder can, for instance, handle IFR cancellations for Essen inbounds on runway 23 or manage Mönchengladbach in- and outbounds during 05 operations, thereby relieving the pickup. This often makes sense because the feeder is already separating inbounds in this area anyway, which also reduces coordination to a minimum.
- If the pickup is very busy however the feeder has less traffic, handoffs can be done early and without sufficient spacing, vectors or speeds as long as separation exists. In this case the feeder has the capacity to establish sufficient spacing and is able to reduce the workload of the pickup controller.
- The workload balancing also works in the opposite direction. If the feeder becomes very busy and reaches his capacity limits, the pickup must ensure that aircraft are sent as simply and uniformly as possible. In such cases, aircraft should be transferred with sufficient spacing on the downwind at FL70 or FL80 and a speed of 220 knots. Significant deviations from the downwind make the feeder's job harder. If the aircraft are too low, there is a risk of entering the PADL Wickede during 23 operations. Additionally, this provides the feeder with enough levels to work with vertical separation effectively.

## Reduced Minimum Radar Separation

Minimum separation of IFR flights approaching the parallel runway system (23L & 23R or 05L & 05R) can be reduced to 2.5 NM, according to AIP, if no **wake turbulence separation** has to be applied:

### “ Reduced Minimum Radar Separation for Diagonal Staggered Approaches (Based on NfL I - 9/09)

1. The Minimum Radar Separation (MRS) for diagonal staggered approaches to parallel runways at Düsseldorf Airport is 2.5 NM between 10 NM and the touchdown point.

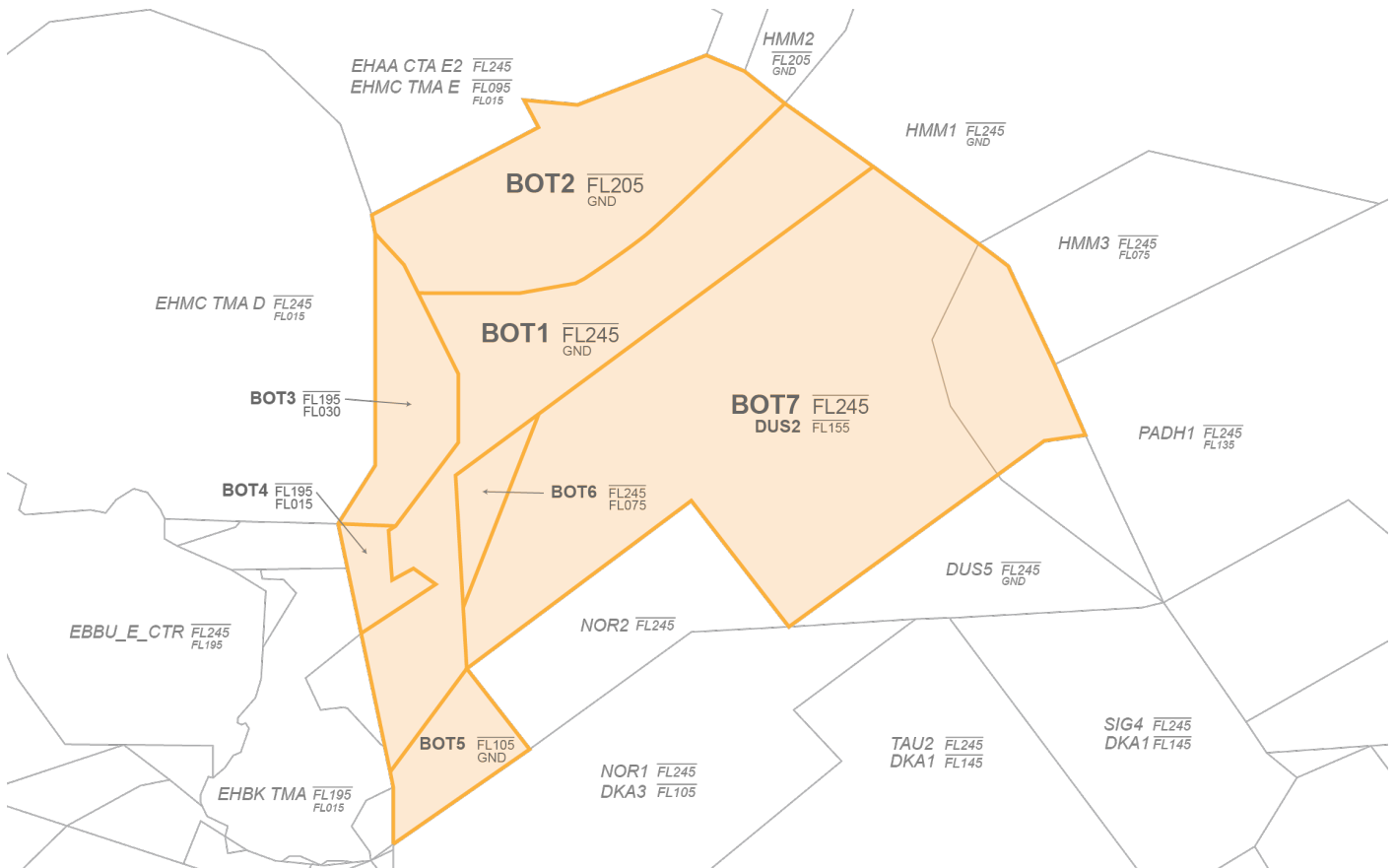
2. The reduced MRS will be applied to landing directions 05 and 23, provided the following conditions are met:

- Preceding and succeeding aircraft are approaching different parallel runways.
- Both aircraft are established on the final approach track.

Quote from AIP Germany/AD 2 EDDL 1-23 (by the German Luftfahrt-Bundesamt), applicable on VATSIM.

## Sector Bottrop (BOT)

Sector Bottrop is responsible for the lower airspace approximately north of Düsseldorf and a small part above the arrival sector. In addition to arrivals and departures for Niederrhein-Weeze (EDLV) and the Geilenkirchen military airfield (ETNG), its tasks primarily include through flights to and from Düsseldorf.



*Border Langen Radar Sector Bottrop (BOT)*

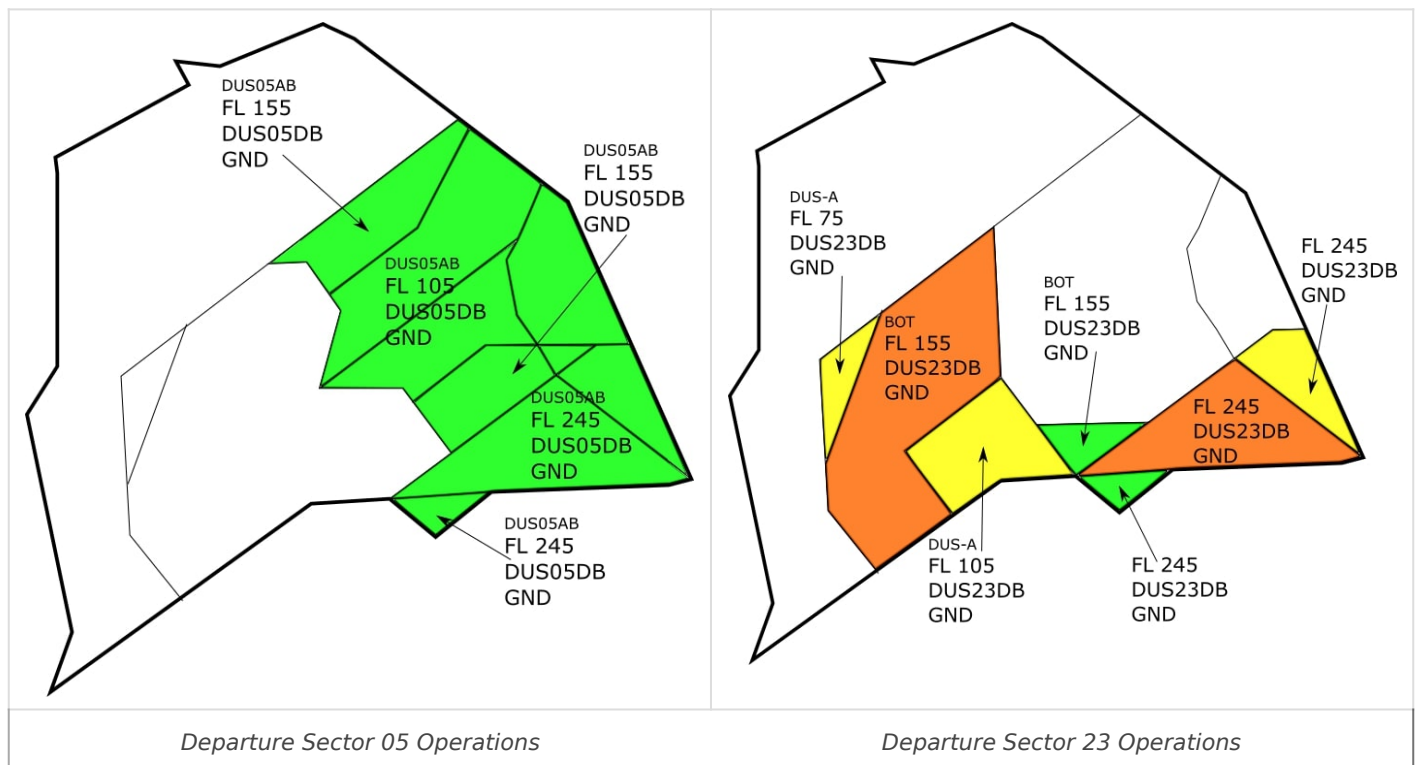
If the Bottrop sector is not staffed separately, it is taken over by Düsseldorf Approach by default.

**Flights through BOT:** In addition to the flights to and from Düsseldorf, there are also flights in lower airspace and to destinations in the Netherlands, Belgium and Luxembourg. The respective transfer altitudes are published in the respective LoA. Flights to **Münster/Osnabrück (EDDG)** via BAMSU must be cleared for the BAMSU#J arrival before the transfer to the HMM sector takes place.

## Düsseldorf Departure (DLD)



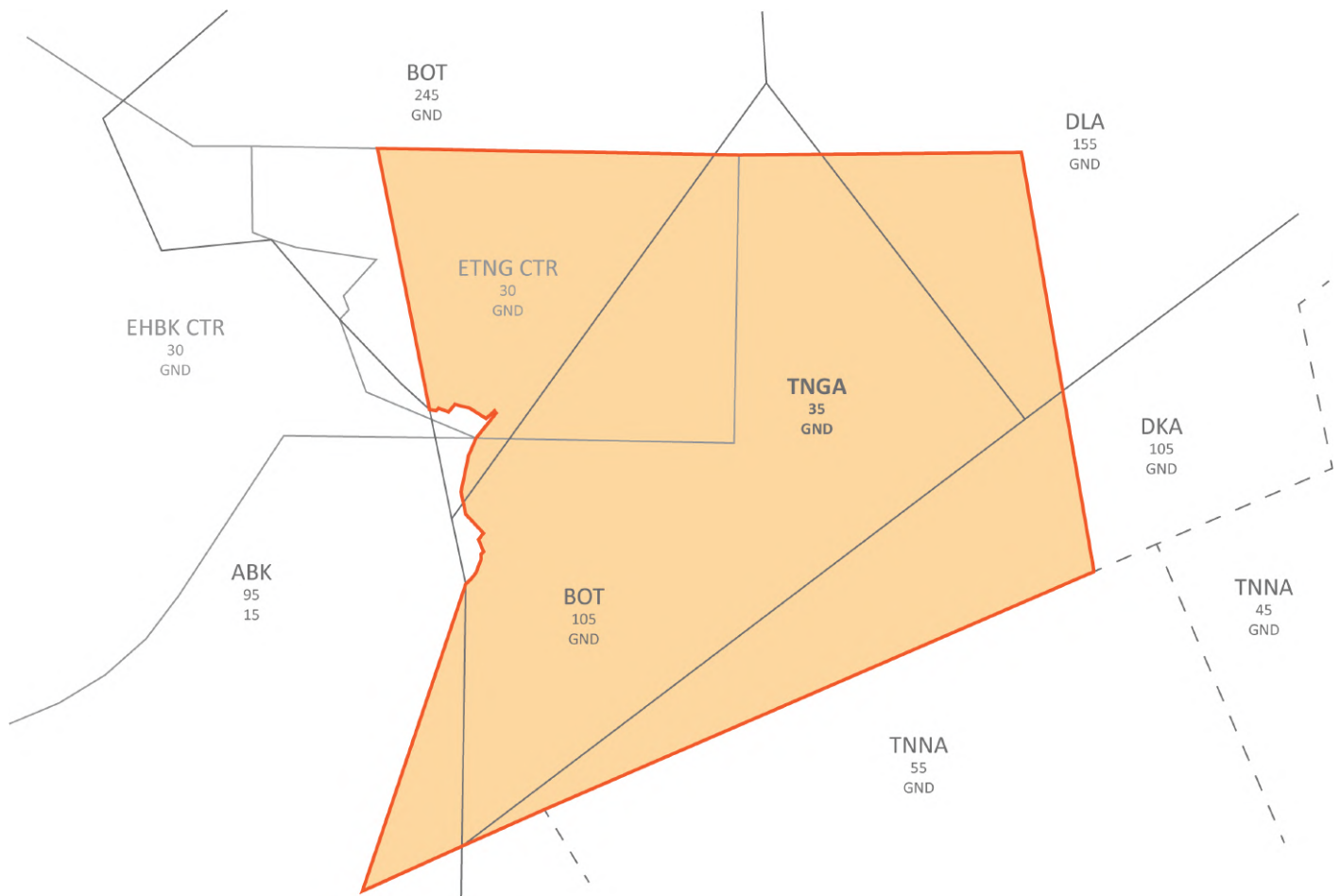
Düsseldorf Departure is responsible for departures out of Düsseldorf EDDL and Mönchengladbach EDLN. According to the departure procedures, pilots have to contact Departure when passing 2000ft AMSL.



## Frisbee Radar (TNGA)

The military approach sector Frisbee Radar is responsible for all departures from Geilenkirchen's (ETNG) runway 09 and approaches to Geilenkirchen's runway 27.

The transfer conditions for all approaches to runway 27 must be coordinated individually with Frisbee Radar. Departures from runway 09 flying an SID will be handed over at the sector boundary at 3000ft at the latest, unless otherwise coordinated; for departures on an OID, the handover conditions will be coordinated individually by Frisbee Radar. Frisbee Radar always has to obtain a release by BOT for all departures.



Charts for military airfields are available within the german Military-AIP.

# Potential Conflicts

## 05-Operations

- After a short time, all outbounds on a SID cross the STARs or transitions of the inbounds (north via HALME, south via DOMUX). The outbound flights should be below (max. FL90) the inbound flights (min. FL100). After passing the crossing point, descent and climb can be continued.
- The STARs and transitions originating from PISAP, HALME and BIKMU ultimately all meet north of the airport at point GAPNU. Those from DOMUX and ELDAR (05 operations only) meet to the south at point DL502. Good advance planning and pre-sorting for the final approach is recommended here.
- The MODRU/NETEX SID not only crosses the approaching traffic coming via HALME, as mentioned above, but also the approaching traffic coming via PISAP. Whenever possible, attempts should be made to guide departing aircraft over the approaching aircraft.
- Both departures and arrivals can come via the LMA NDB. Here too, it is advisable to stagger the traffic vertically and initially keep departures below the arrivals until there is no longer a conflict for the further climb or descent clearance.
- EDLN departures from runway 13 cross the EDDL final approach shortly after departure. Mönchengladbach Tower therefore always requires a departure release from DLAT for 13

operations. In this case, DLAT and DLA should coordinate a sufficient gap between EDDL approaches and, if necessary, issue the departure release with the condition of an immediate take-off.

- EDLN approaches to runway 31 cross the EDDL final approach. DLAT and DLA should coordinate a sufficient gap between EDDL approaches. It also makes sense for DLAT to guide the EDLN approach to the final approach.

## 23-Operations

- All aircraft departing via the southern SIDs cross the traffic approaching via BIKMU. As this crosses BIKMU at FL140, departures should initially be kept below FL140 and cleared for further climb after passing the conflict area.
- All STARs and transitions from points BIKMU, LMA, PISAP and HALME end at BOT NDB or meet at points XAMOD and DL426. Good advance planning and pre-sorting for the final approach is recommended here.
- Both departures and arrivals can come via the LMA NDB. Here too, it is advisable to stagger the traffic vertically and initially keep departures below the arrivals until there is no longer a conflict for the further climb or descent clearance.
- EDLN departures from runway 13 are not necessarily separated from EDDL departures, depending on the respective climb rates. Mönchengladbach Tower therefore always requires a departure release from DLD for 13 operations. DLD should therefore pay particular attention to separation in this situation. If necessary, DLD can also instruct Düsseldorf Tower to hold departures briefly to enable a safe EDLN departure.

## Holdings

In case holdings are required, traffic should be held by Approach and only the lowest inbound aircraft should be sent to the Feeder. These holdings should be used with caution as they are directly in the downwind sector.

- **DUS** (min. 3,000 ft AMSL, max. 24,000 ft AMSL)
- **DLA503** and **DLA524** - 05 operations (min. 4,000 ft AMSL, max. FL070)
- **DLA409** and **DLA429** - 23 operations (min. 4,000 ft AMSL, max. FL070)

## Enroute-Holdings

As the above-mentioned holdings partly block the arrival sector and make working more difficult, published enroute holdings are preferably used for Düsseldorf.

- **ADEMI** (DOMUX Arrivals - min. 6000ft AMSL - Inbound 284° - Left)
- **HMM** (HALME Arrivals - min. 5000ft AMSL - Inbound 257° - Left)
- **DOMEG** (HALME Arrivals - min. 5000ft AMSL - Inbound 170° - Left)
- **ELDAR** (BIKMU Arrivals - min. 6000ft AMSL - Inbound 358° - Left)
- **NVO** (BIKMU Arrivals - min. 6000ft AMSL - Inbound 068° - Right)

# Crosscoupling of Approach Frequencies

Düsseldorf Approach (EDDL\_APP) cross-couples all other EDDL\_X\_APP frequencies via XC in Audio for VATSIM. This enables us to always use the correct departure frequency (published on the charts) when the approach/departure is staffed.

When EDLN is staffed, the controllers there must always be informed of the active operating direction in EDDL.