

ENR 4.1
Funknavigationsanlagen – Strecke
Radio navigation aids – en-route

Name of station VOR declination	ID	Frequency Channel	Hours of operation	Coordinates	ELEV DME antenna (ft)	Remarks
1	2	3	4	5	6	7
Allgaeu NDB	ALG	341.00 KHz	H24	N 47 59 50.57 E 010 15 43.88		Operational range sector 0°–360°: 25 NM
Barmen DVORTACAN (1° E/2012)	BAM	113.60 MHz CH83x	H24	N 51 19 39.93 E 007 10 37.14	885	Operational coverage sector 292°–338°: 60 NM, FL 500 sector 338°–292°: 40 NM, FL 500
Bottrop NDB	BOT	406.50 KHz	H24	N 51 35 08.89 E 007 01 22.84		Operational range sector 0°–360°: 17 NM NDB unusable: in sector from station <hr/> 039°–043° 15 NM 043°–039° 17 NM
Bruenkendorf DVOR/DME (2° E/2012)	BKD	117.70 MHz CH124x	H24	N 53 02 04.29 E 011 32 46.38	83	Operational coverage sector 0°–360°: 80 NM, FL 500
Celle NDB	CEL	311.00 KHz	H24	N 52 35 22.52 E 010 01 46.04		Operational range sector 0°–360°: 25 NM NDB unusable: in sector from station <hr/> 040°–260° 15 NM 260°–320° 11.5 NM 320°–040° 10 NM
Cola DVOR/DME (1° E/2012)	COL	108.80 MHz CH25x	H24	N 50 47 00.70 E 007 35 39.03	958	Operational coverage sector 225°–315°: 60 NM, FL 250 sector 315°–225°: 40 NM, FL 250 DVOR/DME unusable in sector 0°–360°: below <hr/> 0 – 10 NM 2000 ft MSL 10 – 20 NM 3300 ft MSL 20 – 30 NM 4700 ft MSL 30 – 40 NM 6200 ft MSL DVOR/DME unusable in sector 225°–315°: below <hr/> 40 – 50 NM 7900 ft MSL 50 – 60 NM 9700 ft MSL In addition, DVOR/DME can be used for the published en-route, approach and departure procedures. Radial 097: Severe course roughness between 3.8 NM and 4.3 NM possible.
Dinkelsbuehl DVORTACAN (2° E/2012)	DKB	117.80 MHz CH125x	H24	N 49 08 33.91 E 010 14 17.90	1791	Operational coverage sector 0°–360°: 60 NM, FL 500 The DVOR may only be used for the radials in the published en-route, approach and departure procedures and is not permitted for area navigation. TACAN unusable in sector 0°–360°: below <hr/> 0 – 10 NM 2800 ft MSL 10 – 20 NM 4100 ft MSL 20 – 30 NM 5500 ft MSL 30 – 40 NM 7000 ft MSL 40 – 50 NM 8600 ft MSL 50 – 60 NM 10400 ft MSL
Dresden DVOR/DME (3° E/2012)	DRN	114.35 MHz CH90y	H24	N 51 00 55.97 E 013 35 56.00	1051	Operational coverage sector 0°–360°: 60 NM, FL 250
Elbe VOR/DME (2° E/2015)	LBV	115.10 MHz CH98x	H24	N 53 39 09.33 E 009 34 46.13	4	

Name of station VOR <i>declination</i>	ID	Frequency Channel	Hours of operation	Coordinates	ELEV DME antenna (ft)	Remarks
1	2	3	4	5	6	7
Erfurt DVOR/DME (2° E/2012)	ERF	113.85 MHz CH85y	H24	N 50 57 03.13 E 011 14 12.06	1283	Operational coverage sector 0°–360°: 40 NM, FL 250 DVOR unusable in sector 175°–265°: below 10 – 20 NM 3000 ft MSL 20 – 30 NM 4500 ft MSL 30 – 40 NM 6500 ft MSL
Erlangen VOR/DME (2° E/2012)	ERL	114.90 MHz CH96x	H24	N 49 39 19.49 E 011 09 02.92	1830	Operational coverage sector 0°–360°: 60 NM, FL 500 DME unusable in sector 0°–360°: below 0 – 10 NM 2900 ft MSL 10 – 20 NM 4100 ft MSL 20 – 30 NM 5500 ft MSL 30 – 40 NM 7000 ft MSL 40 – 50 NM 8700 ft MSL 50 – 60 NM 10500 ft MSL In addition, VOR/DME can be used for the published en-route, approach and departure procedures.
Frankfurt DVORTACAN (2° E/2012)	FFM	114.20 MHz CH89x	H24	N 50 03 13.47 E 008 38 13.53	491	Operational coverage sector 203°–248°: 50 NM, FL 500 sector 248°–203°: 100 NM, FL 500 DVORTACAN unusable in sector 310°–340°: below 20 – 40 NM 4000 ft MSL beyond 40 NM 8000 ft MSL
Friedland DVOR/DME (3° E/2012)	FLD	117.15 MHz CH118y	H24	N 53 45 45.85 E 013 33 47.29	130	Operational coverage sector 0°–360°: 60 NM, FL 500 DVOR/DME unusable in sector 0°–360°: below 0 – 10 NM 1200 ft MSL 10 – 20 NM 2400 ft MSL 20 – 30 NM 3800 ft MSL 30 – 40 NM 5400 ft MSL 40 – 50 NM 7000 ft MSL 50 – 60 NM 8800 ft MSL In sector 040°–090° the DVOR may only be used for the radials in the published en-route, approach and departure procedures and is not permitted for area navigation.
Fulda DVOR/DME (2° E/2012)	FUL	112.10 MHz CH58x	H24	N 50 35 32.84 E 009 34 19.81	1116	Operational coverage sector 0°–360°: 100 NM, FL 500 DVOR/DME unusable in sector 010°–320°: below 0 – 10 NM 2200 ft MSL 10 – 20 NM 3400 ft MSL 20 – 30 NM 4800 ft MSL 30 – 40 NM 6400 ft MSL 40 – 50 NM 8000 ft MSL 50 – 60 NM 9800 ft MSL 60 – 70 NM 11700 ft MSL 70 – 80 NM 13800 ft MSL 80 – 90 NM 16000 ft MSL 90 –100 NM 18300 ft MSL DVOR/DME unusable in sector 320°–010°: below 20 – 40 NM 7000 ft MSL 40 – 60 NM 12000 ft MSL 60 – 80 NM 17000 ft MSL 80 –100 NM 22000 ft MSL In addition, DVOR/DME can be used for the published en-route, approach and departure procedures.

Name of station VOR <i>declination</i>	ID	Frequency Channel	Hours of operation	Coordinates	ELEV DME antenna (ft)	Remarks
1	2	3	4	5	6	7
Gedern DVORTACAN (2° E/2012)	GED	110.80 MHz CH45x	H24	N 50 24 43.01 E 009 14 56.99	1631	Operational coverage sector 225°–315°: 70 NM, FL 500 sector 315°–225°: 80 NM, FL 500 The DVOR may only be used for the radials in the published en-route, approach and departure procedures and is not permitted for area navigation. TACAN unusable in sector 0°–360°: below <hr/> 0 – 10 NM 2700 ft MSL 10 – 20 NM 3900 ft MSL 20 – 30 NM 5300 ft MSL 30 – 40 NM 6800 ft MSL 40 – 50 NM 8500 ft MSL 50 – 60 NM 10300 ft MSL 60 – 70 NM 12200 ft MSL TACAN unusable in sector 315°–225°: below <hr/> 70 – 80 NM 14200 ft MSL
Germinghausen DVOR/DME (1° E/2012)	GMH	115.40 MHz CH101x	H24	N 51 10 13.84 E 007 53 31.34	1814	Operational coverage sector 0°–360°: 60 NM, FL 500 The DVOR may only be used for the radials in the published en-route, approach and departure procedures and is not permitted for area navigation. DME unusable in sector 0°–360°: below <hr/> 0 – 10 NM 2900 ft MSL 10 – 20 NM 4100 ft MSL 20 – 30 NM 5500 ft MSL 30 – 40 NM 7000 ft MSL 40 – 46 NM 8000 ft MSL ID GMH: DVOR ID and DME ID are not synchronized.
Gotem DVOR/DME (2° E/2012)	GOT	115.25 MHz CH99y	H24	N 51 20 35.22 E 011 35 51.10	791	Operational coverage sector 0°–360°: 60 NM, FL 500
Hahn NDB	HAN	376.00 KHz	H24	N 49 57 53.58 E 007 16 51.15		Operational range sector 0°–360°: 25 NM NDB unusable: in sector from station <hr/> 260°–340° 18 NM 340°–260° 25 NM NDB approach RWY21 cannot be used due to needle oscillation >5° and longer than 4 SEC.
Hamburg DVORTACAN (2° E/2012)	HAM	113.10 MHz CH78x	H24	N 53 41 08.07 E 010 12 17.99	185	Operational coverage sector 0°–360°: 60 NM, FL 500 DVORTACAN unusable in sector 0°–360°: below <hr/> 0 – 10 NM 1200 ft MSL 10 – 20 NM 2500 ft MSL 20 – 30 NM 3900 ft MSL 30 – 40 NM 5400 ft MSL 40 – 50 NM 7000 ft MSL 50 – 60 NM 8800 ft MSL In addition, DVORTACAN can be used for the published en-route, approach and departure procedures.
Hamburg NDB	HOS	339.00 KHz	H24	N 53 40 37.10 E 010 04 59.53		Operational range sector 0°–360°: 15 NM

Name of station VOR <i>declination</i>	ID	Frequency Channel	Hours of operation	Coordinates	ELEV DME antenna (ft)	Remarks
1	2	3	4	5	6	7
Hamm DVOR/DME (1° E/2012)	HMM	115.65 MHz CH103y	H24	N 51 51 24.72 E 007 42 29.86	217	Operational coverage sector 112°–157°: 60 NM, FL 500 sector 157°–112°: 40 NM, FL 500 DVOR/DME unusable in sector 0°–360°: below 0 – 10 NM 1300 ft MSL 10 – 20 NM 2500 ft MSL 20 – 30 NM 3900 ft MSL 30 – 40 NM 5400 ft MSL DVOR/DME unusable in sector 112°–157°: below 40 – 50 NM 7100 ft MSL 50 – 60 NM 8900 ft MSL In sector 090°–120° the DVOR may only be used for the radials in the published en-route, approach and departure procedures and is not permitted for area navigation.
Hehlingen DVOR/DME (2° E/2012)	HLZ	117.30 MHz CH120x	H24	N 52 21 48.22 E 010 47 42.79	404	Operational coverage sector 0°–360°: 80 NM, FL 500
Helgoland VOR/DME (1° E/2012)	DHE	116.30 MHz CH110x	H24	N 54 11 08.47 E 007 54 38.52	26	Operational coverage sector 045°–202°: 60 NM, FL 500 sector 202°–045°: 200 NM, FL 500 The VOR may only be used for the radials in the published en-route, approach and departure procedures and is not permitted for area navigation. DME unusable in sector 045°–202°: below 0 – 10 NM 1100 ft MSL 10 – 20 NM 2400 ft MSL 20 – 30 NM 3700 ft MSL 30 – 40 NM 3500 ft MSL 40 – 50 NM 6900 ft MSL 50 – 60 NM 8700 ft MSL DME unusable in sector 202°–045°: below 60 – 70 NM 10600 ft MSL 70 – 80 NM 12700 ft MSL 80 – 90 NM 14900 ft MSL 90 –100 NM 17200 ft MSL 100 –110 NM 19700 ft MSL 110 –120 NM 22200 ft MSL 120 –130 NM 24900 ft MSL 130 –140 NM 27800 ft MSL 140 –150 NM 30700 ft MSL 150 –160 NM 33800 ft MSL 160 –170 NM 37100 ft MSL 170 –180 NM 40500 ft MSL 180 –190 NM 44000 ft MSL 190 –200 NM 47600 ft MSL

Name of station VOR <i>declination</i>	ID	Frequency Channel	Hours of operation	Coordinates	ELEV DME antenna (ft)	Remarks
1	2	3	4	5	6	7
Hermisdorf DVOR/DME (3° E/2016)	HDO	108.65 MHz CH23y	H24	N 50 55 41.34 E 014 22 07.68	1433	Operational coverage sector 0°–360°: 60 NM, FL 500 DVOR/DME unusable in sector 010°–090°: below 0 – 20 NM 3800 ft MSL 20 – 30 NM 5100 ft MSL 30 – 40 NM 6700 ft MSL 40 – 50 NM 8300 ft MSL 50 – 60 NM 10100 ft MSL DVOR/DME unusable in sector 090°–242°: below 0 – 40 NM 6700 ft MSL 40 – 50 NM 8300 ft MSL 50 – 60 NM 10100 ft MSL DVOR/DME unusable in sector 242°–315°: below 0 – 20 NM 3800 ft MSL 20 – 30 NM 5100 ft MSL 30 – 40 NM 6700 ft MSL 40 – 50 NM 8300 ft MSL 50 – 60 NM 10100 ft MSL DVOR/DME unusable in sector 315°–010°: below 0 – 20 NM 9000 ft MSL 20 – 30 NM 13000 ft MSL 30 – 40 NM 17100 ft MSL 40 – 50 NM 21300 ft MSL 50 – 60 NM 25700 ft MSL
Karlsruhe DVOR/DME (1° E/2012)	KRH	115.95 MHz CH106y	H24	N 48 59 34.60 E 008 35 03.25	909	Operational coverage sector 068°–315°: 60 NM, FL 500 sector 315°–068°: 40 NM, FL 500 DVOR/DME unusable in sector 160°–240°: below 0 – 12 NM 5000 ft MSL 12 – 25 NM 10000 ft MSL 25 – 40 NM 15000 ft MSL
Kempten DVOR/DME (2° E/2016)	KPT	108.40 MHz CH21x	H24	N 47 44 44.80 E 010 20 59.43	2518	Operational coverage sector 112°–157°: 80 NM, FL 500 sector 157°–112°: 60 NM, FL 500 The DVOR may only be used for the radials in the published en-route, approach and departure procedures and is not permitted for area navigation. DME unusable in sector 0°–360°: below 0 – 10 NM 3600 ft MSL 10 – 20 NM 4900 ft MSL 20 – 30 NM 6300 ft MSL 30 – 40 NM 7800 ft MSL 40 – 50 NM 9400 ft MSL 50 – 60 NM 11200 ft MSL DME unusable in sector 112°–157°: below 60 – 70 NM 13100 ft MSL 70 – 80 NM 15200 ft MSL
Kiel-Holtenau NDB	KIL	353.00 KHz	H24	N 54 22 39.26 E 010 07 12.08		Operational range sector 0°–360°: 30 NM

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1	2	3	4	5	6	7
Klasdorf DVOR/DME (3° E/2012)	KLF	115.15 MHz CH98y	H24	N 52 01 09.67 E 013 33 48.29	223	Operational coverage sector 0°–360°: 60 NM, FL 500 DVOR/DME unusable in sector 0°–360°: below 0 – 10 NM 1300 ft MSL 10 – 20 NM 2600 ft MSL 20 – 30 NM 4000 ft MSL 30 – 40 NM 5500 ft MSL 40 – 50 NM 7100 ft MSL 50 – 60 NM 8900 ft MSL In addition, DVOR/DME can be used for the published en-route, approach and departure procedures.
Leine DVOR/DME (2° E/2012)	DLE	115.20 MHz CH99x	H24	N 52 15 01.15 E 009 53 00.58	395	Operational coverage sector 045°–090°: 80 NM, FL 500 sector 090°–045°: 60 NM, FL 500 DVOR/DME unusable in sector 0°–360°: below 0 – 10 NM 1400 ft MSL 10 – 20 NM 2700 ft MSL 20 – 30 NM 4100 ft MSL 30 – 40 NM 5600 ft MSL 40 – 50 NM 7300 ft MSL 50 – 60 NM 9100 ft MSL DVOR/DME unusable in sector 045°–090°: below 60 – 70 NM 11000 ft MSL 70 – 80 NM 13000 ft MSL In sector 025°–050° the DVOR may only be used for the radials in the published en-route, approach and departure procedures and is not permitted for area navigation.
Lima NDB	LMA	311.00 KHz	H24	N 51 22 15.29 E 006 23 41.73		Operational range sector 0°–360°: 15 NM
Luburg VOR/DME (2° E/2012)	LBU	109.20 MHz CH29x	H24	N 48 54 46.71 E 009 20 24.82	1052	Operational coverage sector 135°–315°: 40 NM, FL 500 sector 315°–135°: 60 NM, FL 500 The VOR may only be used for the radials in the published en-route, approach and departure procedures and is not permitted for area navigation. DME unusable in sector 0°–360°: below 0 – 10 NM 2100 ft MSL 10 – 20 NM 3400 ft MSL 20 – 30 NM 4000 ft MSL 30 – 40 NM 6300 ft MSL DME unusable in sector 315°–135°: below 40 – 50 NM 7900 ft MSL 50 – 60 NM 9700 ft MSL
Luebeck DVOR (2° E/2012)	LUB	110.60 MHz	H24	N 53 56 26.67 E 010 40 04.03		Operational coverage sector 0°–360°: 65 NM, FL 500
Magdeburg VOR/DME (3° E/2014)	MAG	110.45 MHz CH41y	H24	N 51 59 41.96 E 011 47 39.50	184	Operational coverage sector 0°–360°: 80 NM, FL 500 VOR/DME unusable in sector 0°–360°: below 0 – 10 NM 1200 ft MSL 10 – 20 NM 2500 ft MSL 20 – 30 NM 3900 ft MSL 30 – 40 NM 5400 ft MSL 40 – 50 NM 7100 ft MSL 50 – 60 NM 8900 ft MSL 60 – 70 NM 10800 ft MSL 70 – 80 NM 12800 ft MSL The VOR may only be used for the radials in the published en-route, approach and departure procedures and is not permitted for area navigation.

Name of station VOR <i>declination</i>	ID	Frequency Channel	Hours of operation	Coordinates	ELEV DME antenna (ft)	Remarks
1	2	3	4	5	6	7
Maisach DVOR/DME (2° E/2012)	MAH	115.20 MHz CH99x	H24	N 48 15 48.35 E 011 18 42.93	1770	Operational coverage sector 0°–360°: 50 NM, FL 500 DVOR/DME unusable in sector 150°–200°: below <hr/> 0 – 10 NM 4900 ft MSL 10 – 20 NM 8200 ft MSL 20 – 30 NM 11700 ft MSL 30 – 40 NM 15300 ft MSL 40 – 50 NM 19000 ft MSL DVOR/DME unusable in sector 200°–150°: below <hr/> 0 – 10 NM 2800 ft MSL 10 – 20 NM 4100 ft MSL 20 – 30 NM 5500 ft MSL 30 – 40 NM 7100 ft MSL 40 – 50 NM 8600 ft MSL In addition, DVOR/DME can be used for the published en-route, approach and departure procedures.
Metro VOR (2° E/2012)	MTR	110.00 MHz	H24	N 50 16 34.59 E 008 50 55.05		Operational coverage sector 0°–360°: 60 NM, FL 250 The VOR may only be used for the radials in the published en-route, approach and departure procedures and is not permitted for area navigation.
Michaelsdorf DVOR (2° E/2012)	MIC	112.20 MHz	H24	N 54 18 19.66 E 011 00 18.67		Operational coverage sector 0°–360°: 60 NM, FL 500 DVOR unusable in sector 105°–125°: below <hr/> 0 – 60 NM 50000 ft MSL DVOR unusable in sector 350°–105°: below <hr/> 0 – 10 NM 1200 ft MSL 10 – 20 NM 2400 ft MSL 20 – 30 NM 3800 ft MSL 30 – 40 NM 5400 ft MSL 40 – 50 NM 7000 ft MSL 50 – 60 NM 8800 ft MSL In addition, DVOR can be used for the published en-route, approach and departure procedures. Unusable on radials 105–125.
Mike NDB	MIQ	426.00 KHz	H24	N 48 34 12.81 E 011 35 51.01		Operational range sector 0°–360°: 24 NM NDB unusable: in sector from station <hr/> 070°–080° 23.5 NM 080°–310° 16.5 NM 310°–335° 22 NM 335°–070° 17 NM

Name of station VOR <i>declination</i>	ID	Frequency Channel	Hours of operation	Coordinates	ELEV DME antenna (ft)	Remarks
1	2	3	4	5	6	7
Muenchen VOR/DME (3° E/2012)	MUN	112.30 MHz CH70x	H24	N 48 10 49.17 E 011 48 57.66	1758	Operational coverage sector 045°–112°: 60 NM, FL 500 sector 112°–158°: 80 NM, FL 500 sector 158°–225°: 60 NM, FL 500 sector 225°–315°: 80 NM, FL 500 sector 315°–045°: 40 NM, FL 500 The VOR may only be used for the radials in the published en-route, approach and departure procedures and is not permitted for area navigation. DME unusable in sector 0°–360°: below <hr/> 0 – 10 NM 2800 ft MSL 10 – 20 NM 4100 ft MSL 20 – 30 NM 5500 ft MSL 30 – 40 NM 7000 ft MSL DME unusable in sector 045°–315°: below <hr/> 40 – 50 NM 8600 ft MSL 50 – 60 NM 10400 ft MSL DME unusable in sector 112°–158°: below <hr/> 60 – 70 NM 12400 ft MSL 70 – 80 NM 14400 ft MSL DME unusable in sector 225°–315°: below <hr/> 60 – 70 NM 12400 ft MSL 70 – 80 NM 14400 ft MSL
Nattenheim VORTACAN (1° E/2012)	NTM	115.30 MHz CH100x	H24	N 50 00 57.10 E 006 31 54.44	1388	Operational coverage sector 0°–360°: 60 NM, FL 500 The VOR may only be used for the radials in the published en-route, approach and departure procedures and is not permitted for area navigation. TACAN unusable in sector 0°–360°: below <hr/> 0 – 10 NM 2800 ft MSL 10 – 20 NM 4100 ft MSL 20 – 30 NM 5500 ft MSL 30 – 40 NM 7000 ft MSL 40 – 50 NM 8600 ft MSL 50 – 60 NM 10400 ft MSL
Nienburg VOR (2° E/2012)	NIE	116.50 MHz	H24	N 52 37 33.21 E 009 22 19.17		Operational coverage sector 0°–360°: 40 NM, FL 250 The VOR may only be used for the radials in the published en-route, approach and departure procedures and is not permitted for area navigation.
Noervenich DVORTACAN (1° E/2016)	NVO	116.20 MHz CH109x	H24	N 50 49 21.64 E 006 38 11.54	430	Operational coverage sector 0°–360°: 60 NM
Osnabrueck DVOR (1° E/2012)	OSN	114.30 MHz	H24	N 52 12 00.49 E 008 17 07.87		Operational coverage sector 023°–068°: 80 NM, FL 500 sector 068°–023°: 60 NM, FL 500
Ried DVOR/DME (2° E/2012)	RID	112.20 MHz CH59x	H24	N 49 46 54.09 E 008 32 29.35	337	Operational coverage sector 045°–225°: 60 NM, FL 250 sector 225°–045°: 40 NM, FL 250 Short-term course roughness in sector 80°–110° between 4 NM and 6 NM below 10000 ft MSL.

Name of station VOR <i>declination</i>	ID	Frequency Channel	Hours of operation	Coordinates	ELEV DME antenna (ft)	Remarks
1	2	3	4	5	6	7
Roding DVOR/DME (3° E/2012)	RDG	114.70 MHz CH94x	H24	N 49 02 24.97 E 012 31 35.57	2151	Operational coverage sector 150°–170°: 80 NM, FL 500 sector 170°–150°: 60 NM, FL 500 DVOR/DME unusable in sector 100°–150°: below <hr/> 0 – 10 NM 5400 ft MSL 10 – 20 NM 8900 ft MSL 20 – 30 NM 12500 ft MSL 30 – 40 NM 16300 ft MSL 40 – 50 NM 20200 ft MSL 50 – 60 NM 24200 ft MSL DVOR/DME unusable in sector 150°–100°: below <hr/> 0 – 10 NM 3200 ft MSL 10 – 20 NM 4500 ft MSL 20 – 30 NM 5900 ft MSL 30 – 40 NM 7400 ft MSL 40 – 50 NM 9000 ft MSL 50 – 60 NM 10800 ft MSL In addition, DVOR/DME can be used for the published en-route, approach and departure procedures.
Saarbruecken NDB	SBN	343.00 KHz	H24	N 49 13 07.87 E 007 07 06.04		Operational range sector 0°–360°: 34 NM NDB unusable: in sector from station <hr/> 060°–260° 34 NM 260°–060° 21 NM
Spessart NDB	PSA	370.00 KHz	H24	N 49 51 44.07 E 009 20 53.97		Operational range sector 050°–350°: 40 NM sector 350°–050°: 13 NM NDB unusable: in sector from station <hr/> 080°–190° 28 NM 190°–210° 20 NM 210°–340° 30 NM 340°–080° 17 NM
Sulz DVOR (2° E/2012)	SUL	116.10 MHz	H24	N 48 22 53.71 E 008 38 41.41		Operational coverage sector 0°–360°: 60 NM, FL 250 DVOR unusable in sector 0°–360°: below <hr/> 0 – 10 NM 2700 ft MSL 10 – 20 NM 4000 ft MSL 20 – 30 NM 5400 ft MSL 30 – 40 NM 6900 ft MSL 40 – 50 NM 8600 ft MSL 50 – 60 NM 10300 ft MSL In addition, DVOR can be used for the published en-route, approach and departure procedures.
Walda DVOR/DME (2° E/2012)	WLD	112.80 MHz CH75x	H24	N 48 34 45.91 E 011 07 45.79	1390	Operational coverage sector 135°–045°: 60 NM, FL 500 DVOR/DME unusable in sector 0°–360°: below <hr/> 0 – 10 NM 2500 ft MSL 10 – 20 NM 3700 ft MSL 20 – 30 NM 5100 ft MSL 30 – 40 NM 6600 ft MSL 40 – 50 NM 8300 ft MSL 50 – 60 NM 10100 ft MSL DVOR/DME unusable in sector 045°–135°: below <hr/> 60 – 70 NM 12000 ft MSL 70 – 80 NM 14000 ft MSL In addition, DVOR/DME can be used for the published en-route, approach and departure procedures.

Name of station VOR <i>declination</i>	ID	Frequency Channel	Hours of operation	Coordinates	ELEV DME antenna (ft)	Remarks																
1	2	3	4	5	6	7																
Warburg DVOR/DME (1° E/2012)	WRB	113.70 MHz CH84x	H24	N 51 30 20.51 E 009 06 39.29	833	Operational coverage sector 0°–360°: 80 NM, FL 500 DVOR/DME unusable in sector 0°–360°: below <table border="0"> <tr><td>0 – 10 NM</td><td>1900 ft MSL</td></tr> <tr><td>10 – 20 NM</td><td>3200 ft MSL</td></tr> <tr><td>20 – 30 NM</td><td>4600 ft MSL</td></tr> <tr><td>30 – 40 NM</td><td>6100 ft MSL</td></tr> <tr><td>40 – 50 NM</td><td>7800 ft MSL</td></tr> <tr><td>50 – 60 NM</td><td>9500 ft MSL</td></tr> <tr><td>60 – 70 NM</td><td>11500 ft MSL</td></tr> <tr><td>70 – 80 NM</td><td>13500 ft MSL</td></tr> </table> In addition, DVOR/DME can be used for the published en-route, approach and departure procedures.	0 – 10 NM	1900 ft MSL	10 – 20 NM	3200 ft MSL	20 – 30 NM	4600 ft MSL	30 – 40 NM	6100 ft MSL	40 – 50 NM	7800 ft MSL	50 – 60 NM	9500 ft MSL	60 – 70 NM	11500 ft MSL	70 – 80 NM	13500 ft MSL
0 – 10 NM	1900 ft MSL																					
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50 – 60 NM	9500 ft MSL																					
60 – 70 NM	11500 ft MSL																					
70 – 80 NM	13500 ft MSL																					
Weser NDB	WSN	378.00 KHz	H24	N 53 20 49.81 E 008 52 29.04		Operational range sector 0°–360°: 60 NM																
Westerland/Sylt NDB	SLT	387.00 KHz	H24	N 54 51 24.83 E 008 24 35.94		Operational range sector 0°–360°: 25 NM																
Wipper VOR (1° E/2012)	WYP	109.60 MHz	H24	N 51 02 54.07 E 007 16 47.99		Operational coverage sector 112°–158°: 40 NM, FL 250 sector 158°–112°: 25 NM, FL 150 The VOR may only be used for the radials in the published en-route, approach and departure procedures and is not permitted for area navigation.																
Wuerzburg VOR (2° E/2012)	WUR	110.20 MHz	H24	N 49 43 03.11 E 009 56 49.20		Operational coverage sector 0°–360°: 60 NM, FL 100 The VOR may only be used for the radials in the published en-route, approach and departure procedures and is not permitted for area navigation.																
Zweibruecken DVOR/DME (1° E/2012)	ZWN	114.80 MHz CH95x	H24	N 49 13 44.66 E 007 25 04.41	1164	Operational coverage sector 0°–360°: 60 NM, FL 500																