

ETSI AD 2.1 Aerodrome Location Indicator and Name

ETSI – INGOLSTADT/MANCHING

ETSI AD 2.2 Aerodrome Geographical and Administrative Data

1	ARP coordinates and site at AD	48°42.9378'N 011°32.0220'E Centre between RWY 07L/25R and RWY 07R/25L
2	Direction and distance from (city)	5.4 NM 124° from Ingolstadt, 1.5 NM E of Manching
3	Elevation/Reference temperature	1203 ft (367 m) 23.9 °C
4	Geoid undulation at AD ELEV PSN	NIL
5	MAG VAR/Annual change	2.99°E (2017)/0.12°E
6	AD Administration	<i>mil:</i> WTD 61 <i>civ:</i> Gesellschaft für zivile Mitbenutzung des Militärflugplatzes Ingolstadt-Manching m.b.H.
	Address	<i>mil:</i> Wehrtechnische Dienststelle für Luftfahrzeuge und Luftfahrtgerät der Bundeswehr WTD 61 AF 110-1 / FS-StOffz Flugplatz 85077 Manching <i>civ:</i> IMA, GAT 85077 Manching
	Telephone	<i>mil:</i> +49 8459 80-2113 / 2133 FspNBw 6601-2113 / 2133 <i>civ:</i> +49 8459 33-2431
	Telefax	<i>mil:</i> +49 8459 80-3080 FspNBw 6601-3080 <i>civ:</i> +49 8459 33-2436
	AFS	<i>mil:</i> ETSIZPZX <i>civ:</i> ETSIZPZX
	E-mail	<i>mil:</i> FlugberatungIngolstadt@bundeswehr.org <i>civ:</i> info@etsi-airport.de
7	Types of traffic permitted (IFR/VFR)	IFR / VFR
8	Remarks	NIL

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ETSI AD 2.3 Operational Hours

1	Aerodrome operator	<i>mil:</i> PPR 3 h MON-THU 0800-1600++ FRI 0800-1300++ CLSD HOL <i>civ:</i> MON-THU 0800-1600++ FRI 0800-1300++ PPR: MON-THU 0600-0800++, 1600-2100++ FRI 0600-0800++, 1300-1900++ SAT, SUN, HOLSR-30/0600-SS+30/1900++
2	Customs and immigration	<i>mil:</i> HO <i>civ:</i> For passenger in goods within the duty-free quantity. For flights from and to non EU countries or Non-Schengen countries, PPR MNM 24 H prior DEP or LDG.
3	Health and sanitation	HO
4	AIS Briefing Office	HO Outside MIL OPR HR: AIS-C H24 Telephone: +49 69 78072-500 or 01803 337 247 Telefax: +49 69 78072-505 or 01803 329 247
5	ATS Reporting Office (ARO)	HO Outside MIL OPR HR: AIS-C H24 Telephone: +49 69 78072-500 or 01803 337 247 Telefax: +49 69 78072-505 or 01803 329 247
6	MET Briefing Office	<i>mil:</i> HO <i>civ:</i> H24
7	ATS	HO, RADAR service only during MIL OPR HR
8	Fuelling	HO
9	Handling	HO
10	Security	H24
11	De-icing	Not available
12	Remarks	<i>civ:</i> PPR inquiries only during MIL OPR HR

ETSI AD 2.4 Handling Services and Facilities

1	Cargo-handling facilities	Fork-lift, highloader
2	Fuel/oil types	<i>mil:</i> F-34 / H-515, O-133, O-138, O-156, O-160 <i>civ:</i> 100LL, Jet A1
3	Fuelling facilities/capacity	Fuel trucks
4	De-icing facilities	Not available
5	Hangar space for visiting aircraft	<i>mil:</i> O/R <i>civ:</i> Not available
6	Repair facilities for visiting aircraft	<i>mil:</i> Minor repairs for B105, C160, EUFI, H53, TIGR, TOR, UH1 <i>civ:</i> Not available
7	Oxygen	<i>mil:</i> LHOX, LOX, LPOX <i>civ:</i> Not available
8	Aircraft starting units	<i>mil:</i> PRESAIR, RST-180, U1003 <i>civ:</i> GPU 24V/115V
9	Remarks	<i>mil:</i> De-arming or cross-servicing on request only <i>civ:</i> NIL

ETSI AD 2.5 Passenger Facilities

1	Hotels	In Manching, Ingolstadt
2	Restaurants	Within IMA Terminal
3	Transportation	Taxi
4	Medical facilities	mil: Dispensary, 3 ambulances civ: Not available
5	Bank and Post Office	In Manching, Ingolstadt
6	Tourist Office	NIL
7	Remarks	NIL

ETSI AD 2.6 Rescue and Fire Fighting Services

1	AD category for fire fighting	Cat 9, see Remarks
2	Rescue equipment	4 airport crash tender, 1 fire engine, 1 rescue vehicle.
3	Capability for removal of disabled aircraft	O/R
4	Remarks	Outside mil OPR HR, Cat 6 applies. Rescue platform for fighter jet available (including Eurofighter)

ETSI AD 2.7 Seasonal Availability – Clearing

1	Types of clearing equipment	Available
2	Clearance priorities	RWY-TWY-Apron
3	Remarks	All year round usable, information on snow clearance published by SNOWTAM.

ETSI AD 2.8 Aprons, Taxiways and Check Locations/Positions Data

1	Apron surface and strength	Concrete, LCN 120 AIRBUS premises: concrete, LCN 50 Civ: PCN 30 R/A/W/T
2	Taxiway width, surface and strength	S: 30 m N: 12.5 m C: 18.5 m E: 12.5 m (special briefing for A/C with more than 15 m Wingspan)
3	Altimeter checkpoint location and elevation	Not available
4	VOR checkpoints	Not available
5	INS checkpoints	In front of ramp 1 and 2
6	Remarks	NIL

ETSI AD 2.9 Surface Movement Guidance and Control System and Markings

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Follow-me car, signal area
2	RWY and TWY markings and LGT	Touchdown zone, RWY designator, -centre line, sidestrip TWY centre line, threshold
3	Stop bars	NIL
4	Remarks	NIL

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ETSI AD 2.10 Aerodrome Obstacles

1.	Lighted building, 48°42.7159'N 011°31.6590'E, 1305 ft MSL / 110 ft GND
2.	Lighted antenna, 48°42.4958'N 011°31.1561'E, 1302 ft MSL / 107 ft GND
3.	Lighted antenna, 48°42.8992'N 011°31.9275'E, 1349 ft MSL / 155 ft GND
4.	Lighted antenna, 48°42.8927'N 011°32.5418'E, 1314 ft MSL / 122 ft GND
5.	Lighted building, 48°42.8800'N 011°32.4076'E, 1317 ft MSL / 124 ft GND
6.	Lighted building, 48°42.8550'N 011°32.3130'E, 1317 ft MSL / 125 ft GND
7.	Lighted antenna, 48°43.2823'N 011°33.2159'E, 1314 ft MSL / 126 ft GND
8.	Lighted antenna, 48°43.0825'N 011°32.4286'E, 1347 ft MSL / 155 ft GND
9.	Lighted building, 48°43.1191'N 011°31.7703'E, 1308 ft MSL / 115 ft GND
10.	Lighted building, 48°42.8272'N 011°32.2367'E, 1329 ft MSL / 136 ft GND
11.	Lighted building, 48°42.8811'N 011°32.0305'E, 1400 ft MSL / 206 ft GND

ETSI AD 2.11 Meteorological Information Provided

1	Associated MET Office	<i>mil:</i> METO ETSI Tel: +49 8459 30-3142 FspNBw 6601-3142 <i>civ:</i> Meteorological advisory centre for aviation (MAC) South Tel: 0900 10 77 22 5 ¹
2	Hours of service	<i>mil:</i> HO <i>civ:</i> H24
	MET Office outside hours	<i>mil:</i> METFC-GAF Münster
3	Office responsible for TAF preparation Periods of validity	ETSI, see MIL AIP GEN 3.5 para 4.7
4	Trend forecast Interval of issuance	Colourstate
5	Briefing/consultation provided	<i>mil:</i> General weather briefing, weather briefing verbal and by phone. <i>civ:</i> Selfbriefing facilities in responsibility of AD administration.
6	Flight documentation Language(s) used	Charts, abbreviated plain language text. German/English
7	Charts and other information available for briefing or consultation	<i>mil:</i> Chart Display, additional charts on request. <i>civ:</i> Further information available by FAX on demand service: +49 69 8056-1
8	Supplementary equipment available for providing information	<i>mil:</i> Data display
9	ATS units provided with information	TWR, RADAR
10	Additional information (limitation of service, etc.)	<i>mil:</i> METO ETSI, TEL: +49 8459 80-3142, FspNBw 6601-3142 <i>civ:</i> Individual weather consultation: MAC South TEL: 0900 10 77 22 5 ¹ ¹ Value-added service prices see AIP GEN 3.5 - 13 and 14

ETSI AD 2.12 Runway Physical Characteristics

RWY Designator	True BRG	Dimensions of RWY (m)	Strength (PCN) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
07R	068.23°	2940 x 60	RWYs: LCN 92	48°42.27460'N 011°31.12100'E	THR 1200.8 ft TDZ 1200.8 ft
25L	248.26°	2940 x 60	Concrete SWYs: Concrete	48°42.86262'N 011°33.34727'E	THR 1193.4 ft TDZ 1196.3 ft
07L	068.22°	2439 x 30	RWYs: LCN 92	48°42.99998'N 011°30.92308'E	THR 1195.4 ft TDZ 1195.4 ft
25R	248.24°	2439 x 30	Concrete with antiskid	48°43.48793'N 011°32.76992'E	THR 1189.7 ft TDZ 1190.4 ft

Slope of RWY-SWY	SWY dimensions (m)	CWY dimensions (m)	Strip dimensions (m)	OFZ	Remarks
7	8	9	10	11	12
-0.1% / -0.2% 2940 m / 243 m	243 x 60	324 x 150	3614 x 300	NIL	RWY shoulders asphalt, both sides 15 m.
0.1% / 0.1% 2940 m / 311 m	311 x 60	324 x 150			
-0.1% 2439 m	Not available	Not available	2559 x 300	NIL	RWY shoulders asphalt, both sides 30 m.
0.1% 2439 m	Not available	Not available			

Aircraft Arresting Systems					
RWY Designator	No	Type	Location	Usable	Remarks
13	14	15	16	17	18
07R	1	44B-2D	23 ft before threshold	No	NIL
	2	44B-2L	1300 ft beyond threshold	Yes	O/R 10 min
	3	44B-2L	1300 ft before end of RWY	Yes	NIL
	4	44B-2D	23 ft beyond end of RWY	Yes	NIL
25L	1	44B-2D	23 ft before threshold	No	NIL
	2	44B-2L	1300 ft beyond threshold	Yes	O/R 20 min
	3	44B-2L	1300 ft before end of RWY	Yes	NIL
	4	44B-2D	23 ft beyond end of RWY	Yes	NIL
07L	1	44B-2D	607 ft before threshold	No	NIL
	2	44B-2L	1200 ft before end of RWY	Yes	NIL
25R	1	44B-2L	1200 ft beyond threshold	Yes	NIL
	2	44B-2D	607 ft beyond end of RWY	Yes	NIL

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ETSI AD 2.13 Declared Distances

RWY Designator	TORA (m)	TODA (m)	ASDA (m)	LDA (m)	Remarks
1	2	3	4	5	6
07R	2940	3264	3183	2940	NIL
25L	2940	3264	3251	2940	NIL
07L	2439	2439	2439	2439	NIL
25R	2439	2439	2439	2439	NIL

ETSI AD 2.14 Approach and Runway Lighting

RWY Designator	APCH LGT type length INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ LGT length	RWY Centre Line LGT length spacing colour INTST	RWY Edge LGT length spacing colour INTST	RWY End LGT colour WBAR	SWY LGT length colour	Remarks
1	2	3	4	5	6	7	8	9	10
07R	NATO-standard White LIH	Available	PAPI 3.0°	Not available	2940 m 15 m white red/ white red	2940 m 60 m White LIH	red	300 m red	NIL
25L	NATO-standard White LIH	Available	PAPI 3.0°	900 m	2940 m 15 m white red/ white red	2940 m 60 m White LIH	red	300 m red	NIL
07L	Modified Calvert system White LIH	Available	PAPI 3.0°	Not available	Not available	2940 m 60 m White LIH	red	Not available	NIL
25R	Modified Calvert system White LIH	Available	PAPI 3.0°	Not available	Not available	2940 m 60 m White LIH	red	Not available	NIL

ETSI AD 2.15 Other Lighting, Secondary Power Supply

1	ABN/IBN location, characteristics and hours of operation	ABN: white / green, on TWR
2	LDI location and LGT Anemometer location and LGT	LDI: Available, lighted
3	TWY edge and centre line lighting	Blue, LIL
4	Secondary power supply/switch-over time	Available / 15 Sec
5	Remarks	Obstruction marking and lighting available.

ETSI AD 2.16 Helicopter Landing Area

1	Coordinates TLOF or THR of FATO Geoid undulation	NIL
2	TLOF and/or FATO elevation	NIL
3	TLOF and FATO area dimensions, surface, strength, marking	NIL
4	True BRG of FATO	NIL
5	Declared distance available	NIL
6	APP and FATO lighting	NIL
7	Remarks	NIL

ETSI AD 2.17 ATS Airspace

1	Designation and lateral limits	INGOLSTADT, see AIP Germany ENR 2.1
2	Vertical limits	GND-3700 ft MSL
3	Airspace classification	D
4	ATS unit call sign Language(s)	INGO TOWER German, English
5	Transition altitude	5000 ft MSL
6	Remarks	NIL

ETSI AD 2.18 ATS Communication Facilities

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
RADAR	INGO RADAR	243.000 MHz	HO	Emergency frequencies for all services
		121.500 MHz	HO	
		278.100 MHz	HO	SSR Mode Codes 3/A 4260-4267
		120.600 MHz	HO	
		125.575 MHz	HO	
		369.375 MHz	HX	
		313.475 MHz	HX	
		379.750 MHz	HX	
		123.300 MHz	HX	
		139.400 MHz	HX	
		122.100 MHz	HX	
TWR	INGO TOWER	373.200 MHz	HO	
		257.800 MHz	HO	
		125.250 MHz	HO	
		122.100 MHz	HO	
		282.100 MHz	HX	
		240.950 MHz	HX	
		139.400 MHz	HX	

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ETSI AD 2.19 Radio Navigation and Landing Aids

Type of aid MAG VAR, Type of supported OPS (for VOR/ILS/ MLS give declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
TACAN (3°E/2017)	IGL	CH 51X (111.400 MHz)	H24	48°43.0825'N 011°34.1803'E	1237 ft	084°(T), 1.44 NM from ARP. Designated operational coverage: 292°-338° 60 NM, FL 500 338°-292° 40 NM, FL 500. Minimum reception altitude: btn R-190 and R-020 at 40 NM, 5000 ft GND, btn R-020 and R-190 at 40 NM, 6000 ft GND.
NDB (3°E/2017)	IGL	345.000 kHz	H24	48°44.2607'N 011°38.6707'E		068°(T), 3.79 NM from THR RWY25L. Designated operational range: 21 NM.
ILS 25L CAT I LOC (3°E/2017)	IIGW	108.100 MHz	H24	48°42.1779'N 011°30.7551'E		LOC course: 246° LOC usable 12 NM 23° North and 17° South of RCL 3200 ft MSL
GP		334.700 MHz		48°42.7218'N 011°33.1436'E		Glide path angle: 3°
OM	Dashes	75.000 MHz		48°44.2697'N 011°38.6865'E		3.80 NM from threshold RWY 25L
MM	Dots and dashes	75.000 MHz		48°43.0800'N 011°34.1712'E		0.60 NM from threshold RWY 25L

ETSI AD 2.20 Örtliche Besonderheiten

- Besondere IFR Verfahren für RWY 25R/07L.
- Übungsanflüge für militärische Luftfahrzeuge sind von 1100-1300++ verboten.
- Lastenabsetzgebiet 3 km südlich des ARP bis zu 3000 ft MSL. Seitliche Begrenzungen: 48°41.70'N 011°33.04'E - 48°41.32'N 011°33.31'E - 48°40.92'N 011°31.79'E - 48°41.30'N 011°31.56'E
- Erprobungsflüge und Absetzen von Lasten werden innerhalb der Kontrollzone durchgeführt. Lfz-Führer sind darauf hinzuweisen, bei Ausfall der Funkverbindung auf Strecke diesen Flugplatz nicht als geeigneten Flugplatz zum Ausweichen zu betrachten.
- Wegen möglicher Verzögerung durch Erprobungsflüge ist 15 min zusätzlicher Kraftstoffvorrat erforderlich, sonst ist mit Umleitung zum Ausweichflugplatz zu rechnen.
- Prop-Flugzeugverkehr und Segelfluggetrieb SAT, SUN und HOL von SR-SS bis zu 3000 ft MSL im Umkreis von 5 NM um den ARP.

ETSI AD 2.20 Local Traffic Regulations

- Special IFR procedures for RWY 25R/07L.
- Practice approaches are prohibited for mil acft from 1100-1300++.
- Cargo dropping area 3 km south of ARP up to 3000 ft MSL. Lateral limits: 48°41.70'N 011°33.04'E - 48°41.32'N 011°33.31'E - 48°40.92'N 011°31.79'E - 48°41.30'N 011°31.56'E
- Test flights and cargo dropping are carried out within the control zone. Pilots are to be advised that this aerodrome should not be considered as a suitable aerodrome for diversion when experiencing radio communication failure enroute.
- 15 min additional fuel required due to possible delay caused by test flights, otherwise diversion to alternate aerodrome is to be expected.
- Prop aircraft and glider flying SAT, SUN and HOL from SR-SS up to 3000 ft MSL, radius 5 NM of ARP.

ETSI AD 2.21 Verfahren zur Lärmvermeidung

1. Militärischer VFR Abflug nur für Besatzungen, die mit den örtlichen Lärminderungsverfahren vertraut sind.

ETSI AD 2.22 Flugverfahren

1. IFR-Verfahren

Die Instrumentenanflug- und Instrumentenabflugverfahren wurden gemäß den auf der jeweiligen Verfahrensseite angegebenen Kriterien erstellt.

ETSI AD 2.23 Zusätzliche Informationen

ICAO Flugplatzbezugscode: 4D

ETSI AD 2.21 Noise Abatement Procedures

1. Military VFR departure only for Aircrews familiar with local Noise Abatement Procedures.

ETSI AD 2.22 Flight Procedures

1. IFR procedures

The instrument approach and departure procedures are established in accordance with the criteria stated on the individual procedure chart.

ETSI AD 2.23 Additional Information

ICAO Aerodrome Reference Code: 4D

ETSI AD 2.24 Charts related to an Aerodrome

AERODROME CHART	AD 2 ETSI 2 - 1
AIRCRAFT PARKING / DOCKING CHART	AD 2 ETSI 2 - 2
LONGITUDINAL PROFILES OF RUNWAYS AND STOPWAYS	AD 2 ETSI 2 - 3
MINIMUM VECTORING ALTITUDES	AD 2 ETSI 2 - 5 / 6
AERODROME CHART	CENOR FLIP VOL 2
SI 107 - 125	CENOR FLIP VOL 2 [AD 2 ETSI 4 - 1]*
SI 207 - 225	CENOR FLIP VOL 2 [AD 2 ETSI 4 - 2]*
RNAV (GNSS) RWY 07L	CENOR FLIP VOL 2 [AD 2 ETSI 3 - 1/2]*
RNAV (GNSS) RWY 07R	CENOR FLIP VOL 2 [AD 2 ETSI 3 - 3/4]*
RNAV (GNSS) RWY 25L	CENOR FLIP VOL 2 [AD 2 ETSI 3 - 5/6]*
RNAV (GNSS) RWY 25R	CENOR FLIP VOL 2 [AD 2 ETSI 3 - 7/8]*
IAA RWY 07L	CENOR FLIP VOL 2
TACAN RWY 07R	CENOR FLIP VOL 2
IAA RWY 07R	CENOR FLIP VOL 2
ILS X or LOC RWY 25L	CENOR FLIP VOL 2 [AD 2 ETSI 3 - 9]*
ILS Y or LOC RWY 25L	CENOR FLIP VOL 2 [AD 2 ETSI 3 - 10]*
ILS Z or LOC RWY 25L	CENOR FLIP VOL 2 [AD 2 ETSI 3 - 11]*
TACAN RWY 25L	CENOR FLIP VOL 2
IAA RWY 25L	CENOR FLIP VOL 2
NDB Y RWY 25L	CENOR FLIP VOL 2 [AD 2 ETSI 3 - 12]*
NDB Z RWY 25L	CENOR FLIP VOL 2 [AD 2 ETSI 3 - 13]*
COPTER NDB RWY 25L	CENOR FLIP VOL 2 [AD 2 ETSI 3 - 14]*
TACAN RWY 25R	CENOR FLIP VOL 2
IAA RWY 25R	CENOR FLIP VOL 2
ARR/DEP - 1	GEMIL FLIP VAD
ARR/DEP - 2	GEMIL FLIP VAD
AERODROME CHART	GEMIL FLIP VAD
ARR/DEP JET RWY 07R/25L	GEMIL FLIP VAD JET
ARR/DEP JET RWY 07L/25R	GEMIL FLIP VAD JET
ARR/DEP JET RWY 07R/25L, 07L/25R	GEMIL FLIP VAD JET
AERODROME CHART	GEMIL FLIP VAD JET

* In the AIP Germany the charts have been taken over unchanged from the military version.

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