

Norwegian Airports & Charts

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General recommendations

General recommendations

When flying within Polaris FIR, some small things can make the experience great for everyone. Here is some great advice from the controllers in Polaris FIR:

Read the frequency

This may sound strange and a bit harsh, but it is essential for our controllers in busy events. If you do not read the room (or in this case frequency), you will most likely cause more stress for both controllers and your fellow pilots. Therefore make sure to:

- Listen to the frequency before checking in. Audio for VATSIM can be a bit slow on frequency change during high-load
- If you are requesting clearance when it is busy, please do not try to force into the frequency for a clearance. Once we get some aircraft departed, the frequency will quickly be calmer, so please be patient.

In the majority of the cases you can obtain clearance via DCL (ACARS) though the hoppie network - if your aircraft has this functionality, use it!

Be prepared

We can not say this enough - we all win by doing this. It is not unusual for us to issue an instruction that is far ahead in time, such as giving direct routing to a waypoint on the approach while still on a cruise. So make sure to prepare your charts and brief yourself before departure and landing.

Pushback

If you are restricted in any sort to perform the pushback as instructed, notify the controller as soon it's practically possible

All pushback shall be executed straight back unless otherwise had been instructed. If it's requested to perform a push facing towards a direction on the taxiway, the controller will inform you of the pushback clearance.

If unsure, please do not hesitate to ask the controller before requesting the pushback.

Taxi

Taxi clearances to the runway are often given without a specific holding point. If it's the case, taxi to the most reasonable holding point. In most cases, this will be at the end of the runways or the locations which give the shortest backtracks.

If you receive the instruction "HOLD SHORT", we expect you to stop before entering/crossing the specified taxiway.

When entering or exiting the runway we expect all aircraft to stay clear of runway entrance. By not fully vacating or not holding short of the runway entry line, you will be occupying the runway and others may not take off or in worst case instructed to go around

Report available at any holding point if you can and want to make an intersection departure. Tower will try to accommodate that as long as traffic situation permits

IFR Departure

When airborne and contacting approach, establish the communication by:

- Call up with callsign
- Report the current altitude

This is to establish both communication and verify data that what we see on the radar is your aircraft. If you don't report your altitude, we have to ask so by saying it on initial call saves time.

If traffic permits, you can expect a direct to a waypoint along your route, also beyond the end of the SID. In short domestic flights, even a direct to the IAF (Initial Approach Fix) or waypoint on the expected star is not unusual. If you have a short flight time, we recommend to pre-plan and pre-program the expected arrival and approach before departing from the departure field.

Note: Also make sure to report your altitude also when you are in contact with top/down ATC (ATC covers both the aerodrome and approach sector).

IFR Arrival

An arrival clearance will be given before the end of your routing. A STAR and expected approach will be issued. A confirmation of what approach you can expect will be issued by approach on initial contact. If your destination does not have a STAR, expect vectors or direct to the respective points on the approach.

Some do and don't on arrival:

Descend

Do not descend without clearance, a STAR clearance is not a descend clearance

If you are ready to descend, but haven't received clearance, report ready for descent shortly before reaching the Top of Descend (T/D).

Directs and vectoring

Do not ask for a direct, we always try to give the best direct we can when there is room for it. If you have not been given a direct that's most likely due traffic ahead.

Expect also directs to waypoints along the STAR or on the approach procedures. We will give it to you when there is room for it.

Speed control

If no ATC speed restriction have been given, follow speeds according to the STAR. Also remember to maintain speed 250kt IAS below FL100.

Cleared for approach?

When cleared for approach via a transition point/IAF, you are also cleared to descend according to the procedure.

Flying aircraft with CODE F

Norway has a handful of airports serving different types of aircrafts. But when it comes to CODE F aircraft (for example A380 & B747-8), there are limitations on most of our airfields. The only airfield with documented CODE F procedures is Oslo Airport (ENGM). All pilots are highly encouraged to follow published charts and procedures on AIP, which is also in accordance with VATSIM Code of Conduct (CoC). If there are no published CODE F procedures to intended airport, the aerodrome is likely to not be capable to handle your aircraft. ATC will always advise if you are uncertain about this when it comes to different airport's capabilities.

Flying into AFIS Aerodromes

In Norway we have smaller airports with Traffic Information Areas (TIA) and Traffic Information Zones (TIZ). These are uncontrolled airspaces (class G) due to them being less busy. Hence, only AFIS is provided and it's the pilots responsibility to avoid collisions within these airspaces.

Two-way radio contact with AFIS is mandatory. The AFIS unit will provide runway in use, weather conditions and traffic information.

Simplified summary for pilots

Note: The below is only applicable to airports on land, not offshore (HTZ).

- "Runway occupied" means someone else is using the runway to depart or land, you **must** give way. Respond to such calls with your intention to give way/hold position/orbit/route behind as appropriate. You are the PIC, you decide what the best course of action is.
- "No reported traffic runway XX" means you are free to use the runway to depart or land.

- Establish two-way radio contact before entering TIZ/TIA (*have your callsign and message acknowledged by ATC/ATS*).
- When departing, report before starting/pushing/taxiing, and don't initiate this action before ATIS have had a chance to respond with relevant information if any.
- When ATIS units are online, their callsign is "[Airport] Information".
- Norwegian ATIS airports are covered by overlying APP/CTR controllers when the ATIS unit is offline. If in doubt, ask via PM.
- Obtain your IFR clearance from the ATIS unit (*when online*), they will coordinate with ATC.
- Make safe and sensible decisions as PIC. Keep in mind these laws **and** common practices:
 - Landing aircraft have priority over departing aircraft.
 - VFR aircraft should generally give way to IFR and commercial operations. This is not law, but the VFR pilot is almost always inconvenienced far less by making short delays than IFR and airline ops.

More in-depth information and examples of procedures are available in the [ATIS Guide for ATC](#).

Report broken or outdated content

If you find any broken or outdated links, pages, documentation and similar. Do not hesitate to report it to norway@vatsim-scandinavia.org.

Airports

Airport specified briefings for aerodromes within ENOR/ENOB FIR

Airport Sceneries

ENBR | Bergen Flesland

Simulator	Freeware/Payware	Scenery	Remark
Microsoft Flight Simulator (MSFS)	Freeware	<u>WombiiActual</u> (<u>Flightsim.to</u>)	Our recommendation
	Payware	<u>Bergen Airport</u> (<u>RDdesign</u>)	Incorrect runway slope
		<u>ENBR Bergen Flesland Airport</u> (<u>Salvuz</u>)	
X-Plane (XP11+XP12)	Freeware	Default Gateway	
	Payware	<u>Bergen Airport XP</u> (<u>Aerosoft</u>)	
Prepar3D (P3D) Flight Simulator X (FSX)	Freeware	<u>Airports of Norway</u> (<u>AoN</u>)	
	Payware	<u>Bergen Airport X</u> (<u>Aerosoft</u>)	

ENGM | Oslo Gardermoen

Simulator	Freeware/Payware	Scenery	Remark
Microsoft Flight Simulator (MSFS)	Freeware	<u>Oslo Airport</u> (<u>Flightsim.to</u>)	Our recommendation
	Payware	<u>ORBX Oslo</u>	
		<u>Mega Airport Oslo-Gardemoen</u> (<u>Aerosoft</u>)	

Simulator	Freeware/Payware	Scenery	Remark
X-Plane (XP11+XP12)	Freeware	Default Gateway	
	Payware	Airport Oslo XP (Aerosoft)	Not recommended due geo offset
		ENGM - Oslo Airport Gardemoen (Taimodels)	
Prepar3D (P3D) Flight Simulator X (FSX)	Freeware	Airports of Norway (AoN)	
	Payware	Mega Airport Oslo X (Aerosoft)	Not recommended due geo offset

ENTC | Tromsø Langnes

Simulator	Freeware/Payware	Scenery	Remark
Microsoft Flight Simulator (MSFS)	Freeware	donutsdemise (Flightsim.to)	Old layout/terminal
		artogsta (Flightsim.to)	
	Payware	M'M Simulations (Flightsim.to)	
X-Plane (XP11+XP12)	Freeware	Default Gateway	
	Payware	Tromsø Airport XP (Aerosoft)	
Prepar3D (P3D) Flight Simulator X (FSX)	Freeware	Airports of Norway (AoN)	
	Payware	Tromsø Airport X (Aerosoft)	

ENVA | Trondheim Værnes

Simulator	Freeware/Payware	Scenery	Remark
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Microsoft Flight Simulator (MSFS)	Freeware	<u>ENVA Trondheim Værnes (Flightsim.to)</u>	
	Payware	<u>Aerosoft Værnes</u>	
X-Plane (XP11+XP12)	Freeware	Default Gateway	
Prepar3D (P3D) Flight Simulator X (FSX)	Freeware	<u>Airports of Norway (AoN)</u>	
	Payware	<u>Aerosoft Vaernes</u>	

ENBR - Bergen Flesland

Overview

Bergen Airport Flesland is the airport of the 2nd biggest city in Norway and covers most of the population in the western side of Norway. The most popular routing is flying over the mountain to Norways main airport at Oslo, but short commuter routes to Stavanger, Bodø, Trondheim, Kristiansand and other cities in Norway are common too. Bergen airport is also serving several European routes to popular vacation routes and important routes to the big hubs in central Europe.

Available stands

<https://stands.vatsim-scandinavia.org/?icao=ENBRframeless=true>

Use of stands

Area	Stands	Assigned to
Terminal	15-20 28-32	Domestic flights
	23-32	International schengen flights
	23-27	International non-schengen flights
North Remote Apron	41-46	Passenger remote stands
	47-48	Ambulance flights
South Remote Apron	1-11	Cargo & passenger remote stands
	1	ARC E+ aircraft

Area	Stands	Assigned to
Helicopter Terminal	50-56	Offshore helicopter flights
Technical Apron		Local VFR club, Airlift, Widerøe Hangar
GA Apron		General Aviation
De-Ice Platform	81-84	Business Jets

IFR clearance

Initial contact is with Clearance Delivery, reporting callsign, stand number, and latest ATIS identification letter and QNH. If unable to follow SID, please advise on initial contact.

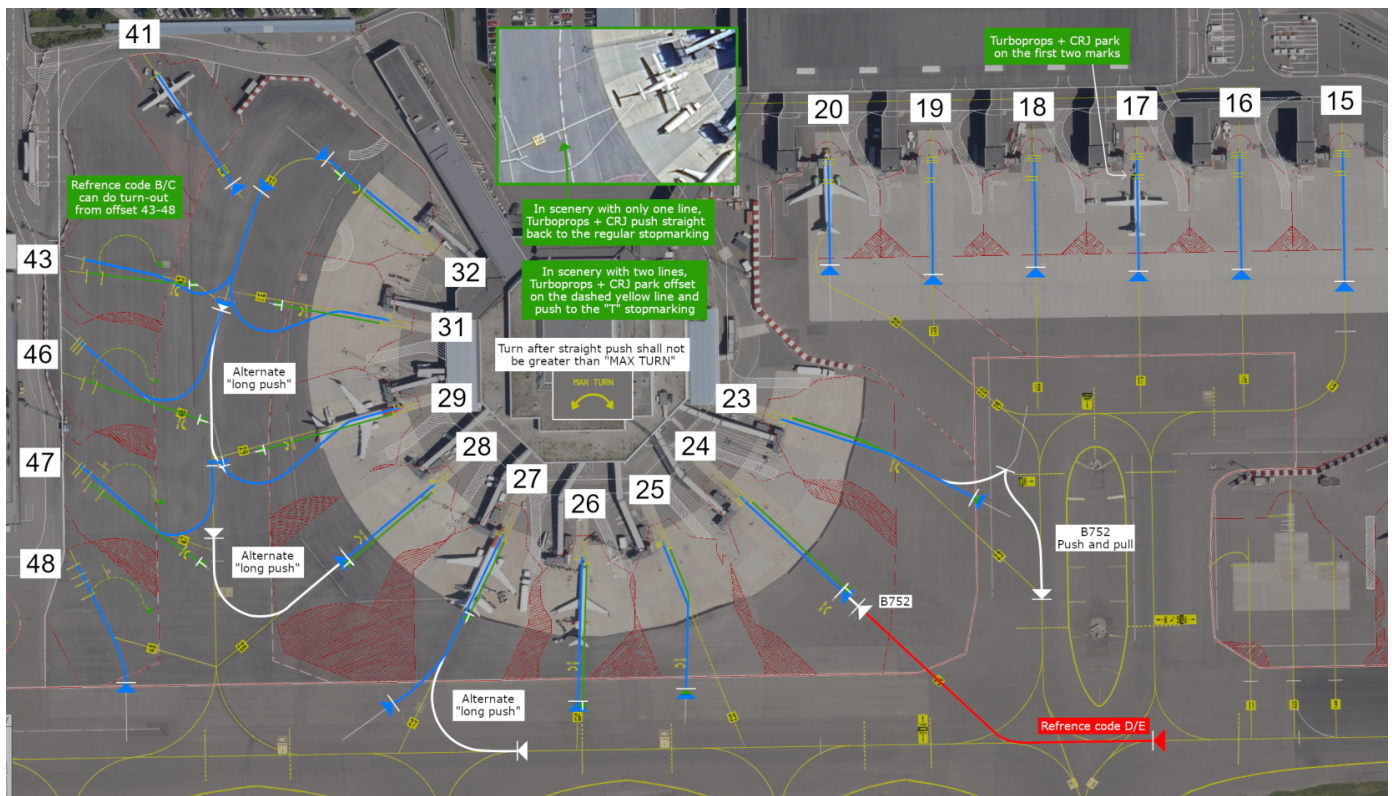
IFR departures with destination ENZV or ENHD shall use BEGOD as first (and only waypoint) in the route on FPL

Push-back

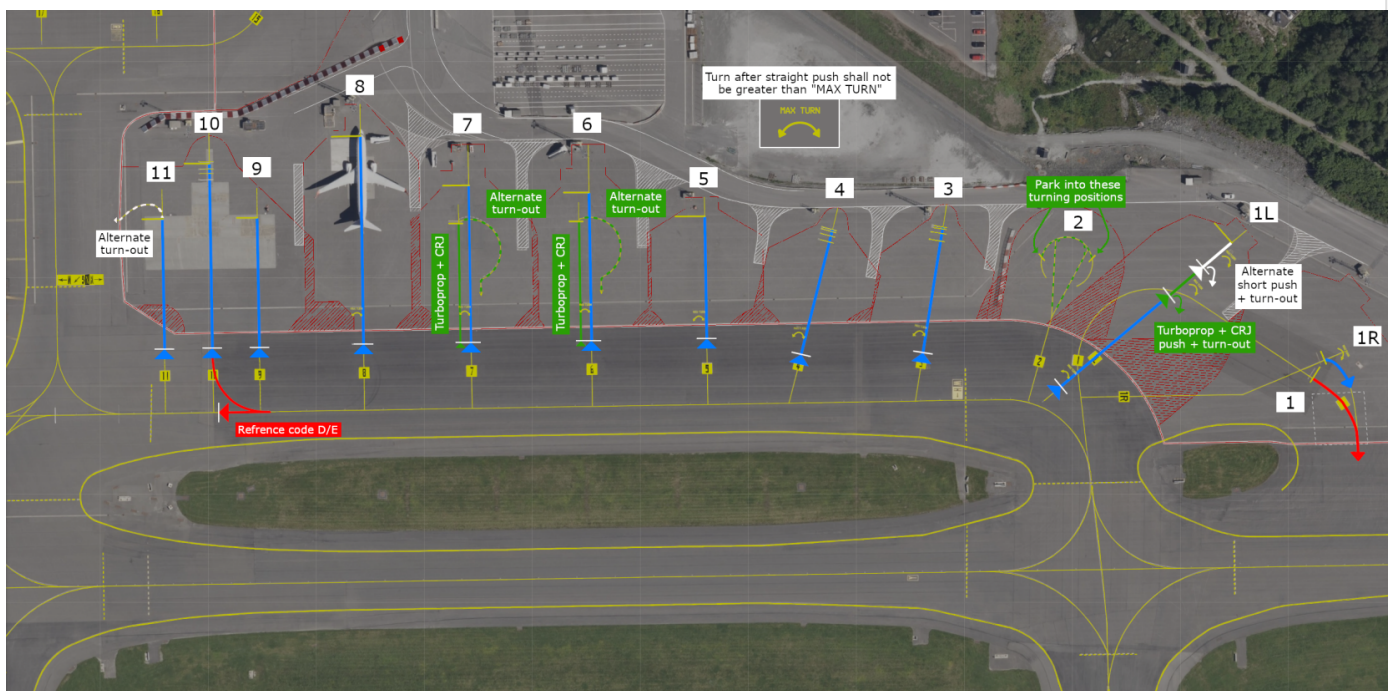
Most of the terminal gates require straight-back pushes. However, a few have turn pushes. In the map overview below, you will access all information:

Map Overviews

Terminal + Apron North (Stand 15-48)



Apron South (Stand 1-11)



If the stand is not mentioned in the maps, ask the ground controller if you're unsure how to execute the pushback

ATC can deviate from standard procedures if it's more optimal for the current traffic situation. If it's the case you can expect pushback instructions once the pushback clearance is given.

Taxi

Taxi instructions include the full taxi route, however the runway intersection will normally not be specified. Pilots are expected to taxi to the beginning of the runway; A1 (RWY 17) and A9 (RWY 35).

Aircraft with wake turbulence category light can expect taxi to intersection A2 (RWY 17) and A8 (RWY 35) during busy periods, and A4 (RWY 17) and A6 (RWY 35) when traffic permits.

Helicopters on Heli Apron can expect taxi to intersection A5 (RWY 17) and A6 (RWY 35).

Pilots are encouraged to state (preferably when on TWR frequency):

- Ready (or not ready) for departure, e.g.
READY [FOR DEPARTURE] (or NOT YET READY)
- Acceptable or desired intersection for departure, e.g.
ABLE FROM A3 (or A2) (or [REQUIRE] FULL LENGTH)

Make sure to double-check if you are able to use the runway length from the intersection before requesting it.

Runways

There is a single runway available at ENBR, which is runway 17/35.

Helicopters may land on taxiway Y (parallel to the runway) if there are low traffic levels and good visibility conditions.

Important note when landed:

Please vacate the runway fully. This means the whole aircraft has crossed the stop bar line. If the aircraft is partly over and not fully, the consequences are that we might have to send aircraft around or delay them as the runway is not free.

SIDs

All SIDs are individually numbered for each runway. When receiving your clearance, know that the SID stated is only valid for one runway, in case the controller forgets to state the departure runway. RNAV SIDs at Bergen have an initial climb altitude of 6000ft. If you are unable to follow the published SIDs (old AIRAC, default or non-database freeware aircraft, etc.), request an Omni-directional departure. Omni-directional departures have their own designated SIDs as OMNI3D and OMNI3C. Although it sounds like a normal SID, it's a omni-directional departure. You will find the omni-departure procedures on the chart databases. It is important that you NEVER climb above the initial climb without ATC clearance, as STARs and SIDs cross each other at different altitudes.

Arrival and STARs

Before or at the initial phase of your descent, you will recessive your clearance for STAR and arrival. The arrivals contain many waypoints and restrictions. We recommend preloading the expected STAR and crosschecking so the correct fixes and restrictions have been loaded before descending. This helps you and the aircraft to plan the optimum descend profile and the start of the desende. Although remember to not start on the STAR unless you have been cleared by the controller.

Do not descend until cleared by the controller. If you receive the arrival clearance or the STAR clearance, this does not mean you have been cleared for descend.

Flesland is using a “Point Merge System”, or PMS. This means that all STARs end up in a “fan” made out of waypoints (RIVIP, GODID, GILVA, NEPAM), in which pilots should always be prepared for a direct routing towards the merge waypoint, 4 in total, in order to ease the workload of approach ATC.

If traffic situation permits, you might get directs along the STAR or at the terminating/transition point. Be prepared to execute direct routings when instructed to.

Study the approach charts, and make sure to always follow altitude and speed restriction, unless otherwise instructed by ATC.

Approach

All aircraft can expect ILS W approach, unless it has been instructed to expect another type of approach. If unable to perform the ILS approach, advise the approach controller on initial contact.

The last fix of the STAR (or Merge Point) is followed by a transition to the ILS approach for each runway. ATC often replaces these with vectoring, but always be prepared to fly the transition, and do NOT fly direct from the merge point to the Final Approach Fix. If you have no transitions available, inform ATC and request vectoring.

When you are cleared for the approach via GILVA, NEPAM, GODID or RIVIP transition, you are also cleared to continue the descent as long as the restrictions are followed. Usually, the restriction is 4000 feet or above at the transition point, but we recommend as always looking at your chart for the most precise information.

Following approach types is available in ENBR:

Runway	Approach types
17	ILS W, LOC W, RNP Z, RNP (AR) E/N/S/W, VOR Helicopter only: ILS Y, LOC Y, RNP 139
35	ILS W, LOC W, RNP Z, RNP (AR) E/N/W, VOR Helicopter only: ILS Y, LOC Y, RNP 043

Unless other instructions have been given from ATC, it's expected that pilots maintains minimum 160 KT IAS until 4 NM from THR. ATC shall be informed if you are unable to comply with this.

- Notes:
- 1. RNP (AR) approaches are only to be considered to be used at a low-traffic level. RNP Z is available on request.
 - 2. Visual approaches are also available and shall not fly below 2000 feet until established on final. Expect direct to respective points in the visual approach chart when planning for visual approach.

Direct routings

In Norway, direct routings are often used. Both arriving and departing traffic should be prepared to fly direct the end of SIDs, STAR Merge Points, and airspace border fixes. Make sure you have your filed route and waypoint page available to quickly accommodate direct routings.

Communications

You can always check online positions and sectors by visiting vatglasses.uk

ENBR_ATIS - Flesland ATIS - 125.250

ENBR_DEL - Flesland Delivery - 123.400

ENBR_GND - Flesland Ground - 121.900

ENBR_TWR - Flesland Tower - 119.100

ENBR_W_APP - Flesland Approach West - 121.000

ENBR_E_APP - Flesland Approach East - 125.000

ENBR_D_APP - Flesland Director - 118.850

ENSV_CTR - Polaris Control (Stavanger ACC) - 120.650

ENSV_N_CTR - Polaris Control (Stavanger ACC north) - 124.700

ENOR_CTR - Polaris Control (Bandbox) - 125.500

ENOR_S_CTR - Polaris Control (Bandbox South/Covering ENOS+ENSV AoR) - 121.550

ENOR_SC_CTR - Polaris Control (Bandbox South Central/Covering

ENOS+ENSV+ENBD_S - 134.515

ENRC_S_CTR - Flesland Tower (Bodø Remote Tower Center) - 118.425

Note: Other sectors and frequencies could be used during major events for a more sufficient sector splits in Polaris ACC

ENCN - Kristiansand

Kjevik

Overview

Kristiansand Airport (Kjevik) is located on Norway's southern coast and serves the southern region. It offers flights to various Norwegian and European destinations including Oslo, Bergen and Amsterdam.

Stands

<https://stands.vatsim-scandinavia.org/?icao=ENCNframeless=true>

Apron	Suggested Parking
Stand 10	International (ARC D)
Stand 11	International (ARC C)
Stand 12	Domestic/International (ARC C)
Stand 17-13	Domestic Flights (ARC C)
Stand 18	Business jets
Stand 19	Business jets / Cargo (ARC D - Max wingspan 42 M)
Apron S (31-38)	GA
Apron O (42-48)	GA

De-Ice

Kjevik Airport has only one de-icing platform, south of taxiway Y. Taxiing to and from the platform requires ATC clearance, even outside the maneuvering area. Pilots should exercise caution when taxiing.

Platform	Restriction
De-Ice	One ARC C or D ACFT

The Engine Testing Area shares the same location as the de-icing facility. Business jets may use the stands east of de-ice for parking outside of winter operations.

IFR clearance

Initial contact is with Kjevik Tower, reporting callsign, stand number, and latest ATIS identification letter and QNH.

Push-back

Pushback is straight back from all stands unless the controller specifies otherwise during pushback clearance.

Taxi

Tower provides taxi instructions. For RWY 03, expect taxi to holdingpoint A. For RWY 21, expect taxi to holdingpoint B with runway backtracking.

Taxiways C and G are limited to ARC B aircraft and daytime operations only due to no taxiway lighting.

Runways

Runway (03/21) has a runway length of approximately 2000 meters. During runway 03 operation aircrafts will get taxi to holding-point A via Y. During 21 operations you will get instructions to back-track the runway from B.

SIDs

All SIDs are individually numbered for each runway. When receiving your clearance, know that the SID stated is only valid for one runway, in case the controller forgets to state the departure runway.

All departures have an initial climb to 5000FT.

If you are unable to follow the published SIDs (old AIRAC, default or non-database freeware aircraft, etc.), request an Omni-directional departure.

It is important that you NEVER climb above the initial climb without ATC clearance, as STARs and SIDs cross each other at different altitudes.

STARs

Study the approach charts, and make sure to always follow altitude and speed restriction, unless otherwise instructed by ATC.

STARs are available from AMSEV, LANTI, OSVAL, RASVI, TIPSO, PEVEB (RWY 03/21)

All STARs terminate at a transition fix. If cleared for an ILS approach, follow the ILS transition route depicted on the ILS charts.

Approach

ILS, LOC, and RNP approaches are available for both runways. Due to noise abatement, visual approaches must follow the PAPI slope when below 1500ft.

Communications

You can always check online positions and sectors by visiting vatglasses.uk

Main logon	Frequency	Position
ENCN_ATIS	124.475	Kjevik ATIS
ENCN_TWR	118.100	Kjevik Tower
ENCN_APP	119.950	Kjevik Approach
ENOS_CTR	127.250	Polaris Control (Oslo ACC)

Main logon	Frequency	Position
ENOS_8_CTR	134.350	Polaris Control (Oslo ACC Sector 8)
ENOR_S_CTR	121.550	Polaris Control (Bandbox)
ENOR_SC_CTR	134.515	Polaris Control (Bandbox South Central/ENSV+ENOS+ENBD_S)
ENOR_CTR	125.500	Polaris Control (Bandbox)

ENGM – Oslo Lufthavn

Available stands

<https://stands.vatsim-scandinavia.org/?icao=ENGMframeless=true>

Overview

Oslo Airport, Gardermoen is the main airport of the Norwegian capital Oslo, and the main international airport of Norway. Having earlier served as a secondary airport, air force base and charter airport, Gardermoen opened as the new main airport of Oslo on October the 8th 1998, replacing the now closed Fornebu Airport. Today, it has over 26 million passengers passing through each year, with 162 destinations worldwide, from short domestic flights to intercontinental long hauls.

CODE F / A380

All procedures are also well shown on AD 2 ENGM 2-3 (Aerodrome Ground Movement Chart - Code F)

Runway 01L/19R will normally be used for departure and arrivals.

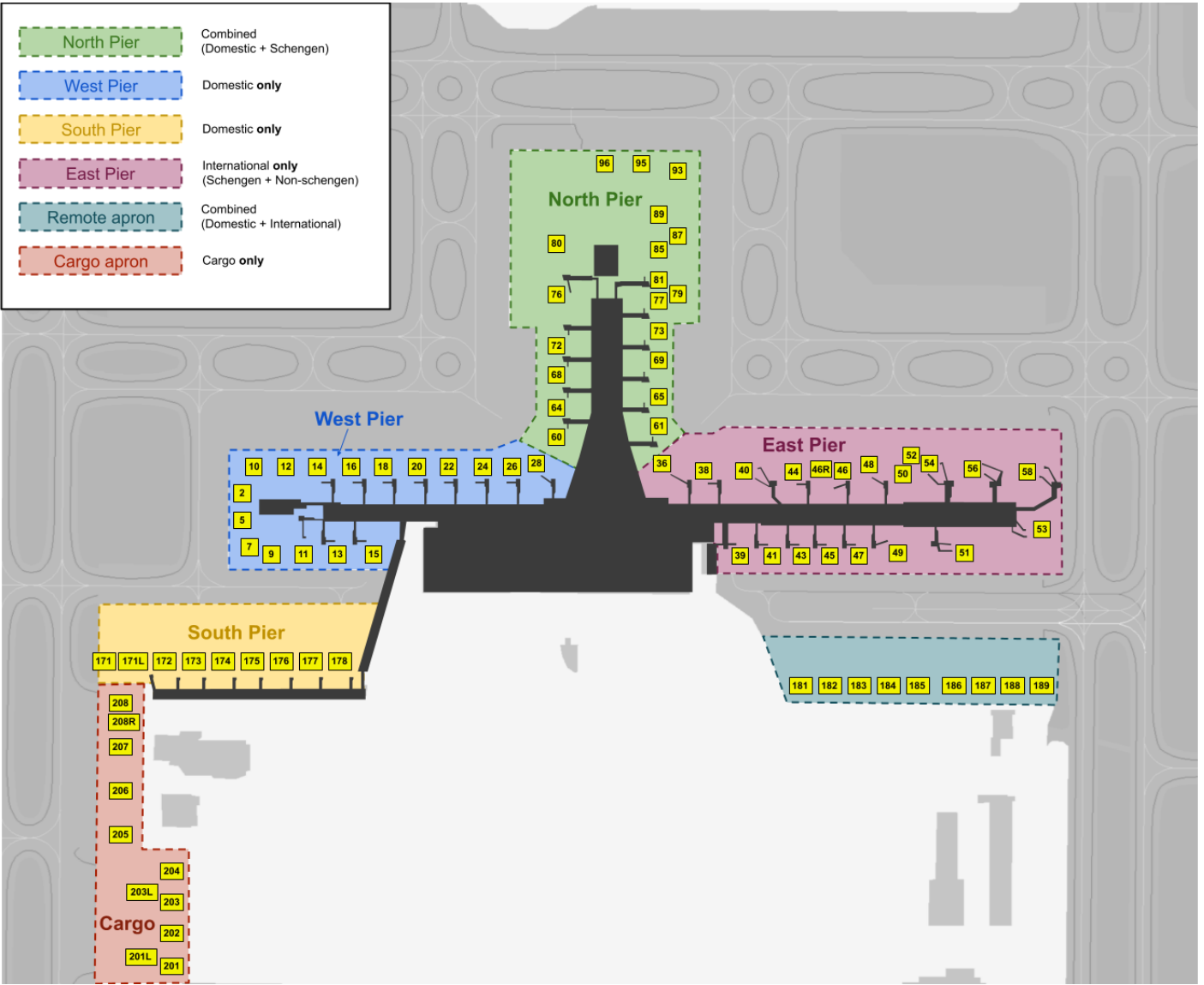
The following stands are designated for Code F operations:

Stand	Taxi Restrictions	Pushback procedures
52	Shall taxi via TWY W and J1 to stand	Towing/Pushback is accepted on J between J1 and S to position 19.
80	Shall taxi via TWY Y and D1	Towing/Pushback is accepted on D between D1 and P to position 31.

Stand	Taxi Restrictions	Pushback procedures
171L	Shall taxi via TWY K	Push back to startposition 53 facing West.
201L	TWY N can be used for CODE F	Start-up position 63 facing south or 64 facing north as instructed by GND.
203L	TWY N can be used for CODE F	Start-up position 63 facing south or 64 facing north as instructed by GND.

- Additionally, Taxiways N, M, P, V, S, and T are approved for A380 movements.

Stands



Pier/Apron	Stands	Assigned to
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West Pier	2-28	Domestic Only
East Pier	36-44	Schengen only
	40-53	Non-schengen only
North Pier	60-96	Domestic & Schengen Only
South Pier	171-178	Domestic mainly
Remote apron	181-189	International mainly
Cargo Apron	201-208	Cargo only
GA Apron	313-332	General aviation

IFR clearance

Initial contact is with Clearance Delivery, reporting callsign, stand number, and latest ATIS identification letter and QNH.

The ATIS will indicate whether clearance via datalink is available. If your aircraft is equipped with ACARS, please request clearance via datalink.

Requesting De-icing

If you need de-icing before departure, request it when making your IFR clearance request. If you forget to do so, notify ATC immediately once you determine that de-icing is required. After pushback is requested, de-icing may no longer be available, as you will have already been placed in the departure sequence - depending on traffic conditions.

DCL: Include clearance request with Remark REQ DEICE

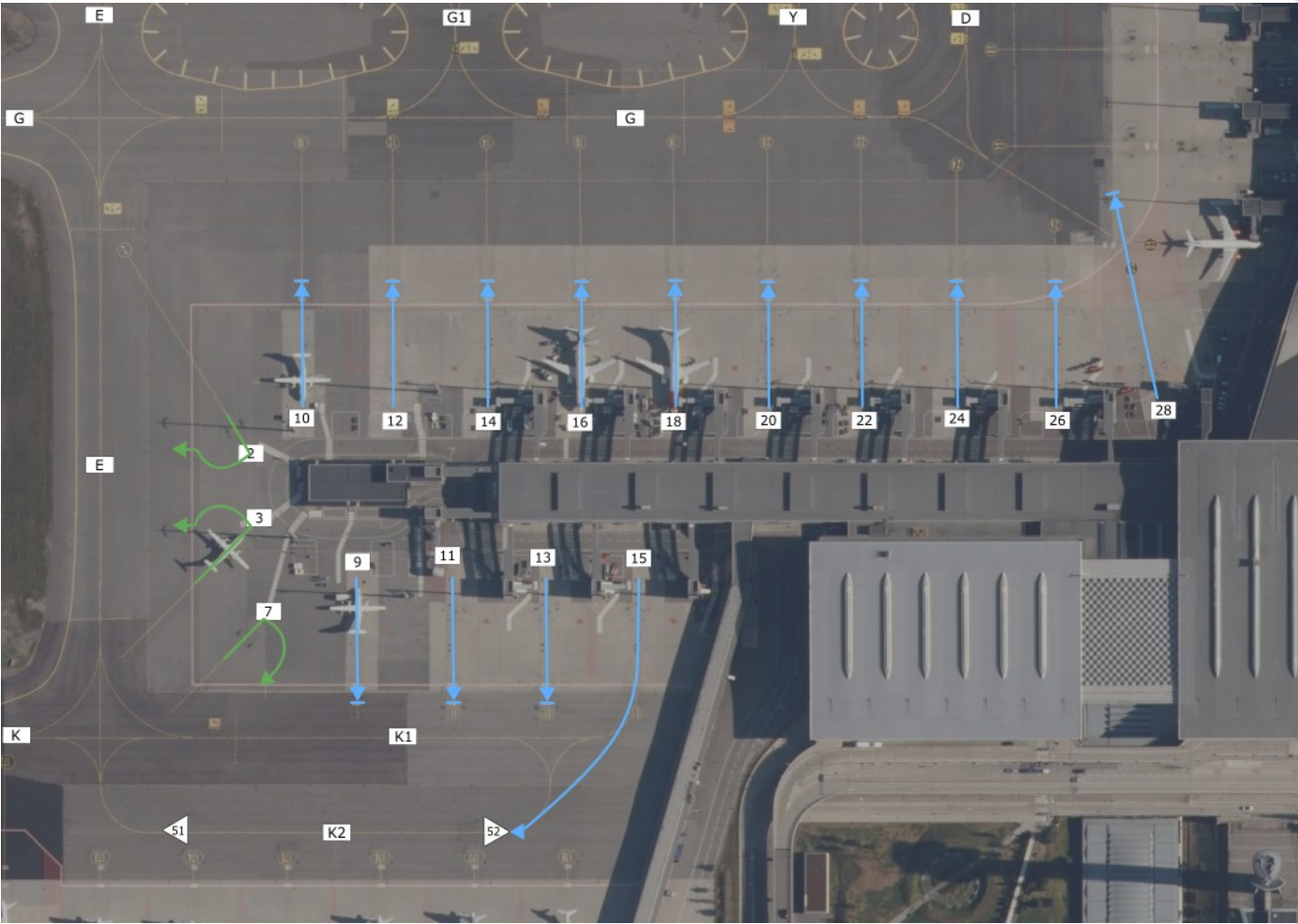
Voice: Upon initial contact with GARDEMOEN DELIVERY, advise if de-ice is required.

Push-back

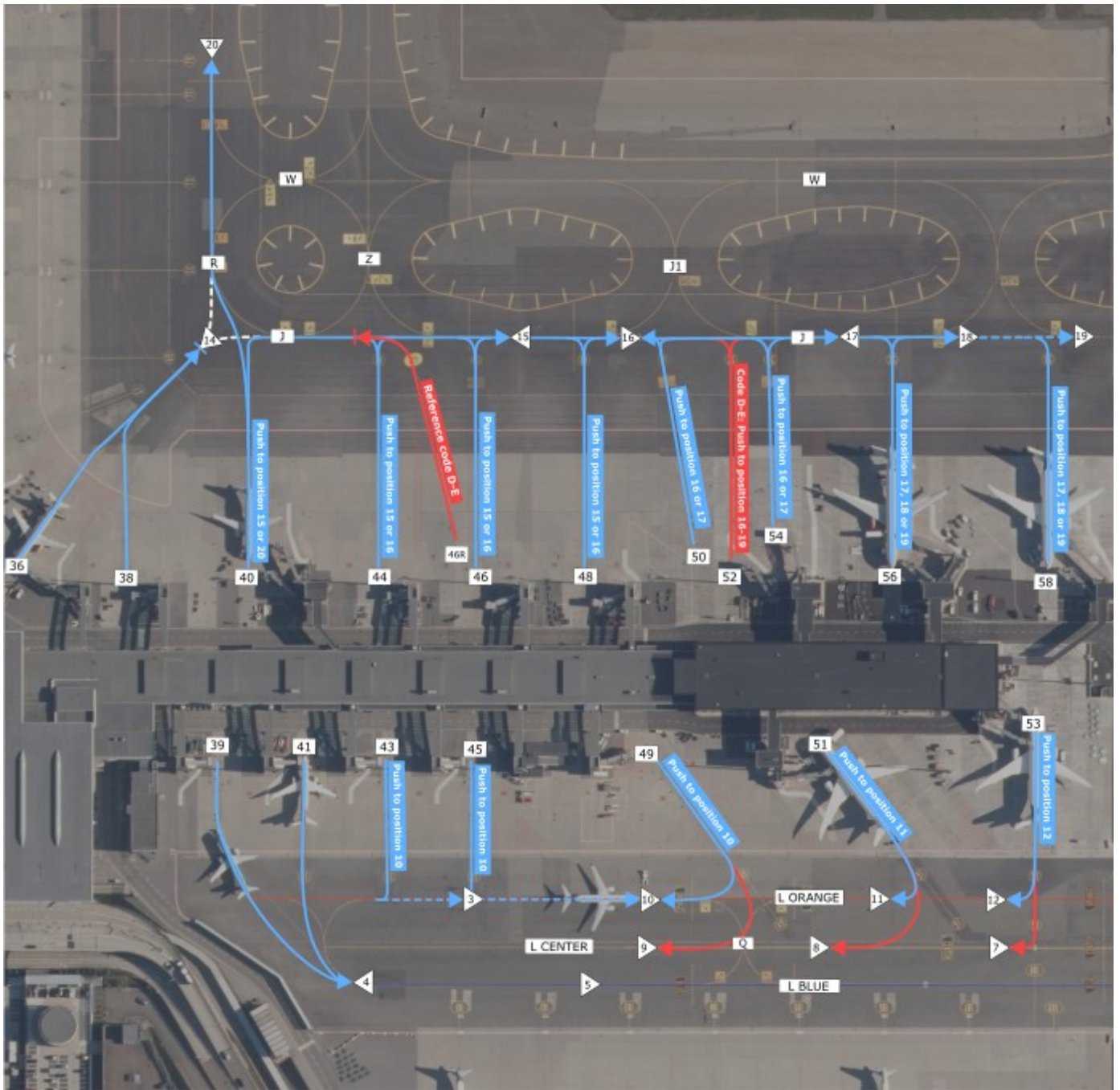
Most of the terminal gates requires straight-back pushes, however a few have turn-pushes. Please have a look on the maps below to see how you should perform your push from the stand. You can click on the images to have a closer look.

Pushback maps

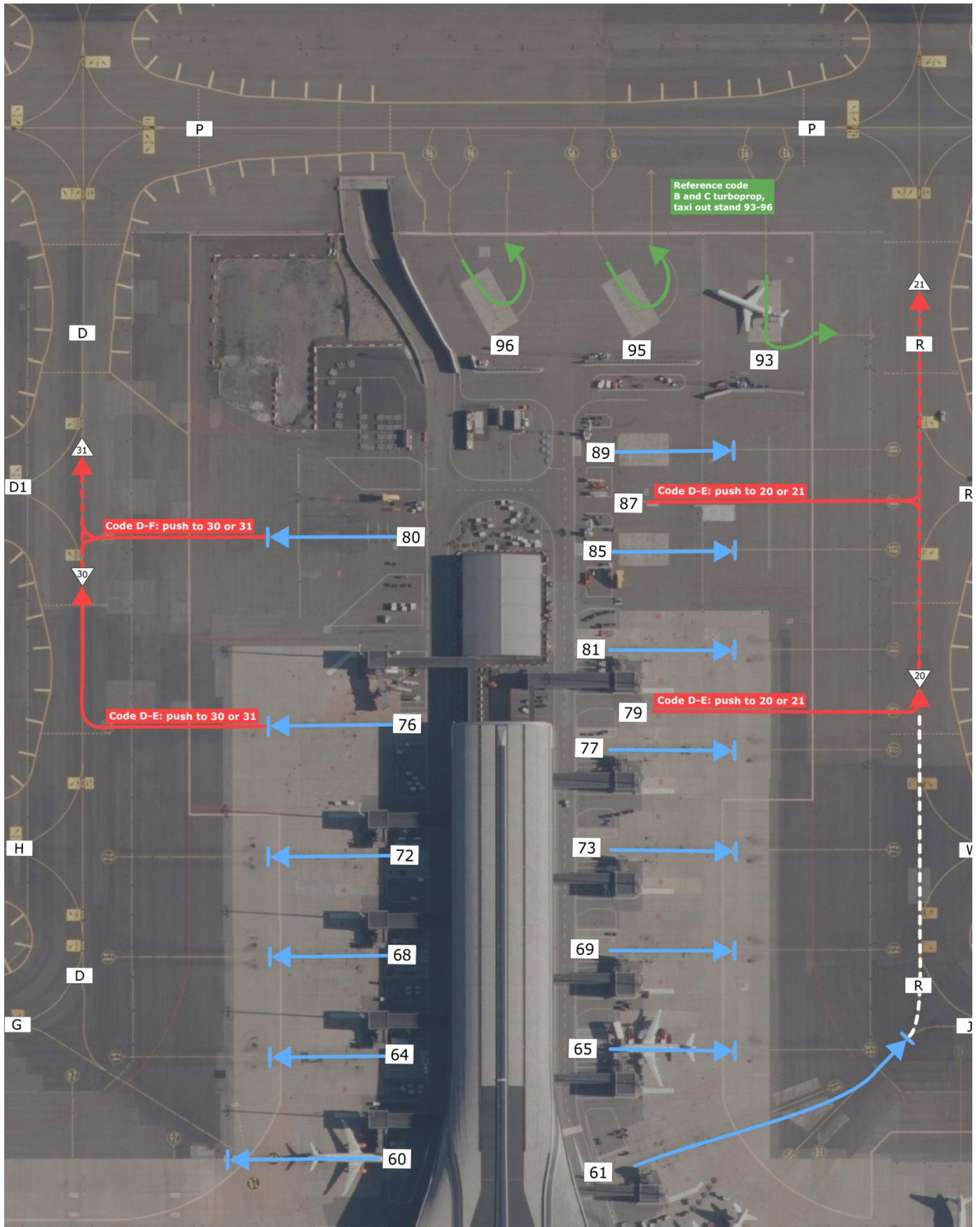
Stand 1-28 | Pier West



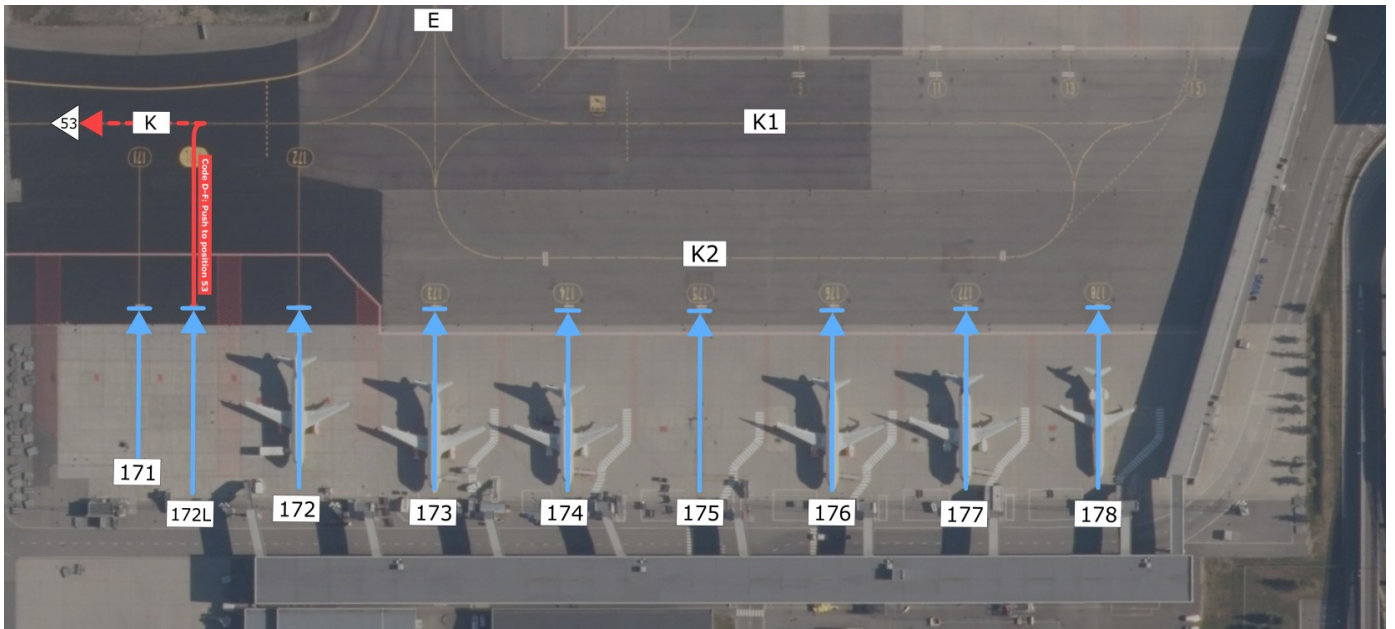
Stand 36-58 | Pier East



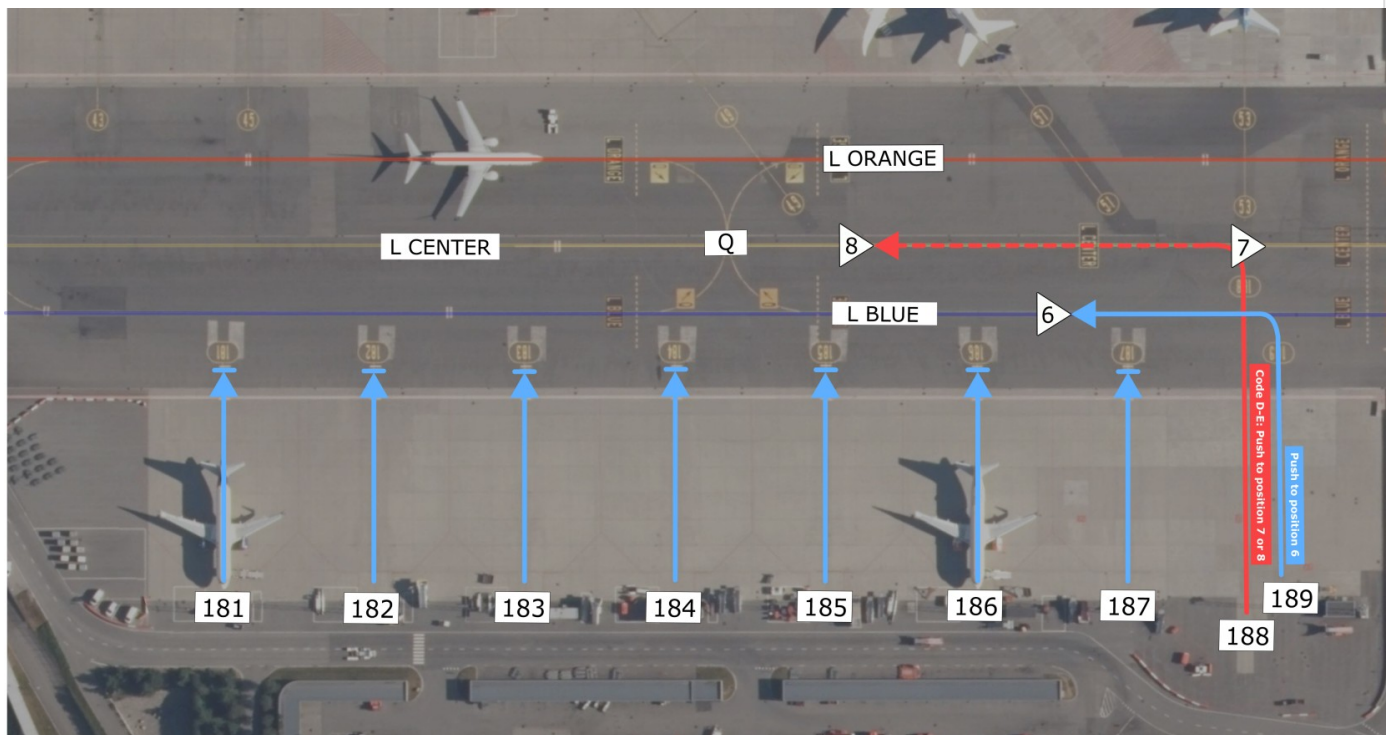
Stand 60-96 | Pier North



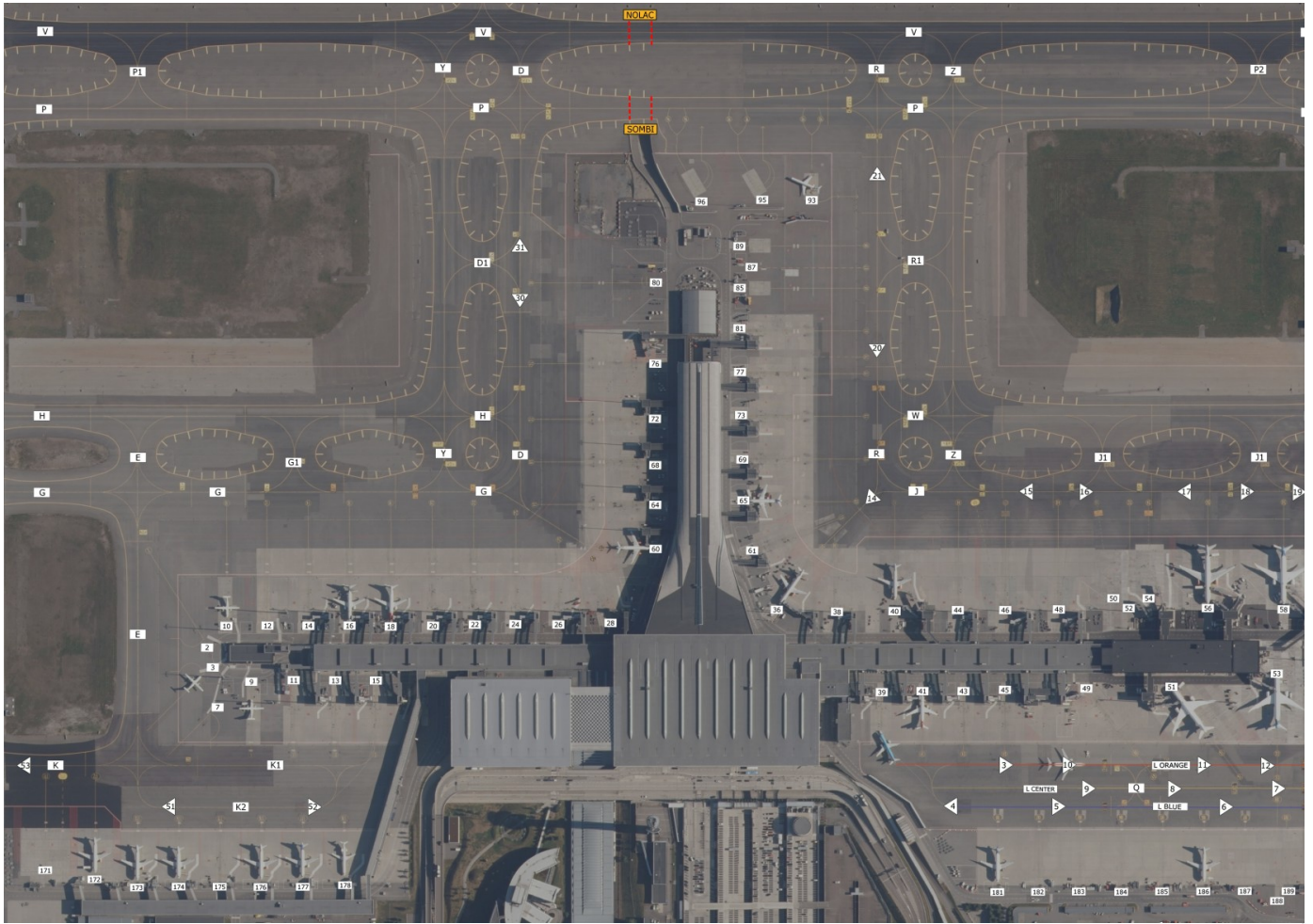
Stand 171-178



Stand 181-189



Overview



ATC can deviate from standard procedures if it's more optimal for the current traffic situation. If it's the case you can expect pushback instructions once the pushback clearance is given.

Taxi

Taxi instructions at Gardermoen include the full taxi route, but the runway intersection may not always be specified. If your clearance states "holding point runway XX," you may request an intersection departure by calling ATC with "**CALLSIGN, ready via [intersection]**" as you approach it. Approval will depend on traffic conditions. Before requesting, ensure the available runway length is sufficient for your aircraft.

For runway 01R, always expect a full-length departure via B1 or B2 due to noise abatement and SID procedures.

Runways

Given that you've parked according to the paragraph describing the Use of stands, usually the eastern runway (19L/01R) is used for international departures/arrivals, and the western (19R/01L) for domestic departures/arrivals. This however is not a set rule, and runways are organized to accommodate high traffic loads. The western runway (19R/01L) has a TORA of 3600m, the eastern runway (19L/01R) has a TORA of 2950m.

During winter operations the airport normally operates with a segregated runway configuration, landing on 01R/19R and departing 01L/19L.

Heavy aircraft may request to use the western runway due to its length, make this request as you request your IFR clearance.

SIDs

Each SID is assigned to a specific runway. When receiving your clearance, remember that the SID provided is only valid for one runway—double-check in case the controller omits the departure runway.

At Gardermoen, RNAV SIDs have an initial climb altitude of 7,000 feet. If you are unable to follow the published SIDs due to an outdated AIRAC cycle, default aircraft, or non-database freeware, inform ATC when requesting clearance. You will be given alternative departure instructions based on the assigned runway and aircraft type.

VEMIN and VIBUK departures are restricted to propeller aircraft only.

STARs

Oslo Airport Gardermoen is one of the first in Europe to implement a Point Merge System (PMS). This system organizes all STARs into a waypoint "fan" (refer to the STAR charts for Gardermoen). Pilots should always be ready for a direct routing to one of the four merge waypoints to help reduce approach ATC workload.

All STARs are valid for both parallel runways, 19L/R or 01L/R. Approach ATC will assign your runway based on current traffic conditions and stand allocation.

The final fix of the STAR (or Merge Point) leads to a transition FIX for the ILS approach to each runway. While ATC often provides vectors instead, always be prepared to fly the published transition. Do not proceed directly from the merge point to the Final Approach Fix (FAF). If no transitions are available, inform ATC and request vectors.

Review the ILS charts carefully and adhere to all altitude and speed restrictions unless instructed otherwise by ATC.

Approach

The standard approach to Gardermoen is ILS for all runways, all of which are CAT III equipped. During low visibility conditions, only the right runway (01R or 19R) is used for landings. RNP approaches are available upon request. The RNP AR approaches will allow for shorter track miles.

"Via `INSUV/VALPU/TITLA/BAVAD` cleared ILS approach runway xx" means that after reaching the specified waypoint, you are to follow the ILS transition route as depicted on the ILS approach charts. You must also descend according to the published procedure - study the ILS charts so you are well prepared.

Standard Speeds to Follow (unless ATC assigns you a different speed):

- 220 knots at the transition point (INSUV/VALPU/TITLA/BAVAD)
- 200 knots at IF point (OGRAS/NOSLA/OSPAD/ODUDI)
- Minimum 160 knots (or higher) until reaching 4 DME

Visual approaches are not permitted for jet aircraft—only propeller aircraft may request a visual approach.

Direct routings

In Norway, direct routings are commonly used. Both arriving and departing traffic should be prepared for direct clearances to the end of SIDs, STAR merge points, or airspace border fixes. Ensure you have your filed route and waypoint page readily available to quickly accommodate direct routing instructions.

Communications

You can always check online positions and sectors by visiting vatglasses.uk

Main logon	Frequency	Position
ENGM_A_ATIS	126.125	Gardermoen Arrival ATIS
ENGM_D_ATIS	127.150	Gardermoen Departure ATIS
ENGM_W_DEL	121.680	Gardermoen Delivery West
ENGM_E_DEL	121.930	Gardermoen Delivery East
ENGM_W_GND	121.605	Gardermoen Ground West
ENGM_E_GND	121.905	Gardermoen Ground East
ENGM_P_GND	121.730	Gardermoen Ground Planner
ENGM_W_TWR	118.300	Gardermoen Tower West (01L/19R)
ENGM_E_TWR	120.100	Gardermoen Tower East (01R/19L)
ENGM_W_APP	120.450	Oslo Approach West
ENGM_E_APP	118.475	Oslo Approach East
ENGM_D_APP	136.400	Oslo Director
ENGM_F_APP	128.900	Oslo Final
ENOS_CTR	127.250	Polaris Control (Oslo ACC South)
ENOS_N_CTR	120.375	Polaris Control (Oslo ACC North)
ENOR_S_CTR	121.550	Polaris Control (Bandbox South/Covering ENOS+ENSV)
ENOR_SC_CTR	134.515	Polaris Control (Bandbox South Central/Covering ENOS+ENSV+ENBD_S)
ENOR_CTR	125.500	Polaris Control (Bandbox)
ENRC_S_CTR	118.425	Gardemoen Tower (Bodø Remote Tower Center)

Note: Other sectors and frequencies could be used during major events for a more sufficient sector splits in Polaris ACC

ENTC - Tromsø Langnes

Overview

Tromsø is the biggest city in Northern Norway and is often called as “the Nordic answer to Paris”. The airport is located 3 kilometres from the city centre and is an important hub for the commuter network in Northern Norway. It also has international destinations within Europe. The surrounding area is spectacular and the approach into Tromsø is known for its steep approach down to the runway. Are you up for the challenge?

Stands

Available stands

<https://stands.vatsim-scandinavia.org/?icao=ENTCframeless=true>

Normal stand allocation is as followed:

Domestic: 21-25

International: 15-21

GA parks on the apron east of the runway

IFR clearance

Initial contact is with Tromsø Tower, reporting callsign, stand number, and latest ATIS identification letter and QNH.

In major events, an own dedicated delivery position will be online to issue IFR clearances.

Push-back

All pushback is executed straight back from the stand if it's not specified by the controller on pushback clearance.

Taxi

Taxi instructions at Tromsø include the full taxi route, however, the runway intersection is not always included. If for example “holding point runway XX” is stated in your instruction, you may call ATC with “CALLSIGN, ready via ” as you approach this intersection, and it may be approved if traffic permits. Make sure to double-check if you are able to use the runway length from the intersection before requesting it.

Runways

The runway (18/36) has a runway length of approximately 2400 meters. Medium and heavy aircraft are expected to backtrack on runway 18 for full length. Heavy aircraft may request a backtrack for full length on runway 36.

SIDs

All SIDs are individually numbered for each runway. When receiving your clearance, know that the SID stated is only valid for one runway, in case the controller forgets to state the departure runway.

All departures have an initial climb to FL90.

If you are unable to follow the published SIDs (old AIRAC, default or non-database freeware aircraft, etc.), request an Omni-directional departure.

It is important that you NEVER climb above the initial climb without ATC clearance, as STARs and SIDs cross each other at different altitudes.

STARs

Study the approach charts, and make sure to always follow altitude and speed restriction, unless otherwise instructed by ATC.

STAR is available from LOMVI, KIIKA, DIBDI, AMIMO, GILGU, SJA (NON-RNAV, RWY 18), LURAP (NON-RNAV, RWY 36)

Holdings & rerouting during event

On major events such as Fly and See Santa, you have to expect holding and reroutings. We kindly ask and expect pilots to know the aircraft they execute rerouting and holdings in the specific aircraft. There are limited published holds. Expect to hold as published if there is a published hold. If not, holding instructions will be given.

Approach

Tromsø has an ILS, LOC and RNP approach for both runways.

The glide path is steeper than normal, so make sure to be established on a manageable speed before starting the approach. The Glide path angle is 4 degrees (7%)

Direct routings

In Norway, direct routings are often used. Both arriving and departing traffic should be prepared to fly direct to the end of SIDs, STAR Merge Points, and airspace border fixes. Make sure you have your filed route and waypoint page available to quickly accommodate direct routings. Pilots unable to fly direct, should make a comment regarding this in their Flight-Plan Remarks section.

ENTO - Torp Sandefjord

Overview

Welcome to Sandefjord! Home of the most flown domestic routes by Widerøe together with Bergen. The airport is located just south of Oslo Gardermoen together with Kjevik on the south easterly coast of Norway. Sandefjord has also several flights to the nordic and European destinations.

Stands

<https://stands.vatsim-scandinavia.org/?icao=ENTOframeless=true>

Stands	Section
1-2	Combined
3-5	Domestic
10-12	Schengen
13-15	Non-schengen/International
32-34	GA
N, S	Deice

IFR clearance

Initial contact is with Torp Ground, reporting callsign, stand number, and latest ATIS identification letter and QNH.

Push-back

All pushback is executed straight back from the stand if it's not specified by the controller on pushback clearance.

Taxi

Taxi instructions at Torp are given by Ground. When runway 36 is in use, you will get taxi to W1. If runway 18 is in use taxi will be given by Ground to either W2 for crossing or W3 for back-track. Further taxi instructions will be given by Torp Tower.

Runways

Runway (18/36) has a runway length of approximately 2800 meters. During runway 18 operation aircrafts will get taxi to holding point A via C or instructions to back-track the runway.

SIDs

All SIDs are individually numbered for each runway. When receiving your clearance, know that the SID stated is only valid for one runway, in case the controller forgets to state the departure runway.

All departures have an initial climb to 4000FT.

If you are unable to follow the published SIDs (old AIRAC, default or non-database freeware aircraft, etc.), request an Omni-directional departure.

It is important that you NEVER climb above the initial climb without ATC clearance, as STARs and SIDs cross each other at different altitudes.

STARs

Study the approach charts, and make sure to always follow altitude and speed restriction, unless otherwise instructed by ATC.

STARs are available from BAMIX, VATEX, REPKU, ESOSI, ULMUG (RWY 18/36)

Approach

Torp has and ILS, LOC, RNP and VOR approach for both runways. Visual approaches are also available if the weather criterias are met.

Communications

You can always check online positions and sectors by visiting vatglasses.uk

Main logon	Frequency	Position
ENTO_ATIS	119.075	Torp ATIS
ENTO_GND	126.175	Torp Ground
ENTO_TWR	118.650	Torp Tower
ENTO_APP	134.050	Farris Approach
ENTO_D_APP	124.350	Farris Director/VFR
ENOS_CTR	127.250	Polaris Control (Oslo ACC South)
ENOS_N_CTR	120.375	Polaris Control (Oslo ACC North)
ENOR_S_CTR	121.550	Polaris Control (Bandbox South/Covering ENOS+ENSV)
ENOR_SC_CTR	134.515	Polaris Control (Bandbox South Central/Covering ENOS+ENSV+ENBD_S)
ENOR_CTR	125.500	Polaris Control (Bandbox)
ENRC_S_CTR	118.425	Gardemoen Tower (Bodø Remote Tower Center)

ENVA - Trondheim

Værnes

Overview

Welcome to Trondheim! Home of the most flown domestic city pair together with Oslo. Also the home of "Hell", great moustache styling and rock. But do not forget the airport. It is the 3rd busiest airport in Norway as it is a domestic hub for commuters to the smaller airports in Norway. Trondheim host also several flight towards nordic and European destinations.

Stands

<https://stands.vatsim-scandinavia.org/?icao=ENVAframeless=true>

Stands	Assigned to
23-29	Commuter Domestic
30-37	Domestic flights
40-44	International flights

Apron	Assigned to
M1	De-Ice Pad
M2	GA
M3	GA Ambulance flights
M4-M6	Military parking

IFR clearance

Initial contact is with Ground, reporting callsign, stand number, and latest ATIS identification letter and QNH

Push-back

Most of the terminal gates requires straight-back pushes, however a few have turn-pushes. If you are not sure how pushback is executed from your stand, please have a look on the pushback maps which will show how we want you to perform the pushback.

Pushback maps

Runway 09 in use



Runway 27 in use



*Click on image to expand it's size

ATC can deviate from standard procedures if it's more optimal for the current traffic situation. If it's the case you can expect pushback instructions once the pushback clearance is given.

Taxi

Taxi instructions normally contains the full taxi route, however the runway intersection is not always included. If for example “holding point runway XX” is stated in your instruction, you may call ATC with “CALLSIGN, ready via ” as you approach this intersection, and it may be approved if traffic permits. Make sure to double-check if you are able to use the runway length from the intersection before requesting it.

SIDs

All SIDs are individually numbered for each runway. When receiving your clearance, know that the SID stated is only valid for one runway, in case the controller forgets to state the departure runway. RNAV SIDs (including OMNI-departure) has an initial climb altitude of 6000 ft. If you are unable to follow the published SIDs (old AIRAC, default or non-database freeware aircraft, etc.), request an Omni-directional departure. It is important that you NEVER climb above the initial climb without ATC clearance, as STARs and SIDs cross each other at different altitudes.

W and X procedures have earlier turns, and thus is only available to slower flights with TAS below 300.

STARs

Trondheim Værnes is using a “Point Merge System”, or PMS for all arrivals. This means that all STARs end up in a “fan” made out of waypoints (study the STAR charts), in which pilots should always be prepared for a direct routing towards the merge waypoint, 4 in total, in order to ease the workload of approach ATC.

The last fix of the STAR (or Merge Point) is followed by a transition to the ILS approach for each runway. ATC often replace these with vectoring, but always be prepared to fly the transition, and do NOT fly direct from the merge point to the Final Approach Fix. If

you have no transitions available, inform ATC and request vectoring. Study the approach charts, and make sure to always follow altitude and speed restriction, unless otherwise instructed by ATC

??Recommended descend restrictions

All STARs to Trondheim are by standard giving a descend profile, based on flying along the STAR throughout. In almost all situations, a DCT to STAR merge point will be given. Therefore a set of recommended altitudes at given points is added to charts and text pages to guide and give an optimum descend profile to the approach. We highly recommend programming this in FMS/FMC in good time prior to your top of descend and pre-program your expected STAR

Runway 09

Designator	Recommended Altitude
MIVSO xL	Cross VA414 at 7000 ft
NELSU xL	Cross VA414 at 7000 ft
NUPGO xL	Cross TUDLU at 7000 ft
VEVOD xL	Cross NEDIV at 7000 ft

Runway 27

Designator	Recommended Altitude
MIVSO xL	Cross ADEXA at FL 90
NELSU xL	Cross ADEXA at FL 90
NUPGO xL	Cross ALENU at FL 90
VEVOD xL	Cross ADEXA at FL 90

Approach

The default approach to Værnes is ILS for all runways. RNAV or visual approaches are available on request.

Visual approach is usually flown via MALOV (Runway 09) and TUSMO (Runway 27).

Direct routings

In Norway, direct routings are often used. Both arriving and departing traffic should be prepared to fly direct the end of SIDs, STAR Merge Points, and airspace border fixes. Make sure you have your filed route and waypoint page available to quickly accommodate direct routings.

Communications

You can always check online positions and sectors by visiting vatglasses.uk

ENVA_ATIS - Værnes ATIS - 127.550

ENVA_GND - Værnes Ground - 121.600

ENVA_TWR - Værnes Tower - 119.400

ENVA_APP - Værnes Approach - 118.600

ENVA_D_APP - Værnes Director - 119.150

ENBD_CTR - Polaris Control (Bodø ACC) - 126.450

ENBD_S_CTR - Polaris Control (Oslo ACC south) - 125.700

ENBD_C_CTR - Polaris Control (Bodø ACC central split) - 118.550

ENOR_SC_CTR - Polaris Control (Bandbox South Central/ENSV+ENOS+ENBD_S) - 134.515

ENOR_CTR - Polaris Control (Bandbox) - 125.500

ENRC_N_CTR - Værnes Tower (Bodø Remote Tower Center) - 118.325

ENZV - Stavanger/Sola

Overview

Welcome to Stavanger! The airport is located just outside the city south of the western coast of Norway.

Stands

<https://stands.vatsim-scandinavia.org/?icao=ENZVframeless=true>

Stands	Section for
17-24	Domestic
14-16	Combined
7-13	International
45-47	GA
50-64	Helicopter
25-27, 30-36, 301-303	Cargo/GA

De-Ice

When requesting startup, advise ATC if de-icing is required. This must be given over radio transmission only, not via DCL.

Platform	Restriction
TWY P	Not available for ARC D or E
TWY Q	One ARC D or E ACFT

When de-icing completed and ready, contact ATC for taxi clearance.

IFR clearance

Initial contact is with Sola Ground, reporting callsign, stand number, and latest ATIS identification letter and QNH.

Flight level allocations

Flights from ENZV to ENBR & ENSO are to file **EVEN** flight levels below FL175.

SIDs

All SIDs are individually numbered for each runway. When receiving your clearance, know that the SID stated is only valid for one runway, in case the controller forgets to state the departure runway.

Type	Initial climb
SID	6000 ft
OMNI-SID	5000 ft
SID (CAT H)	2000 ft

Push-back

Aircraft will be pushed to different disconnection positions (DPSN) based on stand and aircraft type:

- Standard pushback from stand 7-12 and 24 is a "long push and start" which implies straight pushback. Adjacent TWY will be closed for aircraft movement.
- Standard pushback from stand 13-22 is:
 - DPSN 1 (ARC B-C): Straight push and start
 - DPSN 2 ((ARC C-D) includes, but is not limited to A21N, 321, B752/3, MD83.): A "Long push and start" which implies straight pushback. Adjacent TWY will be closed for aircraft movement.
- Standard pushback from stand 7-19 ((ARC D-E) includes, but is not limited to A-332/3/8/9, A342/3/5/6, A359/1, B744/8, B762/3/4, B772/L/3/W, B788/9/J) is a "long push and start to align with TWY L". This implies that ACFT will be pushed to the centerline of TWY L, facing towards TWY R.

For detailed description, see AD 2 ENZV 2-4: "Push Back Procedures" in the AIP.

Taxi

Taxi instructions include the full taxi route however, the runway intersection is not always included. If for example “holding point runway XX” is stated in your instruction, you may call ATC with;

“CALLSIGN, ready via A1

as you approach this intersection or with the taxi request, and it may be approved if traffic permits. Make sure to double-check if you are able to use the runway length from the intersection before requesting it.

When taxiing to holding point for runway 36, you will need to cross runway. Make sure to cross the runway only if you have been cleared to by ATC

Intersection departure from runway 10/28 when departing runway 18/36 is available upon request

Runways

Runway 18/36 is the main runway at Stavanger, Sola (ENZV). It will be used for all fixed-wings departures and arrivals as a favourable runway. If crosswind component exceeds aircraft limits, RWY 10/28 will be used.

Runway 18

Intersection	TORA (m)
TWY G1	2539
TWY A1	1830

Runway 36

Intersection	TORA (m)
TWY E1	2435

Intersection	TORA (m)
RWY 10/28	1758

Runway 10/28 is used mainly for helicopter departure and arrivals. If strong crosswinds or low visibility, helicopters will land on RWY 18/36. The runway can also be used for departures and arrivals for fixed wing ACFT for operational reasons (crosswind, maintainainance etc.)

Runway 10

Intersection	TORA (m)
TWY D	1646
TWY H	1112

Runway 28

Intersection	TORA (m)
TWY F1	2193
TWY G5	1479
TWY H	961
TWY D	456

If you are unable to follow the published SIDs (old AIRAC, default or non-database freeware aircraft, etc.), request an Omni-directional departure.

It is important that you NEVER climb above the initial climb without ATC clearance, as STARs and SIDs cross each other at different altitudes.

STARs

Study the approach charts, and make sure to always follow altitude and speed restriction, unless otherwise instructed by ATC.

STARs are available from BEGOD, IDIDI, KUNEM, RIVEX, ROPNO, UNBUD and UPDER for all runways.

Own CAT H STARs are available from EVOLO and UTERU for RWY 10, 18 & 36.

Approach

Sola has ILS, LOC and RNP approach for both runways. Visual approaches are also available and should not be flown below the ILS glide path or PAPI glide slope.

Communications

You can always check online positions and sectors by visiting vatglasses.uk

Main logon	Frequency	Position
ENZV_ATIS	126.000	Sola ATIS
ENZV_TWR	121.750	Sola Ground
ENZV_TWR	118.350	Sola Tower
ENZV_APP	119.400	Sola Approach
ENZV_A_APP	119.950	Sola Arrival
ENSV_CTR	120.650	Polaris Control (Stavanger ACC)
ENOR_S_CTR	121.550	Polaris Control (Bandbox South/ENSV+ENOS)
ENOR_SC_CTR	134.515	Polaris Control (Bandbox South Central/ENSV+ENOS+ENBD_S)
ENOR_CTR	125.500	Polaris Control (Bandbox)