

# Düsseldorf RG Airports

Note: Not for real navigation!

## Düsseldorf (EDDL/DUS)

Elevation 138 ft

Effective: **01 FEB 2018**

Quelle: DFS GmbH

### NAVAIDS:

<b>DUS</b>	115.15
<b>ILS 05L</b>	109.50 / 053° (IDNE)
<b>DME IDNE*</b>	(110.95)
<b>ILS 05R</b>	111.50 / 053° (IDSE)
<b>ILS 23L</b>	109.90 / 233° (IDSW)
<b>ILS 23R</b>	109.30 / 233° (IDNW)
<b>DY</b>	284.50
<b>LI</b>	417.00

### Communication:

<b>Station</b>	<b>Freq.</b>
ATIS	123.770
Delivery	121.770
Ground East	121.600
Ground West	121.900
Tower	118.300
Director	128.650
Langen Radar	128.550 (Arrival), 128.500 (Departure North), 121.350 (Departure South), 135.720, 129.170 (HMMM), 135.650 (PADH), 127.620 (TAU), 129.870 (FIS North & West), 130.970 (Special)
Maastricht Radar	133.800 (Münster), 132.620 (Ruhr)

(Changes are marked yellow)

\*only available for FS9/FSX/P3D with free addon "["EDDL additional ILS05L 1413.zip"](#)"

### GPS / FMS RNAV Transitions

#### **RWY 05L/05R**

BIKMU 05	BIKMU-RONAD-DL513-DL514-IBIKO-GAPNU-DL522-RONAD-DL524-DL525-DL530-DL550-DL555-DIKMI/NATOS
DOMUX 05	DOMUX-DOLAV-DL502-DL503-DL504-DL505-DL510-DL550-DL555-DIKMI/NATOS
ELDAR 05	ELDAR-DL501-DL502- DL503-DL504-DL505-DL510-DL550-DL555-DIKMI/NATOS
LMA 05	LMA-IBIKO-GAPNU-DL522-RONAD-DL524-DL525-DL530-DL550-DL555-DIKMI/NATOS
TEBRO 05	TEBRO-DL512-VALSU-GAPNU-DL522-RONAD-DL524-DL525-DL530-DL550-DL555-DIKMI/NATOS
XAMOD 05	XAMOD-BOMBA-DL517-DL518-DL519-GAPNU-DL522-RONAD-DL524-DL525-DL530-DL550-DL555-DIKMI/NATOS

#### **RWY 05L/05R (CDO) ⇒ ALPHA for RWY05L / BRAVO for RWY05R**

ABIGI 1A	ABIGI-DL505-DL555-DIKMI	ABIGI 1B
BABUV 1A	BABUV-DL505-DL555-DIKMI	BABUV 1B
DISIP 1A	DISIP-DL525-DL556-DIKMI	DISIP 1B
EKDUS 1A	EKDUS-DL525-DL556-DIKMI	EKDUS 1B
GOGOG 1A	GOGOG-DL510-DL550-DL556-DIKMI	GOGOG 1B

#### **RWY 23L/23R**

BIKMU 23	BIKMU-DL426-DL428-DL429-DL430-DL450-DL452-DL454-DL455- METMA/REGNO
DOMUX 23	DOMUX-DL402-DL403-DL404-DL405-DL406-DL407-DL408-DL409-DL410-DL450-DL452-DL454-DL455- METMA/REGNO
LMA 23	LMA-DL426-DL428-DL430-DL450-DL452-DL454-DL455-METMA/REGNO
TEBRO 23	TEBRO-AGEDA-XAMOD-DL420-DL421-DL422-DL426-DL428-DL429-DL430-DL450-DL452-DL454-DL455- METMA/REGNO
XAMOD 23	XAMOD-DL420-DL421-DL422-DL426-DL428-DL429-DL430-DL450-DL452-DL454-DL455-METMA/REGNO

#### **RWY 23L/23R (CDO) ) ⇒ ALPHA for RWY23R / BRAVO for RWY23L**

IBIXI 1A	IBIXI-DL407-DL456-REGNO	IBIXI 1B
LONSO 1A	LONSO-DL456-REGNO	LONSO 1B
NISOX 1A	NISOX-DL456-REGNO	NISOX 1B
OBOMA1A	OBOMA-DL456-REGNO	OBOMA 1B
RUGAP 1A	RUGAP-DL456-REGNO	RUGAP 1B
TIVIM 1A	TIVIM-DL426-REGNO	TIVIM 1B
UNDOG 1A	UNDOG-DL424-DL426-DL456-REGNO	UNDOG 1B

## Standard Instrument Arrival Routes

### RWY 05L/05R

BIKMU 1X	(BIKMU ONE X-RAY)	BIKMU - RONAD	BRNAV equipment necessary
DOMUX 2X	(DOMUX TWO X-RAY)	DOMUX - DOLAV - LEBTI	BRNAV equipment necessary
LMA 9X	(LIMA NINE X-RAY)	LMA - IBIKO - GAPNU - RONAD	BRNAV equipment necessary
TEBRO 1X	(TEBRO ONE X-RAY)	TEBRO - VALSU - GAPNO - RONAD	BRNAV equipment necessary
XAMOD 2X	(XAMOD TWO X-RAY)	XAMOD - BOMBA - GAPNU - RONAD	BRNAV equipment necessary

### RWY 23L/23R

BIKMU1G	(BIKMU ONE GOLF)	BIKMU - BOT	BRNAV equipment necessary
DOMUX 2G	(DOMUX TWO GOLF)	DOMUX - BAM	
LMA 8G	(LIMA EIGHT GOLF)	LMA - BOT	
TEBRO 3G	(TEBRO THREE GOLF)	TEBRO - AGEDA - XAMOD - BOT	BRNAV equipment necessary
XAMOD 3G	(XAMOD THREE GOLF)	XAMOD - BOT	

## Standard Instrument Departure Routes

Pilots of GPS/FMS RNAV equipped aircraft shall, if possible, use the supplementary GPS/FMS RNAV procedures which are described following the text "GPS / FMS RNAV:". When using these supplementary GPS/FMS RNAV procedures, the pilot shall check and ensure that the underlying conventional flight procedures are adhered to by monitoring the information of the ground based navigations aids. The ground based navigation aids required for the use of the respective conventional flight procedure and the associated aircraft equipment shall remain in operation at all times.

### RWY 05L (Initial Climb Altitude 5000 ft. Remain on TWR frequency until passing altitude 2000 ft.)

LMA 6Y	(LIMA SIX YANKEE)	On R053 DUS to 6.0 DME DUS/5.8 DME IDNE - LT on track 261° LMA to LMA (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. <b>GPS/FMS RNAV:</b> [A600+] - DL050[L] - DL051[L] - DL052 - LMA	1. Only for flights to EDLN. 2. PDG due to airspace structure. If unable to comply, advise DEL on start-up request.
<b>SONEB 5J</b>	(SONEB FIVE JULIETT)	On R053 DUS to 6.0 DME DUS/5.8 DME IDNE - LT on track 008° to 13.5 DME DUS/13.3 DME IDNE - <b>LT on track 349° to LUSIX (Δ)</b> - LT on track 346° via DL054 to SONEB (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. <b>GPS/FMS RNAV:</b> [A600+] - DL050[L] - DL053[L] - <b>DL053[L]</b> - NIKOG[L] - LUSIX[L] - DL054[F140+] - SONEB	1. PDG due to airspace structure. If unable to comply, advise DEL on start-up request. 2. After 13.5 DME DUS (13.3 DME IDNE) BRNAV equipment necessary. 3. Only for Flights with RFL140 or above via RKN/TENLI. Other flights proceed via MEVEL. Flights must be able to cross DL054 at FL140 or above. If unable to comply, advise DEL.
<b>MEVEL 8J</b>	(MEVEL EIGHT JULIETT)	On R053 DUS to 6.0 DME DUS/5.8 DME IDNE - LT on track 008° to 13.5 DME DUS/13.3 DME IDNE - <b>LT on track 349° to LUSIX (Δ)</b> - RT on track 052° to MEVEL (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. <b>GPS/FMS RNAV:</b> [A600+] - DL050[L] - DL053[L] - NIKOG[L] - LUSIX[R] - MEVEL	1. PDG due to airspace structure. If unable to comply, advise DEL on start-up request. 2. After <b>13.5 DME DUS (13.3 DME IDNE)</b> BRNAV equipment necessary.
<b>GMH 8Y</b>	(GERMINGHAUSEN EIGHT YANKEE)	On R053 DUS to 6.4 DME DUS/6.2 DME IDNE - RT on R278 BAM to BAM (Δ) - <b>on R095 BAM ANAVI (Δ)</b> - RT on R292 GMH to GMH (Δ). <b>GPS/FMS RNAV:</b> [A600+] - DL050[L] - DL058[R] - BAM[L] - ANAVI[R] - GMH	Only for flights with RFL140 or below.
<b>NVO 2Y</b>	(NÖRVENICH TWO YANKEE)	On R053 DUS to 6.4 DME DUS/6.2 DME IDNE - RT on R278 BAM inbound BAM - at 3.6 DME BAM ( <b>crossing R027 NVO</b> ) RT on R213 BAM to NVO (Δ). <b>GPS/FMS RNAV:</b> [A600+] - DL050[L] - DL058[R] - BAM[R] - NVO	1. For Flights with RFL 90 and below. Flights with RFL 100 and above shall file via MODRU. 2. Additional available for flights via Q760 (between 0500 (0400) - 0700 (0600)).

<b>DODEN 6J</b>	(DODEN SIX JULIETT)	<p>On R053 DUS to 6.4 DME DUS/6.2 DME IDNE - RT on track 098° to BAM (Δ) - RT on track 134° to ELBAL (Δ) - on track 135° to BETZO (Δ) - RT on track 147° to DODEN (Δ).  <b>Climb with 4.3% (260 ft/NM) or more until passing 3200.</b>            Cross ELBAL at FL150 or above.            Cross DODEN at FL250 or above.  <b>GPS/FMS RNAV:</b>            [A600+] - DL050[L] - DL058[R] - BAM[R] - ELBAL[F150+] - BETZO[R] - DODEN[F250+]</p>	<ol style="list-style-type: none"> <li>1. After passing 3200 BRNAV equipment necessary.</li> <li>2. Only for jet flights with RFL 250 or above. Flights shall cross DODEN at FL250 or above. Flights unable shall file SID KUMIK. Flights unable to cross ELBAL at FL150 or above shall advise DEL on start-up request.</li> </ol>
<b>NUDGO 4J</b>	(NUDGO FOUR JULIETT)	<p>On R053 DUS to 6.4 DME DUS/6.2 DME IDNE - RT on track 098° to BAM (Δ) - on track 095° to ANAVI (Δ) - RT on track 112° to MAMIB (Δ) - LT on track 067° to KULIX (Δ) - LT on track 061° to NUDGO (Δ).  <b>Climb with 4.3% (260 ft/NM) or more until passing 3200.</b>  <b>GPS/FMS RNAV:</b> [A600+] - DL050[L] - DL058[R] - BAM[L] - ANAVI[R] - MAMIB[L] - KULIX[L] - NUDGO</p>	<ol style="list-style-type: none"> <li>1. Not available for flights into upper airspace.</li> <li>2. After passing 3200 BRNAV equipment necessary.</li> <li>3. PDG due to MVA.</li> </ol>
<b>MODRU 6J</b>	(MODRU SIX JULIETT)	<p>On R053 DUS to 6.0 DME DUS/5.8 DME IDNE - LT on track 008° to 12.7 DME DUS/12.4 DME IDNE - LT on track 290° to ORSOV (Δ) - LT on track 242° to VEBAK (Δ) - LT on track 199° via NETEX (Δ) to MODRU (Δ).  <b>Climb with 7% (425 ft/NM) or more until passing 3000.</b>  <b>GPS/FMS RNAV:</b>            [A600+] - DL050[L] - DL053[L] - NIKOG[L] - ORSOV[L] - VEBAK[L] - NETEX - MODRU[F210+]</p>	<ol style="list-style-type: none"> <li>1. PDG due to airspace structure.</li> <li>2. Only for flights with RFL 210 and above. Flights have to be able to cross MODRU at FL210 or above. If unable to comply, advise DEL on startup req.</li> <li>3. Flights intending to continue NETEX - FAMEN or NETEX - DELOW shall file SID MODRU - NETEX - DCT FAMEN or SID MODRU - NETEX - DCT DELOM, also in case of COMM FAIL.</li> <li>4. After 12.7 DME DUS (12.4 DME IDNE) BRNAV equipment necessary.</li> </ol>
<b>NETEX 3J</b>	(NETEX THREE JULIETT)	<p>On R053 DUS to 6. DME DUS/5.8 DME IDNE - LT on track 008° to 12.7 DME DUS/12.4 DME IDNE - LT on track 290° to ORSOV (Δ) - LT on track 242° to VEBAK (Δ) - LT on track 199° to NETEX (Δ).  <b>Climb with 7% (425 ft/NM) or more until passing 3000.</b>  <b>GPS/FMS RNAV:</b>            [A600+] - DL050[L] - DL053[L] - NIKOG[L] - ORSOV[L] - VEBAK[L] - NETEX</p>	<ol style="list-style-type: none"> <li>1. PDG due to airspace structure.</li> <li>2. For flights with RFL from 100 to 200 or flights via Z282 DIBIR L179 (if available).</li> <li>3. After 12.7 DME DUS/12.4 DME IDNE BRNAV equipment necessary.</li> </ol>
<b>KUMIK 4J</b>	(KUMIK FOUR JULIETT)	<p>On R053 DUS to 6.4 DME DUS/6.2 DME IDNE - RT on track 098° to BAM (Δ) - on track 095° to ANAVI (Δ) - RT on track 128° to DEGOM (Δ) - RT on track 141° to KUMIK (Δ).  <b>Climb with 4.3% (260 ft/NM) or more until passing 3200.</b>            Cross DEGOM at FL150 or above.  <b>GPS/FMS RNAV:</b>            [A600+] - DL050[L] - DL058[R] - BAM[L] - ANAVI[R] - DEGOM[F150+;R] - KUMIK</p>	<ol style="list-style-type: none"> <li>1. Only for flights with RFL150 or above.</li> <li>2. After passing 3200 BRNAV equipment necessary.</li> <li>3. Normally not available for flights above FL250 via BOMB1, except Prop/Turbo Prop type aircraft. Flights unable to cross DEGOM at FL150 or above shall advise ATC.</li> </ol>
<b>COL 4J</b>	(COLA FOUR JULIETT)	<p>On R053 DUS to 6.4 DME DUS/6.2 DME IDNE - RT on R278 BAM inbd BAM - at 1.6 DME BAM (crossing R030 NVO) RT on R163 BAM to LIPMI (Δ) - LT on R327 COL to COL (Δ).            Cross LIPMI at FL150 or above.  <b>GPS/FMS RNAV:</b> [A600+] - DL050[L] - DL058[R] - BAM[R] - LIPMI[F150+;L] - COL</p>	<p>Flights unable to cross LIPMI at FL150 or above shall advise clearance Delivery upon startup request.</p>
<b>RWY 05R</b>	<b>(Initial Climb Altitude 5000 ft. Remain on TWR frequency until passing altitude 2000 ft.)</b>		
<b>LMA 1Z</b>	(LIMA ONE ZULU)	<p>On R053 DUS to 6.0 DME DUS/5.8 DME IDNE - LT on track 261° LMA to LMA (Δ).  <b>Climb with 7% (425 ft/NM) or more until passing 3000.</b>  <b>GPS/FMS RNAV:</b> [A600+] - DL050[R] - DL051[L] - DL052 - LMA</p>	<ol style="list-style-type: none"> <li>1. Only for flights to EDLN.</li> <li>2. PDG due to airspace structure. If unable to comply, advise DEL.</li> </ol>
<b>SONEB 5Z</b>	(SONEB FIVE ZULU)	<p>On R053 DUS to 6.0 DME DUS/5.8 DME IDNE - LT on track 008° to 13.5 DME DUS/13.3 DME IDNE - LT on track 349° to LUSIX (Δ) - LT on track 346° via DL054 to SONEB (Δ).  <b>Climb with 7% (425 ft/NM) or more until passing 3000.</b>  <b>GPS/FMS RNAV:</b>            [A600+] - DL050[R] - DL053[L] - NIKOG[L] - LUSIX[L] - DL054[F140+] - SONEB</p>	<ol style="list-style-type: none"> <li>1. PDG due to airspace structure. If unable to comply, advise DEL on start-up request.</li> <li>2. After 13.5 DME DUS (13.3 DME IDNE) BRNAV equipment necessary.</li> <li>3. Only for Flights with RFL 140 or above via RKN/TENLI. Other flights proceed via MEVEL. Flights must be able to cross DL054 at FL140 or above. If unable to comply, advise DEL.</li> </ol>

<b>MEVEL 9Z</b>	(MEVEL NINE ZULU)	On R053 DUS to 6.0 DME DUS/5.8 DME IDNE - LT on track 008° to 13.5 DME DUS/13.3 DME IDNE - <b>LT on track 349° to LUSIX (Δ)</b> - RT on track 052° to MEVEL(Δ). Climb with 7% (425 ft/NM) or more until passing 3000. <b>GPS/FMS RNAV:</b> [A600+] - DL050[R] - DL053[L] - NIKOG[L] - LUSIX[R] - MEVEL	1. PDG due to airspace structure. If unable to comply, advise DEL on start-up request. 2. After <b>13.5 DME DUS (13.3 DME IDNE)</b> BRNAV equipment necessary.
<b>GMH 5Z</b>	(GERMINGHAUSEN FIVE ZULU)	On R053 DUS to 6.4 DME DUS/6.2 DME IDNE - RT on R278 BAM to BAM (Δ) - on R095 BAM to <b>ANAVI (Δ)</b> - RT on R292 GMH to GMH (Δ). <b>GPS/FMS RNAV:</b> [A600+] - DL050[R] - DL058[R] - BAM[L] - ANAVI[R] - GMH	Only for flights with RFL140 or below.
<b>NVO 2Z</b>	(NÖRVENICH ONE ZULU)	On R053 DUS to 6.4 DME DUS/6.2 DME IDNE - RT on R278 BAM inbound BAM - at 3.6 DME BAM ( <b>crossing R027 NVO</b> ) RT on R213 BAM to NVO (Δ). <b>GPS/FMS RNAV:</b> [A600+] - DL050[R] - DL058[R] - BAM[R] - NVO	1. For flights with RFL90 and below. Flights with RFL100 and above shall file via MODRU. 2. Additional available for flights via Q760 (between 0500 (0400) - 0700 (0600)).
<b>DODEN 6Z</b>	(DODEN SIX ZULU)	On R053 DUS to 6.4 DME DUS/6.2 DME IDNE - <b>on track 098°</b> to BAM (Δ) - RT on <b>track 134° to ELBAL (Δ)</b> - on track 135° to BETZO (Δ) - RT on track 147° to DODEN (Δ). <b>Climb with 4.3% (260 ft/NM) or more until passing 3200.</b> Cross <b>ELBAL</b> at FL150 or above. Cross DODEN at FL250 or above. <b>GPS/FMS RNAV:</b> [A600+] - DL050[R] - DL058[R] - BAM[R] - ELBAL[F150+] - BETZO[R] - DODEN[F250+]	1. After <b>passing 3200</b> BRNAV equipment necessary. 2. Only for jet flights with RFL 250 or above. Flights shall cross DODEN at FL250 or above. Flights unable shall file SID KUMIK. Flights unable to cross ELBAL at FL150 or above shall advise DEL. 3. <b>PDG due to MVA.</b>
<b>NUDGO4Z</b>	(NUDGO FOUR ZULU)	On R053 DUS to 6.4 DME DUS/6.2 DME IDNE - RT on <b>track 098°</b> to BAM (Δ) - on <b>track 095° to ANAVI (Δ)</b> - RT on <b>track 112° to MAMIB (Δ)</b> - LT on track 067° via KULIX (Δ) - LT on track 061° to NUDGO (Δ). <b>Climb with 4.3% (260 ft/NM) or more until passing 3200.</b> <b>GPS/FMS RNAV:</b> [A600+] - DL050[R] - DL058[R] - BAM[L] - ANAVI[R] - MAMIB[L] - KULIX[L] - NUDGO	1. Not available for flights into upper airspace. 2. After <b>passing 3200</b> BRNAV equipment necessary. 3. <b>PDG due to MVA.</b>
<b>MODRU6Z</b>	(MODRU SIX ZULU)	On R053 DUS to 6.0 DME DUS/5.8 DME IDNE - LT on track 008° to 12.7 DME DUS/12.4 DME IDNE - LT on track 290° to ORSOV (Δ) - LT on track 242° to VEBAK (Δ) - LT on track 199° via NETEX (Δ) to MODRU (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. <b>GPS/FMS RNAV:</b> [A600+] - DL050[R] - DL053[L] - NIKOG[L] - ORSOV[L] - VEBAK[L] - NETEX - MODRU[F210+]	1. PDG due to airspace structure. 2. Only for flights with RFL 210 and above. Flights have to be able to cross MODRU at FL 210 or above. If unable to comply, advise DEL. on startup req 3. Flights intending to continue NETEX - FAMEN or NETEX - DELOW shall file SID MODRU - NETEX - DCT FAMEN or SID MODRU - NETEX - DCT DELOM, also in case of COMM FAIL. 4. After 12.7 DME DUS/12.4 DME IDNE BRNAV equipment necessary.
<b>NETEX 3Z</b>	(NETEX THREE ZULU)	On R053 DUS to 6.0 DME DUS/5.8 DME IDNE - LT on track 008° to 12.7 DME DUS/12.4 DME IDNE - LT on track 290° to ORSOV (Δ) - LT on track 242° to VEBAK(Δ)-LT on track 199° to NETEX (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. <b>GPS/FMS RNAV:</b> A600+ - DL050[R] - DL053[L] - NIKOG[L] - ORSOV[L] - VEBAK[L] - NETEX	1. PDG due to airspace structure. 2. For flights with RFL from 100 to 200 or flights via Z282 DIBIR L179 (if available). 3. After 12.7 DME DUS BRNAV equipment necessary. 4. <b>PDG due to MVA.</b>
<b>KUMIK 4Z</b>	(KUMIK FOUR ZULU)	On R053 DUS to 6.4 DME DUS/6.2 DME IDNE - RT <b>on track 098°</b> to BAM (Δ) - on <b>track 095° to ANAVI (Δ)</b> - RT on track 128° to DEGOM (Δ) - RT on track 141° to KUMIK (Δ). <b>Climb with 4.3% (260 ft/NM) or more until passing 3200.</b> Cross DEGOM at FL150 or above. <b>GPS/FMS RNAV:</b> [A600+] - DL050[R] - DL058[R] - BAM[L] - ANAVI[R] - DEGOM[F150+;R] - KUMIK	1. Only for flights with RFL150 or above. 2. After <b>passing 3200</b> BRNAV equipment necessary. 3. Normally not available for flights above FL250 via BOMB, except Prop/Turbo Prop type aircraft. Flights unable to cross DEGOM at FL150 or above shall advise ATC. 4. <b>PDG due to MVA.</b>
<b>COL 4Z</b>	(COLA FOUR ZULU)	On R053 DUS to 6.4 DME DUS/6.2 DME IDNE - RT on R278 BAM inbd BAM - at 1.6 DME BAM (crossing R030 NVO) RT on R163 BAM to <b>LIPMI (Δ)</b> - LT on R327 COL to COL (Δ). Cross <b>LIPMI</b> at FL150 or above. <b>GPS/FMS RNAV:</b> [A600+] - DL050[R] - DL058[R] - BAM[R] - LIPMI[F150+;L] - COL	Flights unable to cross LIPMI at FL150 or above shall advise clearance Delivery upon startup request.

<b>RWY 23L</b> LMA 2T	(Initial Climb Altitude 5000 ft. Remain on TWR frequency until passing altitude 2000 ft.) (LIMA TWO TANGO)	On Rwy track to 1.0 DME DUS/1.2 DME IDNE or 600 ft, whichever is later - RT on track 297° LMA to LMA (Δ). Climb with 7% (425ft/NM) or more until passing 3000. <b>GPS/FMS RNAV:</b> DL236[A600+;R] - LMA	1. Only for flights to EDLN. 2. PDG due to airspace structure. If unable to comply, advise DEL on start-up request.
<b>SONEB 7T</b>	(SONEB SEVEN TANGO)	On Rwy track to 1.0 DME DUS/1.2 DME IDNE or 600 ft, whichever is later - RT on R003 NVO to 6.0 DME DUS (5.7 DME IDNE) - LT on track 359° to ERKUM (Δ) - RT on track 005° via DL245 to SONEB (Δ). <b>GPS/FMS RNAV:</b> DL230[A600+;R] - DL235[K190-] - DL248[L] - ERKUM[R] - DL245[F140+] - SONEB	1. After 6.0 DME DUS (5.7 DME IDNE) BRNAV equipment necessary. 2. Only for flights with RFL 140 or above via RKN/TENLI. Other Flights proceed via MEVEL. Flights must be able to cross DL245 at FL140 or above. If unable to comply, advise DEL. 3. MAX IAS 190 KT until established on R003 NVO.
<b>MEVEL 3T</b>	(MEVEL THREETANGO)	On Rwy track to 1.0 DME DUS/1.2 DME IDNE or 600 ft, whichever is later - RT on R003 NVO to 6.0 DME DUS (5.7 DME IDNE) - LT on track 359° to ERKUM(Δ) - RT on track 052° via LUSIX(Δ) to MEVEL (Δ) <b>GPS/FMS RNAV:</b> DL230[A600+;R] - DL235[K190-] - DL248[L] - ERKUM[R] - LUSIX - MEVEL	1. After 6.0 DME DUS (5.7 DME IDNE) BRNAV equipment necessary. 2. MAX IAS 190 KT until established on R003 NVO.
<b>GMH 9T</b>	(GERMINGHAUSEN NINE TANGO)	On track 232° DY to 4.5 DME DUS/4.7 DME IDNE - LT on heading 173° until crossing R270 GMH (21.5 DME NVO) - LT on R265 GMH to GMH (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. <b>GPS/FMS RNAV:</b> [A600+] - DL239[L] - DL241[L] - GMH	1. PDG due to airspace structure. If unable to comply, advise DEL. 2. Only for flights with RFL140 or below.
<b>NVO 1T</b>	(NÖRVENICH ONE TANGO)	On track 232° DY to 4.5 DME DUS/4.7 DME IDNE - LT heading 173° to intercept and follow R360 NVO to NVO (Δ) Climb with 7% (425 ft/NM) or more until passing 3000. <b>GPS/FMS RNAV:</b> [A600+] - DL239[L] - DL241[R] - NVO	1. PDG due to airspace structure. If unable to comply, advise DEL. 2. For Flights with RFL 90 and below. Flights with RFL 100 and above shall file via MODRU 3. Additional available for flights via Q760 (between 0500 (0400) – 0700 (0600)).
<b>DODEN 9T</b>	(DODEN NINE TANGO)	On track 232° DY to 4.5 DME DUS/4.7 DME IDNE - LT heading 173° until crossing R270 GMH (21.5 DME NVO) - LT on track 085° via DL242 to ELBAL (Δ) - RT on track 135° to BETZO (Δ) - RT on track 147° to DODEN (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. Cross DL242 at FL150 or above. Cross DODEN at FL250 or above. <b>GPS/FMS RNAV:</b> [A600+] - DL239[L] - DL241[L] - DL242[F150+] - ELBAL[R] - BETZO[R] - DODEN[F250+]	1. PDG due to airspace structure. If unable to comply, advise DEL on start-up request. 2. After crossing R270 GMH (21.5 DME NVO) BRNAV equipment necessary. 3. Only for jet flights with RFL 250 or above. Flights shall cross DODEN at FL250 or above. Flights unable shall file SID KUMIK. Flights unable to cross DL242 at FL150 or above shall advise clearance Delivery upon start-up request.
<b>NUDGO 5T</b>	(NUDGO FIVE TANGO)	On track 232° DY to 4.5 DME DUS/4.7 DME IDNE - LT heading 173° until crossing R270 GMH (21.5 DME NVO) - LT on track 085° to ELBAL (Δ) - LT on track 067° via MAMIB (Δ) to KULIX (Δ) - LT on track 061° to NUDGO(Δ). Climb with 7% (425 ft/NM) or more until passing 3000. <b>GPS/FMS RNAV:</b> [A600+] - DL239[L] - DL241[L] - ELBAL[L] - MAMIB - KULIX[L] - NUDGO	1. PDG due to airspace structure. If unable to comply, advise DEL. 2. Not available for flights into upper airspace. 3. After crossing R270 GMH (21.5 DME NVO) BRNAV equipment necessary.

MODRU 1T	(MODRU ONE TANGO)	<p>On track 232° DY to 3.4 DME DUS/3.6 DME IDNE - RT on track 320° to UBORO (Δ) - LT via NETEX (Δ) on track 199° to MODRU (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. <b>GPS/FMS RNAV:</b> [A600+] - DL243[K210-;R] - <u>UBORO[L]</u> - NETEX[K250-] - MODRU[F210+]</p>	<ol style="list-style-type: none"> <li>1. PDG due to airspace structure. If unable to comply, advise DEL.</li> <li>2. Only for flights with RFL 210 and above. Flights have to be able to cross MODRU at FL 210 or above. If unable to comply, advise DEL on start-up request.</li> <li>3. Flights intending to continue NETEX DCT FAMEN or NETEX DCT DELOW shall file SID MODRU - NETEX - DCT FAMEN or SID MODRU - NETEX - DCT - DELOM. These flights shall leave SID MORDU at NETEX to proceed NETEX DCT FAMEN or NETEX DCT DELOM, also in case of COMM FAIL.</li> <li>4. After passing 3.4 DME DUS (3,6 DME IDNE) BRNAV equipment necessary.</li> <li>5. MAX IAS 210 KT until established on track 320°.</li> <li>6. MAX IAS 250 KT until established on track 199°.</li> </ol>
NETEX 5T	(NETEX FIVE TANGO)	<p>On Rwy track to 1.0 DME DUS/1.2 DME IDNE or 600 ft, whichever is later - RT on track 297° LMA to 13.4 DME DUS/13.3 DME IDNE - LT on track 240° LMA to NETEX(Δ). Climb with 7% (425 ft/NM) or more until passing 3000. <b>GPS/FMS RNAV:</b> <u>DL236[A600+;R]</u> - LMA[L] - NETEX</p>	<ol style="list-style-type: none"> <li>1. PDG due to airspace structure. If unable to comply, advise DEL.</li> <li>2. For flights with RFL from 100 to 200 or flights via Z282 DIBIR L179 (if available).</li> <li>3. Not available for flights with further routing via NETEX DCT FAMEN or NETEX DCT DELOM.</li> </ol>
<b>KUMIK 6T</b>	(KUMIK SIX TANGO)	<p>On track 232° DY to 4.5 DME DUS/4.7 DME IDNE - LT on heading 173° until crossing R270 GMH (21.5 DME NVO) - LT on <u>track 085° to DEGOM (Δ)</u> - RT on track 141° to KUMIK (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. Cross <u>DEGOM</u> at FL150 or above. <b>GPS/FMS RNAV:</b> [A600+] - DL239[L] - DL241[L] - ELBAL - DEGOM[F150+; R] - KUMIK</p>	<ol style="list-style-type: none"> <li>1. PDG due to airspace structure. If unable to comply, advise DEL.</li> <li>2. Only for flights with RFL150 or above.</li> <li>3. After crossing <u>R270 GMH (21.5 DME NVO)</u> BRNAV equipment necessary.</li> <li>4. Normally not available for flights above FL250 via BOMB1, except Prop/Turbo Prop type aircraft. Flights unable to cross DEGOM at FL150 or above shall advise DEL.</li> </ol>
<b>COL 5T</b>	(COLA FIVE TANGO)	<p>On track 232° DY to 4.5 DME DUS/4.7 DME IDNE - LT on heading 173° until crossing R270 GMH (21.5 DME NVO) - LT on <u>R265 GMH to 32.0 DME GMH (crossing R203 BAM)</u> - RT on track 103° to intercept and follow R327 COL to COL (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. <u>Intercept R327 COL (LIPMI)</u> at FL150 or above <b>GPS/FMS RNAV:</b> [A600+] - DL239[L] - DL241[L] - DL244[R] - LIPMI[F150+; R] - COL</p>	<ol style="list-style-type: none"> <li>1. PDG due to airspace structure. If unable to comply, advise DEL.</li> <li>2. Flights unable to cross LIPMI at FL150 or above shall advise DEL.</li> </ol>

<b>RWY 23R</b> LMA 2H	(LIMA TWO HOTEL)	On Rwy track to 1.1 DME DUS/1.3 DME IDNE or 600 ft, whichever is later - RT on track 297° LMA to LMA (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. <b>GPS/FMS RNAV:</b> DL237 - [A600+;R] - LMA	1. Only for flights to EDLN. 2. PDG due to airspace structure. If unable to comply, advise DEL on start-up request.
<b>SONEB 3H</b>	(SONEB THREE HOTEL)	On Rwy track to 1.0 DME DUS/1.2 DME IDNE or 600 ft, whichever is later - RT on R003 NVO to 6.0 DME DUS (5.7 DME IDNE) - LT on track 359° to ERKUM (Δ) - RT on track 005° via DL245 to SONEB (Δ). <b>GPS/FMS RNAV:</b> DL231[A600+;R] - DL234 - DL246[K190-,L] - DL248[L] - ERKUM[R] - DL245[F140+] - SONEB	1. After 6.0 DME DUS (5.7 DME IDNE) BRNAV equipment necessary. 2. Only for flights with RFL 140 or above via RKN/TENLI. Other flights proceed via MEVEL. Flights must be able to cross DL245 at FL140 or above. If unable to comply, advise DEL. 3. MAX IAS 190 KT until established on R003 NVO.
<b>MEVEL 3H</b>	(MEVEL THREE HOTEL)	On Rwy track to 1.0 DME DUS/1.2 DME IDNE or 600 ft, whichever is later - RT on R003 NVO to 6.0 DME DUS (5.7 DME IDNE) - LT on track 359° to ERKUM (Δ) - RT on track 052° via LUSIX (Δ) to MEVEL(Δ). <b>GPS/FMS RNAV:</b> DL231[A600+;R] - DL234 - DL246[K190-,L] - DL248[L] - ERKUM[R] - LUSIX - MEVEL	1. After 6.0 DME DUS (5.7 DME IDNE) BRNAV equipment necessary. 2. MAX IAS 190 KT until established on R003 NVO.
<b>GMH 3H</b>	(GERMINGHAUSEN THREE HOTEL)	On track 229° DY to 4.5 DME DUS/4.7 DME IDNE - LT on heading 173° until crossing R270 GMH (21.5 DME NVO) - LT on R265 GMH to GMH (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. <b>GPS/FMS RNAV:</b> [A600+] - DL240[L] - DL241[L] - GMH	1. PDG due to airspace structure. If unable to comply, advise DEL. 2. Only for flights with RFL140 or below.
<b>NVO 1U</b>	(NÖRVENICH ONE UNIFORM)	On track 229° DY to 4.5 DME DUS/4.7 DME IDNE - LT on heading 173° to intercept and follow R360 NVO to NVO (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. <b>GPS/FMS RNAV:</b> [A600+] - DL240[L] - DL241[R] - NVO	1. For Flights with RFL 90 and below. Flights with RFL 100 and above shall file via MODRU. 2. PDG due to airspace structure. If unable to comply, advise DEL on start-up request. 3. Additional available for flights via Q760 (between 0500 (0400) – 0700 (0600)).
<b>DODEN 3H</b>	(DODEN THREE HOTEL)	On track 229° DY to 4.5 DME DUS/4.7 DME IDNE - LT on heading 173° until crossing R270 GMH (21.5 DME NVO) - LT on track 085° via DL242 to ELBAL(Δ) - RT on track 135° to BETZO (Δ) - RT on track 147° to DODEN (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. Cross DL242 at FL150 or above. Cross DODEN at FL250 or above. <b>GPS/FMS RNAV:</b> [A600+] - DL240[L] - DL241[L] - DL242[F150+] - ELBAL[R] - BETZO[R] - DODEN[F250+]	1. PDG due to airspace structure. If unable to comply, advise DEL on start-up request. 2. After crossing R270 GMH (21.5 DME NVO) BRNAV equipment necessary. 3. Only for jet flights with RFL 250 or above. Flights shall cross DODEN at FL250 or above. Flights unable shall file SID KUMIK. 4. Flights unable to cross DL242 at FL150 or above shall advise DEL on start-up request.
<b>NUDGO 3H</b>	(NUDGO THREE HOTEL)	On track 229° DY to 4.5 DME DUS/4.7 DME IDNE - LT on heading 173° until crossing R270 GMH (21.5 DME NVO) - LT on track 085° to ELBAL (Δ) - LT on track 067° via MAMIB (Δ) to KULIX (Δ) - LT on track 061° to NUDGO (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. <b>GPS/FMS RNAV:</b> [A600+] - DL240[L] - DL241[L] - ELBAL[L] - MAMIB - KULIX[L] - NUDGO	1. PDG due to airspace structure. If unable to comply, advise DEL. 2. Not available for flights into upper airspace. 3. After crossing R270 GMH (21.5 DME NVO) BRNAV equipment necessary.

MODRU 1H	(MODRU ONE HOTEL)	<p>On track 229° to 3.3 DME DUS/3.5 DME IDNE - RT on track 320° to UBORO (Δ) - LT via NETEX (Δ) on track 199° to MODRU (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. <b>GPS/FMS RNAV:</b> [A600+] - DL247[K210-;R] - <u>UBORO[L]</u> - NETEX[K250-] - MODRU[F210+]</p>	<ol style="list-style-type: none"> <li>1. PDG due to airspace structure. If unable to comply, advise DEL.</li> <li>2. Only for flights with RFL 210 and above. Flights have to be able to cross MODRU at FL 210 or above. If unable to comply advise DEL on start-up request.</li> <li>3. Flights intending to continue NETEX DCT FAMEN or NETEX DCT DELOW shall file SID MODRU - NETEX - DCT FAMEN or SID MODRU - NETEX - DCT - DELOM. These flights shall leave SID MODRU at NETEX to proceed NETEX DCT FAMEN or NETEX DCT DELOM, also in case of COMM FAIL.</li> <li>4. After passing 3.3 DME DUS/3.5 DME IDNE BRNAV equipment necessary.</li> <li>5. MAX IAS 210 KT until established on track 320°.</li> <li>6. MAX IAS 250 KT until established on track 199°.</li> </ol>
NETEX 2H	(NETEX TWO HOTEL)	<p>On Rwy track to 1.1 DME DUS/1.3 DME IDNE or 600 ft, whichever is later - RT on track 297° LMA to 13.4 DME DUS/13.3 DME IDNE - LT on track 240° LMA to NETEX(Δ). Climb with 7% (425 ft/NM) or more until passing 3000. <b>GPS/FMS RNAV:</b> DL237 - [A600+;R] - LMA[L] - NETEX</p>	<ol style="list-style-type: none"> <li>1. PDG due to airspace structure. If unable to comply, advise DEL.</li> <li>2. For flights with RFL from 100 to 200 or flights via Z282 DIBIR L179 (if avail.).</li> <li>3. Not available for flights with further routing via NETEX DCT FAMEN or NETEX DCT DELOM.</li> </ol>
KUMIK 3H	(KUMIK THREE HOTEL)	<p>On track 229° DY to 4.5 DME DUS/4.7 DME IDNE - LT on heading 173° until crossing R270 GMH (21.5 DME NVO) - LT on <u>track 085° to DEGOM (Δ)</u> - RT on track 141° to KUMIK (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. Cross <u>DEGOM</u> at FL150 or above <b>GPS/FMS RNAV:</b> [A600+] - DL240[L] - DL241[L] - ELBAL - DEGOM[F150+; R] - KUMIK</p>	<ol style="list-style-type: none"> <li>1. PDG due to airspace structure. If unable to comply, advise DEL.</li> <li>2. Only for flights with RFL150 or above.</li> <li>3. After crossing <u>R270 GMH (21.5 DME NVO)</u> BRNAV equipment necessary.</li> <li>4. Normally not available for flights above FL250 via BOMBI, except Prop/Turbo Prop type aircraft. Flights unable to cross DEGOM at FL150 or above shall advise DEL.</li> </ol>
COL 3H	(COLA THREE HOTEL)	<p>On track 229° DY to 4.5 DME DUS/4.7 DME IDNE - LT on heading 173° until crossing R270 GMH (21.5 DME NVO) - LT on R265 GMH to 32.0 DME GMH (<u>crossing R203 BAM</u>) - RT on <u>track 103 to intercept and follow R327 COL</u> to COL (Δ). Climb with 7% (425 ft/NM) or more until passing 3000. <u>Intercept R327 COL (LIPMI)</u> at FL150 or above <b>GPS/FMS RNAV:</b> [A600+] - DL240[L] - DL241[L] - DL244[R] - LIPMI[F150+;R] - COL</p>	<ol style="list-style-type: none"> <li>1. PDG due to airspace structure. If unable to comply, advise DEL.</li> <li>2. Flights unable to cross LIPMI at FL150 or above shall advise DEL.</li> </ol>

**Remark: Underlined RNAV-Waypoints are fly-over waypoints (Δ)**

### VFR Entry / Exit Points

NOVEMBER	north of airport	MAX 2500 MSL - track 175° to / track 355° from airport	(N 51° 24,3' E006° 44,8')
ECHO	east of airport	MAX 2500 MSL - track 315° to / track 135° from airport	(N 51° 11,4' E006° 56,5')
SIERRA	south of airport	MAX 2500 MSL - track 335°→030° to / track 210°→155° from airport	(N 51° 08,4' E006° 47,2')