ROYAL DANISH AIR FORCE
FLIGHT INFORMATION PUBLICATION

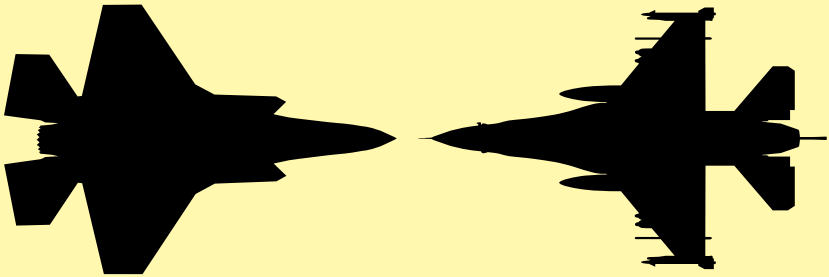
# RDAF FLIP

INSTRUMENT APPROACH AND
DEPARTURE PROCEDURES

# DENMARK AND ALTERNATE AERODROMES

SPECIAL EDITION FOR
FW SKRYDSTRUP

**For Electronic Flight Bag**
**Touch anywhere on this page to continue**



EFFECTIVE 20 MAR 2025
TO 14 MAY 2025

Published by
AIR COMMAND - MIL AIM
www.flv.dk/milaim

# INDEX OF AERODROMES


AALBORG (EKYT)

AARHUS (EKAH)

BILLUND (EKBI)

ESBJERG (EKEB)

KARUP (EKKA)

KASTRUP (EKCH)

ODENSE (EKOD)

ROSKILDE (EKRK)

BORNHOLM / RØNNE (EKRN)

SKRYDSTRUP (EKSP)

STAUNING (EKVJ)

SØNDERBORG (EKSB)

THISTED (EKTS)

ALTERNATES

LEGEND

MISCELLANEOUS

# INDEX OF ALTERNATE AERODROMES


| | |
|---|---|
| | GÖTEBORG/LANDVETTER (ESGG) |
| RAF LAKENHEATH (EGUL) | KRISTIANSTAD OSTERLEN (ESMK) |
| RAF MILDENHALL (EGUN) | MALMO STURUP (ESMS) |
| LEEUWARDEN (EHLW) | HALMSTAD (ESMT) |
| | ANGELHOLM HELSINGBORG (ESTA) |
| OSLO GARDEMOEN (ENGM) | CUXHAVEN/NORDHOLZ (ETMN) |
| RYGGE AB (ENRY) | ROSTOCK-LAAGE (ETNL) |
| | SCHLESWIG-JAGEL AB (ETNS) |
| RONNEBY (ESDF) | WITTMUNDHAFEN AB (ETNT) |

# INDEX OF AERODROME CHARTS AND PROCEDURES


| AERODROME PROCEDURE | PAGE |
|---|---|
| **AALBORG (EKYT)** | |
| AD CHART | 1-1 |
| ILS or LOC RWY 08L | 1-2 |
| HPMA TACAN RWY 08L | 1-4 |
| TACAN RWY 08L (CAT C-E) | 1-6 |
| ILS or LOC RWY 26R | 1-9 |
| HPMA VORTAC RWY 26R | 1-11 |
| VORTAC RWY 26R | 1-12 |
| **AARHUS (EKAH)** | |
| AD CHART | 2-1 |
| ILS or LOC RWY 10R | 2-2 |
| ILS or LOC RWY 28L | 2-7 |
| **BILLUND (EKBI)** | |
| AD CHART | 3-1 |
| BILLUND OPS | 3-2 |
| ILS or LOC Z RWY 09 | 3-3 |
| ILS or LOC Y RWY 09 | 3-4 |
| ILS or LOC Z RWY 27 | 3-7 |
| ILS or LOC Y RWY 27 | 3-8 |
| BILLUND ARRIVAL (TEXT) | 3-11 |
| SID RWY 09/27 (TEXT) | 3-12 |
| SID RWY 09/27 (TEXT) | 3-13 |
| SID RWY 09-RNAV (TEXT) | 3-14 |
| SID RWY 09-RNAV CHART | 3-15 |
| SID RWY 27-RNAV (TEXT) | 3-16 |
| SID RWY 27-RNAV CHART | 3-17 |
| **ESBJERG (EKEB)** | |
| AD CHART | 4-1 |
| ILS or LOC Z RWY 08 | 4-2 |
| ILS or LOC Y RWY 08 | 4-3 |
| ILS or LOC Z RWY 26 | 4-6 |
| ILS or LOC Y RWY 26 | 4-7 |
| **KARUP (EKKA)** | |
| AD CHART | 5-1 |
| ILS or LOC RWY 09R | 5-2 |
| HPMA TACAN RWY 09R | 5-4 |
| ILS or LOC RWY 27L | 5-8 |
| HPMA TACAN RWY 27L | 5-10 |
| **KASTRUP (EKCH)** | |
| AD CHART | 6-1 |
| F-16 PARKING POSITIONS | 6-2 |
| KASTRUP OPS (TEXT) | 6-3 |
| KASTRUP ARRIVAL (TEXT) | 6-5 |
| PRIMARY HOLDINGS | 6-6 |

| AERODROME PROCEDURE | PAGE |
|---|---|
| ILS or LOC RWY 04L | 6-7 |
| ILS or LOC RWY 04R | 6-8 |
| ILS or LOC RWY 22L | 6-9 |
| ILS or LOC RWY 22R | 6-10 |
| ILS or LOC RWY 12 | 6-11 |
| ILS or LOC RWY 30 | 6-12 |
| WP LIST | 6-13 |
| **ODENSE (EKOD)** | |
| AD CHART | 8-1 |
| NOISE ABATEMENT (TEXT) | 8-2 |
| ILS or LOC RWY 24 | 8-5 |
| **ROSKILDE (EKRK)** | |
| AD CHART | 9-1 |
| EKRK OPS (TEXT) | 9-2 |
| EKRK NOISE ABATEMENT | 9-4 |
| EKRK ARRIVAL (TEXT) | 9-7 |
| EKRK DEPARTURE (TEXT) | 9-9 |
| IFR DEP CHART (JET) | 9-12 |
| ILS or LOC RWY 11 (CAT C-E) | 9-17 |
| ILS or LOC RWY 21 | 9-24 |
| **RØNNE (EKRN)** | |
| AD CHART | 10-1 |
| ILS or LOC RWY 11 | 10-2 |
| HPMA TACAN RWY 11 | 10-4 |
| ILS or LOC RWY 29 | 10-5 |
| HPMA TACAN RWY 29 | 10-7 |
| **SKRYDSTRUP (EKSP)** | |
| AD CHART | 13-1 |
| ILS or LOC RWY 10L | 13-2 |
| ILS or LOC Z RWY 10L | 13-4 |
| HPMA TACAN RWY 10L | 13-5 |
| TACAN RWY 10L | 13-6 |
| ILS or LOC RWY 28R | 13-9 |
| ILS or LOC Z RWY 28R | 13-11 |
| HPMA TACAN RWY 28R | 13-12 |
| TACAN RWY 28R | 13-13 |
| **STAUNING (EKVJ)** | |
| AD CHART | 14-1 |
| LOC RWY 27 | 14-3 |
| **SØNDERBORG (EKSB)** | |
| AD CHART | 15-1 |
| ILS or LOC RWY 32 | 15-4 |

# INDEX OF AERODROME CHARTS AND PROCEDURES


| AERODROME PROCEDURE | PAGE |
|---|---|
| **MISCELLANEOUS** | |
| TERPS VS. PANS OPS | 20-2 |
| AIRCRAFT CATEGORIES/SPEEDS | 20-6 |
| HPMA CRITERIA | 20-8 |
| LANDING MINIMA EXPLANATION | 20-9 |
| COLD WEATHER ALT CORRECTION | 20-11 |
| DECLARED DISTANCES | 20-12 |
| ACN/PCN SYSTEM | 20-13 |
| NON-PA FLYING TECHNIQUES | 20-15 |
| APPROACH LIGHTING SYSTEMS | 20-17 |
| SIDESTEP PROCEDURE | 20-18 |
| RADIO NAVIGATION AIDS | 20-19 |
| NDB BEARING/DISTANCES | 20-20 |
| VOR/TACAN BEARING/DISTANCES | 20-21 |
| LIST OF AERODROMES | 20-22 |
| AERODROME BEARING/DISTANCE | 20-23 |
| **FOREIGN ALTERNATES** | |
| **LEEUWARDEN (EHLW)** | |
| AD CHART | 21-1 |
| SID LW1 RWY 23 | 21-2 |
| SID LW3 RWY 05 | 21-3 |
| SID LW5 RWY 27 | 21-4 |
| SID LW7 RWY 09 | 21-5 |
| ILS or LOC RWY 05 | 21-6 |
| HI-TACAN RWY 05 | 21-7 |
| TACAN RWY 05 | 21-8 |
| ILS or LOC RWY 09 | 21-9 |
| HI-TACAN RWY 09 | 21-10 |
| TACAN RWY 09 | 21-11 |
| ILS or LOC RWY 23 | 21-12 |
| HI-TACAN RWY 23 | 21-13 |
| TACAN RWY 23 | 21-14 |
| ILS or LOC RWY 27 | 21-15 |
| HI-TACAN RWY 27 | 21-16 |
| TACAN RWY 27 | 21-17 |
| **GARDERMOEN (ENGM)** | |
| AD CHART | 22-1 |
| HPMA ILS or LOC RWY 01L | 22-2 |
| HPMA ILS or LOC RWY 01R | 22-3 |
| HPMA ILS or LOC RWY 19L | 22-4 |
| HPMA ILS or LOC RWY 19R | 22-5 |

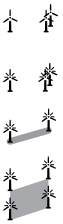
| AERODROME PROCEDURE | PAGE |
|---|---|
| **RYGGE (ENRY)** | |
| AD CHART | 23-1 |
| SID EAST | 23-2 |
| SID WEST | 23-3 |
| TACAN RWY 12 | 23-4 |
| HPMA ILS or LOC RWY 30 | 23-5 |
| ILS M or LOC M RWY 30 | 23-6 |
| TACAN RWY 30 | 23-7 |
| **NORDHOLZ (ETMN)** | |
| AD CHART | 25-1 |
| SID MN 108-126 | 25-2 |
| ILS or LOC RWY 08 | 25-3 |
| TACAN RWY 08 | 25-4 |
| ILS or LOC RWY 26 | 25-5 |
| TACAN RWY 26 | 25-6 |
| **LAAGE (ETNL)** | |
| AD CHART | 26-1 |
| SID NL 12-32 | 26-2 |
| SID NL 14-34 | 26-3 |
| SID NL 16-36 | 26-4 |
| SID NL 109-127 | 26-5 |
| SID NL 227 | 26-6 |
| ILS or LOC Y RWY 09 | 26-7 |
| ILS or LOC Z RWY 09 | 26-8 |
| TACAN RWY 09 | 26-9 |
| ILS or LOC Y RWY 27 | 26-10 |
| ILS or LOC Z RWY 27 | 26-11 |
| TACAN RWY 27 | 26-12 |
| **SCHLESWIG (ETNS)** | |
| AD CHART | 27-1 |
| SID NS 105-123 | 27-2 |
| TACAN RWY 05 | 27-3 |
| TACAN RWY 23 | 27-4 |
| **WITTMUNDHAFEN (ETNT)** | |
| AD CHART | 28-1 |
| SID NT 108-126 | 28-2 |
| SID NT 208 | 28-3 |
| TACAN RWY 08 | 28-4 |
| ILS or LOC RWY 26 | 28-5 |
| TACAN RWY 26 | 28-6 |

## INDEX OF AERODROME CHARTS AND PROCEDURES


| AERODROME<br>PROCEDURE | PAGE |
|---|---|
| **RONNEBY AB (ESDF)** | |
| AD CHART | 29-1 |
| ILS or LOC RWY 01 | 29-2 |
| PAR RWY 01 | 29-3 |
| ILS or LOC RWY 19 | 29-4 |
| PAR RWY 19 | 29-5 |
| WP LIST | 29-6 |
| **GÖTEBORG, LANDVETTER (ESGG)** | |
| AD CHART | 30-1 |
| ILS or LOC RWY 03 | 30-2 |
| ILS or LOC RWY 21 | 30-3 |
| **KRISTIANSTAD (ESMK)** | |
| AD CHART | 31-1 |
| ILS or LOC RWY 19 | 31-2 |
| **MALMO (ESMS)** | |
| AD CHART | 32-1 |
| ILS or LOC RWY 17 | 32-2 |
| ILS or LOC RWY 35 | 32-3 |
| **HALMSTAD (ESMT)** | |
| AD CHART | 33-1 |
| ILS or LOC Z RWY 19 | 33-2 |
| ILS or LOC Y RWY 19 | 33-3 |
| **ÄNGELHOLM (ESTA)** | |
| AD CHART | 34-1 |
| ILS or LOC Z RWY 14 | 34-2 |
| ILS or LOC Y RWY 14 | 34-3 |
| **LAKENHEATH (EGUL)** | |
| AD CHART | 35-1 |
| AXHOK AND TIDPU DEP | 35-2 |
| HI/LO-ILS Y or LOC RWY 23 | 35-3 |
| HI/LO TACAN RWY 23 | 35-4 |
| **MILDENHALL (EGUN)** | |
| AD CHART | 36-1 |
| NUGTU DEP | 36-2 |
| TACAN RWY 28 | 36-3 |
| ILS or LOC RWY 28 | 36-4 |

| AERODROME<br>PROCEDURE | PAGE |
|---|---|

RDAF FLIP uses the same symbology as CENOR FLIP (See LEGEND-2 and LEGEND-3) with the following exceptions:

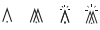


Wind turbine - unlit
Group of wind turbines - unlit

Wind turbine - lit
Group of wind turbines - lit

Line of wind turbines - lit

Wind farm - lit

} Replaces  where obstacles are in fact wind turbines.



Exceptionally high obstacle - lit

} Replaces  where an obstacle is 1000 ft AMSL or more)



Highest obstacle within the Plan View Area



Para drop zone



Cities, towns, villages



Air traffic services Reporting Office (ARO)



Water aerodrome

CHANGES: WATER AERODROME ADDED. EDITORIAL.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

VOR

DME

VOR/DME

TACAN

VORTAC

NDB

VFR Reporting Point / Intersection
On Request Fly-By

VFR Reporting Point / Intersection
Compulsory Fly-By

VFR Reporting Point / Intersection
On Request Fly-Over

VFR Reporting Point / Intersection
Compulsory Fly-Over

Waypoint On Request Fly-By

Waypoint Compulsory Fly-By

Waypoint On Request Fly-Over

Waypoint Compulsory Fly-Over

5 DME Mileage

Procedural Track

5000
R-270
(25) Minimum Level, Direction, Distance

R-270 Radial

LR-270 Lead Radial

1100 1100 Mandatory Level / Recommended Level

1100 1100 Minimum Level / Maximum Level

Spot Elevation

Obstruction (unlighted)
Group of Obstructions (unlighted)

Obstruction (lighted)
Group of Obstructions (lighted)

HIRTA (no obstruction)

HIRTA (with obstruction unlighted)

HIRTA (with obstruction lighted)

HIRTA
High intensity radio transmission area

Power Transmission Line

MSA FIX 25 NM

6100
305°
085°
5700

**Minimum Sector Altitude (MSA)**
**25NM radius**

Identification of Radio Navigational Facility

Sector Boundary

Minimum sector Altitude (MSA)

ED-P3
5000 ft MSL
GND

Danger Area (ED-D)
Restricted Area (ED-R)
Prohibited Area (ED-P)

0°
(2005)
1°E
(2005)

Variation

International Border

FIR

Control Zone (CTR)

Not to Scale

**000.000x** Frequency available on request

**ATIS*** Control Tower or ATIS operates non-continuously

ARP

27 Distance

HG 1
3600
4500
HG 2

**Night Low Flying System**
(Route Segment)

Waypoint Designator

Enroute Flight Altitude in ft MSL

Emergency Enroute Flight Altitude in ft MSL

IAF Initial Approach Fix

Missed Approach

CHANGES: NEW PAGE.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

Procedure Turn

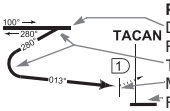
Final Approach Fix (FAF)
(Non precision approaches)

Visual Descent Point (VDP)

Transition Route

Supplementary Route

**Profile**




Descent from Holding Pattern
Radio Nav Facility
Turns
Missed Approach Point
RWY

270° to
Final Approach Course from IAF to main Radio NavAid or ARP




Standard Holding Pattern



Holding Fix (If holding fix conform to IAF, IAF symbol is to be used.)

GS 3.0°
TCH 35
Glide Slope in Degrees
Threshold Crossing Height

1100
Glide Slope Intercept Altitude


Front Course


Back Course


Glide Slope


MM


OM

General symbol for radio facilities


Radar reflector


VASIS / PAPI


Displaced Threshold


INS Position


Closed runway or taxiway
TWY


Uni-directional / Bi-directional Cable
The cables are displayed with regard to the direction of their arresting capabilities (uni-/bi-directional) irrespective of flight operational restrictions.


Net



Taxiway designation


ABN



Helicopter Landing Area



Supervision office


Wind sock (unlighted, lighted)


RWY (hard surface)


RWY (unpaved surface)


RWY (unpaved surface) with unpaved surface beyond RWY extremities


RWY (hard surface) with hard surface beyond RWY extremities


RWY (hard surface) with unpaved surface beyond RWY extremities


TWY or apron (hard surface)


Building

## APPROACH LIGHTING SYSTEM

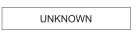

Threshold (ALS no flashing lights)
Threshold (ALS with flashing lights)


Lights on extended rwy center line
1 row
2 rows
3 rows or more


Crossbar



No ALS



Type of ALS unknown



Example



Example

CHANGES: NEW PAGE.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

# AALBORG (EKYT)

AERODROME CHART

ILS or LOC RWY 08L

ILS or LOC RWY 26R

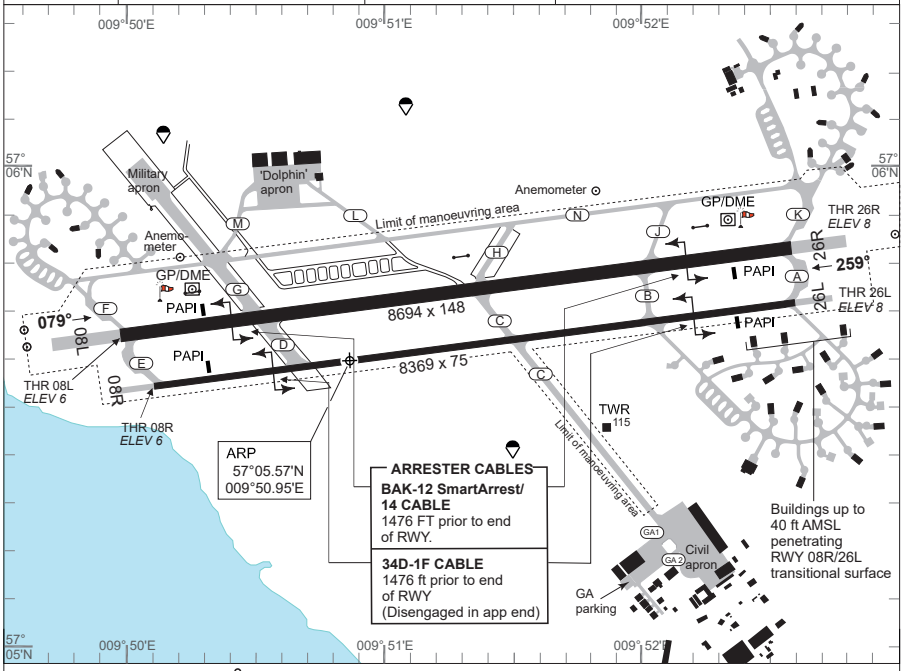
HPMA TACAN RWY 08L

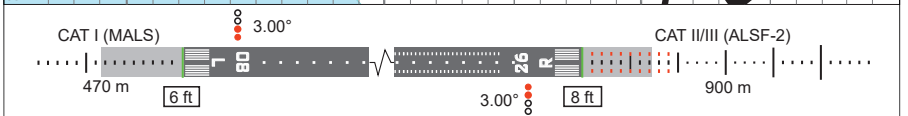
HPMA VORTAC RWY 26R

TACAN RWY 08L (CAT C-E)

VORTAC RWY 26R

| AALBORG ATIS | AALBORG TOWER | AALBORG APPROACH | AD Admin and FPL: | +45 728 46310 |
|---|---|---|---|---|
| 120.480 | 353.525 118.305 | 362.450 123.980 | Email: | woc@atwaal.dk |
| AD Elev 8 | ARP 57°05.57'N 009°50.95'E | VAR 4.0°E (JAN 2023) | | |




| RWY | PCN | DECLARED DISTANCES PSN | TORA | TODA | ASDA | LDA | THR ELEV | RWY LIGHTING THR | PAPI | TDZ | CL | EDGE | END | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08L | 66 F/D/W/T | E/F | 8694 | 8694 | 9422 | 8694 | 6 | LIH | 3.00° | | LIH | LIH | LIH | 57°05.623'N 009°50.005'E |
| | | D/G | 6791 | 6791 | 7519 | | | | | | | | | |
| | | C/H | 4002 | 4002 | 4730 | | | | | | | | | |
| 26R | | A/K | 8694 | 8694 | 9589 | 8694 | 8 | LIH | 3.00° | LIH | LIH | LIH | LIH | 57°05.790'N 009°52.611'E |
| | | B/J | 6791 | 6791 | 7686 | | | | | | | | | |
| | | C/H | 4691 | 4691 | 5586 | | | | | | | | | |
| 08R | 52 | E | 8369 | 8369 | 8861 | 8369 | 6 | LIL | 3.00° | | | LIL | LIL | 57°05.515'N 009°50.128'E |
| 26L | F/D/X/U | A | 8369 | 8369 | 8861 | 8369 | 8 | LIL | 3.00° | | | LIL | LIL | 57°05.675'N 009°52.634'E |

Start-up clearance required for all aircraft, also for engine ground run.

Use of TWY N is only permitted for aircraft size up to and including C-130. Larger size aircraft will need specific clearance from Current OPS before using TWY N.

Standard Instrument Departures (SID) have not been established.

Omnidirectional departures RWY 08L/R and 26R/L: Climb straight ahead to at least 600 FT MSL before turn is commenced.

**MIPS** **CIRCLING MINIMA (NORTH of aerodrome only)**

| A | B | C | D | E |
|---|---|---|---|---|
| 510 -1.5 502 (600-1.5) | 510 -1.6 502 (600-1.6) | 690 -2.4 682 (700-2.4) | 750 -3.6 742 (800-3.6) | 840 -3.6 832 (900-3.6) |

CHANGES: PAPI RIGHT SIDE WINGBARS RWY 08R, 26L AND 26R WITHDRAWN. PAPI ANGLE RWY 08R/26L CHANGED TO 3.00°.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

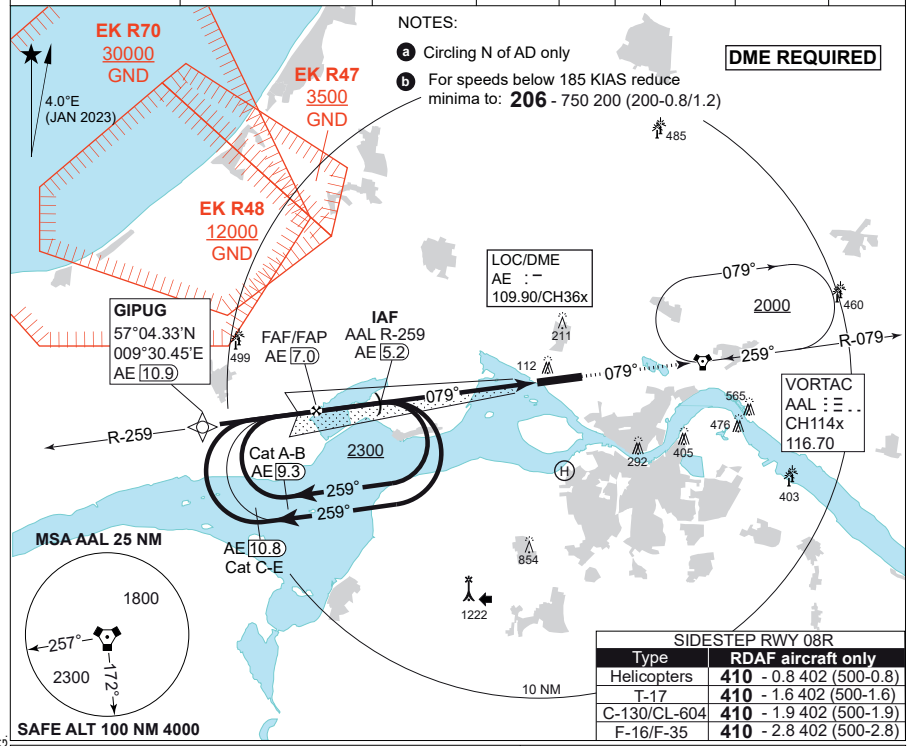
**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 8

**ILS or LOC RWY 08L**
**AALBORG (EKYT)**

| COPENHAGEN CONTROL | AALBORG ATIS | AALBORG APPROACH | AALBORG TOWER |
|---|---|---|---|
| 242.650 124.555 | 120.480 | 362.450 123.980 | 353.525 118.305 |

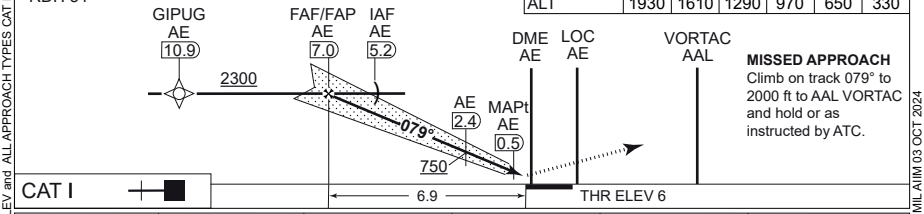
| LOC/DME | VORTAC | APP COURSE | FAF ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|---|
| AE 109.90/CH 36x | AAL CH114x/116.700 | 079° | 2300 FT | 3.00° | **206** | 6 | 470 M | 8694 FT |




| SIDESTEP RWY 08R | |
|---|---|
| **Type** | **RDAF aircraft only** |
| Helicopters | **410** - 0.8 402 (500-0.8) |
| T-17 | **410** - 1.6 402 (500-1.6) |
| C-130/CL-604 | **410** - 1.9 402 (500-1.9) |
| F-16/F-35 | **410** - 2.8 402 (500-2.8) |

**TA 3000**
GS 3.00°
RDH 54

| LOC ONLY: CDFA 3.00° / 5.24% | | | | | | |
|---|---|---|---|---|---|---|
| DME AE | 6 | 5 | 4 | 3 | 2 | 1 |
| DIST THR | 5.9 | 4.9 | 3.9 | 2.9 | 1.9 | 0.9 |
| ALT | 1930 | 1610 | 1290 | 970 | 650 | 330 |




**MISSED APPROACH**
Climb on track 079° to 2000 ft to AAL VORTAC and hold or as instructed by ATC.

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-ILS CAT I 08L | **206** - 750 200 (200-0.8/1.2) | | | | **281** -900 275 (300-0.9/1.3) b |
| S-LOC 08L | **300** - 900 292 (300-0.9/1.4) | | | | **310** -1000 302 (400-1.0/1.4) |
| CIRCLING a | **510** -1.5 502 (600-1.5) | **510** -1.6 502 (600-1.6) | **690** -2.4 682 (700-2.4) | **750** -3.6 742 (800-3.6) | **840** -3.6 832 (900-3.6) |

MIPS

CHANGES: AD ELEV, THR ELEV and ALL APPROACH TYPES CAT MINIMA CHG.

AIR COMMAND DENMARK - MIL AIM 03 OCT 2024

**MIPS**

**INSTRUMENT APPROACH CHART**

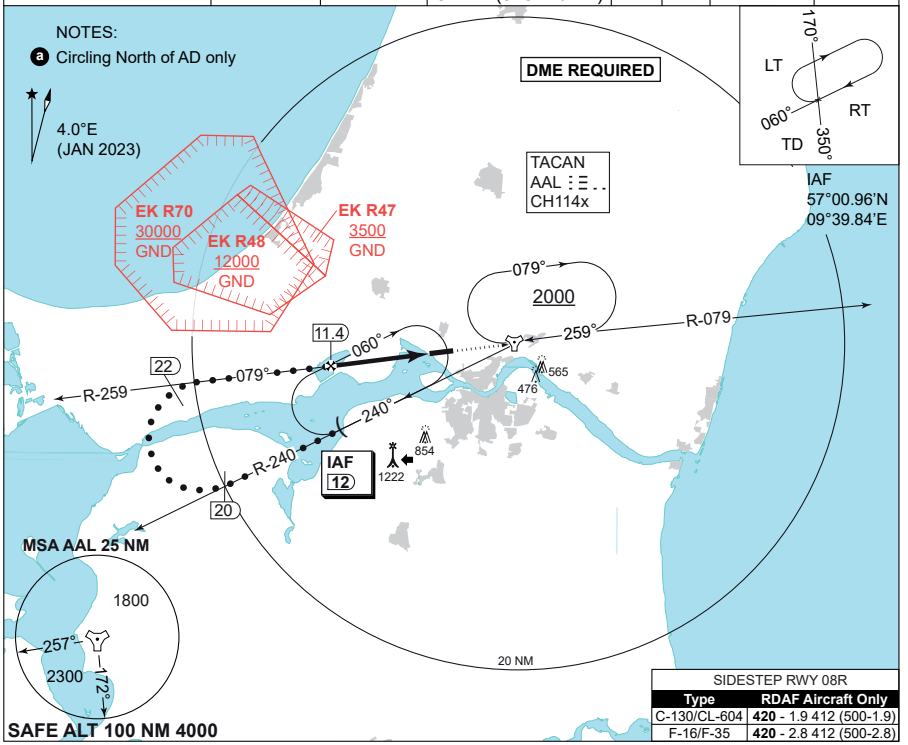
AD ELEV 8

**HPMA TACAN RWY 08L**

**AALBORG (EKYT)**

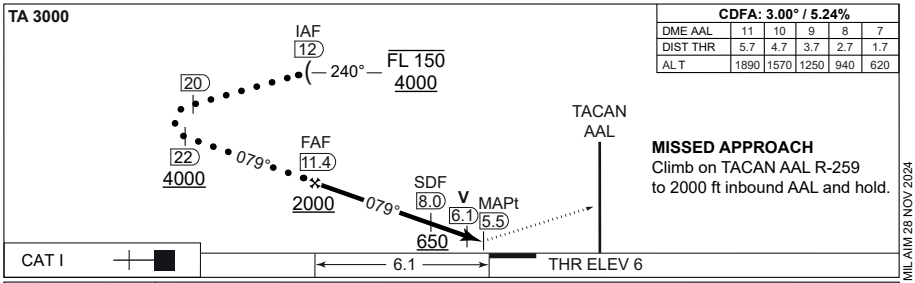
| COPENHAGEN CONTROL | AALBORG ATIS | AALBORG APPROACH | AALBORG TOWER |
|---|---|---|---|
| 242.650 124.555 | 120.480 | 362.450 123.980 | 353.525 118.305 |

| TACAN | APP COURSE | FAF ALT | DESCENT GR. | MDA | THR | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| AAL CH 114X | 079° | 2000 FT | 5.24% (318 FT/NM) | **340** | 6 | 470 M | 8694 FT |




SIDESTEP RWY 08R

| Type | RDAF Aircraft Only |
|---|---|
| C-130/CL-604 | **420** - 1.9 412 (500-1.9) |
| F-16/F-35 | **420** - 2.8 412 (500-2.8) |




| CDFA: 3.00° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME AAL | 11 | 10 | 9 | 8 | 7 |
| DIST THR | 5.7 | 4.7 | 3.7 | 2.7 | 1.7 |
| ALT | 1890 | 1570 | 1250 | 940 | 620 |

**MISSED APPROACH**
Climb on TACAN AAL R-259
to 2000 ft inbound AAL and hold.

| CATEGORY | HPMA |
|---|---|
| S-TACAN 08L | **340** - 1100 332 (400-1.1/1.5) |
| CIRCLING a | **560** - 3.2 552 (600-3.2) |

CHANGES: VORTAC CHANGED TO TACAN WITHOUT FREQUENCY.

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

**HPMA TACAN RWY 08L**

57°05.57'N
009°50.95'E

**AALBORG (EKYT)**

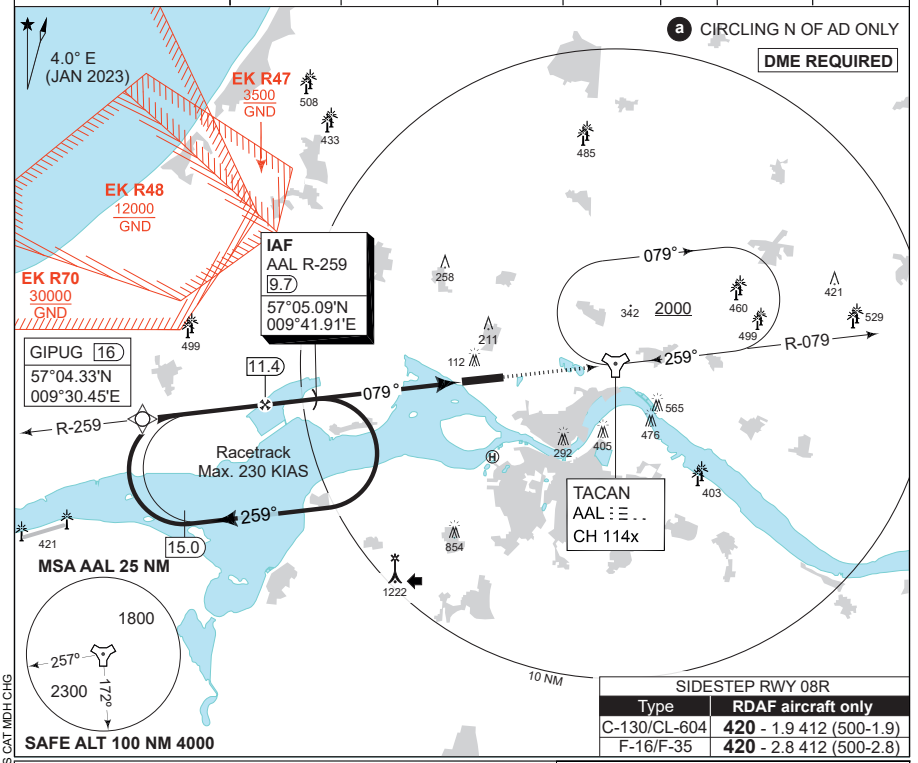
**MIPS**
**INSTRUMENT APPROACH CHART**

**TACAN RWY 08L (CAT C-E)**
**AALBORG (EKYT)**

AD ELEV 8

| COPENHAGEN CONTROL | AALBORG ATIS | AALBORG APPROACH | AALBORG TOWER |
|---|---|---|---|
| 242.650 124.555 | 120.480 | 362.450 123.980 | 353.525 118.305 |

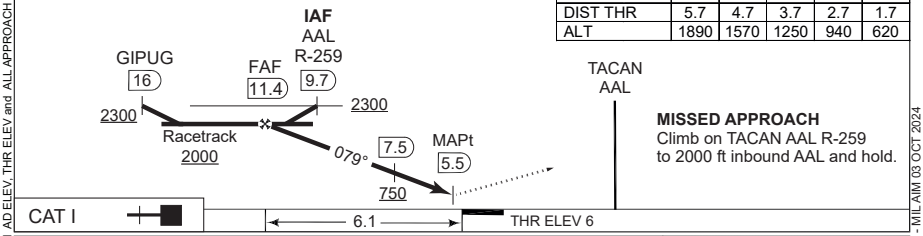
| TACAN | APP COURSE | FAF ALT | DESCENT GR | MDA | THR | ALS length | LDA |
|---|---|---|---|---|---|---|---|
| AAL CH 114x | 079° | 2000 FT | 318 FT/NM | **340** | 6 | 470 M | 8694 FT |




| SIDESTEP RWY 08R | |
|---|---|
| Type | RDAF aircraft only |
| C-130/CL-604 | **420** - 1.9 412 (500-1.9) |
| F-16/F-35 | **420** - 2.8 412 (500-2.8) |

TA 3000

| CDFA 3.0° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME AAL | 11 | 10 | 9 | 8 | 7 |
| DIST THR | 5.7 | 4.7 | 3.7 | 2.7 | 1.7 |
| ALT | 1890 | 1570 | 1250 | 940 | 620 |




| CATEGORY | C | D | E |
|---|---|---|---|
| S-TACAN 08L | **340** -1100 332 (400-1.1/1.5) | | |
| CIRCLING a | **690** -2.4 682 (700-2.4) | **750** -3.6 742 (800-3.6) | **840** -3.6 832 (900-3.6) |

CHANGES: EDITORIAL and AD ELEV, THR ELEV and ALL APPROACH TYPES CAT MDH CHG
AIR COMMAND DENMARK - MIL AIM 03 OCT 2024

**MIPS**

**INSTRUMENT APPROACH CHART**

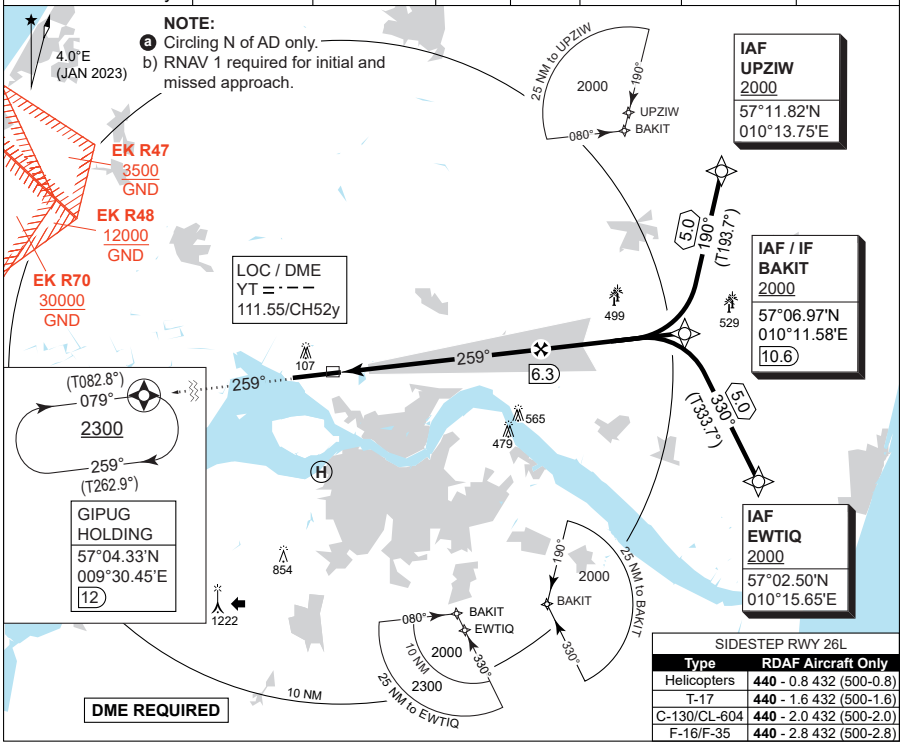
AD ELEV 8

**ILS or LOC RWY 26R**

**AALBORG (EKYT)**

| COPENHAGEN CONTROL | AALBORG ATIS | AALBORG APPROACH | AALBORG TOWER |
|---|---|---|---|
| 242.650 124.555 | 120.480 | 362.450 123.980 | 353.525 118.305 |

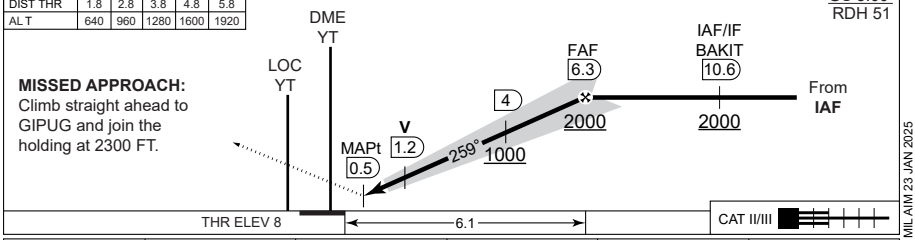
| LOC/DME | APP COURSE | GS INCPT ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| YT 111.55/CH 52y | 259° | 2000 FT | 3.00° | **208** | 8 | 900 M | 8694 FT |




| SIDESTEP RWY 26L | |
|---|---|
| **Type** | **RDAF Aircraft Only** |
| Helicopters | **440** - 0.8 432 (500-0.8) |
| T-17 | **440** - 1.6 432 (500-1.6) |
| C-130/CL-604 | **440** - 2.0 432 (500-2.0) |
| F-16/F-35 | **440** - 2.8 432 (500-2.8) |

| CDFA: 3.00° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME YT | 2 | 3 | 4 | 5 | 6 |
| DIST THR | 1.8 | 2.8 | 3.8 | 4.8 | 5.8 |
| ALT | 640 | 960 | 1280 | 1600 | 1920 |

**TA 3000**
GS 3.00°
RDH 51




**MISSED APPROACH:**
Climb straight ahead to GIPUG and join the holding at 2300 FT.

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-CAT I | **208** - 550 200 (200-0.8/1.2) | | | | |
| S-CAT II | **RA 101** (DA 108) - 350 100 | | | | N/A |
| S-LOC 26R | **390** - 1100 382 (400-1.1/1.8) | | | | |
| CIRCLING a | **510** -1.5 502 (600-1.5) | **510** -1.6 502 (600-1.6) | **690** -2.4 682 (700-2.4) | **750** -3.6 742 (800-3.6) | **840** -3.6 832 (900-3.6) |

MIPS

CHANGES: RNP APCH REQUIREMENT CORRECTED TO RNAV 1.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

**MIPS**

**INSTRUMENT APPROACH CHART**

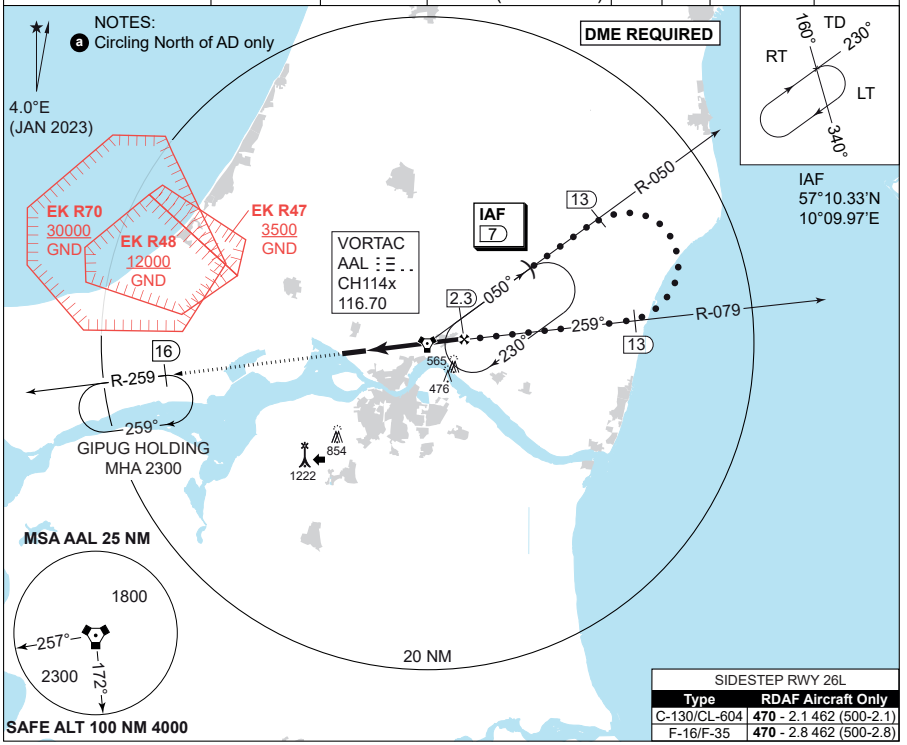
AD ELEV 8

**HPMA VORTAC RWY 26R**

**AALBORG (EKYT)**

| COPENHAGEN CONTROL | AALBORG ATIS | AALBORG APPROACH | AALBORG TOWER |
|---|---|---|---|
| 242.650 124.555 | 120.480 | 362.450 123.980 | 353.525 118.305 |

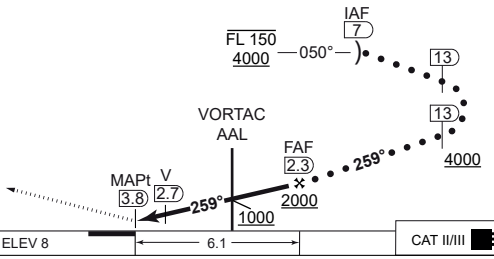
| VORTAC | APP COURSE | FAF ALT | DESCENT GR. | MDA | THR | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| AAL 116.70/CH 114X | 259° | 2000 FT | 5.24% (318 FT/NM) | **420** | 8 | 900 M | 8694 FT |




| SIDESTEP RWY 26L | |
|---|---|
| **Type** | **RDAF Aircraft Only** |
| C-130/CL-604 | **470** - 2.1 462 (500-2.1) |
| F-16/F-35 | **470** - 2.8 462 (500-2.8) |

| CDFA: 3.00° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME AAL | 2 | 1 | 0 | 1 | 2 |
| DIST THR | 1.8 | 2.8 | 3.8 | 4.8 | 5.8 |
| AL T | 640 | 960 | 1280 | 1600 | 1920 |

**TA 3000**




**MISSED APPROACH**
Climb on AAL R-259 to DME 16. Join GIPUG holding at 2300 FT.

| CATEGORY | HPMA |
|---|---|
| S-VORTAC 26R | **420** - 1200 412 (500-1.2/1.9) |
| CIRCLING a | **560** - 3.2 552 (600-3.2) |

CHANGES: PROCEDURE CHANGED FROM TERPS TO HPMA CRITERIA

MIPS

AIR COMMAND DENMARK - MIL AIM 03 OCT 2024

**HPMA VORTAC RWY 26R** **AALBORG (EKYT)**

57°05.57'N
009°50.95'E

**MIPS**

**INSTRUMENT APPROACH CHART**

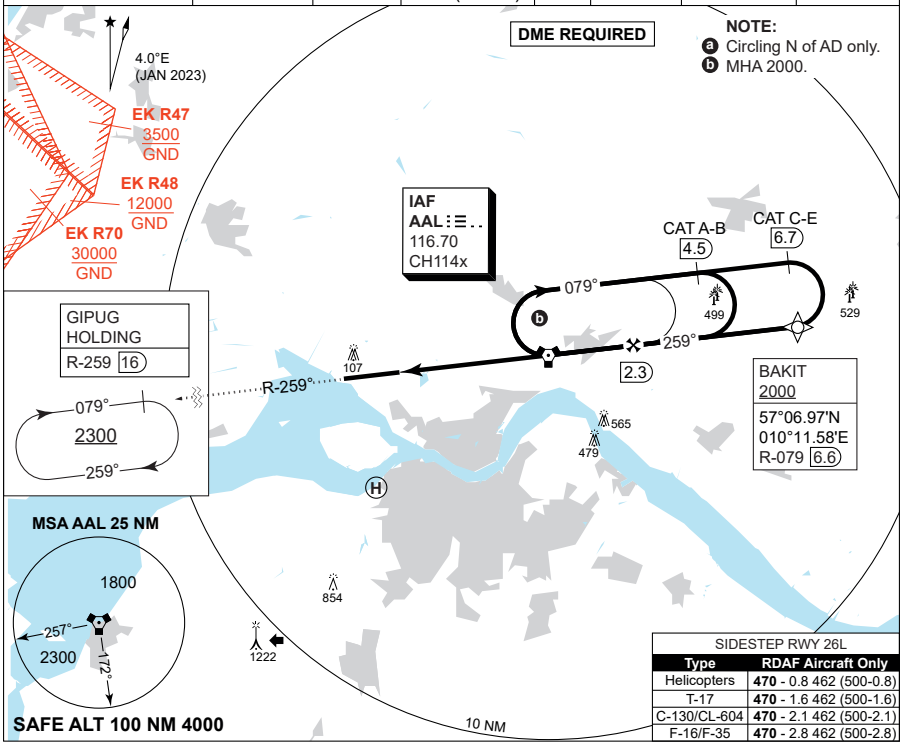
AD ELEV 8

**VORTAC RWY 26R**

**AALBORG (EKYT)**

| COPENHAGEN CONTROL | AALBORG ATIS | AALBORG APPROACH | AALBORG TOWER |
|---|---|---|---|
| 242.650 124.555 | 120.480 | 362.450 123.980 | 353.525 118.305 |

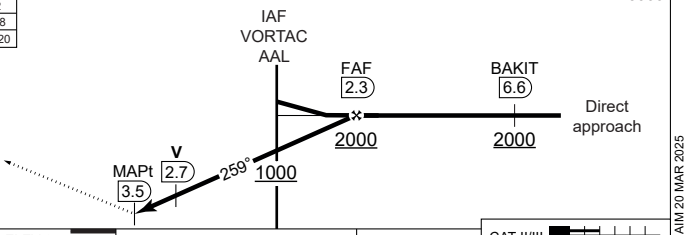
| VORTAC | APP COURSE | FAF ALT | DESCENT GR. | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| AAL 116.70/CH 114x | 259° | 2000 FT | 3.0° (5.24%) | **420** | 8 | 900 M | 8694 FT |




**CDFA: 3.00° / 5.24%**

| DME AAL | 2 | 1 | 0 | 1 | 2 |
|---|---|---|---|---|---|
| DIST THR | 1.8 | 2.8 | 3.8 | 4.8 | 5.8 |
| ALT | 640 | 960 | 1280 | 1600 | 1920 |

**TA 3000**




**MISSED APPROACH:**
Climb on AAL R-259 to DME 16. Join GIPUG holding at 2300 FT.

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| VORTAC 26R | **420** - 1200 412 (500-1.2/1.9) | | | | |
| CIRCLING a | **510** -1.5 502 (600-1.5) | **510** -1.6 502 (600-1.6) | **690** -2.4 682 (700-2.4) | **750** -3.6 742 (800-3.6) | **840** -3.6 832 (900-3.6) |

MIPS

CHANGES: VDP DME DISTANCE CORRECTED TO 2.7 NM.

AIR COMMAND DENMARK - MIL AIP 20 MAR 2025

**VORTAC RWY 26R** **AALBORG (EKYT)**

57°05.57'N
009°50.95'E

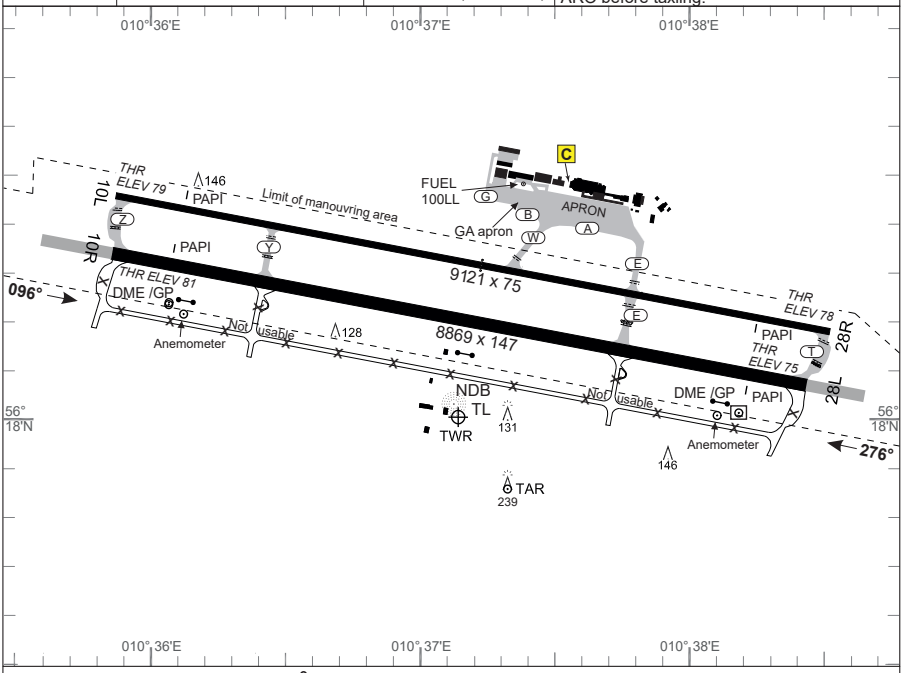
# AARHUS (EKAH)

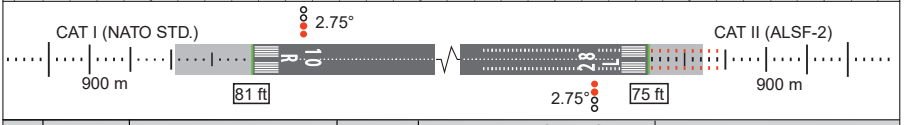
AERODROME CHART

ILS or LOC RWY 10R

ILS or LOC 28L (CAT C-E)

| AARHUS ATIS | AARHUS TOWER | AARHUS APPROACH | Airport Office: **131.555** Tel.: +45 87 75 70 50 |
|---|---|---|---|
| **125.155** | **118.530** | **119.280** | All departing flights must file a complete or abbreviated flight plan to Aarhus ARO before taxiing. |
| AD Elev **82** | ARP 56°18.00'N 010°37.14'E | VAR 4.0°E (APR 2022) | |




| RWY | PCN | DECLARED DISTANCES TORA | TODA | ASDA | LDA | THR ELEV | RWY LIGHTING THR | PAPI | TDZ | CL | EDGE | END | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10R | 76/R/B/X/U | 8869 | 9597 | 9597 | 8869 | 81 | LIH | 2.75° | | LIH | LIH | LIH | 56°18.33'N 010°35.86'E |
| 28L | | 8869 | 9807 | 9807 | 8869 | 75 | LIH | 2.75° | LIH | LIH | LIH | LIH | 56°18.07'N 010°38.43'E |
| 10L | 120/F/B/W/T | 9121 | 9121 | 9121 | 9121 | 79 | LIL | 3.00° | | | LIL | LIL | 56°18.45'N 010°35.87'E |
| 28R | | 9121 | 9121 | 9121 | 9121 | 78 | LIL | 3.00° | | | LIL | LIL | 56°18.18'N 010°38.52'E |

Standard Instrument Departures (SID) have not been established.
Omnidirectional departures RWY 10R/L and 28L/R: Climb straight ahead to at least 700 FT MSL before turning.

CHANGES: ATIS FREQ. CHG.

***MIPS*** **CIRCLING MINIMA**

| A | B | C | D | E |
|---|---|---|---|---|
| **570** -1.5 488 (500-1.5) | **680** -1.6 598 (600-1.6) | **1060** -2.4 978 (1000-2.4) | **1180** -3.6 1098 (1100-3.6) | **1180** -3.6 1098 (1100-3.6) |

AIR COMMAND DENMARK - MIL AIM 03 OCT 2024

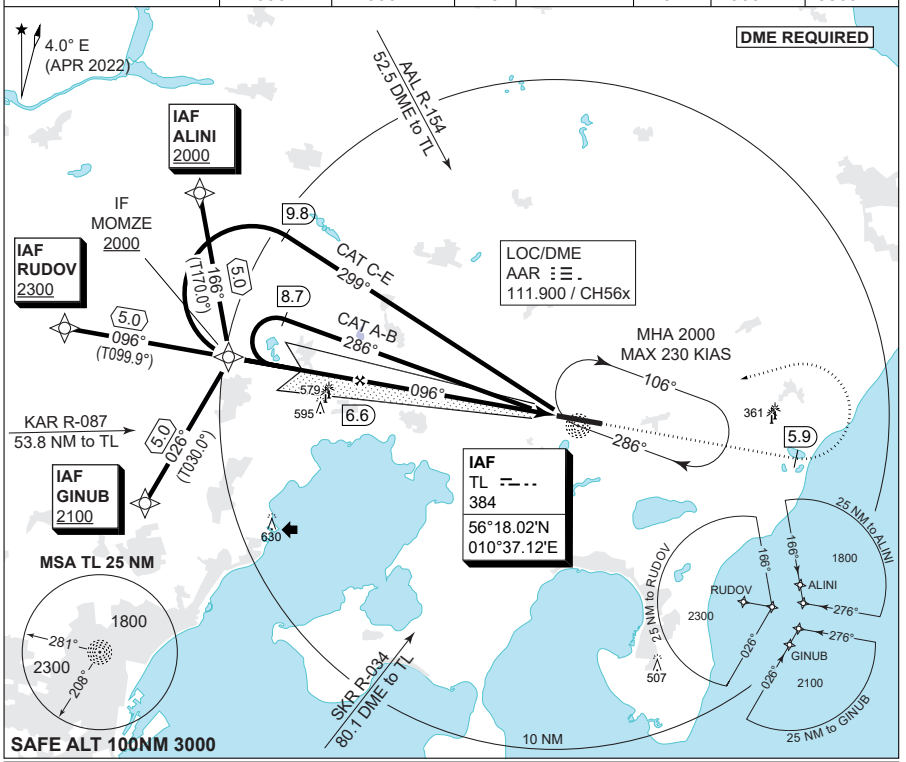
**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 82

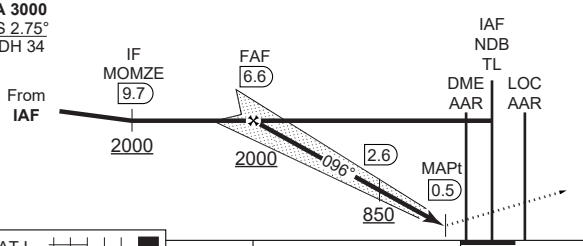
**ILS or LOC RWY 10R**
**AARHUS (EKAH)**

| COPENHAGEN CONTROL | AARHUS ATIS | AARHUS APPROACH | AARHUS TOWER |
|---|---|---|---|
| 313.425 123.725 | 125.155 | 119.280 | 118.530 |

| LOC/DME | APP COURSE | GS INTCPT ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| AAR 111.900/CH 56x | 096° | 2000 FT | 2.75° | See CAT | 81 | 900 M | 8869 FT |




**TA 3000**
GS 2.75°
RDH 34




| CDFA: 2.75° / 4.8% | | | | | |
|---|---|---|---|---|---|
| DME AAR | 6 | 5 | 4 | 3 | 2 |
| DIST THR | 5.9 | 4.9 | 3.9 | 2.9 | 1.9 |
| AL T | 1840 | 1550 | 1260 | 960 | 670 |

**MISSED APPROACH**
Climb on track 096° to 2000 FT.
At DME AAR 5.9 turn left inbound
NDB TL and hold.

CHANGES: ATIS FREQ. CHG.

| MIPS | CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|---|
| | S-ILS 10R | **281** - 550 200 (200-0.8/1.2) | | | | |
| | S-LOC 10R | **480** - 1100 398 (400-1.1/1.8) | | | | |
| | CIRCLING | **570** - 1.5 488 (500-1.5) | **680** - 1.6 598 (600-1.6) | **1060** - 2.4 978 (1000-2.4) | **1180** - 3.6 1098 (1100-3.6) | **1180** - 3.6 1098 (1100-3.6) |

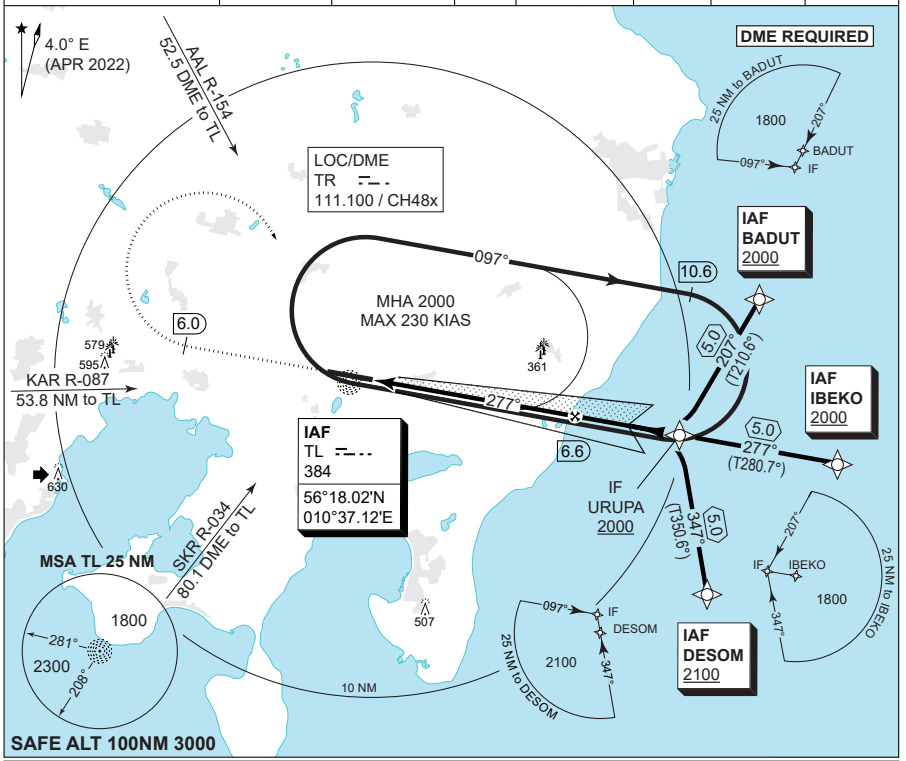
AIR COMMAND DENMARK - MIL AIM 03 OCT 2024

**MIPS** **ILS or LOC RWY 28L (CAT C-E)**

**INSTRUMENT APPROACH CHART** AD ELEV 82 **AARHUS (EKAH)**

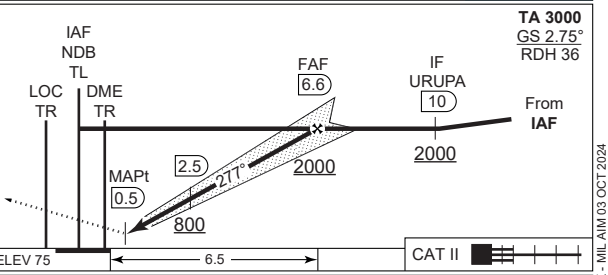
| COPENHAGEN CONTROL | AARHUS ATIS | AARHUS APPROACH | AARHUS TOWER |
|---|---|---|---|
| 313.425 123.725 | 125.155 | 119.280 | 118.530 |

| LOC/DME | APP COURSE | GS INTCPT ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| TR 111.100/CH 48x | 277° | 2000 FT | 2.75° | **275** | 75 | 900 M | 8869 FT |




| CDFA: 2.75° / 4.8% | | | | | |
|---|---|---|---|---|---|
| DME AAR | 2 | 3 | 4 | 5 | 6 |
| DIST THR | 1.9 | 2.9 | 3.9 | 4.9 | 5.9 |
| ALT | 670 | 960 | 1260 | 1550 | 1840 |

**MISSED APPROACH**
Climb on track 276° to 2000 FT.
At DME TR 6.0 turn right inbound
NDB TL and hold.




**TA 3000**
GS 2.75°
RDH 36

| CATEGORY | C | D | E |
|---|---|---|---|
| S-ILS CAT I | **275** - 550 200 (200-0.8/1.2) | | |
| S-ILS CAT II | **RA 99** (DA 175) - 350 100 | | N/A |
| S-LOC 28L | **480** - 1100 398 (400-1.1/1.8) | | |
| CIRCLING | **1060** - 2.4 978 (1000-2.4) | **1180** - 3.6 1098 (1100-3.6) | **1180** - 3.6 1098(1100-3.6) |

CHANGES: ATIS FREQ. CHG.

MIPS

AIR COMMAND DENMARK - MIL AIM 03 OCT 2024

# BILLUND (EKBI)

AERODROME CHART

BILLUND OPS

ILS or LOC Z RWY 09

ILS or LOC Z RWY 27

ILS or LOC Y RWY 09

ILS or LOC Y RWY 27

BILLUND ARRIVAL

BILLUND DEPARTURE

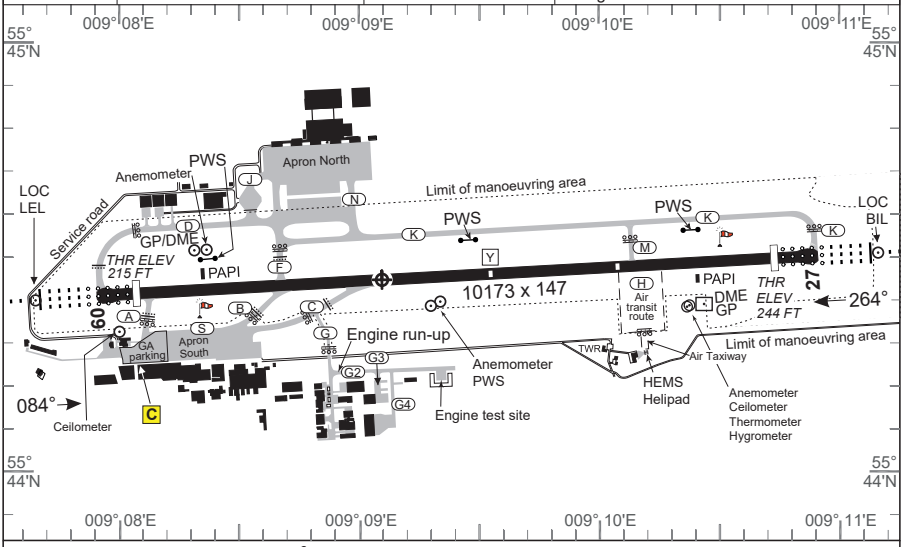
SID RWY 09 (TEXT)

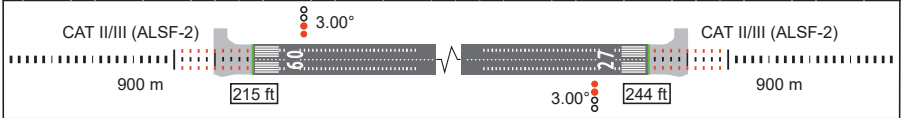
SID RWY 27 (TEXT)

SID RWY 09 (CHART)

SID RWY 27 (CHART)

| BILLUND ATIS (ARR/DEP) | BILLUND TOWER (ARR/DEP) | BILLUND APPROACH | Billund ARO: **131.500** Tel.: +45 76 50 50 50 |
|---|---|---|---|
| **118.780 129.105** | **119.005 129.505** | **127.580** | All departing flights must file a complete or abbreviated flight plan to Billund ARO before taxiing. |
| AD Elev **247** | ARP 55°44.42'N 009°09.11'E | VAR 3.0°E (JUN 2020) | |




| RWY | PCN | DECLARED DISTANCES PSN | TORA | TODA | ASDA | LDA | THR ELEV | RWY LIGHTING THR | PAPI | TDZ | CL | EDGE | END | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09 | 110 F/A/X/T | D | 10173 | 10173 | 10173 | 9681 | 215 | LIH Green | 3° | LIH White | LIH | LIH | LIH Red | 55°44.39'N 009°08.09'E |
| | | A | 9471 | 9471 | 9471 | | | | | | | | | |
| | | B | 7709 | 7709 | 7709 | | | | | | | | | |
| | | F | 7621 | 7621 | 7621 | | | | | | | | | |
| | | C | 6669 | 6669 | 6669 | | | | | | 7200 ft White | 500 ft Red | | |
| 27 | | K | 9681 O/R 10173 | 9681 O/R 10173 | 10173 | 9681 | 244 | LIH Green | 3° | LIH White | 2000 ft Red/white | 7700 ft White | LIH Red | 55°44.47'N 009°10.77'E |
| | | M | 7126 | 7126 | 7618 | | | | | | | | | |
| | | Y | 5088 | 5088 | 5580 | | | | | | 1000 ft Red | 2000 ft Yellow | | |
| | | C | 3438 | 3438 | 3930 | | | | | | | | | |
| | | B | 2273 | 2273 | 2765 | | | | | | | | | |

**Climb out for flights not cleared via an SID** (MAX IAS 250 KT FL 60 and below):

RWY 09: For jet aeroplanes irrespective of weight and for propeller and turbo-propeller aeroplanes with MTOM above 5700kg: Climb on track 084° MAG to INLIS or 1000 FT MSL whichever is later, then turn according to clearance. Minimum climb gradient 3.7% until passing 1000 FT.

RWY 09: For propeller and turbo propeller aeroplanes with MTOM 5700kg or less: Climb on track 084° MAG to 1000 FT MSL, then turn according clearance. Minimum climb gradient 3.7% until passing 1000 FT MSL.

RWY 27: All aeroplanes: Climb on track 264° MAG to DME LEL 1.0 NM or 700 FT MSL, whichever is later, then turn according to clearance.

| MIPS | CIRCLING MINIMA (North of AD only) | | | | |
|---|---|---|---|---|---|
| A | B | C | D | E |
| **800** -1.5 553 (600-1.5) | **820** -1.6 573 (600-1.6) | **1100** -2.4 853 (900-2.4) | **1100** -3.6 853 (900-3.6) | **1200** -3.6 953 (1000-3.6) |

CHANGES: BUILDINGS ADDED & EDITED N OF APRON NORTH.

AIR COMMAND DENMARK - MIL AIM 20 MAR 2025

# BILLUND OPERATIONS

## 1. GROUND HANDLING (FIGHTER AIRCRAFT ONLY)

1.1. Parking iaw. ATC instructions. F-35 expect to be parked on Apron South. F-35 to be parked on concrete only and with enough room to enable onward taxi out to the runway (no towbar available).

1.2. For F-35 JET-A/JET-A1 is characterized as “Restricted Fuel” iaw. FSD. RTB flight to be conducted as direct transit flight back to EKSP. Aircraft to be partially refueled iaw. RTB mission profile.

1.3. Billund Marshallers are familiar with “F-35 Ground Ladder” operation, but it is the pilot’s responsibility to be familiar with, and be able to instruct civilian ground personnel in its operation, from the cockpit.

CHANGES: NEW PAGE. F-35 GROUND HANDLING INSTRUCTION.

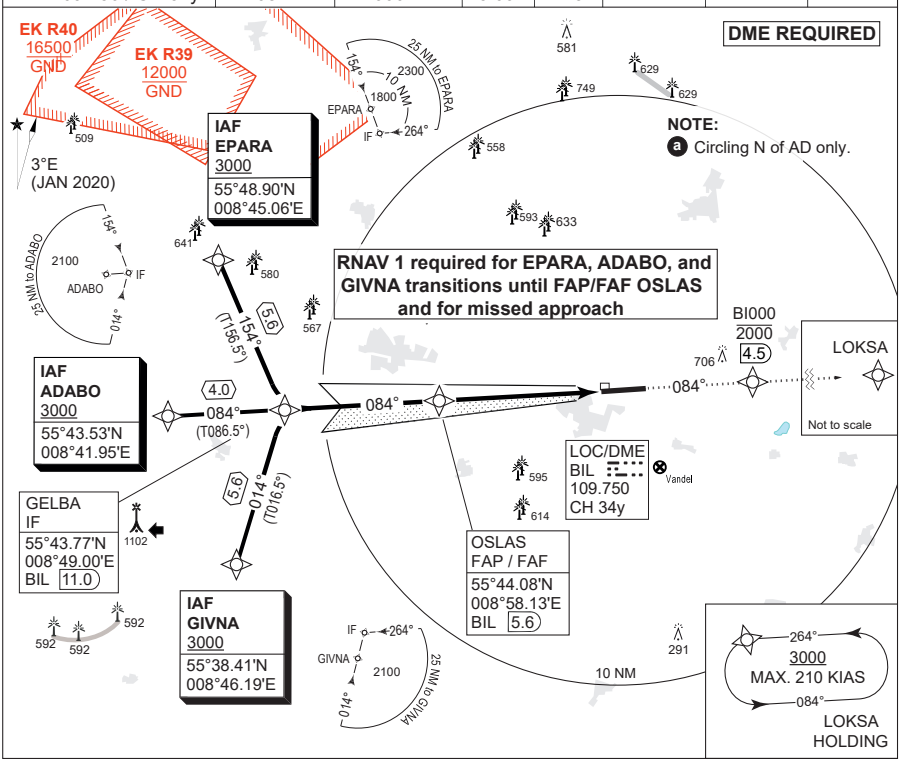
AIR COMMAND DENMARK - MIL AIM 18 APR 2024

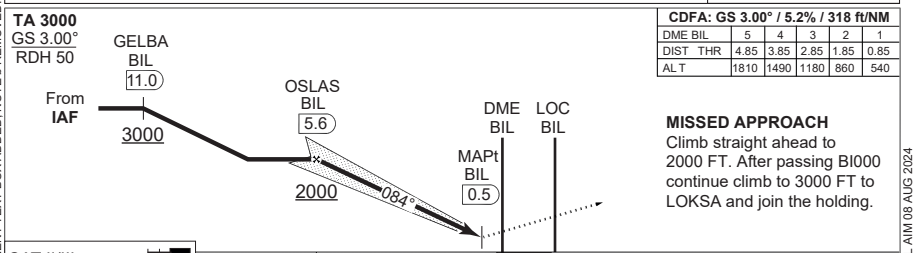
**MIPS**
**INSTRUMENT APPROACH CHART** AD ELEV 247

**ILS or LOC Z RWY 09**
**BILLUND (EKBI)**

| COPENHAGEN CONTROL | BILLUND ATIS (ARR / DEP) | BILLUND APPROACH | BILLUND TOWER (ARR / DEP) |
|---|---|---|---|
| 362.750 136.550 | 118.780 129.105 | 127.580 | 119.005 129.505 |

| LOC / DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| BIL 109.750 / CH 34y | 084° | 2000 FT | 3.00° | **415** | 215 | 900 M | 9681 FT |




| CDFA: GS 3.00° / 5.2% / 318 ft/NM | | | | | |
|---|---|---|---|---|---|
| DME BIL | 5 | 4 | 3 | 2 | 1 |
| DIST THR | 4.85 | 3.85 | 2.85 | 1.85 | 0.85 |
| ALT | 1810 | 1490 | 1180 | 860 | 540 |

**MISSED APPROACH**
Climb straight ahead to 2000 FT. After passing BI000 continue climb to 3000 FT to LOKSA and join the holding.

| | CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|---|
| MIPS | ILS CAT I | **415** - 550 200 (200-0.8/1.2) | | | | **475** - 600 260 (300-0.8/1.3) |
| | ILS CAT II | **RA 102** (DA 315) - 350 100 | | | | N/A |
| | LOC 09 | **640** - 1300 425 (500-1.3/2.0) | | | | |
| | CIRCLING a | **800** - 1.5 553 (600-1.5) | **820** - 1.6 573 (600-1.6) | **1100** - 2.4 853 (900-2.4) | **1100** - 3.6 853 (900-3.6) | **1200** - 3.6 953 (1000-3.6) |

CHANGES: RNAV 1 REQUIREMENT TEXT BOX ADDED, NOTE b REMOVED

AIR COMMAND DENMARK - MIL AIM 08 AUG 2024

**MIPS**

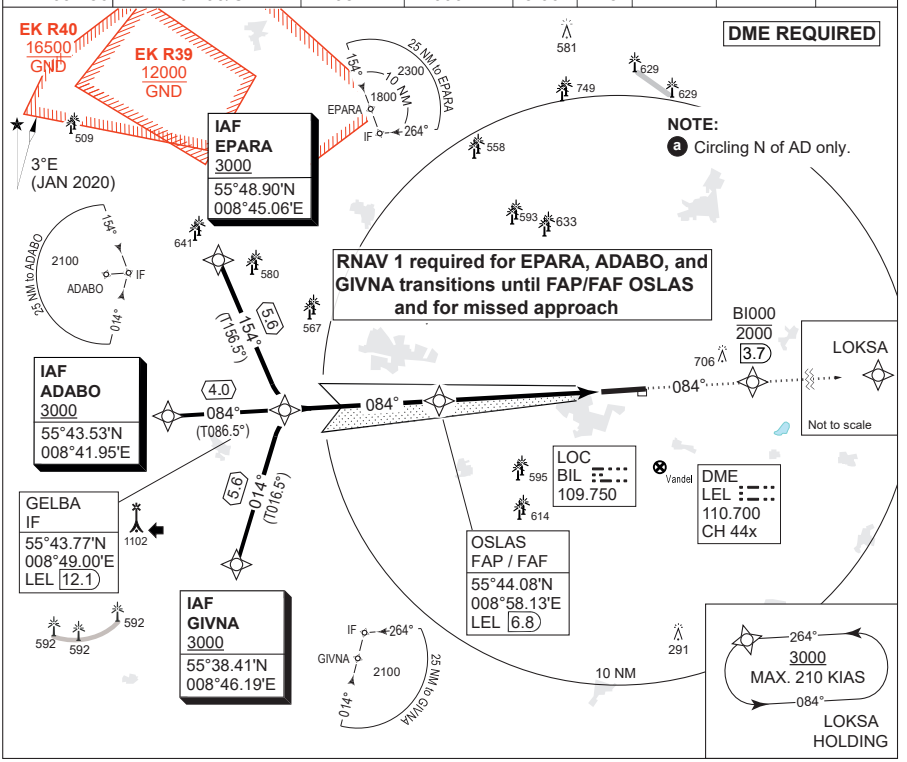
**INSTRUMENT APPROACH CHART** AD ELEV 247

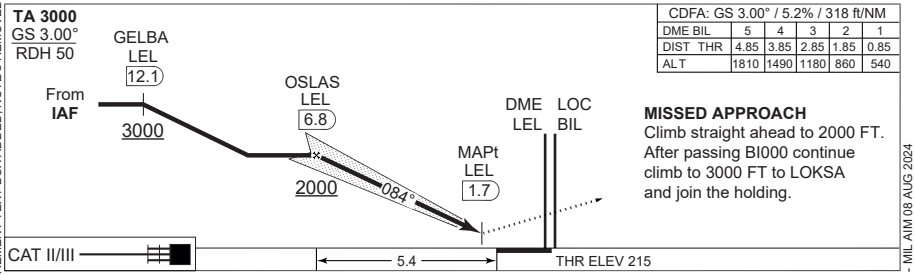
**ILS or LOC Y RWY 09**

**BILLUND (EKBI)**

| COPENHAGEN CONTROL | BILLUND ATIS (ARR / DEP) | BILLUND APPROACH | BILLUND TOWER (ARR / DEP) |
|---|---|---|---|
| 362.750 136.550 | 118.780 129.105 | 127.580 | 119.005 129.505 |

| LOC | DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|---|
| BIL 109.750 | LEL 110.700/CH 44x | 084° | 2000 FT | 3.00° | **415** | 215 | 900 M | 9681 FT |




| CDFA: GS 3.00° / 5.2% / 318 ft/NM | | | | | |
|---|---|---|---|---|---|
| DME BIL | 5 | 4 | 3 | 2 | 1 |
| DIST THR | 4.85 | 3.85 | 2.85 | 1.85 | 0.85 |
| ALT | 1810 | 1490 | 1180 | 860 | 540 |

**MISSED APPROACH**
Climb straight ahead to 2000 FT. After passing BI000 continue climb to 3000 FT to LOKSA and join the holding.

| | CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|---|
| MIPS | ILS CAT I | **415** - 550 200 (200-0.8/1.2) | | | | **475** - 600 260 (300-0.8/1.3) |
| | ILS CAT II | **RA 102** (DA 315) - 350 100 | | | | N/A |
| | LOC 09 | **640** - 1300 425 (500-1.3/2.0) | | | | |
| | CIRCLING a | **800** - 1.5 553 (600-1.5) | **820** - 1.6 573 (600-1.6) | **1100** - 2.4 853 (900-2.4) | **1100** - 3.6 853 (900-3.6) | **1200** - 3.6 953 (1000-3.6) |

CHANGES: RNAV 1 REQUIREMENT TEXT BOX ADDED, NOTE b REMOVED

AIR COMMAND DENMARK - MIL AIM 08 AUG 2024

**MIPS**

**INSTRUMENT APPROACH CHART** AD ELEV 247

**ILS or LOC Z RWY 27**

**BILLUND (EKBI)**

| COPENHAGEN CONTROL | BILLUND ATIS (ARR / DEP) | BILLUND APPROACH | BILLUND TOWER (ARR / DEP) |
|---|---|---|---|
| 362.750 136.550 | 118.780 129.105 | 127.580 | 119.005 129.505 |

| LOC / DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| LEL 110.700 / CH 44x | 264° | 2000 FT | 3.00° | **SEE CAT** | 244 | 900 M | 9681 FT |

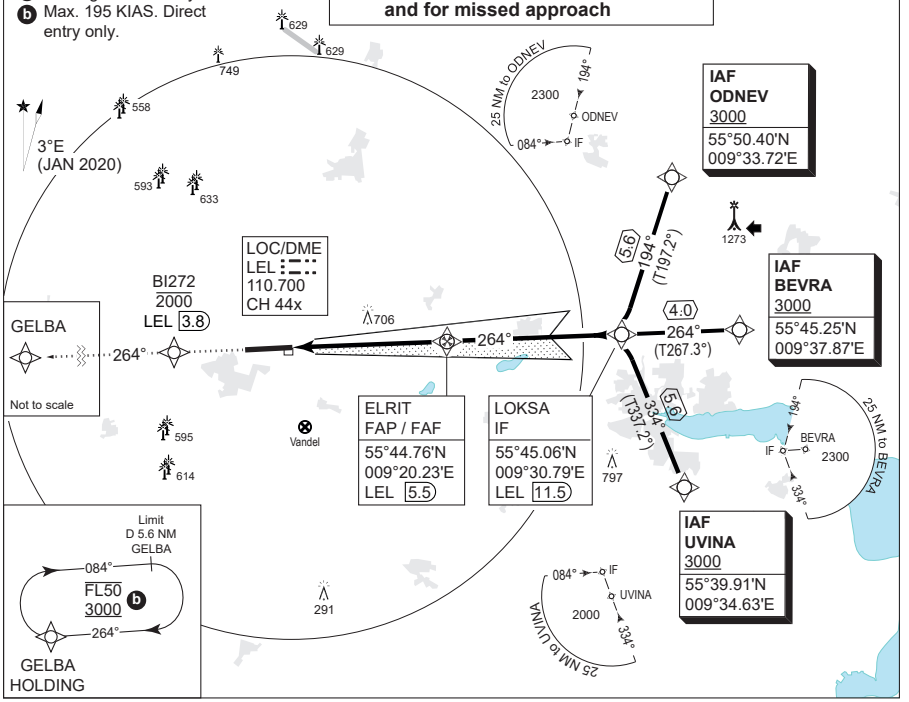
**NOTE:**

ⓐ Circling N of AD only.

ⓑ Max. 195 KIAS. Direct entry only.

**RNAV 1 required for ODNEV, BEVRA, and UVINA transitions until FAP/FAF ELRIT and for missed approach**

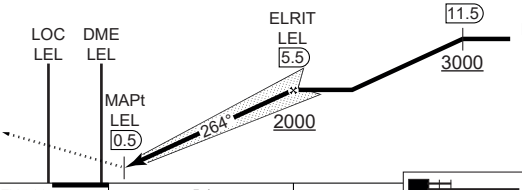
**DME REQUIRED**




| CDFA: GS 3.00° / 5.2% | | | | |
|---|---|---|---|---|
| DME LEL | 2 | 3 | 4 | 5 |
| DIST THR | 1.8 | 2.8 | 3.8 | 4.8 |
| ALT | 870 | 1190 | 1510 | 1830 |

**TA 3000**
GS 3.00°
RDH 49

**MISSED APPROACH**
Climb straight ahead to 2000 FT.
After passing BI272 continue climb to 3000 FT to GELBA and join the holding.




| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| ILS CAT I | **444** - 550 200 (200-0.8/1.2) | | | | **479** - 550 235 (300-0.8/1.2) |
| ILS CAT II | **RA 93** (DA 344) - 350 100 | | | | N/A |
| LOC 27 | **750** - 1600 503 (600-1.6/2.4) | | | | |
| CIRCLING ⓐ | **800** - 1.5 553 (600-1.5) | **820** - 1.6 573 (600-1.6) | **1100** - 2.4 853 (900-2.4) | **1100** - 3.6 853 (900-3.6) | **1200** - 3.6 953 (1000-3.6) |

MIPS

CHANGES: RNAV 1 REQUIREMENT TEXT BOX ADDED. NOTE REMOVED.

AIR COMMAND DENMARK - MIL AIM 08 AUG 2024

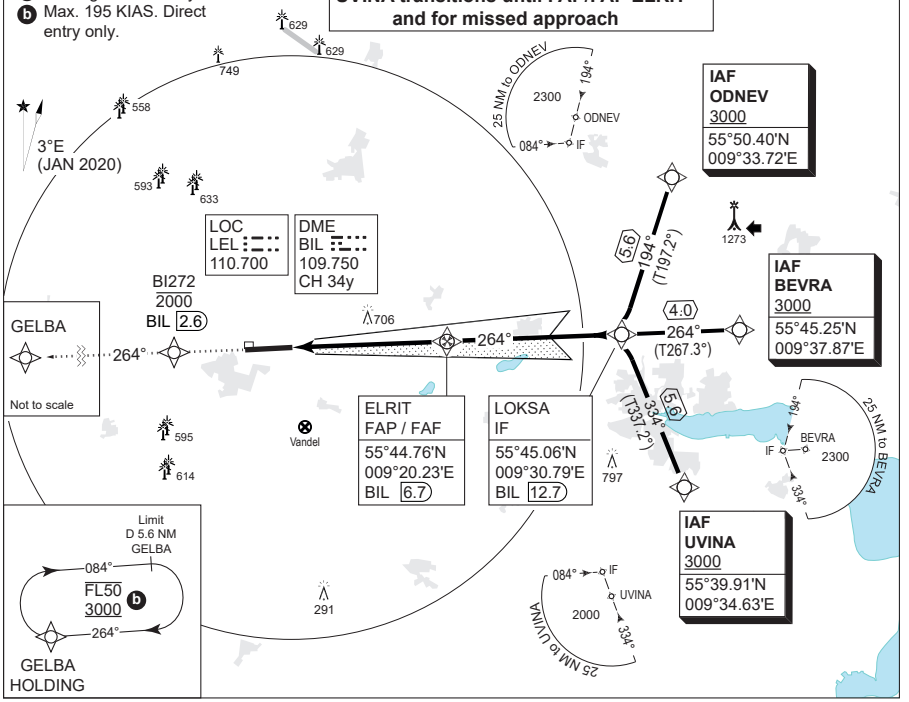
| COPENHAGEN CONTROL | BILLUND ATIS (ARR / DEP) | BILLUND APPROACH | BILLUND TOWER (ARR / DEP) |
|---|---|---|---|
| 362.750 136.550 | 118.780 129.105 | 127.580 | 119.005 129.505 |

| LOC | DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|---|
| LEL 110.700 | BIL 109.750/CH 34y | 264° | 2000 FT | 3.00° | **SEE CAT** | 244 | 900 M | 9681 FT |

**NOTE:**
- (a) Circling N of AD only.
- (b) Max. 195 KIAS. Direct entry only.

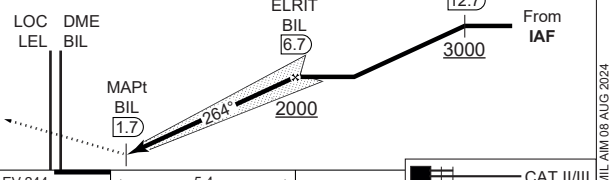
**RNAV 1 required for ODNEV, BEVRA, and UVINA transitions until FAP/FAF ELRIT and for missed approach**

**DME REQUIRED**




| CDFA: GS 3.00° / 5.2% | | | | |
|---|---|---|---|---|
| DME BIL | 3 | 4 | 5 | 6 |
| DIST THR | 1.6 | 2.6 | 3.6 | 4.6 |
| ALT | 815 | 1130 | 1450 | 1770 |

**MISSED APPROACH**
Climb straight ahead to 2000 FT. After passing BI272 continue climb to 3000 FT to GELBA and join the holding.




| | CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|---|
| MIPS | ILS CAT I | **444** - 550 200 (200-0.8/1.2) | | | | **479** - 550 235 (300-0.8/1.2) |
| | ILS CAT II | **RA 93** (DA 344) - 350 100 | | | | N/A |
| | LOC 27 | **750** - 1600 503 (600-1.6/2.4) | | | | |
| | CIRCLING (a) | **800** - 1.5 553 (600-1.5) | **820** - 1.6 573 (600-1.6) | **1100** - 2.4 853 (900-2.4) | **1100** - 3.6 853 (900-3.6) | **1200** - 3.6 953 (1000-3.6) |

CHANGES: RNAV I REQUIREMENT TEXT BOX ADDED, NOTE REMOVED.
AIR COMMAND DENMARK - MIL AIM 08 AUG 2024

## BILLUND ARRIVAL

Aircraft will normally be cleared by ACC KØBENHAVN to LOKSA or GELBA.

At first contact with BILLUND APPROACH state type of aircraft.

Speed limit: FL 60 and below: MAX IAS 250KT.

**Radio communications failure.**
Navigations aids designated for radio communication failure during IMC for arriving aircraft are:

- Fix OSLAS when RWY 09 is expected runway in use, and
- Fix ELRIT when RWY 27 is expected runway in use.

**Precision approach. Category II/III operations.**
The operations are subject to the following procedures and conditions:

a. ATC procedures.
The minimum distance between an aircraft on final approach on a CAT II / III ILS approach and any other preceding aircraft will for CAT II not be less than 5 NM and for CAT III not less than 8 NM. The separation must be established at the latest when preceding aircraft passes THR. Departing aircraft must have commenced take-off run, before arriving aircraft has left 2000 FT on final approach.

b. Pilot procedures.
Pilots who intend to fly a CAT II / III ILS approach are to use the following phrase: "Request Category II (or III) ILS approach runway XX (mention runway number)" Above mentioned request shall be made to COPENHAGEN CONTROL and confirmed on first contact with BILLUND APPROACH.

c. During final approach ATC will inform the pilot of following:
Change to secondary power supply for electronic and visual aids, if the aircraft has passed OSLAS BIL 5.6 NM for RWY 09 or ELRIT LEL 5.5 NM for RWY 27.

**Reverse thrust.**
Use of more than idle reverse thrust is allowed only for safety reasons.
Note: With respect to propeller and turboprop aeroplanes idle reverse refers to propeller in beta range and engine at idle power.

CHANGES: EDITORIAL.
AIR COMMAND DENMARK - MIL AIM 18 APR 2024

# STANDARD INSTRUMENT DEPARTURE (SID) - RWY 09/27

Squawk: When instructed for line-up, squawk assigned SSR code.

Communication: Unless otherwise instructed remain on TWR FREQ until passing 1500 FT, then contact BILLUND APPROACH on 127.580 MHZ.

**1. IFR DEPARTURE**

1.1 Departing traffic shall contact TWR on 129.505 prior to TOBT (Target Off Block Time) in order to obtain ATC clearance. Clearance is available from EOBT -30 min. At initial contact aircraft type and stand number shall be stated.
When RWY 09 is in use state preferred take-off position.

1.2 Standard Instrument Departures (SID):
Departing aircraft certified for P-RNAV operations will be assigned a PRNAV SID.
Aircraft not certified for P-RNAV operations will be assigned a detailed departure clearance.
Clearance will be issued only when radar service is available.
Alternate SIDs ASKOV and GOKIM will be issued on ATC discretion.

1.3 If unable to follow P-RNAV SID, state inability at first contact with TWR to obtain alternate clearance.

1.4 Climb out for flights not cleared via an SID:

MAX IAS 250 KT FL60 and below.

RWY 09: For jet aeroplanes irrespective of weight and for propeller and turboprop aeroplanes with MTOM above 5700 kg: Climb on track 084° MAG to INLIS or 1000 FT MSL whichever is later, then turn according to clearance. Minimum climb gradient 3.7% until passing 1000 FT MSL.
RWY 09: For propeller and turboprop aeroplanes with MTOM 5700 kg or less: Climb on track 084° MAG to 1000 FT MSL, then turn according to clearance. Minimum climb gradient 3.7% until passing 1000 FT MSL.
RWY 27: All aeroplanes: Climb on track 264° MAG to DME LEL 1.0 NM or 700 FT MSL, whichever is later, then turn according to clearance.

1.5 Aircraft requesting cruising level at or above FL 250 in HANNOVER UIR are advised to arrange the climb to be at or above FL 250 within 45 NM from EKBI. If unable advise BILLUND TOWER upon clearance request.

*cont...*

CHANGES: EDITORIAL.
AIR COMMAND DENMARK - MIL AIM 18 APR 2024

## STANDARD INSTRUMENT DEPARTURE (SID) - RWY 09/27

1.6 Flight plan for international flights shall be filed via one of the SID termination points (RERPA, INTET, ABINO, RIDSI, ALS, MIKRO or BAMPI).

For BAMPI SID the following compulsory routing after BAMPI shall be included in the flight plan:

- Traffic via P992: BAMPI - P60 - NARBA - P992
- Traffic via P619: BAMPI - P60 - NAVIK - P619
- Traffic via P613: BAMPI - P60 - NUGLO - P613
- Traffic via L983: BAMPI - P60 - AMRAM - L983
- Traffic via N866: BAMPI - P60 - AMRAM - N866

1.7 Flight plan for flights with destination within COPENHAGEN AREA shall be filed via ABINO. Flight plan for other domestic flights may be filed DCT.

CHANGES: EDITORIAL.
AIR COMMAND DENMARK - MIL AIM 18 APR 2024

| Designator | Route (Tracks are magnetic) | After take off | | |
|---|---|---|---|---|
| | | Climb gradient | Climb to | Contact |
| **RERPA 2B** | On track 084° to 1000 FT- Left turn BI367 - RERPA | MIN due to obstacle: 3.7% (2.1°) to 1000 FT | FL 60 (or requested level if lower). | Remain on TWR FREQ until 1500 FT. Then contact Billund Approach 127.580 MHZ |
| **INTET 2B** | On track 084° to 1000FT- Left turn INTET | | | |
| **ABINO 6B** | On track 084° to 1000 FT - Left turn ABINO | | | |
| **RIDSI 7B** | ODFEX - Right turn RIDSI (No turn below 2000 FT) | | | |
| **ALS 6B** | ODFEX - Right turn ALS (No turn below 2000 FT) | | | |
| **MIKRO 5B** | ODFEX - Right turn MIKRO (No turn below 2000 FT) | | | |
| **BAMPI 5B** | On track 084° to 1000 FT - Left turn BI373 - BI372 - BAMPI | | | |
| **GOKIM 4B*** | ODFEX at 2000 FT or below - GOKIM | | FL 80 (or req. level if lower) | |

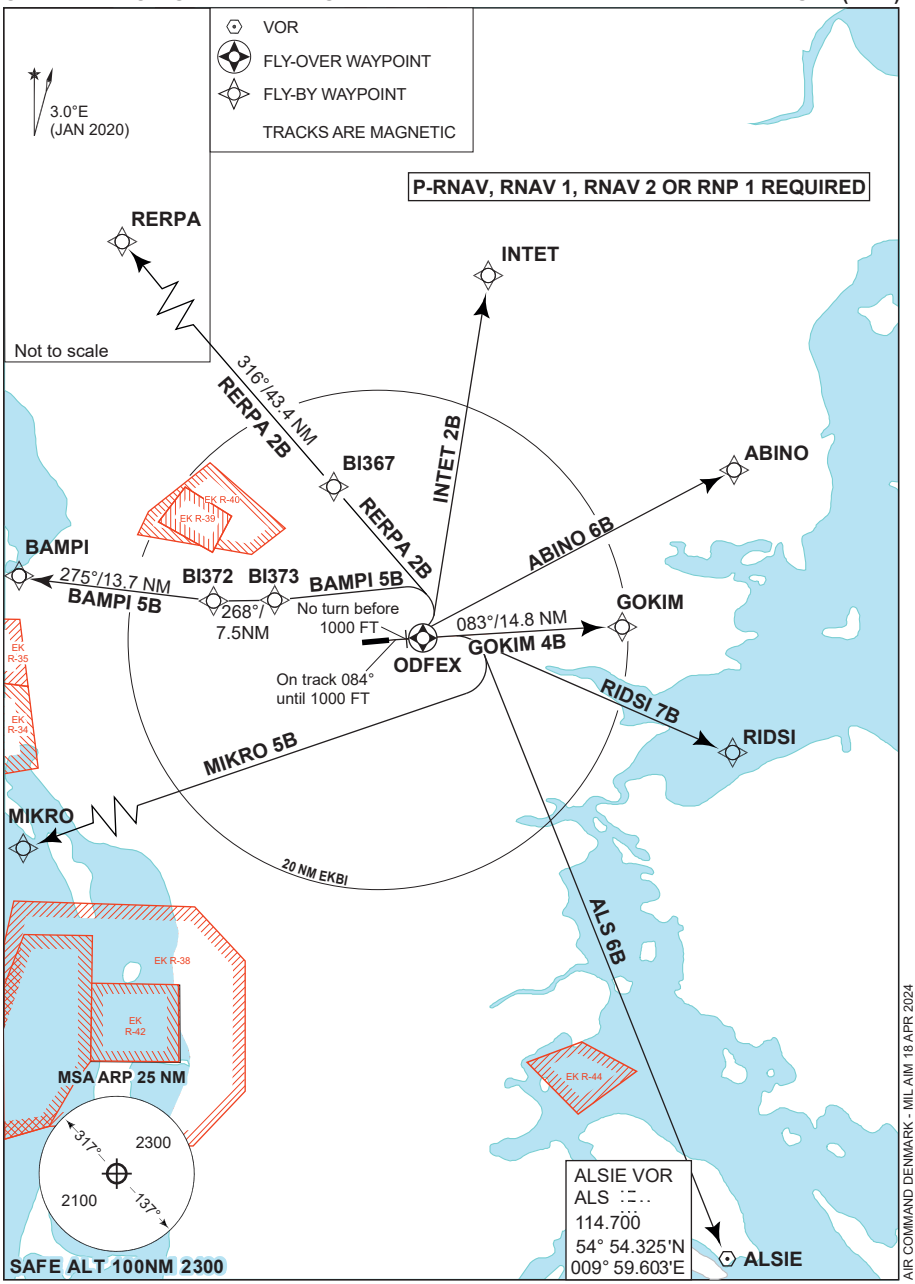
**P-RNAV, RNAV 1, RNAV 2 or RNP 1 required**

**Squawk:** When instructed for line-up, squawk assigned SSR-code.
**Radar Vectoring:** Radar vectoring will normally be provided by BILLUND APPROACH to expedite traffic.
**Speed limit:** FL 60 and below: MAX IAS 250 KT.
**COM failure on BAMPI SID:** Maintain FL60 or last assigned level until 10 NM after BAMPI.
**Non P-RNAV equipped acft:** At first contact with TWR state inability to follow SID. Expect departure instructions by TWR.
Note: Noise limitations listed in AIP Denmark, chapter 21 "Noise Abatement Provisions", paragraph 2.2.
**RMK:** * GOKIM 4B SID is not flightplanable but only available on ATC discretion.

| Waypoint | Latitude | Longtitude |
|---|---|---|
| ABINO | 55° 58.100'N | 009° 59.667'E |
| BAMPI | 55° 50.574'N | 008° 16.177'E |
| BI367 | 55° 56.384'N | 009° 02.976'E |
| BI372 | 55° 48.638'N | 008° 40.192'E |
| BI373 | 55° 48.540'N | 008° 53.524'E |
| ODFEX | 55° 44.622'N | 009° 15.743'E |
| GOKIM | 55° 45.527'N | 009° 41.977'E |
| INTET | 56° 13.578'N | 009° 24.685'E |
| MIKRO | 55° 24.905'N | 008° 09.983'E |
| RERPA | 56° 28.700'N | 008° 11.250'E |
| RIDSI | 55° 35.500'N | 009° 59.650'E |

CHANGES: EDITORIAL.
AIR COMMAND DENMARK - MIL AIM 18 APR 2024

## STANDARD INSTRUMENT DEPARTURE CHART




CHANGES: SAFE ALT., EDITORIAL.

AIR COMMAND DENMARK - MIL AIM 18 APR 2024

| Designator | Route (Tracks are magnetic) | After take-off | | |
|---|---|---|---|---|
| | | Remark | Climb to | Contact |
| **RERPA 2A** | On track 264° to 700 FT - right turn BI367 - RERPA | No turn before DME LEL 1.0 NM | FL 60 (or requested level if lower) | Remain on TWR FREQ until1500 FT. Then contact Billund Approach, 127.580 MHZ |
| **INTET 2A** | On track 264° to 700 FT - right turn BI367 - INTET | | | |
| **ABINO 6A** | On track 264° to 700 FT - right turn BI364 - ABINO | | | |
| **RIDSI 6A** | On track 264° to 700 FT - right turn BI364 - RIDSI | | | |
| **ALS 6A** | On track 264° to 700 FT - right turn BI371 - left turn ALS | | | |
| **MIKRO 5A** | On track 264° to 700 FT - right turn BI371 - left turn MIKRO | | | |
| **BAMPI 5A** | On track 264° to 700 FT - right turn BI371 - left turn BI372 - BAMPI | | | |
| **ASKOV 4A*** | On track 264° to 700 FT - right turn BI371 at 2000 FT or below - left turn ASKOV | | FL 80 (or req. level if lower) | |

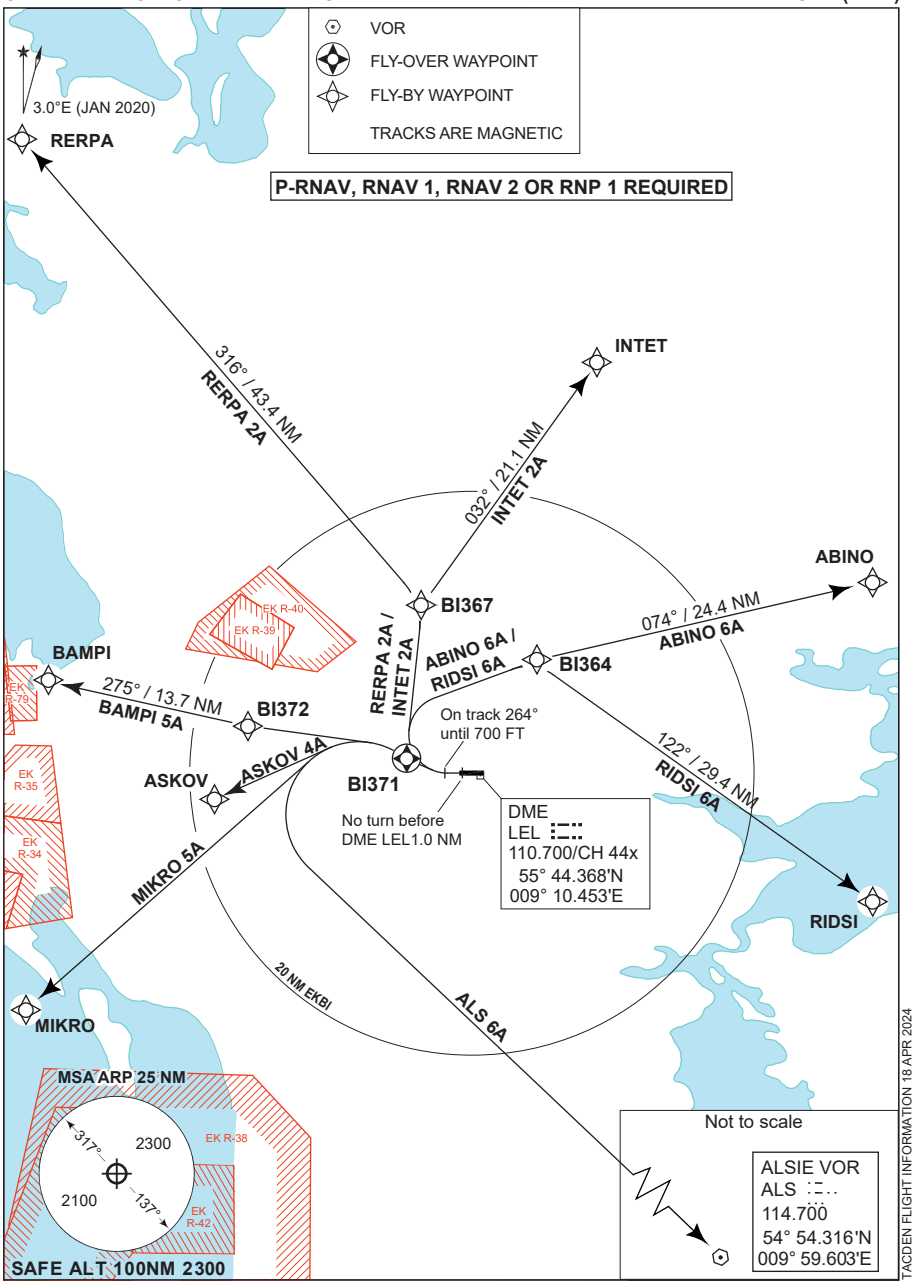
**P-RNAV, RNAV 1, RNAV 2 or RNP 1 required**

**Squawk:** When instructed for line-up, squawk assigned SSR-code.
**Radar Vectoring:** Radar vectoring will normally be provided by BILLUND APPROACH to expedite traffic.
**Speed limit:** FL 60 and below: MAX IAS 250 KT.
**COM failure on BAMPI SID:** Maintain FL60 or last assigned level until 10 NM after BAMPI.
**Non P-RNAV equipped acft:** At first contact with TWR state inability to follow SID.
Expect departure instructions by TWR.
Note: Noise limitations listed in AIP Denmark, chapter 21 "Noise Abatement Provisions", paragraph 2.2.
**RMK:** * ASKOV 4A SID is not flightplanable but only available on ATC discretion.

| Waypoint | Latitude | Longtitude |
|---|---|---|
| ABINO | 55° 58.100'N | 009° 59.667'E |
| ASKOV | 55° 42.393'N | 008° 37.257'E |
| BAMPI | 55° 50.574'N | 008° 16.177'E |
| BI364 | 55° 52.612'N | 009° 17.499'E |
| BI367 | 55° 56.385'N | 009° 02.977'E |
| BI371 | 55° 47.228'N | 009° 00.712'E |
| BI372 | 55° 48.644'N | 008° 40.192'E |
| INTET | 56° 13.578'N | 009° 24.685'E |
| MIKRO | 55° 24.905'N | 008° 09.983'E |
| RERPA | 56° 28.700'N | 008° 11.250'E |
| RIDSI | 55° 35.500'N | 009° 59.650'E |

CHANGES: EDITORIAL.
AIR COMMAND DENMARK - MIL AIM 18 APR 2024

STANDARD INSTRUMENT DEPARTURE CHART




CHANGES: EDITORIAL

TACDEN FLIGHT INFORMATION 18 APR 2024

# ESBJERG (EKEB)

AERODROME CHART

ILS or LOC Z RWY 08

ILS or LOC Z RWY 26

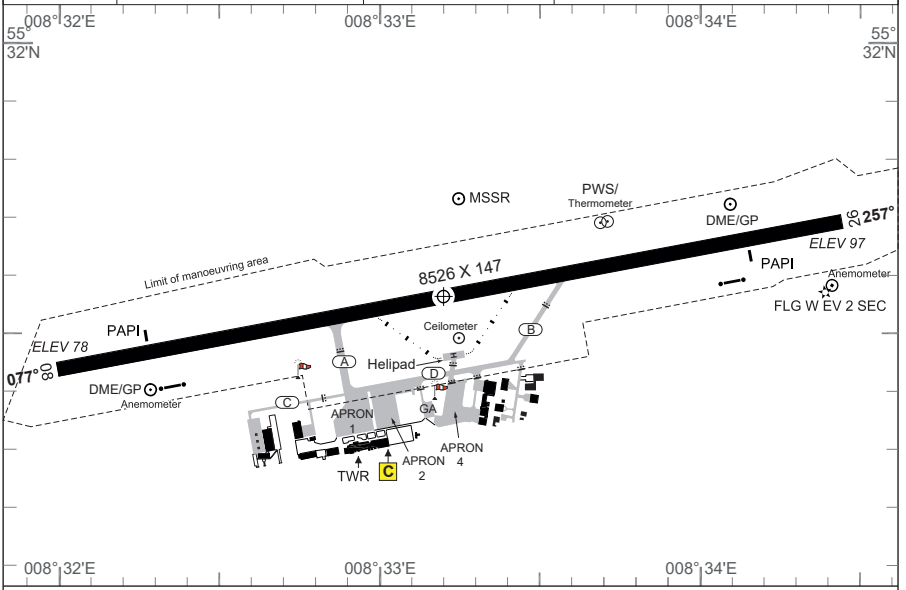
ILS or LOC Y RWY 08

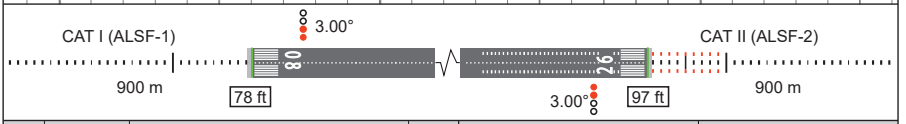
ILS or LOC Y RWY 26

ESBJERG INFORMATION
**120.155**

| AD Elev **97** | ARP 55°31.56'N 008°33.20'E | VAR 3.0°E (JAN 2020) |
|---|---|---|

Esbjerg Airport: +45 76 16 90 00
Briefing EKCH: +45 32 47 82 72




| RWY | PCN | DECLARED DISTANCES PSN | TORA | TODA | ASDA | LDA | THR ELEV | RWY LIGHTING THR | PAPI | TDZ | CL | EDGE | END | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08 | 60 F/A/W/T | | 8526 | 8526 | 8526 | 8526 | 79 | LIH | 3.00° | | LIH | LIH | LIH | 55°31.43'N 008°32.01'E |
| | | A | 5479 | 5479 | 5479 | | | | | | | | | |
| | | B | 3021 | 3021 | 3021 | | | | | | | | | |
| 26 | | | 8526 | 8526 | 8526 | 8526 | 97 | LIH | 3.00° | LIH | LIH | LIH | LIH | 55°31.69'N 008°34.44'E |
| | | B | 5410 | 5410 | 5410 | | | | | | | | | |
| | | A | 2969 | 2969 | 2969 | | | | | | | | | |

Parachuting may take place.

Flight procedures:
- Aircraft will normally be cleared by ACC Copenhagen to TOMMO HLDG.
- Navigation fix designated for radio communication failure during IMC is: TOMMO.

- Omnidirectional departures:
RWY 08/26: Climb straight ahead to at least 500 FT AMSL before turn is commenced.

**MIPS** CIRCLING MINIMA (Cat. C - E north of AD only)

| A | B | C | D | E |
|---|---|---|---|---|
| **590** -1.5 493 (500-1.5) | **600** -1.6 503 (600-1.6) | **840** -2.4 743 (800-2.4) | **990** -3.6 893 (900-3.6) | **1090** -3.6 993 (1000-3.6) |

CHANGES: ARRIVAL & COMMUNICATON FAILURE PROCEDURES CHANGED. CIRCLING MINIMA CHANGED.

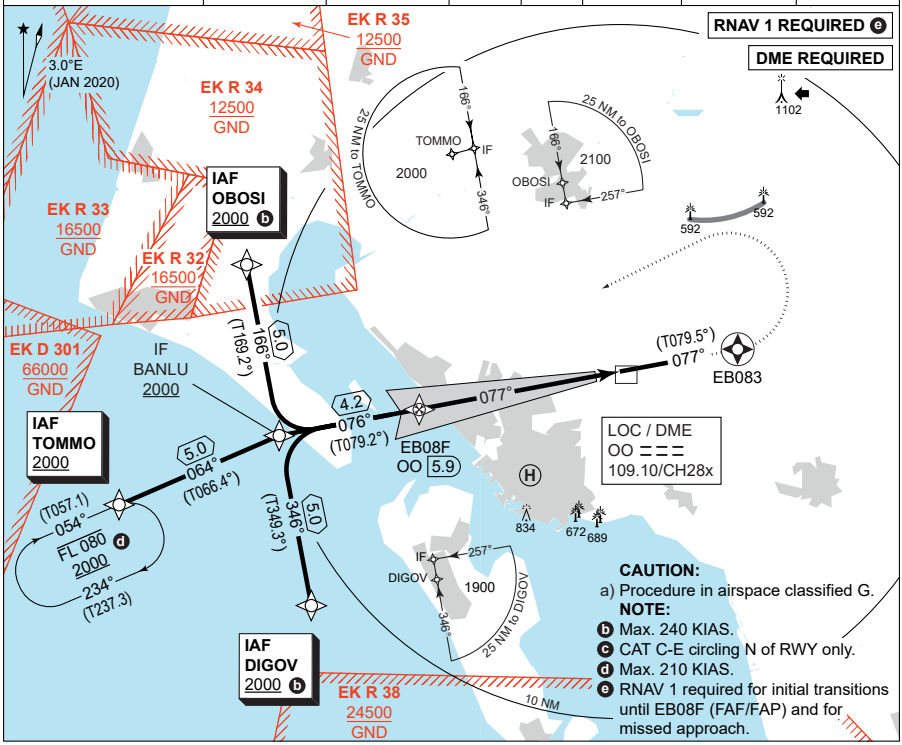
AIR COMMAND DENMARK - MIL AIM 20 MAR 2025

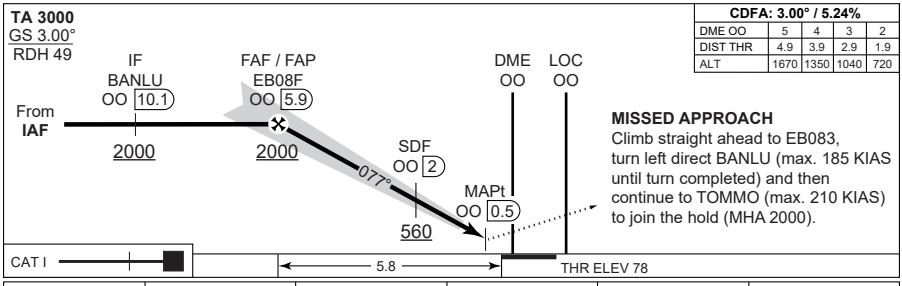
**MIPS**

**INSTRUMENT APPROACH CHART** | AD ELEV 97 | **ILS or LOC Z RWY 08 ESBJERG (EKEB)**

| COPENHAGEN CONTROL | BILLUND ATIS | BILLUND APPROACH | ESBJERG INFORMATION |
|---|---|---|---|
| 362.750 136.555 | 118.780 | 127.580 | 120.155 |

| LOC/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| OO 109.10 / CH28x | 077° | 2000 FT | 3.00° | **278** | 78 | 900 M | 8526 FT |




| CDFA: 3.00° / 5.24% | | | | |
|---|---|---|---|---|
| DME OO | 5 | 4 | 3 | 2 |
| DIST THR | 4.9 | 3.9 | 2.9 | 1.9 |
| ALT | 1670 | 1350 | 1040 | 720 |

| MIPS | CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|---|
| | S-ILS CAT I | **278** - 550 200 (200-0.8/1.2) | | | | |
| | S-LOC 08 | **460** - 1100 382 (400-1.1/1.8) | | | | |
| | CIRCLING c | **590** -1.5 493 (500-1.5) | **600** -1.6 503 (600-1.6) | **840** -2.4 743 (800-2.4) | **990** -3.6 893 (900-3.6) | **1090** -3.6 993 1000-3.6) |

CHANGES: PROCEDURE COMPLETELY REVISED.

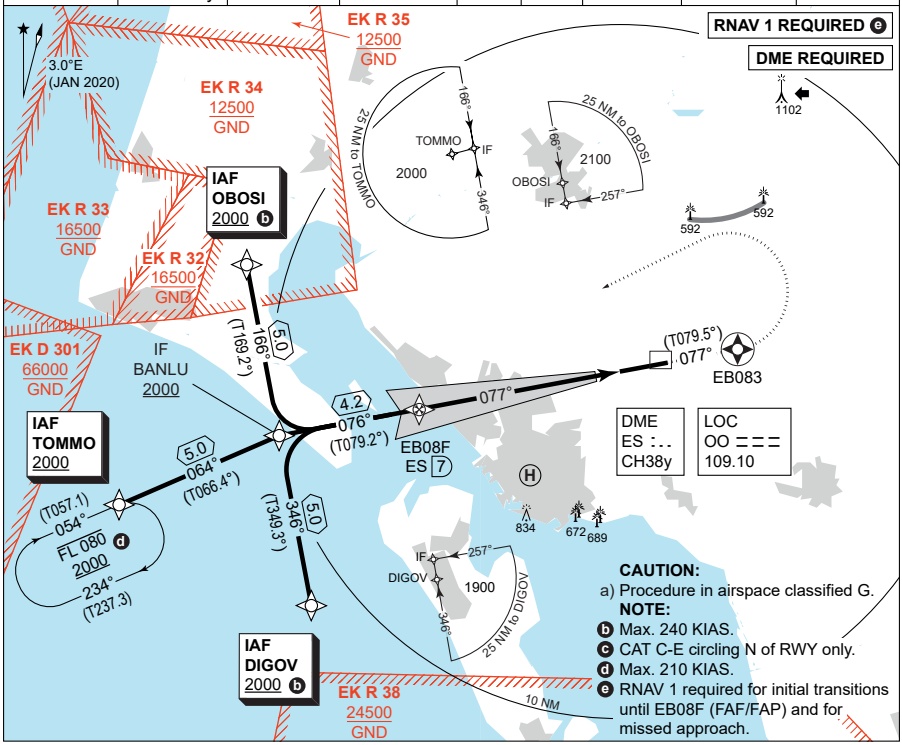
AIR COMMAND DENMARK - MIL AIM 20 MAR 2025

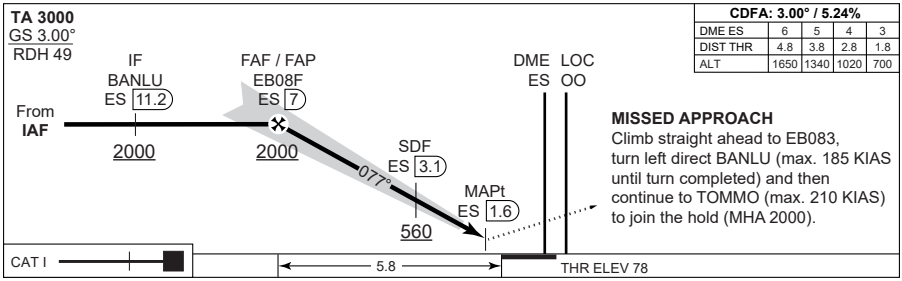
**MIPS**

**INSTRUMENT APPROACH CHART** | AD ELEV 97 | **ILS or LOC Y RWY 08 ESBJERG (EKEB)**

| COPENHAGEN CONTROL | BILLUND ATIS | BILLUND APPROACH | ESBJERG INFORMATION |
|---|---|---|---|
| 362.750 136.555 | 118.780 | 127.580 | 120.155 |

| LOC | DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|---|
| OO 109.10 | ES CH38y | 077° | 2000 FT | 3.00° | **278** | 78 | 900 M | 8526 FT |




| CDFA: 3.00° / 5.24% | | | | |
|---|---|---|---|---|
| DME ES | 6 | 5 | 4 | 3 |
| DIST THR | 4.8 | 3.8 | 2.8 | 1.8 |
| ALT | 1650 | 1340 | 1020 | 700 |

| MIPS | CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|---|
| | S-ILS CAT I | **278** - 550 200 (200-0.8/1.2) | | | | |
| | S-LOC 08 | **460** - 1100 382 (400-1.1/1.8) | | | | |
| | CIRCLING c | **590** -1.5 493 (500-1.5) | **600** -1.6 503 (600-1.6) | **840** -2.4 743 (800-2.4) | **990** -3.6 893 (900-3.6) | **1090** -3.6 993 1000-3.6) |

CHANGES: PROCEDURE COMPLETELY REVISED.

AIR COMMAND DENMARK - MIL AIM 20 MAR 2025

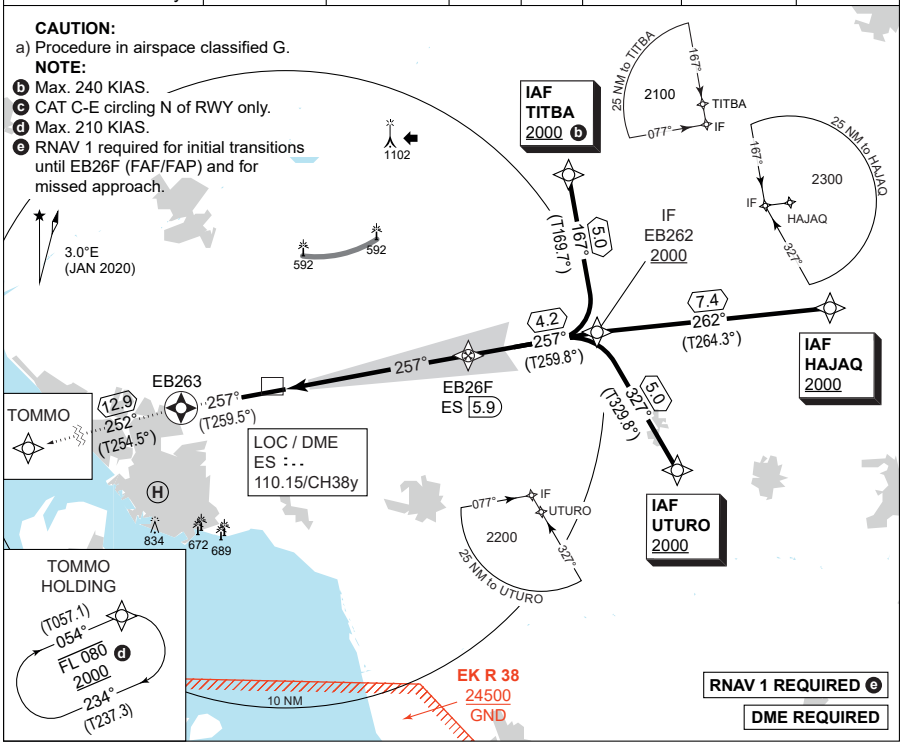
**ILS or LOC Y RWY 08** | 55°31.56'N 008°33.20'E | **ESBJERG (EKEB)**

**MIPS**
**INSTRUMENT APPROACH CHART** AD ELEV 97

**ILS or LOC Z RWY 26**
**ESBJERG (EKEB)**

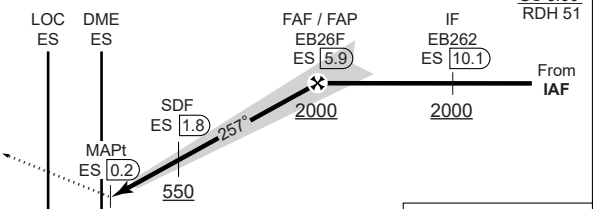
| COPENHAGEN CONTROL | BILLUND ATIS | BILLUND APPROACH | ESBJERG INFORMATION |
|---|---|---|---|
| 362.750 136.555 | 118.780 | 127.580 | 120.155 |

| LOC/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| ES 110.15 / CH38y | 257° | 2000 FT | 3.00° | **297** | 97 | 900 M | 8526 FT |




| CDFA: 3.00° / 5.24% | | | | |
|---|---|---|---|---|
| DME ES | 2 | 3 | 4 | 5 |
| DIST THR | 1.8 | 2.8 | 3.8 | 4.8 |
| ALT | 730 | 1050 | 1360 | 1680 |

**TA 3000**
GS 3.00°
RDH 51




**MISSED APPROACH**
Climb straight ahead to EB263, turn left to TOMMO to join the hold (MHA 2000).

| | CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|---|
| MIPS | S-ILS CAT I | **297** - 550 200 (200-0.8/1.2) | | | | |
| | S-LOC 26 | **430** - 800 333 (400-0.8/1.5) | | | | |
| | CIRCLING c | **590** -1.5 493 (500-1.5) | **600** -1.6 503 (600-1.6) | **840** -2.4 743 (800-2.4) | **990** -3.6 893 (900-3.6) | **1090** -3.6 993 1000-3.6) |

CHANGES: PROCEDURE COMPLETELY REVISED.

AIR COMMAND DENMARK - MIL AIM 20 MAR 2025

**ILS or LOC Z RWY 26** **ESBJERG (EKEB)**

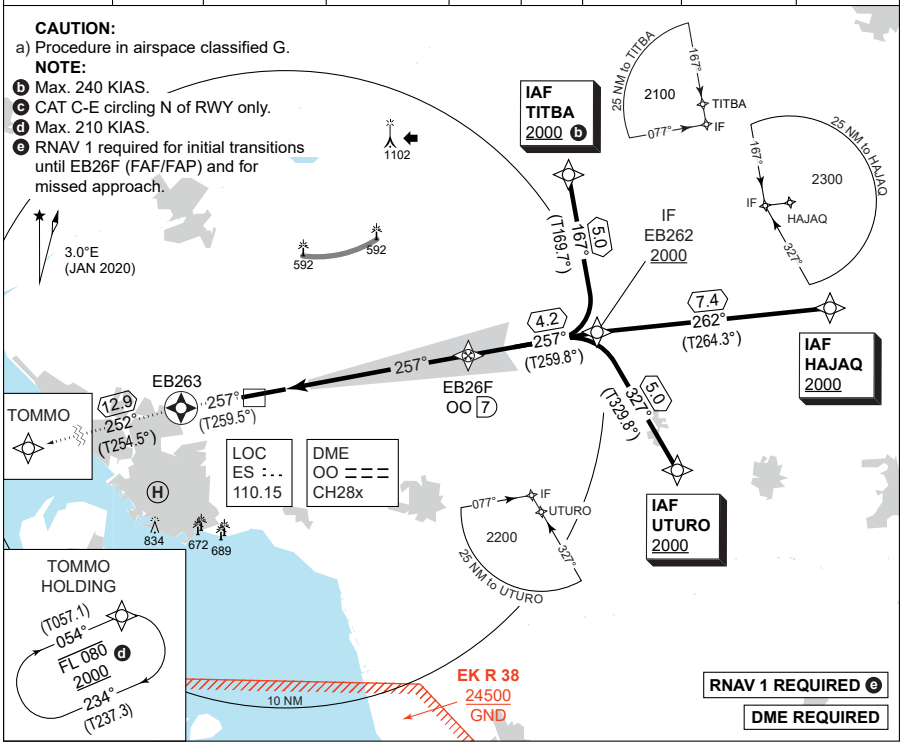
55°31.56'N
008°33.20'E

**MIPS**
**INSTRUMENT APPROACH CHART** AD ELEV 97

**ILS or LOC Y RWY 26**
**ESBJERG (EKEB)**

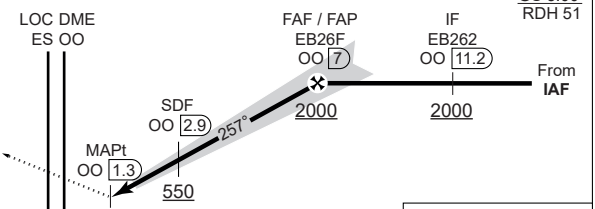
| COPENHAGEN CONTROL | BILLUND ATIS | BILLUND APPROACH | ESBJERG INFORMATION |
|---|---|---|---|
| 362.750 136.555 | 118.780 | 127.580 | 120.155 |

| LOC | DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|---|
| ES 110.15 | OO 28x | 257° | 2000 FT | 3.00° | **297** | 97 | 900 M | 8526 FT |




| CDFA: 3.00° / 5.24% | | | | |
|---|---|---|---|---|
| DME OO | 3 | 4 | 5 | 6 |
| DIST THR | 1.8 | 2.8 | 3.8 | 4.8 |
| ALT | 710 | 1030 | 1350 | 1660 |

**TA 3000**
GS 3.00°
RDH 51




**MISSED APPROACH**
Climb straight ahead to EB263,
turn left to TOMMO
to join the hold (MHA 2000).

| MIPS | CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|---|
| | S-ILS CAT I | **297** - 550 200 (200-0.8/1.2) | | | | |
| | S-LOC 26 | **430** - 800 333 (400-0.8/1.5) | | | | |
| | CIRCLING c | **590** -1.5 493 (500-1.5) | **600** -1.6 503 (600-1.6) | **840** -2.4 743 (800-2.4) | **990** -3.6 893 (900-3.6) | **1090** -3.6 993 1000-3.6) |

CHANGES: PROCEDURE COMPLETELY REVISED.

AIR COMMAND DENMARK - MIL AIM 20 MAR 2025

**ILS or LOC Y RWY 26** **ESBJERG (EKEB)**

55°31.56'N
008°33.20'E

# KARUP (EKKA)

AERODROME CHART

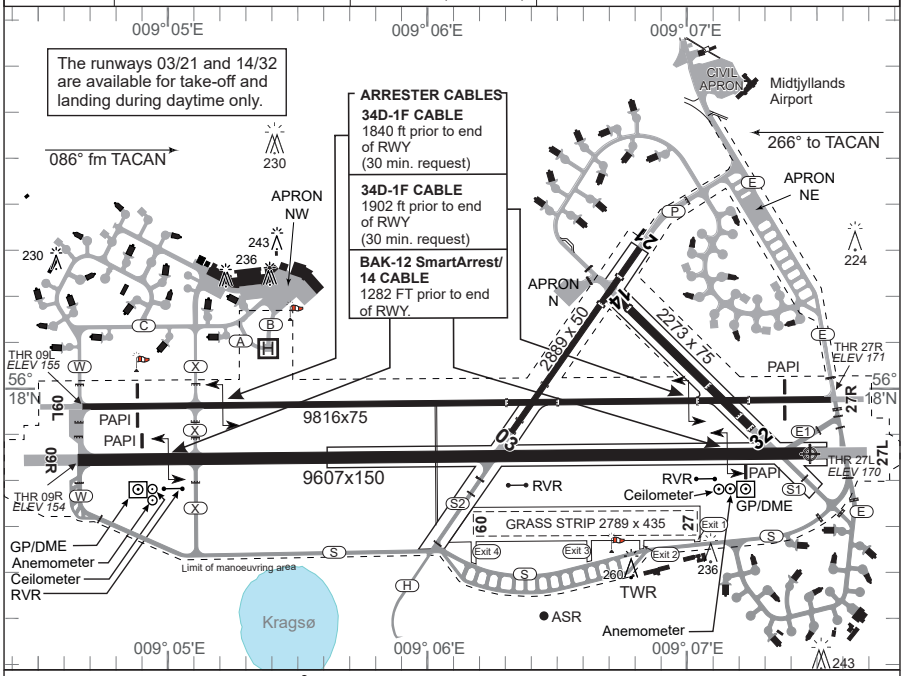
ILS or LOC RWY 09R

ILS or LOC RWY 27L

HPMA TACAN RWY 09R

HPMA TACAN RWY 27L

| KARUP ATIS | KARUP TOWER | KARUP APPROACH | AD Admin and FPL: +45 72 84 31 11 |
|---|---|---|---|
| 120.580 | 353.575 / 119.580 | 269.275 / 120.430 | Email: wkar-wingops@mil.dk |
| AD Elev 171 | ARP 56°17.85'N 009°07.48'E | VAR 4.0°E (JAN 2023) | |




| RWY | PCN | DECLARED DISTANCES TORA | TODA | ASDA | LDA | THR ELEV | RWY LIGHTING THR | PAPI | TDZ | CL | EDGE | END | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09R | 75 | 9607 | 9607 | 10352 | 9607 | 154 | LIH | 3.00° | | LIH | LIH | LIH | 56°17.84'N 009°04.64'E |
| 27L | 75 | 9607 | 9607 | 10352 | 9607 | 170 | LIH | 3.00° | LIH | LIH | LIH | LIH | 56°17.85'N 009°07.48'E |
| 09L | 120 | 9816 | 9816 | 10389 | 9816 | 154 | LIL | 2.75° | | | LIL | LIL | 56°17.95'N 009°04.66'E |
| 27R | 120 | 9816 | 9816 | 10282 | 9816 | 171 | LIL | 2.75° | | | LIL | LIL | 56°17.96'N 009°07.56'E |
| | | | | | | | | | | | | | MIL HELIPAD PSN 56°18.08'N 009°05.38'E |

**Noise abatement procedures:**
RWY 27L/R: None.
RWY 09R/L: Noise abatement procedure for all jet aircraft and for propeller and turboprop aircraft MTOW above 5700 kg for departure or missed approach RWY 09R/L:
VMC: Avoid overflying the towns/villages Karup and Kølvrå below 2000 feet MSL.
IMC: Turn must not be commenced before DME KAR (CH 37x) 6.5 NM (or DME KAP (CH20y) 4.0 NM) or 2000 feet AMSL, whichever comes first.

Afterburner/reheat must be cut off before reaching the NE/SW going main road (Viborg - Herning) just east of the airfield.

**Omnidirectional departures all runways:**
Climb straight ahead to at least 850 FT AMSL before turn is commenced.

| MIPS | CIRCLING MINIMA | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| A | | B | | C | | D | | E | |
| 670 | -1.5 499 (500-1.5) | 680 | -1.6 509 (600-1.6) | 850 | -2.4 679 (700-2.4) | 880 | -3.6 709 (800-3.6) | 1120 | -3.6 949 (1000-3.6) |

CHANGES: GENERAL AVIATION PARKING AND CIVIL HELIPAD WITHDRAWN.
AIR COMMAND DENMARK - MIL AIM 03 OCT 2024

**MIPS**

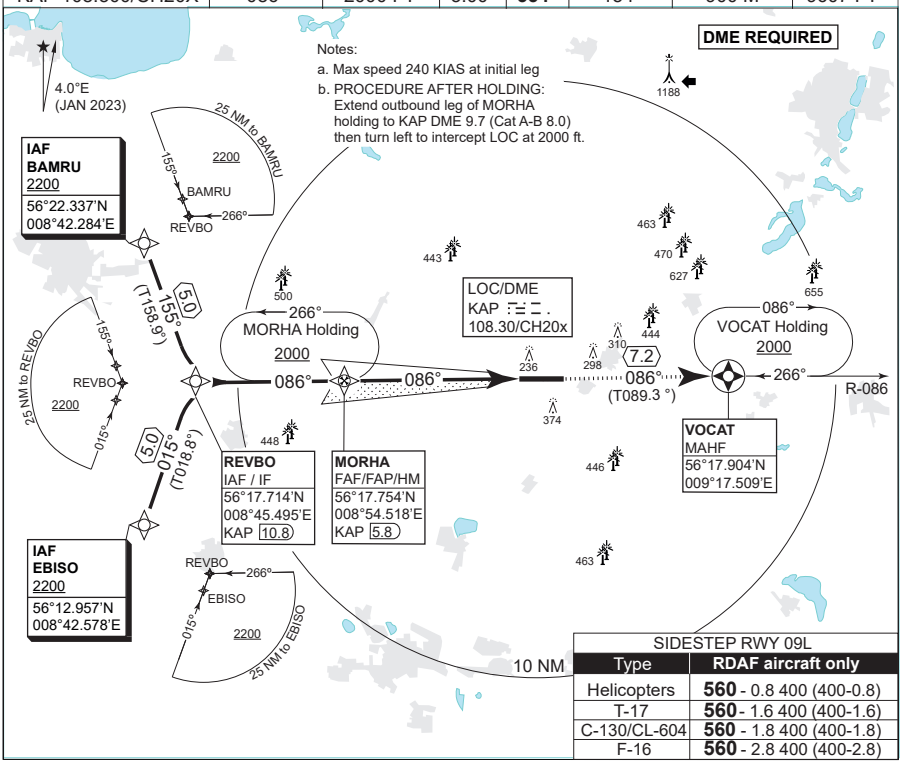
# INSTRUCTION APPROACH CHART

AD ELEV 171

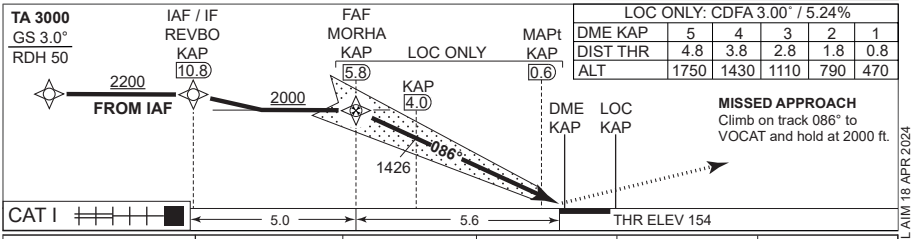
# ILS or LOC RWY 09R
# KARUP AIR BASE (EKKA)

| COPENHAGEN CONTROL | KARUP ATIS | KARUP APPROACH | KARUP TOWER |
|---|---|---|---|
| 242.650 124.555 | 120.580 | 269.275 120.430 | 353.575 119.580 |

| LOC/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| KAP 108.300/CH20X | 086° | 2000 FT | 3.00° | **354** | 154 | 900 M | 9607 FT |




| SIDESTEP RWY 09L | |
|---|---|
| **Type** | **RDAF aircraft only** |
| Helicopters | **560** - 0.8 400 (400-0.8) |
| T-17 | **560** - 1.6 400 (400-1.6) |
| C-130/CL-604 | **560** - 1.8 400 (400-1.8) |
| F-16 | **560** - 2.8 400 (400-2.8) |




| LOC ONLY: CDFA 3.00° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME KAP | 5 | 4 | 3 | 2 | 1 |
| DIST THR | 4.8 | 3.8 | 2.8 | 1.8 | 0.8 |
| ALT | 1750 | 1430 | 1110 | 790 | 470 |

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| MIPS S-ILS CAT I | **354** - 550 200 (200-0.8/1.2) | | | | |
| MIPS S-LOC 09R | **470** - 750 316 (400-0.8/1.4) | | | | |
| MIPS CIRCLING | **670** - 1.5 499 (500-1.5) | **680** - 1.6 509 (600-1.6) | **840** - 2.4 669 (700-2.4) | **880** - 3.6 709 (800-3.6) | **1120** - 3.6 949 (1000-3.6) |

CHANGES: ATC VHF FREQ

AIR COMMAND DENMARK - MIL AIM 18 APR 2024

**MIPS**

**INSTRUMENT APPROACH CHART**

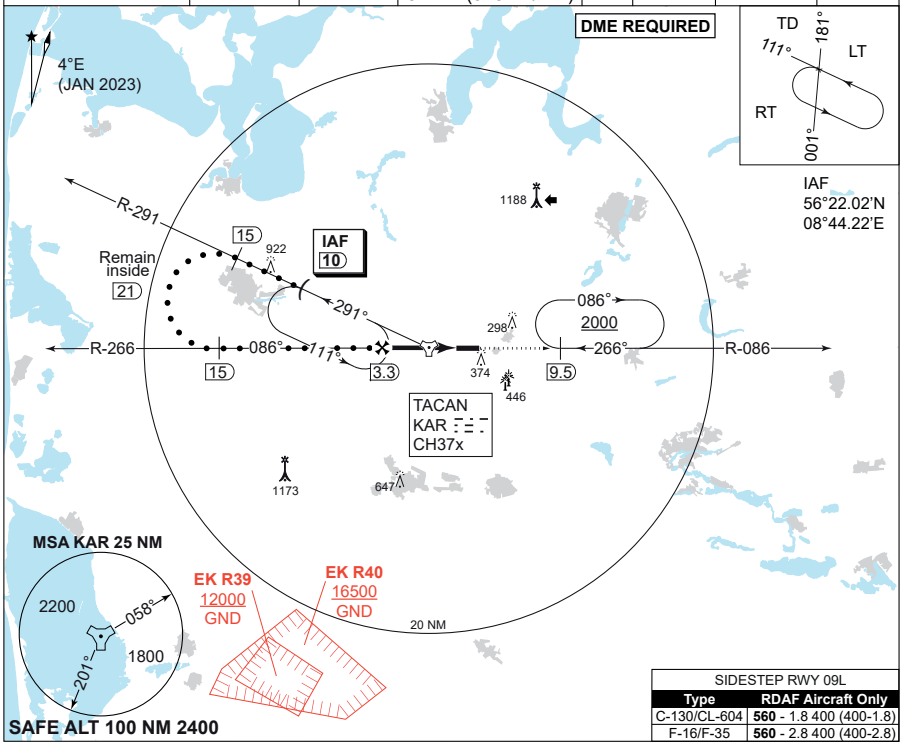
AD ELEV 171

**HPMA TACAN RWY 09R**

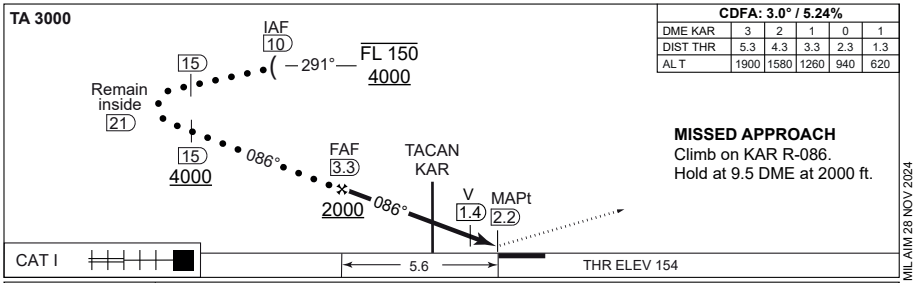
**KARUP AIR BASE (EKKA)**

| COPENHAGEN CONTROL | KARUP ATIS | KARUP APPROACH | KARUP TOWER |
|---|---|---|---|
| 242.650 124.555 | 120.580 | 269.275 120.430 | 353.575 119.580 |

| TACAN | APP COURSE | FAF ALT | DESCENT GR. | MDA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| KAR CH 37x | 086° | 2000 FT | 5.24% (318 FT/NM) | **490** | 154 | 900 M | 9607 FT |




| SIDESTEP RWY 09L | |
|---|---|
| **Type** | **RDAF Aircraft Only** |
| C-130/CL-604 | **560** - 1.8 400 (400-1.8) |
| F-16/F-35 | **560** - 2.8 400 (400-2.8) |




| CDFA: 3.0° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME KAR | 3 | 2 | 1 | 0 | 1 |
| DIST THR | 5.3 | 4.3 | 3.3 | 2.3 | 1.3 |
| ALT | 1900 | 1580 | 1260 | 940 | 620 |

**MISSED APPROACH**

Climb on KAR R-086.
Hold at 9.5 DME at 2000 ft.

| MIPS | CATEGORY | HPMA |
|---|---|---|
| | S-TACAN 09R | **490** - 800 336 (400-0.8/1.5) |
| | CIRCLING | **750** - 3.2 579 (600-3.2) |

CHANGES: TACAN FREQ DELETED SO THAT ONLY CHANNEL IS DEPICTED.

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

**HPMA TACAN RWY 09R**

56°17.85'N
009°07.48'E

**KARUP AIR BASE (EKKA)**

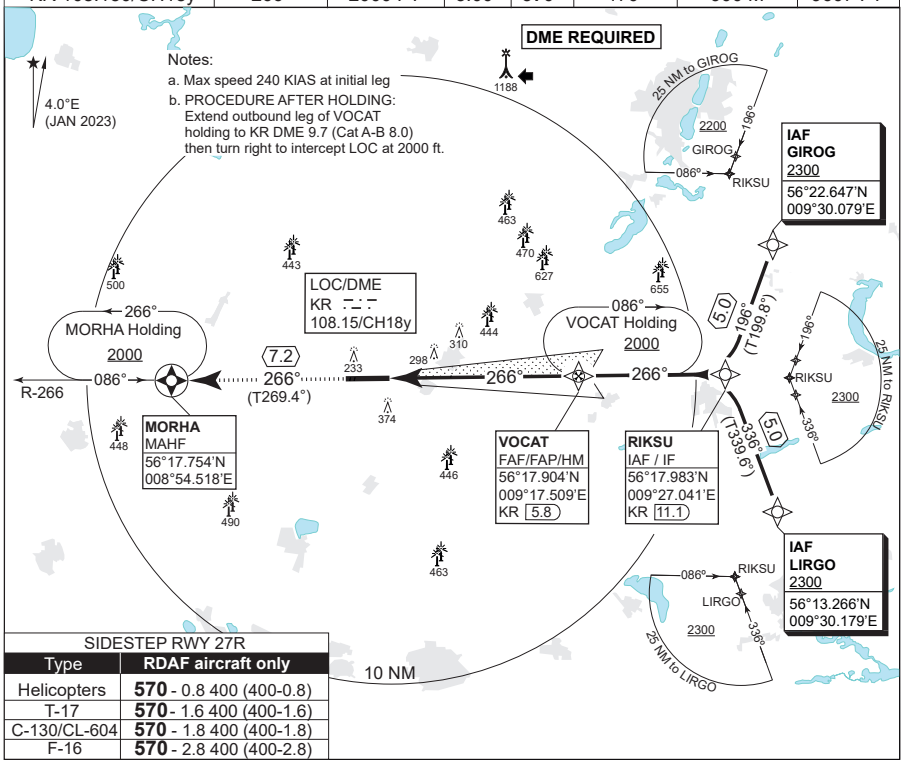
**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 171

**ILS or LOC RWY 27L**
**KARUP AIR BASE (EKKA)**

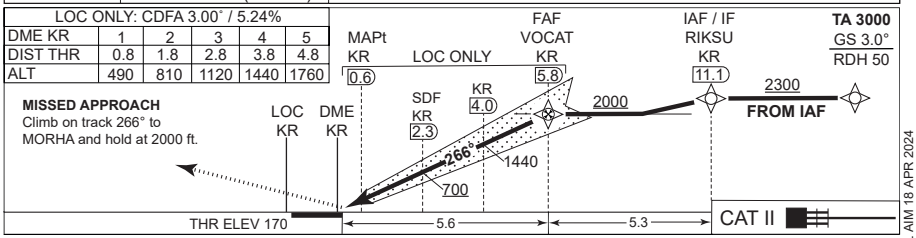
| COPENHAGEN CONTROL | KARUP ATIS | KARUP APPROACH | KARUP TOWER |
|---|---|---|---|
| 242.650 124.555 | 120.580 | 269.275 120.430 | 353.575 119.580 |

| LOC/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| KR 108.150/CH18y | 266° | 2000 FT | 3.00° | **370** | 170 | 900 M | 9607 FT |




| SIDESTEP RWY 27R | |
|---|---|
| **Type** | **RDAF aircraft only** |
| Helicopters | **570** - 0.8 400 (400-0.8) |
| T-17 | **570** - 1.6 400 (400-1.6) |
| C-130/CL-604 | **570** - 1.8 400 (400-1.8) |
| F-16 | **570** - 2.8 400 (400-2.8) |

| LOC ONLY: CDFA 3.00° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME KR | 1 | 2 | 3 | 4 | 5 |
| DIST THR | 0.8 | 1.8 | 2.8 | 3.8 | 4.8 |
| ALT | 490 | 810 | 1120 | 1440 | 1760 |




**MISSED APPROACH**
Climb on track 266° to MORHA and hold at 2000 ft.

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-ILS CAT I | **370** - 550 200 (200-0.8/1.2) | | | | |
| S-ILS CAT II | **RA 106** (DA 270) - 350 100 | | | | N/A |
| S-LOC 27L | **480** - 750 310 (400-0.8/1.4) | | | | |
| CIRCLING | **670** - 1.5 499 (500-1.5) | **680** - 1.6 509 (600-1.6) | **840** - 2.4 669 (700-2.4) | **880** - 3.6 709 (800-3.6) | **1120** - 3.6 949 (1000-3.6) |

CHANGES: ATC VHF FREQ.
MIPS

AIR COMMAND DENMARK - MIL AIM 18 APR 2024

**MIPS**

**INSTRUMENT APPROACH CHART**

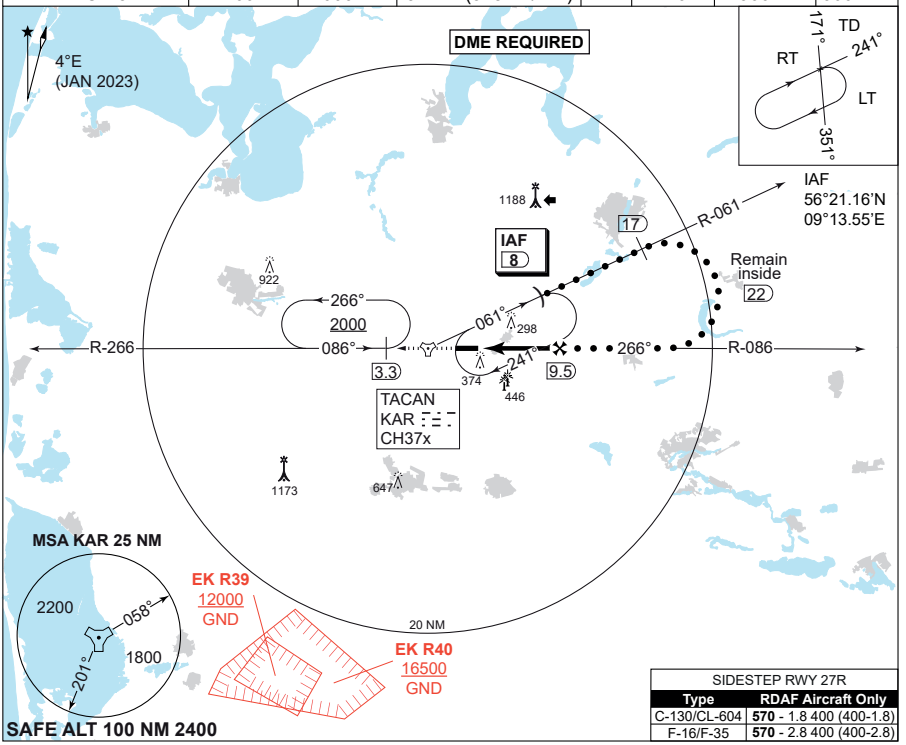
AD ELEV 171

**HPMA TACAN RWY 27L**

**KARUP AIR BASE (EKKA)**

| COPENHAGEN CONTROL | KARUP ATIS | KARUP APPROACH | KARUP TOWER |
|---|---|---|---|
| 242.650 124.555 | 120.580 | 269.275 120.430 | 353.575 119.580 |

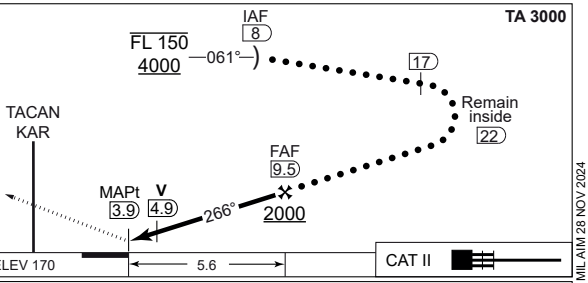
| TACAN | APP COURSE | FAF ALT | DESCENT GR. | MDA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| KAR CH 37x | 266° | 2000 FT | 5.24% (318 FT/NM) | **550** | 170 | 900 M | 9607 FT |




| SIDESTEP RWY 27R | |
|---|---|
| **Type** | **RDAF Aircraft Only** |
| C-130/CL-604 | **570** - 1.8 400 (400-1.8) |
| F-16/F-35 | **570** - 2.8 400 (400-2.8) |

| CDFA: 3.0° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME KAR | 5 | 6 | 7 | 8 | 9 |
| DIST THR | 1.1 | 2.1 | 3.1 | 4.1 | 5.1 |
| ALT | 580 | 900 | 1220 | 1540 | 1850 |

**TA 3000**




**MISSED APPROACH**

Climb on R-086 to KAR.
After KAR continue on R-266.
Hold at 3.3 DME at 2000 ft.

| CATEGORY | HPMA |
|---|---|
| S-TACAN 27L | **550** - 1000 379 (400-1.0/1.7) |
| CIRCLING | **750** - 3.2 579 (600-3.2) |

CHANGES: TACAN FREQ DELETED SO THAT ONLY CHANNEL IS DEPICTED. STRAIGHT-IN HAA CHANGED TO 379.

MIPS

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

# KASTRUP (EKCH)

AERODROME CHART

F-16 PARKING EKCH

ILS or LOC RWY 04L

ILS or LOC RWY 22L

ILS or LOC RWY 04R

ILS or LOC RWY 22R

ILS or LOC RWY 12

ILS or LOC RWY 30

KASTRUP OPS

KASTRUP ARRIVAL

WP LIST




| RWY | PCN | DECLARED DISTANCES TORA | TODA | ASDA | LDA | HDG MAG | THR ELEV | RWY LIGHTING THR | PAPI | TDZ | CL | EDGE | END | APP LGT | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04L | 80 F/C/X/U | 9842 | 9842 | 11715 | 9842 | 037° | 13 | LIH | 3° | LIH | LIH | LIH | LIH | CAT II | 55°35.54'N 012°36.22'E |
| 22R | 80 F/C/X/U | 11715 | 11715 | 11715 | 9842 | 217° | 14 | LIH | 3° | | LIH | LIH | LIH | J | 55°36.76'N 012°37.10'E |
| 04R | 80 F/C/X/U | 10833 | 10833 | 10833 | 10833 | 037° | 12 | LIH | 3° | | LIH | LIH | LIH | J | 55°36.19'N 012°37.99'E |
| 22L | 80 F/C/X/U | 10833 | 10833 | 10833 | 10833 | 217° | 8 | LIH | 3° | LIH | LIH | LIH | LIH | CAT II+III | 55°37.53'N 012°40.06'E |
| 12 | 80 F/C/X/U | 9186 | 9186 | 9186 | 7759 | 119° | 13 | LIH | 3° | | | LIH | LIH | J | 55°37.46'N 012°38.36'E |
| 30 | 80 F/C/X/U | 7759 | 7759 | 8743 | 6873 | 299° | 8 | LIH | 3° | | | LIH | LIH | J | 55°36.84'N 012°40.02'E |

| FREQUENCIES | |
|---|---|
| COPENHAGEN APP: | 119.805 |
| KASTRUP FINAL: | 120.205 |
| KASTRUP TWR: | 118.105 / 118.580 / 118.705 / 119.355 / 121.830 |
| KASTRUP APRON: | 121.630 / 121.905 |
| ATIS (ARR): | 122.755 |
| ATIS (DEP): | 122.855 |
| ASE HANDLING: | 131.925 |

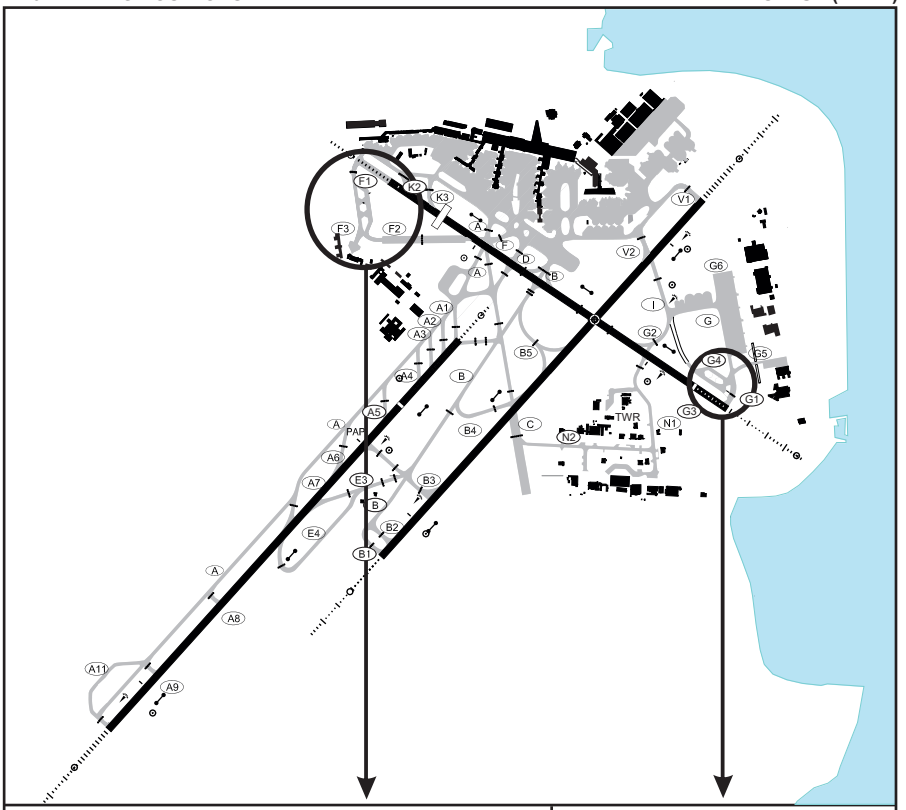
F-16 PARKING POSITIONS
ARMED OR EPU ACTIVATED:
TWY G3. Safe direction SOUTH EAST (follow marshaller)
AIRCRAFT NOT ARMED:
RI, RII or RIII on Apron W, TWY F3, engine run-up area on Apron C or TWY F2. Follow marshaller.
See page 6-2 for further details.

TAKE-OFF POSITIONS

| RWY | PSN | TORA | TODA | ASDA |
|---|---|---|---|---|
| 22R | A2 | 11446 | 11446 | 11446 |
| | A3 | 11026 | 11026 | 11026 |
| | A4 | 10610 | 10610 | 10610 |
| | A5 | 9478 | 9478 | 9478 |
| 04R | B2 | 10508 | 10508 | 10508 |
| | B3 | 9176 | 9176 | 9176 |
| | B4/C | 6368 | 6368 | 6368 |
| 22L | V2 | 9143 | 9143 | 9143 |
| 12 | K2 | 8854 | 8854 | 8854 |
| | K3 | 8136 | 8136 | 8136 |
| | D | 5908 | 5908 | 5908 |

CHANGES: ASE HANDLING FRQ. ADDED, MANOEUVRING AREA ADDED, DECLARED DIST. RWY 22R, EDITORIAL

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025




CHANGES: EDITORIAL.

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

# KASTRUP OPERATIONS

## 1. GENERAL

1.1. Use of afterburner is not permitted

1.2. Preferred RWY for landing: 22L/04L.
Preferred RWY for take off: 22R/04R.

## 2. APPROACH

2.1. After KORSA or TRANO expect radar vectoring to final.

2.2. On initial contact with APP or ARR: State callsign, aircraft type, and arrival ATS.

2.3. On initial contact with Final state callsign only.

2.4. Do not overfly the city of Copenhagen below 2500 feet.

2.5. RWY 12: Do not fly below GP during instrument or visual approach.

2.6. Landing on RWY 22L: Turn on to taxiway B unless otherwise instructed.
Landing on RWY 04L: Turn on to taxiway A unless otherwise instructed.

2.7. Remain on tower frequency after landing until otherwise instructed by ATC.

## 3. START UP AND DEPARTURE

3.1. Contact DLV (119.900 MHz) between 30 and 10 minutes prior to engine start and state; Call sign, aircraft type, parking place, departure ATIS and need for de-icing.
If unable to follow the SID, inform DLV (“Unable RNAV”).

3.2. After read back, DLV will give the frequency for GND or TWR. (Expect 121.900 MHz for GND).

3.3. On GND/TWR request start up and taxi (Marshaller compulsary from R1-R3)

3.4. Take off position: See AD LAYOUT for INT and distances.

3.5. Departure:

3.5.1. When passing 1000 feet contact departure on frequency 124.980 MHz for the following SID's (without designator as e.g. BISTA 1C): BISTA, KEMAX, SIMEG, SALLO, MAXEL and TOBIS – departures in direction 001° to 270° from EKCH ARP.

3.5.2. When passing 1000 feet contact DEP on frequency 120.255 MHz for the following departures (without designator e.g. DOBEL 1C): DOBEL, MIRGO, and NOVPO – departures in direction 271° to 360° from EKCH ARP.

CHANGES: WP CODAN, ASTOS, BALOX, SORGA WITHDRAWN. WP SALLO ADDED.

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

3.6. Speed restriction is 250 kt. below FL70.
3.7. NOTE: Non RNAV aircraft: At first CTC with TWR state inability to follow SID. Climb straight ahead to FL70 for radar vectors to SID designation point. COM: Remain on TWR FREQ until passing 1000FT. At 1000FT CTC DEP. ALT restriction is FL70.

**4. GROUND HANDLING (FIGHTER AIRCRAFT ONLY)**

4.1. Landing not planned:
Contact ASE Handling on frequency 131.925 MHz as soon as possible.
4.2. Planned landing:
Contact ASE Handling on phone +45 2068 5928 before the mission.
4.3. For F-35 JET-A/JET-A1 is characterized as “Restricted Fuel” iaw. FSD. RTB flight to be conducted as direct transit flight back to EKSP. Aircraft to be partially refueled iaw. RTB mission profile.
4.4. ASE Handling are not familiar with “F-35 Ground Ladder”. It is the pilot’s responsibility to be familiar with, and be able to instruct civilian ground personnel in its operation, from the cockpit.

**5. PLANNED PARKING POSITIONS FOR FIGHTER AIRCRAFT**

5.1. Armed F-16 or F-16 with activated EPU:
Taxiway G3. Safe direction is SE (Follow Marshaller).
5.2. Unarmed F-16:
RI, RII or RIII on Apron W, taxiway F3, engine run up area on Apron C or taxiway F2. (Follow Marshaller).
5.3. Unarmed F-35:
CPH Marshaller will handover aircraft to ASE Handling on parking spot G110-G114.
Parking is only allowed on concrete as IPP operation will melt asphalt.

CHANGES: HANDLING PROVIDER CHANGED.

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

# KASTRUP ARRIVAL

**IFR approach**
At first contact with APPROACH, state type of aircraft.
At initial contact with FINAL, state only callsign.

**Radio Communication failure during IFR approach for a/c WITHOUT VOR, but WITH TACAN, incl. RDAF F-16 / F-35.**
In case of radio communication failure the last cleared and acknowledged level shall be maintained until RNAV fix UVALO (55º47.47N 012º05.73E) HIGH HOLDING. (UVALO R-278 / 20 NM). Descend to 6000 FT AMSL in the holding pattern. If already at a lower level, maintain this.

From UVALO HIGH HOLDING proceed via UVALO on radials (UVALO R-160 to RWY 04L/R and R-083 to RWY 22L/R respectively). At 13 NM from UVALO descend to maintain 3000 FT before established on the localizer to the runway concerned.

**Radio Communication failure during IFR approach for a/c WITH VOR.**
In case of radio communication failure, the last cleared and acknowledged level shall be maintained until the appropriate primary holding pattern (see next page). Descent to FL80 in the holding pattern. If already at a lower level, maintain that level until KASFI (55°35.43N 012 36.82E).

From the primary holding pattern proceed via ERNOV, TIDVU, OLPIB, KOR or TNO VOR direct to KASFI. Maintain FL 80 (FL 100 via ERNOV) or last cleared and acknowledged level or altitude.

If radio communication failure occur during vectoring or after passing over or abeam the primary holding fix, proceed direct to KASFI. Maintain FL 80 (FL 100 via ERNOV) or last cleared and acknowledged level or altitude. When distance to KASFI is 15 NM or less descend to 5000 FT. After KASFI descend to 3000 FT and proceed direct relevant IAF.

**Special conditions for flying in Swedish Airspace.**
Danish military aircraft may, in connection with approach to EKCH, enter Swedish airspace, within the areas delegated to Copenhagen APP. The flight must be controlled by Copenhagen APP. The areas are:

- Copenhagen Area.
- Area L2, L3, Area SUNDET and Area KASTRUP (see MIL AIP Denmark page ENR 2.1-2 and ENR 2.3-3 (chart))

CHANGES: WPT CODAN AND KAS VOR WITHDRAWN. WPT OLPIB AND KASFI ADDED. COM FAIL PROC CHANGED.

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

Military aircraft may, without special permission, enter Swedish territorial waters in Øresund. Minimum distance to the Swedish coast is 1 NM. All kinds of military activities are prohibited during passage. The area is limited as follows:

- To the north by a line between Gilbjerghoved (56° 08.000'N 012° 27.000'E) and Kullen (56° 18.000'N 012° 27.000'E).
- To the south by a line between Stevns Lighthouse (55° 18.000'N 012° 27.000'E) and Falsterbo Odde (55° 23.000'N 012° 49.000'E).

**Primary holdings for København/Kastrup**

| Holding Name | Inbound Track (MAG) | Turn | MAX IAS | MNM/MAX Level Time | Entry Procedure |
|---|---|---|---|---|---|
| **TIDVU**<br>55° 24.678'N<br>013° 33.452'E | 294 | Right | 230 | 5000 FT<br>1.5 MIN | Omni-directional |
| **OLPIB**<br>55° 00.090'N<br>012° 22.753'E | 030 | Right | 230 | 3500FT/FL140<br>1 MIN | Omni-directional |
| | 030 | Right | 240 | FL150/FL190<br>1.5 MIN | Omni-directional |
| **LUGAS**<br>KOR VOR/DME<br>R-251/23.8 DME<br>55° 19.783'N<br>010° 57.783'E | 073 | Left | 230 | 3500FT/FL140<br>1 MIN | Direct entry via TUDLO* |
| | 073 | Left | 240 | FL150/FL200<br>1.5 MIN | Direct entry via TUDLO* |
| | 073 | Left | 265 | FL210/FL300<br>1.5 MIN | Direct entry via TUDLO* |
| **ROSBI**<br>TNO VOR/DME<br>R-282/17.7 DME<br>55° 50.967'N<br>010° 55.917'E | 103 | Left | 230 | 3500FT/FL140<br>1 MIN | Direct entry via TESPI** |
| | 103 | Left | 240 | FL150/FL200<br>1.5 MIN | Direct entry via TESPI** |
| | 103 | Left | 265 | FL210/FL300<br>1.5 MIN | Direct entry via TESPI** |
| **ERNOV**<br>56° 10.132'N<br>012° 34.427'E | 179 | Left | 230 | FL100 /<br>1.5 MIN | Omni-directional |

Notes:
*) TUDLO is on KOR R-251/35.1 DME, PSN 55° 16.550'N 010° 38.867'E
**) TESPI is on TNO R-281/31.6 DME, PSN 55° 53.900'N 010° 31.867'E

CHANGES: CODAN HOLDING CHANGED TO OLPIB. ODN VOR WITHDRAWN.

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

**MIPS**
**INSTRUMENT APPROACH CHART** AD ELEV 17

**ILS or LOC RWY 04L**
**KASTRUP(EKCH)**

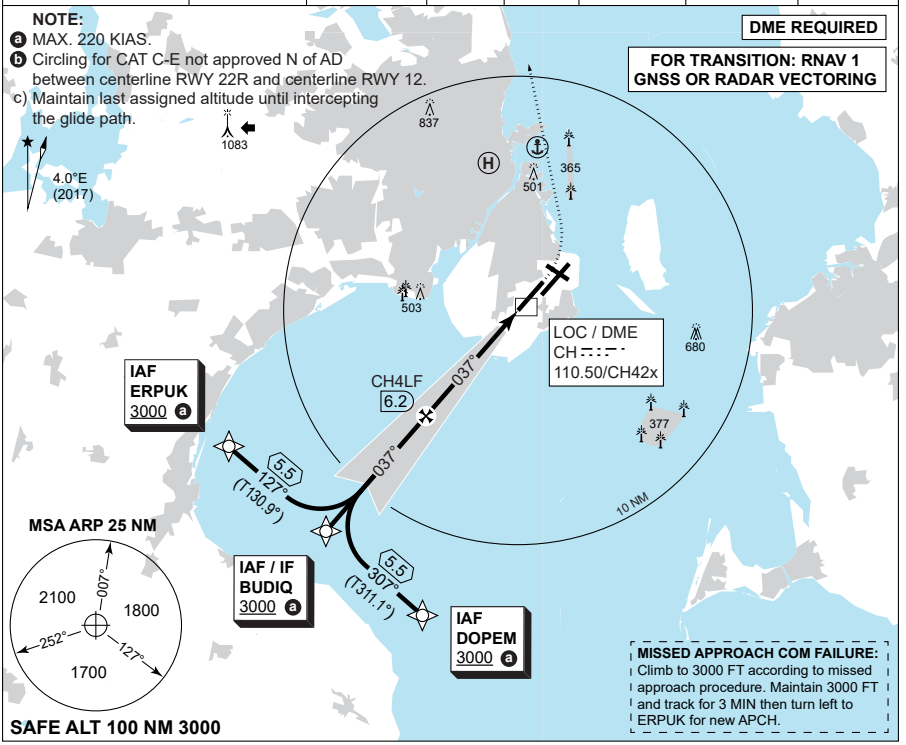
| COPENHAGEN APPROACH | KASTRUP ATIS (ARR) | KASTRUP FINAL | KASTRUP TWR | KASTRUP APRON |
|---|---|---|---|---|
| 119.805 | 122.755 | 120.205 | 118.105 | 121.630 |

| LOC/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| CH 110.50/CH42x | 037° | 2000 FT | 3.00° | **213** | 13 | 900 M | 9842 FT |

**NOTE:**
- (a) MAX. 220 KIAS.
- (b) Circling for CAT C-E not approved N of AD between centerline RWY 22R and centerline RWY 12.
- (c) Maintain last assigned altitude until intercepting the glide path.

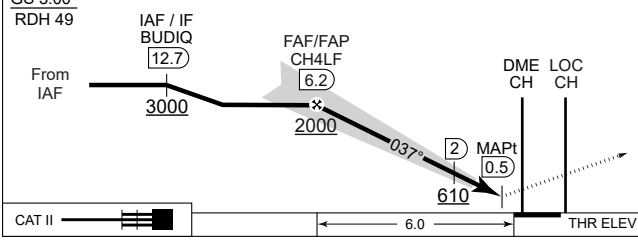
**DME REQUIRED**

**FOR TRANSITION: RNAV 1 GNSS OR RADAR VECTORING**




**TA 5000**
GS 3.00°
RDH 49

| CDFA: 3.00° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME CH | 6 | 5 | 4 | 3 | 2 |
| DIST THR | 5.8 | 4.8 | 3.8 | 2.8 | 1.8 |
| AL T | 1940 | 1620 | 1300 | 980 | 660 |




**MISSED APPROACH**
Climb straight ahead to 500 FT. Turn left and track 343° climbing to 3000 FT. Inform ATC.

| MIPS | CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|---|
| | S-ILS CAT I | **213** - 550 200 (200-0.8/1.2) | | | | |
| | S-ILS CAT II | **RA 102** (DA 113) - 350 100 | | **RA 106** (DA 117) 350 104 | **RA 120** (DA 131) 350 118 | N/A |
| | S-LOC 04L | **420** - 1200 403 (500-1.2/1.9) | | | | |
| | CIRCLING (b) | **580** -1.5 563 (600-1.5) | **590** -1.6 573 (600-1.6) | **1010** -2.4 993 (1000-2.4) | **1010** -3.6 993 (1000-3.6) | **1180** -3.6 1163 (1200-3.6) |

CHANGES: NEW PROCEDURE.

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

**ILS or LOC RWY 04L**

55°37.08'N
012°39.36'E

**KASTRUP (EKCH)**

**MIPS**

**INSTRUMENT APPROACH CHART**

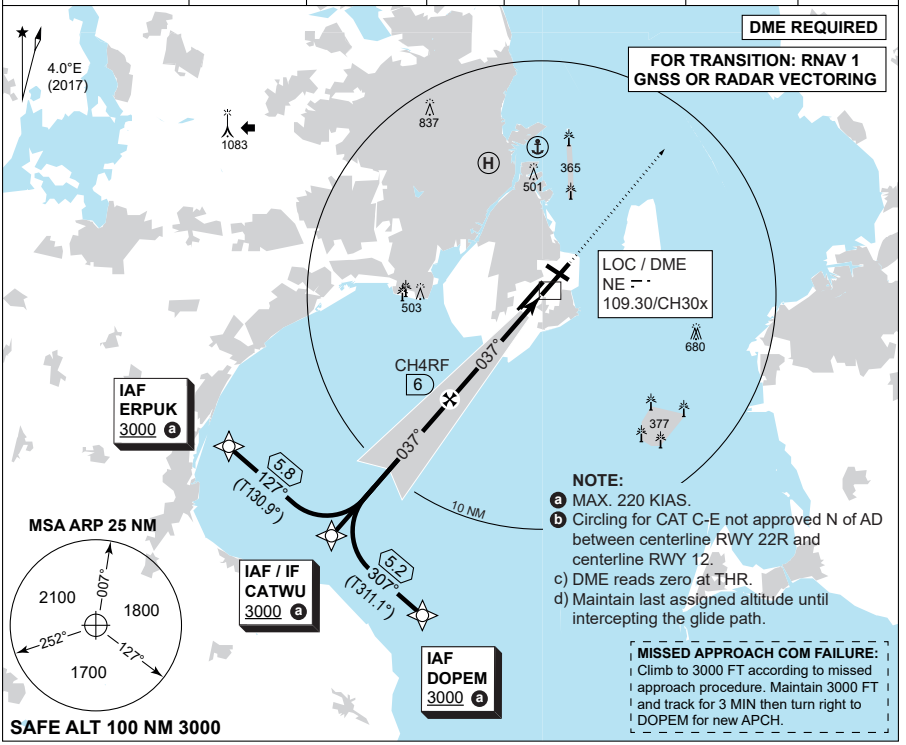
AD ELEV 17

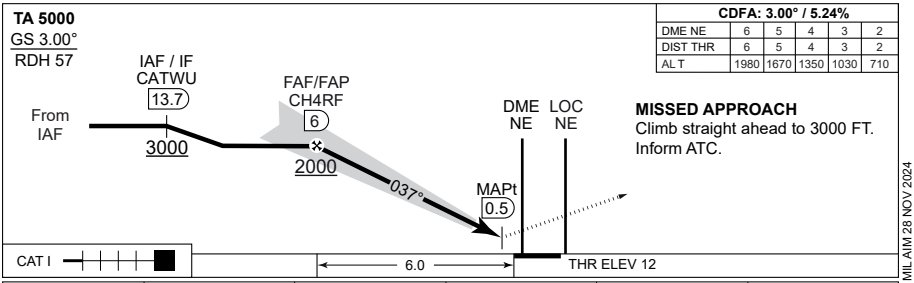
**ILS or LOC RWY 04R**

**KASTRUP(EKCH)**

| COPENHAGEN APPROACH | KASTRUP ATIS (ARR) | KASTRUP FINAL | KASTRUP TWR | KASTRUP APRON |
|---|---|---|---|---|
| 119.805 | 122.755 | 120.205 | 118.105 | 121.630 |

| LOC/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| NE 109.30/CH30x | 037° | 2000 FT | 3.00° | **212** | 12 | 720 M | 10833 FT |




| CDFA: 3.00° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME NE | 6 | 5 | 4 | 3 | 2 |
| DIST THR | 6 | 5 | 4 | 3 | 2 |
| AL T | 1980 | 1670 | 1350 | 1030 | 710 |

**MISSED APPROACH**
Climb straight ahead to 3000 FT.
Inform ATC.

CHANGES: NEW PROCEDURE.

| MIPS | CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|---|
| | S-ILS CAT I | **212** - 550 200 (200-0.8/1.2) | | | | |
| | S-LOC 04R | **580** - 1500 563 (600-1.5/2.6) | | **580** - 1900 563 (600-1.9/2.6) | | |
| | CIRCLING b | **580** -1.5 563 (600-1.5) | **590** -1.6 573 (600-1.6) | **1010** -2.4 993 (1000-2.4) | **1010** -3.6 993 (1000-3.6) | **1180** -3.6 1163 (1200-3.6) |

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

**MIPS**

**INSTRUMENT APPROACH CHART**

AD ELEV 17

**ILS or LOC RWY 22L**

**KASTRUP(EKCH)**

| COPENHAGEN APPROACH | KASTRUP ATIS (ARR) | KASTRUP FINAL | KASTRUP TWR | KASTRUP APRON |
|---|---|---|---|---|
| 119.805 | 122.755 | 120.205 | 118.105 | 121.630 |

| LOC/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| OXS109.50/CH32x | 217° | 2000 FT | 3.00° | **208** | 8 | 840 M | 10833 FT |

**NOTE:**

ⓐ MAX. 220 KIAS.

ⓑ Circling for CAT C-E not approved N of AD between centerline RWY 22R and centerline RWY 12.

ⓒ Pass DME OXS 5 NM not below 1500 FT, due to airspace considerations.

d) CAT III operations may take place without restrictions as the basic ILS surfaces are not penetrated.

e) Maintain last assigned altitude until intercepting the glide path.

**IAF ABEGI** 3000 ⓐ

**DME REQUIRED**

**FOR TRANSITION: RNAV 1 GNSS OR RADAR VECTORING**

**IAF / IF EXTAR** 3000 ⓐ

**IAF ADOVI** 3000 ⓐ

5.5 127° (T131.4°)

5.5 308° (T311.6°)

217°

CH2LF 6.2

4.0°E (2017)

837 365 501 503 680 377

**MSA ARP 25 NM**

2100 007° 1800 252° 127° 1700

LOC / DME OXS 109.50/CH32x

10 NM

**MISSED APPROACH COM FAILURE:** Climb to 3000 FT according to missed approach procedure. Maintain 3000 FT and track for 3 MIN then turn left to ADOVI for new APCH.

**SAFE ALT 100 NM 3000**

| CDFA: 3.00° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME OXS | 2 | 3 | 4 | 5 | 6 |
| DIST THR | 1.8 | 2.8 | 3.8 | 4.8 | 5.8 |
| ALT | 650 | 970 | 1290 | 1600 | 1930 |

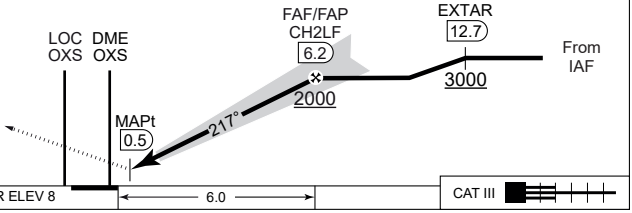
**TA 5000**

GS 3.00°

RDH 53

**MISSED APPROACH**

Climb straight ahead to 500 FT or DME OXS 1.0 NM past DME OXS, whichever is later. Turn left and track 183° climbing to 3000 FT. Inform ATC.




| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-ILS CAT I | **208** - 550 200 (200-0.8/1.2) | | | | |
| S-ILS CAT II | **RA 101** (DA 108) - 350 100 | | | | N/A |
| S-LOC 22L ⓒ | **510** - 1500 493 (500-1.5/2.3) | | | | |
| CIRCLING ⓑ | **580** -1.5 563 (600-1.5) | **590** -1.6 573 (600-1.6) | **1010** -2.4 993 (1000-2.4) | **1010** -3.6 993 (1000-3.6) | **1180** -3.6 1163 (1200-3.6) |

CHANGES: ALS LENGTH.

MIPS

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 17

**ILS or LOC RWY 22R**
**KASTRUP(EKCH)**

| COPENHAGEN APPROACH | KASTRUP ATIS (ARR) | KASTRUP FINAL | KASTRUP TWR | KASTRUP APRON |
|---|---|---|---|---|
| 119.805 | 122.755 | 120.205 | 118.105 | 121.630 |

| LOC/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| KLK 110.90/CH46x | 217° | 2000 FT | 3.00° | **214** | 14 | 900 M | 9842 FT |

**NOTE:**
ⓐ MAX. 220 KIAS.
ⓑ Circling for CAT C-E not approved N of AD between centerline RWY 22R and centerline RWY 12.
c) Maintain last assigned altitude until intercepting the glide path.

4.0°E (2017)

**DME REQUIRED**

**FOR TRANSITION: RNAV 1 GNSS OR RADAR VECTORING**

**IAF ABEGI** 3000 ⓐ

**IAF / IF RUCCI** 3000 ⓐ

**IAF ADOVI** 3000 ⓐ

5.2 127° (T131.3°)

5.8 308° (T311.6°)

CH2RF 6.1

217°

LOC / DME KLK 110.90/CH46x

**MSA ARP 25 NM**

2100 — 007° — 1800 — 127° — 1700 — 252°

**SAFE ALT 100 NM 3000**

10 NM

**MISSED APPROACH COM FAILURE:** Climb to 3000 FT according to missed approach procedure. Maintain 3000 FT and track for 3 MIN then turn right to ABEGI for new APCH.

| CDFA: 3.00° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME OXS | 2 | 3 | 4 | 5 | 6 |
| DIST THR | 1.8 | 2.8 | 3.8 | 4.8 | 5.8 |
| ALT | 650 | 970 | 1290 | 1610 | 1930 |

**TA 5000**
GS 3.00°
RDH 47

**MISSED APPROACH**
Climb straight ahead to 3000 FT.
Inform ATC.

LOC KLK — DME KLK — MAPt 0.5 — FAF/FAP CH2RF 6.1 — IAF / IF RUCCI 14 — From IAF — 2000 — 3000 — 217°

THR ELEV 14 — 6.0 — CAT I

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-ILS CAT I | **214** - 550 200 (200-0.8/1.2) | | | | |
| S-LOC 22R | **450** - 1300 433 (500-1.3/2.0) | | | | |
| CIRCLING ⓑ | **580** -1.5 563 (600-1.5) | **590** -1.6 573 (600-1.6) | **1010** -2.4 993 (1000-2.4) | **1010** -3.6 993 (1000-3.6) | **1180** -3.6 1163 (1200-3.6) |

CHANGES: NEW PROCEDURE.

MIPS

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

**ILS or LOC RWY 22R**

55°37.08'N
012°39.36'E

**KASTRUP (EKCH)**

**MIPS**

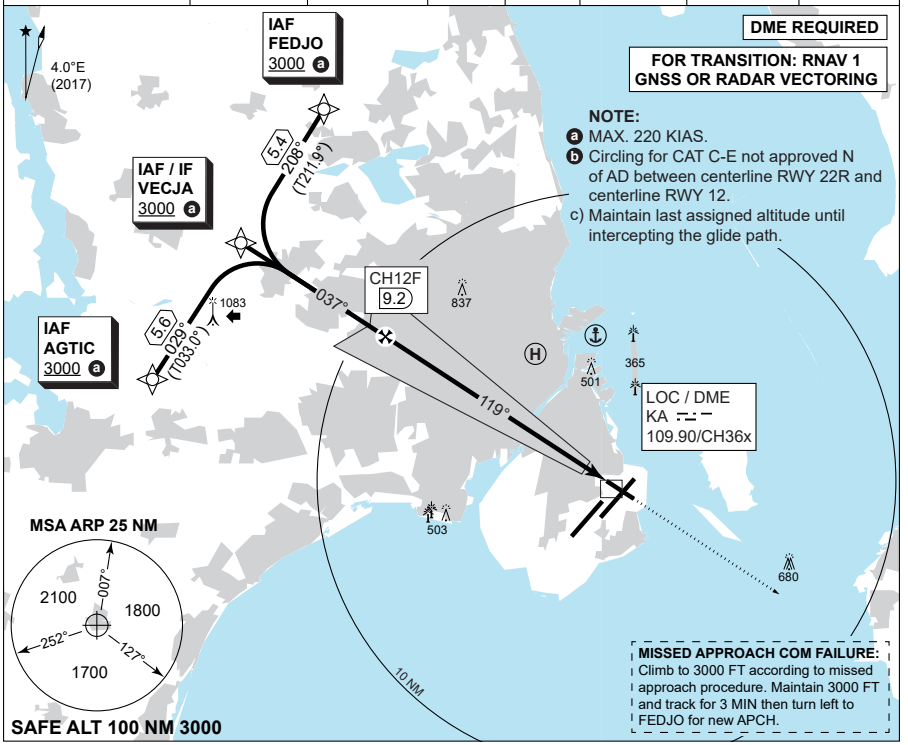
**INSTRUMENT APPROACH CHART** AD ELEV 17

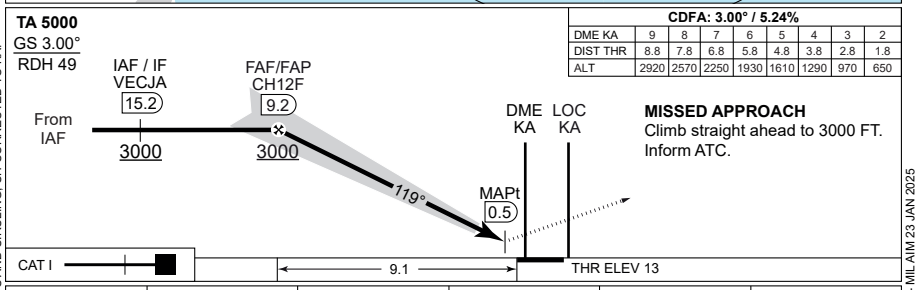
**ILS or LOC RWY 12**

**KASTRUP(EKCH)**

| COPENHAGEN APPROACH | KASTRUP ATIS (ARR) | KASTRUP FINAL | KASTRUP TWR | KASTRUP APRON |
|---|---|---|---|---|
| 119.805 | 122.755 | 120.205 | 118.105 | 121.630 |

| LOC/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| KA 109.90/CH36x | 119° | 3000 FT | 3.00° | **213** | 13 | 900 M | 7759 FT |




| CDFA: 3.00° / 5.24% | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DME KA | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 |
| DIST THR | 8.8 | 7.8 | 6.8 | 5.8 | 4.8 | 3.8 | 2.8 | 1.8 |
| ALT | 2920 | 2570 | 2250 | 1930 | 1610 | 1290 | 970 | 650 |

**MISSED APPROACH**
Climb straight ahead to 3000 FT.
Inform ATC.

| | CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|---|
| MIPS | S-ILS CAT I | **213** - 550 200 (200-0.8/1.2) | | | | |
| | S-LOC 12 | **790** - 1500 773 (800-1.5/3.6) | | **790** - 2400 773 (800-2.4/3.6) | | |
| | CIRCLING b | **790** -1.5 773 (800-1.5) | **790** -1.6 773 (800-1.6) | **1010** -2.4 993 (1000-2.4) | **1010** -3.6 993 (1000-3.6) | **1180** -3.6 1163 (1200-3.6) |

CHANGES: MDA(H) FOR LOC AND CIRCLING, CH CORRECTED TO KA.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

**ILS or LOC RWY 12**

55°37.08'N
012°39.36'E

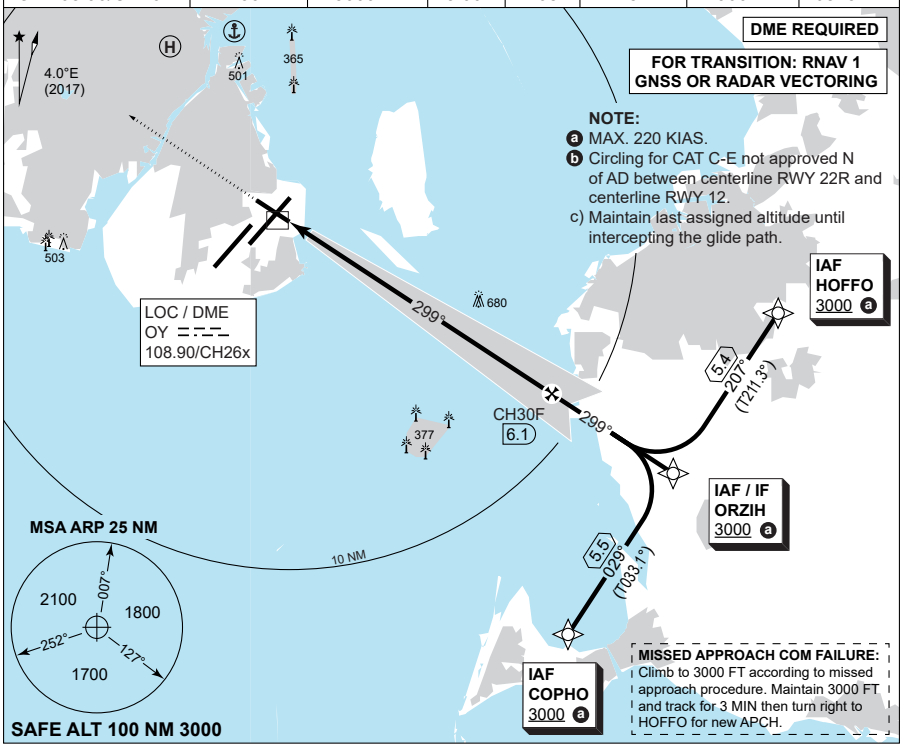
**KASTRUP (EKCH)**

**MIPS**

**INSTRUMENT APPROACH CHART** | AD ELEV 17 | **ILS or LOC RWY 30 KASTRUP(EKCH)**

| COPENHAGEN APPROACH | KASTRUP ATIS (ARR) | KASTRUP FINAL | KASTRUP TWR | KASTRUP APRON |
|---|---|---|---|---|
| 119.805 | 122.755 | 120.205 | 118.105 | 121.630 |

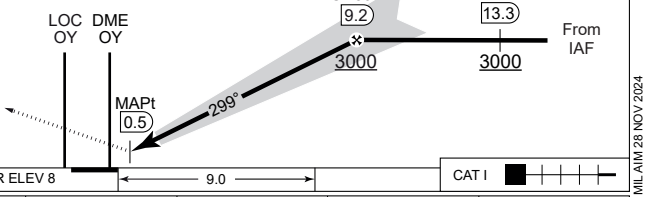
| LOC/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| OY 108.90/CH26x | 299° | 3000 FT | 3.00° | **208** | 8 | 900 M | 6873 FT |




| CDFA: 3.00° / 5.24% | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DME OY | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| DIST THR | 1.8 | 2.8 | 3.8 | 4.8 | 5.8 | 6.8 | 7.8 | 8.8 |
| ALT | 640 | 960 | 1280 | 1600 | 1920 | 2240 | 2560 | 2870 |

**TA 5000**
GS 3.00°
RDH 49

**MISSED APPROACH**
Climb straight ahead to 3000 FT.
Inform ATC.




| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-ILS CAT I | **208** - 550 200 (200-0.8/1.2) | | | | |
| S-LOC 30 | **510** - 1500 493 (500-1.5/2.3) | | | | |
| CIRCLING b | **580** -1.5 563 (600-1.5) | **590** -1.6 573 (600-1.6) | **1010** -2.4 993 (1000-2.4) | **1010** -3.6 993 (1000-3.6) | **1180** -3.6 1163 (1200-3.6) |

CHANGES: NEW PROCEDURE.

MIPS

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

**ILS or LOC RWY 30** | 55°37.08'N 012°39.36'E | **KASTRUP (EKCH)**

**Kastrup (EKCH) waypoint coordinates:**

| | | CODING | DISPLAY |
|---|---|---|---|
| ABEGI | IAF | 55 50 31.0N 012 47 20.0E | 55 50.517N 012 47.333E |
| ADOVI | IAF | 55 43 15.0N 013 01 56.0E | 55 43.250N 013 01.933E |
| AGTIC | IAF | 55 40 56.7N 012 10 36.7E | 55 40.946N 012 10.612E |
| BUDIQ | IAF | 55 26 07.0N 012 21 44.7E | 55 26.116N 012 21.744E |
| CATWU | IAF | 55 25 54.6N 012 22 10.2E | 55 25.910N 012 22.170E |
| COPHO | IAF | 55 24 59.6N 012 54 07.7E | 55 24.994N 012 54.128E |
| DOPEM | IAF | 55 22 31.0N 012 29 01.0E | 55 22.517N 012 29.017E |
| ERPUK | IAF | 55 29 43.0N 012 14 27.0E | 55 29.717N 012 14.450E |
| EXTAR | IAF | 55 46 53.3N 012 54 38.4E | 55 46.888N 012 54.640E |
| FEDJO | IAF | 55 50 14.9N 012 21 06.0E | 55 50.249N 012 21.100E |
| HOFFO | IAF | 55 34 15.0N 013 04 24.0E | 55 34.250N 013 04.400E |
| ORZIH | IAF | 55 29 37.1N 012 59 27.0E | 55 29.619N 012 59.450E |
| RUCCI | IAF | 55 47 06.2N 012 54 13.0E | 55 47.103N 012 54.217E |
| VECJA | IAF | 55 45 39.8N 012 16 02.5E | 55 45.664N 012 16.041E |

| | | CODING | DISPLAY |
|---|---|---|---|
| RW04L | THR | 55 35 31.9N 012 36 12.7E | 55 35.532N 012 36.212E |
| RW04R | THR | 55 36 11.2N 012 37 59.0E | 55 36.187N 012 37.983E |
| RW22L | THR | 55 37 31.5N 012 40 03.3E | 55 37.525N 012 40.055E |
| RW22R | THR | 55 36 44.9N 012 38 05.6E | 55 36.749N 012 38.094E |
| RW12 | THR | 55 37 26.9N 012 38 20.8E | 55 37.449N 012 38.347E |
| RW30 | THR | 55 36 49.9N 012 40 01.0E | 55 36.831N 012 40.017E |

CHANGES: NEW CHART.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

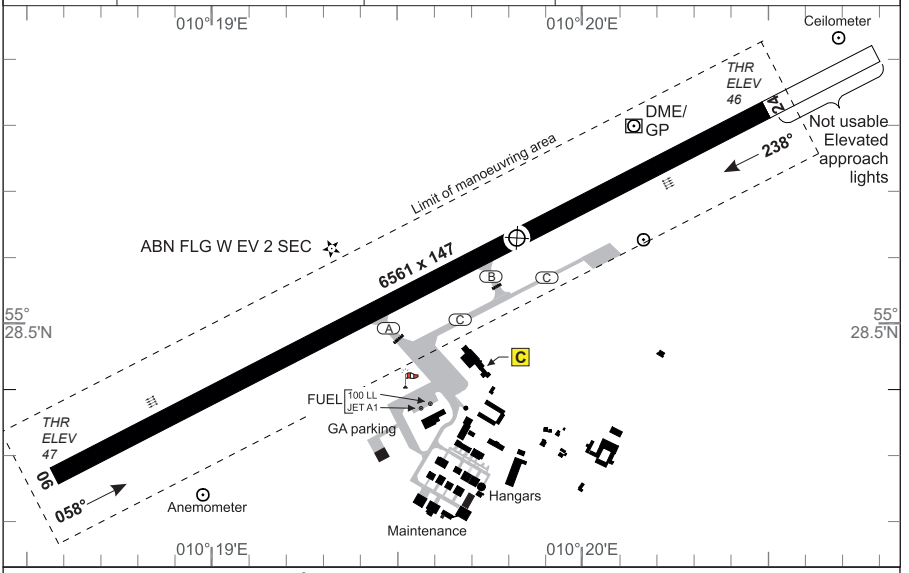
# ODENSE (EKOD)

AERODROME CHART

NOISE ABATEMENT

ILS or LOC RWY 24

| ODENSE INFORMATION 119.530 | | | Odense Airport: +45 65 95 50 72 |
|---|---|---|---|
| AD Elev **56** | ARP 55°28.60'N 010°19.86'E | VAR 2.3°E (AUG 2014) | |







| RWY | PCN | DECLARED DISTANCES TORA | TODA | ASDA | LDA | THR ELEV | RWY LIGHTING THR | PAPI | TDZ | CL | EDGE | END | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06 | | 6561 | 6561 | 6561 | 6561 | 47 | LIH | 3° | | | LIH | | 55°28.25'N 10°18.79'E |
| A | 50 R/D/X/U | 3628 | 3628 | 3628 | | | | | | | | | |
| B | | 2650 | 2650 | 2650 | | | | | | | | | |
| 24 | | 6561 | 6561 | 6561 | 6561 | 46 | LIH | 3° | | | LIH | LIH | 55°28.79'N 10°20.43'E |
| B | 50 R/D/X/U | 3959 | 3959 | 3959 | | | | | | | | | |
| A | | 2998 | 2998 | 2998 | | | | | | | | | |

AD PPR outside OPS hours. Request to be submitted not later than 1 hour before termination of service. Self-service AVBL for aircraft MTOW blw 2000 kg. VFR outside opening hours. Contact to EKOD outside Service Hours phone manned from 0600-2200 local time on TEL +45 65 95 50 72. NOTE: Opening charge will be collected outside regular Service Hours.

Parachuting may take place. Drone operation may take place. Check NOTAM for EK R25 and EK R26.

FLIGHT PROCEDURES

1. IFR Arrival

1.1 Aircraft will normally be cleared by ACC KØBENHAVN to OD24F HOLDING.

1.2 Navigation aid designated for radio communication failure during IMC for arriving aircraft is NDB FE.

2. IFR Departure

2.1 Standard Instrument Departures (SID) have not been established.

2.2 Omnidirectional departures:
RWY 06/24: Climb straight ahead to at least 700 FT MSL before turn is commenced.

| MIPS | CIRCLING MINIMA (North of AD only) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| A | | B | | C | | D | | E | |
| **500** | -1.5 444 (500-1.5) | **550** | -1.6 494 (500-1.6) | **790** | -2.4 734 (800-2.4) | **790** | -3.6 734 (800-3.6) | **890** | -3.6 834 (900-3.6) |

CHANGES: AERODROME BEACON (ABN) MOVED N OF MANEUVRING AREA.

AIR COMMAND DENMARK - MIL AIM 20 MAR 2025

# NOISE ABATEMENT PROCEDURES

**Noise abatement provision**
1. Flights in the periods 2200-2300 (2100-2200) and 0500-0600 (0400-0500):
In the periods 2200-2300 (2100-2200) and 0500-0600 (0400-0500) the airport may be used by the following aircraft:

- Aeroplanes and helicopters with MTOM not exceeding 5700 KG.
- Propeller aeroplanes with MTOM below 9000 KG and noise certified according to ICAO annex 16, chapter 6 or chapter 10.
- Jet and turboprop aeroplanes (irrespective of MTOM) certified according to ICAO Annex 16, chapter 3 and which fulfil the lower limits of the requirements (flyover 89 EPNdB, lateral 94 EPNdB and Approach 98 EPNdB).

The number of those operations is limited to 100 per month.

**2. Noise abatement provisions for ACFT with MTOM above 5700 KG.**
3.1 Take-off RWY06:

- Departure towards ALSIE VOR: Turn right – VOR ODN R-229 – VOR ALS R-010 to ALSIE VOR.

3.2 Take-off RWY24:

- Right turn must not be commenced until after VOR/DME ODN R-239/15NM.
- Departure towards ALSIE VOR: Left turn must not be commenced until after VOR/DME ODN R-239/16NM.
- Departure towards TRANO VOR and KORSA VOR: Left turn must not be commenced until after VOR/DME ODN R-239/14NM if the aeroplane in question is a jet aeroplane noise certified according to ICAO Annex 16, chapter 2.

**3. School and training flights:**
School and training flights are permitted in the period 0600-2200 (0500-2100). For big jet aeroplanes (MTOM above 34000 KG or with more than 19 seats) school and traning flights are permitted only MON-FRI EXC HOL in the period 0600-2100 (0500-2000). Due to environmental reasons traffic circuits in connection with landing exercises RWY 06/24 shall take place alternately north and south of the runway. PPR to be submitted within operational hours.

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 22 FEB 2024

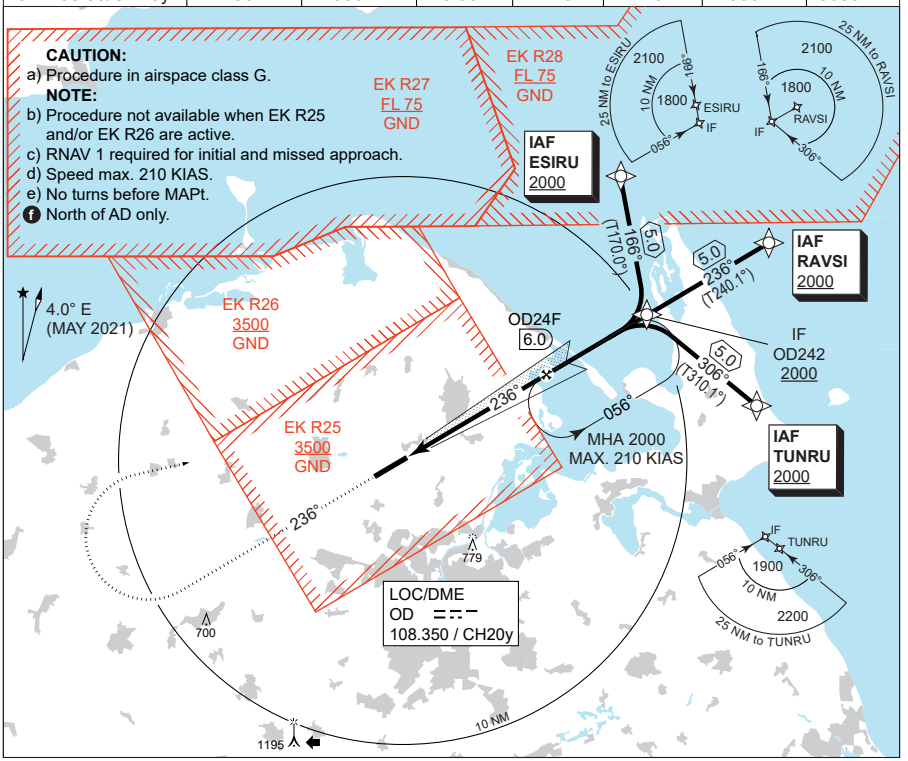
**MIPS**

**INSTRUMENT APPROACH CHART** | AD ELEV 56 | **ILS or LOC RWY 24**

**ODENSE / H C ANDERSEN (EKOD)**

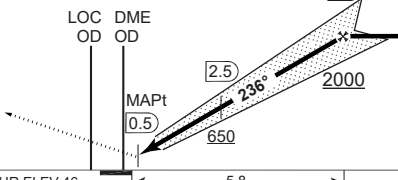
| COPENHAGEN CONTROL | ODENSE INFORMATION |
|---|---|
| 360.100 133.150 | 119.530 |

| LOC/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| OD 108.35/CH20y | 236° | 2000 FT | 3.00° | **246** | 46 | 900 M | 6053 FT |




| CDFA: 3.00° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME OD | 2 | 3 | 4 | 5 | 6 |
| DIST THR | 1.8 | 2.8 | 3.8 | 4.8 | 5.8 |
| AL T | 690 | 1010 | 1320 | 1640 | 1960 |

**MISSED APPROACH:**
Climb straight ahead until 2000 FT, then turn right climbimg to 3000 FT and hold at OD24F.




**TA 3000**
GS 3.00°
RDH 57

CAT I

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-ILS 24 | **246** - 550 200 (200-0.8/1.2) | | | | |
| S-LOC 24 | **380** - 800 334 (400-0.8/1.5) | | | | |
| CIRCLING (f) | **500** - 1.5 444 (500-1.5) | **550** - 1.6 494 (500-1.6) | **790** - 2.4 734 (800-2.4) | **790** - 3.6 734 (800-3.6) | **890** - 3.6 834 (900-3.6) |

CHANGES: ODENSE INFORMATION FREQ CHANGED.

MIPS

AIR COMMAND DENMARK - MIL AIM 13 JUN 2024

# ROSKILDE (EKRK)

AERODROME CHART

ILS or LOC RWY 11 (CAT C-E)

ILS or LOC RWY 21

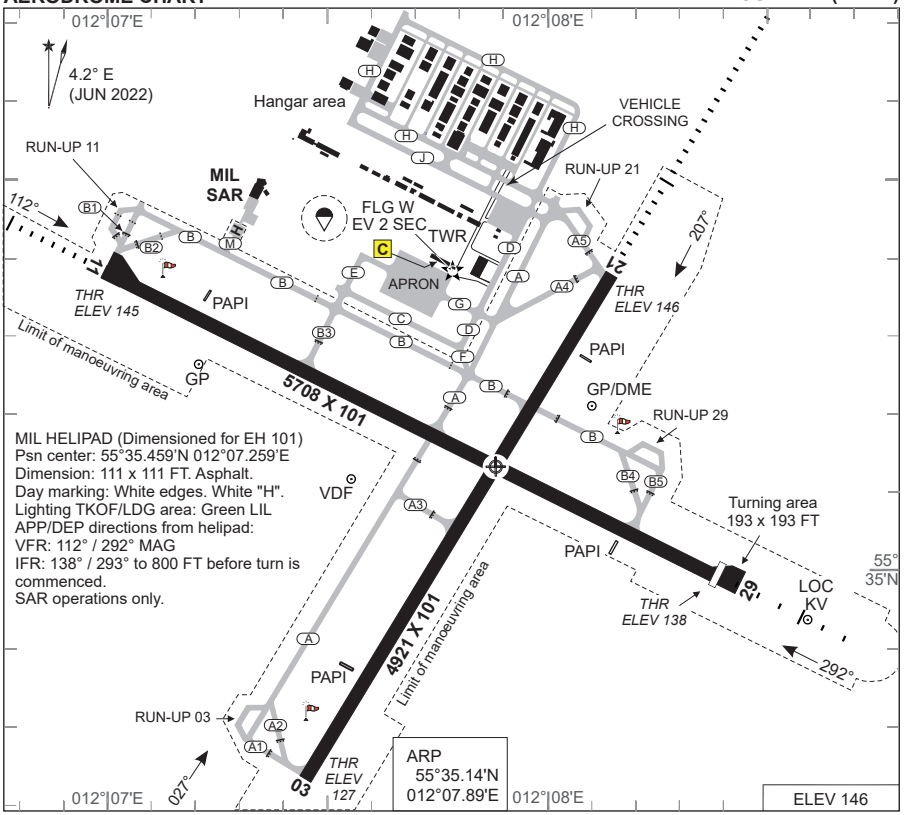
EKRK OPS

NOISE ABATEMENT

EKRK ARRIVAL

EKRK DEPARTURE

IFR DEP (JET)




| RWY | PCN | DECLARED DISTANCES | | | | | THR ELEV | RWY LIGHTING | | | | | | THRPSN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | PSN | TORA | TODA | ASDA | LDA | | THR | PAPI | TDZ | CL | EDGE | END | |
| 03 | 30F/C/X/T | A1/2 | 4921 | 4921 | 4921 | 4921 | 127 | LIH | 3° | | | LIH | LIH | 55°34.70'N 012°07.43'E |
| | | A3 | 2486 | 2486 | 2486 | | | | | | | | | |
| 21 | | A4/5 | 4921 | 4921 | 4921 | 4921 | 146 | LIH | 3° | | | LIH | LIH | 55°35.40'N 012°08.16'E |
| | | B | 3664 | 3664 | 3664 | | | | | | | | | |
| 11 | 36F/C/X/T | B1/2 | 5708 | 5708 | 5902 | 5708 | 145 | LIH | 3° | | | LIH | LIH | 55°35.40'N 012°06.94'E |
| | | B3 | 3864 | 3864 | 4058 | | | | | | | | | |
| | | A | 2673 | 2673 | 2867 | | | | | | | | | |
| 29 | | | 5902 | 5902 | 5902 | 5708 | 138 | LIH | 3° | | | LIH | LIH | 55°34.98'N 012°08.42'E |
| | | B4/5 | 4921 | 4921 | 4921 | | | | | | | | | |
| | | A | 3083 | 3083 | 3083 | | | | | | | | | |

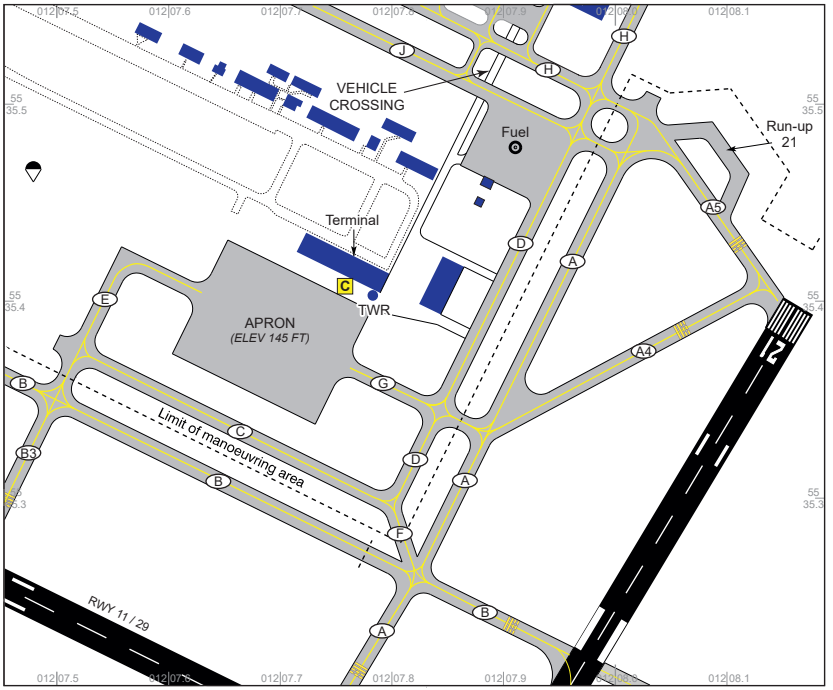
| | |
|---|---|
| ROSKILDE ATIS | 123.805 |
| ROSKILDE TWR | 118.905 (119.655) |
| ROSKILDE APP | 125.530 |
| ROSKILDE HANDLING | 131.555 (Handling, FPL etc.) |
| COPENHAGEN INFORMATION | 127.080 (Civil) |

TAXI REGULATIONS
Incoming traffic shall taxi via TWY C and TWY D, and outgoing traffic via TWY A and TWY B unless otherwise instructed by ATC.

CHANGES: VEHICLE CROSSING NOTE ADDED.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

# ROSKILDE OPERATIONS




## 1. GENERAL

Noise Abatement Provisions at EKRK are strict and comprehensive. Consult page 9-4 through 9-6 Noise Abatement Provisions before flight.

## 2.TAXI REGULATIONS

Incoming traffic shall taxi via TWY C and TWY D, and outgoing traffic via TWY A and TWY B unless otherwise instructed by ATC. (“IN via INNER” and “OUT via OUTER”).

## 3.REDUCTION OF LANDING DISTANCE AVAILABLE

In order to increase the runway capacity, the Landing Distance Available can be reduced for arriving aircraft.

When the Landing Distance Available has been reduced for a landing aircraft on runway 03 this runway may simultaneously be crossed by departing, landing or taxiing aircraft on runway 11/29 and by taxiing aircraft on taxiway Bravo.

CHANGES: VEHICLE CROSSING ADDED.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

When the Landing Distance Available has been reduced for a landing aircraft on runway 11 this runway may simultaneously be crossed by departing, landing or taxiing aircraft on runway 03/21.

Air Traffic Control will assess in which cases the procedures for reduction of Landing Distance Available can be applied. However, the Pilot-in-Command of the aircraft involved is responsible for determining whether the reduced Landing Distance Available in the actual situation is adequate for the aircraft in question.

The procedure for reduction of Landing Distance Available, will be used on the following conditions:

a) Landing Distance Available is reduced only during the daily period for VFR flights.

b) Landing Distance Available is reduced only when visual meteorological conditions (VMC) exists, and only when the pilots in command of the aircraft involved are able to see the other aircraft

c) If reduced braking action, due to e.g. rain or slush, is not reported and if measured, the coefficient, is 0.40 or above.

d) Two-way radio communication must be established between Roskilde Tower and the aircraft involved on the same frequency.

e) The landing aircraft will in due time be asked whether the reduction of the Landing Distance Available is acceptable.
Following phraseology will be used:
**For Runway 03:** "CONFIRM ABLE TO ACCEPT A SHORT LANDING RUNWAY 03, SO AS TO STOP THE AIRCRAFT NOT LATER THAN TAXIWAY A3. LANDING DISTANCE AVAILABLE 740 METRES".
**For Runway 11:** "CONFIRM ABLE TO ACCEPT A SHORT LANDING RUNWAY 11, SO AS TO STOP THE AIRCRAFT NOT LATER THAN TAXIWAY A. LANDING DISTANCE AVAILABLE 940 METRES".

f) Traffic information will be issued to both aircraft involved.

g) Involved aircraft must be in sight from Roskilde Tower from the time, where traffic information are issued and until landing.

h) Landing clearance will be issued with following phraseology:
**For Runway 03:** "STOP THE AIRCRAFT NOT LATER THAN TAXIWAY A3, RUNWAY 03 CLEARED TO LAND".
**For Runway 11:** "STOP THE AIRCRAFT NOT LATER THAN TAXIWAY A, RUNWAY 11 CLEARED TO LAND".

i) The condition as well as the clearance must be read back by the landing aircraft.

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022

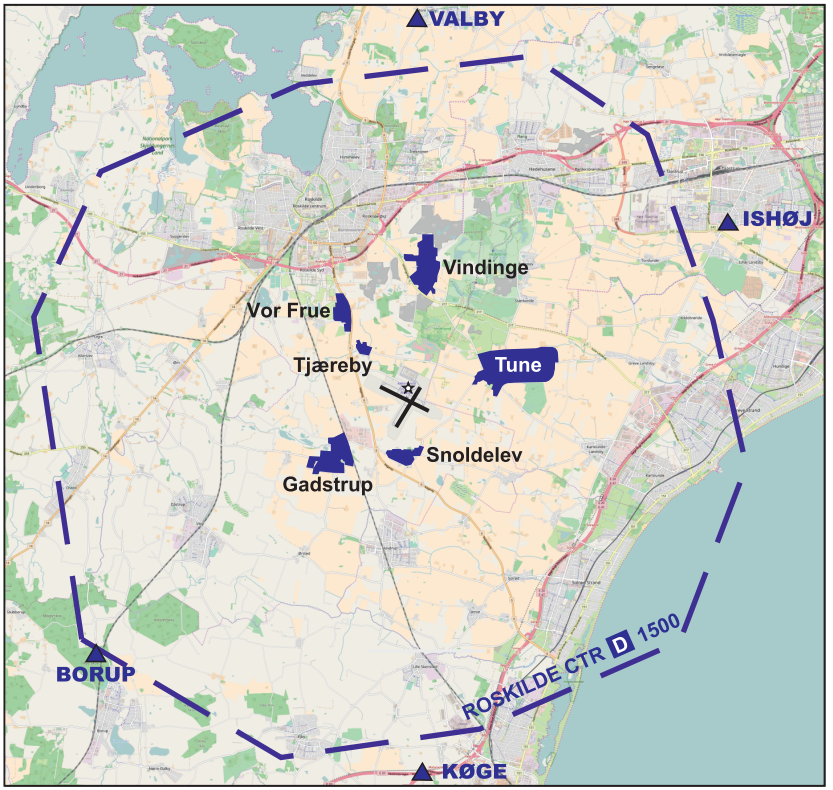
# NOISE ABATEMENT PROVISIONS

## 1.1 General provisions

1.1.1 Deviations from the Noise Abatement Provisions are permitted when necessary in connection with:

a. Take-off and landing for vital flights, such as search and rescue, hospital flights, head of state, medevac, environmental monitoring flights or humanitarian flights.

b. Take-off and landing in connection with security control of the airport area.




1.1.2 Overflying the towns Gadstrup, Snoldelev, Tjæreby, Tune, Vindinge and Vor Frue should be avoided in connection with VFR take-off and landing. This provision is valid for all VFR flights to and from Roskilde Airport and for all flights (IFR and VFR) flying visual aerodrome traffic circuits for landing exercises.

1.1.3 Violation of the Noise Abatement Provisions can be punished in pursuance of the Regulations for Civil Aviation BL 3-40 "Abatement of Noise from Controlled Aerodromes".

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022

**1.2 Jet aircraft**

1.2.1 Jet aircraft may operate only, if they are noise certificated according to ICAO Annex 16, chapter 2 or chapter 3, and if they comply with the noise criteria given in ICAO Annex 16, chapter 2 for aircraft with a MTOM up to 34.000 KG.

1.2.2 School and training flights are prohibited with jet aircraft with a MTOM above 5700 KG, unless it can be documented that the noise level for the aircraft concerned is less than or equal to 80 dB (A), cf. Guidance Material no 5/1994 - issued by the Danish Environmental Protection Agency - concerning noise from aerodromes.

1.2.3 Before executing VFR school and training flights the Pilot-in-Command shall obtain more specified instructions from the Airport Office/Briefing.

1.2.4 VFR landing exercises carried out in connection with school flights are permitted only as stated in item 1.3.4.

**1.3 Propeller and turboprop aeroplanes**

1.3.1 After take-off the Pilot-in-Command should aim to use an air speed giving the best rate of climb.

1.3.2 School and training flights are prohibited with aircraft with a MTOM above 5.700 KG, unless it can be documented that the noise level for the aircraft concerned is less than or equal to 80 dB (A), cf. Guidance Material no 5/ 1994 - issued by the Danish Environmental Protection Agency - concerning noise from aerodromes (noise class I, II and III).

1.3.3 Before executing VFR school and training flights the Pilot-in-Command shall obtain more specified instructions from the Airport Office /Briefing.

1.3.4 VFR landing exercises and continuous approaches carried out in connection with school flights are permitted only:

a. From 1 MAY to 31 AUG:

| | |
|---|---|
| MON-FRI, EXC HOL | 0700-1900 Danish time |
| SAT, EXC HOL | 0700-1400 Danish time |

b. From 1 SEP to 30 APR:

| | |
|---|---|
| MON-FRI, EXC HOL | 0700-2200 Danish time |
| SAT, EXC HOL | 0700-1400 Danish time |

VFR landing exercises and continuous approaches carried out in connection with school flights are also permitted - from 1 SEP to 30 APR on certain Saturdays within the period 1400-1900 Danish time - by arrangement with the Airport Office.

1.3.4.1 VFR landing exercises and continuous approaches carried out by a holder of a licence in order to maintain the privileges of the licence are permitted all days between 0700-2200. If performed outside the times specified in 1.3.4, the pilot license number must be submitted to the ARO.

1.3.4.2 IFR landing exercises and continuous approaches are permitted only:

| | |
|---|---|
| MON-FRI, EXC HOL | H24 |
| SAT, EXC HOL | 0700-1400 Danish time |

IFR landing exercises and continuous approaches are also permitted in the period 1 SEP to 30 APR from 1400-1900 Danish time on certain Saturdays - by arrangement with the Airport Office.

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022

**1.4 Helicopters**

1.4.1 School and training flights with helicopters with MTOM above 5.700 kg are prohibited.

1.4.2 Before executing VFR school and training flights, the Pilot-in-Command shall obtain more specified instructions from the Airport Office/Briefing.

1.4.3 VFR landing exercises carried out in connection with school flights are permitted only as stated in item 1.3.4.

**1.5 Reporting**

1.5.1 Reporting by the Pilot-in-Command to the Danish CAA.

1.5.1.1 The Pilot-in-Command shall as fast as possible report to the Danish CAA when it has not been possible to comply with the provision in item 1.1.2 due to safety reasons.

1.5.2 Reporting by the Air Navigation Services KØBENHAVN to the Danish CAA.

1.5.2.1 The Air Navigation Services KØBENHAVN shall notify The Danish CAA of every clearance deviating from the above mentioned provisions.

1.5.2.2 The Air Navigation Services KØBENHAVN shall notify the Danish CAA of every clearance according to the provision in item 1.1.1.

1.5.2.3 The Air Navigation Services KØBENHAVN shall notify the Danish CAA when observing the towns overflown - mentioned in item 1.1.2 - in connection with VFR take-off or landing.

1.5.3 Københavns Lufthavne A/S (Copenhagen Airports) reporting to the Danish CAA.

1.5.3.1 Københavns Lufthavne A/S (Copenhagen Airports) shall notify the Danish CAA when it has been ascertained that jet aircraft has been operating against the regulation in item 1.2.1.

1.5.3.2 Københavns Lufthavne A/S (Copenhagen Airports) shall notify the Danish CAA when it has been ascertained that aircraft has executed school and training flights against the provisions in item 1.2.2, 1.3.2 or 1.4.1.

1.5.3.3 Københavns Lufthavne A/S (Copenhagen Airports) shall notify the Danish CAA when it has been ascertained that school flight has taking place against the provisions in item 1.2.4, 1.3.4 or 1.4.3.

1.5.4 The Danish CAA follow-up of reports.

1.5.4.1 The Danish CAA will make further investigation based on the received reports. The investigation will include an evaluation of whether liability to punishment shall be exercised according to Regulations for Civil Aviation BL 5-40.

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022

# ROSKILDE ARRIVAL

**Flight Planning**

IFR traffic to København/Roskilde shall be planned via the appropriate primary holding (TIDVU, ERNOV, KOR or FISKO) via routes listed below. Holdings are described on page 9-8.

Note: Traffic via AALBORG VOR/DME shall flight plan via T551-TNO to FISKO. Traffic via RØNNE VOR shall flight plan via L983-ROBUS-DCT-KOR.

TIDVU holding and ERNOV holding are inside Swedish territory. Operators not permitted to overfly Swedish territory shall file outside Swedish territory.

**Filing of Flight Plan**
Traffic to København/Roskilde shall include appropriate primary holding in the flight plan.

**Performance Restrictions/Level Restrictions**
Descend from cruising level/top of descend shall be planned so as to meet the following level restrictions:

| ARR via | Level restriction | Primary Holding |
|---|---|---|
| ROBUS | MAX FL 70 | KOR |
| | MAX FL 70 (20 NM prior to KOR) | KOR |
| TNO | MAX FL70 (20 NM prior to TNO) | FISKO |

**Radio communication failure during IFR approach.**
In case of radio communication failure, the latest received and acknowledged level shall be maintained until the appropriate primary holding. In TIDVU holding decend to FL 70. In ERNOV holding decend to FL 100. In FISKO and KOR holding

**Ground handling**
It is mandatory for all aircraft above 3000 kgs to contact “Roskilde Handling” 15 MIN prior to arrival, stating ETA, POB, fuel requirement, intention and to receive parking instructions. Ground handling is mandatory for non-resident commercial and private operators of aircraft with MTOM above 3000 kgs when using main apron facilities.

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022

## Primary holdings for København/Roskilde

| Holding name | Inbound track (MAG) | Turn | MAX IAS | MNM/MAX level Time | Entry procedure |
|---|---|---|---|---|---|
| **TIDVU**<br>55° 24.678'N<br>013° 33.452'E | 294 | Right | 230 | 5000FT<br>1.5 MIN | Omni-directional |
| **FISKO**<br>TNO VOR R-112/12.5 DME.<br>KV 13.2 DME<br>55° 41.083'N<br>011° 46.267'E | 112 | Right | 210 | 3000FT/FL140<br>1 MIN | Direct via TNO R-112 |
| **KORSA**<br>KOR VOR/DME<br>55° 26.362'N<br>011° 37.892'E | 298 | Right | 210 | 3000FT/FL140<br>1 MIN | Omni-directional |
| **ERNOV**<br>56° 10.132'N<br>012° 34.427'E | 179 | Left | 230 | FL 100 /-<br>1.5 MIN | Omni-directional |

## Secondary Holdings for København/Roskilde

| Holding name | Inbound track (MAG) | Turn | MAX IAS | MNM/MAX level Time | Entry procedure |
|---|---|---|---|---|---|
| **ROSKILDE**<br>L RK<br>55° 37.388'N<br>011° 59.830'E | 112 | Right | 210 | 2000FT/6000FT<br>1 MIN | Omni-directional |

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022

# ROSKILDE DEPARTURE

**Flight Planning**
Standard Instrument Departures are not established.

1. For destinations outside Copenhagen Area and outside the lateral limit of Malmö TMA, flight planning shall be via one of the Departure routes. See below.
2. For destinations within Copenhagen Area and within the lateral limit of Malmö TMA, flights may be planned direct between significant points/aerodromes.

| PROP AIRCRAFT | | | JET AIRCRAFT | | |
|---|---|---|---|---|---|
| **ROUTE** | **RMK** | **NOTE** | **ROUTE** | **RMK** | **NOTE** |
| NOVPO DCT VEDAR | | | NOVPO DCT VEDAR | | |
| ERNOV | Only AVBL FL090 and below | | ERNOV | Only AVBL FL090 and below | |
| KEMAX | | | KEMAX | | |
| SIMEG | | A | SIMEG | | A |
| SALLO | | A | SALLO | | A |
| TNO | Only AVBL FL060 and below | | TNO | Only AVBL FL060 and below | |
| DOBEL DCT ODDON | | | KOR | Only AVBL FL060 and below | |
| KOR | Only AVBL FL060 and below | | BISTA DCT NEXEN or BETUD | Only AVBL FL070 and above | A |
| MAXEL DCT KOPEX or BETUD | Only AVBL FL070 and above | A | TOBIS DCT LANGO | Only AVBL FL070 and above | |
| MIRGO DCT GOLGA | Only AVBL FL070 and above | | DOBEL DCT ODDON | | |
| | | | MIRGO DCT GOLGA | Only AVBL FL070 and above | |

**Notes:**
A. Departure route BETUD available only to operators not permitted to fly over Swedish territory. Generally Departure route SALLO/SIMEG applies. Flight planning via Departure route BETUD is restricted to MAX FL 70 until BETUD.

**ATC clearance**
For flights to destinations outside Copenhagen Area and outside the lateral limit of Malmö TMA, ATC clearance will be issued via the departure routes based on VOR radials or DCT. Traffic via DOBEL (below FL065), KOR and TNO can expect a maximum of 5000 FT until leaving Copenhagen Area.

**Omnidirectional Departure from Roskilde**
Climb straight ahead to at least 800 FT MSL before turn is commenced.

**Departure from military helipad:**
Departure 140: Climb on track 139 to 800 FT MSL before turn is commenced.
Departure 295: Climb on track 294 to 800 FT MSL before turn is commenced.

CHANGES: WAYPOINTS UPDATED, EDITORIAL.
AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

**Radar vectoring**
Radar vectoring may be used to expedite traffic. Heading deviations after departure shall not be initiated below 800 FT MSL.

Speed limit: FL 70 and below: MAX IAS 250 KT.

**Radio Communication Failure**
1. Flights leaving Copenhagen Area and Malmö TMA:
In case of radio communication failure after departure, maintain for a period of three minutes the cleared level. Then climb to 4000 FT MSL or maintain cleared level if higher. Maintain until final waypoint of the departure route, then climb to requested flight level. In case of radio communication failure after departure, while under radar vectoring, aircraft shall proceed in the most direct manner to the departure route filed and climb according to above described procedure.

2. Flights with entire route within Copenhagen Area and Malmö TMA:
In case of radio communication failure after departure, maintain for a period of three minutes the cleared level, then continue in accordance with the current flight plan. In case of radio communication failure after departure, while under radar vectoring, aircraft shall proceed in the most direct manner in accordance with the current flight plan and climb according to above described procedure.

| WAYPOINT LIST | | | |
|---|---|---|---|
| WAY-POINT | LATTITUDE/LONGITUDE | WAY-POINT | LATTITUDE/LONGITUDE |
| BETUD | 55° 00.435'N 012° 31.346'E | MIRGO | 56° 02.142'N 011° 59.882'E |
| BISTA | 55° 12.203'N 012° 07.383'E | NEXEN | 54° 48.647'N 011° 37.515'E |
| DOBEL | 55° 36.365'N 011° 23.396'E | NOVPO | 56° 06.400'N 012° 14.467'E |
| ERNOV | 56° 10.132'N 012° 34.427'E | ODDON | 55° 34.861'N 010° 39.179'E |
| GOLGA | 56° 19.984'N 011° 41.703'E | SALLO | 54° 55.000'N 013° 23.172'E |
| KEMAX | 56° 07.587'N 013° 27.230'E | SIMEG | 55° 15.002'N 013° 30.072'E |
| KOPEX | 54° 58.223'N 011° 28.061'E | TNO | 55° 46.446'N 011° 26.351'E |
| KOR | 55° 26.362'N 011° 37.892'E | TOBIS | 55° 15.141'N 011° 40.577'E |
| LANGO | 54° 56.738'N 010° 51.378'E | VEDAR | 56° 31.900'N 012° 07.417'E |
| MAXEL | 55° 12.555'N 011° 54.149'E | | |

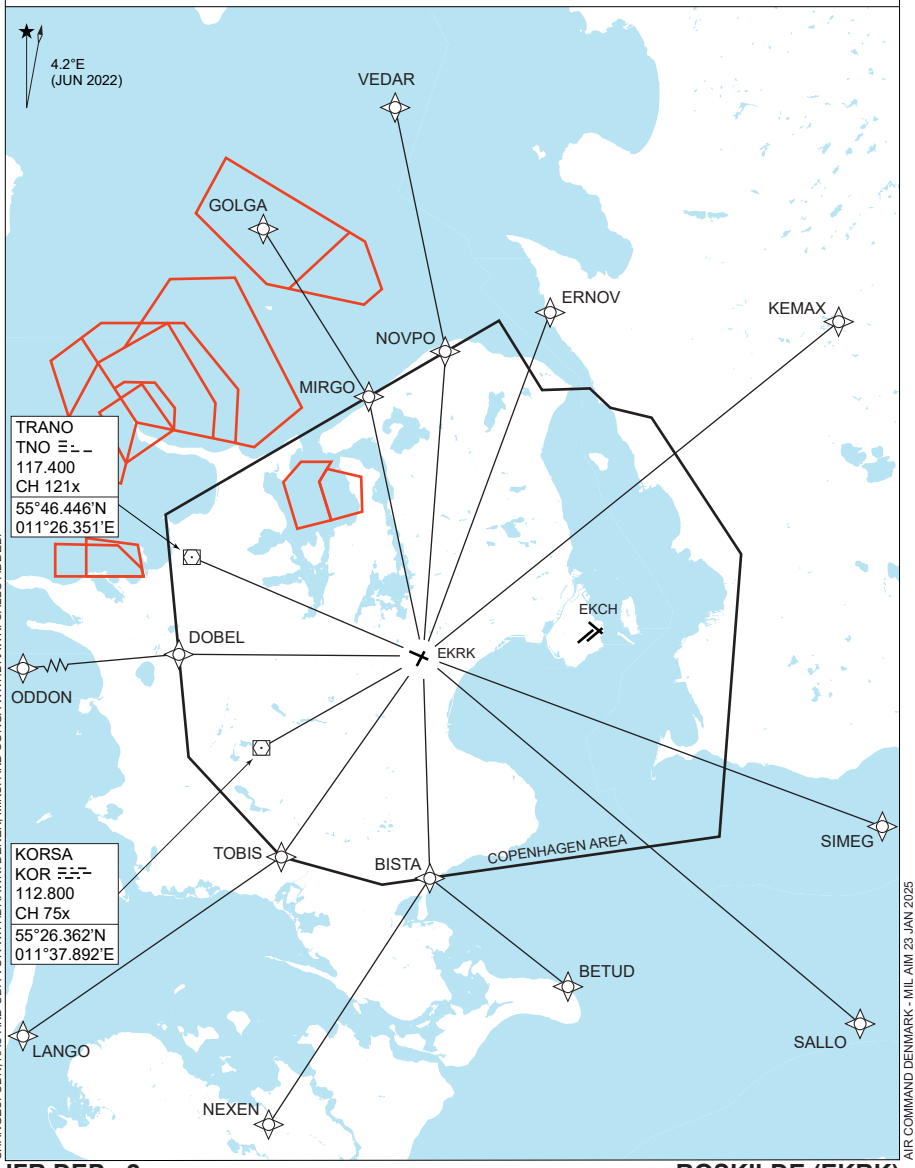
CHANGES: WAYPOINT LIST UPDATED.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

## IFR TRAFFIC FROM ROSKILDE

# JET

Procedures are also valid for IFR traffic from Danish aerodromes within Copenhagen Area, except København / Kastrup (EKCH).
FOR FURTHER INFORMATION SEE PAGE 9-9 TO 9-10.




CHANGES: ODN, KAS AND CDA VOR WITHDRAWN, DENEK, MIKSI AND SORGA WITHDRAWN, SALLO ADDED

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

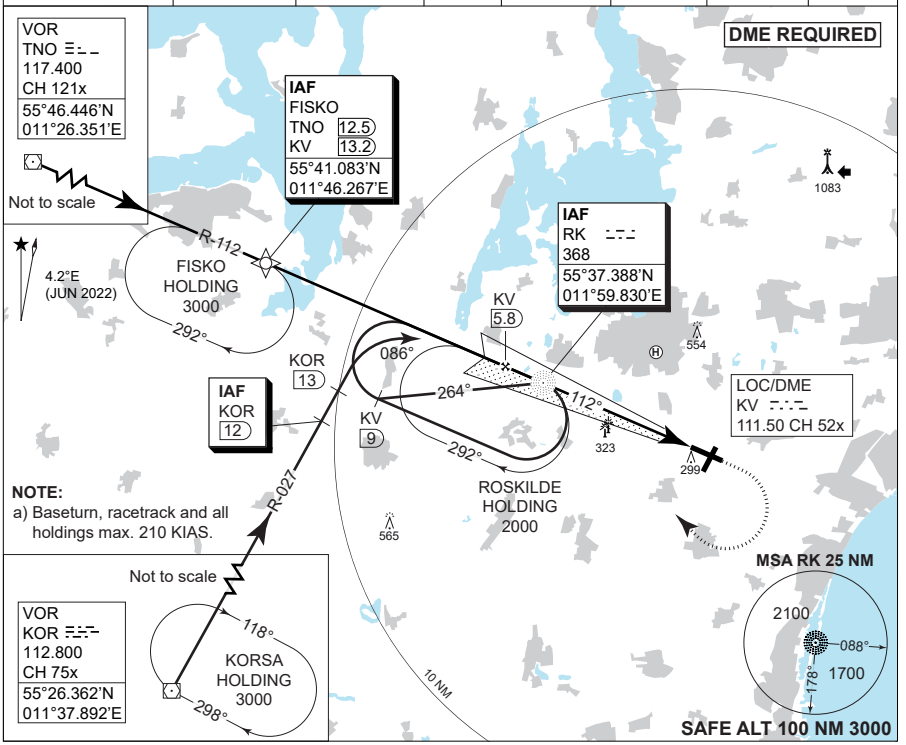
**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 146

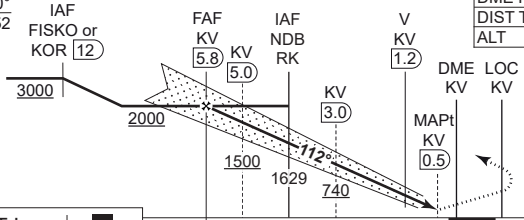
**ILS or LOC RWY 11 (CAT C-E)**
**ROSKILDE (EKRK)**

| COPENHAGEN APPROACH | ROSKILDE ATIS | ROSKILDE APPROACH | ROSKILDE TOWER |
|---|---|---|---|
| 119.805 | 123.805 | 125.530 | 118.905 119.655 |

| LOC/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| KV 111.50 CH 52x | 112° | 2000 FT | 3.00° | **SEE CAT** | 145 FT | 900 M | 5708 FT |




**TA 5000**
GS 3.0°
RDH 52




| LOC ONLY CDFA 3.0° / 5.3% | | | | | |
|---|---|---|---|---|---|
| DME KV | 5 | 4 | 3 | 2 | 1 |
| DIST TO THR | 4.8 | 3.8 | 2.8 | 1.8 | 0.8 |
| ALT | 1740 | 1420 | 1100 | 780 | 460 |

**MISSED APPROACH**
Climb to 500 FT then right turn climbing to 2000 FT to NDB RK.
MAX IAS 185 KT until turn completed.

CAT I

| CATEGORY | C | D | E |
|---|---|---|---|
| S-ILS 11 (MACG 2.5%) | **439** - 650 294 (300-0.8/1.4) | **449** - 700 304 (400-0.8/1.4) | **467** - 800 322 (400-0.8/1.5) |
| S-ILS 11 (MACG 5.0%) | **345** - 550 200 (200-0.8/1.2) | | |
| S-LOC 11 | **520** - 1000 375 (400-1.0/1.7) | | |
| CIRCLING | **950** - 2400 804 (900-2.4) | **950** - 3600 804 (900-3.6) | **1050** - 3600 904 (1000-3.6) |

MIPS

CHANGES: NEW PAGE NUMBER. EDITORIAL.

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

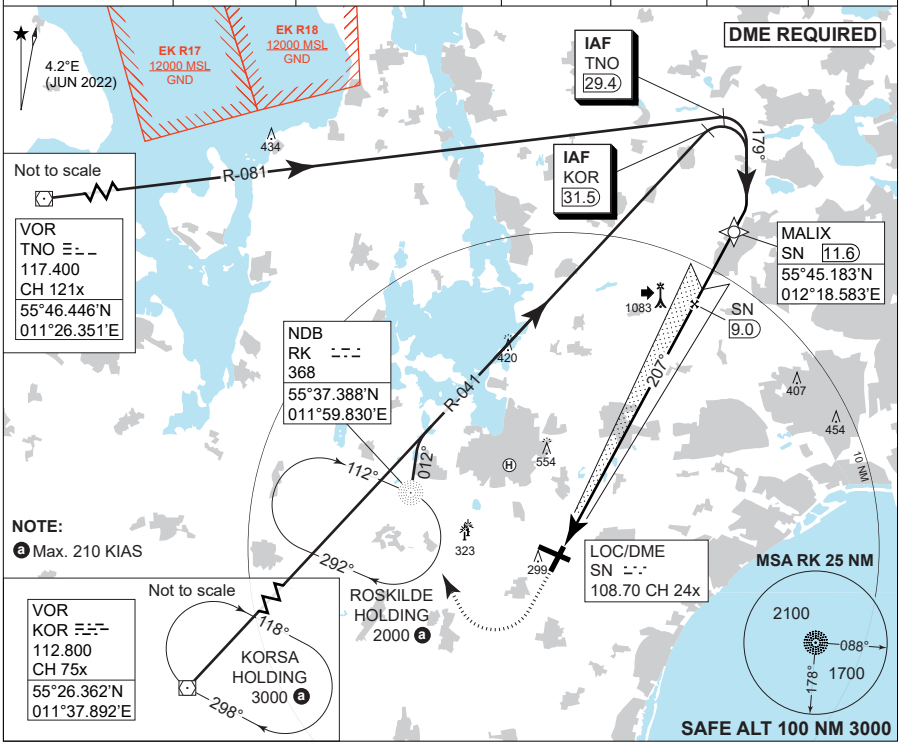
**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 146

**ILS or LOC RWY 21**
**ROSKILDE (EKRK)**

| COPENHAGEN APPROACH | ROSKILDE ATIS | ROSKILDE APPROACH | ROSKILDE TOWER |
|---|---|---|---|
| 119.805 | 123.805 | 125.530 | 118.905 119.655 |

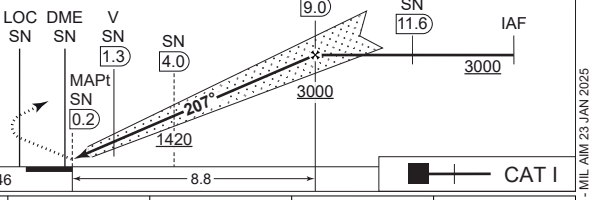
| LOC/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| SN 108.70 CH 24x | 207° | 3000 FT | 3.00° | **346** | 146 FT | 900 M | 4921 FT |




| LOC ONLY CDFA 3.0° / 5.2% | | | | | | | |
|---|---|---|---|---|---|---|---|
| DME SN | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| DIST TO THR | 1.8 | 2.8 | 3.8 | 4.8 | 5.8 | 6.8 | 7.8 |
| ALT | 780 | 1100 | 1420 | 1730 | 2050 | 2370 | 2680 |

**TA 5000**
GS 3.0
RDH 50

**MISSED APPROACH**
Climb to 500 FT then right turn climbing to 2000 FT to NDB RK.




| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-ILS 21 | **346** - 550 200 (200-0.8/1.2) | | | | |
| S-LOC 21 | **540** - 1100 394 (400-1.1/1.8) | | | | |
| CIRCLING | **610** - 1.5 464 (500-1.5) | **850** - 1.6 704 (800-1.6) | **950** - 2.4 804 (900-2.4) | **950** - 3.6 804 (900-3.6) | **1050** - 3.6 804 (1100-3.6) |

MIPS

CHANGES: EK R17 AND R18 CORRECTED.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

**ILS or LOC RWY 21**

55°35.13'N
012°07.89'E

**ROSKILDE (EKRK)**

# BORNHOLM / RØNNE (EKRN)

AERODROME CHART

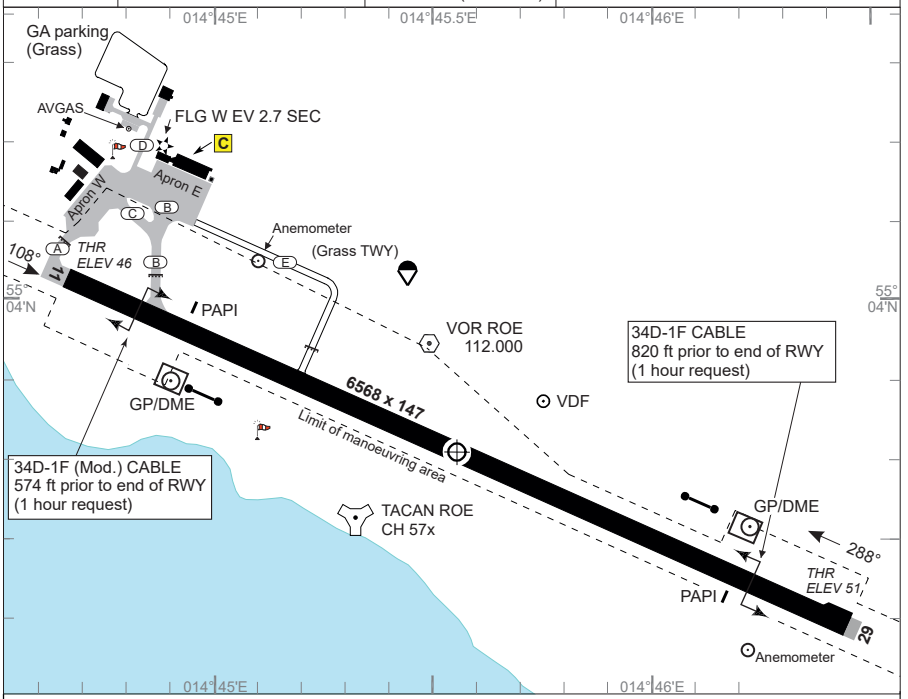
ILS or LOC RWY 11

ILS or LOC RWY 29

HPMA TACAN RWY 11

HPMA TACAN RWY 29

| RØNNE TOWER | BORNHOLM HANDLING | REMARK: |
|---|---|---|
| 118.330 (VDF) 257.800 | 131.550 | Airport phone: +45 56 95 26 26 |
| AD Elev 52 | ARP 55°03.80'N 014°45.58'E | VAR 5.5°E (JAN 2023) |







| RWY | PCN | DECLARED DISTANCES PSN | TORA | TODA | ASDA | LDA | THR ELEV | RWY LIGHTING THR | PAPI | TDZ | CL | EDGE | END | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 38 F/B/X/T | THR | | | | 6568 | 46 | LIH | 3.00° | | | LIH | LIH | 55°04.01'N 014°44.71'E |
| | | A | 6568 | 6568 | 6568 | | | | | | | | | |
| | | B | 5928 | 5928 | 5928 | | | | | | | | | |
| 29 | | THR | 6568 | 6568 | 6568 | 6568 | 51 | LIH | 3.00° | | | LIH | LIH | 55°03.58'N 014°46.43'E |

**Flight Procedures**

1. IFR Arrival

1.1 Aircraft will normally be cleared by SWEDEN CONTROL to ROE VOR.

1.2 Navigation aid designated for radio communication failure during IMC for arriving aircraft is NDB FAU.

2. IFR Departure

2.1 Standard Instrument Departures (SID) have not been established.

2.2 Omnidirectional departures

RWY 11: Climb straight ahead to at least 700 FT MSL before turn is commenced.

RWY 29: Climb straight ahead to at least 500 FT MSL before turn is commenced. Procedure design gradient 4.5% up to 800 FT MSL, due to cranes 525 FT - 2.1 NM NW from THR.

**MIPS** — **CIRCLING MINIMA (SOUTH of aerodrome only)**

| A | B | C | D | E |
|---|---|---|---|---|
| 500 -1.5 450 (500-1.5) | 700 -1.6 650 (700-2.3) | 800 -2.4 750 (800-2.7) | 800 -3.6 750 (800-3.6) | 900 -3.6 850 (900-3.6) |

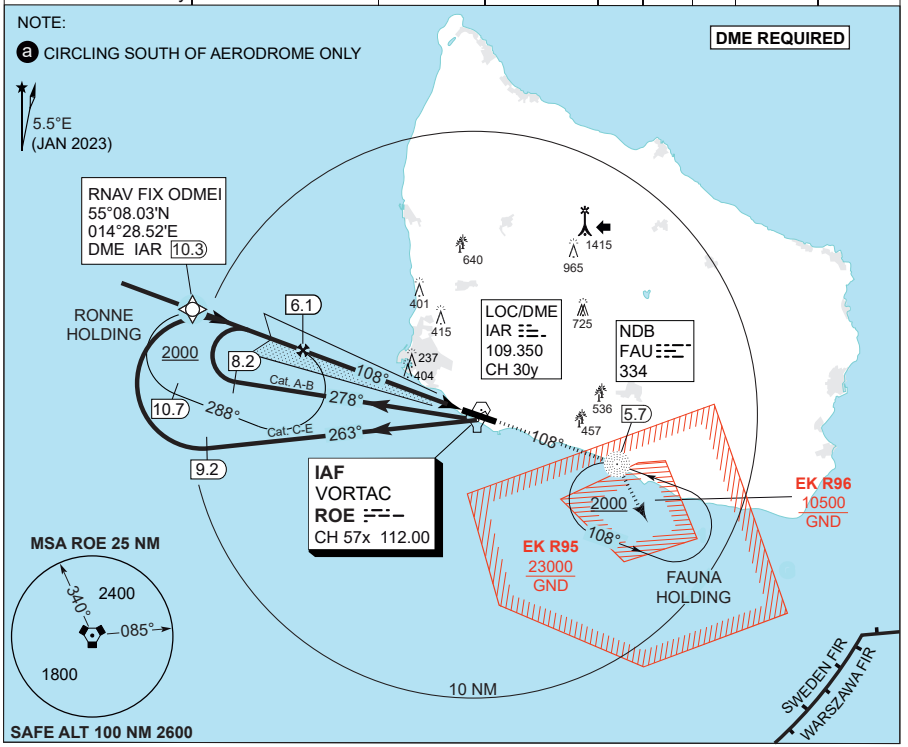
CHANGES: GLIDER STRIP DELETED. EDITORIAL.

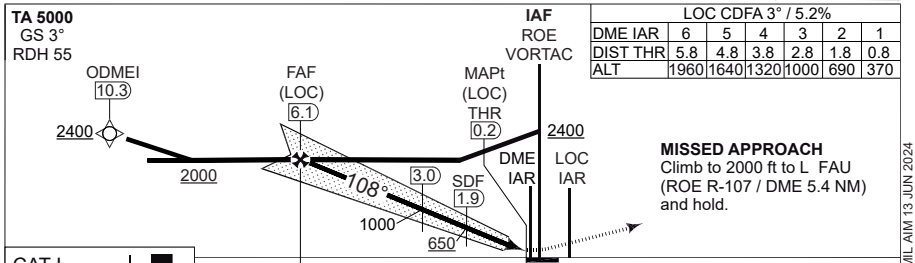
AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

AD ELEV 52

| SWEDEN CONTROL | ROENNE TOWER |
|---|---|
| 134.980 128.180 | 257.800 118.330 |

| LOC/DME | VORTAC | APP COURSE | GS INTCP ALT | GS | DA | THR | ALS length | LDA |
|---|---|---|---|---|---|---|---|---|
| IAR 109.350/CH 30y | ROE 112.00/CH 57x | 108° | 2000 FT | 3.0° | **246** | 46 | 600 M | 6568 FT |




| LOC CDFA 3° / 5.2% | | | | | | |
|---|---|---|---|---|---|---|
| DME IAR | 6 | 5 | 4 | 3 | 2 | 1 |
| DIST THR | 5.8 | 4.8 | 3.8 | 2.8 | 1.8 | 0.8 |
| ALT | 1960 | 1640 | 1320 | 1000 | 690 | 370 |

| MIPS | CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|---|
| | S-ILS 11 | **246** - 750 200 (200-0.8/1.2) | | | | **255** - 750 209 (300-0.8/1.2) |
| | S-LOC 11 | **350** - 1000 304 (400-1.0/1.4) | | | | |
| | CIRCLING a | **500** - 1.5 450 (500-1.5) | **700** - 2.3 650 (700-2.3) | **800** - 2.7 750 (800-2.7) | **800** - 3.6 750 (800-3.6) | **900** - 3.6 850 (900-3.6) |

CHANGES: TWR FREQ CHG

AIR COMMAND DENMARK - MIL AIM 13 JUN 2024

**MIPS**

**INSTRUMENT APPROACH CHART**

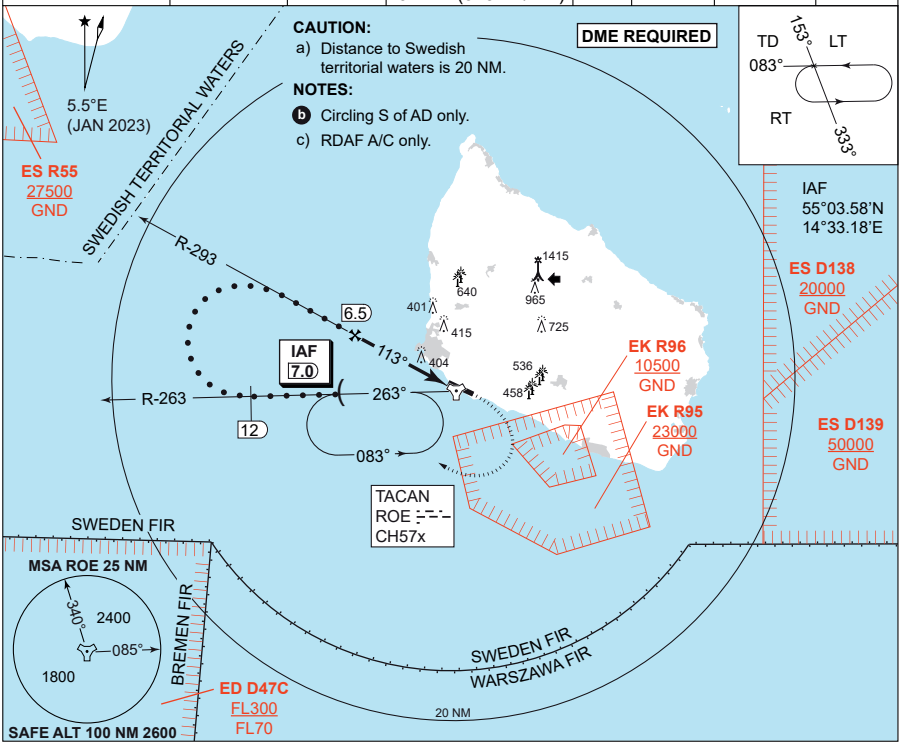
AD ELEV 52

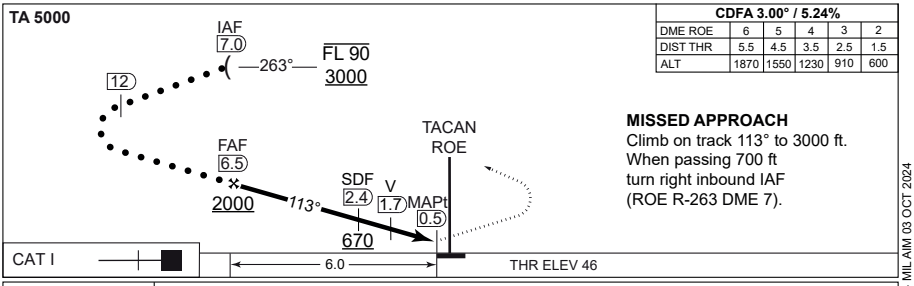
**HPMA TACAN RWY 11**

**ROENNE (EKRN)**

| SWEDEN CONTROL | ROENNE TOWER |
|---|---|
| 134.980 128.180 | 257.800 118.330 |

| TACAN | APP COURSE | FAF ALT | DESCENT GR. | MDA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| ROE CH 57x | 113° | 2000 FT | 5.24% (318 FT/NM) | **440** | 46 | 600 M | 6568 FT |




| CDFA 3.00° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME ROE | 6 | 5 | 4 | 3 | 2 |
| DIST THR | 5.5 | 4.5 | 3.5 | 2.5 | 1.5 |
| ALT | 1870 | 1550 | 1230 | 910 | 600 |

**MISSED APPROACH**

Climb on track 113° to 3000 ft.
When passing 700 ft
turn right inbound IAF
(ROE R-263 DME 7).

| CATEGORY | HPMA |
|---|---|
| S-TACAN 11 | **440** - 1400 394 (400-1.4/1.8) |
| CIRCLING | **610** - 3.2 558 (600-3.2) |

CHANGES: NEW PROCEDURE DEVELOPRED ACCORDING TO HPMA CRITERIA

MIPS

AIR COMMAND DENMARK - MIL AIM 03 OCT 2024

**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 52

**ILS or LOC RWY 29**
**ROENNE (EKRN)**

| SWEDEN CONTROL | ROENNE TOWER |
|---|---|
| 134.980 128.180 | 257.800 118.330 |

| LOC/DME | VORTAC | APP COURSE | GS INTCP ALT | GS | DA | THR | ALS length | LDA |
|---|---|---|---|---|---|---|---|---|
| IRE 110.30/CH40x | ROE 112.00/CH 57x | 288° | 2000 FT | 3.0° | **251** | 51 | 900 M | 6568 FT |

NOTES:
a CIRCLING SOUTH OF AERODROME ONLY
b BASE TURN FAU OUTBOUND:
CAT. A-B 136°
CAT. C-E 152° - MAX SPEED 220 KIAS

**DME REQUIRED**

5.5°E
(JAN 2023)

**IAF**
NDB
FAU
334
55°01.69'N
014°54.03'E

LOC/DME
IRE
110.30
CH 40x

VORTAC
ROE
CH 57x
112.00

RNAV FIX ULRED
54°59.42'N
015°02.93'E
DME IRE 10.5

264°
288°
108°
136°
152°
6.1
8.0
8.6
2000
b

EK R95
23000
GND

EK R96
10500
GND

10 NM

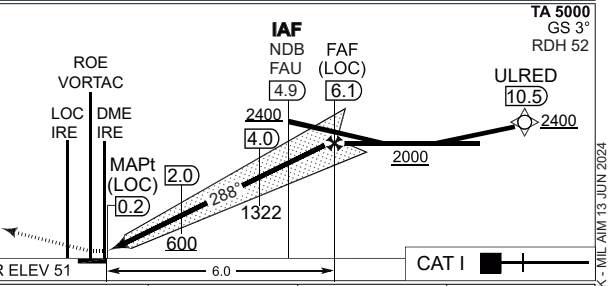
**MSA ROE 25 NM**
340°
085°
2400
1800

**SAFE ALT 100 NM 2600**

SWEDEN FIR
WARSZAWA FIR

| LOC CDFA 3.00° / 5.2% | | | | | |
|---|---|---|---|---|---|
| DME IRE | 2 | 3 | 4 | 5 | 6 |
| DIST THR | 1.8 | 2.8 | 3.8 | 4.8 | 5.8 |
| ALT | 690 | 1010 | 1330 | 1640 | 1960 |

**MISSED APPROACH**
Climb to minimum 700 ft, turn left and climb on track 264° to 2000 ft. Turn left to FAU NDB (ROE R-107, IRE DME 4.9) and hold.




**TA 5000**
GS 3°
RDH 52

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-ILS 29 | **251** - 550 200 (200-0.8/1.2) | | | | |
| S-LOC 29 | **400** - 900 349 (400-0.9/1.6) | | | | |
| CIRCLING a | **500** - 1.5 450 (500-1.5) | **700** - 2.3 650 (700-2.3) | **800** - 2.7 750 (800-2.7) | **800** - 3.6 750 (800-3.6) | **900** - 3.6 850 (900-3.6) |

MIPS

CHANGES: TWR FREQ CHG.

AIR COMMAND DENMARK - MIL AIM 13 JUN 2024

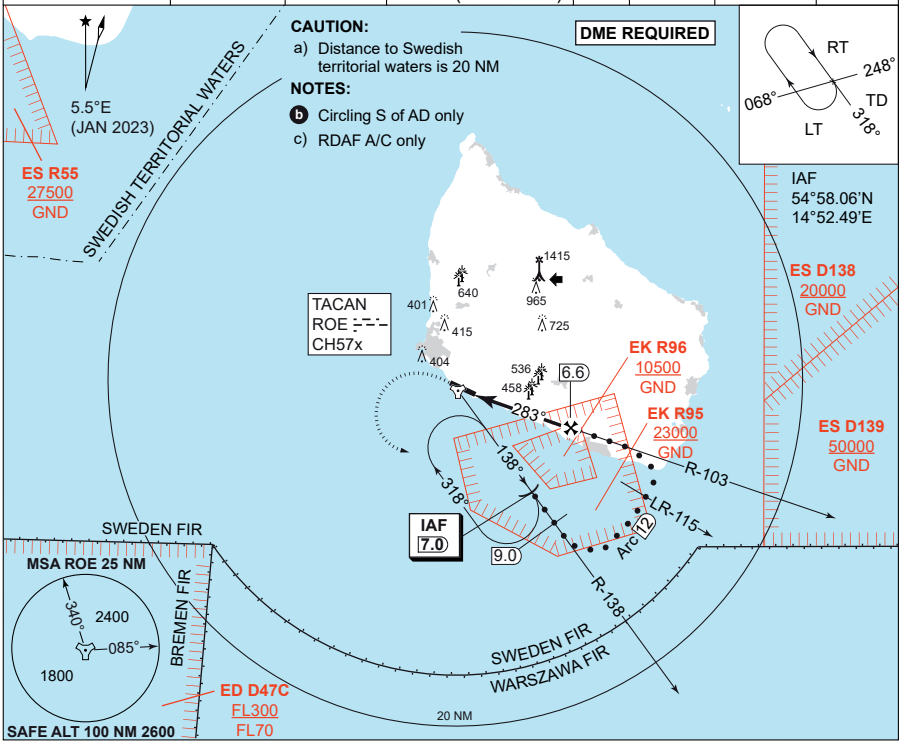
**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 52

**HPMA TACAN RWY 29**
**ROENNE (EKRN)**

| SWEDEN CONTROL | ROENNE TOWER |
|---|---|
| 134.980 128.180 | 257.800 118.330 |

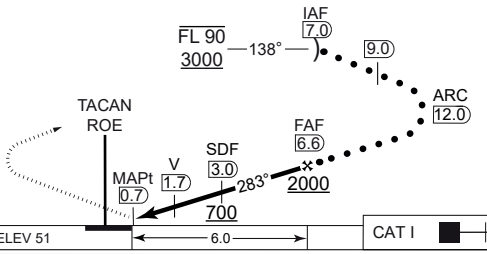
| TACAN | APP COURSE | FAF ALT | DESCENT GR. | MDA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| ROE CH 57x | 283° | 2000 FT | 5.24% (318 FT/NM) | **460** | 51 | 900 M | 6568 FT |




| CDFA 3.00° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME ROE | 2 | 3 | 4 | 5 | 6 |
| DIST THR | 1.4 | 2.4 | 3.4 | 4.4 | 5.4 |
| ALT | 540 | 860 | 1180 | 1500 | 1820 |

**TA 5000**

**MISSED APPROACH**
Climb on track 283 to 3000 ft.
When passing 700 ft
turn left inbound IAF
(ROE R-138 DME 7).




| CATEGORY | HPMA |
|---|---|
| S-TACAN 29 | **460** - 1200 409 (500-1.2/1.9) |
| CIRCLING | **610** - 3.2 558 (600-3.2) |

MIPS

CHANGES: NEW PROCEDURE DEVELOPRED ACCORDING TO HPMA CRITERIA

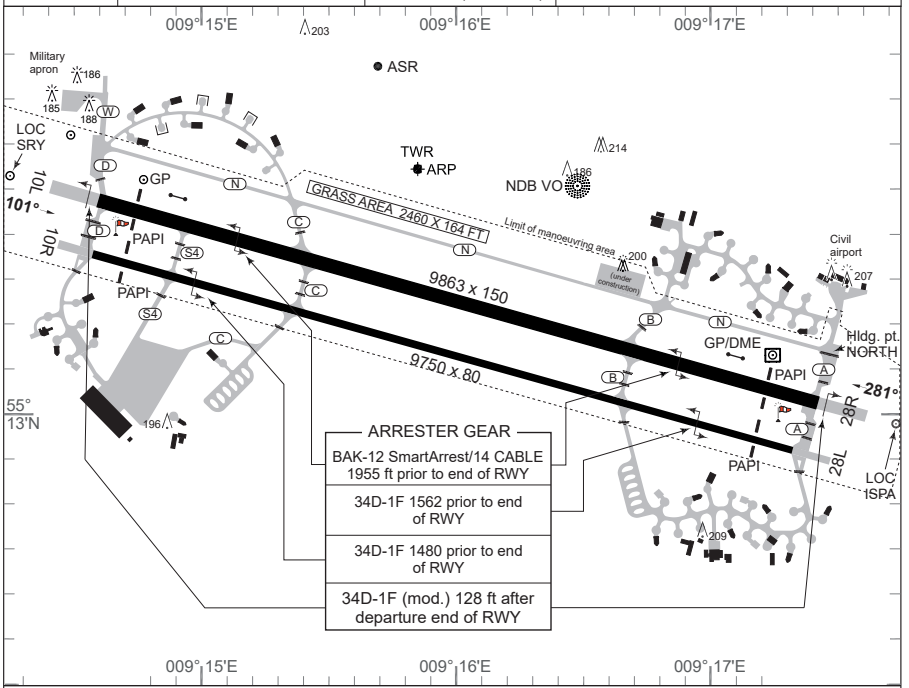
AIR COMMAND DENMARK - MIL AIM 03 OCT 2024

# SKRYDSTRUP (EKSP)

AERODROME CHART

| | |
|---|---|
| ILS or LOC RWY 10L | ILS or LOC RWY 28R |
| ILS or LOC Z RWY 10L | ILS or LOC Z RWY 28R |
| HPMA TACAN RWY 10L | HPMA TACAN RWY 28R |
| TACAN RWY 10L | TACAN RWY 28R |

| SKRYDSTRUP ATIS | SKRYDSTRUP TOWER | SKRYDSTRUP APPROACH | AD Admin and FPL: +45 72 84 81 22 |
|---|---|---|---|
| 133.905 | 286.375 / 118.280 | 280.750 / 124.105 | Email: comm.skpops@mil.dk |
| AD Elev **141** | ARP 55°13.53'N 009°15.84'E | VAR 3.7°E (JAN 2023) | |







| RWY | PCN | DECLARED DISTANCES TORA | TODA | ASDA | LDA | THR ELEV | RWY LIGHTING THR | PAPI | TDZ | CL | EDGE | END | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10L | 90 F/B/W/T Asphalt/ Concrete | 9863 | 9863 | 10597 | 9863 | 126 | LIH | 3° | | | LIH | LIH | 55°13.48'N 009°14.64'E |
| 28R | | 9863 | 9863 | 10600 | 9863 | 141 | LIH | 3° | | | LIH | LIH | 55°13.05'N 009°17.37'E |
| 10R | 77 F/B/W/T Asphalt/ Concrete | 9750 | 9750 | 10237 | 9750 | 124 | LIL | 3° | | | LIL | LIL | 55°13.36'N 009°14.60'E |
| 28L | | 9750 | 9750 | 10237 | 9750 | 139 | LIL | 3° | | | LIL | LIL | 55°12.94'N 009°17.30'E |

Gliding may take place outside hours of MIL operations.
Gliding may take place at Rødekro.

**Omnidirectional IFR-departures:**
RWY 10L & R: Climb straight ahead to at least 700 FT AMSL before turn is commenced.
RWY 28R & L: Climb straight ahead to at least 600 FT AMSL before turn is commenced.

| MIPS | CIRCLING MINIMA | | | | |
|---|---|---|---|---|---|
| A | B | C | D | E |
| **630** -1.5 489 (500-1.5) | **700** -1.6 559 (600-1.6) | **800** -2.4 659 (700-2.4) | **890** -3.6 749 (800-3.6) | **1490** -3.6 1349 (1400-3.6) |

CHANGES: OBST. ADDED, SKRYDSTRUP APP UHF.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 141

**ILS or LOC RWY 10L**
**SKRYDSTRUP (EKSP)**

| COPENHAGEN CONTROL | SKRYDSTRUP ATIS | SKRYDSTRUP APPROACH | SKRYDSTRUP TOWER |
|---|---|---|---|
| 360.100 133.155 | 133.905 | 280.750 124.105 | 286.375 118.280 |

| LOC-DME | APP COURSE | FAP/FAF ALT | GS | DA | THR | ALS length | LDA |
|---|---|---|---|---|---|---|---|
| ISPA 109.35/CH 30y | 101° | 2000 FT | 3.00° | **326** | 126 | 900 M | 9863 FT |

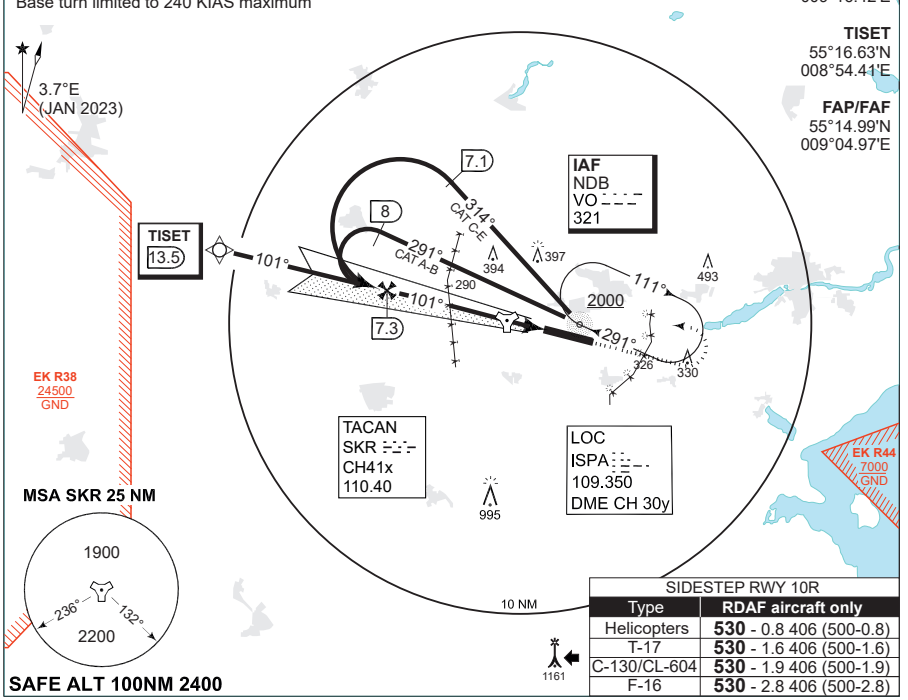
**NOTE:**
SPEED RESTRICTION ACFT CAT C-E:
Base turn limited to 240 KIAS maximum

**ADF AND DME REQUIRED**

**IAF (NDB VO)**
55°13.48'N
009°16.42'E

**TISET**
55°16.63'N
008°54.41'E

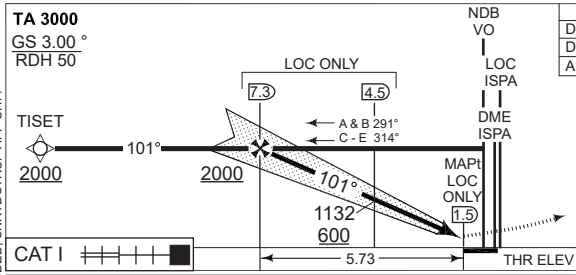
**FAP/FAF**
55°14.99'N
009°04.97'E




| SIDESTEP RWY 10R | |
|---|---|
| Type | **RDAF aircraft only** |
| Helicopters | **530** - 0.8 406 (500-0.8) |
| T-17 | **530** - 1.6 406 (500-1.6) |
| C-130/CL-604 | **530** - 1.9 406 (500-1.9) |
| F-16 | **530** - 2.8 406 (500-2.8) |

**SAFE ALT 100NM 2400**

**TA 3000**
GS 3.00 °
RDH 50




| LOC ONLY (CDFA 3.0° / 5.24%) | | | | | |
|---|---|---|---|---|---|
| DIST TO THR (NM) | 5 | 4 | 3 | 2 | 1 |
| DME ISPA (NM) | 6.5 | 5.5 | 4.5 | 3.5 | 2.5 |
| ALT | 1770 | 1450 | 1130 | 820 | 500 |

**MISSED APPROACH**
Climb on HDG 101° to 2000 FT.
Then turn left to join NDB VO holding.

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| MIPS S-ILS 10L | **326** -550 200 (200-0.8/1.2) | | | | |
| MIPS S-LOC 10L | **410** -750 284 (300-0.8/1.4) | | | | |
| MIPS CIRCLING | **630** -1.5 489 (500-1.5) | **700** -1.6 559 (600-1.6) | **800** -2.4 659 (700-2.4) | **890** -3.6 749 (800-3.6) | **1490** -3.6 1349 (1400-3.6) |

CHANGES: SKR FRQ. ADDED. SKRYDSTRUP APP UHF.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 141

**ILS or LOC Z RWY 10L**
**SKRYDSTRUP (EKSP)**

| COPENHAGEN CONTROL | SKRYDSTRUP ATIS | SKRYDSTRUP APPROACH | SKRYDSTRUP TOWER |
|---|---|---|---|
| 360.100 133.155 | 133.905 | 280.750 124.105 | 286.375 118.280 |

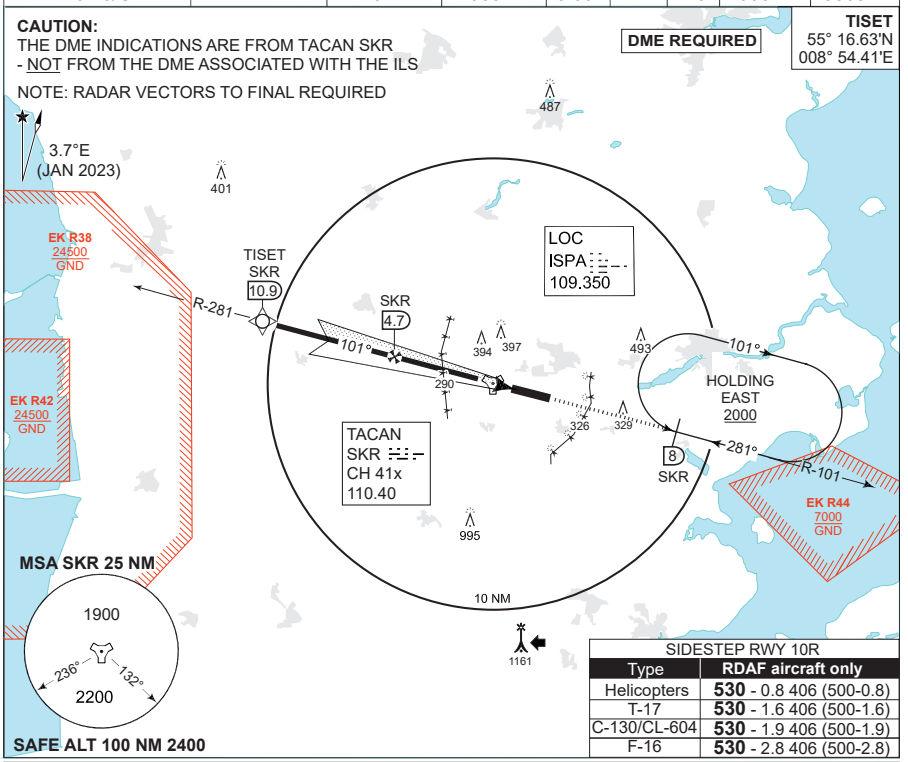
| TACAN | LOC | APP COURSE | FAP/FAF ALT | GS | DA | THR | ALS length | LDA |
|---|---|---|---|---|---|---|---|---|
| SKR 110.40/CH 41x | ISPA 109.35 | 101° | 2000 FT | 3.00° | **326** | 126 | 900 M | 9863 FT |

**CAUTION:**
THE DME INDICATIONS ARE FROM TACAN SKR
- NOT FROM THE DME ASSOCIATED WITH THE ILS

NOTE: RADAR VECTORS TO FINAL REQUIRED

**DME REQUIRED**

**TISET**
55° 16.63'N
008° 54.41'E

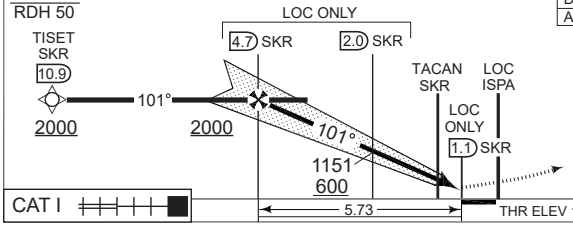



**SAFE ALT 100 NM 2400**

| SIDESTEP RWY 10R | |
|---|---|
| Type | **RDAF aircraft only** |
| Helicopters | **530** - 0.8 406 (500-0.8) |
| T-17 | **530** - 1.6 406 (500-1.6) |
| C-130/CL-604 | **530** - 1.9 406 (500-1.9) |
| F-16 | **530** - 2.8 406 (500-2.8) |

**TA 3000**
GS 3.00°
RDH 50

| LOC ONLY (CDFA 3.0° / 5.24%) | | | | | |
|---|---|---|---|---|---|
| DIST TO THR (NM) | 5 | 4 | 3 | 2 | 1 |
| DME SKR (NM) | 3.9 | 2.9 | 1.9 | 0.9 | 0.1 |
| ALT | 1770 | 1450 | 1140 | 820 | 500 |




**MISSED APPROACH**
Climb to 2000 FT on
R-101 to SKR 8 DME
and join holding EAST.

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| MIPS S-ILS 10L | **326** -550 200 (200-0.8/1.2) | | | | |
| MIPS S-LOC 10L | **410** -750 284 (300-0.8/1.4) | | | | |
| MIPS CIRCLING | **630** -1.5 489 (500-1.5) | **700** -1.6 559 (600-1.6) | **800** -2.4 659 (700-2.4) | **890** -3.6 749 (800-3.6) | **1490** -3.6 1349 (1400-3.6) |

CHANGES: SKRYDSTRUP APP UHF.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

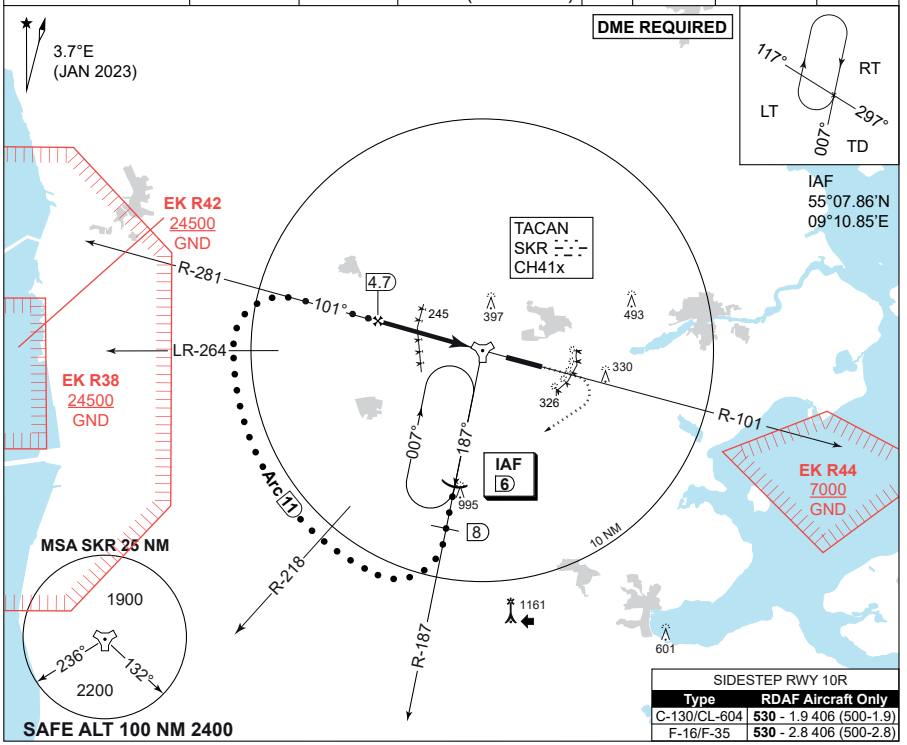
**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 141

**HPMA TACAN RWY 10L**
**SKRYDSTRUP (EKSP)**

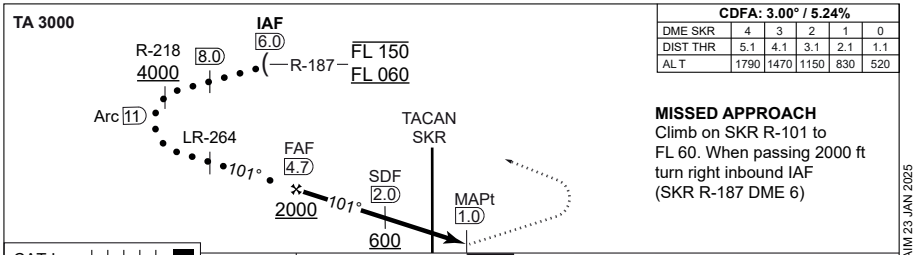
| COPENHAGEN CONTROL | SKRYDSTRUP ATIS | SKRYDSTRUP APPROACH | SKRYDSTRUP TOWER |
|---|---|---|---|
| 360.100 133.155 | 133.905 | 280.750 124.105 | 286.375 118.280 |

| TACAN | APP COURSE | FAF ALT | DESCENT GR. | MDA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| SKR CH 41x | 101° | 2000 FT | 5.24% (318 FT/NM) | **460** | 126 | 900 M | 9863 FT |




SIDESTEP RWY 10R

| Type | RDAF Aircraft Only |
|---|---|
| C-130/CL-604 | **530** - 1.9 406 (500-1.9) |
| F-16/F-35 | **530** - 2.8 406 (500-2.8) |




| CDFA: 3.00° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME SKR | 4 | 3 | 2 | 1 | 0 |
| DIST THR | 5.1 | 4.1 | 3.1 | 2.1 | 1.1 |
| ALT | 1790 | 1470 | 1150 | 830 | 520 |

**MISSED APPROACH**
Climb on SKR R-101 to FL 60. When passing 2000 ft turn right inbound IAF (SKR R-187 DME 6)

| MIPS | CATEGORY | HPMA |
|---|---|---|
| | S-TACAN 10L | **460** - 800 334 (400-0.8/1.5) |
| | CIRCLING | **700** - 3.2 559 (600-3.2) |

CHANGES: SKRYDSTRUP APP UHF

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

**HPMA TACAN RWY 10L**

55°13.53'N
009°15.84'E



**SKRYDSTRUP (EKSP)**

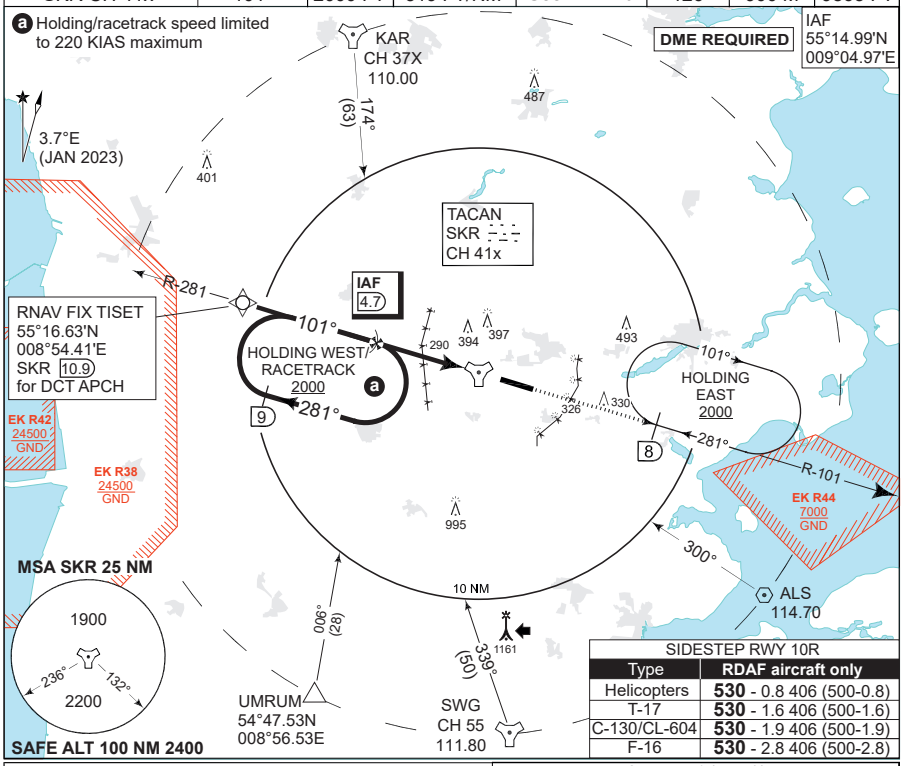
**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 141

**TACAN RWY 10L**
**SKRYDSTRUP (EKSP)**

| COPENHAGEN CONTROL | SKRYDSTRUP ATIS | SKRYDSTRUP APPROACH | SKRYDSTRUP TOWER |
|---|---|---|---|
| 360.100 133.155 | 133.905 | 280.750 124.105 | 286.375 118.280 |

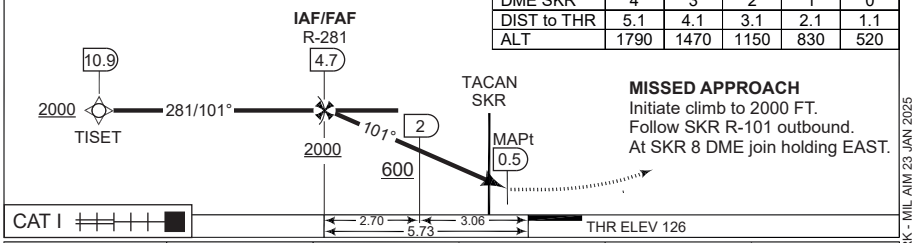
| TACAN | APP COURSE | FAF ALT | DESCENT GR | MDA | THR ELEV | ALS length | LDA |
|---|---|---|---|---|---|---|---|
| SKR CH 41x | 101° | 2000 FT | 319 FT/NM | **See minima** | 126 | 900 M | 9863 FT |




SIDESTEP RWY 10R

| Type | RDAF aircraft only |
|---|---|
| Helicopters | **530** - 0.8 406 (500-0.8) |
| T-17 | **530** - 1.6 406 (500-1.6) |
| C-130/CL-604 | **530** - 1.9 406 (500-1.9) |
| F-16 | **530** - 2.8 406 (500-2.8) |

**TA 3000**




| CDFA 3.0° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME SKR | 4 | 3 | 2 | 1 | 0 |
| DIST to THR | 5.1 | 4.1 | 3.1 | 2.1 | 1.1 |
| ALT | 1790 | 1470 | 1150 | 830 | 520 |

**MISSED APPROACH**
Initiate climb to 2000 FT.
Follow SKR R-101 outbound.
At SKR 8 DME join holding EAST.

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-TACAN 10L | **430** -750 304 (400-0.8/1.4) | | | | |
| CIRCLING | **630** -1.5 489 (500-1.5) | **700** -1.6 559 (600-1.6) | **800** -2.4 659 (700-2.4) | **890** -3.6 749 (800-3.6) | **1490** -3.6 1349 (1400-3.6) |

CHANGES: SKRYDSTRUP APP UHF.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 141

**ILS or LOC RWY 28R**
**SKRYDSTRUP (EKSP)**

| COPENHAGEN CONTROL | SKRYDSTRUP ATIS | SKRYDSTRUP APPROACH | SKRYDSTRUP TOWER |
|---|---|---|---|
| 360.100 133.155 | 133.905 | 280.750 124.105 | 286.375 118.280 |

| LOC / DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| SRY 109.35/CH 30y | 281° | 2200 FT | 3.0° | **341** | 141 | 900 M | 9863 FT |

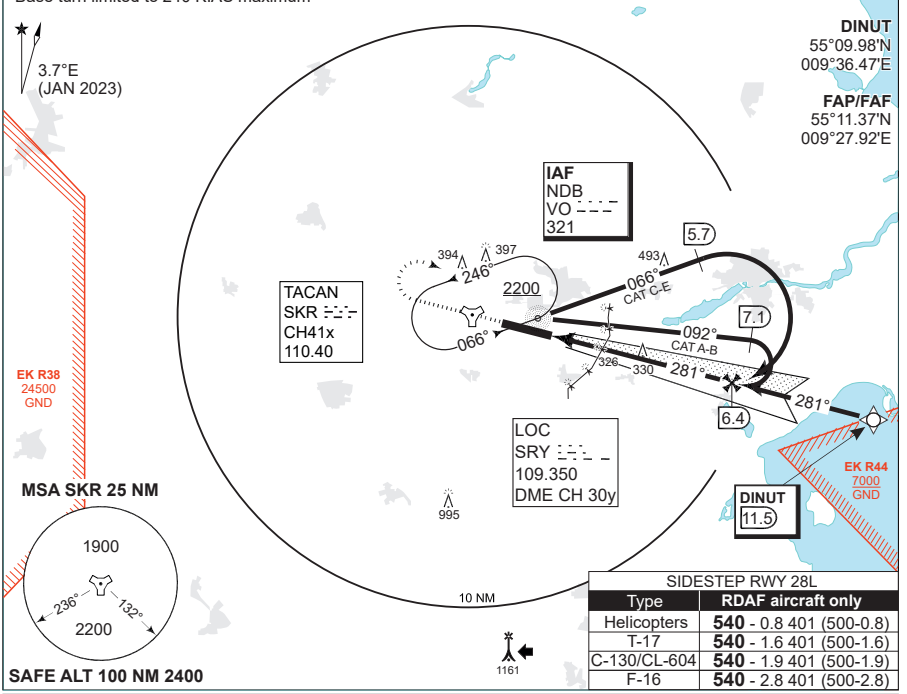
**NOTE:**
SPEED RESTRICTION ACFT CAT C-E:
Base turn limited to 240 KIAS maximum

**ADF AND DME REQUIRED**

**IAF (NDB VO)**
55°13.48'N
009°16.42'E

**DINUT**
55°09.98'N
009°36.47'E

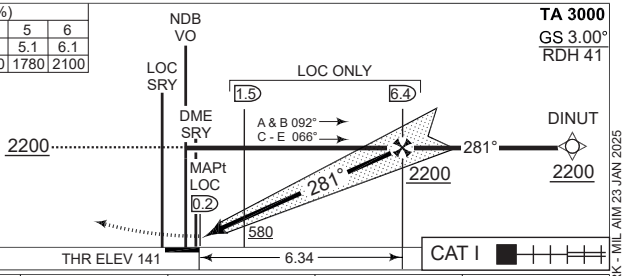
**FAP/FAF**
55°11.37'N
009°27.92'E




| SIDESTEP RWY 28L | |
|---|---|
| Type | RDAF aircraft only |
| Helicopters | **540** - 0.8 401 (500-0.8) |
| T-17 | **540** - 1.6 401 (500-1.6) |
| C-130/CL-604 | **540** - 1.9 401 (500-1.9) |
| F-16 | **540** - 2.8 401 (500-2.8) |

| LOC ONLY (CDFA 3.0° / 5.24%) | | | | | | |
|---|---|---|---|---|---|---|
| DIST TO THR (NM) | 1 | 2 | 3 | 4 | 5 | 6 |
| DME SRY (NM) | 1.1 | 2.1 | 3.1 | 4.1 | 5.1 | 6.1 |
| ALT | 500 | 820 | 1140 | 1460 | 1780 | 2100 |

**TA 3000**
GS 3.00°
RDH 41




**MISSED APPROACH**
Climb on RWY HDG
to 2200 FT. Turn right
to join holding at NDB VO.

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| MIPS S-ILS/DME 28R | **341** -550 200 (200-0.8/1.2) | | | | |
| MIPS S-LOC/DME 28R | **470** -800 329 (400-0.8/1.5) | | | | |
| MIPS CIRCLING | **630** -1.5 489 (500-1.5) | **700** -1.6 559 (600-1.6) | **800** -2.4 659 (700-2.4) | **890** -3.6 749 (800-3.6) | **1490** -3.6 1349 (1400-3.6) |

CHANGES: SKR FRQ. ADDED. SKRYDSTRUP APP UHF.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 141

**ILS or LOC Z RWY 28R**
**SKRYDSTRUP (EKSP)**

| COPENHAGEN CONTROL | SKRYDSTRUP ATIS | SKRYDSTRUP APPROACH | SKRYDSTRUP TOWER |
|---|---|---|---|
| 360.100 133.155 | 133.905 | 280.750 124.105 | 286.375 118.280 |

| TACAN | LOC | APP COURSE | GS INTCP ALT | GS | DA | THR | ALS length | LDA |
|---|---|---|---|---|---|---|---|---|
| SKR 110.40/CH 41x | SRY 109.35 | 281° | 2000 FT | 3.0° | **341** | 141 | 900 M | 9863 FT |

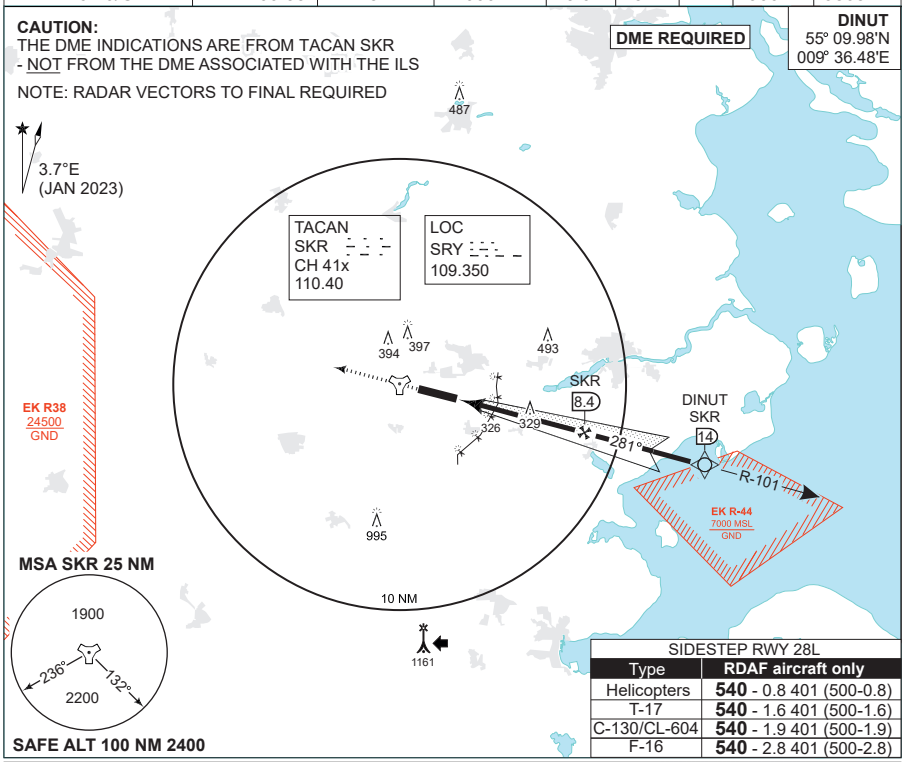
**CAUTION:**
THE DME INDICATIONS ARE FROM TACAN SKR
- NOT FROM THE DME ASSOCIATED WITH THE ILS

NOTE: RADAR VECTORS TO FINAL REQUIRED

**DME REQUIRED**

**DINUT**
55° 09.98'N
009° 36.48'E

3.7°E
(JAN 2023)




**MSA SKR 25 NM**




**SAFE ALT 100 NM 2400**

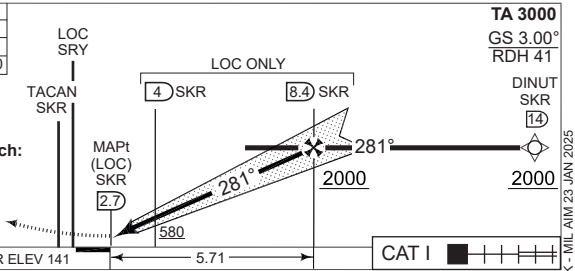
| SIDESTEP RWY 28L | |
|---|---|
| **Type** | **RDAF aircraft only** |
| Helicopters | **540** - 0.8 401 (500-0.8) |
| T-17 | **540** - 1.6 401 (500-1.6) |
| C-130/CL-604 | **540** - 1.9 401 (500-1.9) |
| F-16 | **540** - 2.8 401 (500-2.8) |

| LOC ONLY (CDFA 3.0° / 5.24%) | | | | | |
|---|---|---|---|---|---|
| DIST TO THR (NM) | 1 | 2 | 3 | 4 | 5 |
| DME SKR (NM) | 3.7 | 4.7 | 5.7 | 6.7 | 7.7 |
| ALT | 500 | 820 | 1140 | 1460 | 1780 |

**TA 3000**
GS 3.00°
RDH 41

**MISSED APPROACH**
Climb on track 281° to 2000 ft. Inform ATC.

**Radio com. failure during Missed Approach:**
Initiate climb to 2000 ft on track 281°.
When passing 1000 ft turn left inbound
SKR R-101/8.4 DME and hold.
Squawk 7600.




| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-ILS/DME 28R | **341** -550 200 (200-0.8/1.2) | | | | |
| S-LOC/DME 28R | **470** -800 329 (400-0.8/1.5) | | | | |
| CIRCLING | **630** -1.5 489 (500-1.5) | **700** -1.6 559 (600-1.6) | **800** -2.4 659 (700-2.4) | **890** -3.6 749 (800-3.6) | **1490** -3.6 1349 (1400-3.6) |

CHANGES: SKRYDSTRUP APP UHF.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

**MIPS**

**INSTRUMENT APPROACH CHART**

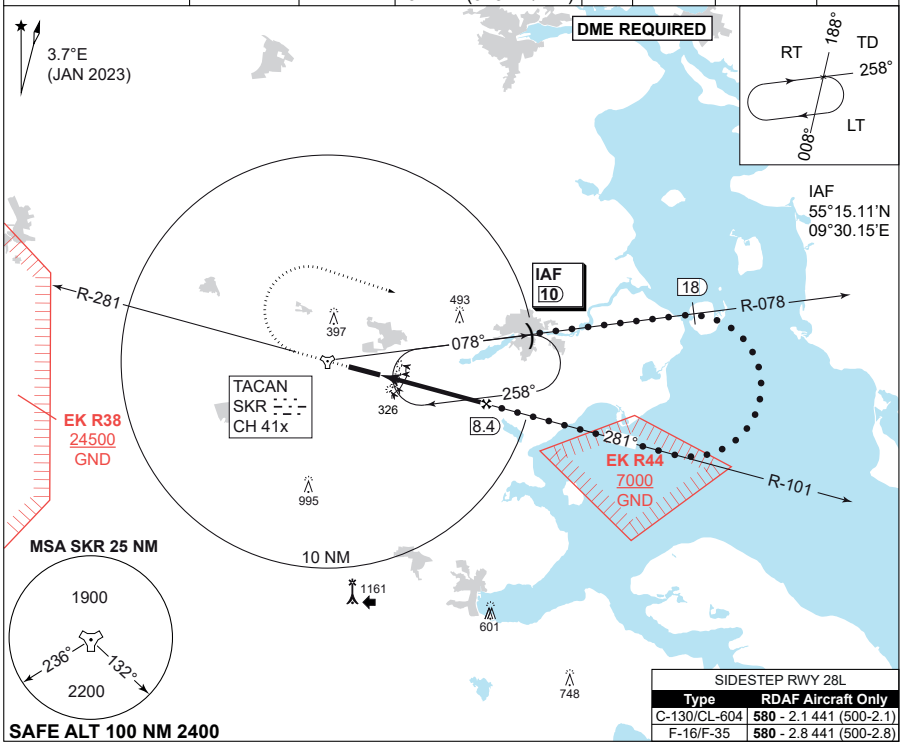
AD ELEV 141

**HPMA TACAN RWY 28R**

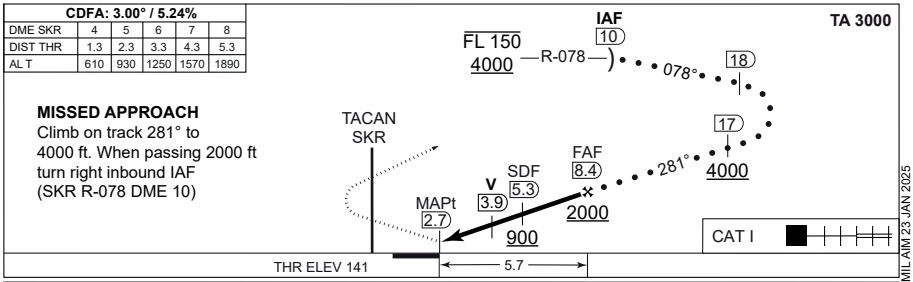
**SKRYDSTRUP (EKSP)**

| COPENHAGEN CONTROL | SKRYDSTRUP ATIS | SKRYDSTRUP APPROACH | SKRYDSTRUP TOWER |
|---|---|---|---|
| 360.100 133.155 | 133.905 | 280.750 124.105 | 286.375 118.280 |

| TACAN | APP COURSE | FAF ALT | DESCENT GR. | MDA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| SKR CH 41x | 281° | 2000 FT | 5.24% (318 FT/NM) | **580** | 141 | 900 M | 9863 FT |




| CDFA: 3.00° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME SKR | 4 | 5 | 6 | 7 | 8 |
| DIST THR | 1.3 | 2.3 | 3.3 | 4.3 | 5.3 |
| ALT | 610 | 930 | 1250 | 1570 | 1890 |




**MISSED APPROACH**
Climb on track 281° to 4000 ft. When passing 2000 ft turn right inbound IAF (SKR R-078 DME 10)

| CATEGORY | HPMA |
|---|---|
| S-TACAN 28R | **580** - 1300 439 (500-1.3/2.0) |
| CIRCLING | **700** - 3.2 559 (600-3.2) |

CHANGES: SKRYDSTRUP APP UHF.

MIPS

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

**HPMA TACAN RWY 28R**

55°13.53'N
009°15.84'E
13-12

**SKRYDSTRUP (EKSP)**

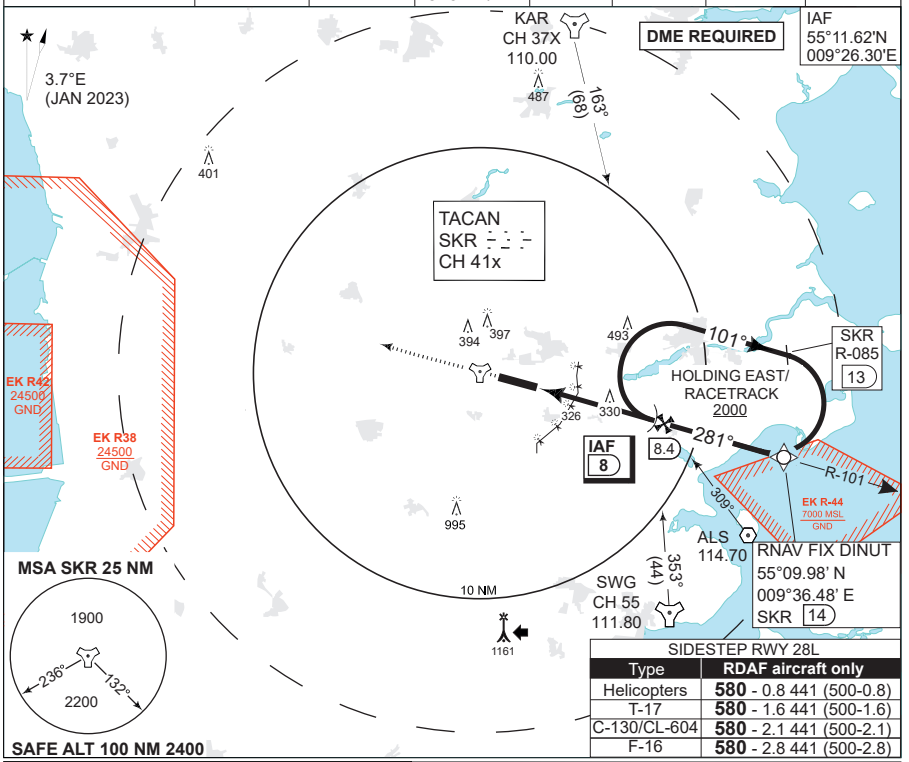
**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 141

**TACAN RWY 28R**
**SKRYDSTRUP (EKSP)**

| COPENHAGEN CONTROL | SKRYDSTRUP ATIS | SKRYDSTRUP APPROACH | SKRYDSTRUP TOWER |
|---|---|---|---|
| 360.100 133.155 | 133.905 | 280.750 124.105 | 286.375 118.280 |

| TACAN | APP COURSE | FAF ALT | DESCENT GR | MDA | THR ELEV | ALS length | LDA |
|---|---|---|---|---|---|---|---|
| SKR CH 41x | 281° | 2000 FT | 319 FT/NM | **580** | 141 | 900 M | 9863 FT |

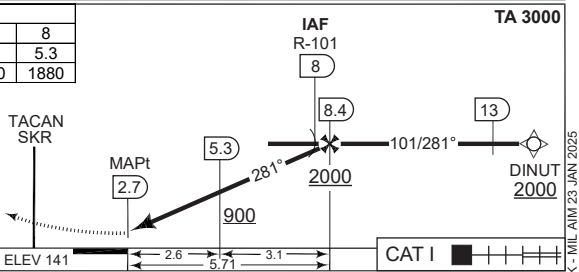



| SIDESTEP RWY 28L | |
|---|---|
| **Type** | **RDAF aircraft only** |
| Helicopters | **580** - 0.8 441 (500-0.8) |
| T-17 | **580** - 1.6 441 (500-1.6) |
| C-130/CL-604 | **580** - 2.1 441 (500-2.1) |
| F-16 | **580** - 2.8 441 (500-2.8) |

| CDFA 3.0° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME SKR | 4 | 5 | 6 | 7 | 8 |
| DIST to THR | 1.3 | 2.3 | 3.3 | 4.3 | 5.3 |
| ALT | 610 | 930 | 1250 | 1560 | 1880 |

**MISSED APPROACH**
Climb on track 281° to 2000 ft. Inform ATC.

**Radio communication failure during Missed Approach:**
Initiate climb to 2000 ft on track 281°. When passing 1000 ft turn left inbound IAF and hold. Squawk 7600.




| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-TACAN 28R | **580** - 1300 439 (500-1.3/1.5) | | **580** - 1300 439 (500-1.3/2.0) | | |
| CIRCLING | **630** -1.5 489 (500-1.5) | **700** -1.6 559 (600-1.6) | **800** -2.4 659 (700-2.4) | **890** -3.6 749 (800-3.6) | **1490** -3.6 1349 (1400-3.6) |

CHANGES: SKRYDSTRUP APP UHF.

MIPS

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

**TACAN RWY 28R**

55°13.53'N
009°15.84'E

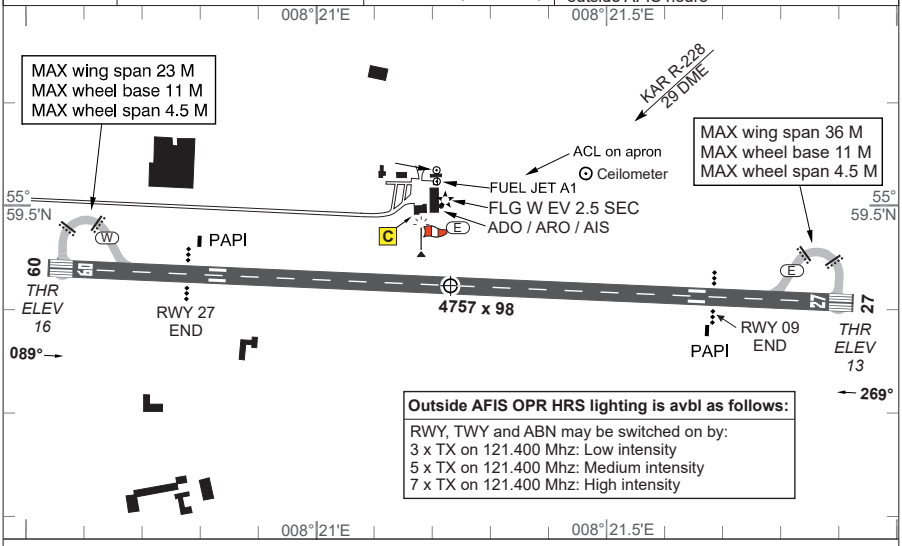
**SKRYDSTRUP (EKSP)**

# STAUNING (EKVJ)

**AERODROME CHART**

**LOC RWY 27**

| STAUNING INFORMATION | BILLUND APPROACH | Stauning Airport: | +45 97 36 90 44 |
|---|---|---|---|
| 121.405 | 127.580 | Briefing EKCH*: | +45 32 47 82 72 |
| | | Flight plan closing (ACC)*: | +45 32 46 23 38 |
| AD Elev 17 | ARP 55°59.41'N 008°21.23'E | VAR 3.0°E (JAN 2020) | *outside AFIS hours |







| RWY | PCN | DECLARED DISTANCES TORA | TODA | ASDA | LDA | THR ELEV | RWY LIGHTING THR | PAPI | TDZ | CL | EDGE | END | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 09 | 21 F/A/Y/T | 3933 | 4757 | 4757 | 3933 | 16 | LIH | 3° | | | LIH | LIH | 55°59.42'N 008°20.54'E |
| 27 | 21 F/A/Y/T | 3933 | 4757 | 4757 | 3933 | 13 | LIH | 3° | | | LIH | LIH | 55°59.39'N 008°21.93'E |

Overflying the summer house area west of the aerodrome should be avoided in connection with TKOF and LDG.
Overflying the towns within the FIZ should be avoided.

IFR Arrival
1. Aircraft will normally be cleared by ACC KØBENHAVN to STAUNING HOLDING.
2. Instrument approach procedures are in airspace classified G below 3500 FT MSL.
3. Radio communication failure: Navigation aid designated for radio communication failure during IMC for arriving aircraft is NDB VJ.

**Note: Circling S of AD only.**

IFR Departure
1. Standard Instrument Departures (SID) have not been established.
2. Omnidirectional departures RWY 09/27: Climb straight ahead to at least 600 FT MSL before turn is commenced.
3. Procedures are in airspace classified G below 3500 FT MSL.

VFR Flights
1. VFR reporting points and VFR routes are established, see LFC 1:500 000 - Denmark.
2. Stauning FIZ is designated as Radio Mandatory Zone (RMZ).

| MIPS | CIRCLING MINIMA | | |
|---|---|---|---|
| | A | B | C |
| | **720** - 2600 703 (800-2.6) | **720** - 2600 703 (800-2.6) | **910** - 2600 893 (900-2.6) |

CHANGES: INFORMATION FREQ. CHG.

AIR COMMAND DENMARK - MIL AIM 03 OCT 2024

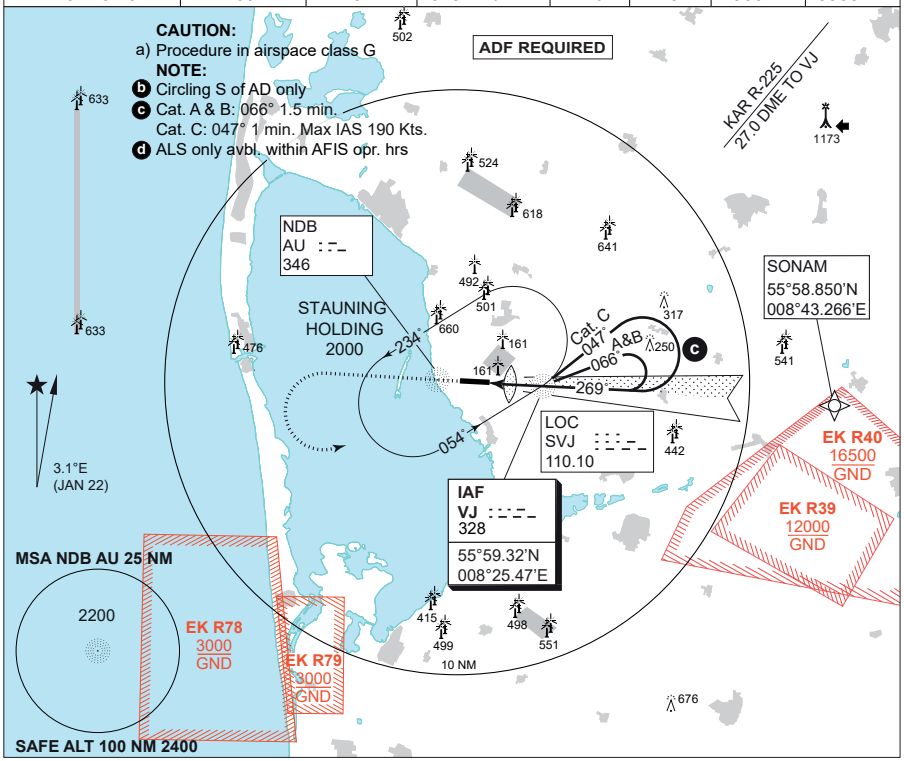
**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 17

**LOC RWY 27**
**STAUNING (EKVJ)**

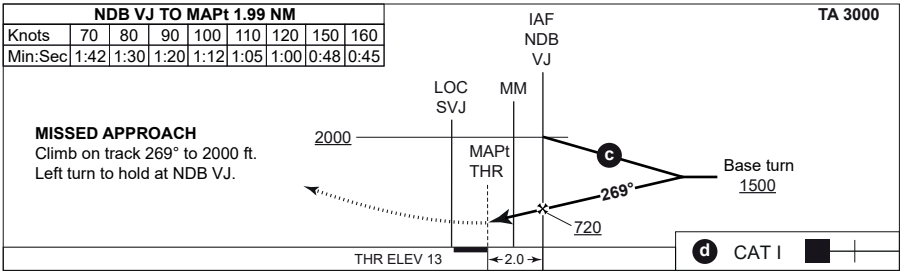
| COPENHAGEN CONTROL | BILLUND APPROACH | STAUNING INFORMATION |
|---|---|---|
| 362.750 136.555 | 127.580 | 121.405 |

| LOC | APP COURSE | FAF ALT | DESCENT GR | MDA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| SVJ 110.10 | 269° | 720 FT | 329 FT / NM | **720** | 13 | 900 M | 3933 FT |




| NDB VJ TO MAPt 1.99 NM | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Knots | 70 | 80 | 90 | 100 | 110 | 120 | 150 | 160 |
| Min:Sec | 1:42 | 1:30 | 1:20 | 1:12 | 1:05 | 1:00 | 0:48 | 0:45 |

TA 3000




**MISSED APPROACH**
Climb on track 269° to 2000 ft.
Left turn to hold at NDB VJ.

CHANGES: ADF REQUIRED

**MIPS**

| CATEGORY | A | B | C |
|---|---|---|---|
| S-LOC 27 | **720** - 2600 707 (800-2.6/3.3) | | |
| CIRCLING b | **720** - 2600 703 (800-2.6) | **720** - 2600 703 (800-2.6) | **910** - 2600 893 (900-2.6) |

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

**LOC RWY 27**

55°59.41'N
008°21.23'E

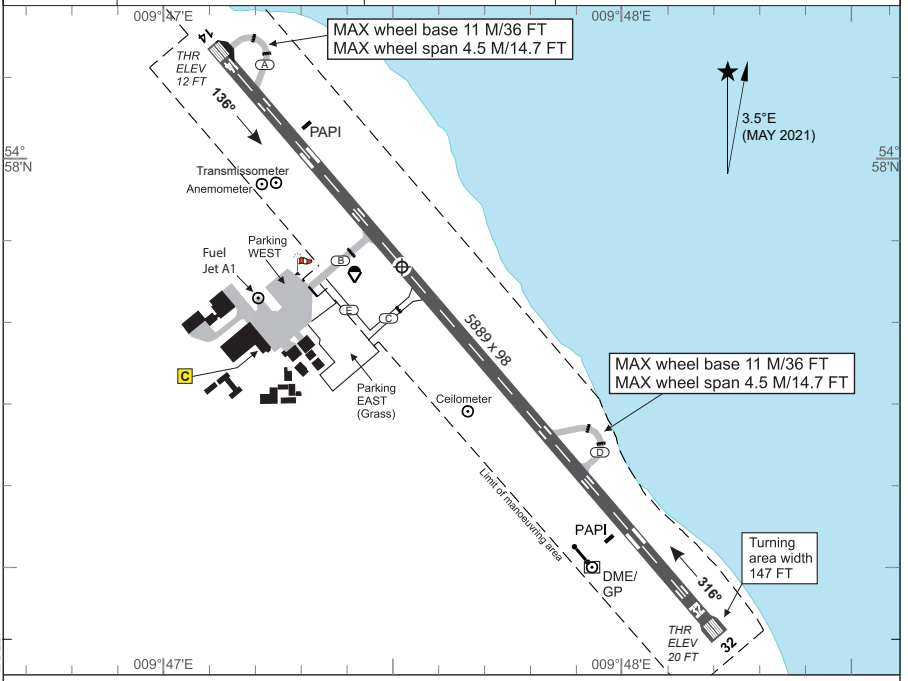
**STAUNING (EKVJ)**

# SØNDERBORG (EKSB)

**AERODROME CHART**

**ILS or LOC RWY 32**

| SØNDERBORG INFORMATION | SKRYDSTRUP APPROACH | Sønderborg AFIS: +45 73 42 21 70 |
|---|---|---|
| **126.400** | **280.750 / 124.105** | AD PPR outside operational hours. |
| AD Elev **24** ARP 54°57.86'N 009°47.50'E | VAR 3.5°E (MAY 2021) | Sønderborg Handling: 131.675 |







| RWY | PCN | DECLARED DISTANCES PSN | TORA | TODA | ASDA | LDA | THR ELEV | RWY LIGHTING THR | PAPI | TDZ | CL | EDGE | END | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 40 F/A/W/T | | 5889 | 5889 | 5889 | 5889 | 12 | LIH | 3° | | | LIH | LIH | 54°58.14'N 009°47.10'E |
| 32 | | | 5889 | 5889 | 5889 | 5889 | 20 | LIH | 3° | | | LIH | LIH | 54°57.40'N 009°48.19'E |

Traffic circuits NE of AD only. Parachuting may take place.

**IFR Arrival**

1. Aircraft will normally be cleared by ACC KØBENHAVN to LIBRI HOLDING.
2. Fix designated for radio communication failure during IMC for arriving aircraft is LIBRI.

**IFR Departure**

1. Standard Instrument Departures (SID) have not been established.
2. Omnidirectional departures RWY 14/32: Climb to at least 500 FT before turn is commenced.

| MIPS | CIRCLING MINIMA (East of AD only) | | |
|---|---|---|---|
| | A | B | C |
| | **480** - 1500 456 (500-1.5) | **530** - 1600 509 (600-1.6) | **690** - 2400 669 (700-2.4) |

CHANGES: ANEMOMETER MIDFIELD WITHDRAWN AND NEW ADDED. TRANSMISSOMETER ADDED

AIR COMMAND DENMARK - MIL AIM 20 MAR 2025

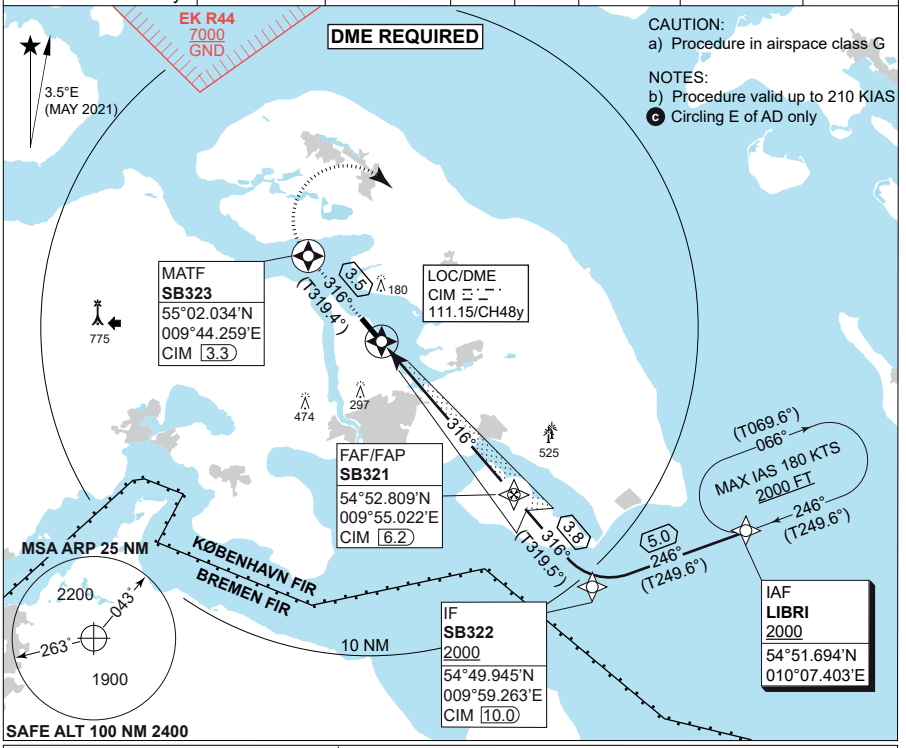
**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 24

**ILS or LOC RWY 32**
**SOENDERBORG (EKSB)**

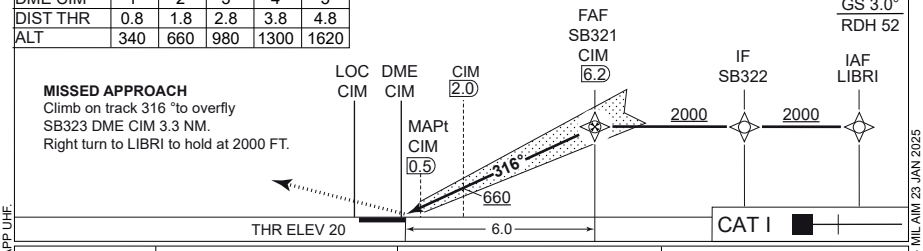
| COPENHAGEN CONTROL | SKRYDSTRUP APPROACH | SOENDERBORG INFORMATION |
|---|---|---|
| 360.100 133.155 | 280.750 124.105 | 126.400 |

| LOC / DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| CIM 111.15/CH 48y | 316° | 2000 FT | 3.00° | **220** | 20 | 900 M | 5889 FT |




| LOC ONLY: CDFA 3.00° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME CIM | 1 | 2 | 3 | 4 | 5 |
| DIST THR | 0.8 | 1.8 | 2.8 | 3.8 | 4.8 |
| ALT | 340 | 660 | 980 | 1300 | 1620 |

**TA 3000**
GS 3.0°
RDH 52




**MISSED APPROACH**
Climb on track 316 °to overfly SB323 DME CIM 3.3 NM.
Right turn to LIBRI to hold at 2000 FT.

| CATEGORY | A | B | C |
|---|---|---|---|
| S-ILS 32 | **220** - 550 200 (200-0.8/1.2) | | |
| S-LOC 32 | **280** - 800 259 (300-0.8/1.3) | | |
| CIRCLING c | **480** - 1500 456 (500-1.5) | **530** - 1600 509 (600-1.6) | **690** - 2400 669 (700-2.4) |

CHANGES: SKRYDSTRUP APP UHF.

MIPS

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

**ILS or LOC RWY 32**

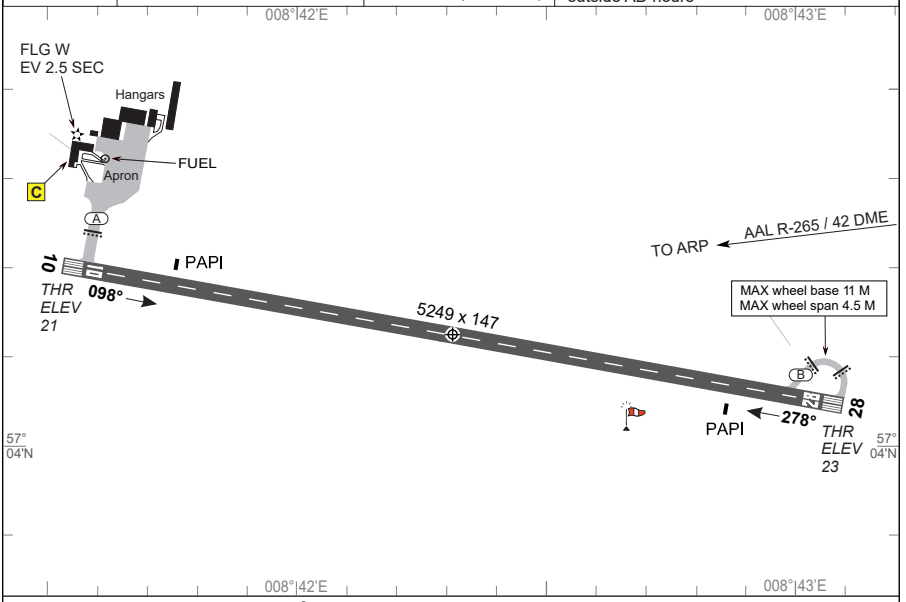
54°57.86'N
009°47.50'E

**SOENDERBORG (EKSB)**

# THISTED (EKTS)

**AERODROME CHART**

| THISTED RADIO | AALBORG APPROACH | Thisted Airport: +45 99 17 37 80 |
|---|---|---|
| 118.125 | 123.980 | Briefing EKCH*: +45 32 47 82 72 |
| AD Elev 23 / ARP 57°04.13'N 008°42.31'E / VAR 2.4°E (JAN 2018) | | Flight plan closing (ACC)*: +45 32 46 23 38 |
| | | *outside AD hours |







| RWY | PCN | DECLARED DISTANCES TORA | TODA | ASDA | LDA | TDZE | RWY LIGHTING THR | PAPI | TDZ | CL | EDGE | END | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 25 F/A/X/T | 5249 | 5249 | 5249 | 5249 | 21 | LIH | | | | LIH | LIH | 57°04.21'N 008°41.53'E |
| 28 | 25 F/A/X/T | 5249 | 5249 | 5249 | 5249 | 23 | LIH | | | | LIH | LIH | 57°04.05'N 008°43.10'E |

AD approved for:
a. VMC day and VFR night operations.
b. Self-service when ADO is closed.
Outside ADO/ARO hours: PPR for AD/ADO submitted to ADO not later than 1 hour before termination of service.

Refuelling (100LL and Jet A1) only within AD hours.

CAUTION: Various wind farms in closer and more distant vicinity of AD. Exceptionally high wind turbines (1000 ft AMSL) 5.6 NM east of AD.

CHANGES: AALBORG APP FREQ CHG

AIR COMMAND DENMARK - MIL AIM 02 NOV 2023

# MISCELLANEOUS

| | |
|---|---|
| TERPS VS. PANS-OPS | A/C SPEEDS |
| HPMA | LANDING MINIMA EXPL. |
| ALTITUDE CORRECTION | DECLARED DISTANCES |
| ACN / PCN | NPA FLYING TECHNIQUES |
| ALS | SIDESTEP |
| RADIO NAVAIDS | NDB BRG. VOR/TAC |
| VOR/TAC BRG. VOR/TAC | LIST OF AERODROMES |
| A/D BRG. VOR/TAC | |



## MISCELLANEOUS

TRANSITION FROM TERPS TO PANS OPS ..... 20-2
AIRCRAFT CATEGORIES / SPEEDS ..... 20-6
HIGH PERFORMANCE MILITARY A/C (HPMA) ..... 20-8
LANDING MINIMA EXPLANATION ..... 20-9
COLD WEATHER ALTITUDE CORRECTION ..... 20-11
DECLARED DISTANCES ..... 20-12
AIRCRAFT CLASSIFICATION/PAVEMENT-
CLASSIFICATION NUMBER (ACN/PCN) ..... 20-13
NON-PA – FLYING TECHNIQUES ..... 20-15
APPROACH LIGHTING SYSTEMS ..... 20-17
SIDESTEP PROCEDURE ..... 20-18
RADIO NAVIGATIONAL AIDS ..... 20-19
NDB BEARING/DISTANCES ..... 20-20
VOR/TACAN BEARING/DISTANCES ..... 20-21
LIST OF AERODROMES ..... 20-22
AERODROME BEARING/DISTANCES ..... 20-23

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022

# INSTRUMENT APPROACH PROCEDURES – TRANSITION FROM TERPS CRITERIA TO ICAO DOC 8168 (PANS OPS)

In the coming versions of this FLIP a growing number of Instrument Approach Procedures (IAP) will be based on criteria in accordance with ICAO DOC 8168 (PANS OPS) and NATO STANAG 3759 (NATO SUPPLEMENT TO ICAO DOC 8168-0PS/611,VOL II FOR THE PREPARATION OF INSTRUMENT APPROACH AND DEPARTURE PROCEDURES (AATCP-1)). Procedures designed in accordance with these two documents will be marked MIPS (Military Instrument Procedures Standardization). Older IAP's based on TERPS criteria will remain valid until the transition process is complete. It will be clearly marked on which criteria an IAP is based:

TERPS
**INSTRUMENT APPROACH CHART** AD ELEV 171 **HI-TACAN RWY 27L KARUP AIR BASE (EKKA)**

| COPENHAGEN CONTROL | KARUP ATIS | KARUP APPROACH | KARUP TOWER |
|---|---|---|---|
| 242.650 124.555 | 120.575 | 292.750 120.425 | 241.650 119.575 |

| TACAN | APP COURSE | FAF ALT | DESCENT GR | MDA | TDZE | ALS length | LDA |
|---|---|---|---|---|---|---|---|
| KAR 110.00/CH 37x | 267° | 2000 FT | 305 FT/NM | **600** | 170 | 900 M | 9607 FT |

*TERPS - this IAP is based on TERPS criteria*

MIPS
**INSTRUMENT APPROACH CHART** AD ELEV 171 **ILS or LOC RWY 27L KARUP AIR BASE (EKKA)**

| COPENHAGEN CONTROL | KARUP ATIS | KARUP APPROACH | KARUP TOWER |
|---|---|---|---|
| 242.650 124.555 | 120.575 | 292.750 120.425 | 241.650 119.575 |

| LOC/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| KR 108.150/CH18y | 266° | 2000 FT | 3.00° | **370** | 170 | 900 M | 9607 FT |

*MIPS (Military Instrument Procedure Standardization)*

The following text explaining the main differences between TERPS and PANS OPS is a cut and paste from the latest version of STANAG 7199 (AFPP-1(B)) - NATO Supplement to ICAO Doc 8168 Volume I Flight Procedures, dated June 2017 and ratified by Denmark.

**TERPS VERSUS PANS-OPS AND MIPS.**
TERPS philosophy regarding the constructing of procedures differs from that of ICAO PANS-OPS in several areas, which also affects the way procedures are to be flown, e.g. turn radius, visual manoeuvring, ILS, missed approach. For aircrew that are used to only flying TERPS procedures, the following is worth noticing:

**a. Aircraft Categories/Speeds.**
Aircraft approach categories play a significant role in the design of PANS-OPS/MIPS instrument procedures. In addition to affecting final approach minima, PANS-OPS references maximum speeds by category for holding, departures and the initial and intermediate segments of instrument approaches. Also the final approach speeds specified by category will be different from the TERPS procedure speeds. The PANS-OPS references are as follows:
Turning departure speeds: PANS-OPS Part I, Section 3, Chapter 2, Table I-3-2-1.
Approach, circling and missed approach speeds: PANS-OPS Part I, Section 4, Chapter 1, Tables I-4-1-1 and I-4-1-2.
Holding speeds: PANS-OPS Part I, Section 6, Chapter 1, Table I-6-1-1.
Holding speeds (Helicopter): PANS-OPS Part I, Section 6, Chapter 1, Table I-6-1-2.
Helicopter only speeds: PANS-OPS Part I, Section 8, Chapter 3, Table I-8-3-1.
HPMA (High Performance Military Aircraft): The MIPS use a separate set of speeds for for HPMA. Chapter 6 also provides a set of HPMA parameters for universal use.

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022

**b. Track.**

Obstacle clearance in PANS-OPS/MIPS procedures is provided under the assumption that pilots will maintain the depicted ground track.

**c. Bank Angle.**

Unless otherwise specified, PANS-OPS approach procedures are based on average achieved bank angle of 25° or the bank angle giving a rate of turn of 3°/sec, whichever is less.

For departures and missed approach, PANS-OPS procedures are based on an average achieved bank angle of 15°. MIPS procedures generally are the same as PANS-OPS, but VCOA departures are based on 23° bank angle. The bank angle for HPMA is 30° for all segments.

**d. Established on Course.**

PANS-OPS defines "established on course" as being within half full-scale deflection for a VOR/DME or ILS (localizer) and within ± 5° of the required final bearing for an NDB. MIPS applies the same deflection tolerance flying a TACAN as PANS-OPS applies for flying a VOR/DME approach.

Do not consider the aircraft to be established on course until within these limits. PANS-OPS/MIPS obstacle clearance surfaces assume that the pilot does not normally deviate from the centre line more than one-half scale deflection after being established on track. Despite the fact that there is a range of "acceptable" variation, every attempt must be made to fly the aircraft on the course centre line and on the glide path. Allowing a more than half-scale deflection (or a more than half-scale fly-up deflection on glideslope) combined with other system tolerances could place the aircraft near the edge or at the bottom of the protected airspace where loss of protection from obstacles can occur.

**e. Omnidirectional Departures.**

The PANS-OPS “Omnidirectional Departure” is somewhat similar to the TERPS “Diverse Departure”; a departure procedure without any track guidance provided.

An important difference is that an Omnidirectional Departure may be published even though obstacles penetrate the 2.5% Obstacle Identification Surface (OIS). PANS-OPS then provides the procedure designer the following options for publishing departure restrictions.

**1. Standard case.**

Where no obstacles penetrate the 2.5% OIS, normally no departure restrictions will be published. Upon reaching 400 feet above Departure End of Runway (DER), a turn in any direction may be initiated.

**2. Specified turn altitude.**

The procedure may dictate a climb to a specified altitude, where an omnidirectional turn safely can be made.

**3. Specified climb gradient.**

The procedure may specify a minimum climb gradient of more than 3.3% to an altitude before turns are permitted.

**4. Sector departure.**

The procedure may identify sectors for which either a minimum turn altitude or a minimum climb gradient is specified. (e.g. “Climb in sector 180°- 270° to 2000 feet before commencing a turn.

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022

**f. Departures with Track Guidance.**

PANS-OPS uses the term Standard Instrument Departure (SID) to refer to departures using track guidance. Minimum climb gradients above the standard 3.3% may apply.
For turning departures:
PANS-OPS protection area is based on using an average bank angle of 15° for the departure turn. Where a departure route requires a turn of more than 15°, a turning departure may be constructed. Turns may be specified at an altitude/height, at a fix or overhead a facility. If an obstacle prohibits turns before the departure end of the runway or prior to reaching an altitude/height, a turning point or a minimum turn altitude/height will be specified. Tracks to be flown and radials/bearings to be intercepted will also be specified.

**1. Turning departure speeds.**

If restricted below the standard maximum speeds, the restricted speeds should be published by category or by a general note. For example, the procedure may be annotated “Departure limited to CAT C aircraft” or “Departure turn limited to 185 kt IAS maximum”. You must comply with the speed limit published on the departure to remain within protected airspace. If you require a higher speed for safe aircraft performance, ATC may approve the higher speed or assign an alternative departure procedure.

**g. Departure: Runway End Crossing Height.**

For PANS-OPS, the origin of the Obstacle Identification Surface (OIS) begins at 16 ft above the DER.

**h. TERPS Low Altitude Approaches.**

PANS-OPS does not distinguish between low and high altitude procedures. PANS-OPS Part I, Section 4, Chapter 3 describes how to enter and fly the different manoeuvres and entries in the initial approach segment.
Differences from TERPS:

- A PANS-OPS reversal procedure does not permit a TERPS holding pattern/race-track entry. Instead, PANS-OPS will specify the track to be flown. So there will be no PANS-OPS procedure depicted with a "barb" symbol depicting turn side.
- PANS-OPS reversal: Pilots may only enter from a track ± 30° of outbound track and must be established on the specified outbound track to start descent.
- PANS-OPS base turn: Pilots may enter from a track ± 30° of outbound track, extended up to the reciprocal of the inbound track. They must be established on the specified outbound track to start descent.
- PANS-OPS racetrack (also different from PANS-OPS holding): Pilots may only proceed outbound on the 30° offset entry track for maximum 1 minute 30 seconds. After this time, turn to a heading parallel to the outbound track for the remainder of the outbound time. If the outbound time is only 1 minute, the time on the 30° offset track shall be 1 min also. After a parallel entry proceeding to final, the holding course must be intercepted after the inbound turn instead of flying direct to the facility.

**i. Circling Procedures.**

PANS-OPS circling protected airspace is typically larger than TERPS and the obstacle clearance is higher. PANS-OPS maximum circling speeds related to category are also higher than TERPS. An example: For aircraft CAT D, PANS-OPS circling maximum speed is 205 kt IAS, while TERPS circling has a maximum speed directly related to the

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022







category definition, which for CAT D is 165 kt IAS.
Also, one important distinction to make is between the terms “runway environment” and “airport environment.” While circling using a PANS-OPS designed procedure, pilots must maintain visual contact with the runway environment throughout the entire circling manoeuvre. TERPS procedures only require pilots to maintain visual contact with the airport environment while circling to land, but cannot descend out of the circling MDA until the runway environment is in sight. The PANS-OPS protection area is based on using an average bank angle of 20° for the turn to final.
For HPMA, the circling criteria are stated on page 20-8.

**j. Holding.**
Differences from TERPS:
The PANS-OPS holding entry procedures are mandatory. Timing, distances and limiting radials must be complied with. Enter the holding pattern based on the heading relative to the three entry sectors depicted in PANS-OPS Part I, Section 6, Chapter 1, Paragraph 1.4. The margins on each sector dividing line is ±5°. Upon reaching the holding fix, follow the appropriate procedure according to entry sector.
Bank angle must not be reduced for wind corrections. The bank angle used in PANS-OPS should be 25° or a rate of 3°/sec, whichever is less.
Timing is made on the outbound leg.
Attempt to maintain the track by allowing for known winds and applying corrections to heading and timing during entry and while flying in the holding pattern.
A radial or a DME value may be published to limit the outbound track.

**k. Transition Altitude/Level.**
Transition altitude is the altitude in the vicinity of an aerodrome at or below which the vertical position of an aircraft is determined from the altimeter set to QNH. Transition altitude is normally specified for each airfield by the country in which the airfield exists. Transition altitude will not normally be below 3000 ft Height Above Aerodrome (HAA) and must be published on the appropriate charts.
Transition level is the lowest flight level available for use above the transition altitude. Transition level is usually communicated to the aircraft together with the descent/approach clearances. The transition layer (area between the transition altitude and transition level) may also be supplied by ATC via the ATIS or during arrival. VFR flight levels may be used on some places, e.g. FL 045.
The vertical position of an aircraft at or below transition altitude shall be expressed in altitude (QNH). Vertical position at or above the transition level shall be expressed in terms of flight levels according to the standard altimeter setting 1013.2 hPa. When passing through the transition layer, vertical position shall be expressed in terms of flight levels when climbing and in terms of altitudes (QNH) when descending.
After an approach clearance has been issued and the descent is commenced, the vertical positioning of an aircraft above the transition level may be by reference to altitude (QNH) provided that a level off above the transition altitude is not anticipated. This is intended for turbo jet aircraft where an uninterrupted descent from high altitude is desired.

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022

# AIRCRAFT CATEGORIES / SPEEDS (PANS OPS/ MIPS)

**Approach, circling, missed approach and turning departure speeds**

| A/C category | $V_{at}$ | Range of speeds for initial approach | Range of final approach speeds | Max.speeds for visual manoeuvring (circling) | Max speeds for missed approach | | Max. speeds for turning departures |
|---|---|---|---|---|---|---|---|
| | | | | | Inter-mediate | Final | |
| A | <91 | 90/150(110[1]) | 70/100 | 100 | 100 | 110 | 120 |
| B | 91/120 | 120/180(140[1]) | 85/130 | 135 | 130 | 150 | 165 |
| C | 121/140 | 160/240 | 115/160 | 180 | 160 | 240 | 265 |
| D | 141/165 | 185/250 | 130/185 | 205 | 185 | 265 | 290 |
| E | 166/210 | 185/250 | 155/230 | 240 | 230 | 275 | 300 |
| H | N/A | 70/120[2] | 60/90[3] | N/A | 90 | 90 | 90 |
| HPMA | See page 20-8 | | | | | | |
| CAT H (Pins)[3] | NA | 70/120 | 60/90 | N/A | 70 or 90 | | |

$V_{at}$ — Speed at threshold based on 1.3 times stall speed $V_{so}$ or 1.23 times stall speed $V_{slg}$ in the landing configuration at maximum certificated landing mass. (Not applicable to helicopters.)

1 Maximum speed for reversal and racetrack procedures.

2 Maximum speed for reversal and racetrack procedures up to and including 6.000 ft is 100 kt, and maximum speed for reversal and racetrack procedures above 6.000 ft is 110 kt.

3 Helicopter point-in-space procedures based on basic GNSS may be designed using maximum speeds of 120 kt for initial and intermediate segments and 90 kt on final and missed approach segments, or 90 kt for initial and intermediate segments and 70 kt on final and missed approach segments based on operational need. Refer to PANS-OPS, Volume II, Part IV, Chapter 1, “Area navigation (RNAV) point-in-space (PinS) approach procedures for helicopters using basic GNSS receivers”.

4 Range of speeds for holding, initial, approach, reversal, racetrack and intermediate segment.

*Note. The $V_{at}$ speeds given in Column 1 of Table I-4-1-1 are converted exactly from those in this table, since they determine the category of aircraft. The speeds given in the remaining columns are converted and rounded to the nearest multiple of five for operational reasons and from the standpoint of operational safety are considered to be equivalent.*

CHANGES: PAGE REFERENCE CORRECTED
AIR COMMAND DENMARK - MIL AIM 26 JAN 2023

In accordance with FKOBST 152.1 item 36.3, aircraft of the Royal Danish Air Force are classified as follows:

| | |
|---|---|
| T-17 | Category A |
| AS-550 Fennec | Category A/H |
| Seahawk | Category A/H |
| EH-101 | Category A/H |
| C-130J | Category C |
| CL-604 | Category C |
| F-16 | Category E |

**Holding speeds - Categories A through E**

| Levels [1] | Normal conditions | Turbulence conditions |
|---|---|---|
| Up to 14.000 ft inclusive | 230 kt [2]<br>170 kt | 280 kt [3]<br>170 kt [4] |
| Above 14.000 ft to 20.000 ft inclusive | 240 kt [5] | 280 kt or 0.8 Mach, whichever is less [3] |
| Above 20.000 ft to 34.000 ft inclusive | 265 kt [5] | |
| Above 20.000 ft to 34.000 ft inclusive | 0.83 Mach | 0.83 Mach |

1) The levels shown represent altitudes or corresponding flight levels depending upon the altimeter setting in use.
2) When the holding procedure is followed by the initial segment of an instrument approach procedure promulgated at a speed higher than 230 kt, the holding should also be promulgated at this higher speed wherever possible.
3) The speed of 280 kt (0.8 Mach) reserved for turbulence conditions shall be used for holding only after prior clearance with ATC, unless the relevant publications indicate that the holding area can accommodate aircraft flight at these high holding speeds.
4) For holdings limited to CAT A and B aircraft only.
5) Wherever possible, 280 kt should be used for holding procedures associated with airway route structures.

**Holding speeds — for helicopter procedures**

| | |
|---|---|
| Maximum speed up to 6.000 ft | |
| Maximum speed above 6.000 ft | |
| Note: MOC in secondary area for helicopter holding procedures is linear from zero to full MOC | |

**Final approach speeds – TERPS vs. PANS**

| A/C category | Range of final approach speeds | |
|---|---|---|
| | TERPS | PANS OPS |
| A | Less than 91 kt | 70 - 100 kt |
| B | 91 -121 kt | 85 - 130 kt |
| C | 121 - 141 kt | 115 - 160 kt |
| D | 141 - 166 kt | 130 - 185 kt |
| E | 166 kt or more | 155 - 230 kt |

CHANGES: AIRCRAFT CATEGORIES CORRECTED.

AIR COMMAND DENMARK - MIL AIM 11 AUG 2022

## HIGH PERFORMANCE MILITARY AIRCRAFT (HPMA)

In order to fly procedures marked "HPMA" the aircraft shall, as a minimum, adhere to the gradients, segment speeds, bank angle and transition times described below. The specific HPMA-criteria replaces, amends or provides criteria in addition to PANS-OPS and MIPS:

a) Departure procedures, minimum climb performance: 8.75% (5.0°).
b) Initial segment descent gradient: Up to 1000 ft/NM.
c) Bank angle: Minimum 30° for all segments, with a bank angle establishment Time of maximum 5 sec.
d) Maximum aircraft dimensions for ILS: Wing span 30 m and glide path antenna to wheel base maximum 6 m.
e) Height loss during precision approach transition to missed approach: Maximum 100 ft.
f) Missed approach climb gradient: 6.0% (3.43°), with a transition time from level flight to the required climb gradient of maximum 10 sec.

**Turn construction parameters / HPMA Speeds (IAS) for Procedure Calculations:**

| *Segment or fix* | | *Speed (IAS)* | *Bank angle* | *Bank establishment Time (seconds)* | *Pilot reaction Time (seconds)* |
|---|---|---|---|---|---|
| Departure | | 350 kt *) | 30° | 5 | 3 |
| Holding | | 300 kt *) | 30° | 5 | 3 |
| Initial approach | Reversal and racetrack | 300 kt *) | 30° | 5 | 3 |
| | DR track | 300 kt *) | 30° | 5 | 3 |
| Holding, initial approach, reversal, racetrack, intermediate segment | | 250 – 300 kt | 30° | 5 | 3 |
| Range of final approach speeds | | 90 – 185 kt | 30° | 5 | 3 |
| Max speed visual manoeuvring (circling) | | 220 kt | 30° | N/A | N/A |
| Visual manoeuvring using prescribed track | | 220 kt | 30° | N/A | N/A |
| Max speed missed approach | Intermediate | 300 kt | 30° | 5 | 3 |
| | Final | 350 kt | 30° | 5 | 3 |

**VISUAL MANOEUVRING (CIRCLING).**
The visual manoeuvring (circling) radii are drawn around the thresholds on the applicable runway(s) and joined with tangents to the arcs. The radii values depends on the aerodrome elevation and will be 3.55 NM at sea level.

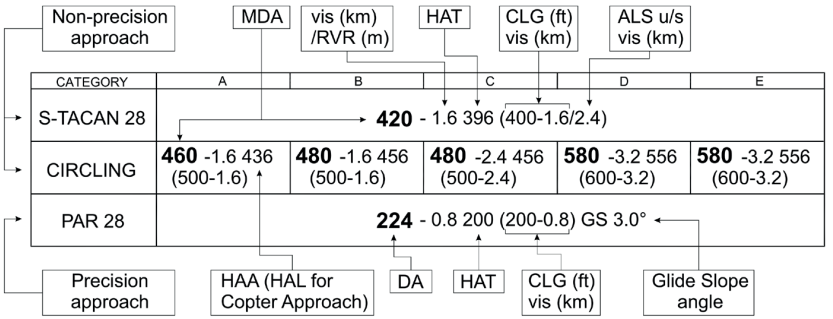
**Obstacle clearance for circling areas:**

| *Aircraft category* | *Minimum obstacle clearance (ft)* | *Minimum OCH above AD elev (ft)* | *Minimum visibility km* |
|---|---|---|---|
| HPMA | 300 | 550 | 3.2 |

**CHARTING.**
The term “HPMA” will be added for the procedure name, e.g. “HPMA TACAN RWY 10L”.

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022

# LANDING MINIMA EXPLANATION




**CLG Ceiling**
A ceiling is expressed in feet above the published aerodrome elevation, and is equal to or greater than the height of the associated DA or MDA.

**DA Decision Altitude**
A specified altitude or height in a 3D instrument approach operation at which a missed approach must be initiated if the required visual reference to continue the approach has not been established.

**HAA Height Above Aerodrome Elevation**
The height of the MDA above the published aerodrome elevation. HAA will be published in conjunction with all circling minima.

**HAT Height Above Touchdown Zone Elevation**
The height of the DA or MDA above the highest runway centerline elevation in the touchdown zone. HAT will be published in conjunction with all straight-in minima.

**MDA Minimum Descent Altitude**
A specified altitude or height in a 2D instrument approach operation or circling approach operation below which descent must not be made without the required visual reference.

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022

**VIS Visibility**

**RVR Runway Visual Range**

Visibility values are expressed as visual range (estimated horizontal visual range on the ground = VIS) or as runway visual range (measured horizontal visual range on the ground along the runway = RVR). The visibility values published following the DA or MDA is the required minimum visibility for the approach.

For straight-in approaches, the visibility value may be either VIS or RVR. For circling approaches, the visibility value will always be VIS. The visibility value published in parentheses with the ceiling value is applicable for flight planning purpose. It is also the required minimum visibility in the event that RVR is not available. The value will always be VIS. For ALS u/s, the last VIS value (after the slash) should be used.

**ILS Cat. II operations**

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| ILS Cat. II 28 | | **RA 101** (DA 124) - 350 100 | | | N/A |

RA DA RVR (m) CLG (ft)

**RA Radio Altimeter Height.**

An indication of the vertical distance between a point on the nominal glide slope at DH and the terrain directly beneath this point.

Note: ILS Cat. II criteria for aircraft Cat. E are not established.

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 22 FEB 2024

# COLD WEATHER ALTITUDE CORRECTION

International Standard Atmosphere (ISA) is used as a basis for the altitude corrections below. ISA temperature at sea level is +15° Celsius, decreasing 2° per 1000 feet above sea level. When actual temperature is lower than ISA, the aircraft will be lower than indicated in its pressure altimeter. Under such circumstances a compensation should be added to altitudes flown during the approach procedure. The altimeter error is approximately 0.4% of aircraft height above reference datum (AD) per degree C below ISA.

When AD temperature is 0 degrees or colder, values in the Altitude Correction Chart should be added to:

a. All procedure altitudes below Transition Level (TL) and ATC assigned IFR altitudes, if not already compensated.
b. Minimum Sector Altitudes (MSA) and Emergency Safe Altitudes.

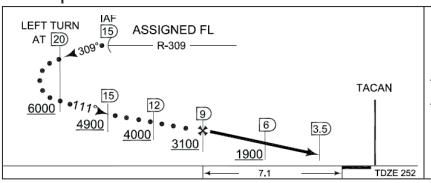
**Pilots must advise ATC when temperature correction Is applied, and state amount of correction or new altitude to be flown.**

| A/D | HEIGHT ABOVE THE ALTIMETER SOURCE | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Temp °C | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1500 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 | 8000 |
| 0 | 20 | 20 | 30 | 30 | 40 | 40 | 50 | 50 | 60 | 90 | 120 | 170 | 230 | 280 | 340 | 400 | 460 |
| -10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 150 | 200 | 290 | 390 | 490 | 590 | 690 | 790 |
| -20 | 30 | 50 | 60 | 70 | 90 | 100 | 120 | 130 | 140 | 210 | 280 | 420 | 570 | 710 | 850 | 1000 | 1150 |
| -30 | 40 | 60 | 80 | 100 | 120 | 140 | 150 | 170 | 190 | 280 | 380 | 570 | 760 | 950 | 1140 | 1340 | 1540 |
| -40 | 50 | 80 | 100 | 120 | 150 | 170 | 190 | 220 | 240 | 360 | 480 | 720 | 970 | 1210 | 1460 | 1710 | 1960 |
| -50 | 60 | 90 | 120 | 150 | 180 | 210 | 240 | 270 | 300 | 450 | 590 | 890 | 1190 | 1500 | 1800 | 2110 | 2420 |
| | VALUES TO BE ADDED TO PUBLISHED ALTITUDES | | | | | | | | | | | | | | | | |

*Note: The table is calculated for sea level AD. Values are conservative when applied at higher AD. (Reference: ICAO Doc 8168-OPS/611 Volume I, Table III-1-4-1 b).*

For odd temperatures or altitudes the following 'rule of thumb' is easy to remember: Add 4 feet for each -1°C temperature deviation from ISA (+15 at SL), per 1000' altitude above the airport. (This method is slightly less conservative than the table above).

Example:




HI-TACAN RWY 10 BARDUFOSS (ENDU)

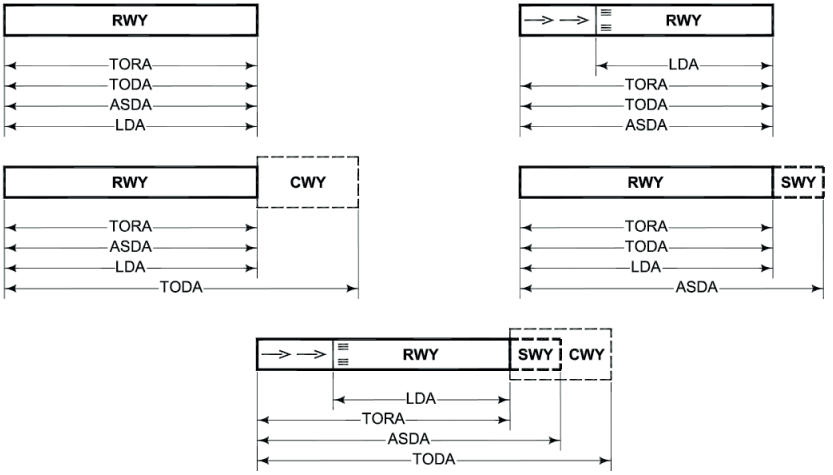
AD elevation: 252 ft
AD Temperature: -30° C.
Difference betw. ISA and actual temp: 45°
HAA = Published altitude – AD elev□

| | Pub. alt. | HAA | Correction *) | Indicated alt **) |
|---|---|---|---|---|
| 20 DME | 6000 | 5748 | + 1100 | 7100 |
| 15 DME | 4900 | 4648 | + 890 | 5800 |
| 12 DME | 4000 | 3748 | + 720 | 4800 |
| FAF | 3100 | 2848 | + 550 | 3700 |
| 6 DME | 1900 | 1648 | + 320 | 2300 |
| MDA | 1420 | 1168 | + 230 | 1650 |

*) Rounded up to the nearest 10 ft
**) Rounded up to the nearest 100 ft, except MDA

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022

## DETERMINATION OF DECLARED DISTANCES FOR RUNWAYS




**SWY Stopway**
A defined rectangular area on the ground at the end of take-off run available, prepared as a suitable area in which an aircraft can be stopped in case of an aborted take-off.

**CWY Clearway**
A defined rectangular area on the ground or water at the end of the runway in the direction of take-off and under control of an appropriate authority, selected or prepared as a suitable area over which an aircraft may make a portion of its initial climb to a specified height, (extension laterally to a distance of a least 75 metres either side of the extended runway centerline and not longer than half the length of the runway).

**TORA Take-Off Run Available**
The length of runway declared available and suitable for the ground run of an aircraft taking off.

**TODA Take-Off Distance Available**
The length of the take-off run available plus the length of the clearway, if provided.

**ASDA Accelerate Stop Distance Available**
The length of the take-off run available plus the length of the stopway, if provided.

**LDA Landing Distance Available**
The length of runway, which is declared available and suitable for the ground run of an aircraft landing. The LDA commences at the threshold/displaced threshold.

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022

# THE AIRCRAFT CLASSIFICATION/PAVEMENT CLASSIFICATION NUMBER (ACN/PCN) SYSTEM

## 1. ACN/PCN System

The ACN/PCN system provides a method of classifying pavement bearing strength for aircraft above 5700 KG Maximum Total Weight Authorized (MTWA).
The ACN is a number expressing the relative effect of an aircraft load on a pavement for a specified sub-grade strength.
The PCN is a number expressing the bearing strength of a pavement for unrestricted operations. Using the ACN/PCN system means to compare the ACN with the PCN.

## 2. Aircraft Classification Number (ACN)

The ACN is calculated, taking into account the weight of the aircraft, the pavement type and the sub-grade category. ACN values are normally given in the Flight Manuals for rigid and flexible pavements.

## 3. Pavement Classification Number (PCN)

PCN are reported as a five part code. Apart from the numerical value of the PCN, the report includes the pavement type (rigid or flexible)and the sub-grade support strength category.
Provision is made in the report for the aerodrome authority to place a limit on maximum allowable tyre pressure, if this is a constraint, and an indication is required of whether the pavement has been evaluated by technical means or by past experience of aircraft use of the pavement.
Details of the coded format and an example are:

3.1 The PCN number.

3.2 The type of pavement:
R = Rigid
F = Flexible

3.3 The pavement sub-grade category:
A = High
B = Medium
C = Low
D = Ultra-low

3.4 The maximum tyre pressure authorized for the pavement:
W = High, no limit
X = Medium, limited to 217 psi
Y = Low, limited to 145 psi
Z = Very low, limited to 73 psi

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022

3.5 Pavement evaluation method:
T = Technical evaluation
U = By experience of aircraft using the pavement

3.6 Example:
If the bearing strength of a rigid pavement resting on a medium strength sub-grade has been assessed by a technical evaluation to be a PCN of 80 and there is no tyre pressure limit, then the reported information would be:

**PCN: 80/R/B/W/T**

**4. Operating procedure.**

- Provided a pavement PCN is equal to or greater than the ACN of the aicraft unlimited use of the pavement is permitted.
- Provided the PCN is smaller than the ACN, the use of the pavement by an aircraft can only be undertaken when prior permission of the individual aerodrome authorithy is granted or by reduction of the aircraft load.

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022

# NON-PRECISION APPROACHES – FLYING TECHNIQUES

In accordance with COMMISSION REGULATION (EC) No 859/2008 of 20 August 2008, the following is stated for civil aircraft:

*… All non-precision approaches shall be flown using the continuous descent final approaches (CDFA) technique unless otherwise approved by the Authority for a particular approach to a particular runway. When calculating the minima in accordance with Appendix 1 (New), the operator shall ensure that the applicable minimum RVR is increased by 200 metres (m) for Cat A/B aeroplanes and by 400 m for Cat C/D aeroplanes for approaches not flown using the CDFA technique, providing that the resulting RVR/CMV value does not exceed 5 000 m.*

There are three techniques for flying non-precision approaches:

- CDFA (Continuous descent final approach)
- Constant descent angle
- Step down descent (“dive and drive”)

**CDFA**

Continuous descent final approach (CDFA). A technique, consistent with stabilized approach procedures, for flying the final approach segment of a non-precision instrument approach procedure as a continuous descent, without level-off, from an altitude/height at or above the final approach fix altitude/height to a point approximately 15 m (50 ft) above the landing runway threshold or the point where the flare manoeuvre should begin for the type of aircraft flown.
ICAO Doc 8168-OPS/611 Vol I § 1.7.2.2 “This technique (CDFA) requires a continuous descent, flown either with VNAV guidance calculated by on-board equipment or based on manual calculation of the required rate of descent, without level-offs”.

**Constant descent angle**

ICAO Doc 8168-OPS/611 Vol I §1.7.3.1 The second technique involves achieving a constant, unbroken angle from the final approach fix (FAF), or optimum point on procedures without an FAF, to a reference datum above the runway threshold, e.g. 15 m (50 ft).
When the aircraft approaches the MDA/H, a decision shall be made to either continue on the constant angle or level off at or above the MDA/H, depending on visual conditions.
ICAO Doc 8168-OPS/611 Vol I §1.7.3.2 If the visual conditions are adequate, the aircraft continues the descent to the runway without any intermediate level-off.
ICAO Doc 8168-OPS/611 Vol I § 1.7.3.3 If visual conditions are not adequate to continue, the aircraft shall level off at or above the MDA/H and continue inbound until either encountering visual conditions sufficient to descend below the MDA/H to the runway or, reaching the published missed approach point and thereafter executing the missed approach procedure.

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 22 FEB 2024

**Step down descent ("dive and drive")**
ICAO Doc 8168-OPS/611 Vol I §1.7.4 The third technique involves an expeditious descent and is described as "descend immediately to not below the minimum step down fix altitude/height or MDA/H, as appropriate". This technique is acceptable as long as the achieved descent gradient remains less than 15 per cent and the missed approach is initiated at or before the MAPt. Careful attention to altitude control is required with this technique due to the high rates of descent before reaching the MDA/H and, thereafter, because of the increased time of exposure to obstacles at the minimum descent altitude.

**The NATO preferred flying technique**
NATO is currently not recommending a preferred flying technique. Nor is visibility minima increased for flights not using the CDFA technique.

**Procedure design**
There are no differences in the design criteria for non-precision approaches, irrespective of the flying technique used during the final segment. However, in accordance with ICAO Doc 8168 Vol II Part I §9 4 3 5:

*… Where distance information is available, to facilitate a continuous descent final approach (CDFA), descent profile advisory information for the final approach should be provided to assist the pilot in maintaining the calculated descent gradient. This information should consist of a table showing altitudes/heights through which the aircraft should be passing at each 2 km or 1 NM as appropriate.*

Where DME is available all revised (MIPS) non-precision procedures in this FLIP will therefore contain a distance/altitude table in the profile view to define the distance/height relationship for the descent path angle required to facilitate the CDFA technique.

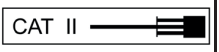
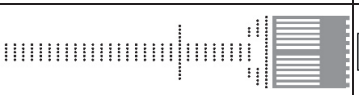
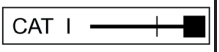
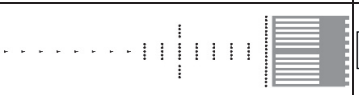
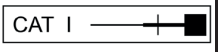
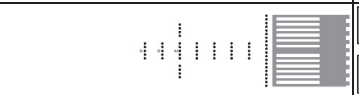
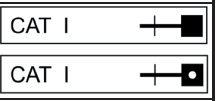
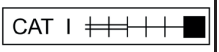
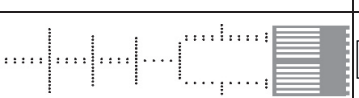
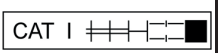
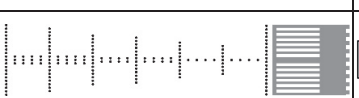
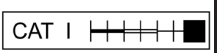
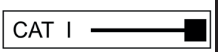
For pilots preferring the constant descent angle approach information of the descent angle/ gradient is provided in the distance/altitude table.

Pilots preferring the 'dive and drive' technique may ignore the distance/altitude table.

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022

## APPROACH LIGHTING SYSTEMS

For planning purposes the following approach lighting systems are to be considered as ALS:

| Description | FLIP Code | System (Example) | IAC Depiction |
|---|---|---|---|
| ALFS-2<br>Standard length: 730/900 M *) | A |  |  |
| ALFS-1<br>Standard length: 730/900 M *) | A1 |  |  |
| SSALR<br>Standard length: 730/900 M *) | A3 |  |  |
| MALS/MALSF<br>Standard length: 420 M *) | A4 A4 |  |  |
| NATO standard<br>Standard length: 900 M *) | BP |  |  |
| Former NATO standard<br>Standard length: 900 M | BN |  |  |
| CALVERT<br>Standard length: 900 M *) | J |  |  |
| Centerline (high intensity)<br>Standard length: 900 M *) | O |  |  |

*) The actual length of the ALS is indicated in the IAC briefing strip.

In accordance with FKOBST F.152-1 chapter 36 all other systems than those mentioned above are to be considered as SRC (Single Row Centerline).

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 21 APR 2022

# SIDESTEP PROCEDURE

A sidestep manoeuvre is the visual alignment manoeuvre, required by a pilot executing an approach to one runway and cleared to land on a parallel runway.

Pans Ops considers landing on any other runway than the approach runway as being a circling manoeuvre that requires circling minima. In some cases, this results in undesirable high minima.

In order to gain a much needed operational advantage, the sidestep procedure is introduced **as a national measure, applicable only to RDAF aircraft and only on the three airbases, Aalborg, Karup and Skrydstrup.** Landing minima to the parallel runway will be equal to or higher than the minima to the primary runway, but will normally be lower than the published circling minima.

The sidestep procedure is developed in accordance with the principles described in AFMAN 11-202 Vol 3 Flight Operations - FLIGHT OPERATIONS (10 JANUARY 2022) but using criteria from ICAO Doc. 8168 Vol II. Visibility minima are derived from STANAG 3759 (AATCP-1(E)), FAA Order 8260.3F Flight Procedures and Airspace (09/07/2023) and FKOBST F.152.1, chapter 36 whichever is the highest.

The procedure ensures adequate obstacle clearance within the entire final approach area covering both the approach runway and the sidestep runway. Area width depends on the navaid used as well as the location of the navaid, i.e. the area for an ILS or a Localizer only approach is narrower than that of a VORTAC. The obstacle clearance altitude (OCA) for the sidestep procedure has been calculated in parallel with that of the approach runway and the highest of the two determines the sidestep minima. However, the published minimum is never below the MDH as determined by FKOBST F.152.1, chapter 36 per aircraft type for landing on parallel runways.

How to fly a sidestep procedure:

- Do NOT initiate the sidestep manoeuvre prior to passing the FAP/FAF.
- After the FAP/FAF commence the sidestep manoeuvre as soon as possible after the runway or runway environment is in sight.
- Comply with any minimum altitude associated with step down fixes.
- Maintain the sidestep MDA until reaching a point where a normal descent to land on the sidestep runway can be started.
- If you lose visual reference during the manoeuvre, follow the missed approach specified for the approach procedure just flown, unless otherwise directed. An initial climbing turn towards the approach runway will ensure that the aircraft remains within the obstruction clearance area.

Sidestep minima are published only for Aalborg, Karup and Skrydstrup.

CHANGES: EDITORIAL
AIR COMMAND DENMARK - MIL AIM 28 DEC 2023

# RADIO NAVIGATIONAL AIDS

| VOR / TACAN / DME | | | | | |
|---|---|---|---|---|---|
| **Station** | **ID** | **Facility** | **Var.** | **Freq / Ch** | **Position** |
| Aalborg | AAL | VOR | 4°E (2022) | 116.70 | N57°06.22' E009°59.74' |
| Aalborg | AAL | TACAN | 4°E (2023) | CH 114X | N57°06.24' E009°59.57' |
| Alsie | ALS | VOR | 4°E (2022) | 114.70 | N54°54.33' E009°59.60' |
| Bella | BEL | DME | | 114.65/CH 93Y | N55°47.47' E012°05.75' |
| Codan | CDA | DME | | 114.90/CH 96X | N55°00.09' E012°22.75' |
| Esebo | ESE | DME | | 116.60/CH 113X | N55°31.35' E008°33.52' |
| Karup | KAR | TACAN | 4°E (2023) | CH 37X | N56°17.80' E009°00.52' |
| Kastrup | KAS | DME | | 112.50/CH 72X | N55°35.43' E012°36.82' |
| Korsa | KOR | VOR/DME | 4°E (2022) | 112.80/CH 75X | N55°26.36' E011°37.89' |
| Lemme | LME | DME | | 115.35/CH 100Y | N55°59.56' E008°21.26' |
| Odin | ODN | DME | | 115.50/CH 102X | N55°34.86' E010°39.18' |
| Ramme | RAM | DME | | 111.85/CH 55Y | N56°28.70' E008°11.24' |
| Rønne | ROE | VOR | 4°E (2016) | 112.00 | N55°03.94' E014°45.52' |
| Rønne | ROE | TACAN | 5.5°E (2023) | CH 57X | N55°03.71' E014°45.35' |
| Skrydstrup | SKR | TACAN | 4°E (2023) | CH 41X | N55°13.74' E009°12.84' |
| Trano | TNO | VOR/DME | 4°E (2022) | 117.40/CH 121X | N55°46.45' E011°26.35' |
| Vamdrup | VAM | DME | | 110.05/CH 37Y | N55°26.28' E009°20.10' |

| NDB | | | |
|---|---|---|---|
| **Station** | **ID** | **Freq (KHz)** | **Position** |
| Stauning | AU | 346 | N55°59.46' E008°19.10' |
| Esbjerg | EJ | 400.5 | N55°32.47' E008°41.98' |
| Esbjerg | HP | 376 | N55°30.69' E008°24.76' |
| Vamdrup | KD | 357 | N55°26.60' E009°20.09' |
| Roskilde | RK | 368 | N55°37.39' E011°59.83' |
| Aarhus | TL | 384 | N56°18.02' E010°37.12' |
| Stauning | VJ | 328 | N55°59.32' E008°25.47' |
| Skrydstrup | VO | 321 | N55°13.48' E009°16.42' |

CHANGES: SD NDB, ODN, CDA AND KAS VOR WITHDRAWN.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

## NDB BEARING/DISTANCE FROM VOR/TACAN

Bearings from the VOR/TACAN facility are magnetic (and equal to the radial), corrected for the variation published in MIL AIP page ENR 4.1 (See also page 20-20). Distances are in nautical miles.

| | AAL | ALS*) | KAR | KOR | SKR | TNO |
|---|---|---|---|---|---|---|
| AU | 216.4°<br>87.0 | 315.4°<br>86.8 | 227.9°<br>29.6 | 283.8°<br>117.2 | 322.7°<br>55.0 | 274.3°<br>106.2 |
| EJ | 201.2°<br>103.4 | 307.2°<br>58.6 | 189.1°<br>46.6 | 270.7°<br>100.2 | 313.1°<br>25.7 | 258.6°<br>94.2 |
| HP | 205.5°<br>109.4 | 300.5°<br>65.4 | 199.3°<br>51.3 | 269.6°<br>110.0 | 298.1°<br>32.3 | 258.5°<br>104.1 |
| KD | 188.7°<br>102.2 | 321.3°<br>39.5 | 163.7°<br>52.5 | 267.1°<br>78.5 | 013.8°<br>13.5 | 251.3°<br>74.3 |
| RK | 138.2°<br>111.3 | 053.1°<br>81.2 | 106.6°<br>108.6 | 044.2°<br>16.6 | 070.8°<br>98.0 | 111.4°<br>21.0 |
| TL | 152.5°<br>52.5 | 010.0°<br>86.5 | 085.1°<br>53.8 | 323.0°<br>62.1 | 031.8°<br>80.1 | 315.3°<br>42.0 |
| VJ | 214.5°<br>84.9 | 317.2°<br>84.3 | 222.9°<br>27.0 | 284.2°<br>113.7 | 325.9°<br>53.0 | 274.5°<br>102.7 |
| VO | 188.4°<br>115.5 | 304.0°<br>31.4 | 168.0°<br>65.1 | 257.9°<br>81.8 | 093.1°<br>2.1 | 242.8°<br>80.9 |

*) No DME

CHANGES: SD NDB, CDA, KAS AND ODN VOR WITHDRAWN.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

## VOR/TACAN BEARING/DISTANCE FROM VOR/TACAN

Bearings from the VOR/TACAN facility are magnetic (and equal to the radial), corrected for the variation published in MIL AIP page ENR 4.1 (See also page 20-20). Distances are in nautical miles.

| | AAL | ALS*) | KAR | KOR | SKR | TNO |
|---|---|---|---|---|---|---|
| **AAL** | | 356.0°<br>132.2 | 029.4°<br>58.5 | 328.0°<br>114.0 | 010.7°<br>115.7 | 325.5°<br>93.3 |
| **ALS** | 176.0°<br>132.2 | | 153.8°<br>90.1 | 237.0°<br>64.9 | 123.6°<br>33.2 | 220.1°<br>72.0 |
| **KAR** | 210.3°<br>58.5 | 334.6°<br>90.1 | | 297.3°<br>102.5 | 351.9°<br>64.6 | 288.0°<br>87.6 |
| **KOR** | 146.6°<br>114.0 | 055.7°<br>64.9 | 115.1°<br>102.5 | | 078.3°<br>83.8 | 157.9°<br>21.2 |
| **SKR** | 189.4°<br>115.7 | 302.2°<br>33.2 | 169.7°<br>64.6 | 258.3°<br>83.8 | | 243.5°<br>82.7 |
| **TNO** | 144.3°<br>93.3 | 038.9°<br>72.0 | 106.0°<br>87.6 | 338.1°<br>21.2 | 063.7°<br>82.7 | |

*) No DME

CHANGES: CDA, KAS AND ODN VOR WITHDRAWN.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

# LIST OF AERODROMES

| Aerodrome | Lat/Long | RWY | RWY length | | Freq. | Phone | PPR |
|---|---|---|---|---|---|---|---|
| EKAE (Ærø) | N54 51,2 E010 27,4 | 15/33 | 2591 x 98 ft | ○ | 123.175 | 6352 6367 | Y |
| EKAH (Århus) | See page 2-1 | | | | | | |
| EKAT (Anholt) | N56 42,0 E011 33.3 | 03/21 | 2132 x 65 ft | ○ | 131.500 | 4619 1114 | N |
| EKBI (Billund) | See page 3-1 | | | | | | |
| EKCH (Kastrup) | See page 6-1 | | | | | | |
| EKEB (Esbjerg) | See page 4-1 | | | | | | |
| EKEL (Endelave) | N55 45,3 E010 15,2 | 11/29 | 2132 x 82 ft | ○ | 129.800 | 7568 9062 | N |
| EKGH (Grønholt) | N55 56,4 E012 22,9 | 11/29 | 2393 x 59 ft | ● | 122.500 | 3332 6560 | Y |
| EKHG (Herning) | N56 11,1 E009 02,8 | 09/27 | 3933 x 98 ft | ● | 121.000 | 9714 1244 | N |
| EKHK (Holbæk) | N55 44,0 E011 36,2 | 10/28 | 1853 x 59 ft | ○ | 123.500 | 2694 4174 | Y |
| EKHV (Haderslev) | N55 18,2 E009 31,4 | 10/28 | 3674 x 75 ft | ● | 122.225 | 4087 8640 | N |
| EKKA (Karup) | See page 5-1 | | | | | | |
| EKKL (Kalundborg) | N55 42,1 E011 15,1 | 09/27 | 2293 x 59 ft | ● | 122.500 | 5929 1123 | N |
| EKLS (Læsø) | N57 16,7 E011 00.3 | 07/25 | 3044 x 75 ft | ● | 123.175 | 2498 3595 | N |
| EKLV (Lemvig) | N56 30,2 E008 18,3 | 08/26 | 2434 x 98 ft | ○ | 123.500 | 9782 1368 | N |
| Lindtorp | N56 23,7 E008 26,5 | 08/26 | 3937 x 98 ft | ● | 122.500 | 9748 7573 | N |
| EKMB (Maribo) | See page 7-1 | | | | | | |
| EKNM (Morsø) | N56 49,5 E008 47.2 | 11/29 | 2296 x 98 ft | ○ | 122.075 | 9772 0004 | N |
| Næstved | N55 12,6 E011 43,1 | 07/25 | 1387 x 49 ft | ○ | N/A | 6173 1950 | N |
| EKOD (Odense) | See page 8-1 | | | | | | |
| EKPB (Kruså/Padborg) | N54 52,3 E009 16,8 | 06/24 | 3523 x 98 ft | ● | 122.075 | 7467 6517 | N |
| EKRA (Rårup) | N55 46.6 E009 56,5 | 10/28 | 2296 x 65 ft | ○ | 122.500 | 4010 7707 | Y |
| EKRD (Randers) | N56 30,4 E010 02,3 | 07/25 | 2952 x 75 ft | ● | 122.075 | 8640 4011 | N |
| EKRK (Roskilde) | See page 9-1 | | | | | | |
| EKRN (Rønne) | See page 10-1 | | | | | | |
| EKRS (Ringsted) | N55 25,6 E011 48,4 | 05/23 | 2404 x 131 | ○ | 123.500 | 2029 3428 | N |
| EKSB (Sønderborg) | See page 15-1 | | | | | | |
| EKSD (Spjald) | N56 06.2 E008 30,9 | 14/32 | 2132 x 98 ft | ○ | N/A | 9738 1194 | Y |
| EKSN (Sindal) | See page 11-1 | | | | | | |
| EKSP (Skrydstrup) | See page 13-1 | | | | | | |
| EKSS (Samsø) | N55 53,4 E010 36,9 | 10/28 | 2293 x 98 ft | ○ | 123.500 | 4016 4044 | N |
| EKST (Sydfyn/Tåsinge) | N55 01,1 E010 33,8 | 11/29 | 2952 x 75 ft | ○ | 123.400 | | N |
| EKSV (Skive) | See page 12-1 | | | | | | |
| EKTD (Tønder) | N54 55,8 E008 50,5 | 12/30 | 2788 x 98 ft | ○ | 122.500 | 7472 2655 | N |
| EKTS (Thisted) | See page 16-1 | | | | | | |
| EKVB (Viborg) | N56 24,6 E009 24,6 | 11/29<br>17/35 | 1896 x 98 ft<br>2214 x 98 ft | ○<br>○ | 123.500 | 8660 1860 | N |
| EKVD (Vamdrup) | See page 17-1 | | | | | | |
| EKVH (Vesthimmerland) | N56 50,9 E009 27,6 | 11/29 | 3976 x 75 ft | ● | 122.225 | 9966 7385 | N |
| EKVJ (Stauning) | See page 14-1 | | | | | | |
| EKYT (Aalborg) | See page 1-1 | | | | | | |

●Asphalt ○Grass

CHANGES: EDITORIAL

AIR COMMAND DENMARK - MIL AIM 21 APR 2022

## AERODROME BEARING/DISTANCE FROM VOR/TACAN

Bearings from the VOR/TACAN facility are magnetic (and equal to the radial) corrected for the variation published in MIL AIP page ENR 4.1 (See also page 20-20). Distances are in nautical miles.

| | AAL | ALS*) | KAR | KOR | SKR | TNO |
|---|---|---|---|---|---|---|
| EKAE | 169.2°<br>136.3 | 097.0°<br>16.4 | 145.8°<br>98.4 | 225.4°<br>53.7 | 113.3°<br>46.8 | 207.7°<br>65.0 |
| EKAH | 152.5°<br>52.4 | 010.0°<br>86.5 | 085.1°<br>53.8 | 322.9°<br>62.2 | 031.7°<br>80.2 | 315.2°<br>42.1 |
| EKAT | 110.7°<br>56.9 | 021.5°<br>120.1 | 069.0°<br>88.1 | 354.1°<br>75.7 | 036.8°<br>118.5 | 360.0°<br>55.7 |
| EKBI | 195.2°<br>86.6 | 326.5°<br>57.9 | 167.7°<br>33.8 | 279.1°<br>86.2 | 352.4°<br>30.8 | 265.4°<br>77.4 |
| EKCH | 130.0°<br>126.0 | 059.8°<br>100.9 | 102.8°<br>129.6 | 068.5°<br>36.5 | 073.3°<br>119.9 | 098.3°<br>42.3 |
| EKEB | 203.5°<br>106.3 | 303.6°<br>62.0 | 194.5°<br>48.8 | 270.1°<br>105.2 | 304.7°<br>28.8 | 258.5°<br>99.2° |
| EKEL | 169.9°<br>81.4 | 005.6°<br>51.9 | 123.4°<br>52.9 | 288.6°<br>50.7 | 043.6°<br>47.5 | 265.0°<br>40.3 |
| EKGH | 126.4°<br>105.8 | 047.7°<br>102.6 | 095.3°<br>115.2 | 036.0°<br>39.5 | 063.0°<br>116.0 | 068.0°<br>33.4 |
| EKHG | 206.0°<br>63.6 | 333.6°<br>83.5 | 165.9°<br>6.8 | 294.2°<br>98.5 | 350.2°<br>57.8 | 284.0°<br>84.5 |
| EKHK | 142.3°<br>98.3 | 043.3°<br>74.3 | 106.1°<br>93.7 | 352.8°<br>17.7 | 064.6°<br>87.1 | 109.3°<br>6.1 |
| EKHV | 184.5°<br>109.5 | 322.0°<br>28.8 | 159.6°<br>62.3 | 260.4°<br>72.6 | 063.5°<br>11.5 | 243.2°<br>71.2 |
| EKKA | 207.0°<br>56.8 | 336.9°<br>89.0 | 085.3°<br>3.9 | 298.4°<br>99.9 | 352.6°<br>64.3 | 288.8°<br>84.7 |
| EKKL | 149.1°<br>94.2 | 037.5°<br>64.3 | 110.5°<br>83.6 | 316.5°<br>20.3 | 063.0°<br>75.1 | 233.3°<br>7.8 |
| EKLS | 068.0°<br>34.5 | 008.9°<br>146.6 | 043.3°<br>88.3 | 345.5°<br>112.5 | 021.1°<br>136.9 | 347.0°<br>91.5 |
| EKLV | 233.6°<br>66.2 | 326.0°<br>111.7 | 294.4°<br>26.4 | 297.1°<br>128.9 | 334.7°<br>82.4 | 290.0°<br>113.8 |
| Lindtorp | 227.0°<br>66.5 | 326.0°<br>104.0 | 283.9°<br>19.9 | 295.4°<br>122.0 | 336.0°<br>74.9 | 287.7°<br>107.4 |
| EKMB | 156.7°<br>152.6 | 099.3°<br>51.7 | 134.2°<br>126.9 | 184.5°<br>45.0 | 107.6°<br>83.2 | 176.0°<br>64.6 |
| EKNM | 243.5°<br>43.1 | 337.0°<br>122.4 | 343.0°<br>32.6 | 308.3°<br>126.7 | 347.7°<br>97.0 | 302.6°<br>108.9 |
| Næstved | 148.3°<br>127.7 | 068.2°<br>62.2 | 120.3°<br>112.6 | 164.1°<br>14.0 | 085.7°<br>86.0 | 160.3°<br>35.1 |
| EKOD | 169.2°<br>98.5 | 014.5°<br>36.2 | 133.3°<br>66.5 | 269.4°<br>44.6 | 064.3°<br>40.9 | 241.0°<br>41.8 |

*)No DME

Continued next page

CHANGES: CDA, KAS AND ODN VOR WITHDRAWN.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

## AERODROME BEARING/DISTANCE FROM VOR/TACAN (continued)

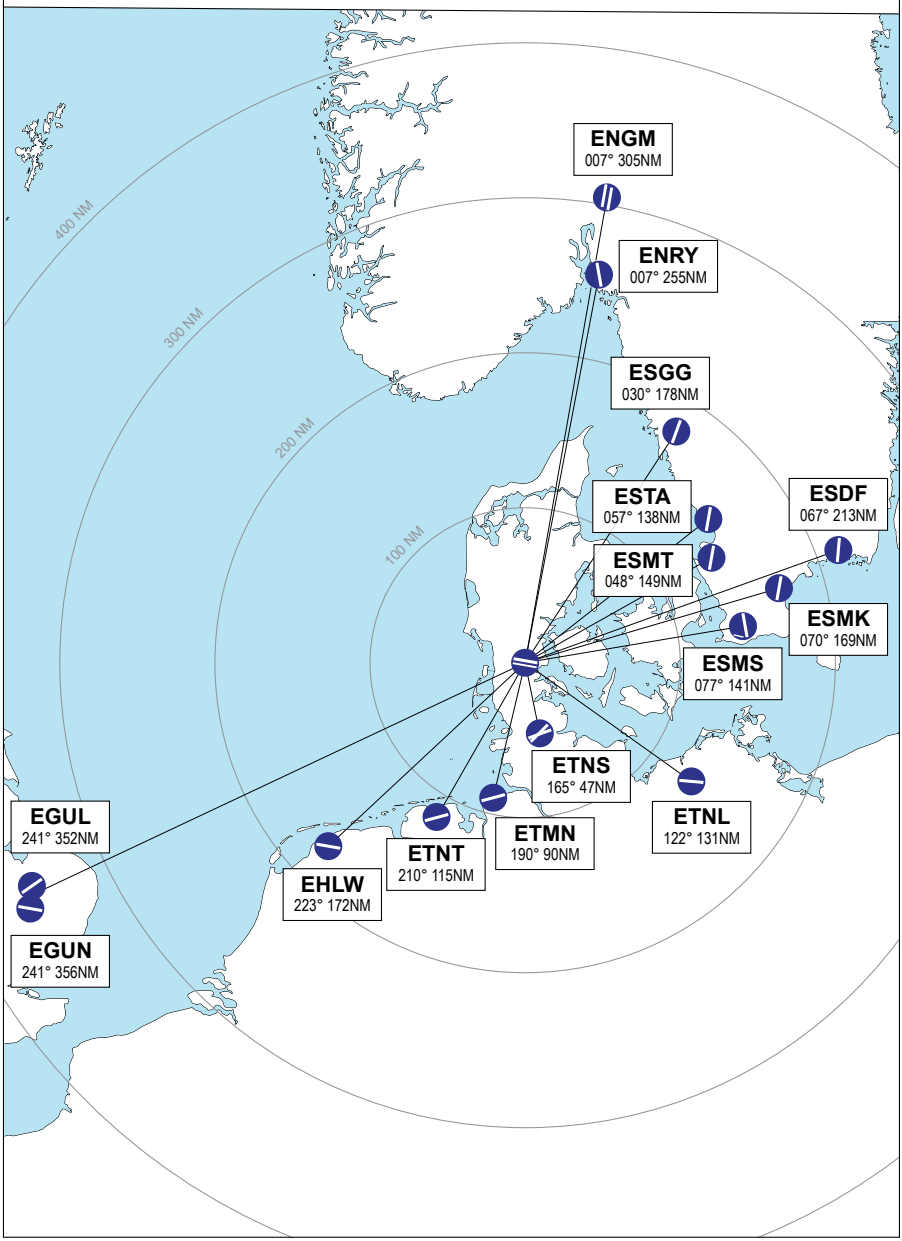
| | AAL | ALS*) | KAR | KOR | SKR | TNO |
|---|---|---|---|---|---|---|
| EKPB | 186.5°<br>136.4 | 261.4°<br>24.8 | 169.8°<br>86.2 | 244.0°<br>87.9 | 170.0°<br>21.7 | 230.6°<br>91.8 |
| EKRA | 177.3°<br>79.8 | 354.1°<br>52.5 | 130.5°<br>44.3 | 286.2°<br>61.0 | 033.6°<br>41.3 | 266.8°<br>50.7 |
| EKRD | 173.37°<br>35.9 | 356.8°<br>96.3 | 065.3°<br>36.5 | 316.7°<br>83.7 | 015.5°<br>81.7 | 309.7°<br>64.5 |
| EKRK | 137.1°<br>115.9 | 056.0°<br>84.0 | 106.8°<br>113.7 | 058.5°<br>19.2 | 072.6°<br>102.0 | 111.5°<br>26.1 |
| EKRN | 121.5°<br>201.7 | 080.7°<br>165.0 | 104.4°<br>208.9 | 096.6°<br>109.7 | 086.7°<br>191.1 | 105.3°<br>121.3 |
| EKRS | 144.3°<br>117.7 | 058.6°<br>69.8 | 113.8°<br>108.1 | 094.6°<br>6.1 | 077.3°<br>89.6 | 145.0°<br>24.9 |
| EKSB | 178.0°<br>128.9 | 292.7°<br>7.7 | 157.3°<br>84.5 | 242.3°<br>69.4 | 124.5°<br>25.6 | 225.7°<br>74.5 |
| EKSD | 215.7°<br>77.6 | 321.6°<br>87.9 | 231.0°<br>20.2 | 288.0°<br>112.9 | 332.0°<br>57.6 | 278.5°<br>100.6 |
| EKSN | 013.6°<br>25.2 | 358.8°<br>156.4 | 024.4°<br>82.9 | 336.0°<br>132.6 | 009.4°<br>140.9 | 335.4°<br>111.5 |
| EKSP | 188.4°<br>115.8 | 303.5°<br>31.4 | 168.2°<br>65.2 | 257.7°<br>82.0 | 100.7°<br>1.9 | 242.7°<br>81.2 |
| EKSS | 160.0°<br>75.9 | 015.4°<br>62.8 | 109.8°<br>59.2 | 304.5°<br>43.9 | 045.6°<br>62.0 | 280.3°<br>28.7 |
| EKST | 167.1°<br>126.9 | 067.0°<br>20.8 | 140.9°<br>93.4 | 231.6°<br>44.6 | 100.8°<br>48.2 | 209.6°<br>54.5 |
| EKSV | 215.4°<br>42.9 | 340.6°<br>102.7 | 015.7°<br>16.2 | 305.9°<br>106.4 | 355.0°<br>79.5 | 298.5°<br>89.2 |
| EKTD | 193.0°<br>136.3 | 268.6°<br>40.0 | 180.0°<br>82.4 | 249.4°<br>100.8 | 211.7°<br>22.1 | 237.3°<br>102.4 |
| EKTS | 263.7°<br>42.2 | 338.1°<br>137.1 | 343.9°<br>47.5 | 312.3°<br>138.5 | 347.4°<br>111.9 | 307.7°<br>119.8 |
| EKVB | 201.0°<br>45.9 | 343.9°<br>92.6 | 058.8°<br>15.0 | 304.9°<br>95.0 | 001.2°<br>71.3 | 296.2°<br>78.2 |
| EKVD | 188.7°<br>102.7 | 320.8°<br>39.2 | 164.0°<br>52.8 | 266.8°<br>78.6 | 013.7°<br>13.1 | 251.0°<br>74.6 |
| EKVH | 224.8°<br>23.4 | 347.4°<br>118.1 | 020.1°<br>36.3 | 316.2°<br>111.7 | 000.7°<br>97.6 | 311.2°<br>92.4 |
| EKVJ | 215.7°<br>86.3 | 316.1°<br>86.0 | 226.2°<br>28.7 | 284.0°<br>116.0 | 323.8°<br>54.3 | 274.4°<br>105.0 |
| EKYT | 259.4°<br>4.5 | 354.0°<br>131.7 | 025.9°<br>55.6 | 325.9°<br>115.9 | 006.6°<br>114.2 | 323.1°<br>95.3 |

*)No DME

CHANGES: CDA, KAS AND ODN VOR WITHDRAWN.

AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

# FW FOREIGN ALTERNATE AERODROMES



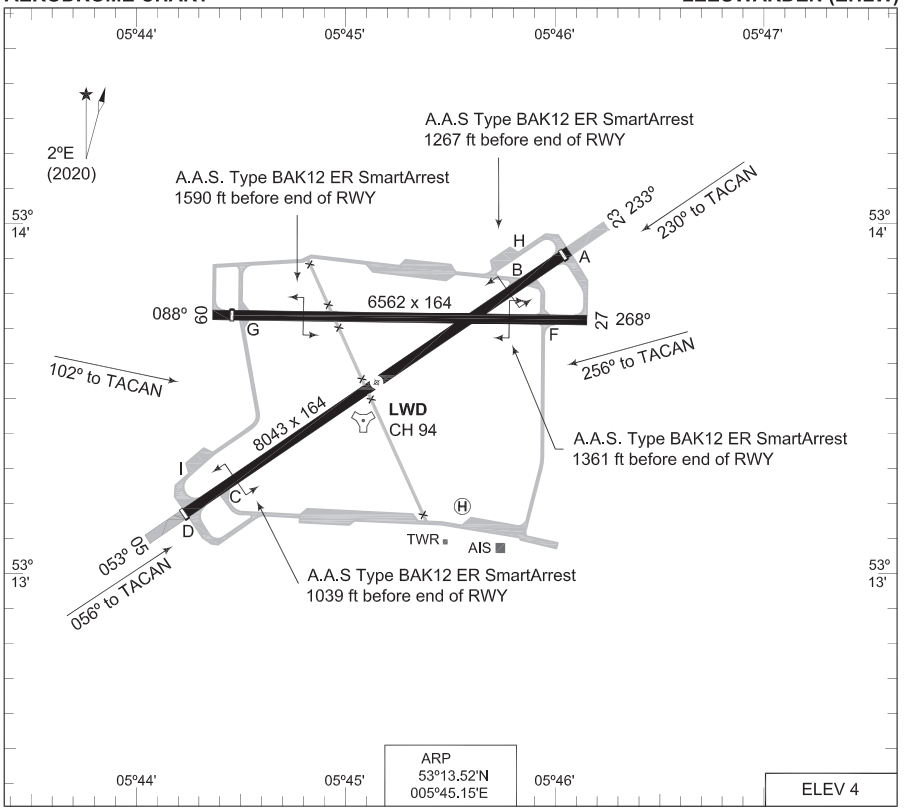
# LEUWARDEN (EHLW)

AERODROME CHART

| | |
|---|---|
| ILS or LOC RWY 05 | ILS or LOC RWY 23 |
| HI-TACAN RWY 05 | HI-TACAN RWY 23 |
| TACAN RWY 05 | TACAN RWY 23 |
| ILS or LOC RWY 09 | ILS or LOC RWY 27 |
| HI-TACAN RWY 09 | HI-TACAN RWY 27 |
| TACAN RWY 09 | TACAN RWY 27 |

| | |
|---|---|
| SID LW1 | SID LW3 |
| SID LW5 | SID LW7 |






| RWY | PCN | TORA | ASDA | TODA | LDA | | PAPI | | THR ELEV | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|
| 23 | 64 F/B/W/T | 8043 | 8043 | 8832 | 7863 | | 3.0° | | 4 | 53°13.88'N 005°46.04'E |
| 05 | 64 F/B/W/T | 8043 | 8043 | 8865 | 8036 | | 3.0° | | 4 | 53°13.15'N 005°44.27'E |
| 27 | 52 F/B/W/T | 6561 | 6561 | 6561 | 6561 | | | | 3 | 53°13.71'N 005°46.18'E |
| 09 | 52 F/B/W/T | 6561 | 6561 | 6561 | 6368 | | | | 3 | 53°13.71'N 005°44.44'E |

LEEUWARDEN TWR 344.850 120.705 (Ground Control) 362.525
LEEUWARDEN ARRIVAL 339.700
RAPCON NORTH 284.475 132.030

| | PROC. CRITERIA | RWY | GS | TCH | OTCH | RPI | CAT | MINIMA CRITERIA | MINIMA |
|---|---|---|---|---|---|---|---|---|---|
| SRA | MIPS | 23 | | | | | AB | MIPS | 450 -1100 446 (500-1.1/1.9) |
| | | | | | | | C | | 450 -1200 446 (500-1.2/2.0) |
| | | | | | | | D | | 450 -1600 446 (500-1.6/2.4) |
| | | | | | | | E | | 450 -2000 446 (500-2.0/2.8) |
| | MIPS | 05 | | | | | AB | MIPS | 470 -1100 446 (500-1.1/1.9) |
| | | | | | | | C | | 470 -1200 446 (500-1.2/2.0) |
| | | | | | | | D | | 470 -1600 446 (500-1.6/2.4) |
| | | | | | | | E | | 470 -2000 446 (500-2.0/2.8) |
| | MIPS | 27 | | | | | AB | MIPS | 420 -1900 417 (500-1.9/1.9) |
| | | | | | | | CD | | 420 -2000 417 (500-2.0/2.0) |
| | | | | | | | E | | 420 -2400 417 (500-2.4/2.4) |
| | MIPS | 09 | | | | | AB | MIPS | 460 -1900 458 (500-1.9/1.9) |
| | | | | | | | C | | 460 -2000 458 (500-2.0/2.0) |
| | | | | | | | DE | | 460 -2400 458 (500-2.4/2.4) |

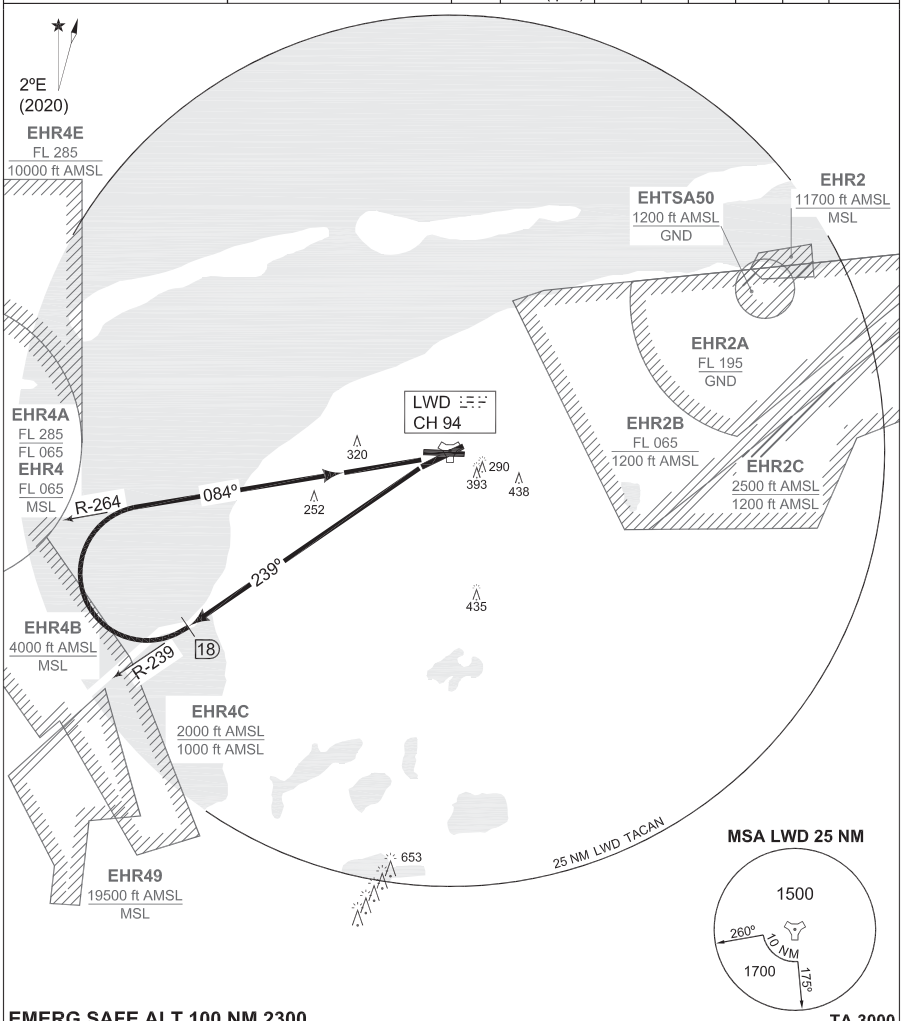
CHANGES: CABLE, TORA, ASDA

RNLAF 23 JAN 2025

AD ELEV 4

| GND CTL | LEEUWARDEN TWR | RAPCON NORTH | DUTCH MIL |
|---|---|---|---|
| 362.525 | 344.850 120.705 | 284.475 132.030 | 259.250 128.355 |

| RWY | Knots | 120 | 180 | 240 | 300 | 360 | to |
|---|---|---|---|---|---|---|---|
| **23** | V/V (fpm) | 600 | 900 | 1200 | 1500 | 1800 | **1000 ft** |




| | |
|---|---|
| **LEEUWARDEN 1 (RWY 23)** | - Climb on R-239 outbound Leeuwarden TACAN.<br>- At 18 DME turn right to intercept R-264 inbound and proceed to Leeuwarden TACAN. |
| **NOTE:** | Procedure may be changed by ATC when BREEZANDDIJK firing range is active. |

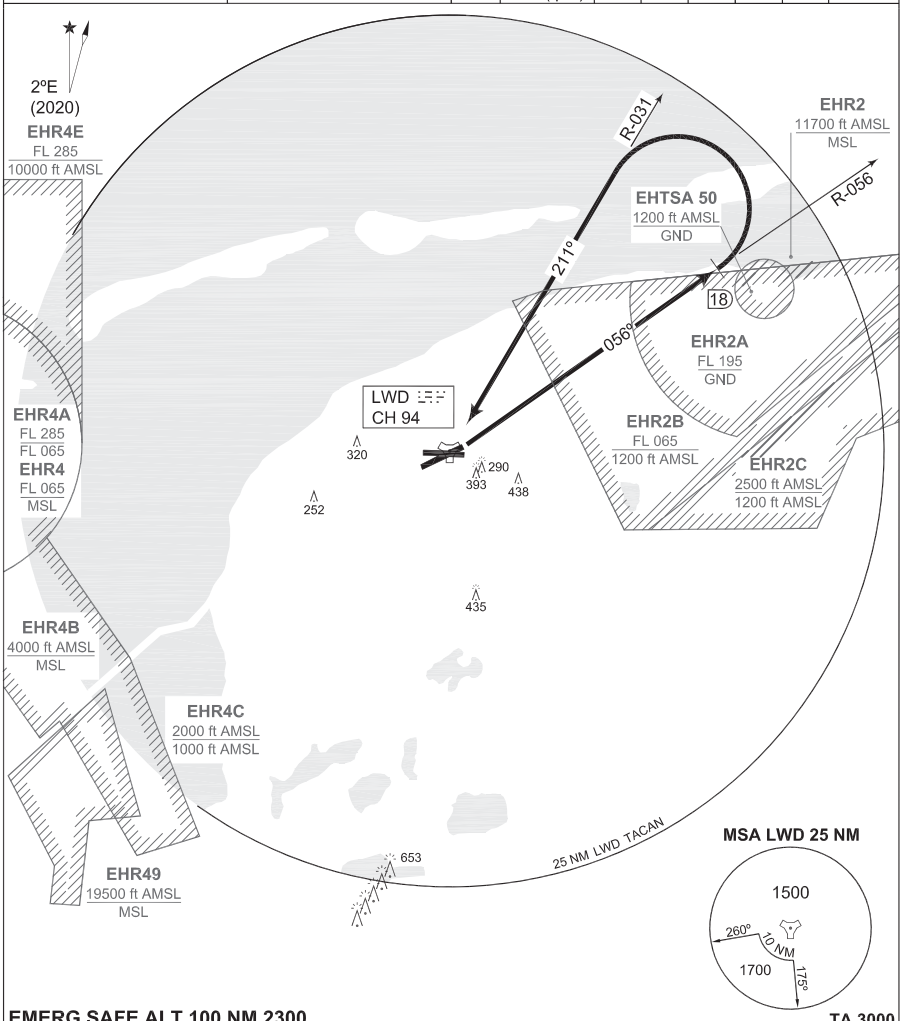
CHANGES: MSA

RNLAF 23 MAR 2023

AD ELEV 4

| GND CTL | LEEUWARDEN TWR | RAPCON NORTH | DUTCH MIL |
|---|---|---|---|
| 362.525 | 344.850 120.705 | 284.475 132.030 | 259.250 128.355 |

| RWY | Knots | 120 | 180 | 240 | 300 | 360 | to |
|---|---|---|---|---|---|---|---|
| **05** | V/V (fpm) | 540 | 810 | 1080 | 1350 | 1620 | **1000 ft** |



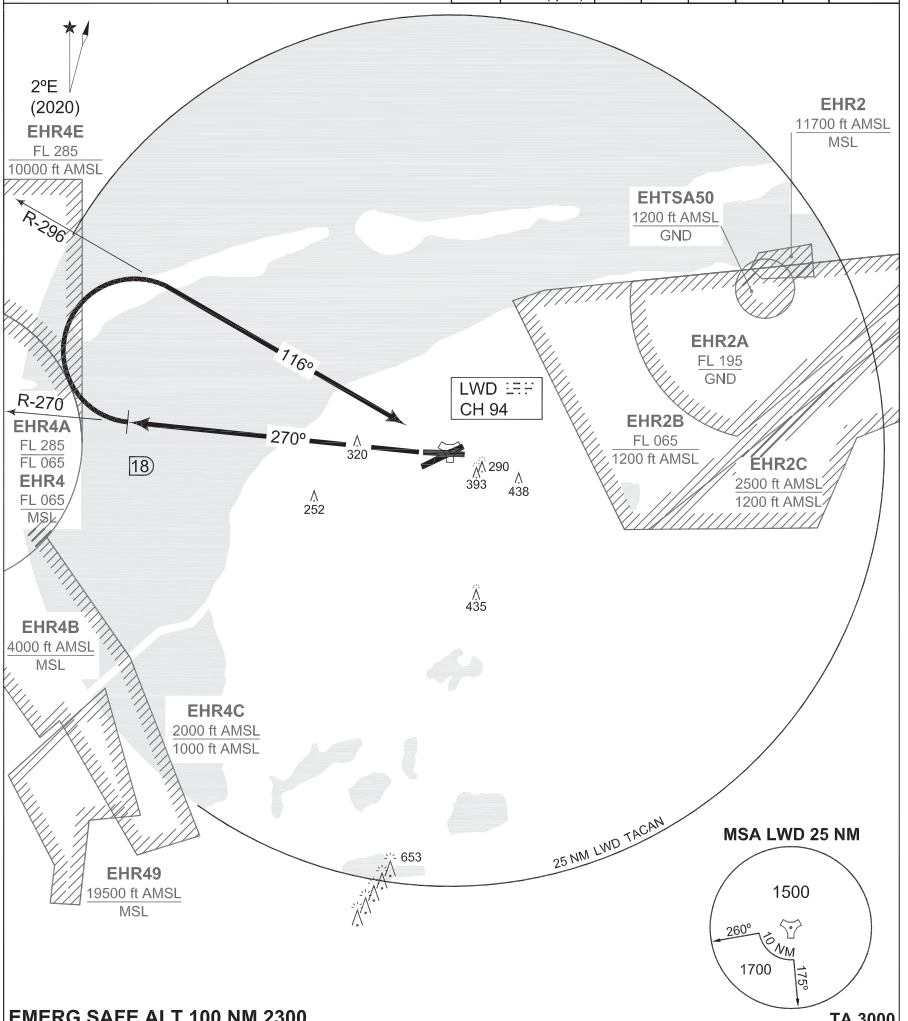

| | |
|---|---|
| **LEEUWARDEN 3 (RWY 05)** | - Climb on R-056 outbound Leeuwarden TACAN.<br>- At 18 DME turn left to intercept R-031 inbound and proceed to Leeuwarden TACAN. |

CHANGES: MSA

RNLAF 23 MAR 2023

| GND CTL | LEEUWARDEN TWR | RAPCON NORTH | DUTCH MIL |
|---|---|---|---|
| 362.525 | 344.850 120.705 | 284.475 132.030 | 259.250 128.355 |

| RWY | Knots | 120 | 180 | 240 | 300 | 360 | to |
|---|---|---|---|---|---|---|---|
| **27** | V/V (fpm) | 550 | 825 | 1100 | 1375 | 1700 | **1000 ft** |




| | |
|---|---|
| **LEEUWARDEN 5 (RWY 27)** | - After take-off RWY 27 intercept R-270 outbound Leeuwarden TACAN.<br>- At 18 DME turn right to intercept R-296 inbound Leeuwarden TACAN. |

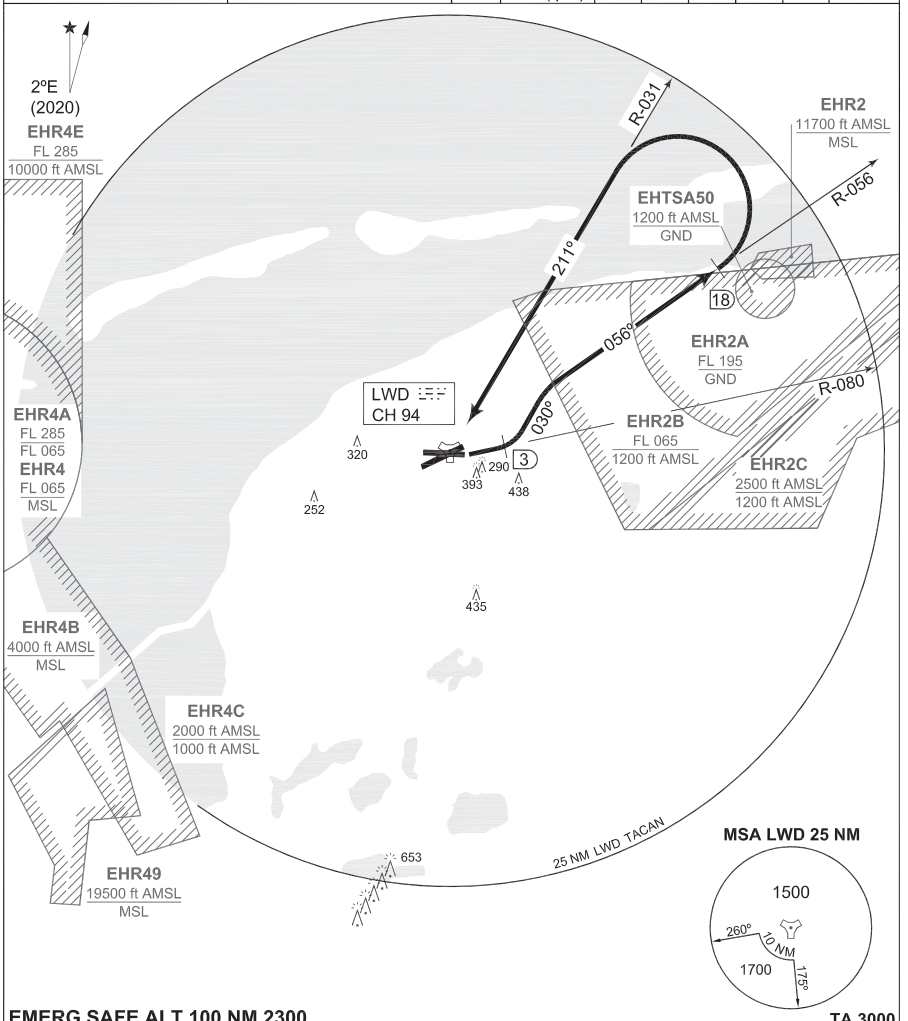
CHANGES: MSA

RNLAF 23 MAR 2023

AD ELEV 4

| GND CTL | LEEUWARDEN TWR | RAPCON NORTH | DUTCH MIL |
|---|---|---|---|
| 362.525 | 344.850 120.705 | 284.475 132.030 | 259.250 128.355 |

| RWY | Knots | 120 | 180 | 240 | 300 | 360 | to |
|---|---|---|---|---|---|---|---|
| 09 | V/V (fpm) | 750 | 1125 | 1500 | 1875 | 2250 | 1000 ft |




| | |
|---|---|
| **LEEUWARDEN 7 (RWY 09)** | - After take-off intercept R-080 outbound Leeuwarden TACAN.<br>- At 3 DME turn left heading 030° to intercept R-056 Leeuwarden TACAN.<br>- At 18 DME turn left to intercept R-031 inbound Leeuwarden TACAN. |

CHANGES: MSA

RNLAF 23 MAR 2023

**MIPS**
**INSTRUMENT APPROACH CHART**

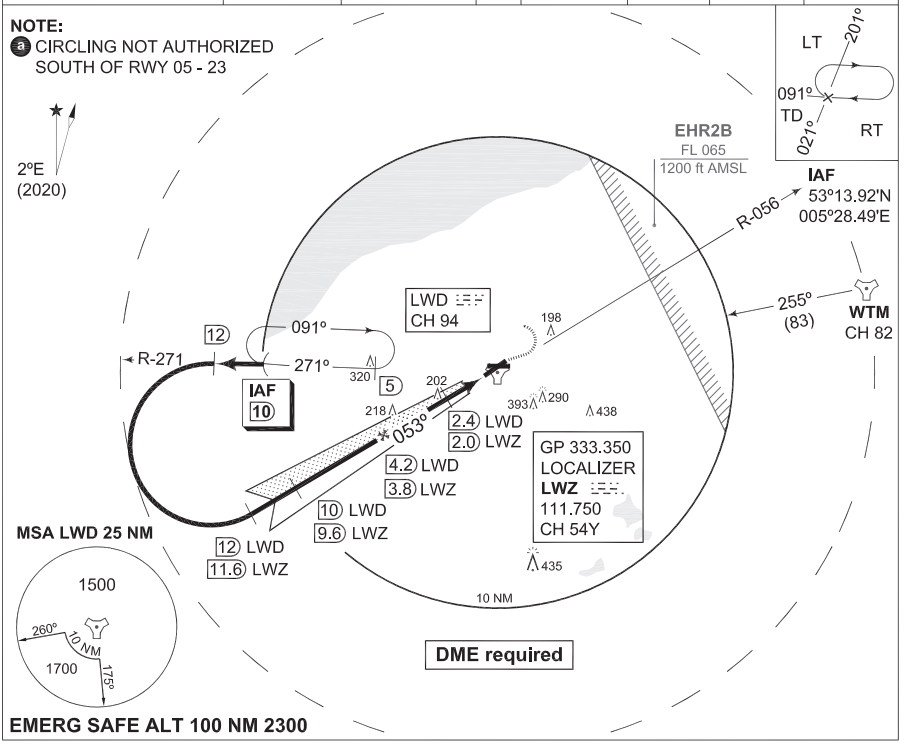
**ILS or LOC RWY 05**
**LEEUWARDEN (EHLW)**

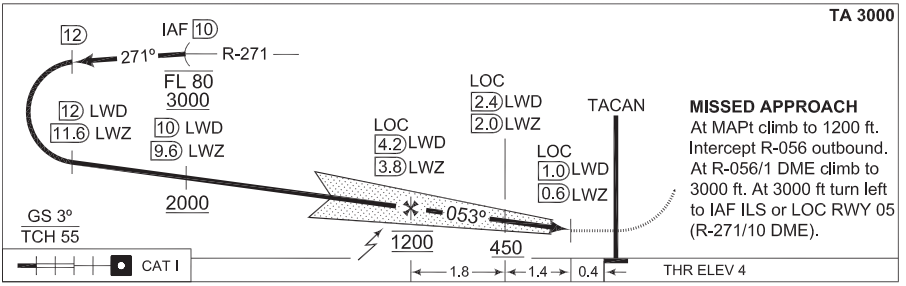
AD ELEV 4

| DUTCH MIL | RAPCON NORTH | LEEUWARDEN TWR | GND CTL |
|---|---|---|---|
| 259.250 128.355 | 284.475 132.030 | 344.850 120.705 | 362.525 |

| LOCALIZER / DME | APP COURSE | GS INTCEPT ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| LWZ 111.750 / CH 54Y | 053° | 1200 FT | 3° | SEE CAT | 4 | 660 m | 8036 FT |

**NOTE:**
(a) CIRCLING NOT AUTHORIZED SOUTH OF RWY 05 - 23




**MISSED APPROACH**
At MAPt climb to 1200 ft. Intercept R-056 outbound. At R-056/1 DME climb to 3000 ft. At 3000 ft turn left to IAF ILS or LOC RWY 05 (R-271/10 DME).

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| | MINIMA ACCORDING TO PANS-OPS; NOT ACCORDING TO APATC-1 | | | | |
| S-ILS 05 | **204** -800 200 (200-0.8/1.6) | **208** -800 204 (300-0.8/1.6) | **218** -800 214 (300-0.8/1.6) | **227** -800 223 (300-0.8/1.6) | **246** -800 242 (300-0.8/1.6) |
| S-LOC 05 | **350** -800 346 (400-0.8/1.6) | | **350** -1200 346 (400-1.2/1.6) | **350** -1200 346 (400-1.2/2.0) | |
| CIRCLING (a) | **500** -1900 496 (500-1.9) | **510** -2800 506 (600-2.8) | **610** -3700 606 (700-3.7) | **720** -4600 716 (800-4.6) | **820** -6500 816 (900-6.5) |

CHANGES: MSA
MIPS
RNLAF 23 MAR 2023

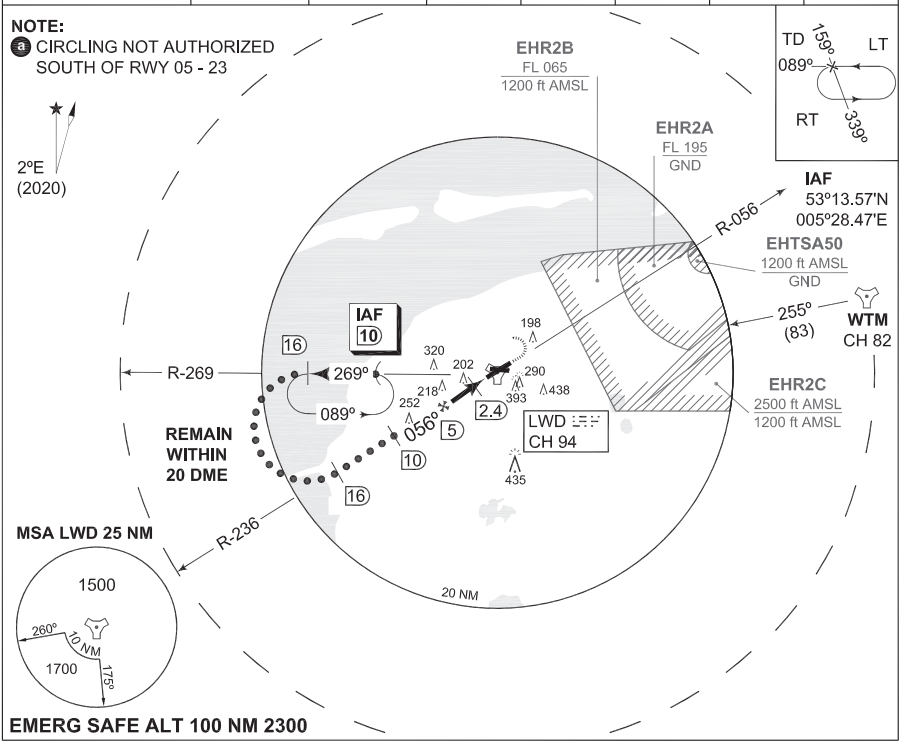
**MIPS**
**INSTRUMENT APPROACH CHART**

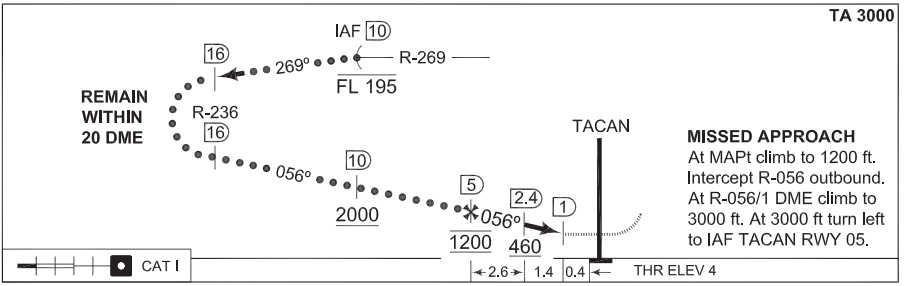
AD ELEV 4

**HI-TACAN RWY 05**
**LEEUWARDEN (EHLW)**

| DUTCH MIL | RAPCON NORTH | LEEUWARDEN TWR | GND CTL |
|---|---|---|---|
| 259.250 128.355 | 284.475 132.030 | 344.850 120.705 | 362.525 |

| TACAN | APP COURSE | FAF ALT | Descent GR | MDA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| LWD CH 94 | 056° | 1200 FT | | **380** | 4 | 660 m | 8036 FT |




| CATEGORY | C | D | E |
|---|---|---|---|
| | MINIMA ACCORDING TO PANS-OPS; NOT ACCORDING TO APATC-1 | | |
| S-TACAN 05 | **380** -1200 376 (400-1.2/1.6) | **380** -1200 376 (400-1.2/2.0) | |
| CIRCLING a | **610** -3700 606 (700-3.7) | **720** -4600 716 (800-4.6) | **820** -6500 816 (900-6.5) |

CHANGES: MSA MIPS

RNLAF 23 MAR 2023

**MIPS**
**INSTRUMENT APPROACH CHART**

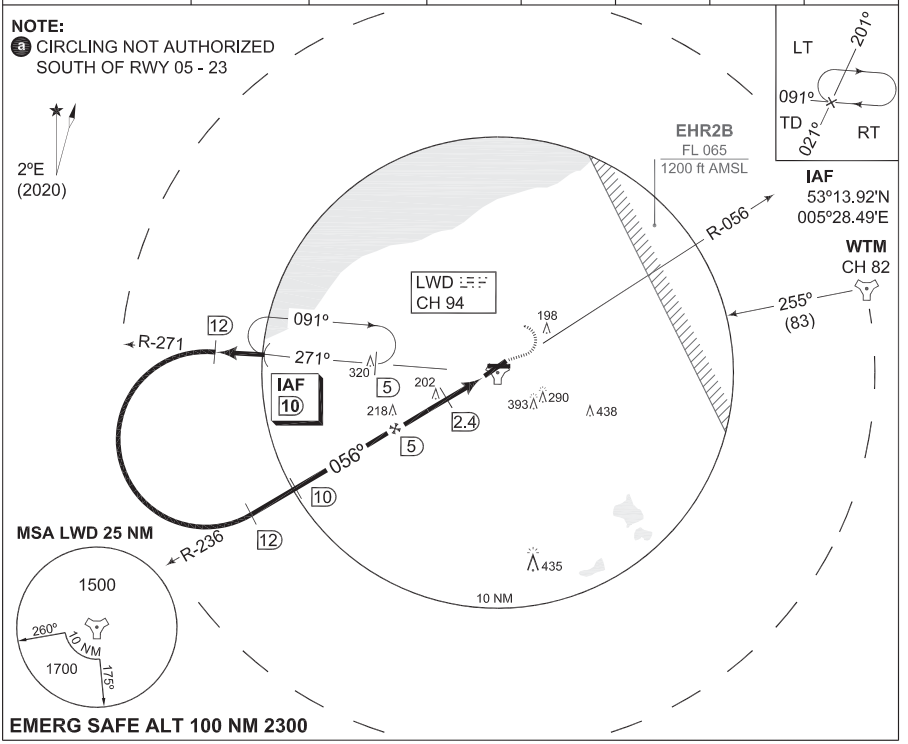
AD ELEV 4

**TACAN RWY 05**
**LEEUWARDEN (EHLW)**

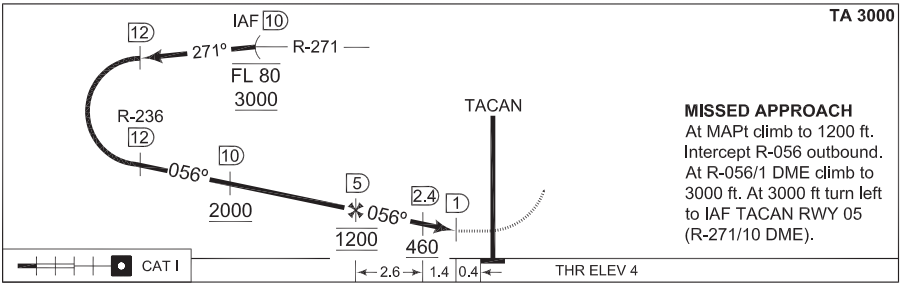
| DUTCH MIL | RAPCON NORTH | LEEUWARDEN TWR | GND CTL |
|---|---|---|---|
| 259.250 128.355 | 284.475 132.030 | 344.850 120.705 | 362.525 |

| TACAN | APP COURSE | FAF ALT | Descent GR | MDA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| LWD CH 94 | 056° | 1200 FT | | **380** | 4 | 660 m | 8036 FT |

**NOTE:**
(a) CIRCLING NOT AUTHORIZED SOUTH OF RWY 05 - 23




**EMERG SAFE ALT 100 NM 2300**




**MISSED APPROACH**
At MAPt climb to 1200 ft. Intercept R-056 outbound. At R-056/1 DME climb to 3000 ft. At 3000 ft turn left to IAF TACAN RWY 05 (R-271/10 DME).

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| | MINIMA ACCORDING TO PANS-OPS; NOT ACCORDING TO APATC-1 | | | | |
| S-TACAN 05 | **380** -800 376 (400-0.8/1.6) | | **380** -1200 376 (400-1.2/1.6) | **380** -1200 376 (400-1.2/2.0) | |
| CIRCLING (a) | **500** -1900 496 (500-1.9) | **510** -2800 506 (600-2.8) | **610** -3700 606 (700-3.7) | **720** -4600 716 (800-4.6) | **820** -6500 816 (900-6.5) |

CHANGES: MSA

MIPS

RNLAF 23 MAR 2023

**MIPS**
**INSTRUMENT APPROACH CHART**

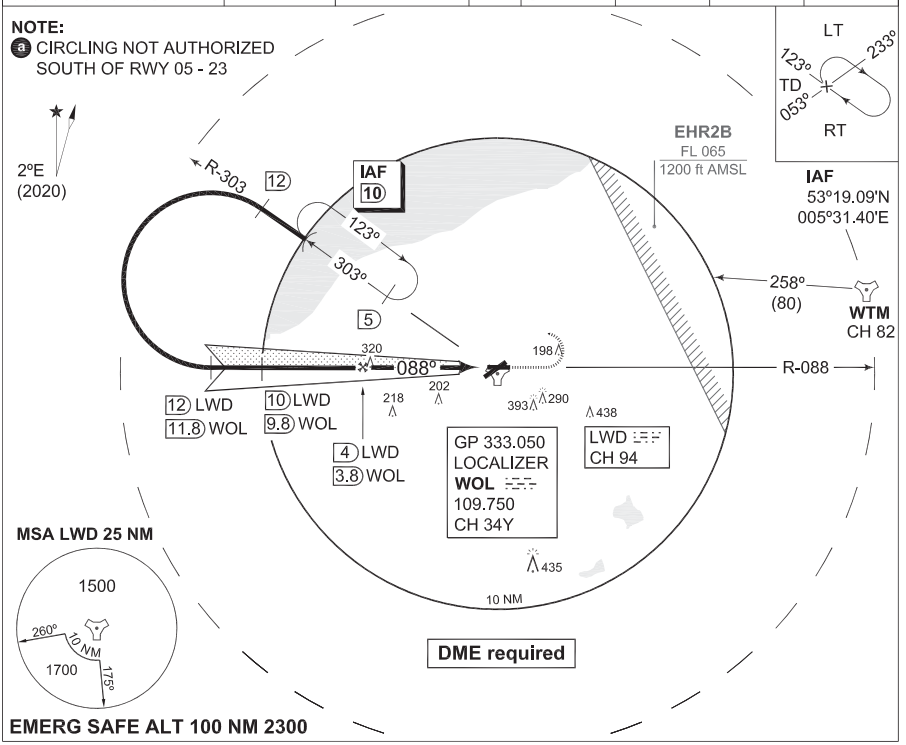
**ILS or LOC RWY 09**
**LEEUWARDEN (EHLW)**

AD ELEV 4

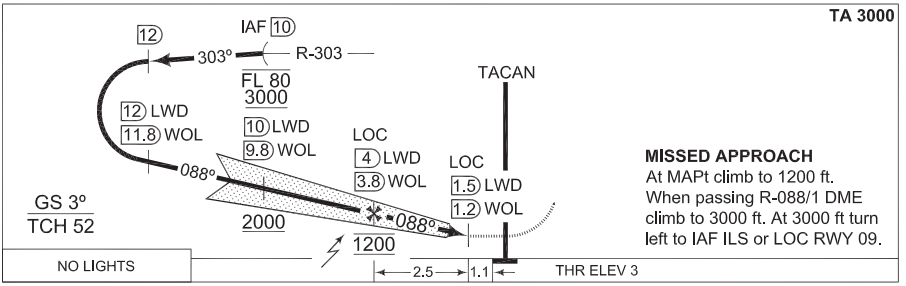
| DUTCH MIL | RAPCON NORTH | LEEUWARDEN TWR | GND CTL |
|---|---|---|---|
| 259.250 128.355 | 284.475 132.030 | 344.850 120.705 | 362.525 |

| LOCALIZER / DME | APP COURSE | GS INTCEPT ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| WOL 109.750 / CH 34Y | 088° | 1200 FT | 3° | **SEE CAT** | 3 | - | 6368 FT |

**NOTE:**
ⓐ CIRCLING NOT AUTHORIZED SOUTH OF RWY 05 - 23




**TA 3000**




**MISSED APPROACH**
At MAPt climb to 1200 ft.
When passing R-088/1 DME climb to 3000 ft. At 3000 ft turn left to IAF ILS or LOC RWY 09.

| CATEGORY | A | B | C | D | E | H |
|---|---|---|---|---|---|---|
| | MINIMA ACCORDING TO PANS-OPS; NOT ACCORDING TO APATC-1 | | | | | |
| S-ILS 09 | **221** -1600 218 (300-1.6/1.6) | **231** -1600 228 (300-1.6/1.6) | **240** -1600 237 (300-1.6/1.6) | **250** -1600 247 (300-1.6/1.6) | **268** -1600 265 (300-1.6/1.6) | **205** -800 202 (300-0.8/0.8) |
| S-LOC 09 | **430** -1600 427 (500-1.6/1.6) | | **430** -2000 427 (500-2.0/2.0) | **430** -2400 427 (500-2.4/2.4) | | **430** -800 427 (500-0.8/0.8) |
| CIRCLING ⓐ | **500** -1900 496 (500-1.9) | **510** -2800 506 (600-2.8) | **610** -3700 606 (700-3.7) | **720** -4600 716 (800-4.6) | **820** -6500 816 (900-6.5) | N.A. |

CHANGES: MSA

MIPS

RNLAF 23 MAR 2023

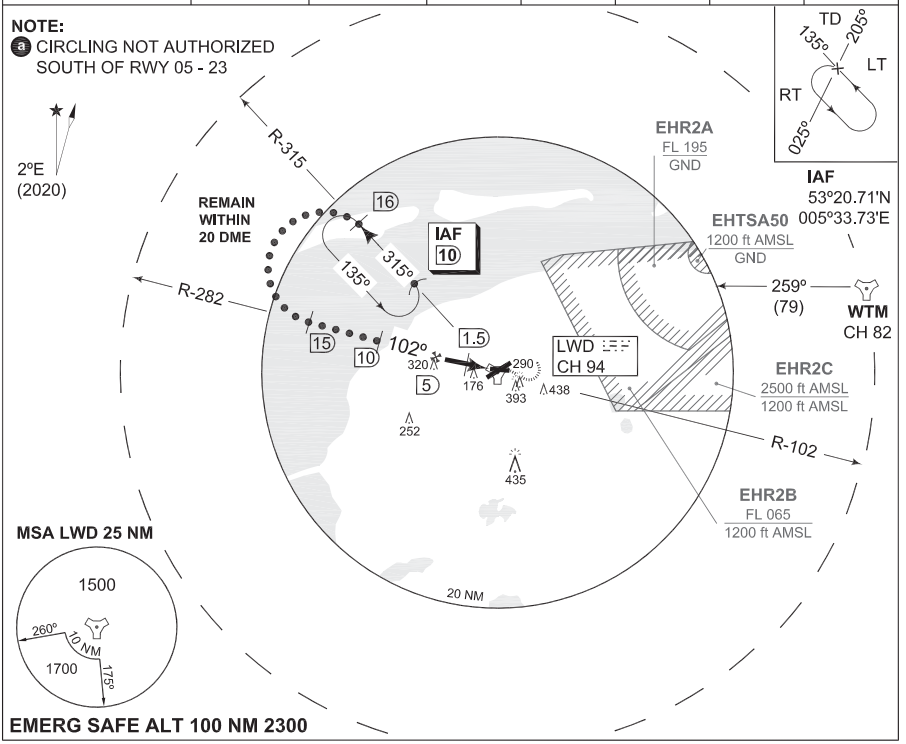
**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 4

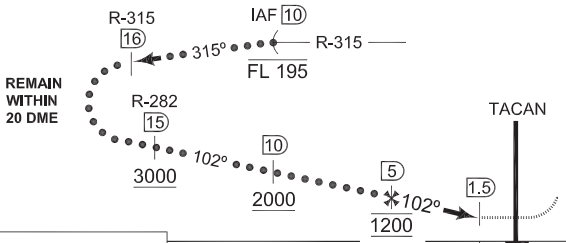
**HI-TACAN RWY 09**
**LEEUWARDEN (EHLW)**

| DUTCH MIL | RAPCON NORTH | LEEUWARDEN TWR | GND CTL |
|---|---|---|---|
| 259.250 128.355 | 284.475 132.030 | 344.850 120.705 | 362.525 |

| TACAN | APP COURSE | FAF ALT | Descent GR | MDA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| LWD CH 94 | 102° | 1200 FT | | **440** | 3 | - | 6368 FT |




**TA 3000**




**MISSED APPROACH**
At MAPt R-282/1.5 DME) climb to 1200 ft. When passing R-102/1 DME climb to 3000 ft, turn left towards IAF TACAN RWY 09.

NO LIGHTS

| CATEGORY | C | D | E |
|---|---|---|---|
| | MINIMA ACCORDING TO PANS-OPS; NOT ACCORDING TO APATC-1 | | |
| S-TACAN 09 | **440** -2000 437 (500-2.0/2.0) | **440** -2400 437 (500-2.4/2.4) | |
| CIRCLING a | **610** -3700 606 (700-3.7) | **720** -4600 716 (800-4.6) | **820** -6500 816 (900-6.5) |

CHANGES: MSA

MIPS

RNLAF 23 MAR 2023

**HI-TACAN RWY 09**

53°13.52'N
005°45.15'E
21-10

**LEEUWARDEN (EHLW)**

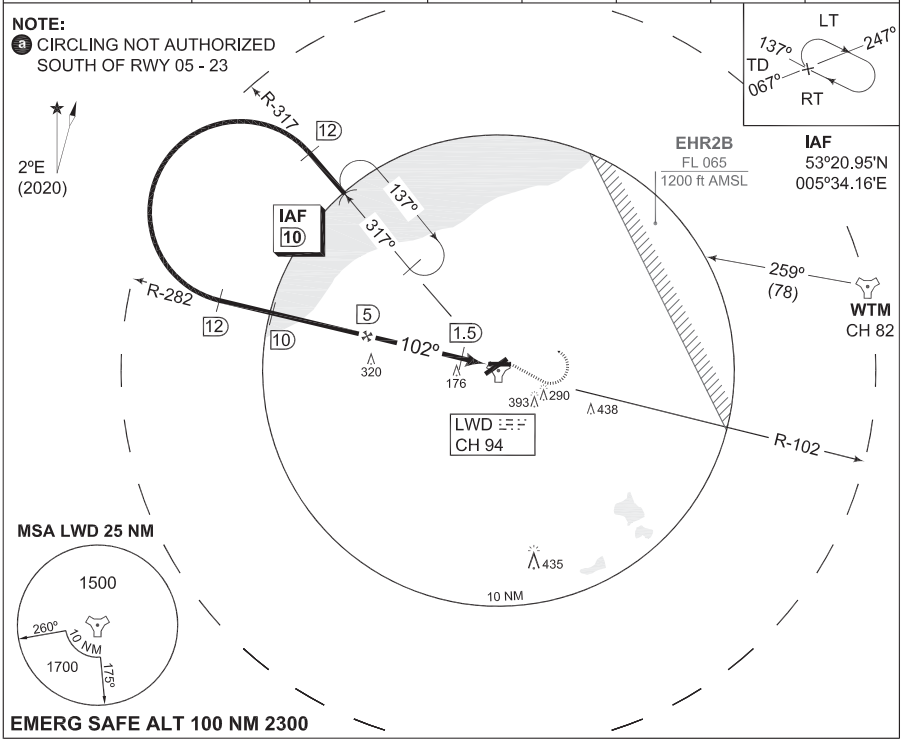
**MIPS**
**INSTRUMENT APPROACH CHART**

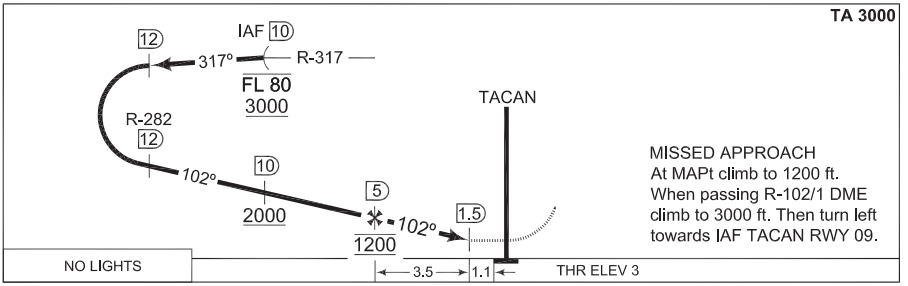
**TACAN RWY 09**
**LEEUWARDEN (EHLW)**

AD ELEV 4

| DUTCH MIL | RAPCON NORTH | LEEUWARDEN TWR | GND CTL |
|---|---|---|---|
| 259.250 128.355 | 284.475 132.030 | 344.850 120.705 | 362.525 |

| TACAN | APP COURSE | FAF ALT | Descent GR | MDA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| LWD CH 94 | 102° | 1200 FT | | **440** | 3 | - | 6368 FT |




| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| | MINIMA ACCORDING TO PANS-OPS; NOT ACCORDING TO APATC-1 | | | | |
| S-TACAN 09 | **440** -1600 437 (500-1.6/1.6) | | **440** -2000 437 (500-2.0/2.0) | **440** -2400 437 (500-2.4/2.4) | |
| CIRCLING a | **500** -1900 496 (500-1.9) | **510** -2800 506 (600-2.8) | **610** -3700 606 (700-3.7) | **720** -4600 716 (800-4.6) | **820** -6500 816 (900-6.5) |

CHANGES: MSA
MIPS

RNLAF 23 MAR 2023

**TACAN RWY 09**

53°13.52'N
005°45.15'E

21-11

**LEEUWARDEN (EHLW)**

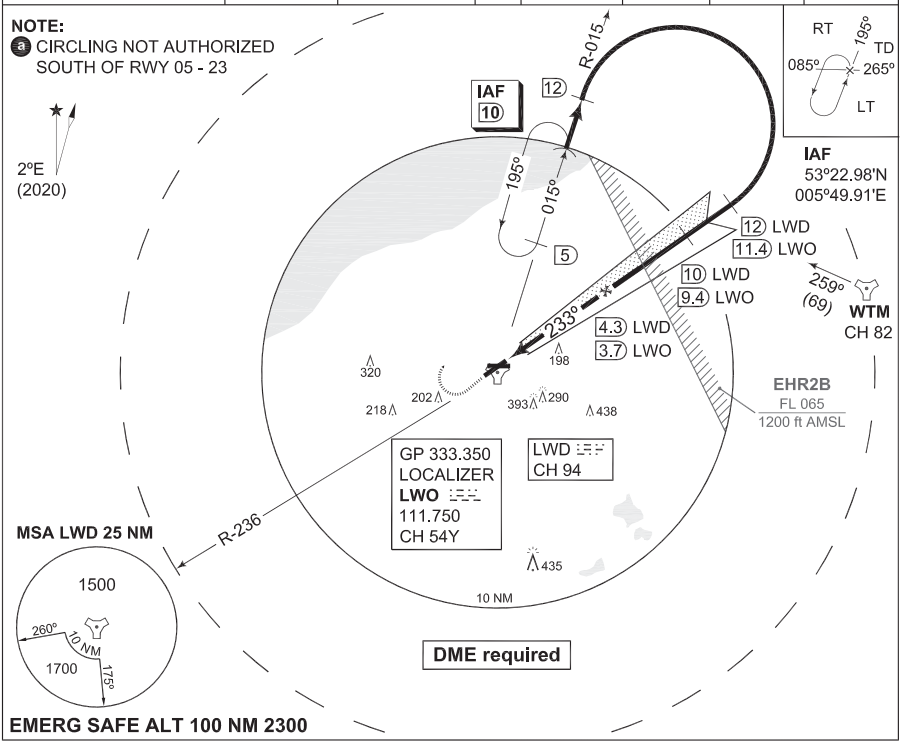
**MIPS**
**INSTRUMENT APPROACH CHART**

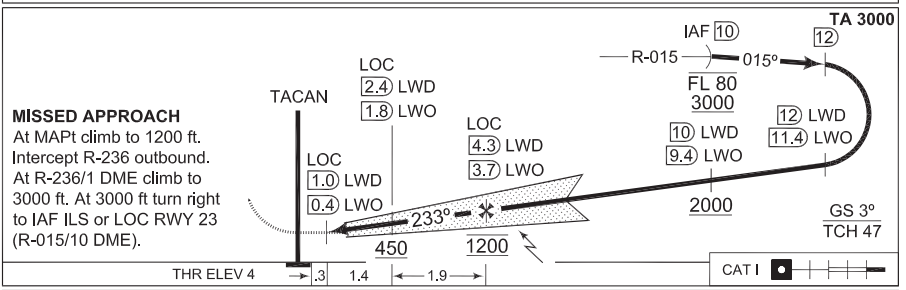
AD ELEV 4

**ILS or LOC RWY 23**
**LEEUWARDEN (EHLW)**

| DUTCH MIL | RAPCON NORTH | LEEUWARDEN TWR | GND CTL |
|---|---|---|---|
| 259.250 128.355 | 284.475 132.030 | 344.850 120.705 | 362.525 |

| LOCALIZER / DME | APP COURSE | GS INTCEPT ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| LWO 111.750 / CH 54Y | 233° | 1200 FT | 3° | **SEE CAT** | 4 | 720 m | 7863 FT |




**MISSED APPROACH**
At MAPt climb to 1200 ft. Intercept R-236 outbound. At R-236/1 DME climb to 3000 ft. At 3000 ft turn right to IAF ILS or LOC RWY 23 (R-015/10 DME).

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| | MINIMA ACCORDING TO PANS-OPS; NOT ACCORDING TO APATC-1 | | | | |
| S-ILS 23 | **217** -800 213 (300-0.8/1.6) | **227** -800 223 (300-0.8/1.6) | **237** -800 233 (300-0.8/1.6) | **247** -800 243 (300-0.8/1.6) | **265** -800 262 (300-0.8/1.6) |
| S-LOC 23 | **340** -800 336 (400-0.8/1.6) | | **340** -1200 336 (400-1.2/1.6) | **340** -1200 336 (400-1.2/2.0) | |
| CIRCLING (a) | **500** -1900 496 (500-1.9) | **510** -2800 506 (600-2.8) | **610** -3700 606 (700-3.7) | **720** -4600 716 (800-4.6) | **820** -6500 816 (900-6.5) |

CHANGES: MSA
MIPS

RNLAF 23 MAR 2023

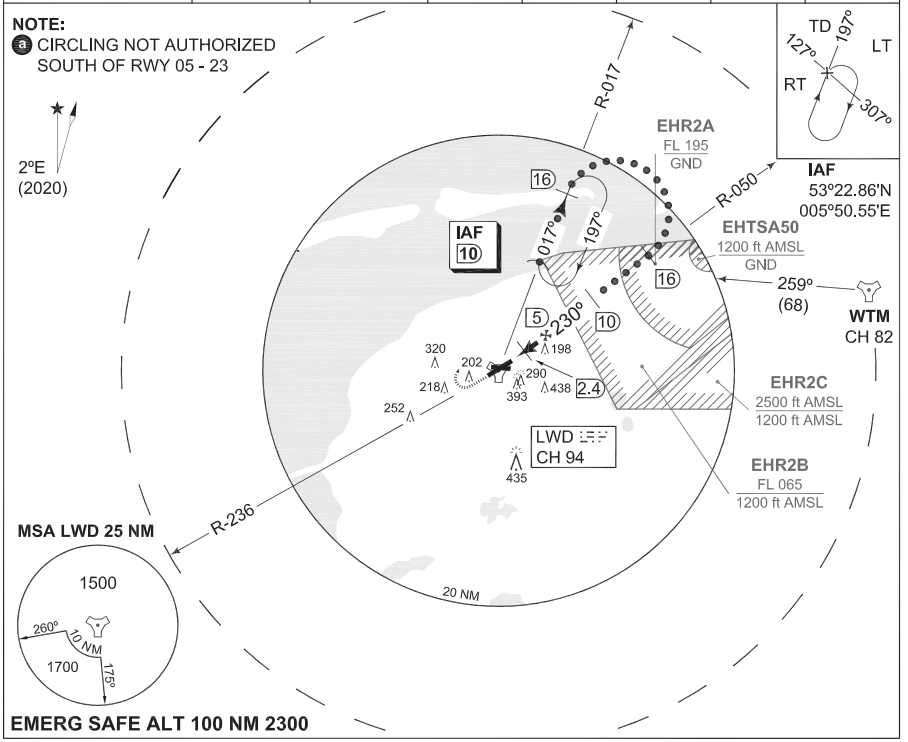
**MIPS**
**INSTRUMENT APPROACH CHART**

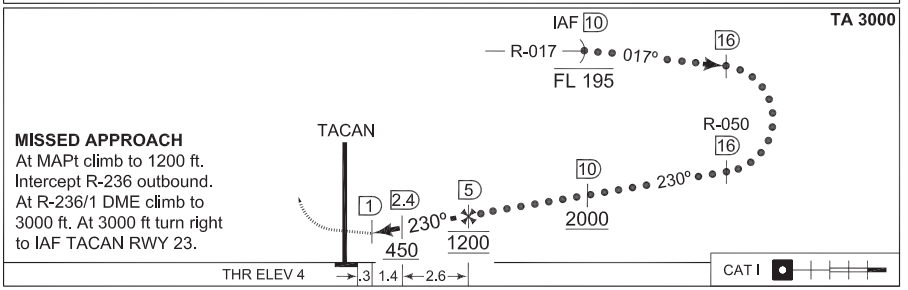
AD ELEV 4

**HI-TACAN RWY 23**
**LEEUWARDEN (EHLW)**

| DUTCH MIL | RAPCON NORTH | LEEUWARDEN TWR | GND CTL |
|---|---|---|---|
| 259.250 128.355 | 284.475 132.030 | 344.850 120.705 | 362.525 |

| TACAN | APP COURSE | FAF ALT | Descent GR | MDA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| LWD CH 94 | 230° | 1200 FT | | **380** | 4 | 720 m | 7863 FT |




**MISSED APPROACH**
At MAPt climb to 1200 ft.
Intercept R-236 outbound.
At R-236/1 DME climb to 3000 ft. At 3000 ft turn right to IAF TACAN RWY 23.

| CATEGORY | C | D | E |
|---|---|---|---|
| | MINIMA ACCORDING TO PANS-OPS; NOT ACCORDING TO APATC-1 | | |
| S-TACAN 23 | **380** -1200 376 (400-1.2/1.6) | **380** -1200 376 (400-1.2/2.0) | |
| CIRCLING a | **610** -3700 606 (700-3.7) | **720** -4600 716 (800-4.6) | **820** -6500 816 (900-6.5) |

CHANGES: MSA
MIPS

RNLAF 23 MAR 2023

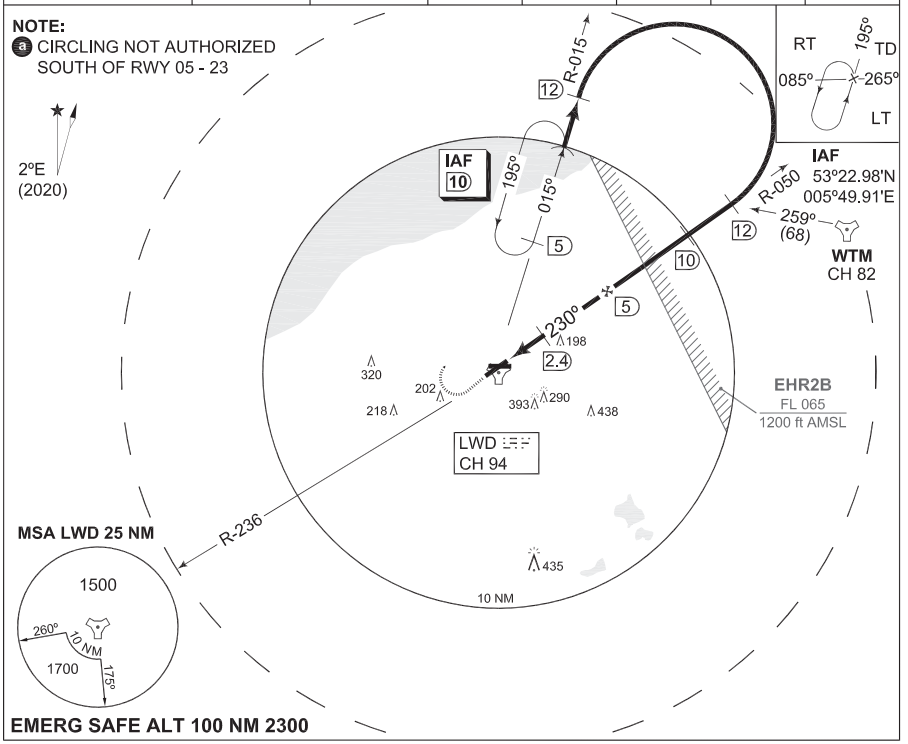
**MIPS**
**INSTRUMENT APPROACH CHART**

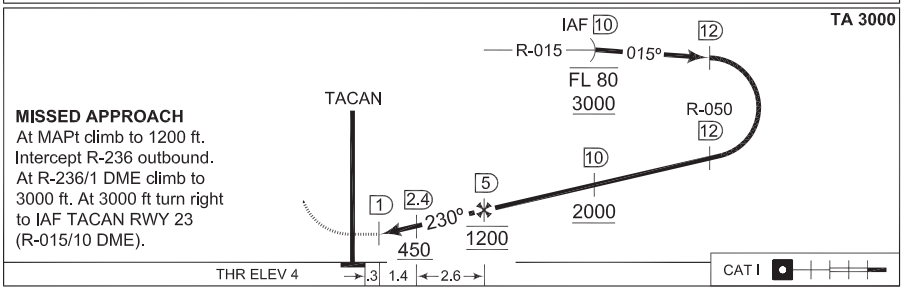
AD ELEV 4

**TACAN RWY 23**
**LEEUWARDEN (EHLW)**

| DUTCH MIL | RAPCON NORTH | LEEUWARDEN TWR | GND CTL |
|---|---|---|---|
| 259.250 128.355 | 284.475 132.030 | 344.850 120.705 | 362.525 |

| TACAN | APP COURSE | FAF ALT | Descent GR | MDA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| LWD CH 94 | 230° | 1200 FT | | **380** | 4 | 720 m | 7863 FT |




**MISSED APPROACH**
At MAPt climb to 1200 ft.
Intercept R-236 outbound.
At R-236/1 DME climb to 3000 ft. At 3000 ft turn right to IAF TACAN RWY 23 (R-015/10 DME).

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| | MINIMA ACCORDING TO PANS-OPS; NOT ACCORDING TO APATC-1 | | | | |
| S-TACAN 23 | **380** -800 376 (400-0.8/1.6) | | **380** -1200 376 (400-1.2/1.6) | **380** -1200 376 (400-1.2/2.0) | |
| CIRCLING a | **500** -1900 496 (500-1.9) | **510** -2800 506 (600-2.8) | **610** -3700 606 (700-3.7) | **720** -4600 716 (800-4.6) | **820** -6500 816 (900-6.5) |

CHANGES: MSA

MIPS

RNLAF 23 MAR 2023

**TACAN RWY 23**

53°13.52'N
005°45.15'E

**LEEUWARDEN (EHLW)**

**MIPS**
**INSTRUMENT APPROACH CHART**

**ILS or LOC RWY 27**
**LEEUWARDEN (EHLW)**

AD ELEV 4

| DUTCH MIL | RAPCON NORTH | LEEUWARDEN TWR | GND CTL |
|---|---|---|---|
| 259.250 128.355 | 284.475 132.030 | 344.850 120.705 | 362.525 |

| LOCALIZER / DME | APP COURSE | GS INTCEPT ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| LOB 109.750 / CH 34Y | 268° | 1200 FT | 3° | **SEE CAT** | 3 | - | 6561 FT |

**NOTE:**
(a) CIRCLING NOT AUTHORIZED SOUTH OF RWY 05 - 23

2°E
(2020)

**IAF**
53°19.17'N
005°58.72'E

RT
123°
233°
TD
303°
LT

EHR2B
FL 065
1200 ft AMSL

R-053
12
233°
053°
IAF
10
5
R-268
320
198
268°
218
202
393
290
438
4.2 LWD
3.7 LOB
10 LWD
9.5 LOB
12 LWD
11.5 LOB
GP 333.050
LOCALIZER
**LOB**
109.750
CH 34Y
LWD
CH 94
435
10 NM

**MSA LWD 25 NM**
1500
260°
10 NM
1700
175°

**DME required**

**EMERG SAFE ALT 100 NM 2300**

**TA 3000**

IAF 10
R-053
053°
12
FL 80
3000
TACAN
LOC
10 LWD
9.5 LOB
12 LWD
11.5 LOB
LOC
4.2 LWD
3.7 LOB
LOC
1.6 LWD
1.1 LOB
268°
268°
2000
1200
GS 3°
TCH 49
THR ELEV 3
1.0
2.6
NO LIGHTS

**MISSED APPROACH**
At MAPt climb to 1200 ft.
When passing R-268/1 DME
climb to 3000 ft. At 3000 ft turn
right to IAF ILS or LOC RWY 27.

| CATEGORY | A | B | C | D | E | H |
|---|---|---|---|---|---|---|
| | MINIMA ACCORDING TO PANS-OPS; NOT ACCORDING TO APATC-1 | | | | | |
| S-ILS 27 | **203** -1600 200 (200-1.6/1.6) | **211** -1600 208 (300-1.6/1.6) | **220** -1600 217 (300-1.6/1.6) | **230** -1600 227 (300-1.6/1.6) | **240** -1600 237 (300-1.6/1.6) | **203** -800 200 (200-0.8/0.8) |
| S-LOC 27 | **360** -1600 357 (400-1.6/1.6) | | | **360** -2000 357 (400-2.0/2.0) | | **360** -800 357 (400-0.8/0.8) |
| CIRCLING (a) | **500** -1900 496 (500-1.9) | **510** -2800 506 (600-2.8) | **610** -3700 606 (700-3.7) | **720** -4600 716 (800-4.6) | **820** -6500 816 (900-6.5) | N.A. |

CHANGES: MSA
MIPS
RNLAF 23 MAR 2023

**ILS or LOC RWY 27**

53°13.52'N
005°45.15'E
21-15

**LEEUWARDEN (EHLW)**

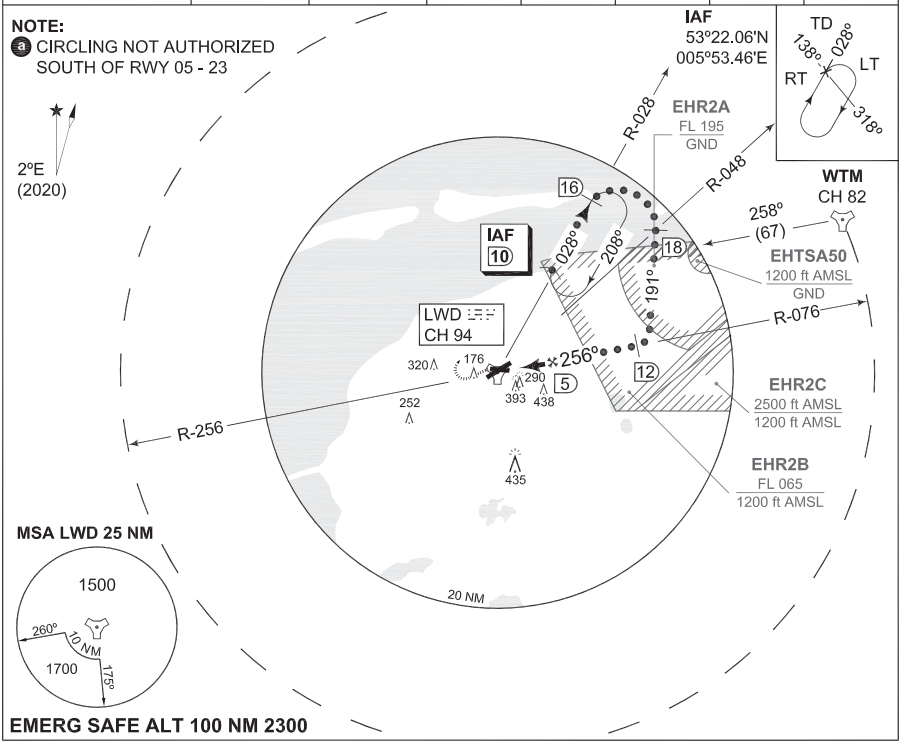
**MIPS**
**INSTRUMENT APPROACH CHART**

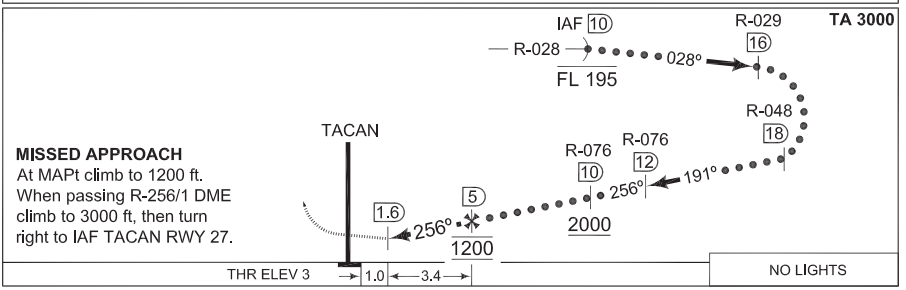
AD ELEV 4

**HI-TACAN RWY 27**
**LEEUWARDEN (EHLW)**

| DUTCH MIL | RAPCON NORTH | LEEUWARDEN TWR | GND CTL |
|---|---|---|---|
| 259.250 128.355 | 284.475 132.030 | 344.850 120.705 | 362.525 |

| TACAN | APP COURSE | FAF ALT | Descent GR | MDA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| LWD CH 94 | 256° | 1200 FT | | **390** | 3 | - | 6561 FT |




**MISSED APPROACH**
At MAPt climb to 1200 ft.
When passing R-256/1 DME
climb to 3000 ft, then turn
right to IAF TACAN RWY 27.

| CATEGORY | C | D | E |
|---|---|---|---|
| | MINIMA ACCORDING TO PANS-OPS; NOT ACCORDING TO APATC-1 | | |
| S-TACAN 27 | **390** -1600 387 (400-1.6/1.6) | **390** -2000 387 (400-2.0/2.0) | |
| CIRCLING a | **610** -3700 606 (700-3.7) | **720** -4600 716 (800-4.6) | **820** -6500 816 (900-6.5) |

CHANGES: MSA

MIPS

RNLAF 23 MAR 2023

**HI-TACAN RWY 27**

53°13.52'N
005°45.15'E
21-16

**LEEUWARDEN (EHLW)**

**MIPS**
**INSTRUMENT APPROACH CHART**

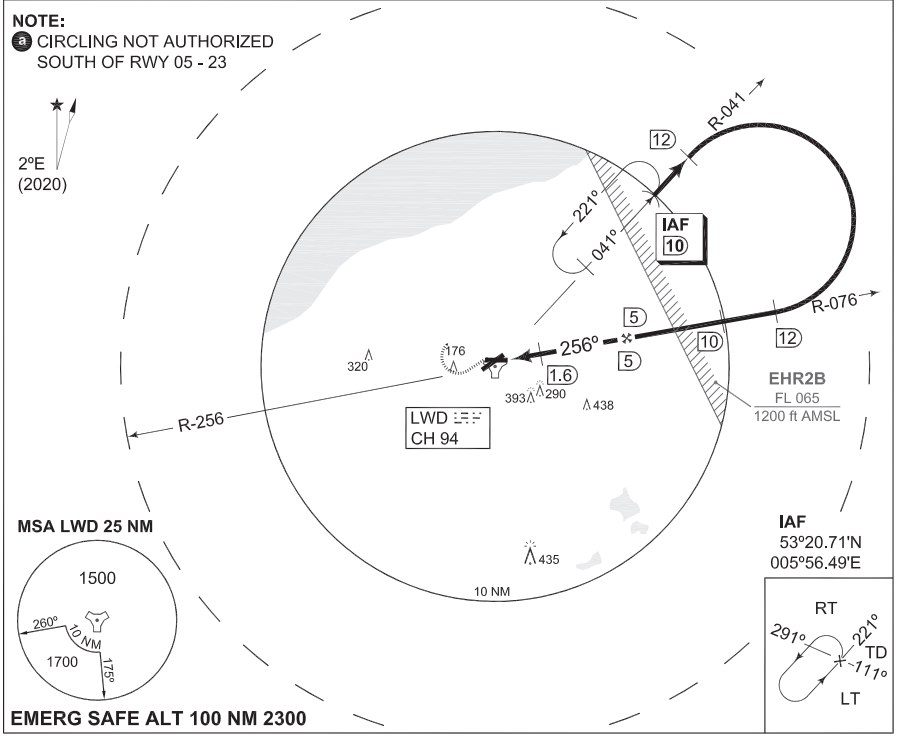
AD ELEV 4

**TACAN RWY 27**
**LEEUWARDEN (EHLW)**

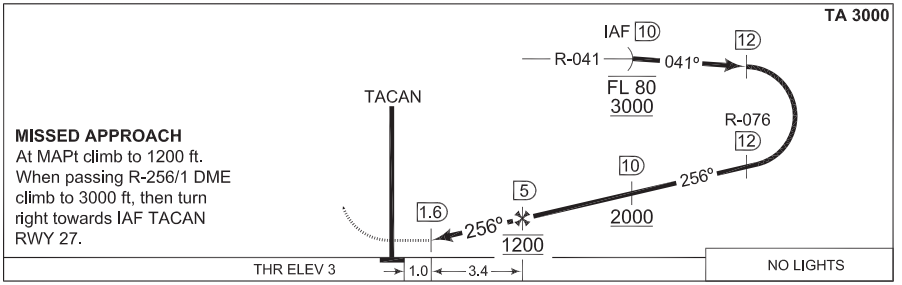
| DUTCH MIL | RAPCON NORTH | LEEUWARDEN TWR | GND CTL |
|---|---|---|---|
| 259.250 128.355 | 284.475 132.030 | 344.850 120.705 | 362.525 |

| TACAN | APP COURSE | FAF ALT | Descent GR | MDA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| LWD CH 94 | 256° | 1200 FT | | **390** | 3 | - | 6561 FT |

**NOTE:**
(a) CIRCLING NOT AUTHORIZED SOUTH OF RWY 05 - 23




**TA 3000**




**MISSED APPROACH**
At MAPt climb to 1200 ft.
When passing R-256/1 DME climb to 3000 ft, then turn right towards IAF TACAN RWY 27.

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| | MINIMA ACCORDING TO PANS-OPS; NOT ACCORDING TO APATC-1 | | | | |
| S-TACAN 27 | **390** -1600 387 (400-1.6/1.6) | | | **390** -2000 387 (400-2.0/2.0) | |
| CIRCLING (a) | **500** -1900 496 (500-1.9) | **510** -2800 506 (600-2.8) | **610** -3700 606 (700-3.7) | **720** -4600 716 (800-4.6) | **820** -6500 816 (900-6.5) |

CHANGES: MSA
MIPS
RNLAF 23 MAR 2023

**TACAN RWY 27**

53°13.52'N
005°45.15'E

**LEEUWARDEN (EHLW)**

# GARDEMOEN (ENGM)

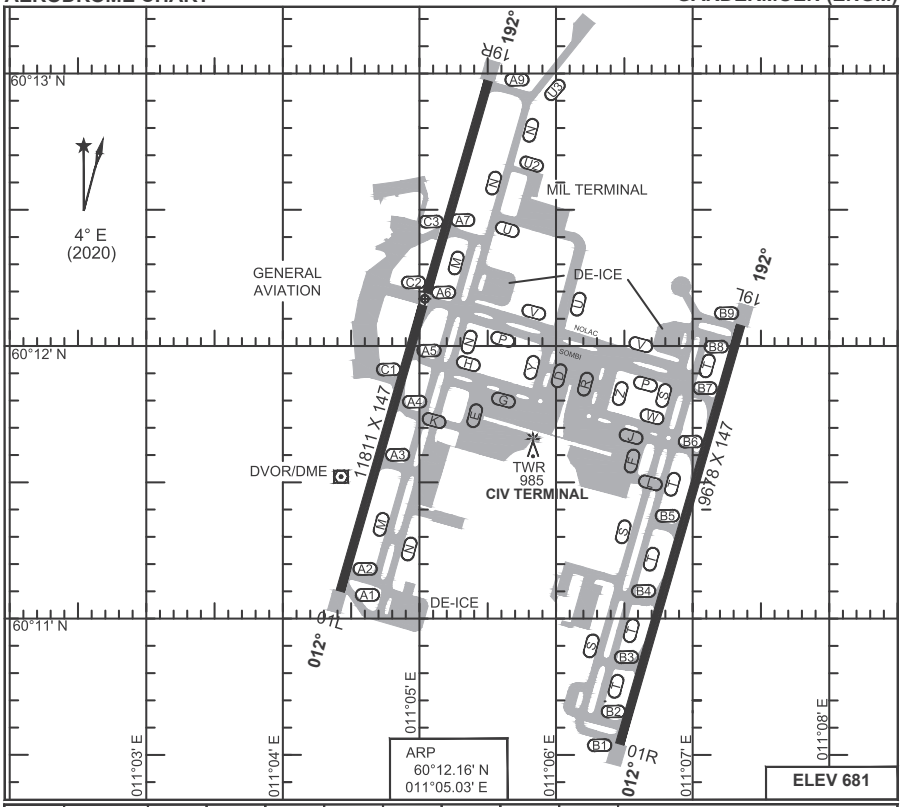
AERODROME CHART

HPMA ILS or LOC RWY 01L

HPMA ILS or LOC RWY 19L

HPMA ILS or LOC RWY 01R

HPMA ILS or LOC RWY 19R




| RWY | PCN | TORA | ASDA | TODA | LDA | | PAPI | ALS | TDZE | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|
| 01L | 75 F/A/W/T | 11811 | 11811 | 11811 | 11811 | | 3.0° | BP | 656 | 60°11.10' N - 011°04.42' E |
| 19R | 75 F/A/W/T | 11811 | 11811 | 11811 | 11811 | | 3.0° | BN | 675 | 60°12.60' N - 011°05.50' E |
| 01R | 75 F/A/W/T | 9678 | 9678 | 9678 | 9678 | | 3.0° | BN | 670 | 60°10.55' N - 011°06.47' E |
| 19L | 75 F/A/W/T | 9678 | 9678 | 10990 | 9678 | | 3.0° | BP | 681 | 60°12.07' N - 011°07.35' E |

| | |
|---|---|
| ATIS - DEP | 127.155 |
| ATIS - ARR | 126.130 |
| GARDERMOEN DELIVERY | DLV WEST 121.680 |
| | DLV EAST 121.930 |
| GARDERMOEN GROUND | GND WEST 121.605 |
| | GND EAST 121.905 |
| DE-ICE COORDINATOR | 121.855 |
| GARDERMOEN TOWER | SECTOR WEST INCL ILS 01L/19R 118.305 257.800 |
| | SECTOR EAST INCL ILS 01R/19L 120.105 257.800 |
| GARDERMOEN OPS (MIL) | 123.275 362.800 |

CHANGES: FREQUENCIES

RNoAF '20 MAR 2025

**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 681

**HPMA ILS or LOC RWY 01L**
**GARDERMOEN (ENGM)**

| ATIS | OSLO APP | DIRECTOR | FINAL | GARDERMOEN TWR | GROUND |
|---|---|---|---|---|---|
| 126.130 | W 120.455 E 118.480 | 136.405 | 128.905 | W 118.305 E 120.105 | W 121.605 E 121.905 |

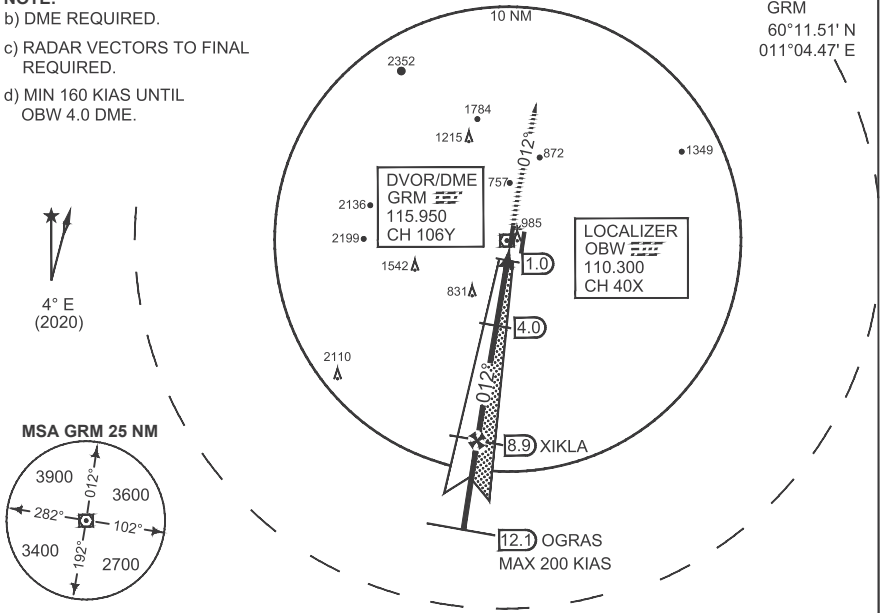
| LOCALIZER/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| OBW 110.300 / CH40X | 012° | 3500 | 3.0° | **856** | 656 | 670 m | 11811 |

**CAUTION:**
CIRCLING NOT AUTHORIZED EAST OF RWY 01L / 19R.

**NOTE:**
b) DME REQUIRED.
c) RADAR VECTORS TO FINAL REQUIRED.
d) MIN 160 KIAS UNTIL OBW 4.0 DME.

OGRAS
59°59.62' N
010°57.85' E

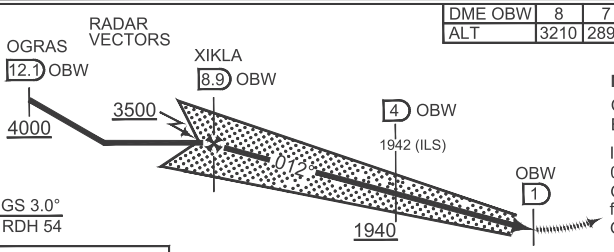
GRM
60°11.51' N
011°04.47' E




**SAFE ALT 100 NM 9700**

| DME OBW | 8 | 7 | 6 | 5 | 4 | 3 | 2 |
|---|---|---|---|---|---|---|---|
| ALT | 3210 | 2890 | 2570 | 2250 | 1940 | 1620 | 1300 |

**TA 7000**




**MISSED APPROACH**
Climb on track 012° to 5000 ft. Expect vectors by Oslo App.

In case of RCF: Climb on track 012° to 5000 ft. After passing OBW 20 DME turn left DCT GRM for new approach. Remain within GRM 25 DME.

| CATEGORY | HPMA |
|---|---|
| S-ILS 01L | **856** -800 200 (200-0.8/1.2) |
| S-LOC 01L | **960** -1200 304 (400-1.2/1.6) |
| CIRCLING | **2040** - 3.2 1359 (1400-3.2) |

CHANGES: FREQUENCIES

MIPS

RNoAF 20 MAR 2025

**HPMA ILS or LOC RWY 01L**

60°12.16' N
011°05.03' E

**GARDERMOEN (ENGM)**

AD ELEV 681

| ATIS | OSLO APP | DIRECTOR | FINAL | GARDERMOEN TWR | GROUND |
|---|---|---|---|---|---|
| 126.130 | W 120.455 E 118.480 | 136.405 | 128.905 | W 118.305 E 120.105 | W 121.605 E 121.905 |

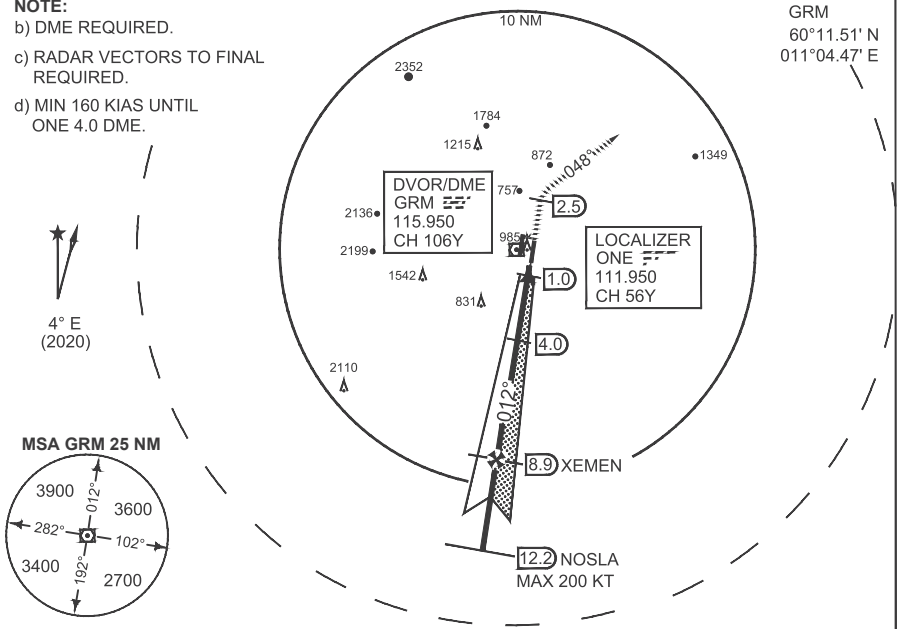
| LOCALIZER/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| ONE 111.950 / CH56Y | 012° | 3500 | 3.0° | **880** | 670 | 880 m | 9678 |

**CAUTION:**
CIRCLING NOT AUTHORIZED WEST OF RWY 01R / 19L.

**NOTE:**
b) DME REQUIRED.
c) RADAR VECTORS TO FINAL REQUIRED.
d) MIN 160 KIAS UNTIL ONE 4.0 DME.

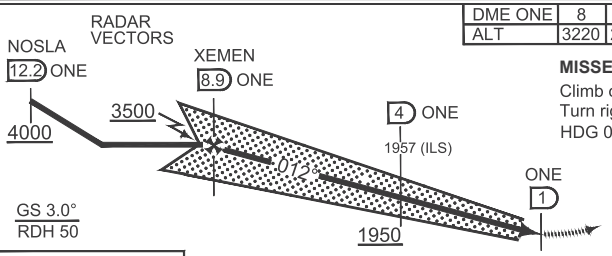
NOSLA
59°59.02' N
010°59.85' E

GRM
60°11.51' N
011°04.47' E




**SAFE ALT 100 NM 9700**

| DME ONE | 8 | 7 | 6 | 5 | 4 | 3 | 2 |
|---|---|---|---|---|---|---|---|
| ALT | 3220 | 2900 | 2590 | 2270 | 1950 | 1630 | 1310 |




**MISSED APPROACH** **TA 7000**
Climb on track 012° to DME 2.5 after ONE. Turn right (MAX 265 KIAS) and proceed on HDG 048° to 4000 ft. Expect vectors.

In case of RCF: Climb to 4000 ft on HDG 048°. After passing ONE 20 DME turn right DCT GRM for new approach. Remain within GRM 25 DME.

| CATEGORY | HPMA |
|---|---|
| S-ILS 01R | **880** - 800 210 (300-0.8/1.2) |
| S-LOC 01R | **970** -1200 300 (300-1.2/1.6) |
| CIRCLING | **1570** - 3.2 889 (900-3.2) |

CHANGES: FREQUENCIES
MIPS
RNGAF 20 MAR 2025

**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 681

**HPMA ILS or LOC RWY 19L**
**GARDERMOEN (ENGM)**

| ATIS | OSLO APP | DIRECTOR | FINAL | GARDERMOEN TWR | GROUND |
|---|---|---|---|---|---|
| 126.130 | W 120.455 E 118.480 | 136.405 | 128.905 | W 118.305 E 120.105 | W 121.605 E 121.905 |

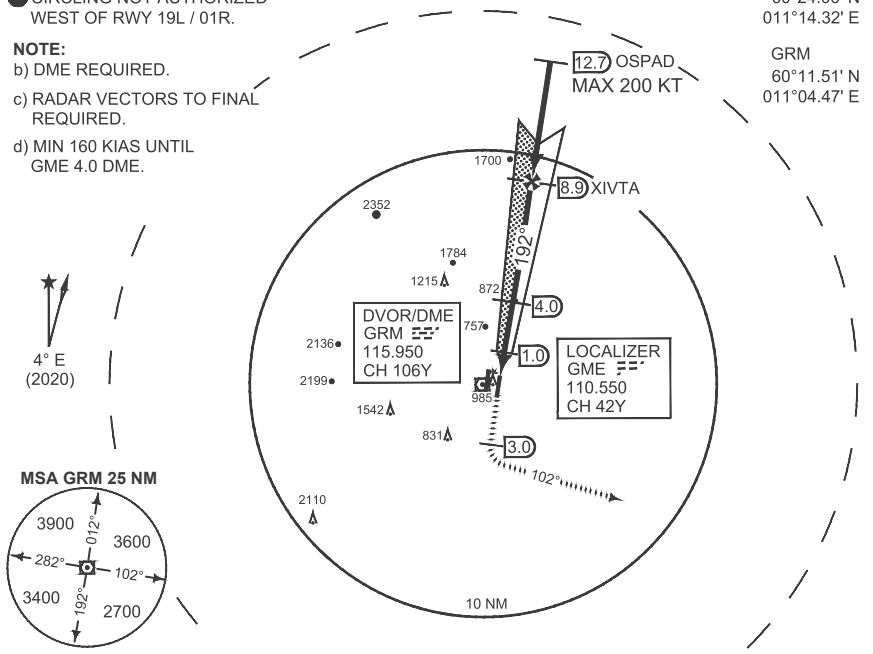
| LOCALIZER/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| GME 110.550 / CH 42Y | 192° | 3500 | 3.0° | 881 | 681 | 900 m | 9678 |

**CAUTION:**
CIRCLING NOT AUTHORIZED WEST OF RWY 19L / 01R.

**NOTE:**
b) DME REQUIRED.
c) RADAR VECTORS TO FINAL REQUIRED.
d) MIN 160 KIAS UNTIL GME 4.0 DME.

OSPAD
60°24.06' N
011°14.32' E

GRM
60°11.51' N
011°04.47' E




**MSA GRM 25 NM**



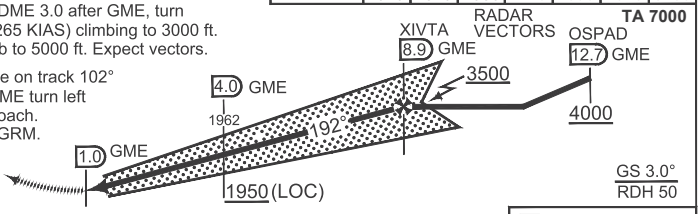

**SAFE ALT 100 NM 9700**

**MISSED APPROACH**

Climb on track 192°. At DME 3.0 after GME, turn left to track 102° (MAX 265 KIAS) climbing to 3000 ft. At DME 13.0 GME, climb to 5000 ft. Expect vectors.

In case of RCF: Continue on track 102° to 5000 ft. At DME 20 GME turn left DCT GRM for new approach. Remain within DME 25 GRM.

| DME GME | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|
| ALT | 1320 | 1640 | 1950 | 2270 | 2590 | 2910 | 3230 |




| CATEGORY | HPMA |
|---|---|
| S-ILS 19L | **881** - 800 200 (200-0.8/1.2) |
| S-LOC 19L | **1030** - 1200 349 (400-1.2/1.6) |
| CIRCLING | **1570** - 3.2 889 (900-3.2) |

CHANGES: FREQUENCIES

MIPS

RNoAF 20 MAR 2025

**HPMA ILS or LOC RWY 19L** 60°12.16' N 011°05.03' E **GARDERMOEN (ENGM)**

AD ELEV 681

| ATIS | OSLO APP | DIRECTOR | FINAL | GARDERMOEN TWR | GROUND |
|---|---|---|---|---|---|
| 126.130 | W 120.455 E 118.480 | 136.405 | 128.905 | W 118.305 E 120.105 | W 121.605 E 121.905 |

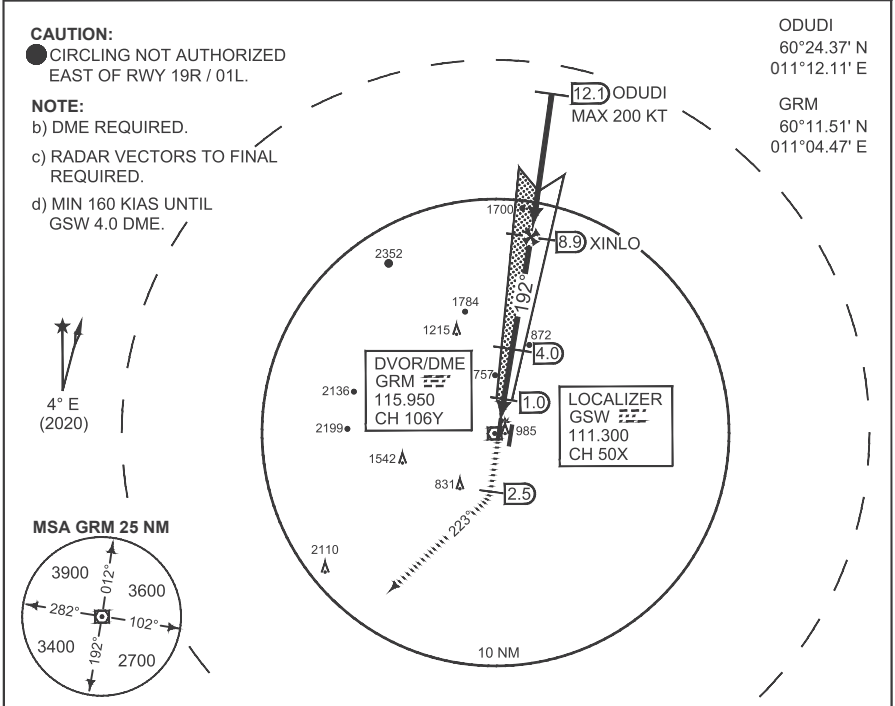
| LOCALIZER/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| GSW 111.300 / CH 50X | 192° | 3500 | 3.0° | 875 | 675 | 900 m | 11811 |

**CAUTION:**
CIRCLING NOT AUTHORIZED EAST OF RWY 19R / 01L.

**NOTE:**
b) DME REQUIRED.
c) RADAR VECTORS TO FINAL REQUIRED.
d) MIN 160 KIAS UNTIL GSW 4.0 DME.

ODUDI
60°24.37' N
011°12.11' E

GRM
60°11.51' N
011°04.47' E




**MSA GRM 25 NM**

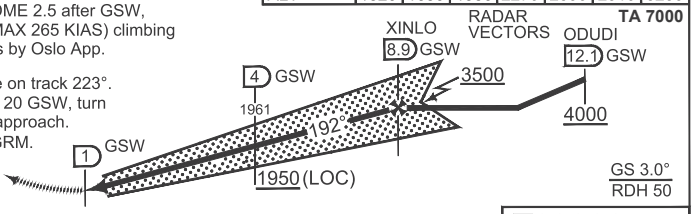



**SAFE ALT 100 NM 9700**

**MISSED APPROACH**
Climb on track 192°. At DME 2.5 after GSW, turn right to track 223° (MAX 265 KIAS) climbing to 5000 ft. Expect vectors by Oslo App.

In case of RCF: Continue on track 223°. Climb to 5000 ft. At DME 20 GSW, turn right DCT GRM for new approach. Remain within DME 25 GRM.

| DME GSW | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|
| ALT | 1320 | 1630 | 1950 | 2270 | 2590 | 2910 | 3230 |




| CATEGORY | HPMA |
|---|---|
| S-ILS 19R | **875** - 800 200 (200-0.8/1.2) |
| S-LOC 19R | **1020** - 1200 345 (400-1.2/2.0) |
| CIRCLING | **1980** - 3.2 1299 (1300-3.2) |

# RYGGE (ENRY)

AERODROME CHART

TACAN RWY 12

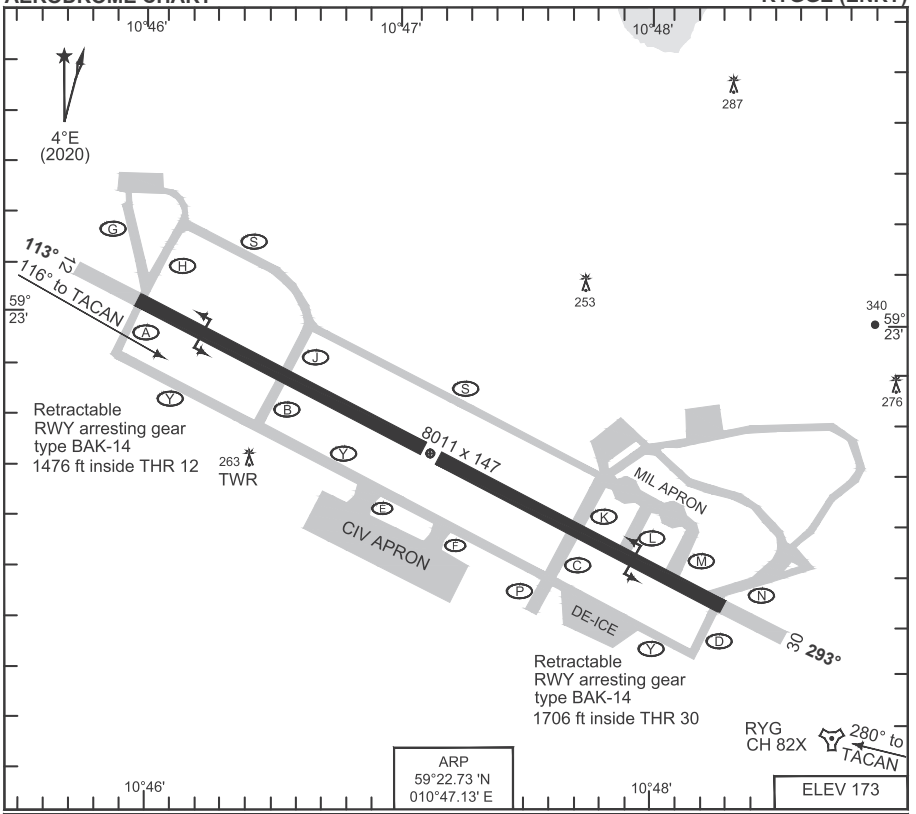
HPMA ILS RWY 30

ILS or LOC M RWY 30

TACAN RWY 30

SID EAST

SID WEST



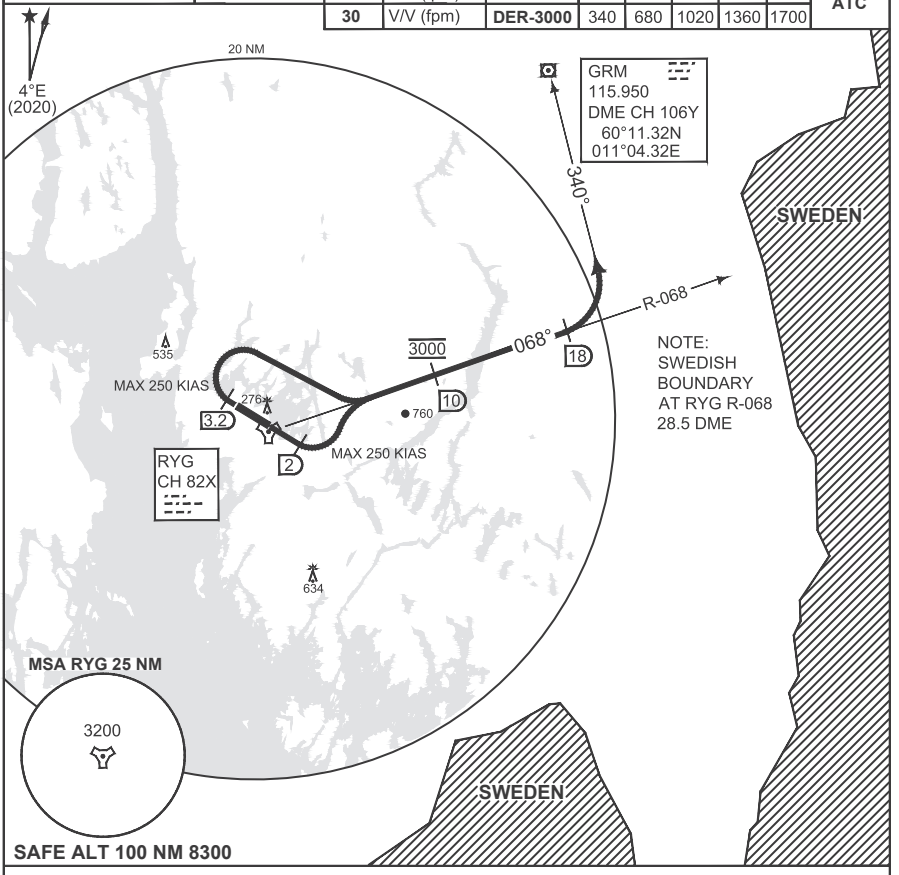

| RWY | PCN | TORA | ASDA | TODA | LDA | | PAPI | | THR ELEV | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 85 F/C/X/T | 8011 | 8011 | 8822 | 8011 | | 3.0° | | 168 | 59°23.02' N - 010°45.97' E |
| 30 | 85 F/C/X/T | 8011 | 8011 | 8208 | 8011 | | 3.0° | | 169 | 59°22.43' N - 010°48.28' E |

| | | | | | |
|---|---|---|---|---|---|
| ATIS | 136.180 | | | | |
| RYGGE GND | 121.705 | | | | |
| RYGGE TWR | 119.505 | 122.100 | 308.850 | 257.800 | |

CHANGES: FREQUENCIES

RNoAF 20 MAR 2025

| ATIS | RYGGE TWR | | | FARRIS APP | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 136.180 | 119.505 122.100 308.850 | | | E 124.355 W 134.055 | | | | | | |
| POLARIS CONTROL | AD ELEV | RWY | GS (kt) | FROM-TO | 60 | 120 | 180 | 240 | 300 | REASON |
| 125.055 | 173 | 12 | V/V (fpm) | DER-3000 | 280 | 560 | 840 | 1120 | 1400 | ATC |
| | | 30 | V/V (fpm) | DER-3000 | 340 | 680 | 1020 | 1360 | 1700 | |




| | |
|---|---|
| SID EAST RWY 12 | - Climb RWY track to 1000 ft or RYG 2 DME, whichever occurs first, then turn left to intercept R-068 outbound to 18 DME. Maximum 250 KIAS. Cross 10 DME at 3000 ft. Follow ATC instruction.<br>- Minimum climb gradient 4.6% (2.7°) to 3000 ft. |
| SID EAST RWY 30 | - Climb RWY track to 1000 ft or RYG 3.2 DME, whichever occurs first, then turn right to intercept R-068 outbound to 18 DME. Maximum 250 KIAS. Cross 10 DME at 3000 ft. Follow ATC instruction.<br>- Minimum climb gradient 5.5% (3.2°) to 3000 ft. |

CHANGES: FREQUENCIES

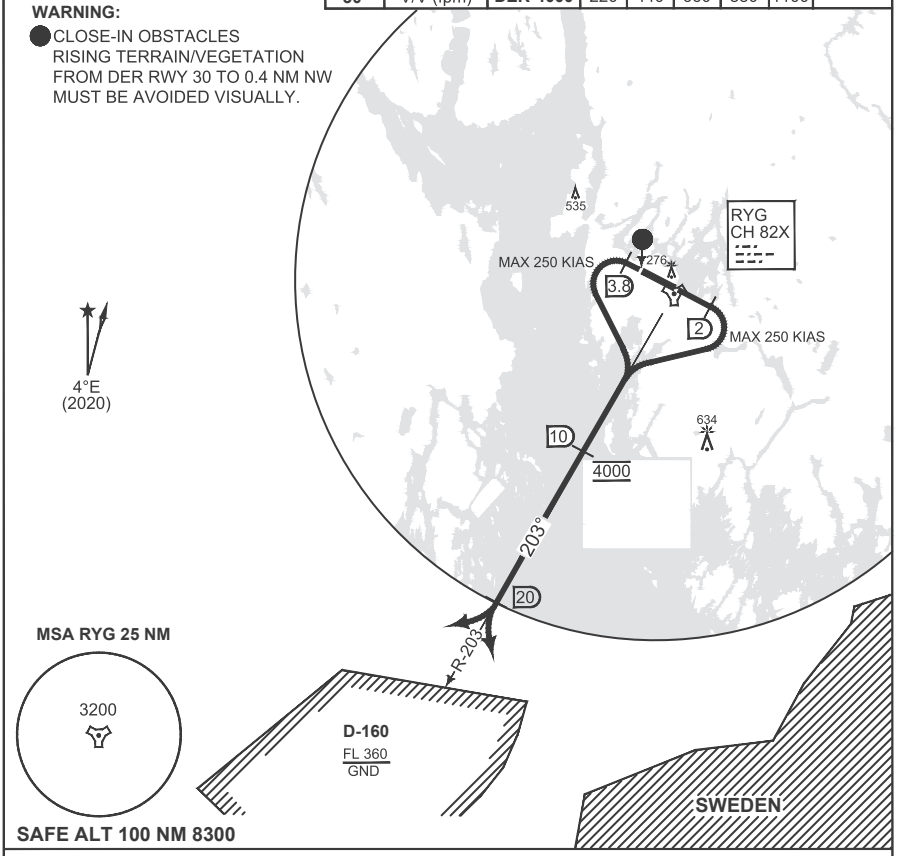
RNoAF 20 MAR 2025

| ATIS | RYGGE TWR | | | FARRIS APP | |
|---|---|---|---|---|---|
| 136.180 | 119.505 | 122.100 | 308.850 | 124.355 | 134.055 |

| POLARIS CONTROL | AD ELEV |
|---|---|
| 125.055 | 173 |

| RWY | GS (kt) | FROM-TO | 60 | 120 | 180 | 240 | 300 | REASON |
|---|---|---|---|---|---|---|---|---|
| 12 | V/V (fpm) | DER-4000 | 330 | 660 | 990 | 1320 | 1650 | ATC |
| 30 | V/V (fpm) | DER-4000 | 220 | 440 | 660 | 880 | 1100 | |

**WARNING:**
CLOSE-IN OBSTACLES RISING TERRAIN/VEGETATION FROM DER RWY 30 TO 0.4 NM NW MUST BE AVOIDED VISUALLY.




| | |
|---|---|
| SID WEST RWY 12 | - Climb RWY track to 1000 ft or 2 DME RYG, whichever occurs first, then turn right to intercept R-203 outbound to 20 DME. Maximum 250 KIAS. Cross 10 DME at 4000 ft. Follow ATC instruction.<br>- Minimum climb gradient 5.4% (3.1°) to 4000 ft. |
| SID WEST RWY 30 | - Climb RWY track to 1000 ft or RYG 3.8 DME, whichever occurs first, then turn left to intercept R-203 outbound to 20 DME. Maximum 250 KIAS. Cross 10 DME at 4000 ft. Follow ATC instruction.<br>- Minimum climb gradient 3.6% (2.1°) to 4000 ft. |

CHANGES: FREQUENCIES

RNAF 20 MAR 2025

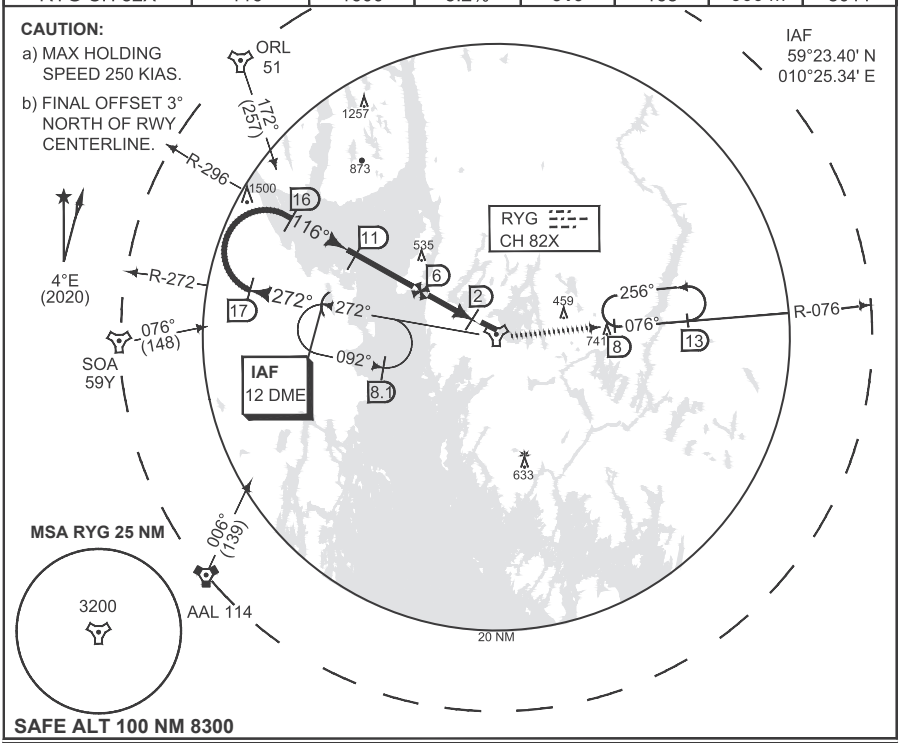
**MIPS**
**INSTRUMENT APPROACH CHART**

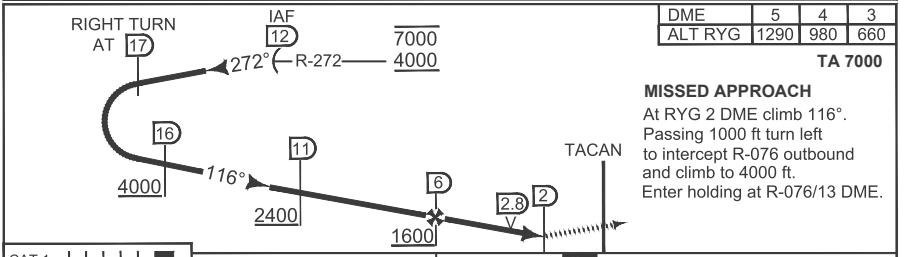
AD ELEV 173

**TACAN RWY 12**
**RYGGE (ENRY)**

| ATIS | RYGGE GND | RYGGE TWR | FARRIS APP (WEST) | FARRIS APP (EAST) |
|---|---|---|---|---|
| 136.180 | 121.705 | 119.505 122.100 308.850 | 134.055 | 124.355 |

| TACAN | APP COURSE | FAF ALT | Descent GR | MDA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| RYG CH 82X | 116° | 1600 | 5.2% | **610** | 168 | 900 m | 8011 |




| DME | 5 | 4 | 3 |
|---|---|---|---|
| ALT RYG | 1290 | 980 | 660 |

**TA 7000**

**MISSED APPROACH**
At RYG 2 DME climb 116°.
Passing 1000 ft turn left to intercept R-076 outbound and climb to 4000 ft.
Enter holding at R-076/13 DME.

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-TAC 12 | **610** - 1400 442 (400-1.4/2.1) | | | | |
| CIRCLING | **670** - 2.3 497 (500-2.3) | **680** - 2.4 507 (600-2.4) | **860** - 3.2 687 (700-3.2) | **910** - 3.6 737 (800-3.6) | **1150** - 4.5 977 (1000-4.5) |

CHANGES: FREQUENCIES

MIPS

RNAF 20 MAR 2025

**TACAN RWY 12**

59°22.73' N
010°47.13' E

**RYGGE (ENRY)**

**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 173

**HPMA ILS or LOC RWY 30**
**RYGGE (ENRY)**

| ATIS | RYGGE GND | RYGGE TWR | FARRIS APP (WEST) | FARRIS APP (EAST) |
|---|---|---|---|---|
| 136.180 | 121.705 | 119.505 122.100 308.850 | 134.055 | 124.355 |

| ILS/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| RY 109.100 / CH 28X | 293° | 3000 | 3.0° | **388** | 169 | 720 m | 8011 |

**CAUTION:**
a) MAX HOLDING SPEED 250 KIAS.

**NOTE:**
b) DME REQUIRED.

c) DME FROM RYG TAC UNLESS INDICATED OTHERWISE.

IAF
59°24.23' N
011°11.79' E

RYG CH 82X
ILS RY 109.100 DME CH 28X

IAF 12 DME

FLE 92X 107° (191)

SOA 59Y 079° (176)

4°E (2020)

8.1 256° R-076 076°

3.5 293° 8.5

ARC 17

LR-103 R-112

1257 873 535 459 489 810 633

**MSA RYG 25 NM**

3200

20 NM

013° (144) AAL 114X

**SAFE ALT 100 NM 8300**

| DME | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|
| ALT RYG | 960 | 1290 | 1610 | 1940 | 2270 | 2600 | 2930 |
| ALT RY | 800 | 1130 | 1450 | 1780 | 2110 | 2440 | 2770 |

**TA 7000**

**MISSED APPROACH**
Climb RWY track to 1000 ft.
Then turn right and intercept R-076 outbound to IAF.
Climb to 4000 ft and hold.

FL 120
4000
R-076
IAF 12
076°
ARC 17

TACAN
RYG 0.7 RY 1.2
RYG 1 RY 1.5
RYG 3.5 RY 4
RYG 8.5 RY 9
293°
1440
3000

GS 3.0°
RDH 51

THR ELEV 169 — 8.8 — CAT 1

| CATEGORY | HPMA |
|---|---|
| S-ILS 30 | **388** - 550 219 (300-0.8/1.2) |
| S-LOC 30 | **610** - 1400 441 (500-1.4/2.1) |
| CIRCLING | **730** - 3.2 557 (600-3.2) |

CHANGES: FREQUENCIES

MIPS

RNoAF 20 MAR 2025

**HPMA ILS or LOC RWY 30** 59°22.73' N 010°47.13' E **RYGGE (ENRY)**

AD ELEV 173

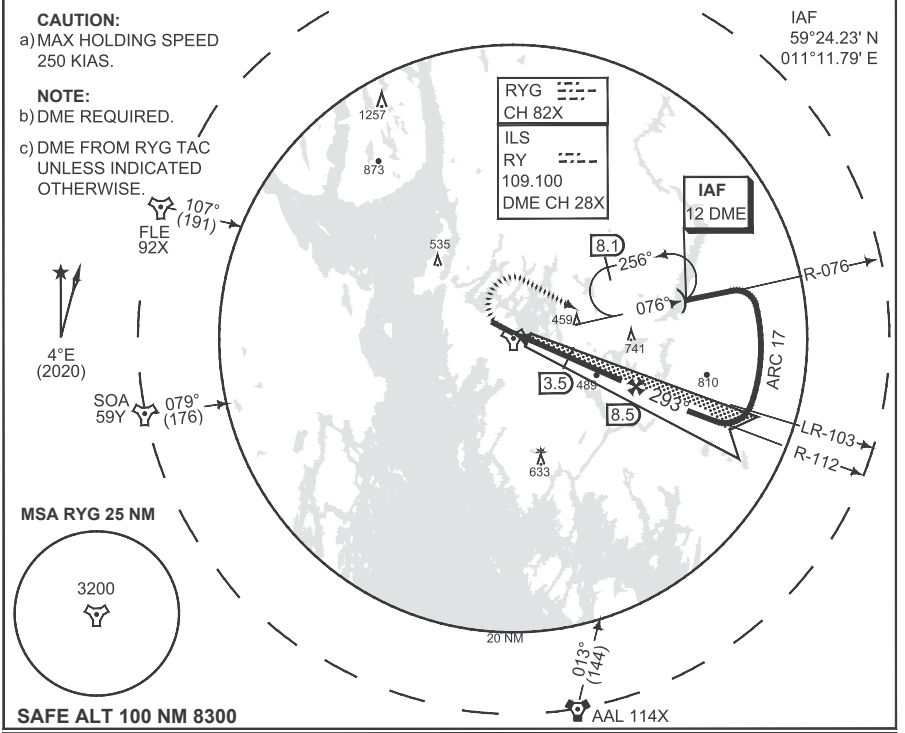
| ATIS | RYGGE GND | RYGGE TWR | FARRIS APP (WEST) | FARRIS APP (EAST) |
|---|---|---|---|---|
| 136.180 | 121.705 | 119.505 122.100 308.850 | 134.055 | 124.355 |

| ILS/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| RY 109.100 / CH 28X | 293° | 3000 | 3.0° | **SEE CAT** | 169 | 720 m | 8011 |

**CAUTION:**
a) MAX HOLDING SPEED 250 KIAS.

**NOTE:**
b) DME REQUIRED.

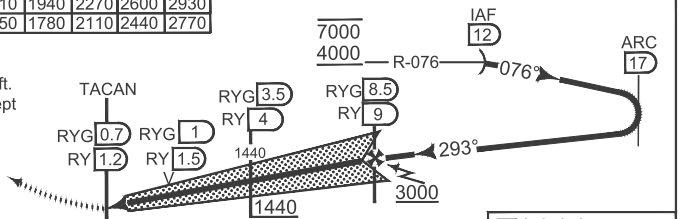
c) DME FROM RYG TAC UNLESS INDICATED OTHERWISE.




| DME | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|
| ALT RYG | 960 | 1290 | 1610 | 1940 | 2270 | 2600 | 2930 |
| ALT RY | 800 | 1130 | 1450 | 1780 | 2110 | 2440 | 2770 |

**TA 7000**

**MISSED APPROACH**
Climb RWY track to 1000 ft.
Then turn right and intercept R-076 outbound to IAF.
Climb to 4000 ft and hold.




| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-ILS 30 | **377** - 550<br>208 (300-0.8/1.2) | **385** - 550<br>216 (300-0.8/1.2) | **391** - 550<br>222 (300-0.8/1.2) | **401** - 550<br>232 (300-0.8/1.2) | **419** - 550<br>250 (300-0.8/1.3) |
| S-LOC 30 | **610** - 1400 441 (500-1.4/2.1) | | | | |
| CIRCLING | **670** - 2.3<br>497 (500-2.3) | **670** - 2.3<br>497 (500-2.3) | **860** - 3.2<br>687 (700-3.2) | **880** - 3.6<br>707 (800-3.6) | **1120** - 4.3<br>947 (1000-4.3) |

CHANGES: FREQUENCIES
MIPS
RNoAF 20 MAR 2025

**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 173

**TACAN RWY 30**
**RYGGE (ENRY)**

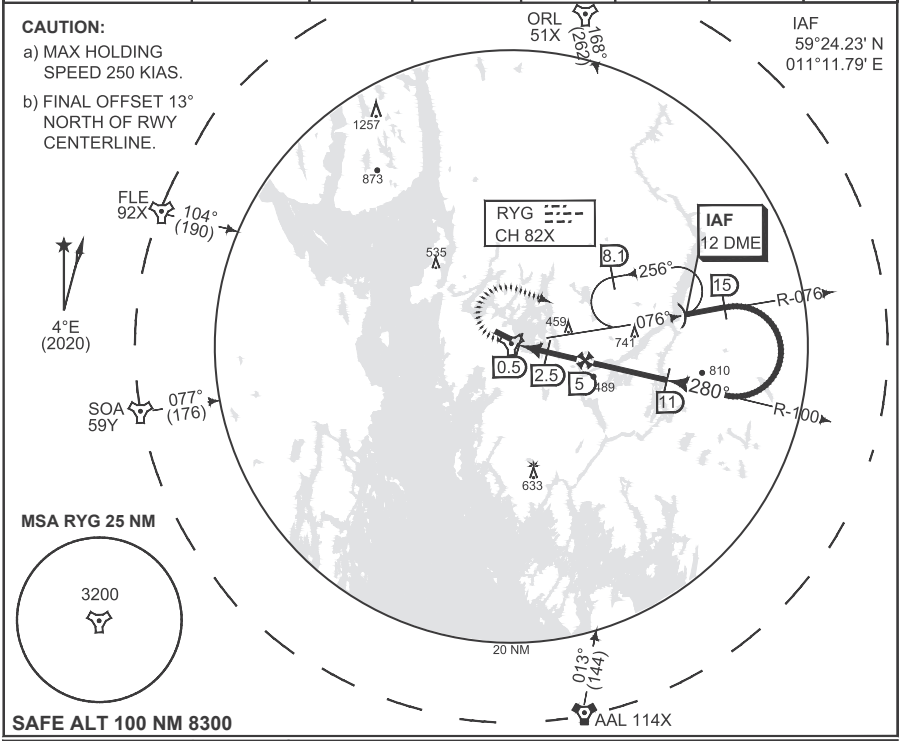
| ATIS | RYGGE GND | RYGGE TWR | FARRIS APP (WEST) | FARRIS APP (EAST) |
|---|---|---|---|---|
| 136.180 | 121.705 | 119.505 122.100 308.850 | 134.055 | 124.355 |

| TACAN | APP COURSE | FAF ALT | Descent GR | MDA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| RYG CH 82X | 280° | 2000 | 5.6% | **570** | 169 | 720 m | 8011 |

**CAUTION:**

a) MAX HOLDING SPEED 250 KIAS.

b) FINAL OFFSET 13° NORTH OF RWY CENTERLINE.

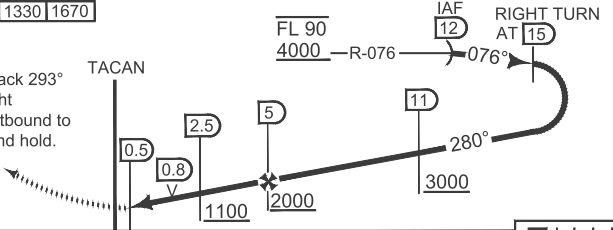



| DME | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| ALT RYG | 660 | 990 | 1330 | 1670 |

**TA 7000**

**MISSED APPROACH**

At 0.5 DME climb on track 293° to 1000 ft, then turn right and intercept R-076 outbound to IAF. Climb to 4000 ft and hold.




| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-TAC 30 | **570** - 1200 401 (500-1.2/1.9) | | | | |
| CIRCLING | **670** - 2.3<br>497 (500-2.3) | **680** - 2.4<br>507 (600-2.4) | **860** - 3.2<br>687 (700-3.2) | **910** - 3.6<br>737 (800-3.6) | **1150** - 4.5<br>977 (1000-4.5) |

CHANGES: FREQUENCIES

MIPS

RNoAF 20 MAR 2025

**TACAN RWY 30**

59°22.73' N
010°47.13' E

**RYGGE (ENRY)**

# NORDHOLZ (ETMN)

AERODROME CHART

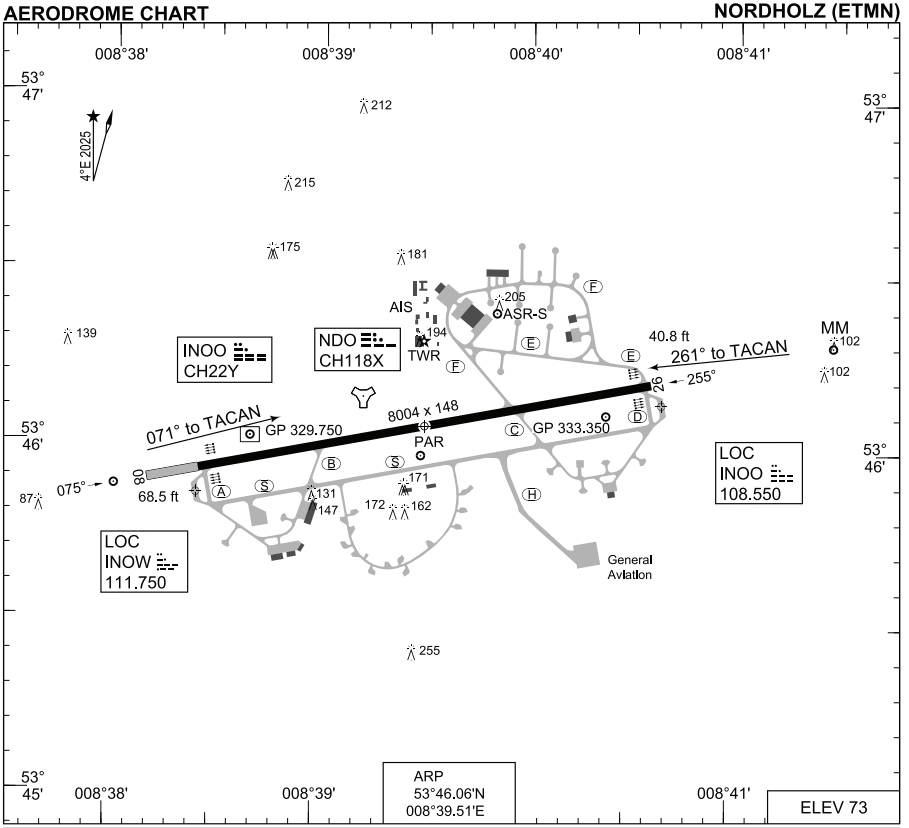
ILS or LOC RWY 08

ILS or LOC RWY 26

TACAN RWY 08

TACAN RWY 26

SID MN 108-126




| RWY | PCN | TORA | ASDA | TODA | LDA | PAPI | | TDZE | THR PSN |
|---|---|---|---|---|---|---|---|---|---|
| 08 | 86 F/A/W/T | 8004 | 8004 | 8004 | 8004 | 3.0° | | 73 | 53°45.93'N 008°38.42'E |
| 26 | 86 F/A/W/T | 8004 | 8906 | 8906 | 8004 | 3.0° | | 64 | 53°46.19'N 008°40.60'E |

NORDHOLZ TOWER 315.700 142.900 131.255
NORDHOLZ RADAR 267.000 129.855 342.625 341.475 SSR 4240 - 4247

| | PROC. CRITERIA | RWY | GS | TCH | OTCH | RPI | CAT | MINIMA CRITERIA | MINIMA |
|---|---|---|---|---|---|---|---|---|---|
| PAR | TERPS | 08 | 3.0° | 43 | | 751 | ABCDE | TERPS | 274 - 0.8 200 (200-0.8/1.2) |
| | TERPS | 26 | 3.0° | 68 | | 1085 | ABCDE | TERPS | 267 - 0.8 200 (200-0.8/1.2) |
| | TERPS | 079 | 3.0° | | | | COPTER | TERPS | 174 - 0.4 100 (100-0.4/0.8) |

CHANGE: VAR, NEW TWR ADDED, ABN (051/25)

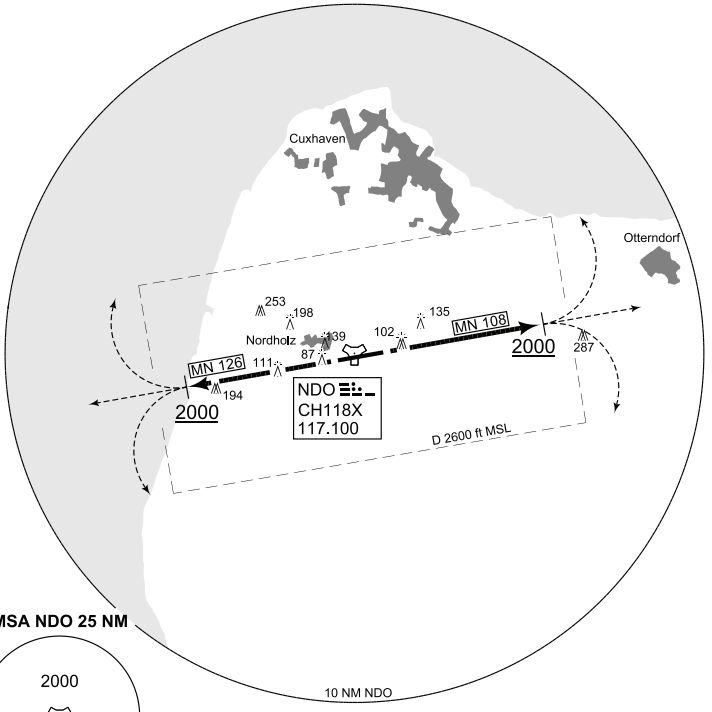
ZentrLuftOp 20 MAR 2025

| NORDHOLZ TOWER | NORDHOLZ RADAR | BREMEN RADAR |
|---|---|---|
| 315.700 131.255 | 342.625 129.855 | 398.000 124.075 |

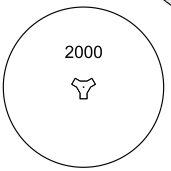
**NOTE:**
a) NO TURN BEFORE DER.

4°E 2025

IFR PROFILES WITHIN
AIRSPACE CLASS "E"
WATCH OUT FOR VFR
TRAFFIC UNKNOWN TO ATC.




**MSA NDO 25 NM**




**EMERG SAFE ALT 100 NM 2700**

**TA 5000**

| | |
|---|---|
| MN 108<br>(RWY 08) | - Climb on track 075° to 2000 ft<br>- Continue as cleared by ATC |
| MN 126<br>(RWY 26) | - Climb on track 255° to 2000 ft<br>- Continue as cleared by ATC |

CHANGE: VAR (051/25)

ZentrLuftOp 20 MAR 2025

**PANS-OPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 73

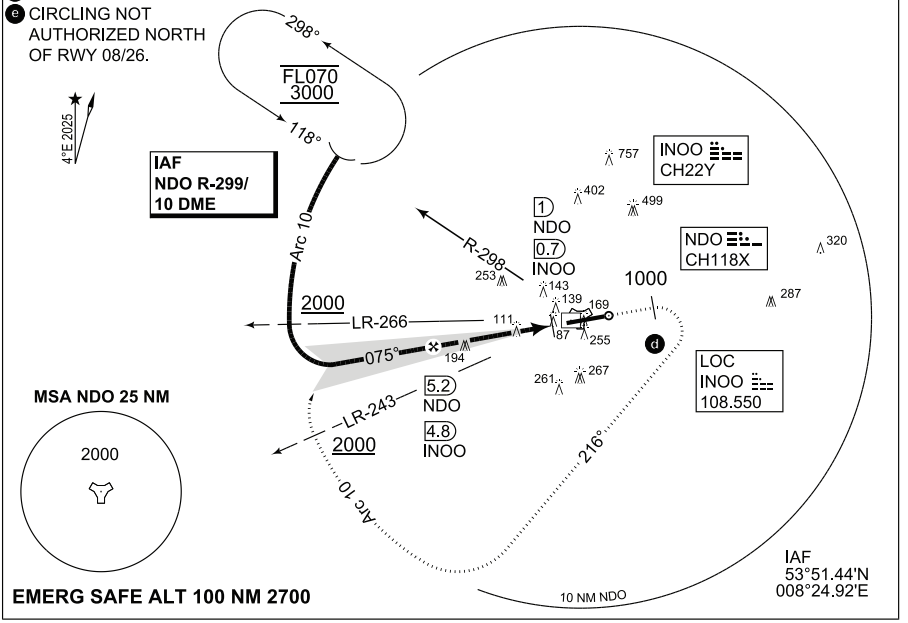
**ILS or LOC RWY 08**
**NORDHOLZ (ETMN)**

| BREMEN RADAR | NORDHOLZ RADAR | NORDHOLZ TOWER |
|---|---|---|
| 299.100 120.225 | 342.625 129.855 | 315.700 131.255 122.100 |

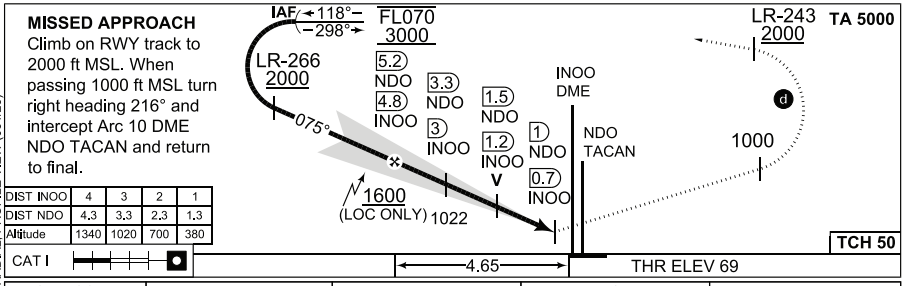
| TACAN / LOCALIZER | APP COURSE | GS INTCP ALT | DESCENT GR | DA | THR ELEV | ALS-LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| CH 118X / INOO 108.55 | 075° | 1600 | 3.0° / 5.2% | **See CAT** | 69 | 900 M | 8004 |

**NOTE:**
a) NO TURN BEFORE MAPT.
b) TIMING NOT AUTHORIZED FOR DEFINING MAPT.
c) TACAN REQUIRED.
(d) MISSED APPROACH LIMITED TO 230 KIAS MAX.
(e) CIRCLING NOT AUTHORIZED NORTH OF RWY 08/26.

IFR PROFILES WITHIN AIRSPACE CLASS "E" WATCH OUT FOR VFR TRAFFIC UNKNOWN TO ATC.




**MISSED APPROACH**
Climb on RWY track to 2000 ft MSL. When passing 1000 ft MSL turn right heading 216° and intercept Arc 10 DME NDO TACAN and return to final.




| DIST INOO | 4 | 3 | 2 | 1 |
|---|---|---|---|---|
| DIST NDO | 4.3 | 3.3 | 2.3 | 1.3 |
| Altitude | 1340 | 1020 | 700 | 380 |

| CATEGORY | A | B | C | D |
|---|---|---|---|---|
| ILS 08 | **269** - 0.8 550 200 (200-0.8/1.2) | | | |
| LOC 08 | **440** - 1.0 371 (400-1.0/1.5) | | **440** - 1.0 371 (400-1.0/1.7) | |
| (e) CIRCLING | **560** - 2.3 487 (500-2.3) | **570** - 2.3 497 (500-2.3) | **780** - 3.3 707 (800-3.3) | **930** - 4.0 857 (900-4.0) |

MIPS

CHANGE: VAR, HOLDING, RADIAL, PROFILE VIEW (051/25)

ZentrLuftOp 20 MAR 2025

**TERPS**
**INSTRUMENT APPROACH CHART**

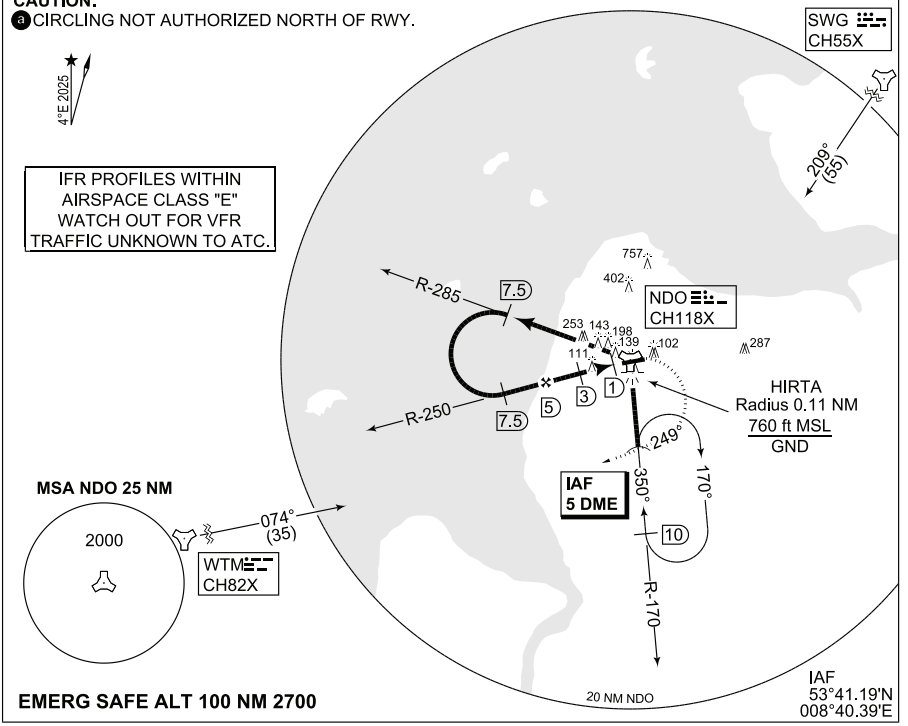
AD ELEV 73

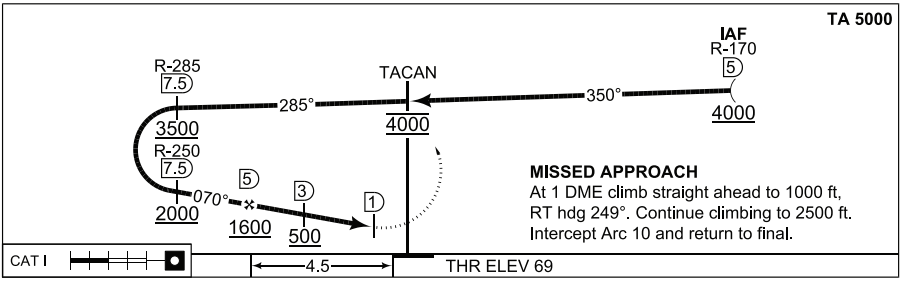
**TACAN RWY 08**
**NORDHOLZ (ETMN)**

| BREMEN RADAR | NORDHOLZ RADAR | NORDHOLZ TOWER |
|---|---|---|
| 299.100 120.225 | 342.625 129.855 | 315.700 131.255 |

| TACAN | APP COURSE | FAF ALT | MDA | THR ELEV | ALS-LENGTH | LDA |
|---|---|---|---|---|---|---|
| NDO CH118X | 070° | 1600 | **450** | 69 | 900 M | 8004 |

**CAUTION:**
ⓐ CIRCLING NOT AUTHORIZED NORTH OF RWY.




| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-TACAN 08 | **450** - 1.1 381 (400-1.1/1.5) | | **450** - 1.1 381 (400-1.1/1.8) | | |
| ⓐ CIRCLING | **560** - 2.3 487 (500-2.3) | **570** - 2.3 497 (500-2.3) | **780** - 3.3 707 (800-3.3) | **930** - 4.0 857 (900-4.0) | **1030** - 4.5 957 (1000-4.5) |
| PAR 08 | **274** - 0.8 200 (200-0.8/1.2) GS 3.0° | | | | |

CHANGE: VAR (051/25)
TERPS
ZentrLuftOp 20 MAR 2025

**TACAN RWY 08**
53°46.06'N
008°39.51'E
**NORDHOLZ (ETMN)**

**PANS-OPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 73

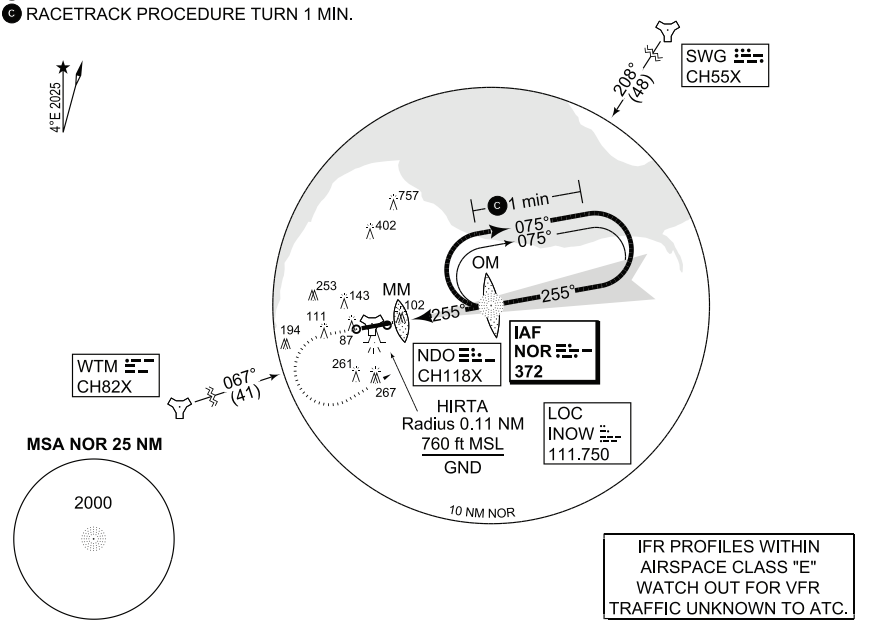
**ILS or LOC RWY 26**
**NORDHOLZ (ETMN)**

| BREMEN RADAR | NORDHOLZ RADAR | NORDHOLZ TOWER |
|---|---|---|
| 299.100 120.225 | 342.625 129.855 | 315.700 131.255 |

| TACAN / LOCALIZER | APP COURSE | GS INTCP ALT | GS | DA | TDZE | ALS-LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| CH 118X / INOW 111.750 | 255° | 1600 | 3.0° (5.2%) | **See CAT** | 64 | 900 M | 8004 |

**NOTE:**
a) PROCEDURE LIMITED TO 230 KIAS.
b CIRCLING NOT AUTHORIZED NORTH OF RWY.
c RACETRACK PROCEDURE TURN 1 MIN.

IAF
53°47.11'N
008°48.37'E

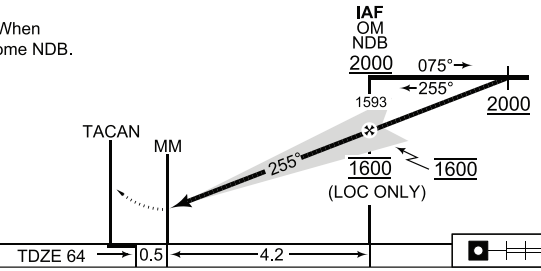



IFR PROFILES WITHIN AIRSPACE CLASS "E" WATCH OUT FOR VFR TRAFFIC UNKNOWN TO ATC.

**EMERG SAFE ALT 100 NM 2700**

**MISSED APPROACH**
Climb straight ahead to 2000 ft. When passing 1000 ft turn left and rehome NDB.

**TA 5000**




| FAF - MAP 4.2 NM | | | | | |
|---|---|---|---|---|---|
| Knots | 60 | 90 | 120 | 150 | 180 |
| min:sec | 4:12 | 2:48 | 2:06 | 1:41 | 1:24 |

| CATEGORY | A | B | C | D |
|---|---|---|---|---|
| S-ILS 26 | **264** - 0.8/550 200 (200-0.8/1.2) | | | |
| S-LOC 26 | **480** - 1.2 416 (500-1.2/1.5) | | **480** - 1.2 416 (500-1.2/1.9) | |
| b CIRCLING | **560** - 2.3 487 (500-2.3) | **570** - 2.3 497 (500-2.3) | **780** - 3.3 707 (800-3.3) | **930** - 4.0 857 (900-4.0) |

MIPS

CHANGE: VAR (051/25)

ZentrLuftOp 20 MAR 2025

**ILS or LOC RWY 26**

53°46.06'N
008°39.51'E

**NORDHOLZ (ETMN)**

**TERPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 73

**TACAN RWY 26**
**NORDHOLZ (ETMN)**

| BREMEN RADAR | NORDHOLZ RADAR | NORDHOLZ TOWER |
|---|---|---|
| 299.100 120.225 | 342.625 129.855 | 315.700 131.255 |

| TACAN | APP COURSE | FAF ALT | MDA | THR ELEV | ALS-LENGTH | LDA |
|---|---|---|---|---|---|---|
| NDO CH118X | 260° | 1600 | **450** | 41 | 900 M | 8004 |

**CAUTION:**
ⓐ CIRCLING NOT AUTHORIZED NORTH OF RWY.

SWG CH55X

4°E 2025

IFR PROFILES WITHIN AIRSPACE CLASS "E" WATCH OUT FOR VFR TRAFFIC UNKNOWN TO ATC.

NDO CH118X

209° (55)

R-045

R-061

R-080

7.5

757 402 253 198 139 181 102 287 111 131 194

260°

5

1

HIRTA
Radius 0.11 NM
760 ft MSL
GND

099°

350°

170°

IAF
5 DME

10

R-170

MSA NDO 25 NM

2000

074° (35)

WTM CH82X

20 NM NDO

IAF
53°41.19'N
008°40.39'E

**EMERG SAFE ALT 100 NM 2700**

**TA 5000**

IAF
R-170
5
4000

350°

TACAN
4000

045°

7.5
R-045
3500

7.5
R-061
3000

7.5
R-080
5
2000

260°
1600

1

**MISSED APPROACH**
At 1 DME turn left climbing to 2500 ft on heading 099° and intercept Arc 10.

THR ELEV 41

4.2

CAT I

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-TACAN 26 | **450** - 1.2 409 (500-1.2/1.5) | | **450** - 1.2 409 (500-1.2/1.9) | | |
| ⓐ CIRCLING | **560** - 2.3 487 (500-2.3) | **570** - 2.3 497 (500-2.3) | **780** - 3.3 707 (800-3.3) | **930** - 4.0 857 (900-4.0) | **1030** - 4.5 957 (1000-4.5) |
| PAR 26 | **267** - 0.8 200 (200-0.8/1.2) GS 3.0° | | | | |

TERPS

CHANGE: VAR (051/25)

ZentrLuftOp 20 MAR 2025

**TACAN RWY 26**

53°46.06'N
008°39.51'E

**NORDHOLZ (ETMN)**

# LAAGE (ETNL)

AERODROME CHART

ILS or LOC Y RWY 09

ILS or LOC Y RWY 27

ILS or LOC Z RWY 09

ILS or LOC Z RWY 27

TACAN RWY 09

TACAN RWY 27

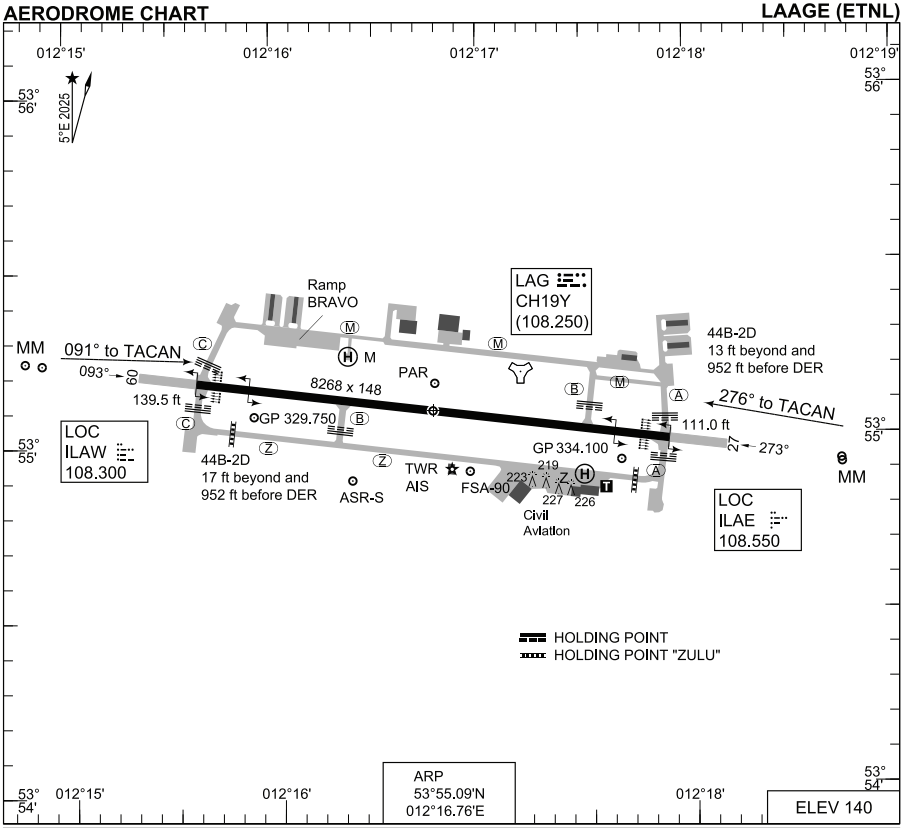
SID NL 12-32

SID NL 109-127

SID NL 14-34

SID NL 227

SID NL 16-36




| RWY | PCN | TORA | ASDA | TODA | LDA | PAPI | | TDZE | THR PSN |
|---|---|---|---|---|---|---|---|---|---|
| 09 | 88 R/B/W/T | 8268 (8924*) | 9266 | 10283 (10938*) | 8268 | 3.0° | | 140 | 53°55.18'N 012°15.62'E |
| 27 | 88 R/B/W/T | 8268 (8924*) | 9269 | 9909 (10564*) | 8268 | 3.0° | | 134 | 53°54.99'N 012°17.90'E |

*SWY available for TKOF on request via backtrack (PCN 66)

| | | |
|---|---|---|
| LAAGE TOWER | 336.400 | 118.430 |
| LAAGE RADAR | 376.400 | 133.105 SSR 4210 - 4217 |
| LAAGE ATIS | 134.605 | |

| | PROC. CRITERIA | RWY | GS | TCH | OTCH | RPI | CAT | MINIMA CRITERIA | MINIMA |
|---|---|---|---|---|---|---|---|---|---|
| PAR | PANS-OPS | 09 | 3.0° | 23 | | 459 | ABCDE | TERPS | 340 - 0.8 200 (200-0.8/1.2) |
| | PANS-OPS | 27 | 3.0° | 29 | | 460 | ABCDE | TERPS | 335 - 0.8 200 (200-0.8/1.2) |

CHANGE: EDITORIAL (042/25)

ZentrLuftOp 20 MAR 2025

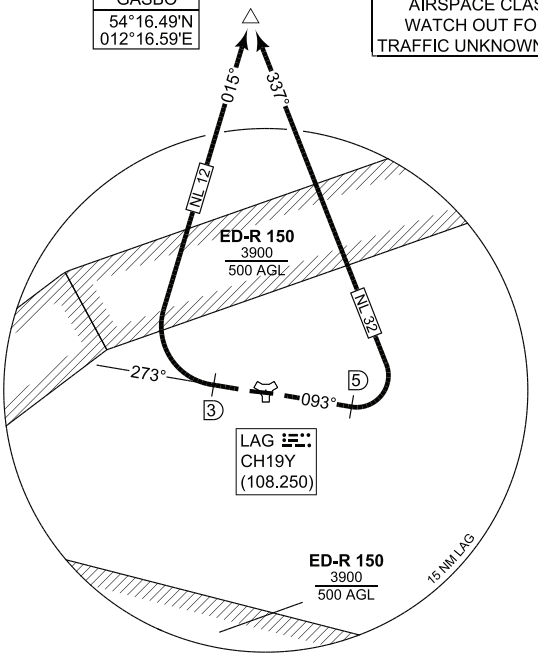
| LAAGE TOWER | LAAGE RADAR | BREMEN RADAR | LAAGE ATIS |
|---|---|---|---|
| 336.400 118.430 | 376.400 133.105 | 259.825 124.175 | 134.605 |

| RWY | Knots | 60 | 120 | 180 | 240 | 300 | 360 | to |
|---|---|---|---|---|---|---|---|---|
| **27** | V/V (fpm) | 270 | 540 | 810 | 1080 | 1350 | 1620 | 1420 ft |
| **09** | V/V (fpm) | 230 | 460 | 690 | 820 | 1050 | 1280 | 1800 ft |

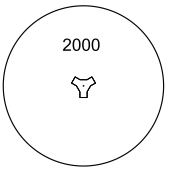
5°E 2025

GASBO
54°16.49'N
012°16.59'E

IFR PROFILES WITHIN AIRSPACE CLASS "E" WATCH OUT FOR VFR TRAFFIC UNKNOWN TO ATC.




**MSA LAG 25 NM**




**EMERG SAFE ALT 100 NM 3500**

**TA 5000**

| | |
|---|---|
| NL 12 (RWY 27) | - Climb on track 273° to LAG/3 DME<br>- Turn right and proceed on track 015° to GASBO<br>- INITIAL CLIMB: 4000 ft |
| NL 32 (RWY 09) | - Climb on track 093° to LAG/5 DME<br>- Turn left and proceed on track 337° to GASBO<br>- INITIAL CLIMB: 4000 ft |

CHANGE: MSA (042/25)

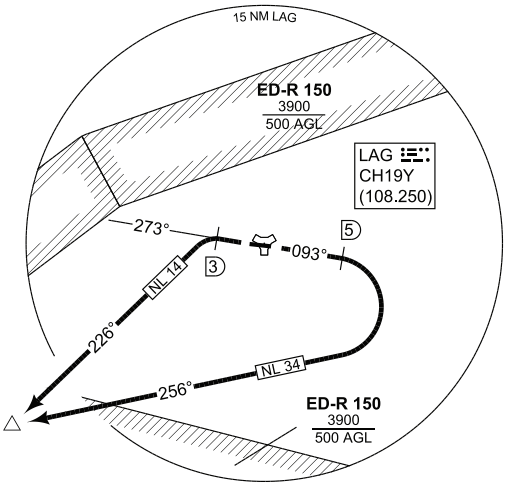
ZentrLuftOp 20 MAR 2025

| LAAGE TOWER | LAAGE RADAR | BREMEN RADAR | LAAGE ATIS |
|---|---|---|---|
| 336.400 118.430 | 376.400 133.105 | 259.825 124.175 | 134.605 |

| RWY | Knots | 60 | 120 | 180 | 240 | 300 | 360 | to |
|---|---|---|---|---|---|---|---|---|
| **27** | V/V (fpm) | 250 | 500 | 750 | 1000 | 1250 | 1500 | 3500 ft |
| **09** | V/V (fpm) | 230 | 460 | 690 | 920 | 1150 | 1380 | 1800 ft |

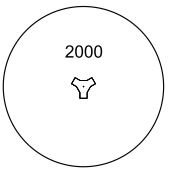
5°E 2025

IFR PROFILES WITHIN
AIRSPACE CLASS "E"
WATCH OUT FOR VFR
TRAFFIC UNKNOWN TO ATC.




| TAGOB |
|---|
| 53°44.09'N<br>011°49.98'E |

**MSA LAG 25 NM**




**EMERG SAFE ALT 100 NM 3500** **TA 5000**

| | |
|---|---|
| NL 14<br>(RWY 27) | - Climb on track 273° to LAG/3 DME.<br>- Turn left and proceed on track 226° to TAGOB<br>- INITIAL CLIMB: 4000 ft |
| NL 34<br>(RWY 09) | - Climb on track 093° to LAG/5 DME<br>- Turn right and proceed on track 256° to TAGOB<br>- INITIAL CLIMB: 4000 ft |

CHANGE: MSA (042/25)

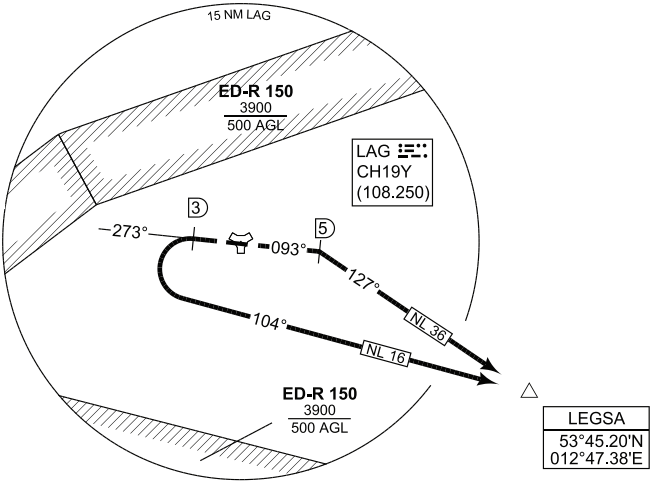
ZentrLuftOp 20 MAR 2025

| LAAGE TOWER | LAAGE RADAR | BREMEN RADAR | LAAGE ATIS |
|---|---|---|---|
| 336.400 118.430 | 376.400 133.105 | 259.825 124.175 | 134.605 |

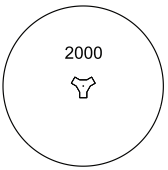
| RWY | Knots | 60 | 120 | 180 | 240 | 300 | 360 | to |
|---|---|---|---|---|---|---|---|---|
| **27** | V/V (fpm) | 250 | 500 | 750 | 1000 | 1250 | 1500 | 3500 ft |
| **09** | V/V (fpm) | 230 | 460 | 690 | 920 | 1150 | 1380 | 1800 ft |

5°E 2025

IFR PROFILES WITHIN
AIRSPACE CLASS "E"
WATCH OUT FOR VFR
TRAFFIC UNKNOWN TO ATC.




**MSA LAG 25 NM**




**EMERG SAFE ALT 100 NM 3500**

**TA 5000**

| | |
|---|---|
| NL 16<br>(RWY 27) | - Climb on track 273° to LAG/3 DME<br>- Turn left and proceed on track 104° to LEGSA<br>- INITIAL CLIMB: 4000 ft |
| NL 36<br>(RWY 09) | - Climb on track 093° to LAG/5 DME<br>- Turn right and proceed on track 127° to LEGSA<br>- INITIAL CLIMB: 4000 ft |

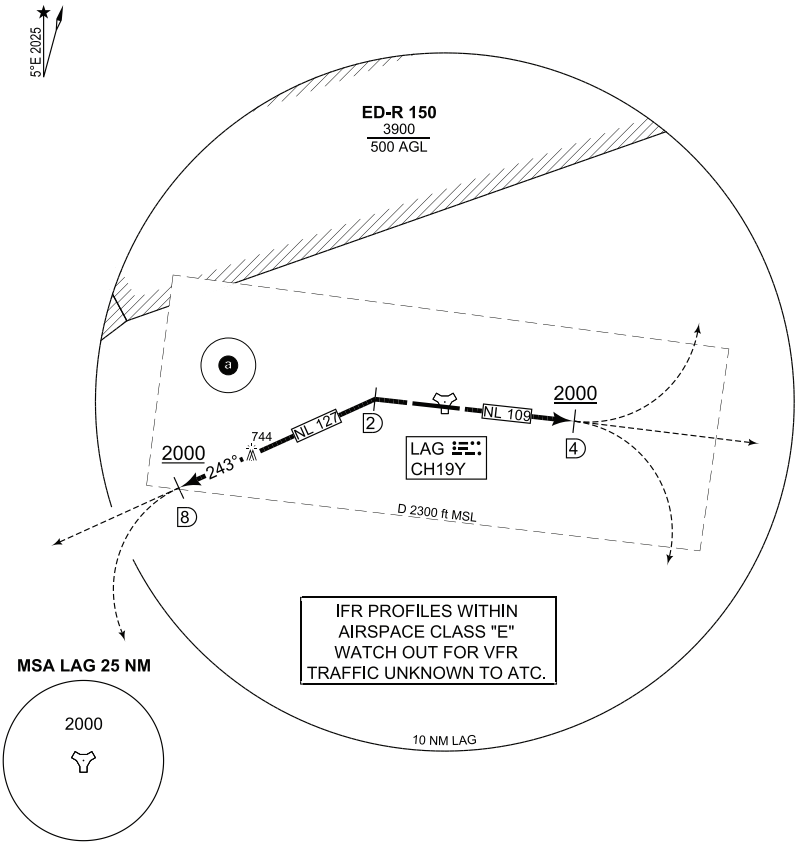
CHANGE: MSA (042/25)

ZentrLuftOp 20 MAR 2025

| LAAGE TOWER | LAAGE RADAR | BREMEN RADAR | LAAGE ATIS |
|---|---|---|---|
| 336.400 118.430 | 376.400 133.105 | 259.825 124.175 | 134.605 |

| RWY | from - to | 60 | 120 | 180 | 240 | 300 | 360 | Reason |
|---|---|---|---|---|---|---|---|---|
| **09** | DER - 2000 | 582 | 1164 | 1746 | 2328 | 2910 | 3492 | ATC |
| **27** | DER - 1000 | 477 | 954 | 1431 | 1908 | 2385 | 2862 | ATC |

**NOTE:**
ⓐ NOISE ABATEMENT AREA AROUND CITY OF SCHWAAN.
b) DME REQUIRED.




**EMERG SAFE ALT 100 NM 3500** **TA 5000**

| | |
|---|---|
| NL 109 (RWY 09) | - Climb straight ahead<br>- Pass LAG/4 DME at 2000 ft or above<br>- Continue as cleared by ATC<br>- INITIAL CLIMB: 4000 ft |
| NL 127 (RWY 27) | - Climb straight ahead<br>- When passing LAG/2 DME turn left and proceed on track 243° to LAG/8 DME, pass LAG/8 DME at 2000 ft or above<br>- Continue as cleared by ATC<br>- INITIAL CLIMB: 4000 ft |

CHANGE: MSA (042/25)



ZentrLuftOp 20 MAR 2025

**PANS-OPS** **NL 227**

**OPERATIONAL INSTRUMENT DEPARTURE CHART** AD ELEV 140 **LAAGE (ETNL)**

| LAAGE TOWER | | LAAGE RADAR | | BREMEN RADAR | | LAAGE ATIS |
|---|---|---|---|---|---|---|
| 336.400 | 118.430 | 376.400 | 133.105 | 259.825 | 124.175 | 134.605 |

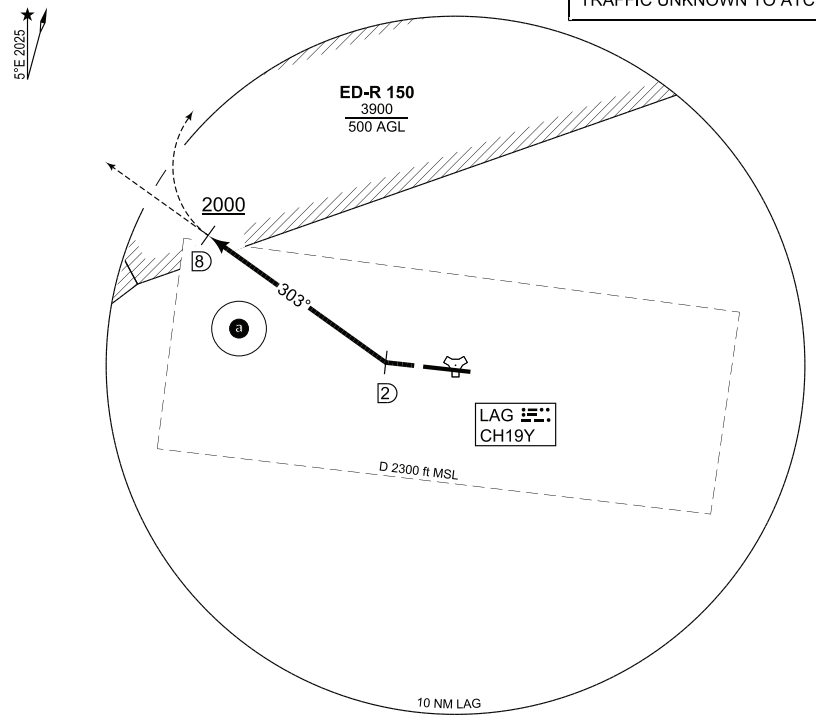
| RWY | from-to | 60 | 120 | 180 | 240 | 300 | 360 | Reason |
|---|---|---|---|---|---|---|---|---|
| **27** | DER - 1000 | 477 | 954 | 1431 | 1908 | 2385 | 2862 | **ATC** |

**NOTE:**

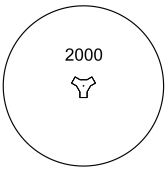
ⓐ NOISE ABATEMENT AREA AROUND CITY OF SCHWAAN.

b) DME REQUIRED.

IFR PROFILES WITHIN AIRSPACE CLASS "E" WATCH OUT FOR VFR TRAFFIC UNKNOWN TO ATC.




**MSA LAG 25 NM**




**EMERG SAFE ALT 100 NM 3500** **TA 5000**

| | |
|---|---|
| NL 227 (RWY 27) | - Climb straight ahead<br>- When passing LAG/2 DME turn right and proceed on track 303° to LAG/8 DME, pass LAG/8 DME at 2000 ft or above<br>- Continue as cleared by ATC<br>- INITIAL CLIMB: 4000 ft |

CHANGE: MSA (04/25)

ZentrLuftOp 20 MAR 2025

**PANS-OPS**
**INSTRUMENT APPROACH CHART** AD ELEV 140

**ILS or LOC Y RWY 09**
**LAAGE (ETNL)**

| BREMEN RADAR | LAAGE RADAR | LAAGE TOWER | LAAGE ATIS |
|---|---|---|---|
| 259.825 124.175 | 376.400 133.105 | 336.400 118.430 | 134.605 |

| TACAN/LOCALIZER | APP COURSE | GS INTCP ALT | GS | DA | TDZE | ALS-LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| LAG CH19Y/ ILAE 108.550 | 093° | 2000 | 3.0° | **See CAT** | 140 | 900 M | 8268 |

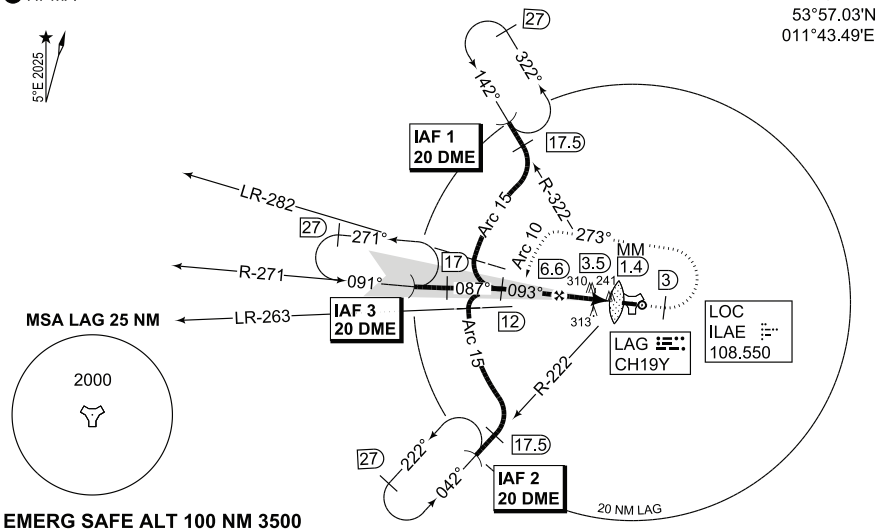
**NOTE:**
a) TIMING NOT AUTHORIZED FOR DEFINING THE MAPT.
b) NON STANDARD PROCEDURE (DEAD RECKONING INTERCEPTS LOC WITH 6.0° ONLY).
c) FOR MILITARY USE ONLY.
d) PAPI AND ILS GLIDEPATH DO NOT COINCIDE.
e) TACAN REQUIRED.
f CIRCLING NOT AUTHORIZED NORTH OF RWY 09/27.
g HPMA

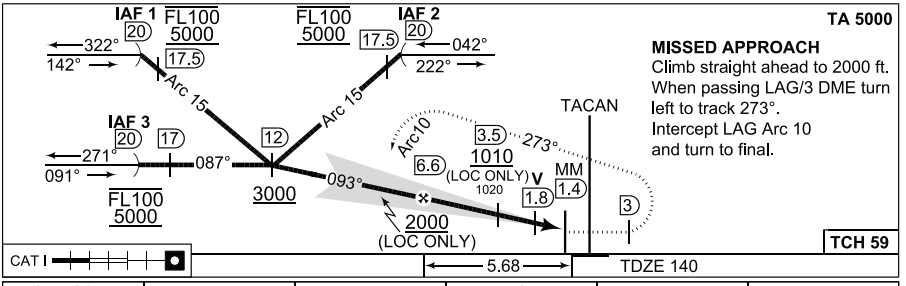
IFR PROFILES WITHIN AIRSPACE CLASS "E" WATCH OUT FOR VFR TRAFFIC UNKNOWN TO ATC.

IAF 1
54°11.91'N
011°58.64'E

IAF 2
53°41.53'N
011°52.58'E

IAF 3
53°57.03'N
011°43.49'E




| | CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|---|
| MIPS | ILS Y 09 | **340** - 0.8 200 (200-0.8/1.2) | | | | **NOT AUTHORIZED** |
| | LOC Y 09 | **490** - 0.8 350 (400-0.8/1.6) | | **490** - 1.2 350 (400-1.2/1.6) | **490** - 1.2 350 (400-1.2/2.0) | **NOT AUTHORIZED** |
| | f CIRCLING | **550** - 1.9 410 (500-1.9) | **640** - 2.3 500 (500-2.3) | **1180** - 4.9 1040 (1100-4.9) | | **1070** - 4.3 930 g (1000-4.3) |

CHANGE: MSA (042/25)

ZentrLuftOp 20 MAR 2025

**ILS or LOC Y RWY 09** 53°55.09'N 012°16.76'E **LAAGE (ETNL)**

**PANS-OPS**
**INSTRUMENT APPROACH CHART** AD ELEV 140

**ILS or LOC Z RWY 09**
**LAAGE (ETNL)**

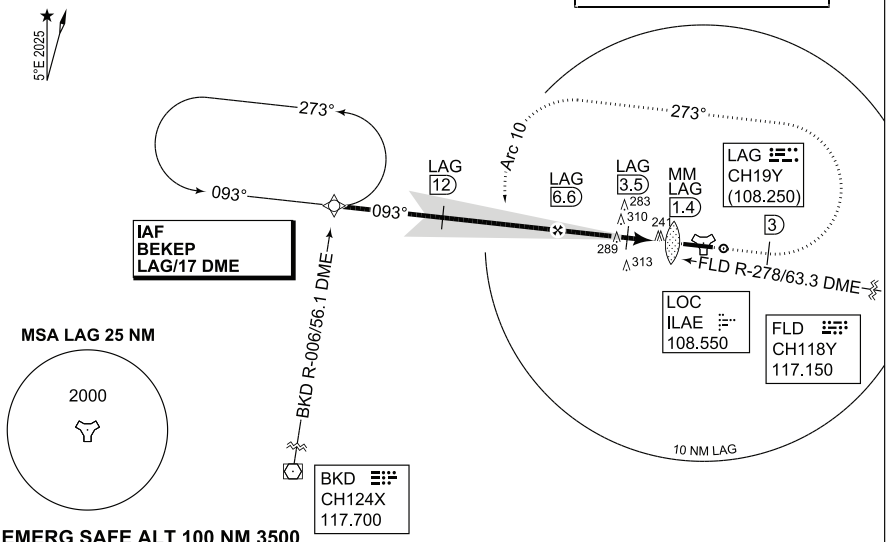
| BREMEN RADAR | LAAGE RADAR | LAAGE TOWER | LAAGE ATIS |
|---|---|---|---|
| 259.825 124.175 | 376.400 133.105 | 336.400 118.430 | 134.605 |

| TACAN/LOCALIZER | APP COURSE | GS INTCP ALT | GS | DA | TDZE | ALS-LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| LAG CH19Y/ILAE 108.550 | 093° | 2000 | 3.0° | **See CAT** | 140 | 900 M | 8268 |

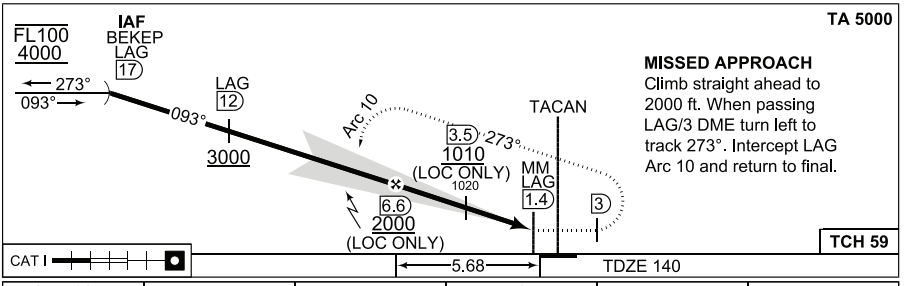
**NOTE:**
a) PAPI AND ILS GLIDEPATH DO NOT COINCIDE.
b) DME REQUIRED.
c) RNAV REQUIRED FOR HOLDING, IN CASE OF LOST COM FOR NON-RNAV EQUIPPED ACFT DISREGARD ETA AND START APPROACH WITHOUT DELAY.
(d) CIRCLING NOT AUTHORIZED NORTH OF RWY 09/27.
(e) HPMA

IAF BEKEP
53°57.16'N
011°48.38'E

IFR PROFILES WITHIN AIRSPACE CLASS "E" WATCH OUT FOR VFR TRAFFIC UNKNOWN TO ATC.




TA 5000




**MISSED APPROACH**
Climb straight ahead to 2000 ft. When passing LAG/3 DME turn left to track 273°. Intercept LAG Arc 10 and return to final.

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| MIPS ILS Z 09 | **340** - 0.8 200 (200-0.8/1.6) | | | | **NOT AUTHORIZED** |
| MIPS LOC Z 09 | **490** - 0.8 350 (400-0.8/1.6) | | **490** - 1.2 350 (400-1.2/1.6) | **490** - 1.2 350 (400-1.2/2.0) | **NOT AUTHORIZED** |
| MIPS (d) CIRCLING | **550** - 1.9 410 (500-1.9) | **640** - 2.3 500 (500-2.3) | **1180** - 4.9 1040 (1100-4.9) | | **1070** - 4.3 930 (e) (1000-4.3) |

CHANGE: MSA (042/25)

ZentrLuftOp 20 MAR 2025

**PANS-OPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 140

**TACAN RWY 09**
**LAAGE (ETNL)**

| BREMEN RADAR | LAAGE RADAR | LAAGE TOWER | LAAGE ATIS |
|---|---|---|---|
| 259.825 124.175 | 376.400 133.105 | 336.400 118.430 | 134.605 |

| TACAN | APP COURSE | FAF ALT | DESCENT GR | MDA | TDZE | ALS-LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| LAG CH19Y | 091° | 1800 | 5.2% | **500** | 140 | 900 M | 8268 |

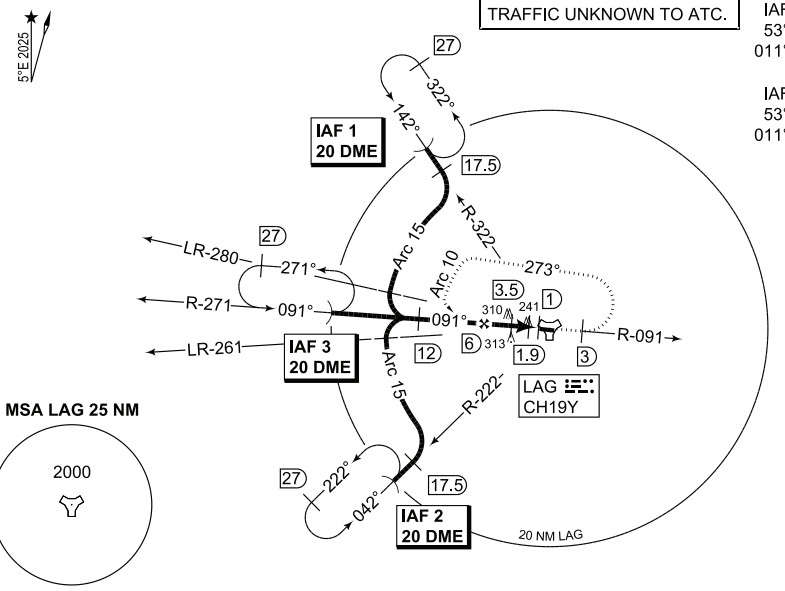
**NOTE:**
a) TIMING NOT AUTHORIZED FOR DEFINING THE MAPT.
b CIRCLING NOT AUTHORIZED NORTH OF RWY 09/27.
c HPMA

IFR PROFILES WITHIN AIRSPACE CLASS "E" WATCH OUT FOR VFR TRAFFIC UNKNOWN TO ATC.

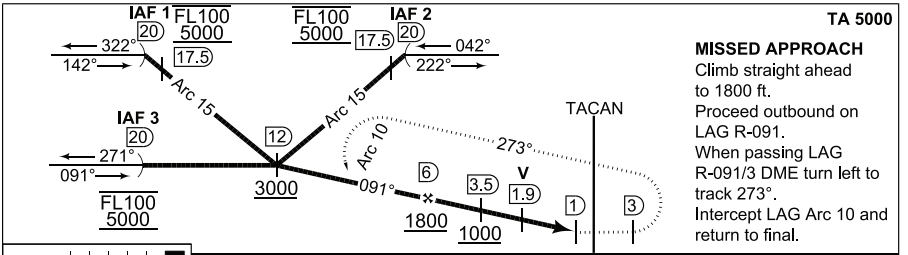
IAF 1
54°11.91'N
011°58.64'E

IAF 2
53°41.53'N
011°52.58'E

IAF 3
53°57.03'N
011°43.49'E




**EMERG SAFE ALT 100 NM 3500**




**TA 5000**

**MISSED APPROACH**
Climb straight ahead to 1800 ft.
Proceed outbound on LAG R-091.
When passing LAG R-091/3 DME turn left to track 273°.
Intercept LAG Arc 10 and return to final.

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| TACAN 09 | **500** - 1.2 360 (400-1.2/1.6) | | | **500** - 1.2 360 (400-1.2/2.0) | |
| MIPS b CIRCLING | **550** - 1.9 410 (500-1.9) | **640** - 2.3 500 (500-2.3) | **1180** - 4.9 1040 (1100-4.9) | | **1070** - 4.3 930 c (1000-4.3) |
| PAR 09 | **340** - 0.8 200 (200-0.8/1.2) | | | | |

CHANGE: MSA (042/25)

ZentrLuftOp 20 MAR 2025

**TACAN RWY 09**

53°55.09'N
012°16.76'E

**LAAGE (ETNL)**

**PANS-OPS**
**INSTRUMENT APPROACH CHART** AD ELEV 140

**ILS or LOC Y RWY 27**
**LAAGE (ETNL)**

| BREMEN RADAR | LAAGE RADAR | LAAGE TOWER | LAAGE ATIS |
|---|---|---|---|
| 259.825 124.175 | 376.400 133.105 | 336.400 118.430 | 134.605 |

| TACAN/LOCALIZER | APP COURSE | GS INTCP ALT | GS | DA | TDZE | ALS-LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| LAG CH19Y/ILAW 108.300 | 273° | 2000 | 3.0° / 5.2% | **See CAT** | 135 | 900 M | 8268 |

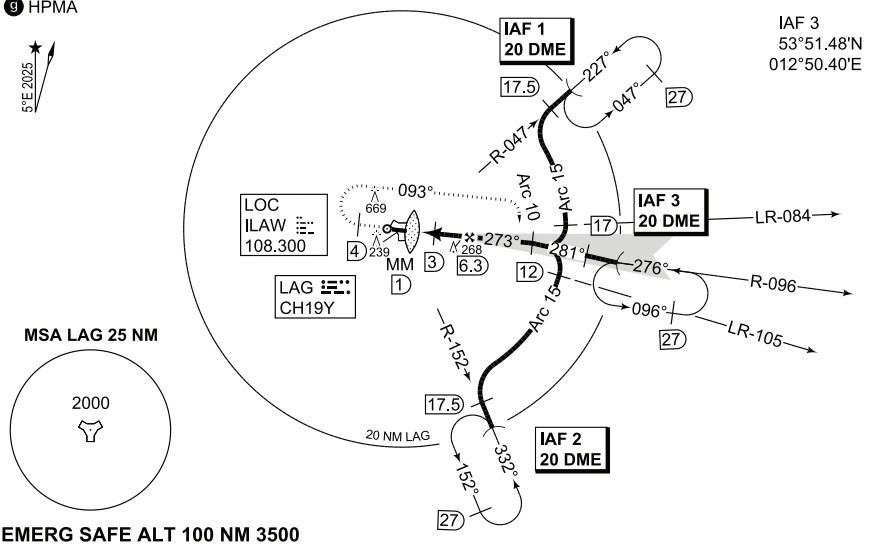
**NOTE:**
a) TIMING NOT AUTHORIZED FOR DEFINING THE MAPT.
b) NON STANDARD PROCEDURE (DEAD RECKONING INTERCEPTS LOC WITH 8.0° ONLY).
c) FOR MILITARY USE ONLY.
d) PAPI AND ILS GLIDEPATH DO NOT COINCIDE.
e) TACAN REQUIRED.
(f) CIRCLING NOT AUTHORIZED NORTH OF RWY 09/27.
(g) HPMA

IFR PROFILES WITHIN AIRSPACE CLASS "E" WATCH OUT FOR VFR TRAFFIC UNKNOWN TO ATC.

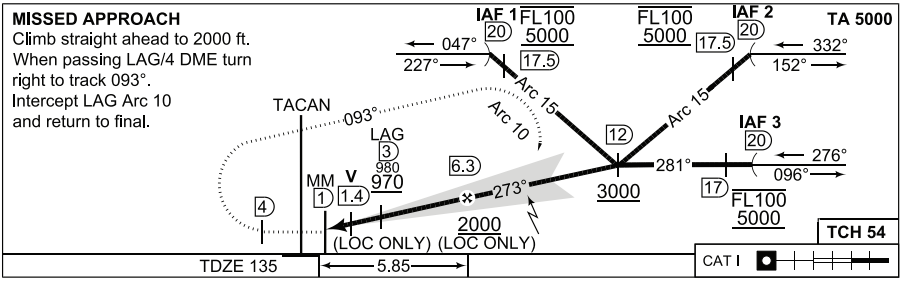
IAF 1
54°07.43'N
012°43.97'E

IAF 2
53°36.80'N
012°30.31'E

IAF 3
53°51.48'N
012°50.40'E




**MISSED APPROACH**
Climb straight ahead to 2000 ft.
When passing LAG/4 DME turn right to track 093°.
Intercept LAG Arc 10 and return to final.




| CHANGE: MSA (04/22/25) | MIPS | CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|---|---|
| | | ILS Y 27 | **335** - 0.8 200 (200-0.8/1.6) | | | | **NOT AUTHORIZED** |
| | | LOC Y 27 | **480** - 0.8 345 (400-0.8/1.6) | | **480** - 1.2 345 (400-1.2/1.6) | **480** - 1.2 345 (400-1.2/2.0) | **NOT AUTHORIZED** |
| | | (f) CIRCLING | **550** - 1.9 410 (500-1.9) | **640** - 2.3 500 (500-2.3) | **1180** - 4.9 1040 (1100-4.9) | | **1070** - 4.3 930 (g) (1000-4.3) |

ZentrLuftOp 20 MAR 2025

**ILS or LOC Y RWY 27**
53°55.09'N
012°16.76'E
**LAAGE (ETNL)**

**PANS-OPS**
**INSTRUMENT APPROACH CHART** AD ELEV 140

**ILS or LOC Z RWY 27**
**LAAGE (ETNL)**

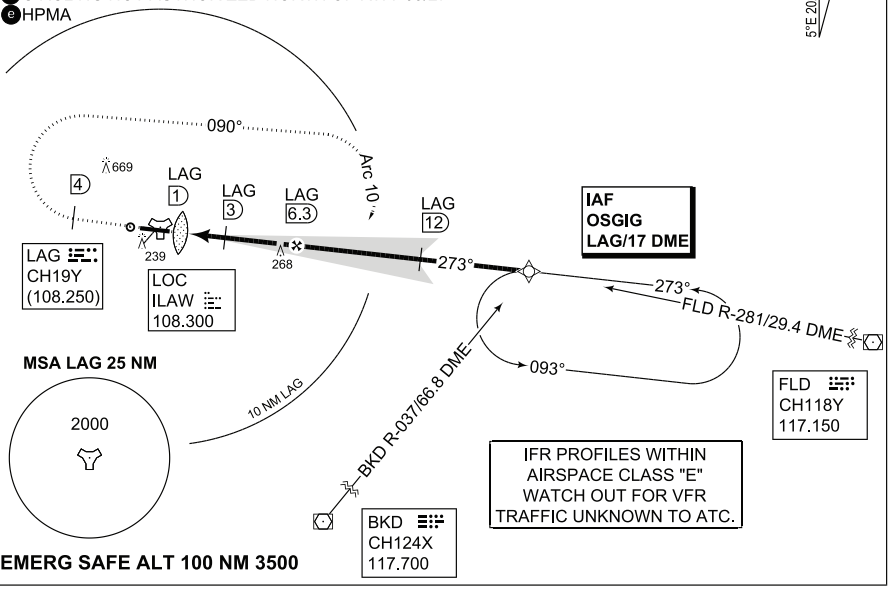
| BREMEN RADAR | LAAGE RADAR | LAAGE TOWER | LAAGE ATIS |
|---|---|---|---|
| 259.825 124.175 | 376.400 133.105 | 336.400 118.430 | 134.605 |

| TACAN/LOCALIZER | APP COURSE | GS INTCP ALT | GS | DA | TDZE | ALS-LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| LAG CH19Y/ILAW 108.300 | 273° | 2000 | 3.0° / 5.2% | **See CAT** | 135 | 900 M | 8268 |

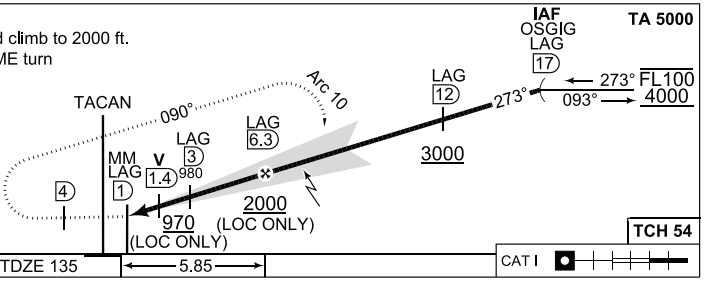
**NOTE:**
a) PAPI AND ILS GLIDEPATH DO NOT COINCIDE
b) DME REQUIRED.
c) RNAV REQUIRED FOR HOLDING, IN CASE OF LOST COM FOR NON-RNAV EQUIPPED ACFT DISREGARD ETA AND START APPROACH WITHOUT DELAY.
d CIRCLING NOT AUTHORIZED NORTH OF RWY 09/27.
e HPMA

IAF OSGIG
53°52.71'N
012°45.61'E

5°E 2025




**MISSED APPROACH**
Climb straight ahead and climb to 2000 ft.
When passing LAG/4 DME turn right to track 090°.
Intercept LAG Arc 10 and return to final.




| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| ILS Z 27 | **335** - 0.8 200 (200-0.8/1.6) | | | | **NOT AUTHORIZED** |
| LOC Z 27 | **480** - 0.8 345 (400-0.8/1.6) | | **480** - 1.2 345 (400-1.2/1.6) | **480** - 1.2 345 (400-1.2/2.0) | **NOT AUTHORIZED** |
| d CIRCLING | **550** - 1.9 410 (500-1.9) | **640** - 2.3 500 (500-2.3) | **1180** - 4.9 1040 (1100-4.9) | | **1070** - 4.3 930 e (1000-4.3) |

MIPS

CHANGE: MSA (042/25)

ZentrLuftOp 20 MAR 2025

**ILS or LOC Z RWY 27** 53°55.09'N 012°16.76'E **LAAGE (ETNL)**

**PANS-OPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 140

**TACAN RWY 27**
**LAAGE (ETNL)**

| BREMEN RADAR | LAAGE RADAR | LAAGE TOWER | LAAGE ATIS |
|---|---|---|---|
| 259.825 124.175 | 376.400 133.105 | 336.400 118.430 | 134.605 |

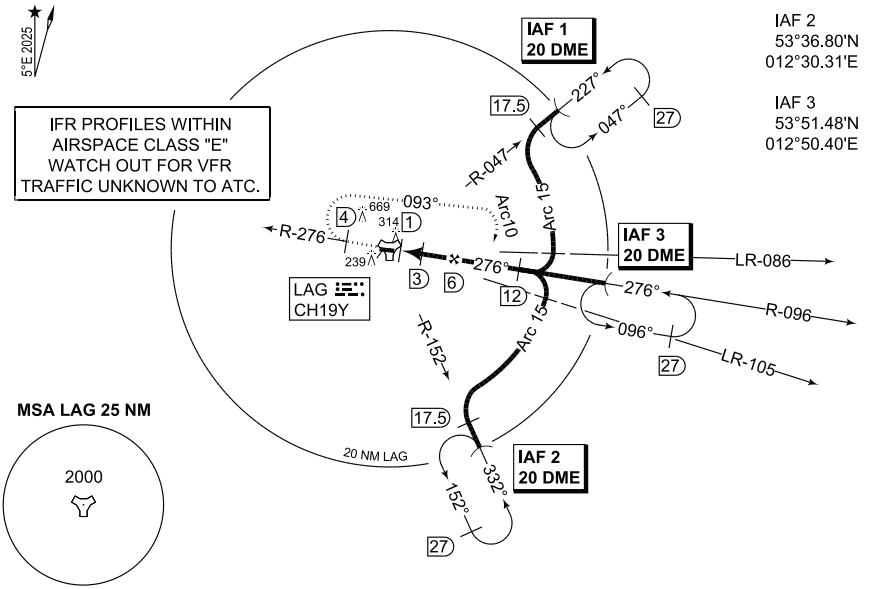
| TACAN | APP COURSE | FAF ALT | DESCENT GR | MDA | TDZE | ALS-LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| LAG CH19Y | 276° | 1900 | 5.2% | **530** | 135 | 900 M | 8268 |

**NOTE:**
a) TIMING NOT AUTHORIZED FOR DEFINING THE MAPT.
b CIRCLING NOT AUTHORIZED NORTH OF RWY 09/27.
c HPMA

IAF 1
54°07.43'N
012°43.97'E

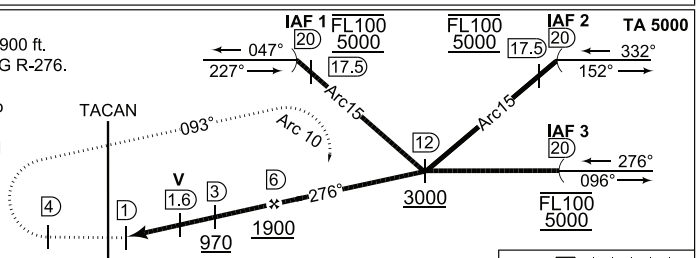
IAF 2
53°36.80'N
012°30.31'E

IAF 3
53°51.48'N
012°50.40'E




**EMERG SAFE ALT 100 NM 3500**

**MISSED APPROACH**
Climb straight ahead to 1900 ft.
Proceed outbound on LAG R-276.
When passing LAG
R-276/4 DME turn right to
track 093°.
Intercept LAG Arc 10 and
return to final.




| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| TACAN 27 | **530** - 0.8 395 (400-0.8/1.6) | | **530** - 1.2 395 (400-1.2/1.6) | **530** - 1.2 395 (400-1.2/2.0) | **530** - 1.6 395 (400-1.6/2.4) |
| b CIRCLING | **550** - 1.9 410 (500-1.9) | **640** - 2.3 500 (500-2.3) | **1180** - 4.9 1040 (1100-4.9) | | **1070** - 4.3 930 c (1000-4.3) |
| PAR 27 | **335** - 0.8 200 (200-0.8/1.2) | | | | |

MIPS

CHANGE: MSA (042/25)

ZentrLuftOp 20 MAR 2025

**TACAN RWY 27**

53°55.09'N
012°16.76'E

**LAAGE (ETNL)**

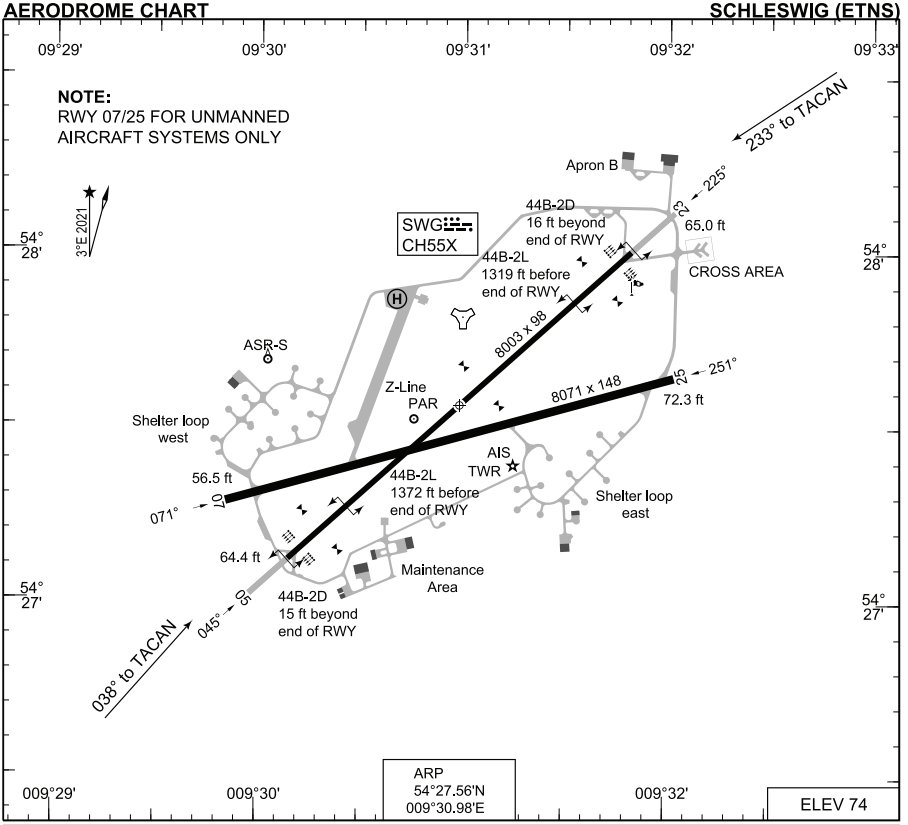
# SCHLESWIG (ETNS)

AERODROME CHART

TACAN RWY 05

TACAN RWY 23

SID NS 105-123




| RWY | PCN | TORA | ASDA | TODA | LDA | PAPI | | TDZE | THR PSN |
|---|---|---|---|---|---|---|---|---|---|
| 05 | 54 F/B/W/T | 8003 | 8003 | 8003 | 8003 | 3.0° | | 70 | 54°27.12'N 009°30.15'E |
| 23 | 54 F/B/W/T | 8003 | 8003 | 8003 | 8003 | 3.0° | | 69 | 54°28.00'N 009°31.82'E |

SCHLESWIG TOWER 246.500 135.155
SCHLESWIG RADAR 376.825 399.525 388.525 142.050 SSR 4230 - 4237

| | PROC. CRITERIA | RWY | GS | TCH | OTCH | RPI | CAT | MINIMA CRITERIA | MINIMA |
|---|---|---|---|---|---|---|---|---|---|
| PAR | TERPS | 05 | 3.0° | 40 | | 750 | ABCDE | TERPS | 270 - 0.8 200 (200-0.8/1.2) |
| | TERPS | 23 | 3.0° | 38 | | 750 | ABCDE | TERPS | 269 - 0.8 200 (200-0.8/1.2) |

CHANGE: RWY DIMENSION (054/25)

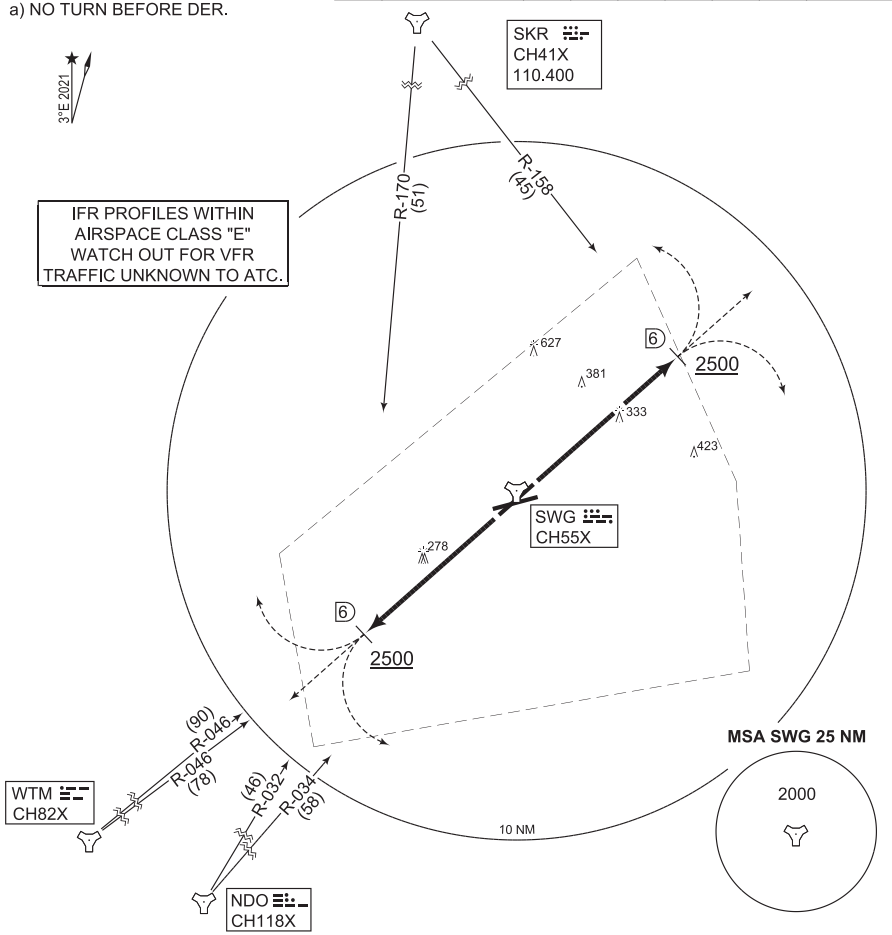
ZentrLuftOp 20 MAR 2025

**OPERATIONAL INSTRUMENT DEPARTURE CHART** AD ELEV 74 **SCHLESWIG (ETNS)**

| BREMEN RADAR | SCHLESWIG RADAR | SCHLESWIG TOWER |
|---|---|---|
| 398.000 124.075 | 376.825 142.050 | 246.500 135.155 |

| RWY | from - to | 60 | 120 | 180 | 240 | 300 | 360 | Reason |
|---|---|---|---|---|---|---|---|---|
| 05 | DER - 3500 ft | 437 | 874 | 1311 | 1748 | 2185 | 2622 | ATC |
| 23 | DER - 3500 ft | 468 | 936 | 1404 | 1872 | 2340 | 2808 | ATC |

**NOTE:**
a) NO TURN BEFORE DER.




**TA 5000** **EMERG SAFE ALT 100 NM 2300**

| | |
|---|---|
| NS 105<br>(RWY 05) | - Climb straight ahead to 2500 ft<br>- Continue as cleared by ATC<br>CLIMBOUT RESTRICTION: Reach 2500 ft within 6 DME<br>- INITIAL CLIMB: 4000 ft |
| NS 123<br>(RWY 23) | - Climb straight ahead to 2500 ft<br>- Continue as cleared by ATC<br>CLIMBOUT RESTRICTION: Reach 2500 ft within 6 DME<br>- INITIAL CLIMB: 4000 ft |

CHANGE: TACAN SKR (414/23)

ZentrLuftOp 22 FEB 2024

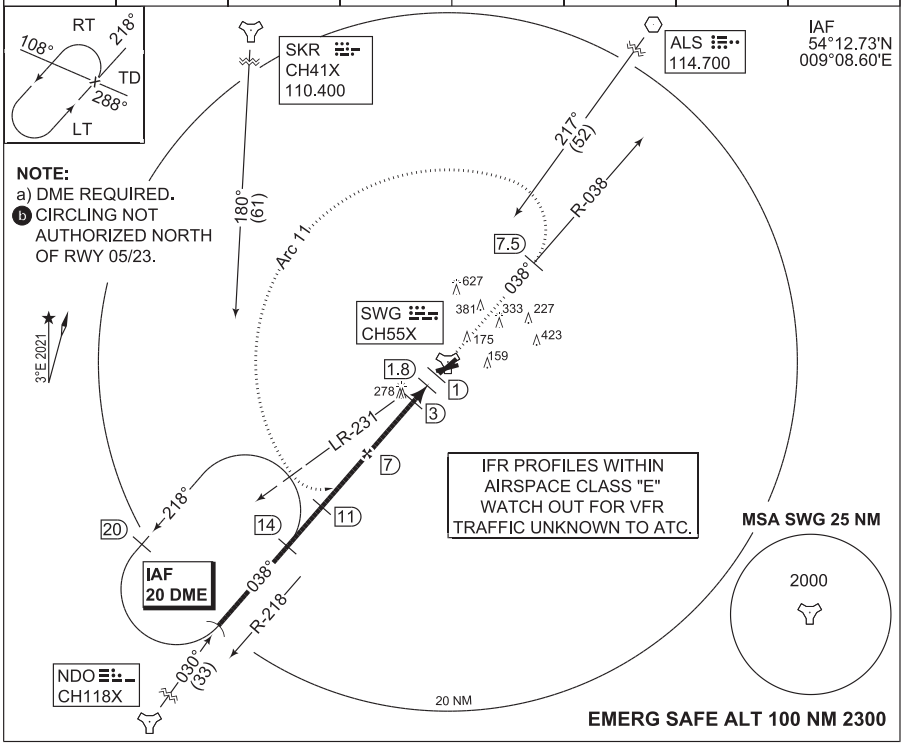
**PANS-OPS**
**INSTRUMENT APPROACH CHART**

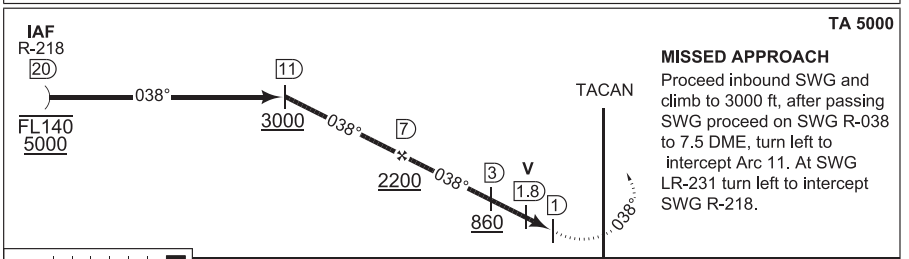
AD ELEV 74

**TACAN RWY 05**
**SCHLESWIG (ETNS)**

| BREMEN RADAR | SCHLESWIG RADAR | SCHLESWIG TOWER |
|---|---|---|
| 398.000 124.075 | 376.825 142.050 | 246.500 135.155 |

| TACAN | APP COURSE | FAF ALT | DESCENT GR | MDA | TDZE | ALS-LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| SWG CH55X | 038° | 2200 | 3.2° / 5.7% | **420** | 70 | 900 M | 8003 |




| | CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|---|
| MIPS | TACAN 05 | **420** - 0.8 350 (400-0.8/1.6) | | **420** - 1.2 350 (400-1.2/1.6) | **420** - 1.2 350 (400-1.2/2.0) | |
| | PAR 05 | **270** - 0.8 200 (200-0.8/1.2) GS 3.0° | | | | |
| | b CIRCLING | **530** - 2.1 456 (500-2.1) | **580** - 2.4 506 (600-2.4) | **790** - 3.3 716 (800-3.3) | **NOT AUTHORIZED** | |

CHANGE: TACAN SKR (414/23)

ZentrLuftOp 22 FEB 2024

**TACAN RWY 05**

54°27.56'N
009°30.98'E

**SCHLESWIG (ETNS)**

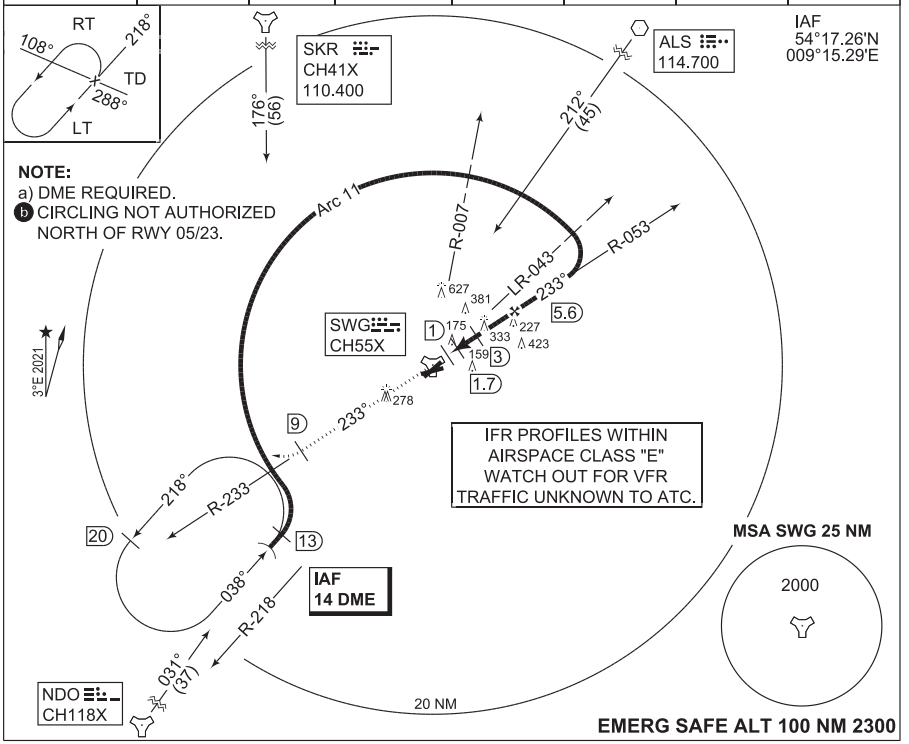
**PANS-OPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 74

**TACAN RWY 23**
**SCHLESWIG (ETNS)**

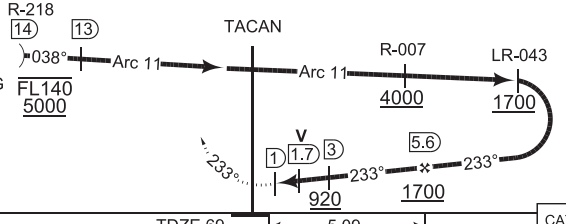
| BREMEN RADAR | SCHLESWIG RADAR | SCHLESWIG TOWER |
|---|---|---|
| 398.000 124.075 | 376.825 142.050 | 246.500 135.155 |

| TACAN | APP COURSE | FAF ALT | DESCENT GR | MDA | TDZE | ALS-LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| SWG CH55X | 233° | 1700 | 3.03° / 5.3% | **490** | 69 | 900 M | 8003 |




**MISSED APPROACH**
Proceed inbound SWG and climb to 4000 ft, after passing SWG proceed on SWG R-233. At SWG 9 DME, turn right to intercept Arc 11.

**TA 5000**




TDZE 69 — 5.09 — CAT I

| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| MIPS TACAN 23 | **490** - 0.8 421 (500-0.8/1.6) | | **490** - 1.2 421 (500-1.2/2.0) | | **490** - 1.6 421 (500-1.6/2.4) |
| MIPS PAR 23 | **269** - 0.8 200 (200-0.8/1.2) GS 3.0° | | | | |
| MIPS b CIRCLING | **530** - 2.1 456 (500-2.1) | **580** - 2.4 506 (600-2.4) | **790** - 3.3 716 (800-3.3) | **NOT AUTHORIZED** | |

CHANGE: TACAN SKR (414/23)

ZentrLuftOp 22 FEB 2024

# WITTMUNDHAFEN (ETNT)

AERODROME CHART

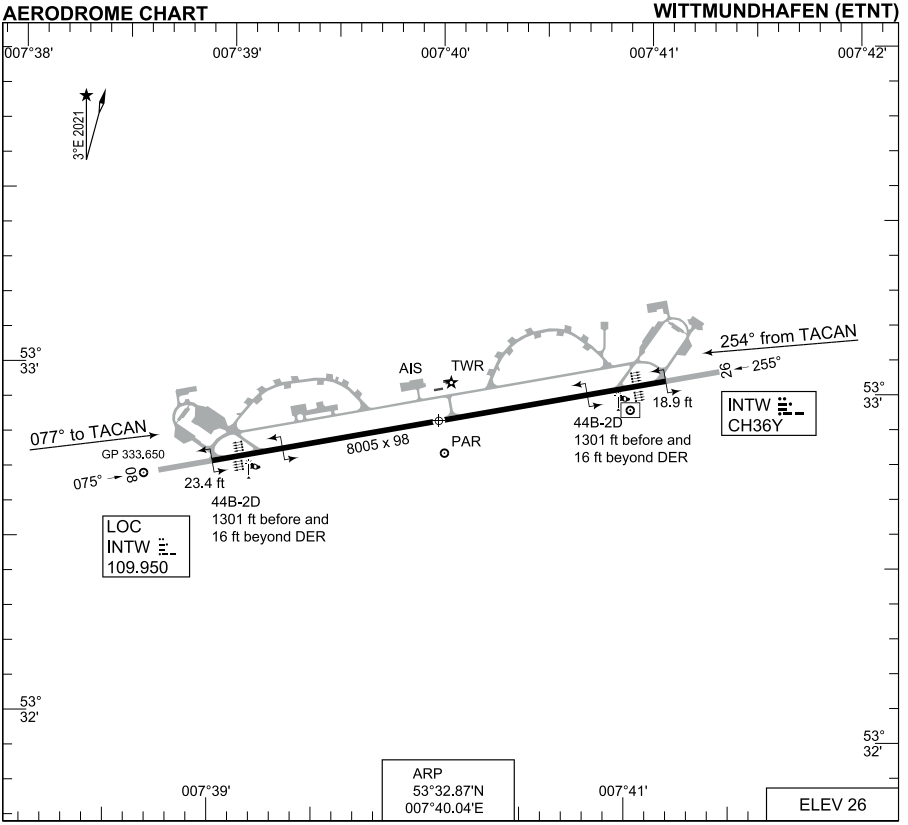
TACAN RWY 08

ILS or LOC RWY 26

TACAN RWY 26

SID NT 108-126

SID NT 208




| RWY | LCN | TORA | ASDA | TODA | LDA | PAPI | | TDZE | THR PSN |
|---|---|---|---|---|---|---|---|---|---|
| 08 | 50 | 8005 | 8005 | 8005 | 8005 | 3.0° | | 26 | 53°32.74'N 007°38.96'E |
| 26 | 50 | 8005 | 8005 | 8005 | 8005 | 3.0° | | 23 | 53°33.01'N 007°41.12'E |

WITTMUND TOWER 247.950 118.730 122.100
WITTMUND RADAR 298.250 123.600 131.015 SSR 4210 - 4217

| | PROC. CRITERIA | RWY | GS | TCH | OTCH | RPI | CAT | MINIMA CRITERIA | MINIMA |
|---|---|---|---|---|---|---|---|---|---|
| PAR | TERPS | 08 | 3.0° | 32 | | 584 | ABCDE | TERPS | 226 - 0.8 200 (200-0.8) |
| | TERPS | 26 | 3.0° | 32 | | 590 | ABCDE | TERPS | 223 - 0.8 200 (200-0.8) |

CHANGE: EDITORIAL (005/23)

ZentrLuftOp 23 MAR 2023

# OPERATIONAL INSTRUMENT DEPARTURE CHART

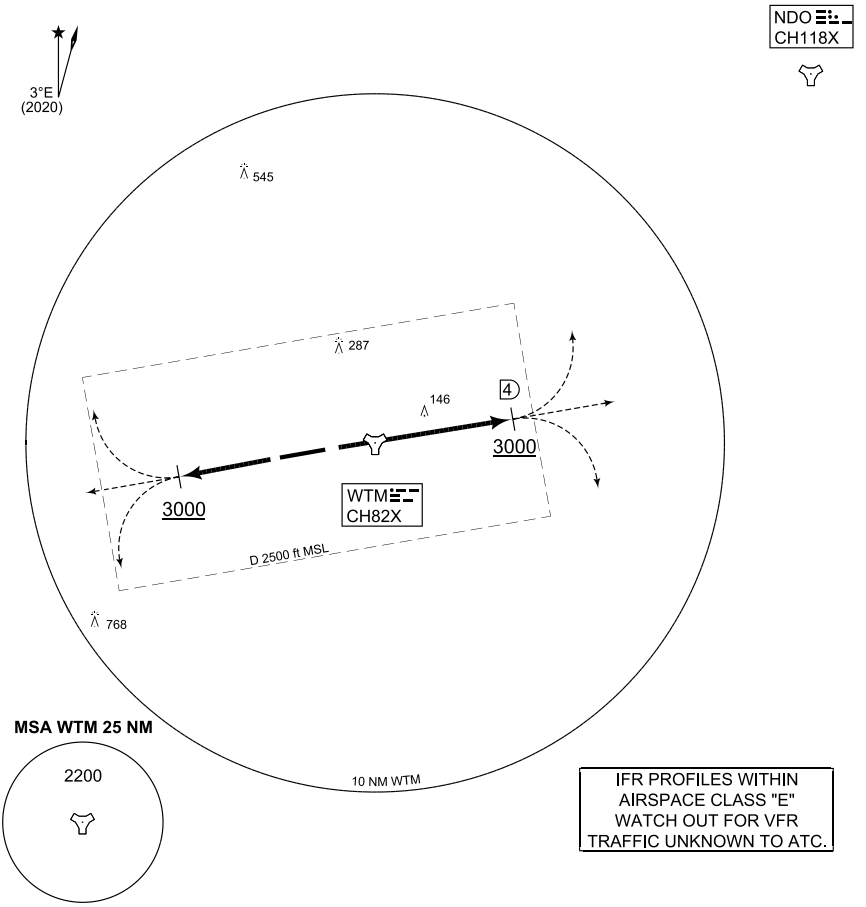
AD ELEV 26

## WITTMUNDHAFEN (ETNT)

| WITTMUND TOWER | WITTMUND RADAR | BREMEN RADAR |
|---|---|---|
| 247.950 118.730 | 298.250 123.600 131.015 | 299.100 120.225 |

| RWY | from - to | 60 | 120 | 180 | 240 | 300 | 360 | Reason |
|---|---|---|---|---|---|---|---|---|
| **26** | DER - 3000 ft | 698 | 1396 | 2094 | 2792 | 3490 | 4188 | ATC |
| **08** | DER - 3000 ft | 545 | 1090 | 1635 | 2180 | 2725 | 3270 | ATC |

**NOTE:**
NT 108 (RWY 08) FOR HOMEBASED AIRCRAFT ONLY



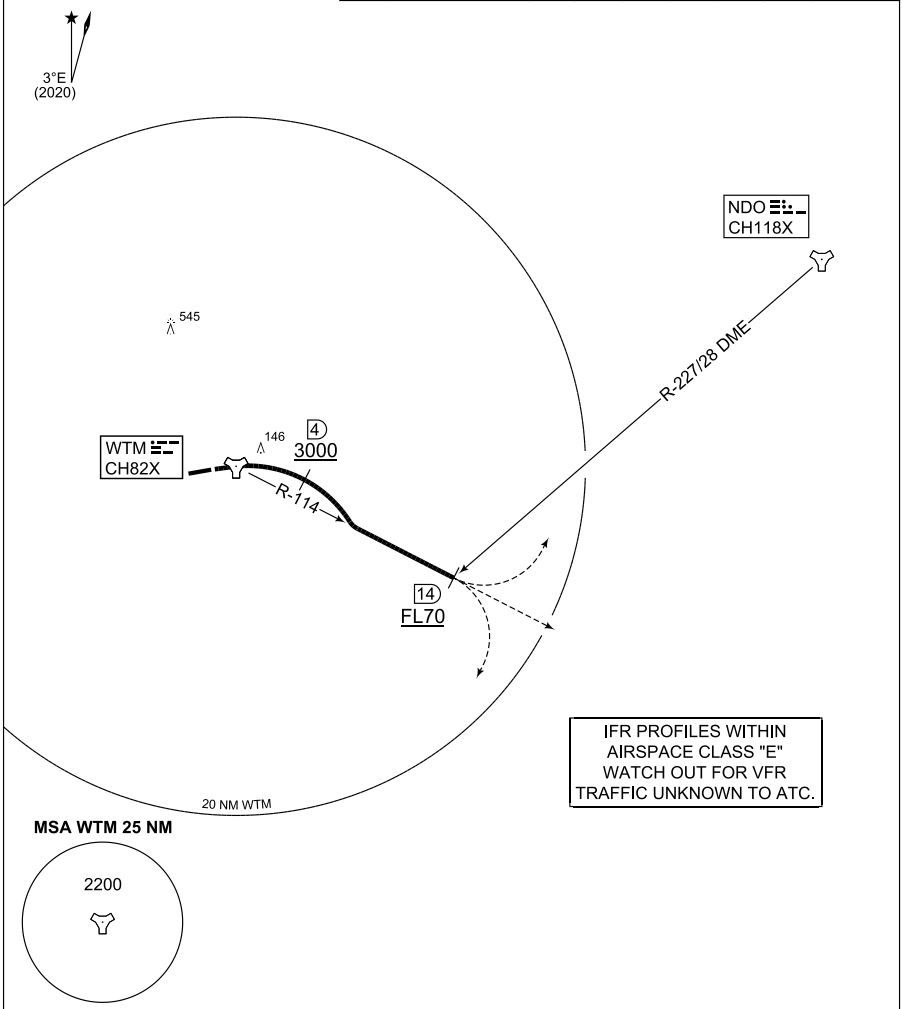

**EMERG SAFE ALT 100 NM 2700** **TA 5000**

| | |
|---|---|
| NT 108<br>(RWY 08) | - Climb straight ahead to WTM/4 DME<br>- Continue as cleared by ATC<br>CLIMBOUT RESTRICTION: Reach 3000 ft within 4 DME |
| NT 126<br>(RWY 26) | - Climb straight until passing 3000 ft MSL<br>- Continue as cleared by ATC<br>CLIMBOUT RESTRICTION: Reach 3000 ft within 7 DME |

CHANGE: OBST (005/23)
ZentrLuftOp 23 MAR 2023

| WITTMUND TOWER | WITTMUND RADAR | BREMEN RADAR |
|---|---|---|
| 247.950 118.730 | 298.250 123.600 131.015 | 299.100 120.225 |

| RWY | from - to | 60 | 120 | 180 | 240 | 300 | 360 | Reason |
|---|---|---|---|---|---|---|---|---|
| **08** | DER - 3000 ft | 545 | 1090 | 1635 | 2180 | 2725 | 3270 | ATC |
| **08** | 3000 ft - FL70 | 400 | 800 | 1200 | 1600 | 2000 | 2400 | ATC |




**EMERG SAFE ALT 100 NM 2700** **TA 5000**

| | |
|---|---|
| NT 208<br>(RWY 08) | CLIMBOUT RESTRICTION: Pass WTM/4 DME at 3000 ft or above<br>- Climb straight ahead to WTM<br>- At WTM turn right to intercept WTM R-114<br>- Pass WTM R-114/14 DME at FL070 or as cleared by ATC |

CHANGE: OBST (005/23)

ZentrLuftOp 23 MAR 2023

**PANS-OPS**
**INSTRUMENT APPROACH CHART**

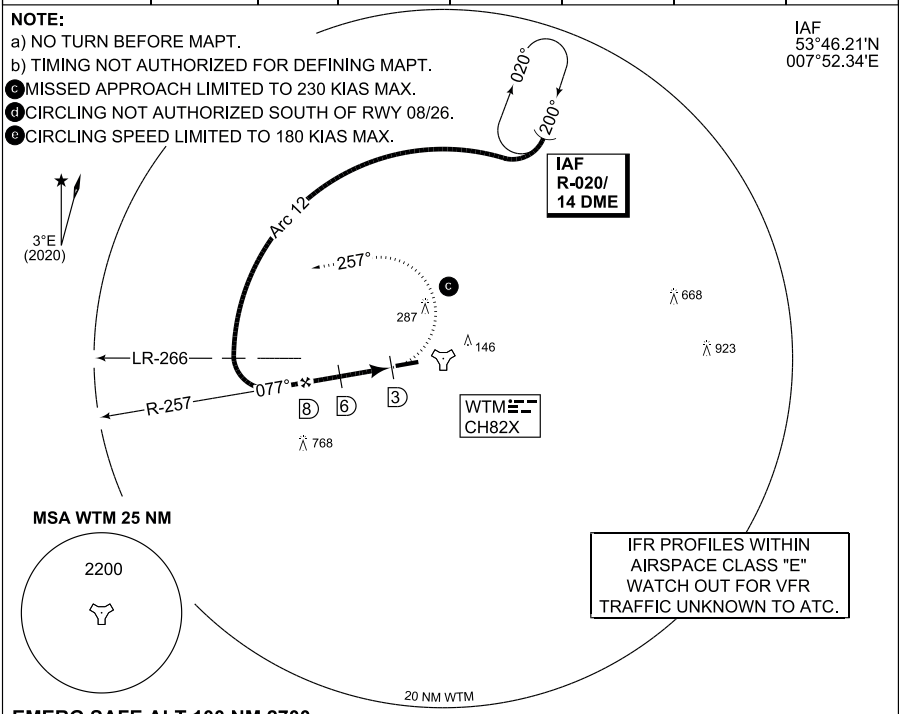
AD ELEV 26

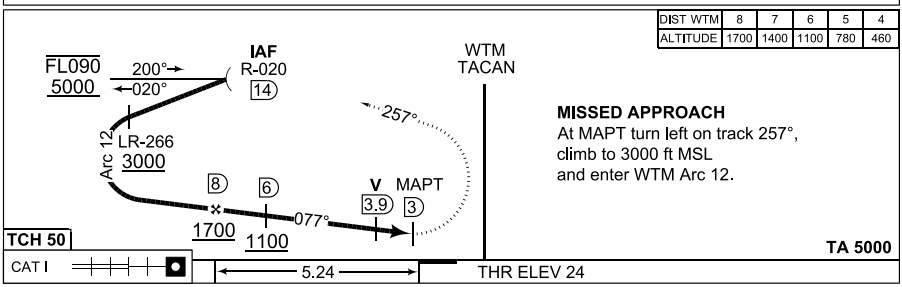
**TACAN RWY 08**
**WITTMUNDHAFEN (ETNT)**

| BREMEN RADAR | WITTMUND RADAR | WITTMUND TOWER |
|---|---|---|
| 299.100 120.225 | 298.250 123.600 131.015 | 247.950 118.730 122.100 |

| TACAN | APP COURSE | FAF ALT | DESCENT GR | MDA | THR ELEV | ALS-LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| WTM CH82X | 077° | 1700 | 5.2% | **420** | 24 | 900 M | 8005 |

**NOTE:**
a) NO TURN BEFORE MAPT.
b) TIMING NOT AUTHORIZED FOR DEFINING MAPT.
c) MISSED APPROACH LIMITED TO 230 KIAS MAX.
d) CIRCLING NOT AUTHORIZED SOUTH OF RWY 08/26.
e) CIRCLING SPEED LIMITED TO 180 KIAS MAX.




| CATEGORY | A | B | C | D |
|---|---|---|---|---|
| TACAN 08 | **420** - 1.1 396 (400-1.1/1.5) | | **420** - 1.1 396 (400-1.1/1.8) | |
| d e CIRCLING | **490** - 2.2 464 (500-2.2) | **560** - 2.4 534 (600-2.4) | **1020** - 4.5 994 (1000-4.5) | |
| PAR 08 | **226** - 0.8 200 (200-0.8/1.2) GS 3.0° | | | |

MIPS

CHANGE: OBST (005/23)

ZentrLuftOp 23 MAR 2023

**TACAN RWY 08**

53°32.87'N
007°40.04'E

**WITTMUNDHAFEN (ETNT)**

**PANS-OPS**
**INSTRUMENT APPROACH CHART**

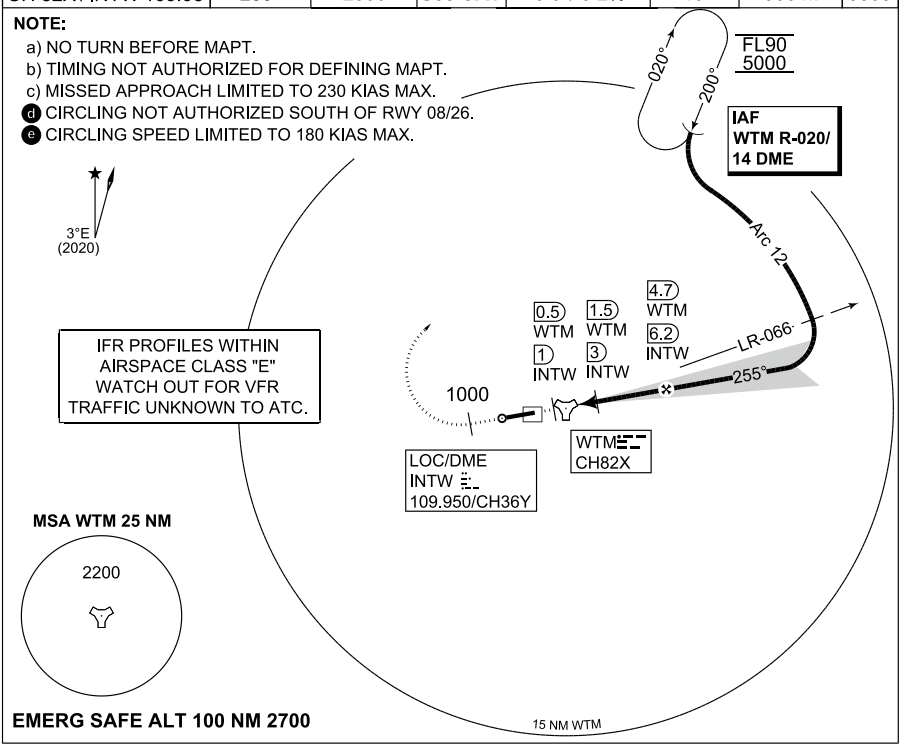
AD ELEV 26

**ILS or LOC RWY 26**
**WITTMUNDHAFEN (ETNT)**

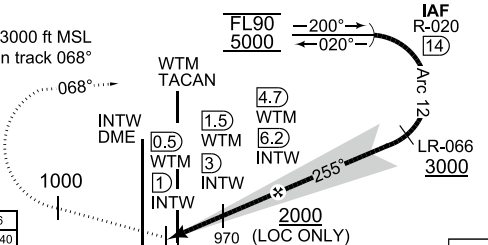
| BREMEN RADAR | WITTMUND RADAR | WITTMUND TOWER |
|---|---|---|
| 299.100 120.225 | 298.250 123.600 131.015 | 247.950 118.730 122.100 |

| TACAN / LOCALIZER | APP COURSE | GS INTCP ALT | DA | DESCENT GR | THR ELEV | ALS-LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| CH 82X / INTW 109.95 | 255° | 2000 | **See CAT** | 3.0°/ 5.2% | 19 | 900 M | 8005 |

**NOTE:**
a) NO TURN BEFORE MAPT.
b) TIMING NOT AUTHORIZED FOR DEFINING MAPT.
c) MISSED APPROACH LIMITED TO 230 KIAS MAX.
d CIRCLING NOT AUTHORIZED SOUTH OF RWY 08/26.
e CIRCLING SPEED LIMITED TO 180 KIAS MAX.




**MISSED APPROACH**
At MAPT climb on RWY track to 3000 ft MSL when passing 1000 ft turn right on track 068° to intercept WTM Arc 12 and return to final.




| DIST THR | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| ALTITUDE | 350 | 670 | 990 | 1310 | 1620 | 1940 |

| CATEGORY | A | B | C | D |
|---|---|---|---|---|
| ILS 26 | **219** - 0.8 550 200 (200-0.8/1.2) | | | |
| LOC 26 | **490** - 1.5 471 (500-1.5) | | **490** - 1.5 471 (500-1.5/2.2) | |
| d e CIRCLING | **490** - 2.2 464 (500-2.2) | **560** - 2.4 534 (600-2.4) | **1020** - 4.5 994 (1000-4.5) | |

MIPS

CHANGE: OBST, ILS GLIDE SLOPE DEPICTION (005/23)

ZentrLuftOp 23 MAR 2023

**ILS or LOC RWY 26**

53°32.87'N
007°40.04'E

**WITTMUNDHAFEN (ETNT)**

**PANS-OPS**
**INSTRUMENT APPROACH CHART**

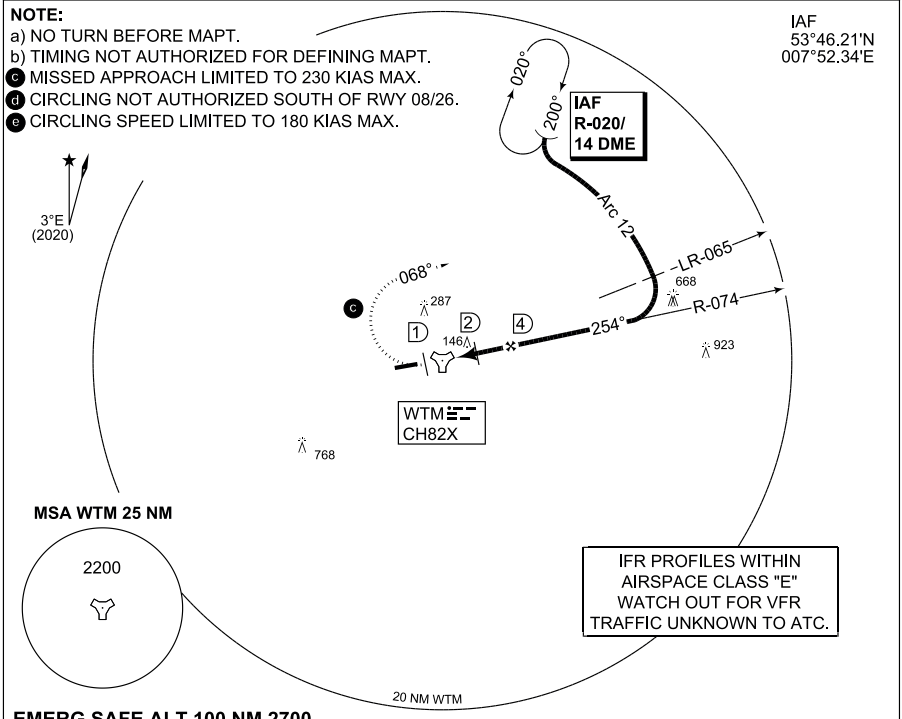
AD ELEV 26

**TACAN RWY 26**
**WITTMUNDHAFEN (ETNT)**

| BREMEN RADAR | WITTMUND RADAR | WITTMUND TOWER |
|---|---|---|
| 299.100 120.225 | 298.250 123.600 131.015 | 247.950 118.730 122.100 |

| TACAN | APP COURSE | FAF ALT | DESCENT GR | MDA | THR ELEV | ALS-LENGTH | LDA |
|---|---|---|---|---|---|---|---|
| WTM CH82X | 254° | 1800 | 5.2% | **400** | 19 | 900 M | 8005 |

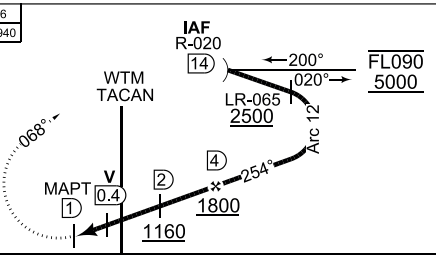
**NOTE:**
a) NO TURN BEFORE MAPT.
b) TIMING NOT AUTHORIZED FOR DEFINING MAPT.
c) MISSED APPROACH LIMITED TO 230 KIAS MAX.
d) CIRCLING NOT AUTHORIZED SOUTH OF RWY 08/26.
e) CIRCLING SPEED LIMITED TO 180 KIAS MAX.




| DIST THR | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| ALTITUDE | 350 | 670 | 990 | 1310 | 1620 | 1940 |

**TA 5000**

**MISSED APPROACH**
At 1 DME turn right climbing to 3000 ft on track 068° and intercept Arc 12.




**TCH 50**

THR ELEV 19 — 5.44 — CAT I

| CATEGORY | A | B | C | D |
|---|---|---|---|---|
| TACAN 26 | **400** - 1.0 377 (400-1.0/1.5) | | **400** - 1.0 377 (400-1.0/1.7) | |
| MIPS d e CIRCLING | **490** - 2.2 464 (500-2.2) | **560** - 2.4 534 (600-2.4) | **1020** - 4.5 994 (1000-4.5) | |
| PAR 26 | **223** - 0.8 200 (200-0.8/1.2) GS 3.0° | | | |

CHANGE: OBST (005/23)

ZentrLuftOp 23 MAR 2023

# RONNEBY AB (ESDF)

AERODROME CHART

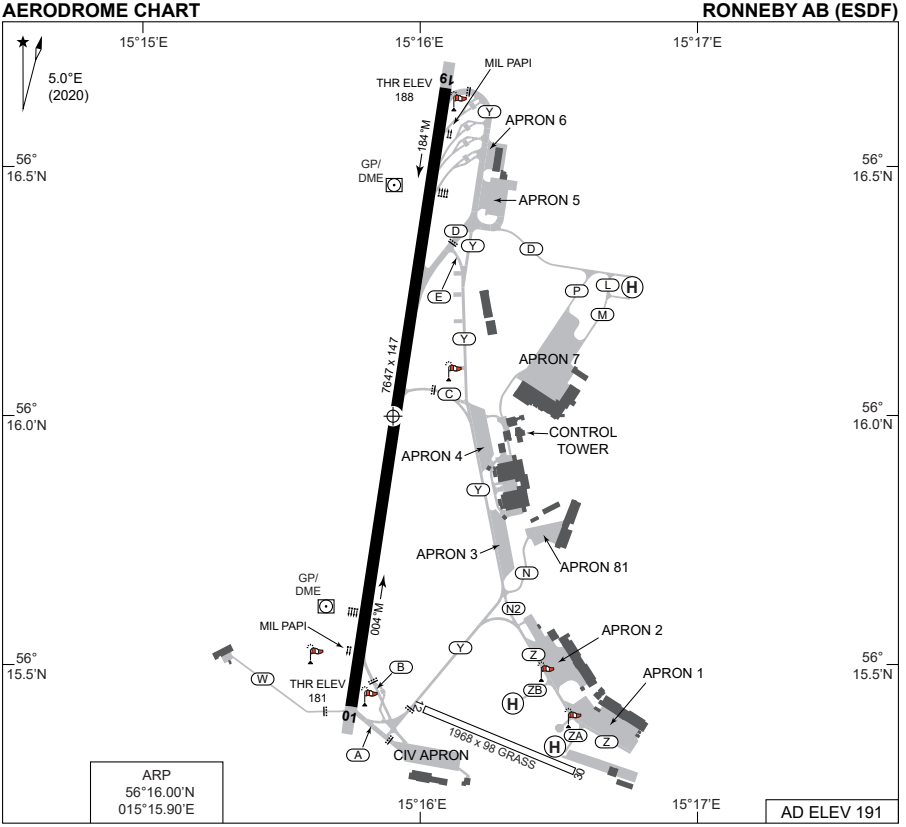
ILS or LOC RWY 01

ILS or LOC RWY 19

PAR RWY 01

PAR RWY 19

WP LIST




| RWY | PCN | TORA | TODA | ASDA | LDA | | PAPI | ALS | THR ELEV | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 50 | 7647 | 7647 | 7647 | 7647 | | 3.0° | CAT I | 181 | 56°15.42'N 015°15.75'E |
| 19 | 50 | 7647 | 7647 | 7647 | 7647 | | 3.0° | CAT I | 188 | 56°16.66'N 015°16.09'E |

RONNEBY TOWER: 119.200
RONNEBY GROUND: 121.850
ATIS: N/A

**MILITARY EQUIPMENT**
MIL PAPI RWY 01/19 GP 2,86° (5%).
Arresting nets beyond ends of RWY 01,19 raised outside ATS ordinary hours.
Marker boards: On both sides of ends and 600m before ends of RWY 01, 19.

**OMNIDIRECTIONAL DEPARTURES**
RWY 01:
CLIMB STRAIGHT AHEAD TO MNM TURNING ALT 700 FT.

RWY 19:
CLIMB STRAIGHT AHEAD TO MNM TURNING ALT 600 FT.

**STANDARD DEPARTURE MIL JET IFR AND VFR**
Applicable to take-off / touch and go landing /go.
Note: Follow ATS clearance after standard departure.
Standard departure will not be read out in ATC clearance.

**Standard departure RWY 01:**
Climb straight ahead with a climb angle of 3° - 5° to Turning Point (TP01). At TP01 turn right to HDG 030° and continue climb with a minimum climb angle of 5°. Continue on HDG 030° to distance 5.4 NM from ARP thereafter follow ATC clearance.
Definition of TP 01: Runway end 0.7 NM from ARP.

**Standard departure RWY 19:**
Climb straight ahead with a climb angle of 3° - 5° to Turning Point (TP19). At TP19 turn right to HDG 220° and continue climb with a minimum climb angle of 5°. Continue on HDG 220° to distance 5.4 NM from ARP thereafter follow ATC clearance.
Definition of TP 19: Railroad distance 1.0 NM from ARP.

MIL JET: Speed 380 kt during departure in TMA, unless otherwise instructed.

CHANGES: NEW AERODROME.

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 191

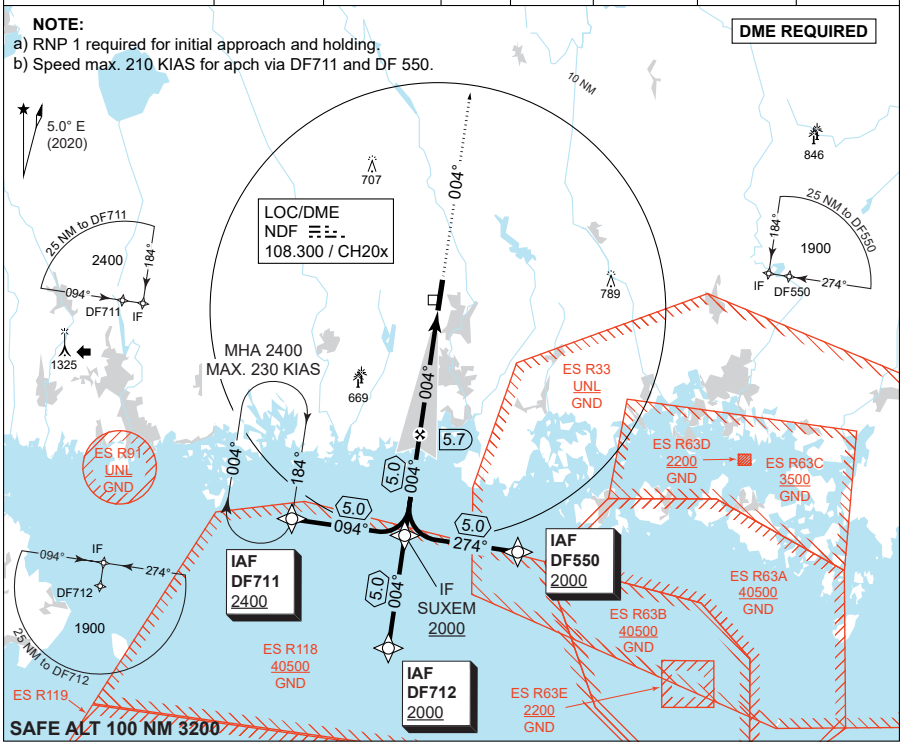
**ILS or LOC RWY 01**
**RONNEBY AB (ESDF)**

| RONNEBY APPROACH | RONNEBY TOWER | GROUND |
|---|---|---|
| 128.450 129.900 | 119.200 | 121.850 |

| LOC / DME | APP COURSE | GS INTCPT ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| NDF 108.300 / CH 20x | 004° | 2000 | 3.00° | **381** | 181 | 900 M | 7647 FT |

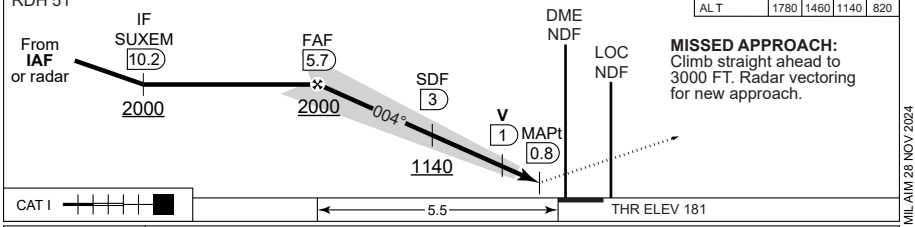
**NOTE:**
a) RNP 1 required for initial approach and holding.
b) Speed max. 210 KIAS for apch via DF711 and DF 550.

**DME REQUIRED**




**TA 5000**
GS 3.00°
RDH 51

| CDFA: 3.00° / 5.24% | | | | |
|---|---|---|---|---|
| DME NDF | 5 | 4 | 3 | 2 |
| DIST THR | 4.8 | 3.8 | 2.8 | 1.8 |
| AL T | 1780 | 1460 | 1140 | 820 |




**MISSED APPROACH:**
Climb straight ahead to 3000 FT. Radar vectoring for new approach.

CHANGES: NEW PROCEDURE.

| MIPS | CATEGORY | D |
|---|---|---|
| | S-ILS 01 | **381** - 550 200 (200-0.8/1.2) |
| | S-LOC 01 | **540** - 900 359 (400-0.9/1.6) |
| | CIRCLING | **1070** - 3.6 879 (900-3.6) |

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

**MIPS**

**INSTRUMENT APPROACH CHART**

AD ELEV 191

**PAR RWY 01**

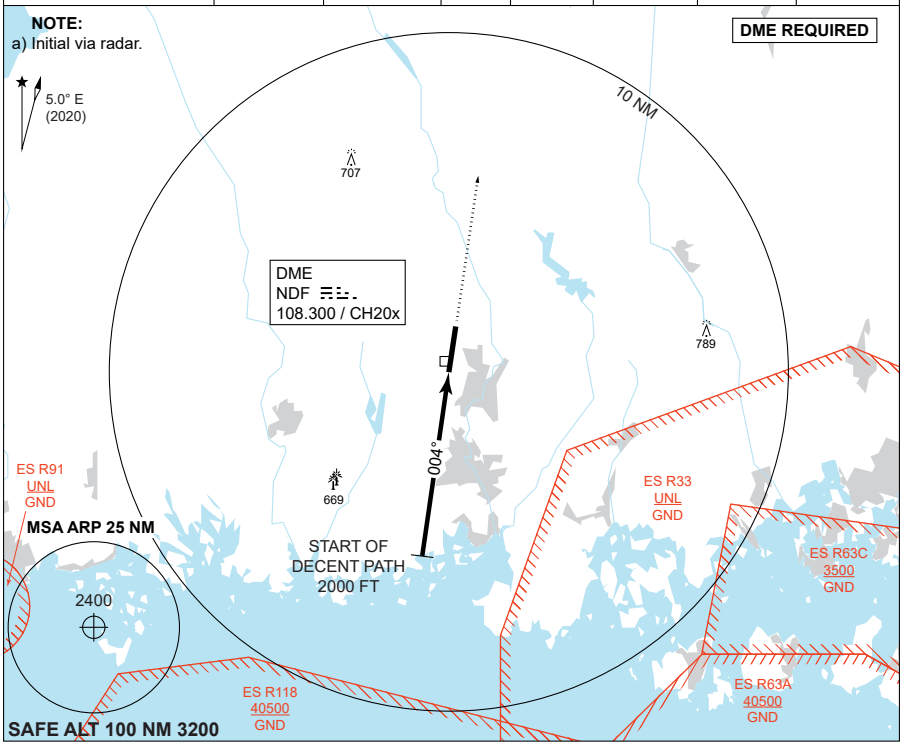
**RONNEBY AB (ESDF)**

| RONNEBY APPROACH | RONNEBY PRECISION (PAR) | RONNEBY TOWER | GROUND |
|---|---|---|---|
| 128.450 129.900 | 134.100 118.000 | 119.200 | 121.850 |

| DME | APP COURSE | GS INTCPT ALT | PAR GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| NDF 108.300 / CH 20x | 004° | 2000 | 3.00° | **411** | 181 | 900 M | 7647 FT |

**NOTE:**
a) Initial via radar.

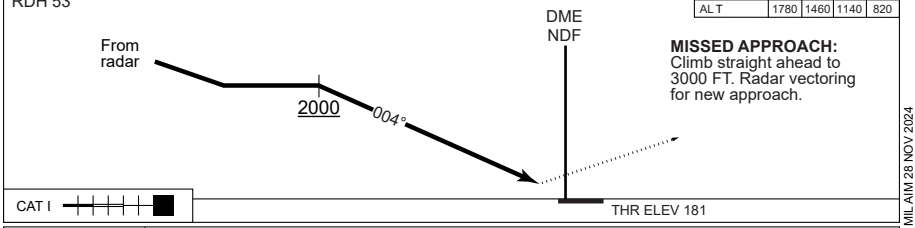
**DME REQUIRED**




**TA 5000**
GS 3.00°
RDH 53

**CDFA: 3.00° / 5.24%**

| DME NDF | 5 | 4 | 3 | 2 |
|---|---|---|---|---|
| DIST THR | 4.8 | 3.8 | 2.8 | 1.8 |
| AL T | 1780 | 1460 | 1140 | 820 |




**MISSED APPROACH:**
Climb straight ahead to 3000 FT. Radar vectoring for new approach.

CHANGES: NEW PROCEDURE.

| MIPS | CATEGORY | D |
|---|---|---|
| | S-PAR 01 | **411** - 550 230 (300-0.8/1.2) |
| | CIRCLING | **1070** - 3.6 879 (900-3.6) |

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

**PAR RWY 01**

56°16.00'N
015°15.90'E

**RONNEBY AB (ESDF)**

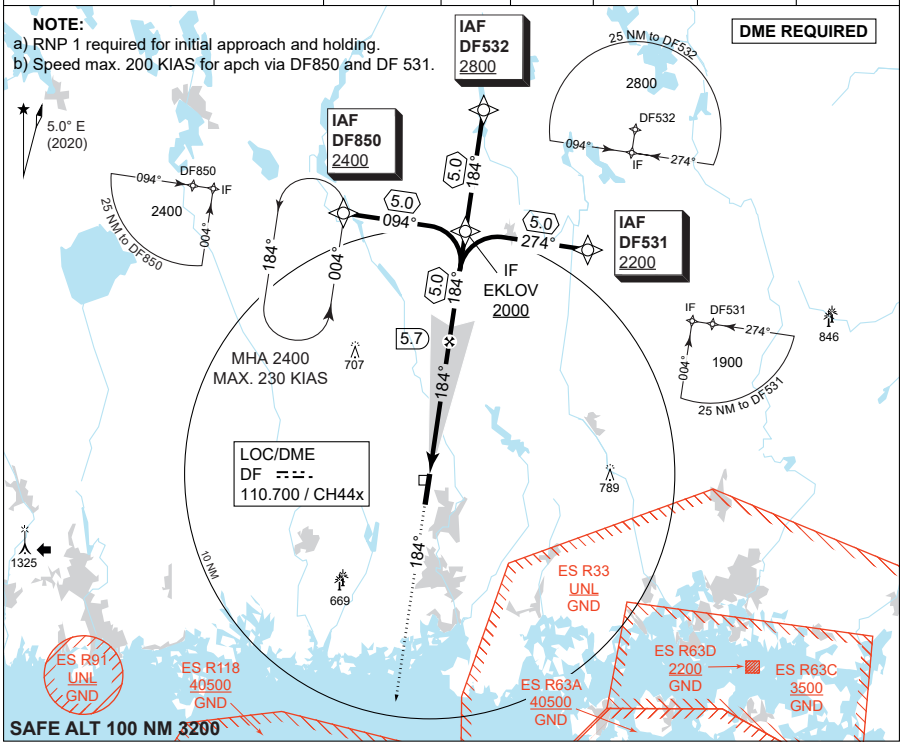
**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 191

**ILS or LOC RWY 19**
**RONNEBY AB (ESDF)**

| RONNEBY APPROACH | RONNEBY TOWER | GROUND |
|---|---|---|
| 128.450 129.900 | 119.200 | 121.850 |

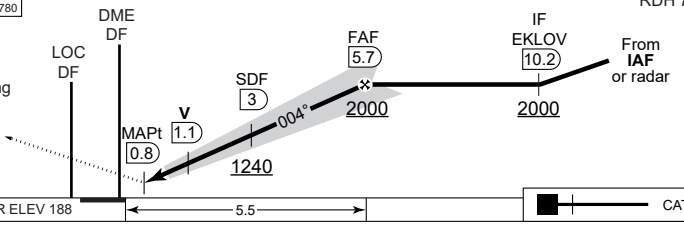
| LOC / DME | APP COURSE | GS INTCPT ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| DF 110.700 / CH 44x | 184° | 2000 | 3.00° | **388** | 188 | 900 M | 7647 FT |




| CDFA: 3.00° / 5.24% | | | | |
|---|---|---|---|---|
| DME DF | 2 | 3 | 4 | 5 |
| DIST THR | 1.8 | 2.8 | 3.8 | 4.8 |
| ALT | 830 | 1150 | 1470 | 1780 |

**TA 5000**
GS 3.00°
RDH 72

**MISSED APPROACH:**
Climb straight ahead to 3000 FT. Radar vectoring for new approach.




| CATEGORY | D |
|---|---|
| S-ILS 19 | **388** - 550 200 (200-0.8/1.2) |
| S-LOC 19 | **610** - 1200 419 (500-1.2/1.9) |
| CIRCLING | **1070** - 3.6 879 (900-3.6) |

CHANGES: NEW PROCEDURE.

MIPS

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

**MIPS**

**INSTRUMENT APPROACH CHART**

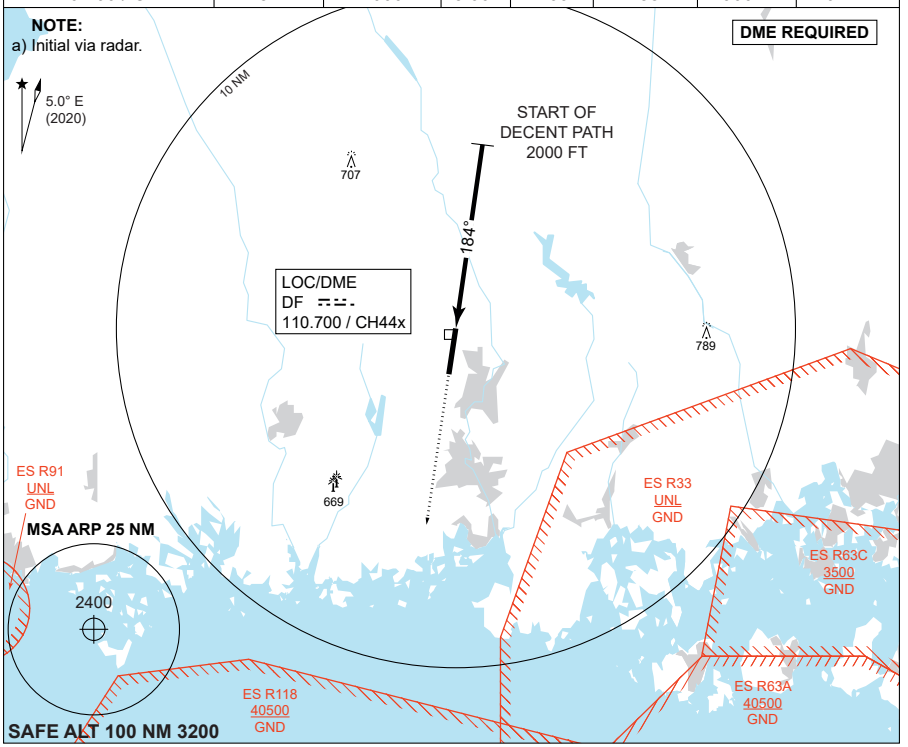
AD ELEV 191

**PAR RWY 19**

**RONNEBY AB (ESDF)**

| RONNEBY APPROACH | RONNEBY PRECISION (PAR) | RONNEBY TOWER | GROUND |
|---|---|---|---|
| 128.450 129.900 | 134.100 118.000 | 119.200 | 121.850 |

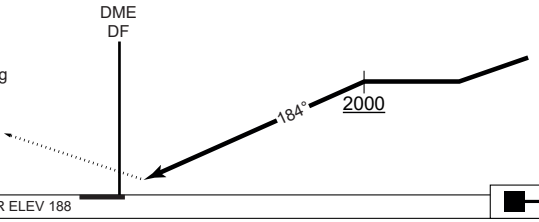
| DME | APP COURSE | GS INTCPT ALT | PAR GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| DF 110.700 / CH 44x | 184° | 2000 | 3.00° | **463** | 188 | 900 M | 7647 FT |




| CDFA: 3.00° / 5.24% | | | | |
|---|---|---|---|---|
| DME DF | 2 | 3 | 4 | 5 |
| DIST THR | 1.8 | 2.8 | 3.8 | 4.8 |
| AL T | 820 | 1140 | 1460 | 1780 |

**TA 5000**
GS 3.00°
RDH 69

**MISSED APPROACH:**
Climb straight ahead to 3000 FT. Radar vectoring for new approach.




| CATEGORY | D |
|---|---|
| S-PAR 19 | **463** - 600 275 (300-0.8/1.3) |
| CIRCLING | **1070** - 3.6 879 (900-3.6) |

CHANGES: NEW PROCEDURE.

MIPS

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

**Ronneby AB (ESDF) waypoint coordinates:**

| | | CODING | DISPLAY |
|---|---|---|---|
| DF531 | IAF | 56 25 46.0N 015 27 43.1E | 56 25.767N 015 27.718E |
| DF532 | IAF | 56 31 27.5N 015 20 11.0E | 56 31.458N 015 20.183E |
| DF550 | IAF | 56 04 47.6N 015 21 52.6E | 56 04.793N 015 21.877E |
| DF711 | IAF | 56 06 17.4N 015 04 13.6E | 56 06.290N 015 04.227E |
| DF712 | IAF | 56 00 36.8N 015 11 43.2E | 56 00.613N 015 11.720E |
| DF850 | IAF | 56 27 16.6N 015 09 54.6E | 56 27.277N 015 09.910E |
| | | | |
| RWY01 | THR | 56 15 24.95N 015 15 45.17E | 56 15.416N 015 15.753E |
| RWY19 | THR | 56 16 39.45N 015 16 05.63E | 56 16.658N 015 16.094E |

CHANGES: NEW CHART.

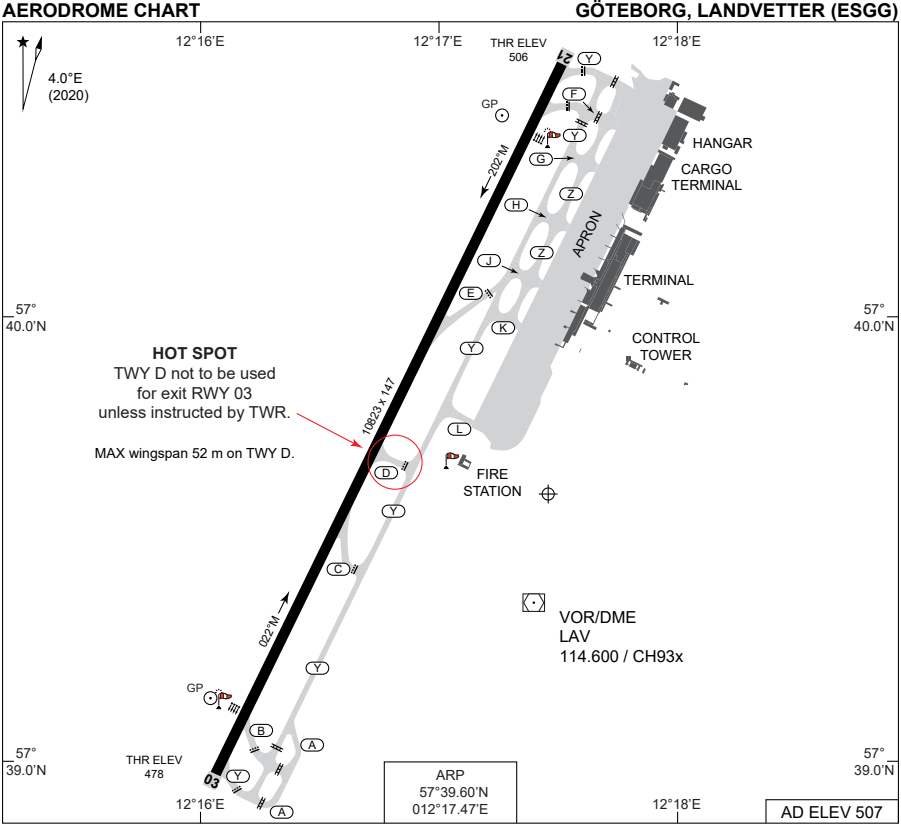
AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

# GÖTEBORG, LANDVETTER (ESGG)

**AERODROME CHART**

**ILS or LOC RWY 03**

**ILS or LOC RWY 21**




| RWY | PCN | TORA | TODA | ASDA | LDA | | PAPI | ALS | THR ELEV | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|
| 03 | 81 | 10823 | 10823 | 10823 | 10823 | | 3.0° | CAT III | 478 | 57°38.97'N 012°16.06'E |
| 21 | 81 | 10823 | 10823 | 10823 | 10823 | | 3.0° | CAT III | 506 | 57°40.57'N 012°17.52'E |

| | | |
|---|---|---|
| CLEARANCE DELIVERY | 121.680 | |
| LANDVETTER TOWER: | 118.605 | (Primary) |
| | 123.100 | (SAR) |
| LANDVETTER GROUND: | 121.905 | |
| ATIS: | 118.380 | |
| | 114.600 | (LAV VOR) |

Call GROUND for Start-up, push-back and taxi instructions.

**OMNIDIRECTIONAL DEPARTURES**

RWY 03:
CLIMB STRAIGHT AHEAD TO MNM TURNING ALT 1000 FT.

RWY 21:
CLIMB STRAIGHT AHEAD TO MNM TURNING ALT 900 FT.

RNAV STARS and SIDs are not published in RDAF FLIP.

**RNAV STARs at GÖTEBORG/Landvetter**
RNAV 1 is required for these RNAV STARs. Operators receiving clearance via RNAV STAR and are unable flying RNAV 1, shall inform ATC by using phraseology "UNABLE RNAV STAR". ATC will then provide radar vectors.

**RNAV SIDs at GÖTEBORG/Landvetter**
All RNAV SIDS are based on RNAV 1. Operators receiving clearance via RNAV SID and are unable flying RNAV 1, shall inform ATC by using phraseology "UNABLE RNAV SID".

**NOISE ABATEMENT PROCEDURES**

Over the central parts of Göteborg aircraft should not be operated below 2000 ft AMSL except when necessary for take-off or landing.

Other noise sensitive areas to be avoided are shown in AIP Sweden (AD 2 ESGG).

CHANGES: NEW CHART.

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

**MIPS**

**INSTRUMENT APPROACH CHART**

AD ELEV 507

**ILS or LOC RWY 03**

**GÖTEBORG, LANDVETTER (ESGG)**

| GÖTEBORG APPROACH | LANDVETTER ATIS | LANDVETTER TOWER | LANDVETTER GROUND |
|---|---|---|---|
| 124.680 | 118.380 114.600 | 118.605 | 121.905 |

| LOC | DME | APP COURSE | GS INCPT ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|---|
| SGG 110.300 | LAV 114.600 | 022° | 3000 FT | 3.00° | **678** | 478 | 900 M | 10823 |

**NOTE:**

a) Join GG708 via RNAV STAR or via radar vectors, max 45° intercept angle.

b) Max. 200 KIAS.

c) Min. 160 KIAS until OM.

**DME REQUIRED**

4.0°E (2020)

1476

LOC SGG 110.300

VOR/DME LAV 114.600 / CH93x

1.3

4.3

8.4

022°

10 NM

ES R62 1800 GND

**MSA ARP 25 NM**

15 NM

2500

3200

IF GG708 b 11.4

57°29.35'N 012°07.36'E

**MISSED APPROACH COM FAILURE:**
Climb straight ahead to 3000 FT AMSL, turn left and join LAV DME-ARC 13 and continue on LAV DME-ARC 13 until LAV R-216. Turn left (not below 3000 ft AMSL) for a normal instrument approach.

**SAFE ALT 100 NM 3200**

**TA 5000**
GS 3.00°
RDH 54

**CDFA: 3.00° / 5.24%**

| DME LAV | 8 | 7 | 6 | 5 | 4 | 3 | 2 |
|---|---|---|---|---|---|---|---|
| DIST THR | 7.3 | 6.3 | 5.3 | 4.3 | 3.3 | 2.3 | 1.3 |
| ALT | 2860 | 2540 | 2220 | 1900 | 1580 | 1260 | 940 |

From RNAV STAR or radar

IF GG708 11.4

3000

FAF 8.4

3000

022°

SDF OM 4.3

1685

1680

V

MAPt MM 1.6 1.3

VOR/DME LAV

LOC SGG

**MISSED APPROACH:**
Climb straight ahead to 3000 FT. Radar vectoring for new approach.

CAT III

7.7

THR ELEV 478

CHANGES: NEW PROCEDURE.

MIPS

| CATEGORY | D |
|---|---|
| S-ILS 03 | **678** - 550 200 (200-0.8/1.2) |
| S-LOC 03 | **820** - 900 342 (400-0.9/1.6) |
| CIRCLING | N/A |



AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

**MIPS**

**INSTRUMENT APPROACH CHART** | AD ELEV 507 | **ILS or LOC RWY 21**

**GÖTEBORG, LANDVETTER (ESGG)**

| GÖTEBORG APPROACH | LANDVETTER ATIS | LANDVETTER TOWER | LANDVETTER GROUND |
|---|---|---|---|
| 124.680 | 118.380 114.600 | 118.605 | 121.905 |

| LOC | DME | APP COURSE | GS INCPT ALT | GS | DA | THR ELEV | ALS LENGTH | LDA |
|---|---|---|---|---|---|---|---|---|
| NGG 108.500 | LAV 114.600 | 202° | 2500 FT | 3.00° | **706** | 506 | 900 M | 10823 |

**NOTE:**

a) Join GG404 via RNAV STAR or via radar vectors, max 45° intercept angle.

b) Max. 200 KIAS.

c) Min. 160 KIAS until OM.

4.0°E (2020)

IF GG404 b 10.3

57°48.79'N 012°25.04'E

**DME REQUIRED**

7.2

202°

4.8

1.7

1476

LOC NGG 108.500

VOR/DME LAV 114.600 / CH93x

ES R62 1800 GND

**MSA ARP 25 NM**

15 NM

10 NM

2500

3200

**SAFE ALT 100 NM 3200**

**MISSED APPROACH COM FAILURE:**
Climb straight ahead to 3000 ft AMSL, turn right and join LAV DME-ARC 12 and continue on LAV DME-ARC 12 until LAV R-006. Turn right (not below 2500 ft AMSL) for a normal instrument approach.

| CDFA: 3.00° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME LAV | 3 | 4 | 5 | 6 | 7 |
| DIST THR | 1.8 | 2.9 | 3.9 | 4.9 | 5.9 |
| ALT | 1150 | 1470 | 1790 | 2110 | 2430 |

**TA 5000**

GS 3.00°

RDH 50

LOC NGG

VOR/DME LAV

FAF 7.2

IF GG708 10.3

From RNAV STAR or radar

OM 4.8

202°

2500

2500

MAPt MM 1.7

V 2

1730

**MISSED APPROACH:**
Climb straight ahead to 3000 FT. Radar vectoring for new approach.

THR ELEV 506

6.1

CAT III

CHANGES: NEW PROCEDURE.

**MIPS**

| CATEGORY | D |
|---|---|
| S-ILS 21 | **706** - 550 200 (200-0.8/1.2) |
| S-LOC 21 | **830** - 800 323 (400-0.8/1.5) |
| CIRCLING | N/A |

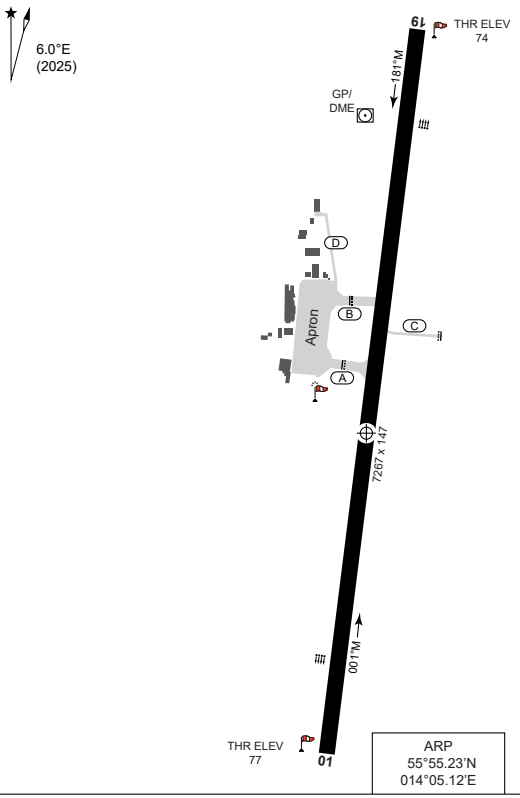


AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

# KRISTIANSTAD (ESMK)

**AERODROME CHART**

**ILS or LOC RWY 19**




| RWY | PCN | TORA | TODA | ASDA | LDA | | PAPI | ALS | THR ELEV | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 45 | 7267 | 8087 | 7267 | 7267 | | 3.00° | NALS | 77 | 55°54.71'N 014°05.00'E |
| 19 | 45 | 7267 | 8415 | 7267 | 7267 | | 3.25° | CAT I | 74 | 55°55.89'N 014°05.26'E |

KRISTIANSTAD TOWER: 129.355

**REMARK:** Electronic Flashing System lights to RWY 19 (870-330 m before THR) and crossbar.

**OMNIDIRECTIONAL DEPARTURES:**

RWY 01
CLIMB STRAIGHT AHEAD TO MNM TURNING ALT 500 FT AMSL.

RWY 19
CLIMB STRAIGHT AHEAD WITH MNM 230 FT/NM (3.8%) TO MNM TURNING ALT 1000 FT AMSL.

**NOISE ABATEMENT PROCEDURES:**

Overflying the community of Everöd should be avoided.

CHANGES: NEW CHART.

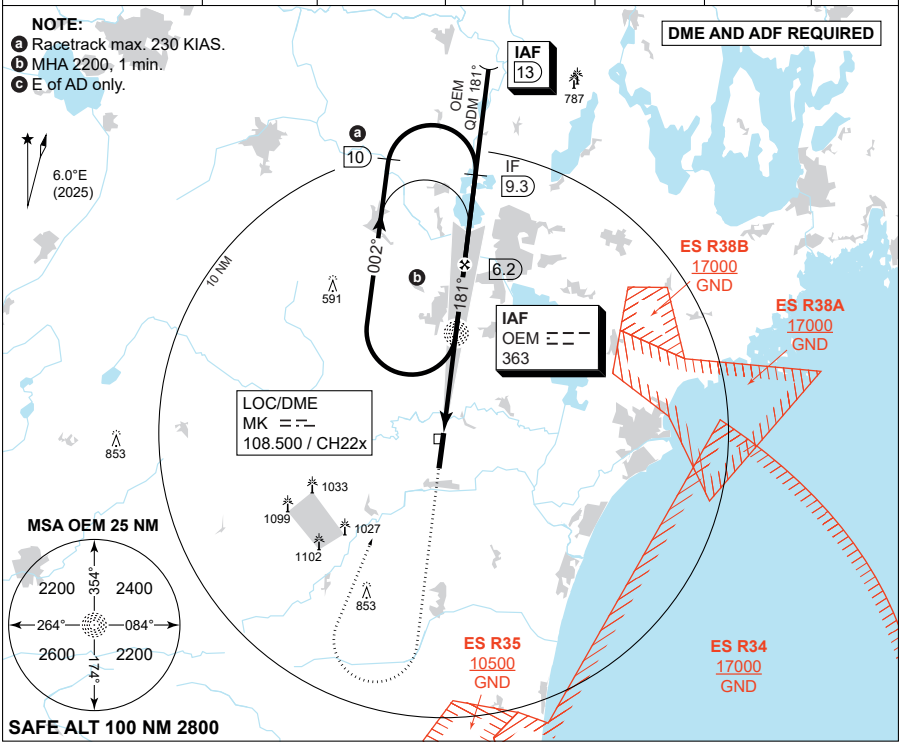
AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

AD ELEV 77



KRISTIANSTAD TOWER
129.355

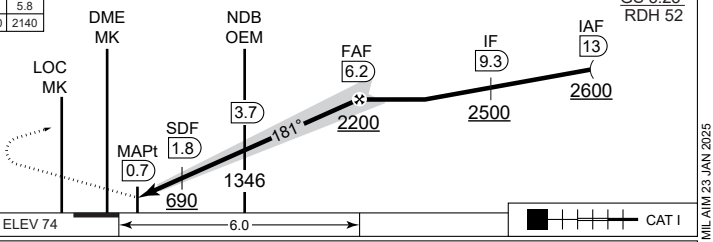
| LOC / DME | APP COURSE | GS INCPT ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| MK 108.500 / CH22x | 182° | 2200 FT | 3.25° | **274** | 74 | 900 M | 7267 |




| CDFA: 3.25° / 5.7% | | | | | |
|---|---|---|---|---|---|
| DME ID | 2 | 3 | 4 | 5 | 6 |
| DIST THR | 1.8 | 2.8 | 3.8 | 4.8 | 5.8 |
| ALT | 750 | 1100 | 1450 | 1790 | 2140 |

TA 5000
GS 3.25°
RDH 52

**MISSED APPROACH:**
Climb straight ahead to 2500 FT. Turn right to OEM (Max. 205 KIAS) and join holding.




| CATEGORY | D |
|---|---|
| S-ILS 19 | **274** - 550 200 (200-0.8/1.2) |
| S-LOC 19 | **410** - 800 333 (400-0.8/1.5) |
| CIRCLING | **1500** - 3.6 1423 (1500-3.6) |
| CIRCLING c | **940** - 3.6 863 (900-3.6) |

CHANGES: TITLE CORRECTED.

MIPS



55°55.23'N
014°05.12'E



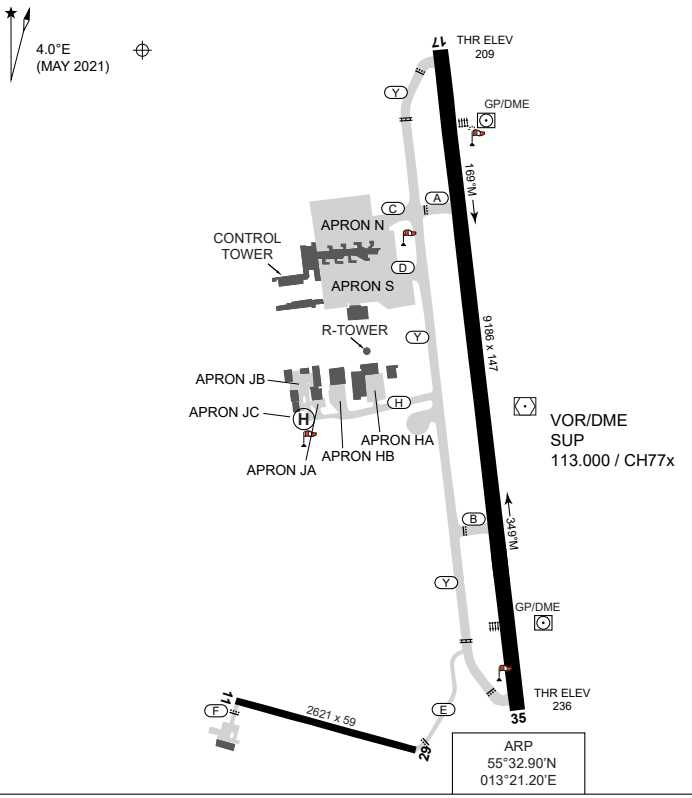
AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

# MALMO (ESMS)

**AERODROME CHART**

**ILS or LOC RWY 17**

**ILS or LOC RWY 35**




| RWY | PCN | TORA | TODA | ASDA | LDA | | PAPI | ALS | THR ELEV | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 80 | 9186 | 10170 | 9186 | 9186 | | 3.0° | CAT II | 209 | 55°32.88'N 013°22.43'E |
| 35 | 80 | 9186 | 10170 | 9186 | 9186 | | 3.0° | CAT I | 236 | 55°31.39'N 013°22.74'E |

STURUP TOWER: 118.805 (PRIMARY)
121.705 (HO)
ATIS: 129.280

RNAV STARS and SIDs are not published in RDAF FLIP. Aircraft unable to conform to these procedures shall inform ATS accordingly.

**OMNIDIRECTIONAL DEPARTURES**

RWY 17:
CLIMB STRAIGHT AHEAD WITH MNM 250 FT/NM (4%) TO MNM TURNING ALT 700 FT.

RWY 35:
CLIMB STRAIGHT AHEAD TO MNM TURNING ALT 700 FT.

**NOISE ABATEMENT PROCEDURES**

Over the central parts of Malmö and Lund and over built up areas around Malmö aerodrome aircraft should not be operated below 2000 ft AMSL except when necessary for take-off or landing.

CHANGES: NEW CHART.

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

**MIPS**
**INSTRUMENT APPROACH CHART**

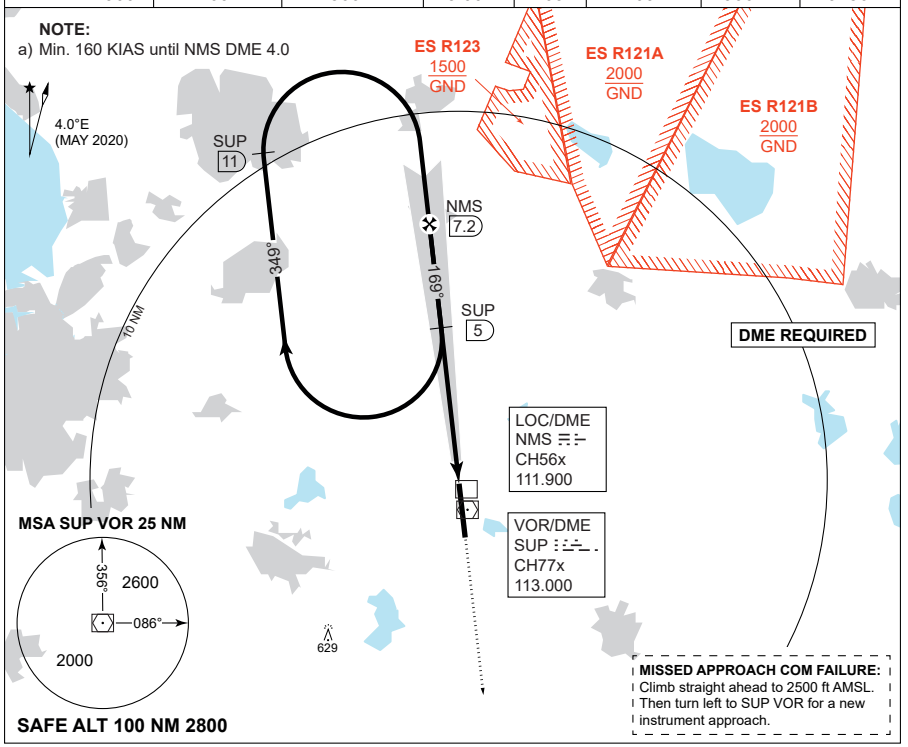
AD ELEV 237

**ILS or LOC RWY 17**
**MALMO (ESMS)**

| SWEDEN CONTROL | STURUP TOWER | STURUP ATIS |
|---|---|---|
| 134.980 | 118.805 | 129.280 |

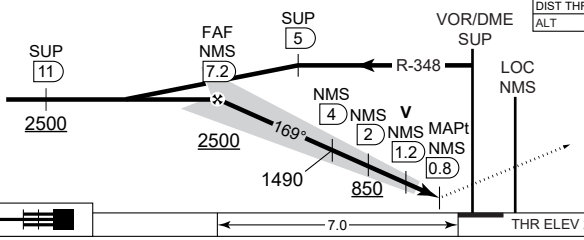
| LOC/DME | APP COURSE | GS INCPT ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| NMS 111.900 | 169° | 2500 FT | 3.00° | **409** | 209 | 900 M | 9186 |

**NOTE:**
a) Min. 160 KIAS until NMS DME 4.0




**TA 5000**
GS 3.00°
RDH 57

| CDFA: 3.00° / 5.24% | | | | | | |
|---|---|---|---|---|---|---|
| DME NMS | 7 | 6 | 5 | 4 | 3 | 2 |
| DIST THR | 6.8 | 5.8 | 4.8 | 3.8 | 2.8 | 1.8 |
| ALT | 2440 | 2120 | 1810 | 1490 | 1170 | 850 |




CHANGES: NEW PROCEDURE.

| MIPS | CATEGORY | D |
|---|---|---|
| | S-ILS 17 | **409** - 550 200 (200-0.8/1.2) |
| | S-LOC 17 | **570** - 1000 361 (400-1.0/1.7) |
| | CIRCLING | **1100** - 3.6 863 (900-3.6) |

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

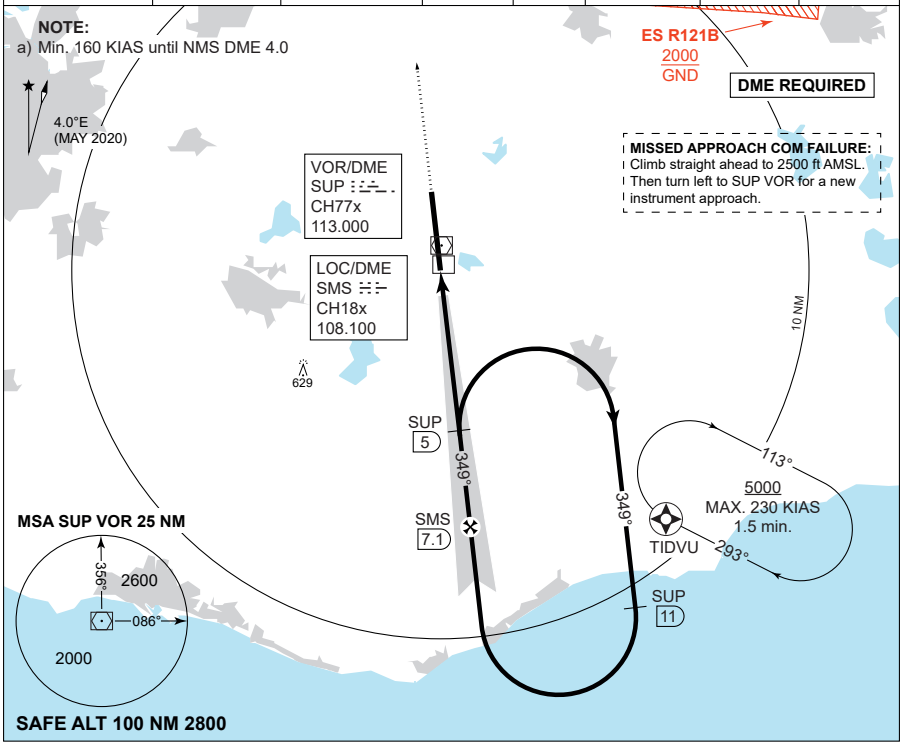
**MIPS**
**INSTRUMENT APPROACH CHART**

AD ELEV 237

**ILS or LOC RWY 35**
**MALMO (ESMS)**

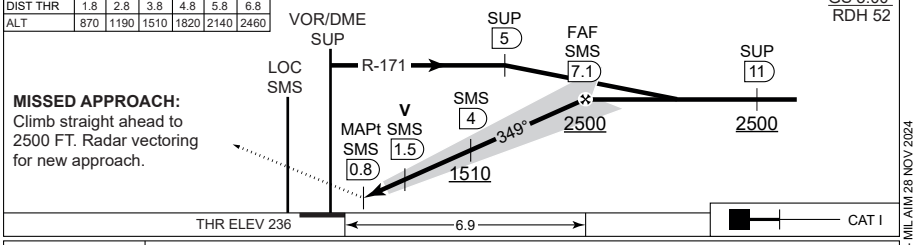
| SWEDEN CONTROL | STURUP TOWER | STURUP ATIS |
|---|---|---|
| 134.980 | 118.805 | 129.280 |

| LOC/DME | APP COURSE | GS INCPT ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| SMS 108.100 | 349° | 2500 FT | 3.00° | **436** | 236 | 900 M | 9186 |




| CDFA: 3.00° / 5.24% | | | | | | | |
|---|---|---|---|---|---|---|---|
| DME SMS | 2 | 3 | 4 | 5 | 6 | 7 |
| DIST THR | 1.8 | 2.8 | 3.8 | 4.8 | 5.8 | 6.8 |
| ALT | 870 | 1190 | 1510 | 1820 | 2140 | 2460 |

**TA 5000**
GS 3.00°
RDH 52




**MISSED APPROACH:**
Climb straight ahead to 2500 FT. Radar vectoring for new approach.

CHANGES: NEW PROCEDURE.

| MIPS | CATEGORY | D |
|---|---|---|
| | S-ILS 35 | **436** - 550 200 (200-0.8/1.2) |
| | S-LOC 35 | **690** - 1400 453 (500-1.4/2.1) |
| | CIRCLING | **1100** - 3.6 863 (900-3.6) |

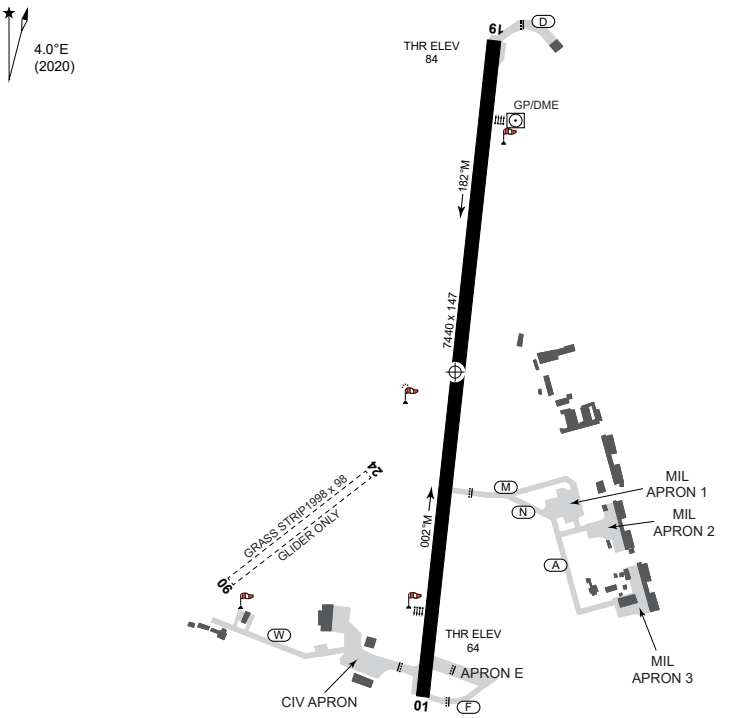
AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

# HALMSTAD (ESMT)

AERODROME CHART

ILS or LOC Z RWY 19

ILS or LOC Y RWY 19




| RWY | PCN | TORA | TODA | ASDA | LDA | | PAPI | ALS | THR ELEV | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 45 | 7440 | 7440 | 7440 | 7440 | | 3.25° | SRC | 64 | 56°40.86'N 012°49.09'E |
| 19 | 45 | 7440 | 7440 | 7440 | 7440 | | 3.00° | CAT I | 84 | 56°42.07'N 012°49.33'E |

HALMSTAD TOWER: 130.105 (PRIMARY)
135.055

RNAV STARS and SIDs are not published in RDAF FLIP. Aircraft unable to conform to these procedures shall inform ATS accordingly.

**OMNIDIRECTIONAL DEPARTURES**

RWY 01:
CLIMB STRAIGHT AHEAD WITH MNM 360 FT/NM (5.8%) TO MNM TURNING ALT 1300 FT.

RWY 19:
CLIMB STRAIGHT AHEAD TO MNM TURNING ALT 500 FT.

**NOISE ABATEMENT PROCEDURES**

For departing IFR-traffic with a MTOM exceeding 5700 kg and not cleard via SID the following applies: After take-off RWY 19 turn must not be initiated until passing NDB MF.

Start RWY 19 and landing RWY 01 accepted only when wind conditions or other flight safety reasons so require.

Visual Approach: Aeroplane with MTOM exceeding 5700 kg shall maintain 2000 ft until final.

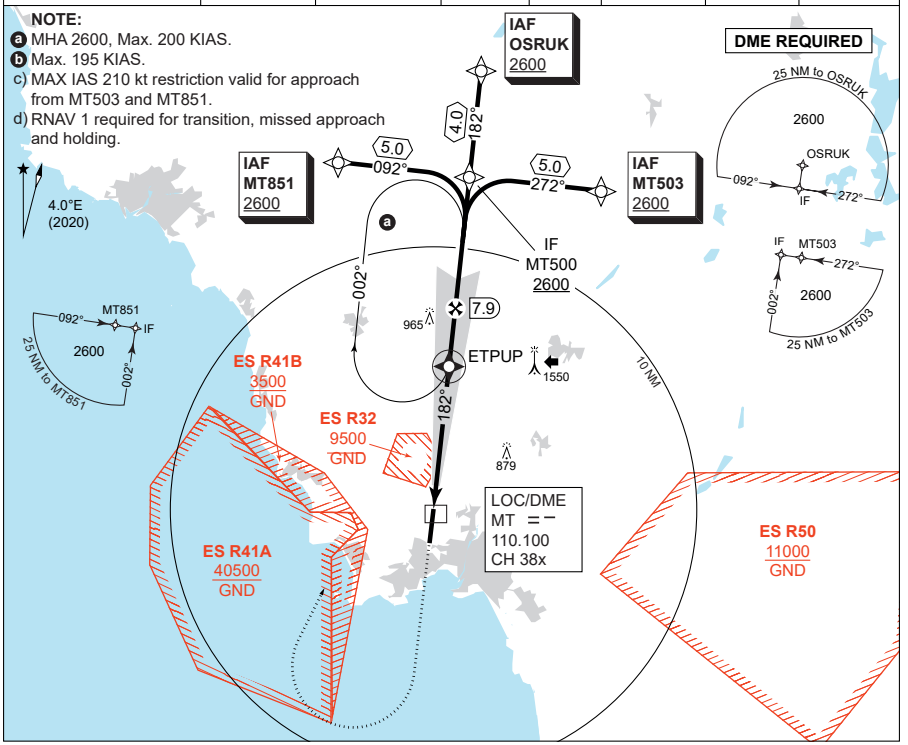
CHANGES: NEW CHART.

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

HALMSTAD TOWER
130.105 135.055

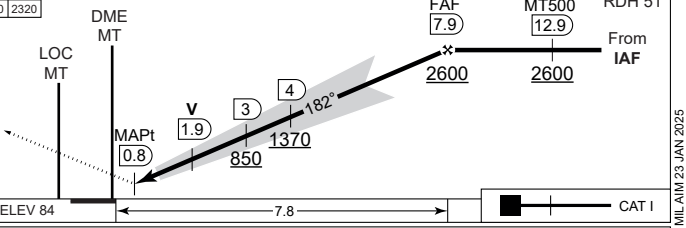
| LOC/DME | APP COURSE | GS INCPT ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| MT 110.100 / CH 38x | 182° | 2600 | 3.00° | **284** | 84 | 885 M | 7440 FT |

**NOTE:**
a) MHA 2600, Max. 200 KIAS.
b) Max. 195 KIAS.
c) MAX IAS 210 kt restriction valid for approach from MT503 and MT851.
d) RNAV 1 required for transition, missed approach and holding.




| CDFA: 3.00° / 5.24% | | | | | | |
|---|---|---|---|---|---|---|
| DME SMS | 2 | 3 | 4 | 5 | 6 | 7 |
| DIST THR | 1.9 | 2.9 | 3.9 | 4.9 | 5.9 | 6.9 |
| ALT | 730 | 1040 | 1370 | 1680 | 2000 | 2320 |

**MISSED APPROACH:**
Climb straight ahead to 1500 FT. Turn right (max. 230 KIAS) to ETPUP climbing to 2600 FT. Join ETPUP holding.




| CATEGORY | D |
|---|---|
| S-ILS 19 | **284** - 550 200 (200-0.8/1.2) |
| S-LOC 19 | **720** - 2200 636 (700-2.2/2.9) |
| CIRCLING b | **1280** - 3.6 1179 (1200-3.6) |

CHANGES: CHART TITLE CORRECTED.



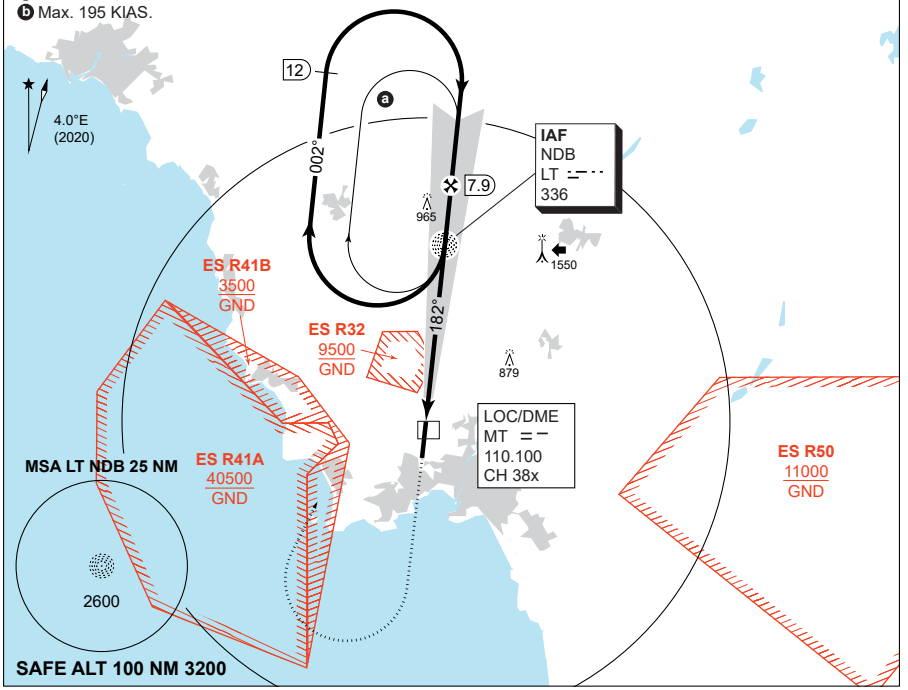
AIR COMMAND DENMARK - MIL AIM 23 JAN 2025

HALMSTAD TOWER
130.105 135.055

| LOC/DME | APP COURSE | GS INCPT ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| MT 110.100 / CH 38x | 182° | 2600 | 3.00° | **284** | 84 | 885 M | 7440 FT |

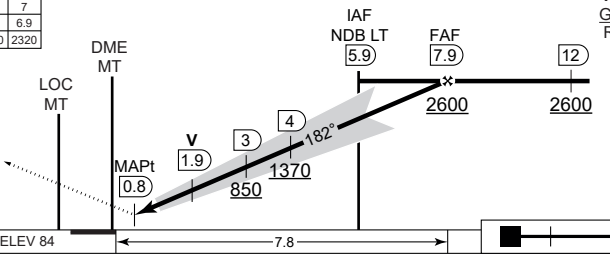
**NOTE:**
ⓐ MHA 2600, Max. 200 KIAS.
ⓑ Max. 195 KIAS.

**ADF AND DME REQUIRED**




| CDFA: 3.00° / 5.24% | | | | | | |
|---|---|---|---|---|---|---|
| DME SMS | 2 | 3 | 4 | 5 | 6 | 7 |
| DIST THR | 1.9 | 2.9 | 3.9 | 4.9 | 5.9 | 6.9 |
| ALT | 730 | 1040 | 1370 | 1680 | 2000 | 2320 |

**TA 5000**
GS 3.00°
RDH 51




**MISSED APPROACH:**
Climb straight ahead to 1500 FT. Turn right (max. 230 KIAS) to LT NDB climbing to 2600 FT.

CHANGES: NEW PROCEDURE.

| MIPS | CATEGORY | D |
|---|---|---|
| | S-ILS 19 | **284** - 550 200 (200-0.8/1.2) |
| | S-LOC 19 | **720** - 2200 636 (700-2.2/2.9) |
| | CIRCLING ⓑ | **1280** - 3.6 1179 (1200-3.6) |

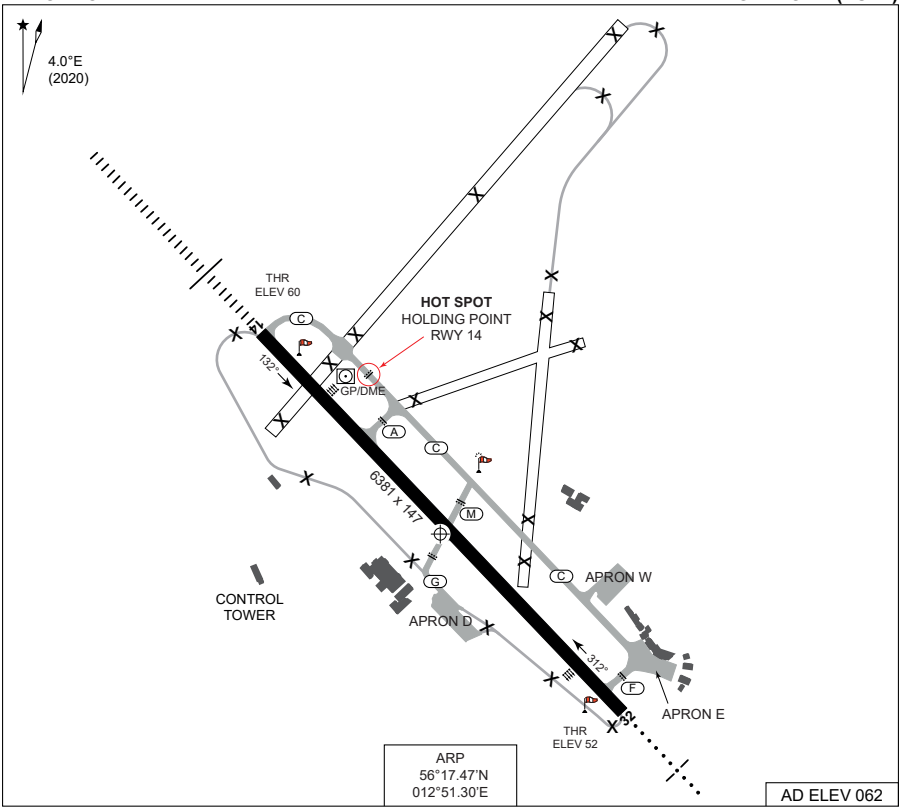
AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

# ÄNGELHOLM (ESTA)

AERODROME CHART

ILS Z or LOC Z RWY 14

ILS Y or LOC Y RWY 14




| RWY | PCN | TORA | TODA | ASDA | LDA | | PAPI | ALS | THR ELEV | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 51 | 6381 | 6381 | 6381 | 6381 | | 3.0° | CAT I | 60 | 56°17.87'N 012°50.65'E |
| 32 | 51 | 6381 | 7053 | 6381 | 6381 | | 3.0° | SRC | 52 | 56°17.11'N 012°51.95'E |

ÄNGELHOM TOWER: 127.105
ATIS: N/A

RNAV STARS are not published in RDAF FLIP. Aircraft unable to conform to these procedures shall inform ATS accordingly.

**OMNIDIRECTIONAL DEPARTURES**
RWY 14:
CLIMB STRAIGHT AHEAD TO MNM TURNING ALT 600 FT.

RWY 32:
CLIMB STRAIGHT AHEAD TO MNM TURNING ALT 700 FT.

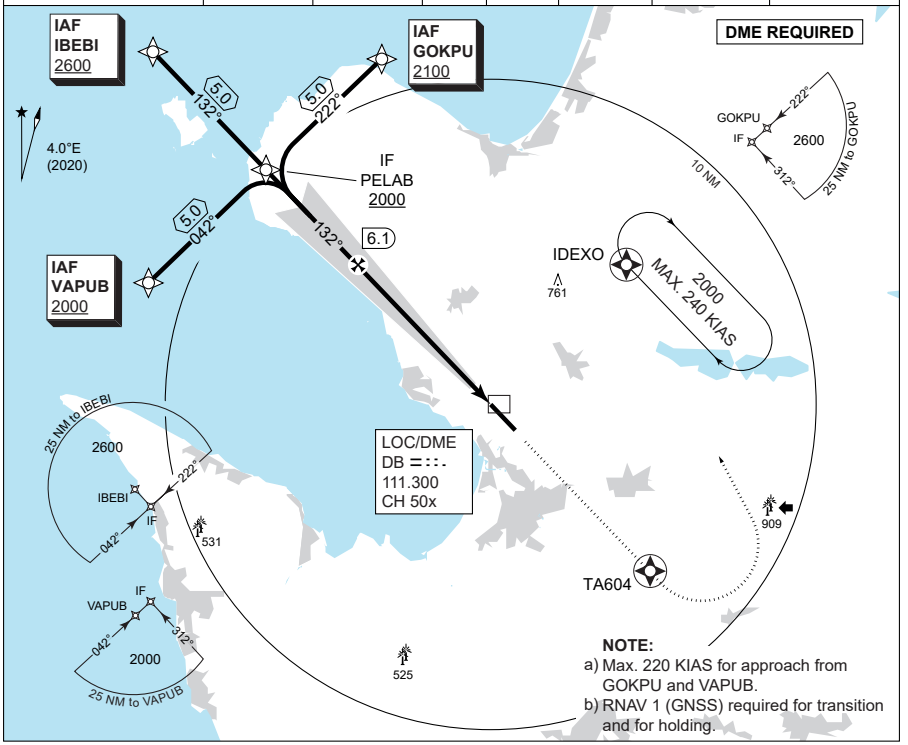
**NOISE ABATEMENT PROCEDURES**
Over the central parts of Ängelholm aircraft should not be operated below 2000 ft AMSL except when necessary for take-off or landing.

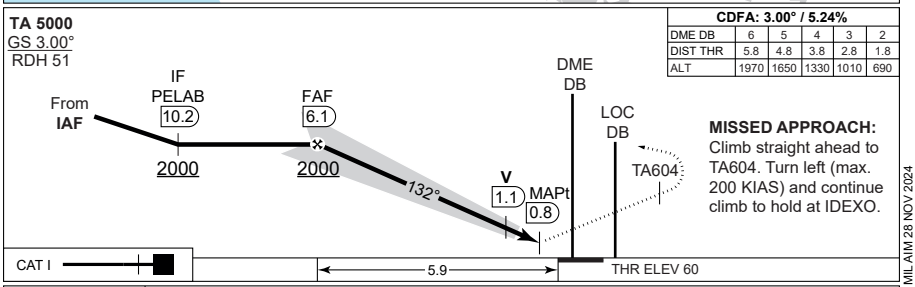
CHANGES: NEW CHART.

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

| ÄNGELHOLM APPROACH | ÄNGELHOLM TOWER |
|---|---|
| 132.455 | 127.105 |

| LOC / DME | APP COURSE | GS INTCP ALT | GS | MDA | THR ELEV | ALS LENGTH | ALS LENGTH |
|---|---|---|---|---|---|---|---|
| DB 111.300 / CH 50x | 132° | 2000 FT | 3.00° | **260** | 60 | 900 M | 6381 FT |




CHANGES: NEW PROCEDURE.

MIPS

| CATEGORY | D |
|---|---|
| S-ILS 14 | **260** - 550 200 (200-0.8/1.2) |
| S-LOC 14 | **410** - 900 348 (400-0.9/1.6) |
| CIRCLING | **1160** - 3.6 1098 (1100-3.6) |

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

**MIPS**
**INSTRUMENT APPROACH CHART** AD ELEV 62

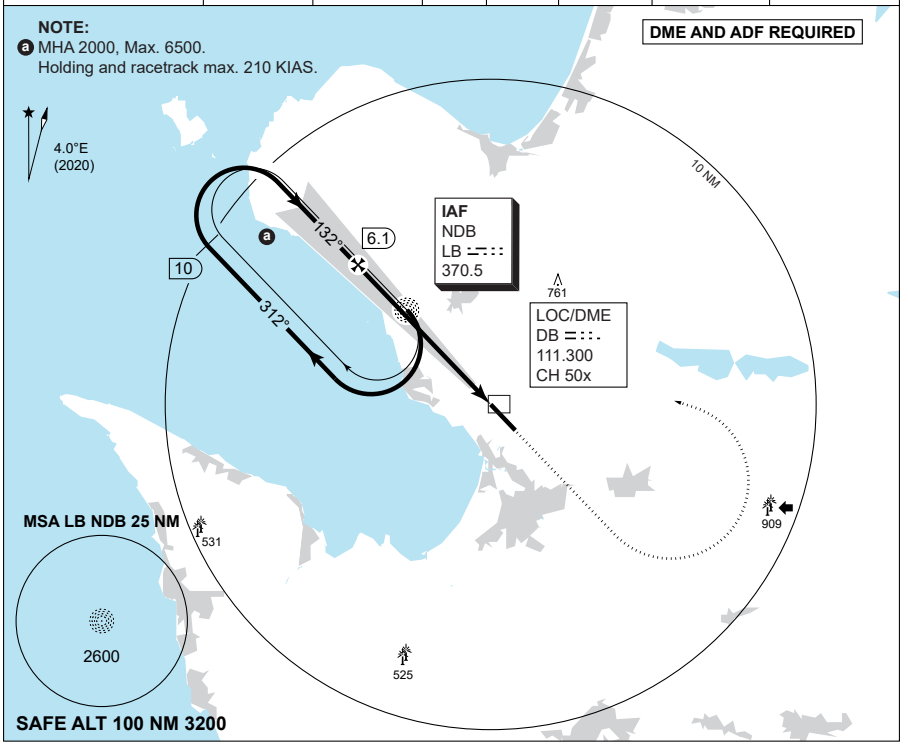
**ILS Y or LOC Y RWY 14**
**ÄNGELHOLM (ESTA)**

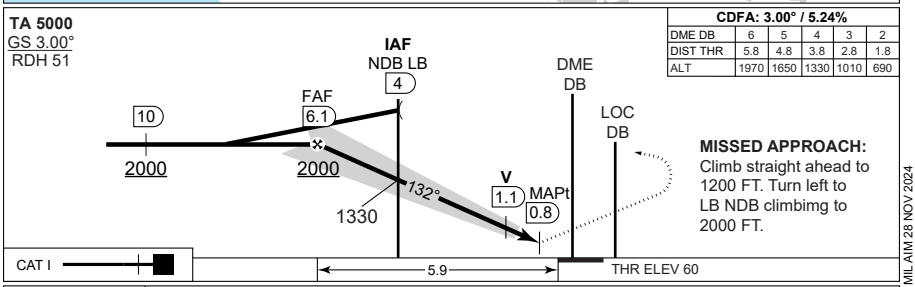
| ÄNGELHOLM APPROACH | ÄNGELHOLM TOWER |
|---|---|
| 132.455 | 127.105 |

| LOC / DME | APP COURSE | GS INTCP ALT | GS | MDA | THR ELEV | ALS LENGTH | ALS LENGTH |
|---|---|---|---|---|---|---|---|
| DB 111.300 / CH 50x | 132° | 2000 FT | 3.00° | **260** | 60 | 900 M | 6381 FT |

**NOTE:**
ⓐ MHA 2000, Max. 6500.
Holding and racetrack max. 210 KIAS.

**DME AND ADF REQUIRED**




| CDFA: 3.00° / 5.24% | | | | | |
|---|---|---|---|---|---|
| DME DB | 6 | 5 | 4 | 3 | 2 |
| DIST THR | 5.8 | 4.8 | 3.8 | 2.8 | 1.8 |
| ALT | 1970 | 1650 | 1330 | 1010 | 690 |

**MISSED APPROACH:**
Climb straight ahead to 1200 FT. Turn left to LB NDB climbimg to 2000 FT.

| CATEGORY | D |
|---|---|
| S-ILS 14 | **260** - 550 200 (200-0.8/1.2) |
| S-LOC 14 | **410** - 900 348 (400-0.9/1.6) |
| CIRCLING | **1160** - 3.6 1098 (1100-3.6) |

CHANGES: NEW PROCEDURE.

MIPS

AIR COMMAND DENMARK - MIL AIM 28 NOV 2024

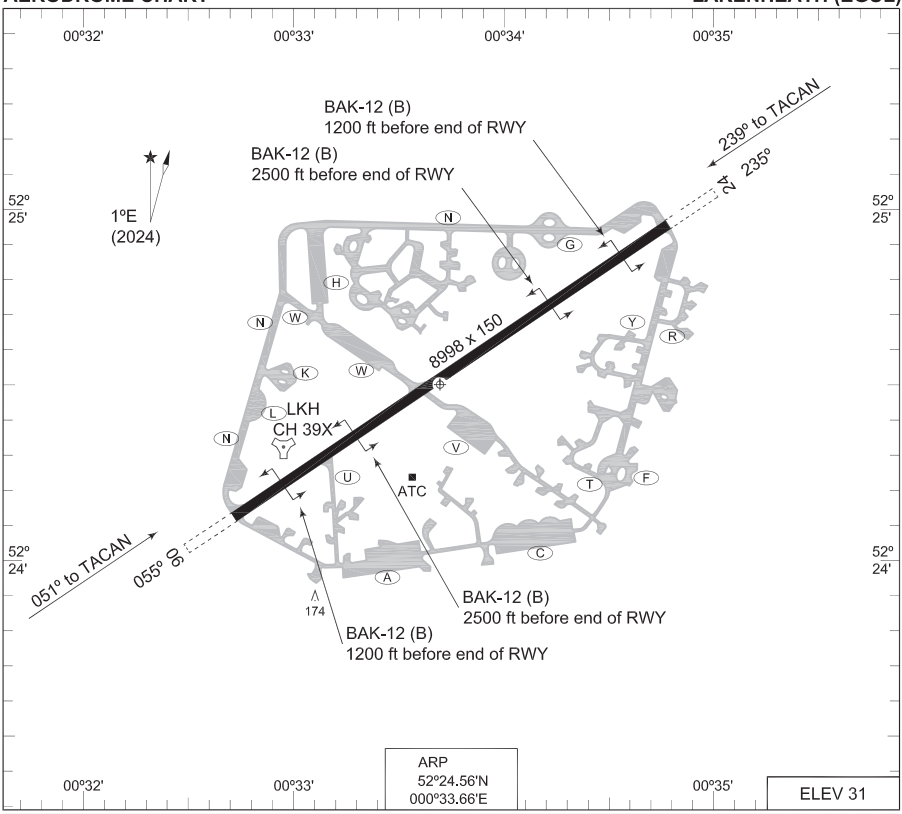
# RAF LAKENHEATH (EGUL)

AERODROME CHART

HI/LO-ILS Y or LOC RWY 23

HI/LO TACAN RWY 23

AXHOK AND TIDPU DEPARTURE




| RWY | PCN | TORA | ASDA | TODA | LDA | | PAPI | | THR ELEV | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|
| 05 | 150 F/B/W/T | 8998 | 9993 | 8998 | 8998 | | 2.5° | | 27 | 52°24.15'N 000°32.66'E |
| 23 | 150 F/B/W/T | 8998 | 9996 | 8998 | 8998 | | 3.0° | | 28 | 52°24.98'N 000°34.66'E |

LAKENHEATH TWR 373.775 137.100
LAKENHEATH APP 275.825 136.500
DEPARTURE 264.575

| | PROC. CRITERIA | RWY | GS | TCH | OTCH | RPI | CAT | MINIMA CRITERIA | MINIMA |
|---|---|---|---|---|---|---|---|---|---|

**NOTES:** a) CIRCUITS: PROHIBITED SOUTH OF RWY 05/23.
b) NORMAL OPS: APP CABLE DE-RIGGED, OVERRUN CABLES RIGGED.
c) MULTIPLE GATES ON NORTH AND SOUTH TWY 83 FT WIDE.
d) DUE TO THE DELAY IN THE RECEIPT OF SOURCE DATA, PLEASE CHECK DoD DOCUMENTS FOR LATEST AMENDMENTS.

CHANGES: EDITORIAL
RNLAF/1 AIDU (RAF) 28 NOV 2024

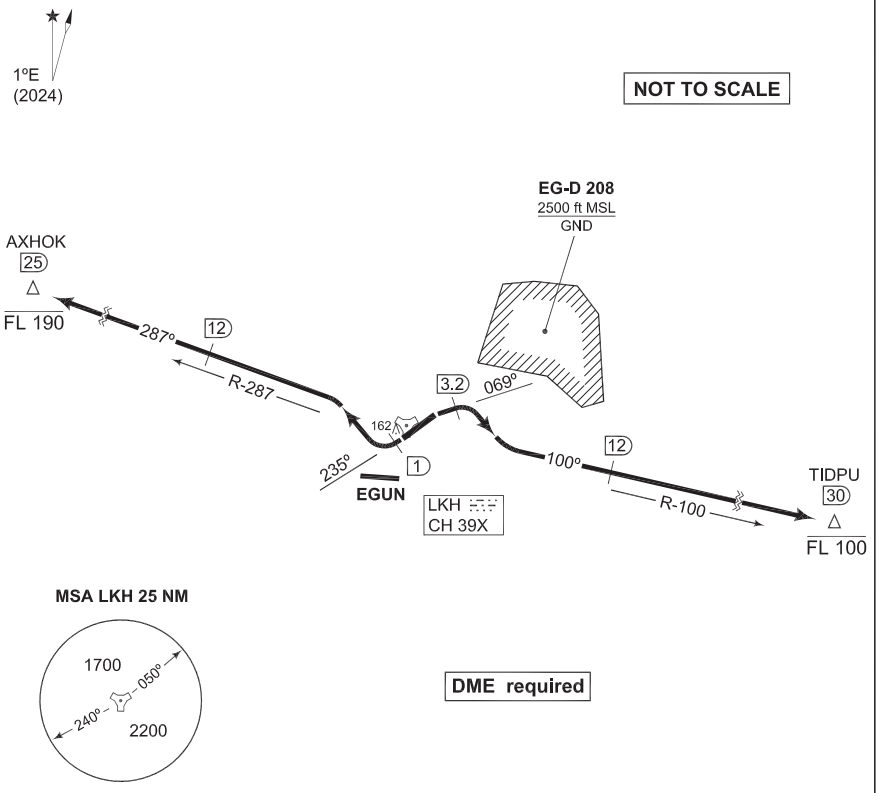
**TERPS (FAA)**
**INSTRUMENT DEPARTURE CHART** AD ELEV 31

**AXHOK 2 AND TIDPU 3 DEPARTURE**
**LAKENHEATH (EGUL)**

| LAKENHEATH TWR | LAKENHEATH APP | LAKENHEATH DEP | SWANWICK MIL |
|---|---|---|---|
| 373.775 137.100 | 275.825 136.500 | 264.575 | 259.600 |

| ATIS | GND CTL |
|---|---|
| 341.050 | 397.350 121.575 |

| RWY | Knots | 60 | 120 | 180 | 240 | 300 | 360 | to |
|---|---|---|---|---|---|---|---|---|
| **05** | V/V (fpm) | 335 | 670 | 1005 | 1340 | 1675 | 2010 | **700 ft** |
| **23** | V/V (fpm) | 839 | 1678 | 2517 | 3356 | 4195 | 4034 | **450 ft** |




**EMERG SAFE ALT 100 NM 2800** **TA 3000**

| | |
|---|---|
| **RWY 06 SID** | - Climb on heading 069° to LKH TACAN 3.2 DME, turn right to intercept LKH R-100 to cross TIDPU/LKH R-100/30 DME at or below FL 100. Climb as directed. |
| **RWY 24 SID** | - Climb on heading 235° to LKH TACAN 1 DME, turn right to intercept LKH R-287 to cross AXHOK/LKH R-287/25 DME at or below FL 190. Climb as directed. |
| **NOTES:** | - Turn at LKH 1 DME mandatory to avoid conflicting RAF MILDENHALL traffic patterns. If unable to comply, notify LAKENHEATH TWR for alternate routing.<br>- Radar required when EG-D 208 active, contact LAKENHEATH TWR for status.<br>- Request expeditious climb for noise abatement.<br>- For WESTCOTT corridor, request FL 240 with LAKENHEATH DEPARTURE CONTROL. Request entry to WESTCOTT corridor with LONDON MIL.<br>- TIDPU 3 DEPARTURE: Remain clear of EG-D 208, if unable to make turn, notify ATC for alternate routing. |

CHANGES: EDITORIAL

RNLAF/1 AIDU (RAF) 28 NOV 2024

**TERPS (FAA)**
**INSTRUMENT APPROACH CHART**

AD ELEV 31

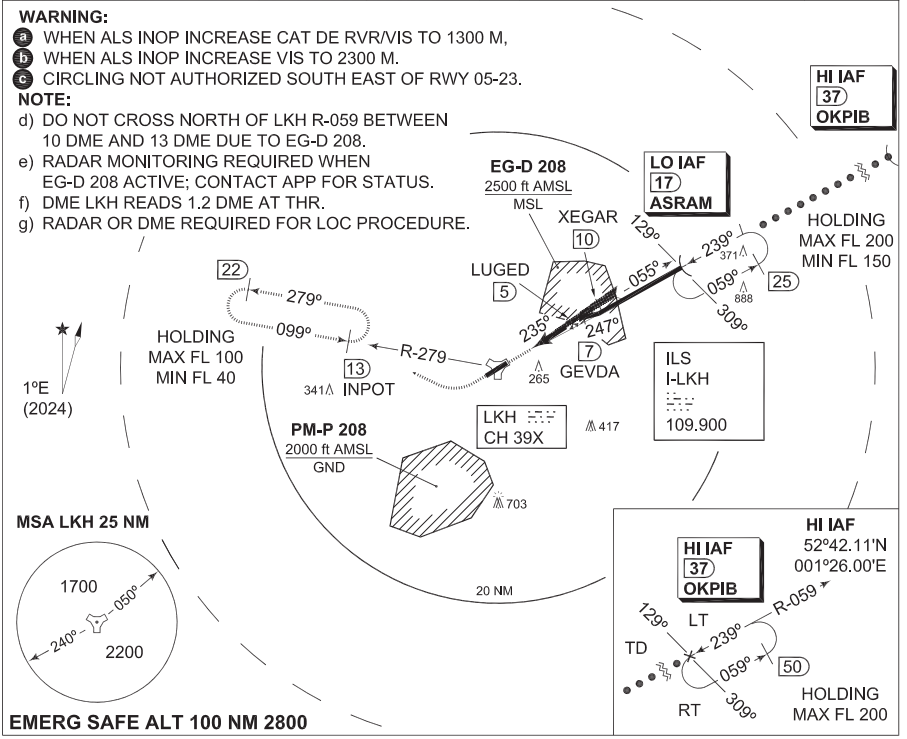
**HI/LO-ILS Y or LOC RWY 23**
**LAKENHEATH (EGUL)**

| SWANWICK MIL | LAKENHEATH APP | LAKENHEATH TWR | GND CTL | ATIS |
|---|---|---|---|---|
| 259.600 | 275.825 136.500 | 373.775 137.100 | 121.575 397.350 | 341.050 |

| LOCALIZER/DME | APP COURSE | GS INTCP ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| I-LKH 109.900/LKH CH 39X | 235° | 1300 FT | 3° | **SEE CAT** | 28 | 914 m | 8998 FT |

**WARNING:**
- (a) WHEN ALS INOP INCREASE CAT DE RVR/VIS TO 1300 M,
- (b) WHEN ALS INOP INCREASE VIS TO 2300 M.
- (c) CIRCLING NOT AUTHORIZED SOUTH EAST OF RWY 05-23.

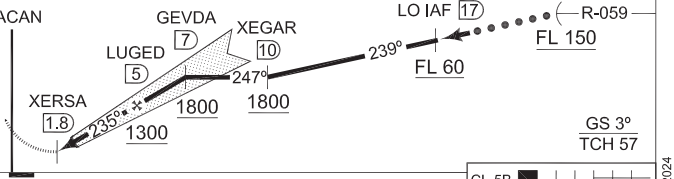
**NOTE:**
- d) DO NOT CROSS NORTH OF LKH R-059 BETWEEN 10 DME AND 13 DME DUE TO EG-D 208.
- e) RADAR MONITORING REQUIRED WHEN EG-D 208 ACTIVE; CONTACT APP FOR STATUS.
- f) DME LKH READS 1.2 DME AT THR.
- g) RADAR OR DME REQUIRED FOR LOC PROCEDURE.




**TA 3000**

**MISSED APPROACH**
Climb and maintain FL 040, leaving 530 ft turn right, intercept LKH R-279 to INPOT/13 DME and hold.

MAPt at 1.8 DME.




| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-ILS 23 (a) | **247** -1.2 218 (300-1.2/1.2) | **257** -1.2 228 (300-1.2/1.2) | **267** -1.2 238 (300-1.2/1.2) | **278** -1.2 249 (300-1.2/1.3) | **298** -1.2 269 (300-1.2/1.3) |
| S-LOC 23 (b) | **530** -1.5 498 (500-1.5/2.3) | | | | |
| CIRCLING (c) | **570** -2.4 538 (600-2.4/2.4) | **580** -2.5 548 (600-2.5/2.5) | **680** -3.0 648 (700-3.0/3.0) | **740** -3.6 708 (800-3.6/3.6) | **840** -3.8 808 (900-3.8/3.8) |

CHANGES: EDITORIAL

RNLAF/1 AIDU (RAF) 28 NOV 2024

**TERPS (FAA)**
**INSTRUMENT APPROACH CHART**

AD ELEV 31

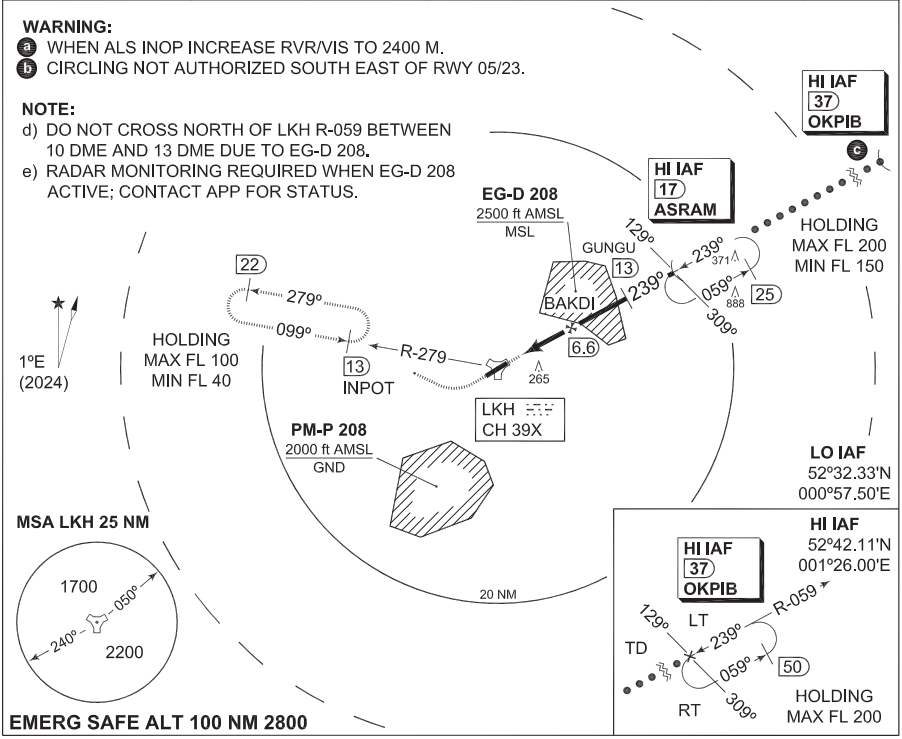
**HI/LO TACAN RWY 23**
**LAKENHEATH (EGUL)**

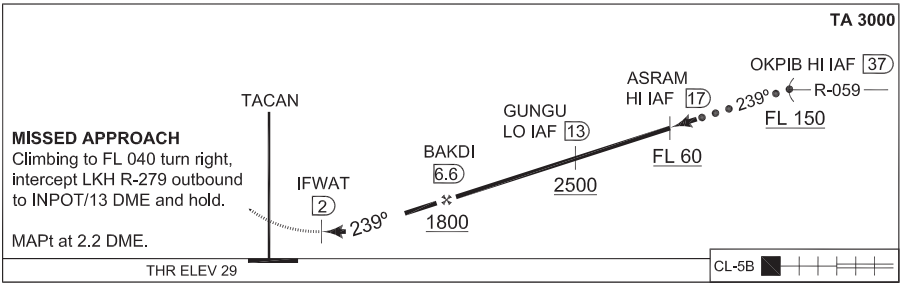
| SWANWICK MIL | LAKENHEATH APP | LAKENHEATH TWR | GND CTL | ATIS |
|---|---|---|---|---|
| 259.600 | 275.825 136.500 | 373.775 137.100 | 397.350 121.575 | 341.050 |

| TACAN | APP COURSE | FAF ALT | Descent GR | MDA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| LKH CH 39X | 239° | 1300 FT | | **550** | 28 | 914 m | 8998 FT |

**WARNING:**
ⓐ WHEN ALS INOP INCREASE RVR/VIS TO 2400 M.
ⓑ CIRCLING NOT AUTHORIZED SOUTH EAST OF RWY 05/23.

**NOTE:**
d) DO NOT CROSS NORTH OF LKH R-059 BETWEEN 10 DME AND 13 DME DUE TO EG-D 208.
e) RADAR MONITORING REQUIRED WHEN EG-D 208 ACTIVE; CONTACT APP FOR STATUS.




| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-TACAN 23ⓐ | **550** -1.6 518 (600-1.6/2.4) | | | | |
| CIRCLINGⓑ | **600** -2.6 568 (600-2.6/2.6) | **610** -2.6 578 (600-2.6/2.6) | **710** -3.1 678 (700-3.1/3.1) | **740** -3.6 708 (800-3.6/3.6) | **840** -3.8 808 (900-3.8/3.8) |

CHANGES: EDITORIAL

RNLAF/1 AIDU (RAF) 28 NOV 2024

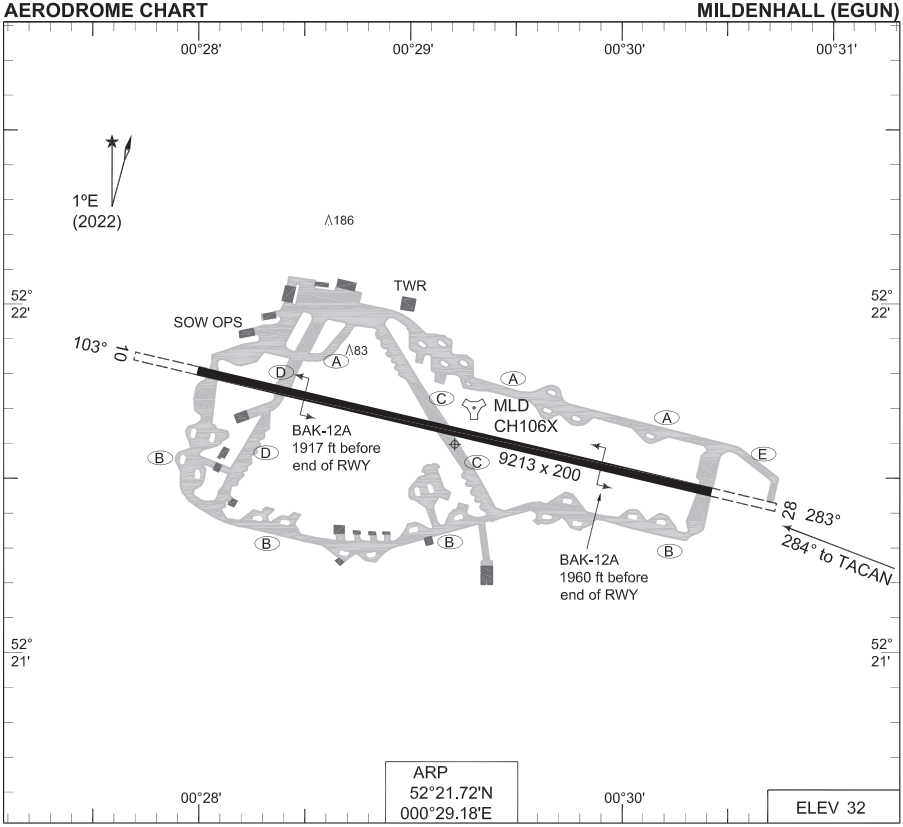
# RAF MILDENHALL (EGUN)

AERODROME CHART

TACAN RWY 28

ILS or LOC RWY 28

NUGTU DEPARTURE




| RWY | PCN | TORA | ASDA | TODA | LDA | | PAPI | | THR ELEV | THR PSN |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 92 R/B/W/T | 9213 | 10213 | 9213 | 9213 | | 2.9° | | 21 | 52°21.89'N 000°27.98'E |
| 28 | 92 R/B/W/T | 9213 | 10213 | 9213 | 9213 | | 2.9° | | 32 | 52°21.54'N 000°30.39'E |

| | | |
|---|---|---|
| MILDENHALL TWR | 370.250 | 122.550 |
| MILDENHALL GND CTL | 337.975 | 121.800 |
| MILDENHALL DISPATCH | 308.850 | 131.975 |

| PROC. CRITERIA | RWY | GS | TCH | OTCH | RPI | CAT | MINIMA CRITERIA | MINIMA |
|---|---|---|---|---|---|---|---|---|

**CAUTION:**
a) No ACFT taxi auth on copter controlled ramp S of Base Ops. TWY Delta S of RWY is also a controlled ramp.
b) RWY 28: road and vehicles, 15 AGL 131 m / 430 ft right of RCL; tree 53 AGL 280 m / 919 ft right of RCL.
c) Avoid Wyton AD, 52°21.43'N000°06.47'W.

**NOTE:**
d) RHAG, PNR 15 min, inset:
- RWY 10 - 1980 ft.
- RWY 28 - 1921 ft.

e) TOWER approval mandatory for engine start.
f) Load breakdown to ACP - ETA minus 15 min.
g) VFR overhead 1800 ft. Circuits rectangular 1200 ft.
h) Porous friction RWY surface - 180° turns prohibited.
i) RWY 10/28, 305 m / 1000 ft overrun avbl for take-off.
j) Avoid Mildenhall village (1 NM SE).
k) DUE TO THE DELAY IN THE RECEIPT OF SOURCE DATA, PLEASE CHECK DoD DOCUMENTS FOR LATEST AMENDMENTS.

CHANGES: RWY LENGHT, TORA, ASDA, TODA, LDA

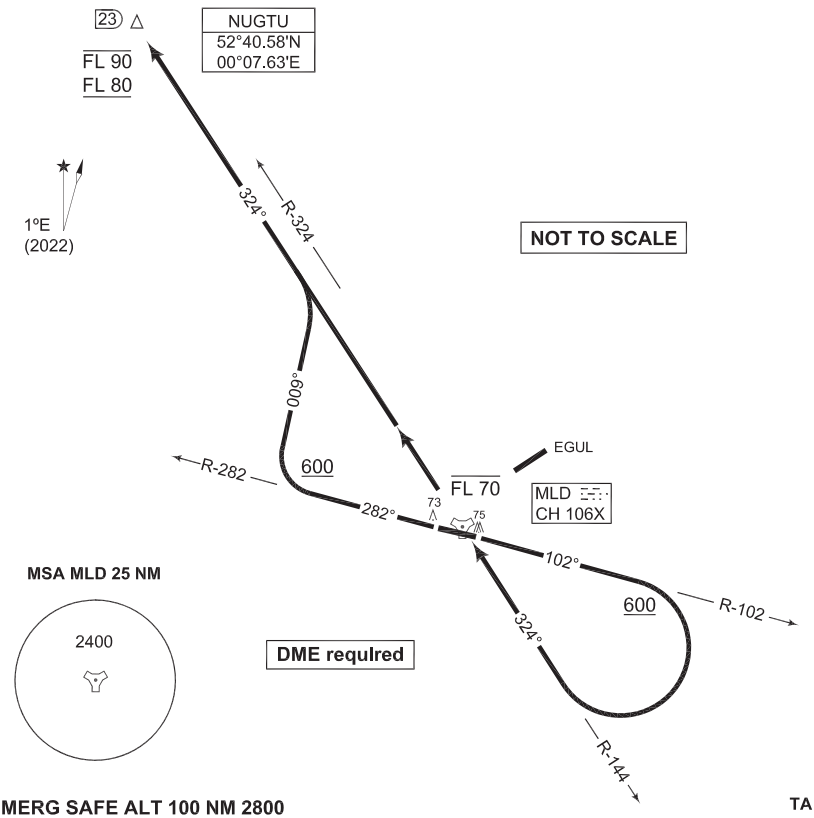
RNLAF/1 AIDU (RAF) 03 OCT 2024

AD ELEV 32

| ATIS | GND CTL | MILDENHALL TWR | LAKENHEATH DEP |
|---|---|---|---|
| 282.025 | 337.975 121.800 | 370.250 122.550 | 264.575 |

| SWANWICK MIL |
|---|
| 259.600 |

| RWY | Knots | 60 | 120 | 180 | 240 | 300 | 360 | to |
|---|---|---|---|---|---|---|---|---|
| **10** | V/V (fpm) | 339 | 678 | 1017 | 1356 | 1695 | 2034 | **8000 ft** |
| **28** | V/V (fpm) | 352 | 704 | 1056 | 1408 | 1760 | 2112 | **8000 ft** |




| | |
|---|---|
| **RWY 10** | - Climb on heading 102°.<br>- Turn right at 600 ft to intercept MLD TACAN R-144.<br>- Proceed inbound to MLD, cross at or below FL 70.<br>- Join MLD R-324 outbound climbing to FL 90.<br>- Cross NUGTU between FL 80 and FL 90.<br>- If further clearance is not received, maintain FL 90 and advise ATC.<br>- Expect enroute clearance with LONDON MIL. |
| **RWY 28** | - Climb on heading 282°.<br>- Turn right at 600 ft and track 009° to intercept MLD R-324 outbound to NUGTU between FL 80 and FL 90.<br>- If further clearance is not received, maintain FL 90 and advise ATC.<br>- Expect enroute clearance with LONDON MIL. |

CHANGE: EMERG SAFE ALT

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**TERPS (FAA)**
**INSTRUMENT APPROACH CHART**

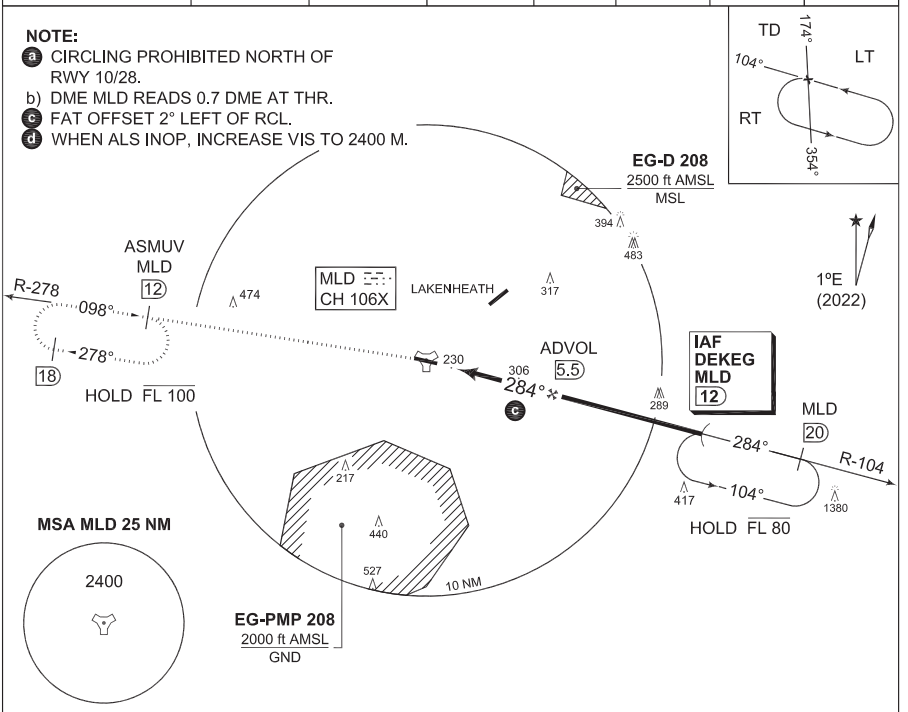
AD ELEV 32

**TACAN RWY 28**
**MILDENHALL (EGUN)**

| SWANWICK | LAKENHEATH APP | MILDENHALL TWR | GND CTL | ATIS |
|---|---|---|---|---|
| 259.600 | 275.825 136.500 | 370.250 122.550 | 337.975 121.800 | 282.025 |

| TACAN | APP COURSE | FAF ALT | DESCENT GR | MDA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| MLD CH 106X | 284° | 1700 FT | | **560** | 32 | 914 m | 9213 FT |

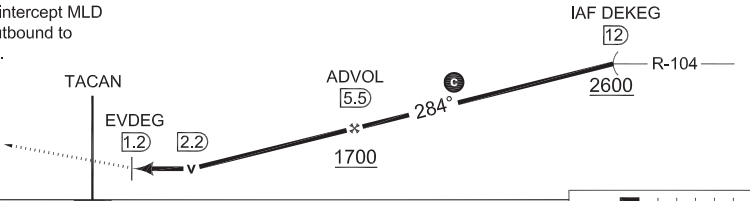
**NOTE:**
- (a) CIRCLING PROHIBITED NORTH OF RWY 10/28.
- b) DME MLD READS 0.7 DME AT THR.
- (c) FAT OFFSET 2° LEFT OF RCL.
- (d) WHEN ALS INOP, INCREASE VIS TO 2400 M.




**TA 3000**

**MISSED APPROACH**
Climb to 2600 ft, intercept MLD TACAN R-278 outbound to ASMUV and hold.

MAPt at 1.2 DME




| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-TACAN 28 (d) | **560** -1700 528 (600-1.7/2.4) | | | | |
| CIRCLING (a) | **560** -2.4 528 (600-2.4/2.4) | | **700** -3.1 668 (700-3.1/3.1) | **740** -3.6 708 (800-3.6/3.6) | **920** -4.0 888 (900-4.0/4.0) |

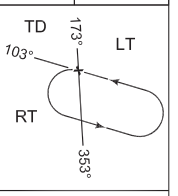
CHANGE: LDA, EMERG SAFE ALT

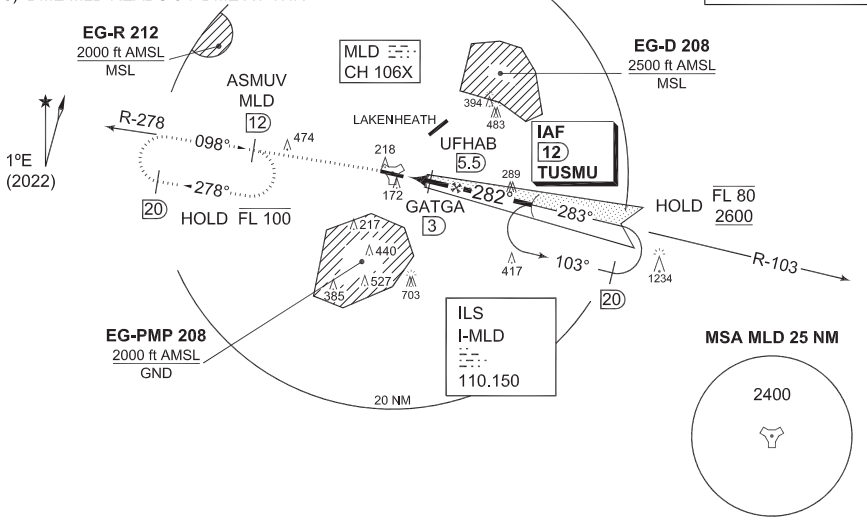
RNLAF/1 AIDU (RAF) 03 OCT 2024

| SWANWICK MIL | LAKENHEATH APP | MILDENHALL TWR | GND CTL | ATIS |
|---|---|---|---|---|
| 259.600 | 275.825 136.500 | 370.250 122.550 | 337.975 121.800 | 282.025 |

| LOCALIZER/DME | APP COURSE | FAF ALT | GS | DA | THR ELEV | ALS | LDA |
|---|---|---|---|---|---|---|---|
| I-MLD 110.150/MLD CH 106X | 282° | 1600 FT | 2.9° | SEE CAT | 32 | 914 m | 9213 FT |

**CAUTION:**
a) GATGA ALTITUDE LESS THAN CAT E MINIMA.
**NOTE:**
b) WHEN ALS INOP, INCREASE CAT ABC VIS TO 1200 M, CAT DE VIS TO 1300 M.
c) WHEN ALS INOP, INCREASE VIS TO 2100 M.
d) CIRCLING NOT AUTHORIZED N OF RWY 10/28.
e) DME MLD READS 0.7 DME AT THR.



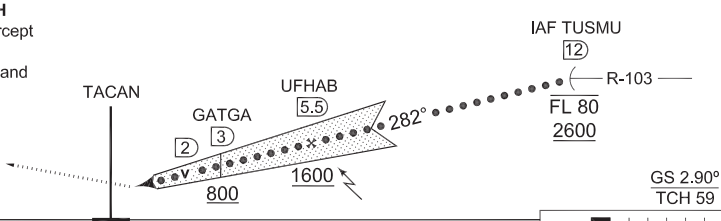




**EMERG SAFE ALT 100 NM 2800**

**TA 3000**

**MISSED APPROACH**
Climb to 2600 ft, intercept MLD TACAN R-278 outbound to ASMUV and hold.

MAPt at 1.2 DME




| CATEGORY | A | B | C | D | E |
|---|---|---|---|---|---|
| S-ILS 28 b | **245** -0.8 213 (300-0.8/1.2) | **255** -0.8 223 (300-0.8/1.2) | **264** -0.8 232 (300-0.8/1.2) | **274** -0.8 242 (300-0.8/1.3) | **294** -0.8 262 (300-0.8/1.3) |
| S-LOC 28 c | **480** -1.4 448 (500-1.4/2.1) | | | | |
| CIRCLING d | **530** -2.3 498 (500-2.3/2.3) | **560** -2.4 528 (600-2.4/2.4) | **700** -3.1 668 (700-3.1/3.1) | **740** -3.6 708 (800-3.6/3.6) | **920** -4.0 888 (900-4.0/4.0) |

CHANGE: LDA, EMERG SAFE ALT

RNLAF/1 AIDU (RAF) 03 OCT 2024

# RDAF FLIP
## Publication dates and editorial deadlines 2025

Publication date: 12 Editorial deadline: 25

| JAN | FEB | MAR | APR | MAJ | JUN | JUL | AUG | SEP | OKT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 |
| 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 |
| 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 |
| 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 |
| 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 |
| 29 |  | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 |
| 30 |  | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| 31 |  | 31 |  | 31 |  | 31 | 31 |  | 31 |  | 31 |

## INSTRUMENT DEPARTURE OR APPROACH PROCEDURE CHARTS
## RATE OF CLIMB OR DESCENT TABLE
## (FEET PR MINUTE)

A rate of climb or descent table is provided for use in planning and execution of climbs or descent under known or approximate ground speed conditions. All figures are rounded up to the nearest 10 feet increment.

| CLIMB / DESCENT GRADIENT | | | GROUND SPEED (KNOTS) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Deg.** | **%** | **FT/ NM** | **60** | **90** | **120** | **150** | **180** | **210** | **240** | **270** | **300** | **330** | **360** |
| 1.43° | 2.50 | 160 | 160 | 230 | 310 | 380 | 460 | 540 | 610 | 690 | 760 | 840 | 920 |
| 2.0° | 3.49 | 220 | 220 | 320 | 430 | 540 | 640 | 750 | 850 | 960 | 1070 | 1170 | 1280 |
| 2.5° | 4.37 | 270 | 270 | 400 | 540 | 670 | 800 | 930 | 1070 | 1200 | 1330 | 1460 | 1600 |
| 2.75° | 4.80 | 300 | 300 | 440 | 590 | 730 | 880 | 1030 | 1170 | 1320 | 1460 | 1610 | 1760 |
| **3.0°** | **5.24** | **320** | **320** | **480** | **640** | **800** | **960** | **1120** | **1280** | **1440** | **1600** | **1760** | **1920** |
| 3.5° | 6.12 | 380 | 380 | 560 | 750 | 930 | 1120 | 1310 | 1490 | 1680 | 1860 | 2050 | 2230 |
| 4.0° | 6.99 | 430 | 430 | 640 | 850 | 1070 | 1280 | 1490 | 1700 | 1920 | 2130 | 2340 | 2550 |
| 4.5° | 7.87 | 480 | 480 | 720 | 960 | 1200 | 1440 | 1680 | 1920 | 2160 | 2400 | 2640 | 2870 |
| 5.0° | 8.75 | 540 | 540 | 800 | 1070 | 1330 | 1600 | 1870 | 2130 | 2400 | 2660 | 2930 | 3190 |
| 5.5° | 9.63 | 590 | 590 | 880 | 1180 | 1470 | 1760 | 2050 | 2350 | 2640 | 2930 | 3220 | 3520 |
| 6.0° | 10.5 | 640 | 640 | 960 | 1280 | 1600 | 1920 | 2240 | 2560 | 2880 | 3200 | 3520 | 3840 |
| 6.5° | 11.4 | 700 | 700 | 1040 | 1390 | 1740 | 2080 | 2430 | 2770 | 3120 | 3470 | 3810 | 4160 |
| 7.0° | 12.3 | 750 | 750 | 1120 | 1500 | 1870 | 2240 | 2620 | 2990 | 3360 | 3740 | 4110 | 4480 |
| 7.5° | 13.2 | 800 | 800 | 1200 | 1600 | 2000 | 2400 | 2800 | 3200 | 3600 | 4000 | 4400 | 4800 |
| 8.0° | 14.1 | 860 | 860 | 1290 | 1710 | 2140 | 2570 | 2990 | 3420 | 3850 | 4270 | 4700 | 5130 |
| 8.5° | 14.9 | 910 | 910 | 1370 | 1820 | 2280 | 2730 | 3180 | 3640 | 4090 | 4550 | 5000 | 5450 |
| 9.0° | 15.8 | 970 | 970 | 1450 | 1930 | 2410 | 2890 | 3370 | 3850 | 4340 | 4820 | 5300 | 5780 |
| 9.5° | 16.7 | 1020 | 1020 | 1530 | 2040 | 2550 | 3060 | 3560 | 4070 | 4580 | 5090 | 5600 | 6110 |
| 10.0° | 17.6 | 1080 | 1080 | 1610 | 2150 | 2680 | 3220 | 3750 | 4290 | 4830 | 5360 | 5900 | 6430 |