ArcGIS Pro 3.1 and ArcGIS Enterprise 11.1 Geographic and Vertical Transformation Tables

Note: Some numbers have been rounded for display. Area of use values are in degrees based upon WGS 1984. Transformation accuracies are approximate.

Table of Contents

Table 1: Geographic (datum) transformations: well-known IDs, accuracies and areas of use	
Table 2: Geographic (datum) transformations: Longitude rotation, Null, and unit change methods	78
Table 3: Geographic (datum) transformations: Geographic 2D offset method	79
Table 4: Geographic (datum) transformations: Geocentric translation method	79
Table 5: Geographic (datum) transformations: Coordinate frame (CF) and position vector (PV) methods	104
Table 6: Geographic (datum) transformations: Molodensky-Badekas method	117
Table 7: Geographic (datum) transformations: HARN, NADCON, and NTv2 methods	
Table 8: Geographic transformation methods: well-known IDs	130
Table 9: Geographic transformation methods: parameters	130
Table 10: Vertical transformations: well-known IDs, accuracies, and areas of use	132
Table 11: Vertical transformations: Vertical offset method	147
Table 12: Vertical transformations: Vertical offset and slope method	148
Table 13: Vertical transformations: file-based methods	150
Table 14: Vertical transformation methods	159
Table 15: Vertical transformations: parameters	160

Table 1: Geographic (datum) transformations: well-known IDs, accuracies and areas of use

Geographic (datum) Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
Abidjan_1987_To_WGS_1984	1470	2.000	Cote d'Ivoire (Ivory Coast)	1.0200	-8.6100	10.7400	-2.4800

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Abidjan_1987_To_WGS_1984_2	6872	2.000	Cote d'Ivoire (Ivory	1.0200	-7.5500	5.1900	-3.1100
			Coast) - offshore				
Accra_To_WGS_1972_BE	1570		Ghana - offshore	1.4000	-3.7900	6.0600	2.1000
Accra_To_WGS_1984	1569	25.000		1.4000	-3.7900	11.1600	2.1000
Accra_To_WGS_1984_3	15495		Ghana - offshore	1.4000	-3.7900	6.0600	2.1000
Accra_To_WGS_1984_4	6896		Ghana - onshore	4.6700	-3.2500	11.1600	1.2300
Aden_1925_To_WGS_1984_1	6910	Unknown	Yemen - South Yemen - mainland	12.5400	43.3700	19.0000	53.1400
Adindan_To_WGS_1984_1	1100	9.000	Africa - Eritrea, Ethiopia, South Sudan and Sudan	3.4000	21.8200	22.2400	47.9900
Adindan_To_WGS_1984_2	1101	44.000	Burkina Faso	9.3900	-5.5300	15.0900	2.4000
Adindan_To_WGS_1984_3	1102	44.000	Cameroon - onshore	1.6500	8.4500	13.0900	16.2100
Adindan_To_WGS_1984_4	1103	6.000	Ethiopia	3.4000	32.9900	14.8900	47.9900
Adindan_To_WGS_1984_5	1104	44.000	Mali	10.1400	-12.2500	25.0100	4.2600
Adindan_To_WGS_1984_6	1105	44.000	Senegal - onshore	12.2900	-17.5900	16.7000	-11.3600
Adindan_To_WGS_1984_7	1106	7.000	Africa - South Sudan and Sudan onshore	3.4900	21.8200	22.2400	38.6600
Afgooye_To_WGS_1984	1107	44.000	Somalia - onshore	-1.7100	40.9800	12.0300	51.4700
AGD_1966_To_GDA_1994	1278	5.000	Australia - onshore	-43.7000	112.8500	-9.8600	153.6900
AGD_1966_To_GDA_1994_10_NTv2_New_South_Wales_and_Vi	1596	0.100	Australia - SE Australia	-39.2000	140.9600	-28.1500	153.6900
ctoria			(ACT NSW Vic)				
AGD_1966_To_GDA_1994_11_NTv2	1803	0.500	Australia - onshore	-43.7000	112.8500	-9.8600	153.6900
AGD_1966_To_GDA_1994_12	15979	3.000	Australia - offshore	-47.2000	109.2300	-8.8800	163.2000
AGD_1966_To_GDA_1994_19	5827	0.500	Australia - Australian Capital Territory	-35.9300	148.7600	-35.1200	149.4000
AGD_1966_To_GDA_1994_2	1458	1.000	Australia - Australian Capital Territory	-35.9300	148.7600	-35.1200	149.4000
AGD_1966_To_GDA_1994_3	1459	1.000	Australia - Tasmania	-43.7000	143.7700	-39.5200	148.5500
AGD_1966_To_GDA_1994_4	1460	1.000	Australia - New South Wales and Victoria	-39.2000	140.9600	-28.1500	153.6900
AGD_1966_To_GDA_1994_8	1594	1.000	Australia - Tasmania	-43.7000	143.7700	-39.5200	148.5500
AGD_1966_To_GDA_1994_9	1595		Australia - Northern Territory	-26.0100	128.9900	-10.8600	
AGD_1966_To_GDA_1994_NTv2_Northern_Territory	1507	0.100	Australia - Northern Territory	-26.0100	128.9900	-10.8600	138.0000
AGD_1966_To_GDA_1994_NTv2_Tasmania	1506	0.100	Australia - Tasmania	-43.7000	143.7700	-39.5200	148.5500

² Copyright @ 2012, 2015-2022 Esri

Geographic (datum) Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
AGD_1966_To_GDA_1994_NTv2_Victoria	1464		Australia - Victoria	-39.2000	140.9600	-33.9800	150.0400
AGD_1966_To_GDA2020_1	9185	0.050	Australia - Australian Capital Territory	-35.9300	148.7600	-35.1200	149.4000
AGD_1966_To_PNG_1994_1	5662	2.000	Papua New Guinea - PFTB	-8.2800	142.2400	-5.5900	144.7500
AGD_1966_To_PNG_1994_2	6937	1.000	Papua New Guinea - mainland onshore	-10.7600	140.8500	-2.5300	150.9600
AGD_1966_To_PNG_1994_3	6938	4.000	Papua New Guinea - mainland onshore	-10.7600	140.8500	-2.5300	150.9600
AGD_1966_To_PNG_1994_4	6939	1.000	Papua New Guinea - PFTB	-8.2800	142.2400	-5.5900	144.7500
AGD_1966_To_PNG_1994_5	6940	2.000	Papua New Guinea - PFTB	-8.2800	142.2400	-5.5900	144.7500
AGD_1966_To_PNG_1994_6	6941	0.500	Papua New Guinea - North Fly	-6.6000	140.8900	-5.0500	141.5400
AGD_1966_To_PNG_1994_7	6942	2.500	Papua New Guinea - North Fly	-6.6000	140.8900	-5.0500	141.5400
AGD_1966_To_WGS_1984	1108	6.000	Australia - onshore	-43.7000	112.8500	-9.8600	153.6900
AGD_1966_To_WGS_1984_12	1665	3.000	Australia - Australian Capital Territory	-35.9300	148.7600	-35.1200	149.4000
AGD_1966_To_WGS_1984_13	1666	3.000	Australia - New South Wales and Victoria	-39.2000	140.9600	-28.1500	153.6900
AGD_1966_To_WGS_1984_14	1667	3.000	Australia - Tasmania	-43.7000	143.7700	-39.5200	148.5500
AGD_1966_To_WGS_1984_15	1668	3.000	Australia - Northern Territory	-26.0100	128.9900	-10.8600	138.0000
AGD_1966_To_WGS_1984_16	15788	5.000	Australia - onshore	-43.7000	112.8500	-9.8600	153.6900
AGD_1966_To_WGS_1984_17_NTv2	15786	2.900	Australia - onshore	-43.7000	112.8500	-9.8600	153.6900
AGD_1966_To_WGS_1984_18	15980	3.000	Australia - offshore	-47.2000	109.2300	-8.8800	163.2000
AGD_1966_To_WGS_1984_19	5841	2.000	Papua New Guinea - PFTB	-8.2800	142.2400	-5.5900	144.7500
AGD_1966_To_WGS_1984_21	6943	5.000	Papua New Guinea - mainland onshore	-10.7600	140.8500	-2.5300	150.9600
AGD_1966_To_WGS_1984_22	6944	4.000	Papua New Guinea - PFTB	-8.2800	142.2400	-5.5900	144.7500

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
AGD_1966_To_WGS_1984_23	6945	4.000	Papua New Guinea -	-6.6000	140.8900	-5.0500	141.5400
			North Fly				
AGD_1984_To_GDA_1994	1279	5.000	Australia – AGD84	-38.5300	109.2300	-9.3700	153.6100
AGD_1984_To_GDA_1994_2	1280	1.000	Australia - AGD84	-38.5300	109.2300	-9.3700	153.6100
AGD_1984_To_GDA_1994_3	1559	Unknown	Australia - Western	-35.1900	112.8500	-13.6700	129.0100
			Australia				
AGD_1984_To_GDA_1994_4_NTv2_Western_Australia	1593	0.100	Australia - Western	-35.1900	112.8500	-13.6700	129.0100
			Australia				
AGD_1984_To_GDA_1994_5_NTv2	1804	0.100	Australia - AGD84	-38.5300	109.2300	-9.3700	153.6100
AGD_1984_To_GDA_1994_NTv2_Queensland	108453	0.1	Australia - Queensland	-29.1900	137.9900	-10.6500	153.6100
			mainland				
AGD_1984_To_WGS_1984_1	1109	+	Australia - AGD84	-38.5300	109.2300	-9.3700	153.6100
AGD_1984_To_WGS_1984_2	1236		Australia - AGD84	-38.5300	109.2300	-9.3700	153.6100
AGD_1984_To_WGS_1984_7	1669		Australia - AGD84	-38.5300	109.2300	-9.3700	153.6100
AGD_1984_To_WGS_1984_8	15789		Australia - AGD84	-38.5300	109.2300	-9.3700	153.6100
AGD_1984_To_WGS_1984_9_NTv2	15785	2.900	Australia - AGD84	-38.5300	109.2300	-9.3700	153.6100
AGD66_To_WGS_1984_20	6905	9.000	Australia - onshore	-43.7000	112.8500	-9.8600	153.6900
Ain_el_Abd_1970_To_MTRF-2000_1	8824	5.000	Saudi Arabia - onshore	16.3700	34.5100	32.1600	55.6700
Ain_el_Abd_To_KSA-GRF17_1	9362	2.000	Saudi Arabia - onshore	16.3700	34.5100	32.1600	55.6700
Ain_El_Abd_To_WGS_1984_1	1110	44.000	Bahrain - onshore	25.5300	50.3900	26.3400	50.8500
Ain_El_Abd_To_WGS_1984_2	1111	18.000	Saudi Arabia - onshore	16.3700	34.5100	32.1600	55.6700
Ain_el_Abd_To_WGS_1984_3	1055	1.000	Kuwait - onshore	28.5300	46.5400	30.0900	48.4800
Ain_El_Abd_To_WGS_1984_4	1056	1.000	Kuwait - onshore	28.5300	46.5400	30.0900	48.4800
Ain_El_Abd_To_WGS_1984_5	1057	1.000	Kuwait - north of 29.25°N	29.1000	46.5400	30.0900	48.4200
Ain_El_Abd_To_WGS_1984_6	1058	1.000	Kuwait - south of 29.25°N	28.5300	46.5400	29.4500	48.4800
Albanian_1987_To_ETRS_1989_1	7833	0.200	Albania - onshore	39.6400	19.2200	42.6700	21.0600
Albanian_1987_To_WGS_1984_1	7834	0.200	Albania - onshore	39.6400	19.2200	42.6700	21.0600
American_Samoa_1962_To_HARN_American_Samoa_East	1579	5.000	American Samoa - Ofu,	-14.3100	-169.7300	-14.1100	-169.3800
			Olesega and Ta'u islands				
American_Samoa_1962_To_HARN_American_Samoa_West	1578	5.000	American Samoa - Tutuila	-14.4300	-170.8800	-14.2000	-170.5100
			island				
American_Samoa_1962_To_NAD_1983_HARN_3	8662	5.000	American Samoa - 2 main	-14.4300	-170.8800	-14.1100	-169.3800
			island groups				
American_Samoa_1962_To_WGS_1984	1577	44.000	American Samoa - 2 main	-14.4300	-170.8800	-14.1100	-169.3800
			island groups				

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
American_Samoa_1962_To_WGS_1984_2	1694	5.000	American Samoa - Tutuila	-14.4300	-170.8800	-14.2000	-170.5100
			island				
American_Samoa_1962_To_WGS_1984_3	1695	5.000	American Samoa - Ofu,	-14.3100	-169.7300	-14.1100	-169.3800
			Olesega and Ta'u islands				
Amersfoort_To_ETRS_1989	1751		Netherlands - onshore	50.7500	3.2000	53.7000	7.2200
Amersfoort_To_ETRS_1989_3	15739		Netherlands - onshore	50.7500	3.2000	53.7000	7.2200
Amersfoort_To_ETRS_1989_4	15740		Netherlands - onshore	50.7500	3.2000	53.7000	7.2200
Amersfoort_To_ETRS_1989_5	4830	0.600	Netherlands - onshore	50.7500	3.2000	53.7000	7.2200
Amersfoort_To_ETRS_1989_6	4831		Netherlands - onshore	50.7500	3.2000	53.7000	7.2200
Amersfoort_To_ETRS_1989_8	9281	0.250	Netherlands - onshore	50.7500	3.2000	53.7000	7.2200
Amersfoort_To_ETRS_1989_9	9282	0.000	Netherlands - onshore	50.7500	3.2000	53.7000	7.2200
Amersfoort_To_ETRS_1989_MB	1066	0.600	Netherlands - onshore	50.7500	3.2000	53.7000	7.2200
Amersfoort_To_ETRS_1989_NTv2	7000	0.100	Netherlands - onshore	50.7500	3.2000	53.7000	7.2200
Amersfoort_To_WGS_1984	1112	1.100	Netherlands - onshore	50.7500	3.2000	53.7000	7.2200
Amersfoort_To_WGS_1984_2	1672	1.100	Netherlands - onshore	50.7500	3.2000	53.7000	7.2200
Amersfoort_To_WGS_1984_2008_MB	108457	0.500	Netherlands - onshore	50.7500	3.2000	53.7000	7.2200
Amersfoort_To_WGS_1984_3	15934	1.050	Netherlands - onshore	50.7500	3.2000	53.7000	7.2200
Amersfoort_To_WGS_1984_4	4833	0.600	Netherlands - onshore	50.7500	3.2000	53.7000	7.2200
Amersfoort_To_WGS_1984_4X	108237	0.750	Netherlands - onshore	50.7500	3.2000	53.7000	7.2200
Amersfoort_To_WGS_1984_NTv2	108042	0.200	Netherlands - onshore	50.7500	3.2000	53.7000	7.2200
Ammassalik_1958_To_Greenland_1996_1	15900	1.000	Greenland - Ammassalik	65.5200	-38.8600	65.9100	-36.8100
			area				
Ammassalik_1958_To_WGS_1984_1	1800	1.000	Greenland - Ammassalik	65.5200	-38.8600	65.9100	-36.8100
			area				
Anguilla_1957_To_WGS_1984_1	1447	10.000	Anguilla - onshore	18.1100	-63.2200	18.3300	-62.9200
Anna_1_1965_To_WGS_1984	15794	44.000	Cocos (Keeling) Islands -	-12.2700	96.7600	-11.7600	96.9900
			onshore				
Antigua_1943_To_WGS_1984	1441	10.000	Antigua - onshore	16.9400	-61.9500	17.2200	-61.6100
Antigua 1943 To WGS 1984 NGA	15811	44.000	Antigua - onshore	16.9400	-61.9500	17.2200	-61.6100
Aratu_To_SIRGAS_2000_1	5050		Brazil - Santos and	-35.7100	-53.3800	-22.6600	-40.2000
			Pelotas				
Aratu_To_SIRGAS_2000_2	5052	0.500	Brazil - Campos	-25.9100	-42.0400	-20.4500	-37.1100
Aratu_To_SIRGAS_2000_3	5054		Brazil - Espirito Santo and	-22.0400	-40.3700	-17.5900	-35.1800
			Mucuri				

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum Latitude	Maximum
Arratus Ta CIDCAC 2000 A	5056	(m)	Duna-il Commonweatiles	Latitude	Longitude		Longitude
Aratu_To_SIRGAS_2000_4	5056	0.500	Brazil - Cumuruxatiba, Jequitinhonha and	-17.7000	-39.2200	-13.0100	-34.6000
			Camamu-Almada				
Aratu_To_SIRGAS_2000_5	5058	0.500		-13.5700	-39.0900	-11.1800	-35.3100
Alata_10_3ll(0A3_2000_3	3038	0.500	Jacuipe	-13.3700	-33.0300	-11.1000	-33.3100
Aratu To SIRGAS 2000 6	5060	0.500	•	-12.2700	-39.1400	-8.3900	-37.0900
/	3000	0.500	Jatoba	12.2700	3312100	0.0500	37.0300
Aratu_To_SIRGAS_2000_7	5062	0.500		-13.5800	-37.3400	-8.7300	-32.0100
			Alagoas				
Aratu_To_SIRGAS_2000_8	5064	0.500	Brazil - Paraiba-	-10.1700	-35.1000	-4.6000	-29.1300
			Pernambuco				
Aratu_To_SIRGAS_2000_9	5066	0.500	Brazil - Potiguar, Ceara	-6.5000	-44.7900	4.2600	-26.0000
			and Barreirinhas				
Aratu_To_WGS_1984_1	15754	Unknown	Brazil - Campos; Espirito	-28.4100	-48.8000	-17.5900	-35.1800
			Santo and Santos basins				
Aratu_To_WGS_1984_10	15710	5.000	Brazil - Campos	-25.9100	-42.0400	-20.4500	-37.1100
Aratu_To_WGS_1984_11	15711	5.000	Brazil - Santos	-28.4100	-48.8000	-22.6600	-40.2000
Aratu_To_WGS_1984_12	15712	5.000	Brazil - Espirito Santo and	-22.0400	-40.3700	-17.5900	-35.1800
			Mucuri				
Aratu_To_WGS_1984_13	5051	1.000	Brazil - Santos and	-35.7100	-53.3800	-22.6600	-40.2000
			Pelotas				
Aratu_To_WGS_1984_14	5053			-25.9100	-42.0400	-20.4500	-37.1100
Aratu_To_WGS_1984_15	5055	1.000	•	-22.0400	-40.3700	-17.5900	-35.1800
			Mucuri				
Aratu_To_WGS_1984_16	5057	1.000	Brazil - Cumuruxatiba,	-17.7000	-39.2200	-13.0100	-34.6000
			Jequitinhonha and				
			Camamu-Almada				
Aratu_To_WGS_1984_17	5059	1.000	Brazil - Reconcavo and	-13.5700	-39.0900	-11.1800	-35.3100
A . T . W.C. 4004 40	5064	4 000	Jacuipe	42.2700	20.4400	0.0000	27.0000
Aratu_To_WGS_1984_18	5061	1.000	Brazil - Tucano and	-12.2700	-39.1400	-8.3900	-37.0900
Aratu Ta MCC 1004 10	5062	1 000	Jatoba	12 5000	27.2400	0.7200	22.0100
Aratu_To_WGS_1984_19	5063	1.000	Brazil - Sergipe and	-13.5800	-37.3400	-8.7300	-32.0100
Aratu To WGS 1984 2	1550	5.000	Alagoas Brazil - Tucano basin	-9.8000	-39.0400	-8.3900	-37.0900
Aratu_To_WGS_1984_2	1330	3.000	north	-9.6000	-39.0400	-0.5900	-37.0900
			Hortif				

Geographic (datum) Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
Aratu_To_WGS_1984_20	5065	1.000	Brazil - Paraiba-	-10.1700	-35.1000	-4.6000	-29.1300
			Pernambuco				
Aratu_To_WGS_1984_21	5067	1.000	Brazil - Potiguar, Ceara	-6.5000	-44.7900	4.2600	-26.0000
			and Barreirinhas				
Aratu_To_WGS_1984_3	1551	5.000	Brazil - Tucano basin	-10.6100	-39.1400	-9.7900	-37.9900
			central				
Aratu_To_WGS_1984_4	1552	5.000	Brazil - Tucano basin	-12.2700	-39.0700	-10.6000	-37.9800
			south				
Aratu_To_WGS_1984_5	10089		Brazil - Santos	-28.4100	-48.8000		-40.2000
Aratu_To_WGS_1984_6	10090		Brazil - Campos	-25.9100	-42.0400	-20.4500	-37.1100
Aratu_To_WGS_1984_7	10091	7.000	Brazil - Espirito Santo and	-22.0400	-40.3700	-17.5900	-35.1800
			Mucuri				
Aratu_To_WGS_1984_8	10092		Brazil - Pelotas	-35.7100	-53.3800		
Aratu_To_WGS_1984_9	10093	15.000	Brazil - offshore 18°S to	-34.0000	-53.3800	-18.0000	-35.1900
			34°S				
Arc_1950_To_WGS_1984_1	1113	44.000	Africa - Botswana,	-30.6600	19.9900	-8.1900	35.9300
			Eswatini, Lesotho,				
			Malawi, Zambia,				
			Zimbabwe				
Arc_1950_To_WGS_1984_10	6906		Zimbabwe	-22.4200	25.2300		33.0800
Arc_1950_To_WGS_1984_11	6904		Malawi	-17.1400	32.6800	-9.3700	35.9300
Arc_1950_To_WGS_1984_2	1114		Botswana	-26.8800	19.9900	-17.7800	29.3800
Arc_1950_To_WGS_1984_4	1116		Lesotho	-30.6600	27.0100	-28.5700	29.4600
Arc_1950_To_WGS_1984_5	1117		Malawi	-17.1400	32.6800	-9.3700	35.9300
Arc_1950_To_WGS_1984_6	1118		Eswatini	-27.3200	30.7900		32.1400
Arc_1950_To_WGS_1984_8	1120		Zambia	-18.0800	21.9900	-8.1900	33.7100
Arc_1950_To_WGS_1984_9	1121	15.000	Zimbabwe	-22.4200	25.2300	-15.6100	33.0800
Arc_1960_To_WGS_1984	1122	35.000	Africa - Kenya and	-11.7500	29.3400	4.6300	41.9100
			Tanzania				
Arc_1960_To_WGS_1984_2	1284		Kenya - onshore	-4.7200	33.9000	4.6300	41.9100
Arc_1960_To_WGS_1984_3	1285	15.000	Tanzania - onshore	-11.7500	29.3400	-0.9900	40.4800
Arc_1960_To_WGS_1984_4	3998	35.000	Burundi	-4.4500	28.9800	-2.3000	30.8600
Ascension_Island_1958_To_WGS_1984	15797	44.000	St Helena - Ascension	-8.0300	-14.4600	-7.8300	-14.2400
			Island				

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Astro_DOS_71-4_To_SHGD2015_1	7893	0.150	St Helena - St Helena	-16.0800	-5.8500	-15.8500	-5.5900
			Island				
Astro_DOS_71-4_To_SHGD2015_2	7895	0.100	St Helena - St Helena	-16.0800	-5.8500	-15.8500	-5.5900
			Island				
Astro_DOS_71-4_To_WGS_1984_2	7894	1.000	St Helena - St Helena	-16.0800	-5.8500	-15.8500	-5.5900
			Island				
Astro_1952_To_WGS_1984	15799	44.000	Japan - Minamitori-shima	24.2200	153.9100	24.3500	154.0500
			(Marcus Island) - onshore				
ATRF_2014_To_GDA2020_Null	108442	1	Australia - GDA	-60.5500	93.4100	-8.4700	
ATS_1977_To_NAD_1983_1_Nova_Scotia	9105		Canada - Nova Scotia	43.4100	-66.2800	47.0800	-59.7300
ATS_1977_To_NAD_1983_CSRS_2_NTv2_Prince_Edward_Is	1846	1.500	Canada - Prince Edward	45.9000	-64.4900	47.0900	-61.9000
ATC 4077 T NAD 4000 CCDC NT 0 NA W	400000	I believe evine	Island	42 4400	60.0500	40.0700	50 7000
ATS_1977_To_NAD_1983_CSRS_NTv2_Maritimes	108302	Unknown	Canada - Maritime	43.4100	-69.0500	48.0700	-59.7300
ATC 1077 To NAD 1002 CCDC NT-2 New Brown wiel	1044	1 500	Provinces	44 5600	60.0500	40.0700	62.7000
ATS_1977_To_NAD_1983_CSRS_NTv2_New_Brunswick	1841		Canada - New Brunswick	44.5600	-69.0500	48.0700	-63.7000
ATS_1977_To_NAD_1983_CSRS_NTv2_Nova_Scotia	1850		Canada - Nova Scotia	43.4100	-66.2800	47.0800	-59.7300
ATS_1977_To_NAD_1983_CSRS_v2_1	9237		Canada - New Brunswick	44.5600	-69.0500	48.0700	
ATS_1977_To_NAD_1983_CSRS_v2_2	9236	1.500	Canada - Prince Edward Island	45.9000	-64.4900	47.0900	-61.9000
ATS_1977_To_NAD_1983_CSRS_v3_3	9235	1.500	Canada - Nova Scotia	43.4100	-66.2800	47.0800	-59.7300
ATS_1977_To_NAD_1983_CSRS_v6_4_Nova_Scotia	9106	0.060	Canada - Nova Scotia	43.4100	-66.2800	47.0800	-59.7300
ATS_1977_To_WGS_1984_1	1688	1.000	Canada - New Brunswick	44.5600	-69.0500	48.0700	-63.7000
ATS_1977_To_WGS_1984_2	1689	1.000	Canada - Prince Edward	45.9000	-64.4900	47.0900	-61.9000
			Island				
ATS_1977_To_WGS_1984_3	1851	1.000	Canada - Nova Scotia	43.4100	-66.2800	47.0800	-59.7300
Australian_Antarctic_1998_To_WGS_1984_1	1890	1.000	Antarctica - Australian	-90.0000	45.0000	-60.0000	160.0000
			sector				
Ayabelle_Lighthouse_To_WGS_1984_2	6907	17.000	Djibouti - onshore	10.9400	41.7500	12.7200	43.4800
Ayabelle_To_WGS_1984	15800	44.000	Djibouti	10.9400	41.7500	12.7200	44.1500
Azores_Central_1948_To_WGS_1984_1	1886	6.000	Portugal - Azores C -	38.3200	-28.9000	39.1400	-26.9700
			onshore				
Azores_Central_1995_To_PTRA08_1	5027	2.000	Portugal - Azores C -	38.3200	-28.9000	39.1400	-26.9700
			onshore				
Azores_Central_1995_To_PTRA08_2	5028	0.500	Portugal - Azores C - Faial	38.4600	-28.9000	38.7000	-28.5400
			onshore				

Geographic (datum) Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
Azores_Central_1995_To_PTRA08_3	5029		Portugal - Azores C -	38.9700	-28.1300	39.1400	-27.8800
Azores_Central_1995_To_PTRA08_4	5030	1.000	Graciosa onshore Portugal - Azores C - Pico onshore	38.3200	-28.6100	38.6100	-27.9800
Azores_Central_1995_To_PTRA08_5	5031	0.800	Portugal - Azores C - S Jorge onshore	38.4800	-28.3700	38.8000	-27.7100
Azores_Central_1995_To_PTRA08_6	5032	0.600	Portugal - Azores C - Terceira onshore	38.5700	-27.4400	38.8600	-26.9700
Azores_Central_1995_To_WGS_1984_10	1980	5.000	Portugal - Azores C - onshore	38.3200	-28.9000	39.1400	-26.9700
Azores_Central_1995_To_WGS_1984_11	1981	1.000	Portugal - Azores C - onshore	38.3200	-28.9000	39.1400	-26.9700
Azores_Central_1995_To_WGS_1984_2	1972	5.000	Portugal - Azores C - Terceira onshore	38.5700	-27.4400	38.8600	-26.9700
Azores_Central_1995_To_WGS_1984_3	1973	1.000	Portugal - Azores C - Terceira onshore	38.5700	-27.4400	38.8600	-26.9700
Azores_Central_1995_To_WGS_1984_4	1974	5.000	Portugal - Azores C - Faial onshore	38.4600	-28.9000	38.7000	-28.5400
Azores_Central_1995_To_WGS_1984_5	1975	1.000	Portugal - Azores C - Faial onshore	38.4600	-28.9000	38.7000	-28.5400
Azores_Central_1995_To_WGS_1984_6	1976	5.000	Portugal - Azores C - Pico onshore	38.3200	-28.6100	38.6100	-27.9800
Azores_Central_1995_To_WGS_1984_7	1977	1.000	Portugal - Azores C - Pico onshore	38.3200	-28.6100	38.6100	-27.9800
Azores_Central_1995_To_WGS_1984_8	1978	5.000	Portugal - Azores C - S Jorge onshore	38.4800	-28.3700	38.8000	-27.7100
Azores_Central_1995_To_WGS_1984_9	1979	1.000	Portugal - Azores C - S Jorge onshore	38.4800	-28.3700	38.8000	-27.7100
Azores_Occidental_1939_To_PTRA08_1	5033	0.500	Portugal - Azores W - onshore	39.3000	-31.3400	39.7700	-31.0200
Azores_Occidental_1939_To_PTRA08_2	5034	0.200		39.3000	-31.3400	39.5800	-31.0700
Azores_Occidental_1939_To_PTRA08_3	5035	0.300	Portugal - Azores W - Corvo onshore	39.6300	-31.1800	39.7700	-31.0200

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Azores_Occidental_1939_To_WGS_1984_1	1887	35.000	Portugal - Azores W - onshore	39.3000	-31.3400	39.7700	-31.0200
Azores_Occidental_1939_To_WGS_1984_2	1982	5.000	Portugal - Azores W - onshore	39.3000	-31.3400	39.7700	-31.0200
Azores_Oriental_1940_To_WGS_1984_1	1885	44.000	Portugal - Azores E - onshore	36.8700	-25.9200	37.9600	-24.7200
Azores_Oriental_1995_To_PTRA08_1	5024	2.000	Portugal - Azores E - onshore	36.8700	-25.9200	37.9600	-24.7200
Azores_Oriental_1995_To_PTRA08_2	5025	0.300	Portugal - Azores E - S Miguel onshore	37.6500	-25.9200	37.9600	-25.0800
Azores_Oriental_1995_To_PTRA08_3	5026	0.100	Portugal - Azores E - Santa Maria onshore	36.8700	-25.2600	37.0800	-24.9600
Azores_Oriental_1995_To_WGS_1984_2	1968	5.000	Portugal - Azores E - S Miguel onshore	37.6500	-25.9200	37.9600	-25.0800
Azores_Oriental_1995_To_WGS_1984_3	1969	1.000	Portugal - Azores E - S Miguel onshore	37.6500	-25.9200	37.9600	-25.0800
Azores_Oriental_1995_To_WGS_1984_4	1970	5.000	Portugal - Azores E - onshore	36.8700	-25.9200	37.9600	-24.7200
Azores_Oriental_1995_To_WGS_1984_5	1971	1.000	Portugal - Azores E - onshore	36.8700	-25.9200	37.9600	-24.7200
Bab_South_To_WGS_1984	108448	Unknown	Palau	1.6400	129.4800	11.4500	136.9800
Barbados_1938_To_WGS_1984_1	15793	3.000	Barbados - onshore	13.0000	-59.7100	13.3900	-59.3700
Barbados_1938_To_WGS_1984_2X	108376	0.150	Barbados - onshore	13.0000	-59.7100	13.3900	-59.3700
Batavia_Jakarta_To_Batavia	1759	0.000	Indonesia - Bali, Java and western Sumatra onshore	-8.9100	95.1600	5.9700	115.7700
Batavia_To_WGS_1984_2	1813	5.000	Indonesia - Java Sea - offshore northwest Java	-6.8900	105.7700	-4.0700	110.0100
Batavia_To_WGS_1984_3	1814	5.000	Indonesia - Bali Sea west	-8.4600	112.8000	-6.8000	117.0100
Beacon_E_1945_To_WGS_1984	15796	44.000	Japan - Iwo Jima	24.6700	141.2000	24.8900	141.4200
Beduaram_To_WGS_1972_BE_1	1839	15.000	Niger - southeast	12.8000	7.8100	16.7000	14.9000
Beduaram_To_WGS_1984_2	15849	15.000	Niger - southeast	12.8000	7.8100	16.7000	14.9000
Beijing_1954_To_WGS_1984_1	15918	1.000	China - Ordos basin	35.0000	107.0000	39.0000	110.0100
Beijing_1954_To_WGS_1984_2	15919	15.000	China - offshore - Yellow Sea	31.2300	119.2300	37.4000	125.0600

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Beijing_1954_To_WGS_1984_3	15920	15.000	China - offshore - Pearl	18.3100	110.1300	22.8900	116.7600
			River basin				
Beijing_1954_To_WGS_1984_4	15921	1.000	China - Tarim - 77.5°E to	37.0000	77.4500	41.9900	88.0000
			88°E and 37°N to 42°N				
Beijing_1954_To_WGS_1984_5	15935	10.000	China - offshore - Bei Bu	17.8100	107.1500	21.6900	110.1700
Beijing_1954_To_WGS_1984_6	15936	1.000	China - Ordos basin	35.0000	107.0000	39.0000	110.0100
Bekaa_Valley_1920_To_WGS_1984_1	6911	Unknown	Lebanon - onshore	33.0600	35.0400	34.6500	36.6300
Belge_1950_Brussels_To_Belge_1950	1264	0.000	Belgium - onshore	49.5000	2.5000	51.5100	6.4000
Belge_1972_To_ETRS_1989_1	1652	1.000	Belgium - onshore	49.5000	2.5000	51.5100	6.4000
Belge_1972_To_ETRS_1989_2	15928	0.200	Belgium - onshore	49.5000	2.5000	51.5100	6.4000
Belge_1972_To_ETRS_1989_3	8369	0.010	Belgium - onshore	49.5000	2.5000	51.5100	6.4000
Belge_1972_To_WGS_1984_1	1609	1.000	Belgium - onshore	49.5000	2.5000	51.5100	6.4000
Belge_1972_To_WGS_1984_2	1610	5.000	Belgium - onshore	49.5000	2.5000	51.5100	6.4000
Belge_1972_To_WGS_1984_3	15929	0.200	Belgium - onshore	49.5000	2.5000	51.5100	6.4000
Bellevue_IGN_To_WGS_1984	15801	35.000	Vanuatu - southern	-20.3100	168.0900	-17.3700	169.9500
			islands				
Bermuda_1957_To_Bermuda_2000_1	15969	1.000	Bermuda - onshore	32.2100	-64.8900	32.4300	-64.6100
Bermuda_1957_To_WGS_1984	1124	35.000	Bermuda - onshore	32.2100	-64.8900	32.4300	-64.6100
Bermuda_1957_To_WGS_1984_2	15970	1.000	Bermuda - onshore	32.2100	-64.8900	32.4300	-64.6100
Bermuda_2000_To_WGS_1984_1	15971	1.000	Bermuda	28.9100	-68.8300	35.7300	-60.7000
Bern_1898_Bern_To_CH1903	1765	0.000	Europe - Liechtenstein	45.8200	5.9600	47.8100	10.4900
			and Switzerland				
BGS2005_To_ETRS_1989_1	8889	1.000	Bulgaria	41.2400	22.3600	44.2300	31.3500
BGS2005_To_WGS_1984_1	8890		Bulgaria	41.2400	22.3600	44.2300	31.3500
Bioko_To_WGS_1984_1	6912	42.000	Equatorial Guinea - Bioko	3.1400	8.3700	3.8200	9.0200
Bissau_To_WGS_1984	1547	25.000	Guinea-Bissau - onshore	10.8700	-16.7700	12.6900	-13.6400
Bogota_Bogota_To_Bogota	1755	0.000	Colombia - mainland	-4.2300	-79.1000	12.5200	-66.8700
Bogota_Bogota_To_WGS_1984	8174	10.000	Colombia - mainland	-4.2300	-79.1000	12.5200	-66.8700
Bogota_To_MAGNA_Region_1_CF	15714	1.000	Colombia region 1	9.8000	-73.0000	12.5200	-71.0600
Bogota_To_MAGNA_Region_1_MB	15730	1.000	Colombia region 1	9.8000	-73.0000	12.5200	-71.0600
Bogota_To_MAGNA_Region_2_CF	15716	1.000	Colombia region 2	9.3900	-76.0800	11.5900	-73.0000
Bogota_To_MAGNA_Region_2_MB	15731	1.000	Colombia region 2	9.3900	-76.0800	11.5900	-73.0000
Bogota_To_MAGNA_Region_3_CF	15718	1.000	Colombia region 3	8.0000	-77.4800	9.4000	-74.3900
Bogota_To_MAGNA_Region_3_MB	15732	1.000	Colombia region 3	8.0000	-77.4800	9.4000	-74.3900

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Bogota_To_MAGNA_Region_4_CF	15720	1.000	Colombia region 4	5.0000	-74.4000	9.4000	-71.9900
Bogota_To_MAGNA_Region_4_MB	15733	1.000	Colombia region 4	5.0000	-74.4000	9.4000	-71.9900
Bogota_To_MAGNA_Region_5_CF	15722		Colombia region 5	5.0000	-77.9200	8.0100	-74.3900
Bogota_To_MAGNA_Region_5_MB	15734	1.000	Colombia region 5	5.0000	-77.9200	8.0100	-74.3900
Bogota_To_MAGNA_Region_6_CF	15724	1.000	Colombia region 6	3.0000	-77.6800	5.0100	-74.3900
Bogota_To_MAGNA_Region_6_MB	15735	1.000	Colombia region 6	3.0000	-77.6800	5.0100	-74.3900
Bogota_To_MAGNA_Region_7_CF	15726	1.000	Colombia region 7	-1.1300	-79.1000	3.0100	-74.0000
Bogota_To_MAGNA_Region_7_MB	15736	1.000	Colombia region 7	-1.1300	-79.1000	3.0100	-74.0000
Bogota_To_MAGNA_Region_8_CF	15728	1.000	Colombia region 8	-4.2300	-74.4000	7.1000	-66.8700
Bogota_To_MAGNA_Region_8_MB	15737	1.000	Colombia region 8	-4.2300	-74.4000	7.1000	-66.8700
Bogota_To_WGS_1984	1125	10.000	Colombia - mainland and	-4.2300	-79.1000	13.6800	-66.8700
			offshore Caribbean				
Bogota_To_WGS_1984_2	1597	0.200	Colombia - Cusiana	4.7500	-73.0000	5.6800	-72.2500
Bogota_To_WGS_1984_Region_1_CF	15715	1.000	Colombia region 1	9.8000	-73.0000	12.5200	-71.0600
Bogota_To_WGS_1984_Region_2_CF	15717	1.000	Colombia region 2	9.3900	-76.0800	11.5900	-73.0000
Bogota_To_WGS_1984_Region_3_CF	15719		Colombia region 3	8.0000	-77.4800	9.4000	-74.3900
Bogota_To_WGS_1984_Region_4_CF	15721	1.000	Colombia region 4	5.0000	-74.4000	9.4000	-71.9900
Bogota_To_WGS_1984_Region_5_CF	15723	1.000	Colombia region 5	5.0000	-77.9200	8.0100	-74.3900
Bogota_To_WGS_1984_Region_6_CF	15725	1.000	Colombia region 6	3.0000	-77.6800	5.0100	-74.3900
Bogota_To_WGS_1984_Region_7_CF	15727	1.000	Colombia region 7	-1.1300	-79.1000	3.0100	-74.0000
Bogota_To_WGS_1984_Region_8_CF	15729	1.000	Colombia region 8	-4.2300	-74.4000	7.1000	-66.8700
Bukit_Rimpah_To_WGS_1984	1126	Unknown	Indonesia - Banga &	-3.3000	105.0700	-1.4400	108.3500
			Belitung Islands				
Cadastre_1997_To_RGM_2004_1	4478	0.100	Mayotte - onshore	-13.0500	44.9800	-12.6100	45.3500
Cadastre_1997_To_WGS_1984_1	4290	1.000	Mayotte - onshore	-13.0500	44.9800	-12.6100	45.3500
Camacupa_1948_to_RSAO13_3	9904	8.000	Angola - offshore block 7	-10.0900	12.6600	-9.4100	13.3900
Camacupa_1948_to_RSAO13_4	9905	10.000	Angola - offshore blocks	-8.3400	11.0800	-6.0300	12.7500
			1 16 and 18				
Camacupa_2015_To_RSAO13_1	8827	3.000	Angola	-18.0200	8.2000	-4.3800	24.0900
Camacupa_2015_To_WGS_1984_11	8882	3.000	Angola	-18.0200	8.2000	-4.3800	24.0900
Camacupa_To_Camacupa_2015_1	8695	5.800	Angola - offshore blocks	-8.5900	10.4100	-6.0100	12.8400
			2 3 17-18 and 31-33				
Camacupa_To_Camacupa_2015_2	8696	4.200	Angola - offshore blocks	-10.0900	10.8300	-6.0300	13.3900
			3 7 15 and 17				
Camacupa_To_RSAO13_1	8883	3.000	Angola - offshore blocks	-10.0900	10.8300	-6.0300	13.3900
			3 7 15 and 17				

¹² Copyright @ 2012, 2015-2022 Esri

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
Companyor To DCAO42 2	0004	(m)	Annala affahana bladia		_		_
Camacupa_To_RSAO13_2	8884	5.000	Angola - offshore blocks 2 3 17-18 and 31-33	-8.5900	10.4100	-6.0100	12.8400
Camacupa_To_WGS_1972_BE_1	1317	10.000	Angola - Angola proper - offshore	-17.2600	8.2000	-6.0100	13.8600
Camacupa_To_WGS_1984_1	1318	10.000	Angola - offshore block 5	-8.5900	12.5800	-7.7500	13.4000
Camacupa_To_WGS_1984_10	1327	5.000	Angola - offshore blocks 2 3 17-18 and 31-33	-8.5900	10.4100	-6.0100	12.8400
Camacupa_To_WGS_1984_2	1319	25.000	Angola - offshore block 2	-7.0100	12.0800	-6.0100	12.8400
Camacupa_To_WGS_1984_3	1320	10.000	Angola - offshore blocks 1 and 16	-7.2600	11.0800	-6.0300	12.0900
Camacupa_To_WGS_1984_4	1321	10.000	Angola - offshore blocks 7 8 24 + WGC spec	-17.2600	8.2000	-6.0100	13.8600
Camacupa_To_WGS_1984_5	1322	3.000	Angola - offshore block 3	-7.3400	11.7400	-6.6600	12.5000
Camacupa_To_WGS_1984_6	1323	8.000	Angola - offshore block 7	-10.0900	12.6600	-9.4100	13.3900
Camacupa_To_WGS_1984_7	1324	3.000	Angola - offshore blocks 3 7 15 and 17	-10.0900	10.8300	-6.0300	13.3900
Camacupa_To_WGS_1984_8	1325	3.000	Angola - offshore block 2	-7.0100	12.0800	-6.0100	12.8400
Camacupa_To_WGS_1984_9	1326	10.000	Angola - offshore blocks 1 16 and 18	-8.3400	11.0800	-6.0300	12.7500
Camp_Area_To_WGS_1984	15802	Unknown	Antarctica - Camp McMurdo area	-77.9400	165.7300	-77.1700	167.4300
Campo_Inchauspe_To_POSGAR_1994_1	15782	5.000	Argentina - mainland onshore	-52.4300	-73.5900	-21.7800	-53.6500
Campo_Inchauspe_To_POSGAR_2007_1	5350	5.000	Argentina – mainland onshore	-52.4300	-73.5900	-21.7800	-53.6500
Campo_Inchauspe_To_WGS_1984	1127	9.000	Argentina - mainland onshore and offshore TdF	-54.9300	-73.5900	-21.7800	-53.6500
Campo_Inchauspe_To_WGS_1984_2	1527	0.500	Argentina - Neuquen province Auca Mahuida area	-38.7500	-69.5000	-37.5000	-68.2500
Canton_1966_To_WGS_1984	15803	26.000	Kiribati - Phoenix Islands	-4.7600	-174.6000	-2.6800	-170.6600
Cape_Canaveral_To_WGS_1984	15804	6.000	North America - Bahamas and USA - Florida - onshore	20.8600	-82.3300	30.8300	-72.6800
Cape_To_Hartebeesthoek94	1504	15.000	South Africa - onshore	-34.8800	16.4500	-22.1300	32.9500

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Cape_To_WGS_1984_1	1128		South Africa - onshore	-34.8800	16.4500		32.9500
Cape_To_WGS_1984_2	1129		South Africa - onshore	-34.8800	16.4500	-22.1300	32.9500
Carthage_Grad_To_Carthage	108338		Tunisia - offshore	33.2200	7.8100	38.4100	13.6700
Carthage_Paris_To_Carthage	1881	0.000	Tunisia - onshore	30.2300	7.4900	37.4000	11.5900
Carthage_To_WGS_1984	1130		Tunisia	30.2300	7.4900	38.4100	13.6700
Carthage_To_WGS_1984_2	1538	1.000	Tunisia - offshore	33.2200	7.8100	38.4100	13.6700
CGRS_1993_To_ETRS_1989	108128	0.500	Cyprus - onshore	34.5900	32.2000	35.7400	34.6500
CGRS93_To_ETRS_1989_1	7720	0.100	Cyprus - onshore	34.5900	32.2000	35.7400	34.6500
CGRS_1993_To_WGS_1984	108129	1.000	Cyprus - onshore	34.5900	32.2000	35.7400	34.6500
CGRS93_To_WGS_1984_1	7721	1.000	Cyprus - onshore	34.5900	32.2000	35.7400	34.6500
CH1903+_To_CHTRF_1995	1509	0.100	Europe - Liechtenstein and Switzerland	45.8200	5.9600	47.8100	10.4900
CH1903+_To_CHTRF95_NTv2	108370	0.100	Europe - Liechtenstein and Switzerland	45.8200	5.9600	47.8100	10.4900
CH1903+_To_ETRS_1989_1	1647	0.100	Europe - Liechtenstein and Switzerland	45.8200	5.9600	47.8100	10.4900
CH1903+_To_ETRS_1989_NTv2	108369	0.100	Europe - Liechtenstein and Switzerland	45.8200	5.9600	47.8100	10.4900
CH1903+_To_WGS_1984_1	1676	1.000	Europe - Liechtenstein and Switzerland	45.8200	5.9600	47.8100	10.4900
CH1903_To_CHTRF95_1_NTv2	7673	0.25	Europe - Liechtenstein and Switzerland	45.8200	5.9600	47.8100	10.4900
CH1903_To_CH1903+_1_NTv2	15486	0.200	Europe - Liechtenstein and Switzerland	45.8200	5.9600	47.8100	10.4900
CH1903_To_ETRS_1989_1	1646	1.500	Europe - Liechtenstein and Switzerland	45.8200	5.9600	47.8100	10.4900
CH1903_To_ETRS_1989_2_NTv2	7674	0.25	Europe - Liechtenstein and Switzerland	45.8200	5.9600	47.8100	10.4900
CH1903_To_WGS_1984_1	1753	1.000	Europe - Liechtenstein and Switzerland	45.8200	5.9600	47.8100	10.4900
CH1903_To_WGS_1984_2	1766	1.5	Europe - Liechtenstein and Switzerland	45.8200	5.9600	47.8100	10.4900
CH1903_To_WGS_1984_3_NTv2	7788	1.5	Europe - Liechtenstein and Switzerland	45.8200	5.9600	47.8100	10.4900
Chatham_Island_1971_To_WGS_1984	1080	26.000	New Zealand - Chatham	-44.6400	-177.2500	-43.3000	-175.5400
_			Islands group				

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
Cl. II	1000	(m)		Latitude	Longitude	Latitude	Longitude
Chatham_Islands_1979_To_NZGD_2000_1	1082	2.000		-44.6400	-177.2500	-43.3000	-175.5400
Cl. 11	1001	2 222	Islands group	44.6400	477.0500	42 2222	475 5400
Chatham_Islands_1979_To_WGS_1984_1	1081	2.000		-44.6400	-177.2500	-43.3000	-175.5400
Character 4044 To Construction	4520	10.000	Islands group	20.7500	60 5000	27 5000	60.2500
Chos_Malal_1914_To_Campo_Inchauspe	1528	10.000	Argentina - Neuquen	-38.7500	-69.5000	-37.5000	-68.2500
			province Auca Mahuida				
Chas Malal 1014 To MCS 1004	108096	10 500	Argantina Nauguan	-38.7500	-69.5000	-37.5000	-68.2500
Chos_Malal_1914_To_WGS_1984	108096	10.500	Argentina - Neuquen province Auca Mahuida	-38./500	-69.5000	-37.5000	-08.2500
			area				
Chos Malal 1914 To WGS 1984 2	9257	2 500	Argentina - Mendoza -	-36.3700	-69.4000	-31.9600	-66.4200
C103_Walai_1314_10_W03_1304_2	3237	2.300	Cuyo basin	-30.3700	-05.4000	-31.9000	-00.4200
Chos Malal 1914 To WGS 1984 3	9258	2 500	Argentina - Neuquen	-40.1700	-71.1900	-34.2600	-66.5200
Chios_Maidi_1511_10_W05_1501_5	3230	2.300	province	10.1700	71.1300	31.2000	00.3200
CHTRF95_To_ETRS_1989_1	8895	0.000	Europe - Liechtenstein	45.8200	5.9600	47.8100	10.4900
		0.000	and Switzerland	.5.5255	0.000	.,.0200	201.000
CHTRF_1995_To_WGS_1984	1511	1.000	Europe - Liechtenstein	45.8200	5.9600	47.8100	10.4900
			and Switzerland				
Chua_To_SIRGAS_2000_1	4069	5.000	Brazil - Distrito Federal	-15.9400	-48.1000	-15.3700	-47.1000
Chua_To_WGS_1984	1131	12.000	Paraguay - north of 22°S	-22.0000	-62.5700	-19.2900	-57.8100
Chua_To_WGS_1984_2	3972	5.000	Brazil - Distrito Federal	-15.9400	-48.1000	-15.3700	-47.1000
Chua_To_WGS_1984_3	4834	5.000	Brazil - Distrito Federal	-15.9400	-48.1000	-15.3700	-47.1000
CIGD11_To_WGS_1984_1	6177	1.000	Cayman Islands	17.5800	-83.6000	20.6800	-78.7200
Combani_1950_To_RGM_2004_1	5888	0.300	Mayotte - onshore	-13.0500	44.9800	-12.6100	45.3500
Combani_1950_To_WGS_1984_1	1916	10.000	Mayotte - onshore	-13.0500	44.9800	-12.6100	45.3500
Conakry_1905_To_WGS_1984	1517	30.000	Guinea - onshore	7.1900	-15.1300	12.6800	-7.6500
Corrego_Alegre_1961_To_SIRGAS_2000_1	5525	2.000	Brazil - Corrego Alegre	-27.5000	-58.1600	-14.9900	-38.8200
			1961				
Corrego_Alegre_1961_To_WGS_1984_1	5540	2.000	Brazil - Corrego Alegre	-27.5000	-58.1600	-14.9900	-38.8200
			1961				
Corrego_Alegre_To_SAD_1969_1	6191	5.000		-33.7800	-58.1600	-2.6800	-34.7400
			1970-1972				
Corrego_Alegre_To_SIRGAS_2000_1	5526	2.000		-33.7800	-58.1600	-2.6800	-34.7400
			1970-1972				

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Corrego_Alegre_To_SIRGAS_2000_2	6193	5.000	Brazil - Corrego Alegre 1970-1972	-33.7800	-58.1600	-2.6800	-34.7400
Corrego_Alegre_To_WGS_1984	1132	8.000	Brazil - Corrego Alegre 1970-1972	-33.7800	-58.1600	-2.6800	-34.7400
Corrego_Alegre_To_WGS_1984_2	5541	2.000	Brazil - Corrego Alegre 1970-1972	-33.7800	-58.1600	-2.6800	-34.7400
Corrego_Alegre_To_WGS_1984_3	6192	5.000	Brazil - Corrego Alegre 1970-1972	-33.7800	-58.1600	-2.6800	-34.7400
Corrego_Alegre_To_WGS_1984_4	6194	5.000	Brazil - Corrego Alegre 1970-1972	-33.7800	-58.1600	-2.6800	-34.7400
CR05_To_CR-SIRGAS_1	9751	0.500	Costa Rica	2.1500	-90.4500	11.7700	-81.4300
CR05_To_Ocotepeque_1935_MB	108013	0.500	Costa Rica - onshore	7.9800	-85.9700	11.2200	-82.5300
CR05_To_WGS_1984_1	5376	1.000	Costa Rica	2.1500	-90.4500	11.7700	-81.4300
CR05_To_WGS_1984_2	9752	1.000	Costa Rica	2.1500	-90.4500	11.7700	-81.4300
CSG_1967_To_RGFG_1995_1	1908	1.000	French Guiana - coastal area	3.4300	-54.4500	5.8100	-51.6100
CSG_1967_To_WGS_1984_1	1906	10.000	French Guiana - coastal area	3.4300	-54.4500	5.8100	-51.6100
D48_To_D96_2010_GI	108076	1.070	Slovenia	45.4200	13.3800	46.8800	16.6100
D48_To_ETRS_1989	108276	3.000	Slovenia	45.4200	13.3800	46.8800	16.6100
D48_To_WGS_1984	108277	3.000	Slovenia	45.4200	13.3800	46.8800	16.6100
D96_To_D48_Dolenjska	108081	0.308	Slovenia - Dolenjska	45.7000	14.4700	46.1200	15.7300
D96_To_D48_Gorenjska	108084	0.249	Slovenia - Gorenjska and N Primorsko	46.0500	13.3800	46.5300	14.8200
D96_To_D48_Jugovzhodna_Slovenija	108079	0.388	Slovenia - SE	45.4200	14.5500	46.2200	15.7300
D96_To_D48_Juzna_Slovenija	108080	0.137	Slovenia - southeastern	45.4200	14.5300	45.7700	15.3600
D96_To_D48_Osrednja_Slovenija	108086	0.185	Slovenia - central	45.9100	14.2100	46.3100	15.2800
D96_To_D48_Pomurje	108083	0.210	Slovenia - Pomurje	46.4700	15.9600	46.8800	16.6100
D96_To_D48_Primorska	108085	0.270	Slovenia - Primorska and Notranjska onshore	45.4400	13.4700	46.0800	14.5800
D96_To_D48_Severovzhodna_Slovenija	108078	0.504	Slovenia - NE	46.1400	14.5400	46.8800	16.6100
D96_To_D48_Stajerska	108082	0.368	Slovenia - Stajerska	46.1000	14.7400	46.7600	16.2700
D96_To_D48_Zahodna_Slovenija	108077	0.357	Slovenia - west of 14°30'E onshore	45.4400	13.3800	46.5300	14.5800
Dabola_To_WGS_1984	1518	25.000	Guinea - onshore	7.1900	-15.1300	12.6800	-7.6500

Geographic (datum) Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
Datum_73_To_ETRS_1989_1	1657		Portugal - mainland -	36.9500	-9.5600	42.1600	-6.1900
	1037	2.000	onshore	30.3300	3.3000	12.1000	0.1300
Datum_73_To_ETRS_1989_2009_3par	5036	0.900	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_73_To_ETRS_1989_2009_7par	5037	0.400	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_73_To_ETRS_1989_3	1992	1.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_73_To_ETRS_1989_6	6189	0.100	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_73_To_WGS_1984_1	108110	5.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_73_To_WGS_1984_1_Prt2000	1658	2.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_73_To_WGS_1984_2	108120	1.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_73_To_WGS_1984_2009_3par	108155	0.900	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_73_To_WGS_1984_2009_7par	108153	0.400	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_73_To_WGS_1984_3	1983	5.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_73_To_WGS_1984_4	1987	1.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_73_To_WGS_1984_NTv2	108025	0.100	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_Lisboa_Bessel_To_WGS_1984_1	108113	5.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_Lisboa_Bessel_To_WGS_1984_2	108123	1.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_Lisboa_Hayford_To_Datum_73_1	108222	5.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_Lisboa_Hayford_To_Datum_73_2	108223	5.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
	400004	(m)	D	Latitude	Longitude	Latitude	Longitude
Datum_Lisboa_Hayford_To_Datum_Lisboa_Bessel_1	108224	5.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_Lisboa_Hayford_To_Datum_Lisboa_Bessel_2	108225	5.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_Lisboa_Hayford_To_ETRS_1989_2009_3par	108158	1.700	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_Lisboa_Hayford_To_ETRS_1989_2009_7par	108156	1.500	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_Lisboa_Hayford_To_ETRS_1989_NTv2	108024	0.100	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_Lisboa_Hayford_To_WGS_1984_1	108114	5.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_Lisboa_Hayford_To_WGS_1984_2	108124	2.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_Lisboa_Hayford_To_WGS_1984_2009_3par	108159	1.700	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_Lisboa_Hayford_To_WGS_1984_2009_7par	108157	1.500	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Datum_Lisboa_Hayford_To_WGS_1984_NTv2	108023	0.100	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
DB_REF_To_ETRS_1989_1	5826	0.500	Germany - onshore	47.2700	5.8600	55.0900	15.0400
Dealul_Piscului_1933_To_WGS_1984_1	1995	10.000	Romania - onshore	43.6200	20.2600	48.2700	29.7400
Dealul_Piscului_1970_To_ETRS_1989_1X	108375	3.000	Romania	43.4400	20.2600	48.2700	31.4100
Dealul_Piscului_1970_To_WGS_1984_1	1996	10.000	Romania	43.4400	20.2600	48.2700	31.4100
Dealul_Piscului_1970_To_WGS_1984_2	1097	7.000	Romania	43.4400	20.2600	48.2700	31.4100
Dealul_Piscului_1970_To_WGS_1984_3X	108374	3.000	Romania	43.4400	20.2600	48.2700	31.4100
Deception_Island_To_WGS_1984	15812	35.000	Antarctica - Deception Island	-63.0800	-60.8900	-62.8200	-60.3500
Deir_ez_Zor_To_WGS_1972_BE	1584	5.000	Syria - Deir area	34.4900	39.3000	35.9000	40.8100
Deir_ez_Zor_To_WGS_1984_2	15741		Syria - Deir area	34.4900	39.3000	35.9000	40.8100
Deir_ez_Zor_To_WGS_1984_3	1586	Unknown	Syria - Al Whaleed area	35.3300	39.1500	35.9000	40.4100
Deir_ez_Zor_To_WGS_1984_4	1587		Syria - Shaddadeh area	35.7900	40.5000	36.5000	41.3900
Deir_ez_Zor_To_WGS_1984_5	15742	5.000	Syria - onshore	32.3100	35.6100	37.3000	42.3800
Deir_ez_Zor_To_WGS_1984_6	15743	0.500	Syria - Deir area	34.4900	39.3000	35.9000	40.8100
DGN95_to_SRGI2013_1	9472	0.200	Indonesia	-13.9500	92.0100	7.7900	141.4600
DGN_1995_To_WGS_1984_1	15912	1.000	Indonesia	-13.9500	92.0100	7.7900	141.4600

¹⁸ Copyright @ 2012, 2015-2022 Esri

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum Latitude	Minimum	Maximum Latitude	Maximum
DUDNI T. ETDE 4000	400402	(m)	C		Longitude		Longitude
DHDN_To_ETRF_1989	108192	5.000	Germany - West	47.2700	5.8600	55.0900	13.8400
DUDNI To STDC 1000	1200	F 000	Germany all states	47.2700	F 0C00	FF 0000	12.0400
DHDN_To_ETRS_1989	1309	5.000	Germany – West	47.2700	5.8600	55.0900	13.8400
DUDAL I. ETDCOO (40)	0240	0.010	Germany all states	40.4400	6 2500	40.6400	7.4400
DHDN_to_ETRS89_(10)	9310		Germany – Saarland	49.1100	6.3500	49.6400	7.4100
DHDN_To_ETRS_1989_2	1776	3.000	Germany – West	47.2700	5.8600	55.0900	13.8400
	1==0	0.100	Germany all states	47.0700	5 1 1 5 5		10.0100
DHDN_To_ETRS_1989_3	1778	0.100	Germany – West	47.2700	6.1100	50.3400	13.8400
	1==0	0.100	Germany S				40.000
DHDN_To_ETRS_1989_4	1779	0.100	Germany – West	50.3300	5.8600	52.3400	12.0300
	1=00	0.100	Germany C		6.5000		44.5000
DHDN_To_ETRS_1989_5	1780	0.100	Germany – West	52.3300	6.5800	55.0900	11.5900
	1=01	0.100	Germany N		0.0000	-1 C100	10.500
DHDN_To_ETRS_1989_6	1781		Germany – Thuringen	50.2000	9.9200	51.6400	12.5600
DHDN_To_ETRS_1989_7	1782		Germany – Saxony	50.2000	11.8900	51.6600	15.0400
DHDN_To_ETRS_1989_8_NTv2	15948		Germany – onshore	47.2700	5.8600	55.0900	15.0400
DHDN_to_ETRS89_9	9338	0.100	Germany - Baden-	47.5400	7.5100	49.8000	10.5000
			Wurttemberg				
DHDN_to_ETRS89_11	9940		Germany - Hessen	49.3900	7.7700	51.6600	10.2400
DHDN_To_WGS_1984_1	1673	5.000	Germany - West	47.2700	5.8600	55.0900	13.8400
			Germany all states				
DHDN_To_WGS_1984_2	1777	3.000	Germany - West	47.2700	5.8600	55.0900	13.8400
			Germany all states				
DHDN_To_WGS_1984_3	15869	2.000	Germany - East Germany	50.2000	9.9200	54.7400	15.0400
			all states				
DHDN_To_WGS_1984_3x	108206	0.100	Germany - West	47.2700	6.1100	50.3400	13.8400
			Germany S				
DHDN_To_WGS_1984_4_NTv2	15949	1.000	Germany - onshore	47.2700	5.8600	55.0900	15.0400
DHDN_To_WGS_1984_4x	108207	0.100	Germany - West	50.3300	5.8600	52.3400	12.0300
			Germany C				
DHDN_To_WGS_1984_5x	108208	0.100	Germany - West	52.3300	6.5800	55.0900	11.5900
			Germany N				
DHDN_To_WGS_1984_6x	108209	0.100	Germany - Thuringen	50.2000	9.9200	51.6400	12.5600
DHDN_To_WGS_1984_7x	108210	0.100	Germany - Saxony	50.2000	11.8900	51.6600	15.0400
Dominica_1945_To_WGS_1984	1442	10.000	Dominica - onshore	15.1400	-61.5500	15.6900	

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
DOS_1968_To_WGS_1984	108259	44.000	Solomon Islands - New	-8.8600	156.4400	-7.5200	158.2000
			Georgia - Ghizo (Gizo)				
DOS_71_4_To_WGS_1984	15798	44.000	St Helena - St Helena	-16.0800	-5.8500	-15.8500	-5.5900
			Island				
Douala_1948_To_WGS_1984_1	15873	10.000	Cameroon - coastal area	2.1600	8.4500	4.9900	10.4000
DRUKREF_03_To_WGS_1984_1	5267	1.000	Bhutan	26.7000	88.7400	28.3300	92.1300
Easter_Island_1967_To_WGS_1984	15806	44.000	Chile - Easter Island	-27.2500	-109.5100	-27.0100	-109.1600
			onshore				
ED_1950_ED77_To_WGS_1984	1514	1.000	Iran	23.3400	44.0300	39.7800	63.3400
ED_1950_ED77_To_WGS_1984_2	1141	19.000	Iran	23.3400	44.0300	39.7800	63.3400
ED_1950_ED77_To_WGS_1984_3	1856	0.500	Iran - South Pars blocks 2	26.5800	52.0700	26.7100	52.2800
			and 3				
ED_1950_ED77_To_WGS_1984_4	1857	0.500	Iran - Lavan Island and	26.2100	52.4900	26.8700	53.4300
			Balal field				
ED_1950_ED77_To_WGS_1984_5	1858	0.500	Iran - Kharg Island	29.1600	50.2200	29.3900	50.4200
ED_1950_ED77_To_WGS_1984_6	15745	0.200	Iran - South Pars block 11	26.4600	52.2200	26.6400	52.4100
ED_1950_To_ED_1987_2	1147	1.000	Norway - offshore north	65.0000	-3.3500	84.7300	38.0100
			of 65°N; Svalbard				
ED_1950_To_ETRF_1989_1	108193	1.000	Norway - offshore north	62.0000	-3.3500	84.7300	38.0100
			of 62°N; Svalbard				
ED_1950_To_ETRS_1989_1	1588	1.000	Norway - offshore north	65.0000	-3.3500	84.7300	38.0100
			of 65°N; Svalbard				
ED_1950_To_ETRS_1989_10	1650	2.000	France	41.1500	-9.8600	51.5600	10.3800
ED_1950_To_ETRS_1989_12_NTv2_Spain_v2	15932	0.200	Spain - mainland and	35.2600	-9.3700	43.8200	4.3900
			Balearic Islands onshore				
ED_1950_To_ETRS_1989_13	5040	5.000	Portugal - mainland -	36.9500	-9.5600	42.1600	-6.1900
			onshore				
ED_1950_To_ETRS_1989_15	9224	1.000	Europe - offshore North	53.4900	3.3400	55.9200	8.8800
			Sea - Germany and				
			Netherlands east of 5°E				
ED_1950_To_ETRS_1989_4	1626	1.000	Denmark - onshore	54.5100	8.0000	57.8000	15.2500
ED_1950_To_ETRS_1989_5	1628	1.000	Gibraltar	36.0000	-5.4200	36.1600	-4.8900
ED_1950_To_ETRS_1989_6	1630	1.500	Spain - Balearic Islands	38.5900	1.1200	40.1500	4.3900
ED_1950_To_ETRS_1989_7	1632	1.500	Spain - mainland except	35.2600	-7.5400	43.5600	3.3900
			northwest				

Geographic (datum) Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
ED_1950_To_ETRS_1989_8	1634		Spain - mainland	41.5000	-9.3700	43.8200	-4.5000
	1031	1.500	northwest	11.5000	3.3700	13.0200	1.5000
ED_1950_To_ETRS_1989_9	1783	2.000	Turkey	34.4200	25.6200	43.4500	44.8300
ED_1950_To_ETRS_1989_NTv2_Baleares	108118		Spain - Balearic Islands -	38.5900	1.1200	40.1500	4.3900
			NTv2 grid				
ED_1950_To_ETRS_1989_NTv2_BALR2009	108067	0.200	Spain - Balearic Islands -	38.5900	1.1200	40.1500	4.3900
			NTv2 grid				
ED_1950_To_ETRS_1989_NTv2_Catalonia	5661		Spain - Catalonia onshore	40.4900	0.1600	42.8600	3.3900
ED_1950_To_ETRS_1989_NTv2_Peninsula	108126	0.500	Spain - Peninsula - NTv2	35.8200	-9.3700	43.8200	3.3900
			grid				
ED_1950_To_ETRS_1989_NTv2_PENR2009	108066	0.100	Spain - Peninsula - NTv2	35.8200	-9.3700	43.8200	3.3900
ED 4050 T WGC 4004 4	1100	10.000	grid	24.0000	0.5600	74 2400	24 5000
ED_1950_To_WGS_1984_1	1133	10.000	Europe - west (DMA	34.8800	-9.5600	71.2100	31.5900
ED 1050 To WCS 1094 10	1142	44.000	ED50 mean) Italy - Sardinia onshore	38.8200	8.0800	41.3100	9.8900
ED_1950_To_WGS_1984_10	1142		Italy - Sicily onshore	36.5900	12.3600	38.3500	15.7100
ED_1950_To_WGS_1984_11 ED_1950_To_WGS_1984_12	1143		Malta - onshore	35.7400	14.2700	36.0500	14.6300
ED_1950_T0_WGS_1984_13	1144		Europe - Portugal and	35.2600	-9.5600	43.8200	3.3900
LD_1930_10_WG3_1984_13	1145	3.000	Spain	33.2000	-9.5000	43.8200	3.3900
ED 1950 To WGS 1984 16	1245	44.000	Tunisia	30.2300	7.4900	38.4100	13.6700
ED_1950_To_WGS_1984_17	1275		France	41.1500	-9.8600	51.5600	10.3800
ED_1950_To_WGS_1984_18	1311	1.000	Europe - common	47.4200	-16.1000	63.8900	10.8600
			offshore				
ED_1950_To_WGS_1984_19	1440	Unknown	Greece - onshore	34.8800	19.5700	41.7500	28.3000
ED_1950_To_WGS_1984_2	1134	6.000	Europe - west central (by	42.3300	-4.8700	57.8000	17.1700
			country)				
ED_1950_To_WGS_1984_23	1612	1.000	Norway - offshore north	62.0000	-3.3500	84.7300	38.0100
			of 62°N; Svalbard				
ED_1950_To_WGS_1984_24	1613	1.000	Norway - North Sea -	56.0800	1.3700	62.0000	11.1400
			offshore south of 62°N				
ED_1950_To_WGS_1984_25	1627		Denmark - onshore	54.5100	8.0000	57.8000	15.2500
ED_1950_To_WGS_1984_26	1629		Gibraltar	36.0000	-5.4200	36.1600	-4.8900
ED_1950_To_WGS_1984_27	1631		Spain - Balearic Islands	38.5900	1.1200	40.1500	4.3900
ED_1950_To_WGS_1984_28	1633	1.500	Spain - mainland except	35.2600	-7.5400	43.5600	3.3900
			northwest				

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
ED_1950_To_WGS_1984_29	1635	1.500	Spain - mainland	41.5000	-9.3700	43.8200	-4.5000
			northwest				
ED_1950_To_WGS_1984_3	1135	Unknown	risia iviidale East II aq,	16.3700	34.1700	37.3900	55.6700
			Israel; Jordan; Lebanon;				
			Kuwait; Saudi Arabia;				
			Syria				
ED_1950_To_WGS_1984_30	1784		Turkey	34.4200	25.6200	43.4500	44.8300
ED_1950_To_WGS_1984_31	1810		Egypt - Western Desert	25.7100	24.7000	31.6800	30.0000
ED_1950_To_WGS_1984_32	3904		Netherlands - offshore	51.4500	2.5300	55.7700	6.4100
ED_1950_To_WGS_1984_34	1989	1.000	Portugal - mainland -	36.9500	-9.5600	42.1600	-6.1900
			onshore				
ED_1950_To_WGS_1984_36	1998	1.000	Germany - offshore	53.6000	3.3400	55.9200	8.8800
			North Sea				
ED_1950_To_WGS_1984_37	1087		Jordan	29.1800	34.8800	33.3800	39.3100
ED_1950_To_WGS_1984_38	1075	10.000	Asia - Middle East - Israel,	31.3500	28.0300	43.4500	41.4700
			Palestine Territory,				
			Turkey - offshore				
ED_1950_To_WGS_1984_39	1853	5.000	Ireland - Corrib and	53.7500	-12.5000	55.7600	-9.4900
			Errigal				
ED_1950_To_WGS_1984_4	1136		Cyprus	32.8800	29.9500	36.2100	35.2000
ED_1950_To_WGS_1984_41_NTv2_Spain_v2	15933	1.000	Spain - mainland and	35.2600	-9.3700	43.8200	4.3900
			Balearic Islands onshore				
ED_1950_To_WGS_1984_42	15964	5.000	Portugal - mainland -	34.9100	-13.8700	41.8800	-7.2400
	110=	40.000	offshore	0= =400	24 7222	24 6000	22.222
ED_1950_To_WGS_1984_5	1137		Egypt - Western Desert	25.7100	24.7000	31.6800	30.0000
ED_1950_To_WGS_1984_6	1138	6.000	Europe - British Isles and	49.1100	-10.5600	60.9000	1.8400
50 4050 T 1400 4004 T	1122	7.000	Channel Islands onshore	F7.0000	4.6000	74 2400	24 5000
ED_1950_To_WGS_1984_7	1139	7.000	Europe - Finland and	57.9300	4.6800	71.2100	31.5900
ED 4050 T 1400 4004 0	1110	44.000	Norway - onshore	24.0000	40.5700	44 7500	20 2000
ED_1950_To_WGS_1984_8	1140		Greece - onshore	34.8800	19.5700		
ED_1950_To_WGS_1984_NGA_7PAR	108335	10.000	Europe - west (DMA	34.8800	-9.5600	71.2100	31.5900
	100110	4 000	ED50 mean)	22.522	1 1000	40.4500	4 0000
ED_1950_To_WGS_1984_NTv2_Baleares	108119	1.000	Spain - Balearic Islands -	38.5900	1.1200	40.1500	4.3900
ED 4050 T 1405 4004 NT 0 DALBOOO	100055	0.000	NTv2 grid	20.5022	4.4000	40.4500	4 2002
ED_1950_To_WGS_1984_NTv2_BALR2009	108069	0.900	Spain - Balearic Islands -	38.5900	1.1200	40.1500	4.3900
			NTv2 grid				

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
ED 4050 T 1405 4004 NT 0 6 1 1 1	100050	(m)		Latitude	Longitude	Latitude	Longitude
ED_1950_To_WGS_1984_NTv2_Catalonia	108359		Spain - Catalonia onshore	40.4900	0.1600	42.8600	3.3900
ED_1950_To_WGS_1984_NTv2_Peninsula	108136	1.000	Spain - Peninsula - NTv2 grid	35.8200	-9.3700	43.8200	3.3900
ED_1950_To_WGS_1984_NTv2_PENR2009	108068	0.900	Spain - Peninsula - NTv2 grid	35.8200	-9.3700	43.8200	3.3900
ED_1950_To_WGS_1984_PT3	108111	Unknown	Portugal - mainland onshore	36.9500	-9.5600	42.1600	-6.1900
ED_1950_To_WGS_1984_PT7	108121	Unknown	Portugal - mainland onshore	36.9500	-9.5600	42.1600	-6.1900
ED_1987_To_ETRS_1989_1	4078	0.300	Europe - west	34.8800	-10.5600	84.7300	38.0100
ED_1987_To_WGS_1984_1	1146	0.800	Europe - North Sea	51.0300	-5.0500	62.0100	11.1400
ED_1987_To_WGS_1984_2	3905	1.000	Europe - west	34.8800	-10.5600	84.7300	38.0100
Egypt_1907_To_WGS_1972	1545	5.000	Egypt	21.8900	24.7000	33.8200	37.9100
ED50_to_ETRS89_16	9408	0.200	Spain - mainland onshore and Ceuta	35.8200	-9.3700	43.8200	3.3900
ED50_to_ETRS89_17	9409	0.200	Spain - Balearic Islands	38.5900	1.1200	40.1500	4.3900
ED50_to_IGM95_1	9735	0.200	Italy - 6°22'E to 18°40'E and north of 35°16'N; San Marino, Vatican City State	35.2600	6.3600	47.1000	18.6700
ED50_to_RDN2008_1	9736	0.200	Italy - 6°22'E to 18°40'E and north of 35°16'N; San Marino, Vatican City State	35.2600	6.3600	47.1000	18.670
Egypt_1907_To_WGS_1984	1148	11.000	Egypt	21.8900	24.7000	33.8200	37.9100
Egypt_1907_To_WGS_1984_2	108043	5.000	Egypt	21.8900	24.7000	33.8200	37.9100
Egypt_1907_To_WGS_1984_3	1546	30.000	Egypt - Gulf of Suez	27.1900	32.3400	30.0100	34.2700
Egypt_1907_To_WGS_1984_4	7697	1.200	Egypt	21.8900	24.7000	33.8200	37.9100
Egypt_Gulf_of_Suez_S-650_TL_To_WGS_1972_BE_1	15792	5.000	Egypt - Gulf of Suez	27.1900	32.3400	30.0100	34.2700
Egypt_Gulf_of_Suez_S-650_TL_To_WGS_1984_2	15846	5.000	Egypt - Gulf of Suez	27.1900	32.3400	30.0100	34.2700
ELD_1979_To_LGD2006_1	15924	5.000	Libya - onshore	19.4900	9.3100	33.2300	25.2100
ELD_1979_To_WGS_1984_1	1859	20.000	Libya - Murzuq and En Naga	27.3200	18.3700	27.6700	18.7200
ELD_1979_To_WGS_1984_2	1860	0.500	Libya - Murzuq and En Naga	27.3200	18.3700	27.6700	18.7200

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
ELD_1979_To_WGS_1984_3	1861	2.000	Libya - Mabruk	29.6100	17.1300	30.0700	17.5100
ELD_1979_To_WGS_1984_4	1862	0.500	Libya - Mabruk	29.6100	17.1300	30.0700	17.5100
ELD_1979_To_WGS_1984_5	1863	6.000	Libya - Mabruk	29.6100	17.1300	30.0700	17.5100
ELD_1979_To_WGS_1984_6	15707	10.000	Libya - Amal	29.1000	20.8000	29.8000	21.4000
ELD_1979_To_WGS_1984_7	15778	0.500	Libya - Sirte NC192	27.5000	21.2500	28.0700	21.5900
ELD_1979_To_WGS_1984_8	15909	5.000	Libya - onshore	19.4900	9.3100	33.2300	25.2100
ELD_1979_To_WGS_1984_9	15923	2.000	Libya - Cyrenaica	32.0000	22.4900	32.8000	23.0000
Estonia_1937_To_ETRS_1989	108272	0.100	Estonia	57.5200	20.3700	60.0000	28.2000
Estonia_1937_To_WGS_1984_NGA	108261	4.700	Estonia	57.5200	20.3700	60.0000	28.2000
Estonia_1992_To_ETRF_1989	108194	0.100	Estonia - onshore	57.5200	21.7400	59.7500	28.2000
Estonia_1992_To_ETRS_1989	1331	0.100	Estonia - onshore	57.5200	21.7400	59.7500	28.2000
Estonia_1992_To_WGS_1984	1333	0.500	Estonia - onshore	57.5200	21.7400	59.7500	28.2000
Estonia_1997_To_ETRS_1989_1	1648	0.000	Estonia	57.5200	20.3700	60.0000	28.2000
Estonia_1997_To_WGS_1984_1	1649	1.000	Estonia	57.5200	20.3700	60.0000	28.2000
ETRF_1989_To_WGS_1984	108195	1.000	Europe – ETRF by country	32.8800	-16.1000	84.7300	40.1800
ETRF2000-PL_to_ETRS89_1	9703	0.000	Poland	49.0000	14.1400	55.9300	24.1500
ETRF2000-PL_to_WGS_1984_1	9772	1.000	Poland	49.0000	14.1400	55.9300	24.1500
ETRS_1989_to_EBBWV14-IRF_1	9941	0.000	UK - Newport to Ebbw	51.5000	-3.3000	51.8500	-2.8900
			Vale				
ETRS_1989_to_FNL22-IRF_1	9975	0.000	UK - Inverness to Thurso	57.4000	-4.6000	58.6400	-3.0000
ETRS_1989_to_HULLEE13-IRF_(1)	9965	0.000	UK - Leeds to Hull	53.6000	-1.7000	53.9000	-0.2700
ETRS_1989_to_MOLDOR11-IRF_1	9878	0.000	UK - Manchester to Dore	53.2500	-2.4000	53.5500	-1.3900
ETRS_1989_to_MRH21-IRF_1	9867	0.000	UK - Cardiff to Lincoln	51.3500	-3.2700	53.2600	-0.3600
ETRS_1989_to_MWC18-IRF_1	10108	0.000	UK - Manchester, Wigan	53.0900	-3.1500	53.6500	-2.1000
			and Chester				
ETRS_1989_To_NTF_3_NTv2	15959	1.000	France - onshore -	41.3100	-4.8700	51.1400	9.6300
			mainland and Corsica				
ETRS_1989_To_OSGB_1936_OSTN15	108057	0.030	UK - Britain and UKCS	49.7500	-9.0000	61.0100	2.0100
			49°45'N to 61°N, 9°W to				
			2°E				
ETRS_1989_to_SCM22-IRF_1	9970	0.000	UK - Motherwell to	55.7000	-4.4000	57.5500	-3.3000
			Inverness				
ETRS_1989_To_S-JTSK_[JTSK03]_1	8365		Slovakia	47.7300	16.8400	49.6100	22.5600
ETRS_1989_To_WGS_1984	1149		Europe – ETRF by country	32.8800	-16.1000	84.7300	40.1800
ETRS_1989_To_Xrail84_1	108050	0.500	UK - London	51.2000	-0.7000	51.8000	0.6000

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
ETRS89_to_AbInvA96_2020-IRF_1	9386	0.000	UK - Aberdeen to	57.1000	-4.3100	57.7100	-2.1000
ETDCOO L. ECAMAA ND IDE A	0750	0.000	Inverness	F 4 0 F 0 0	4 0000	FF 2000	4 2000
ETRS89_to_ECML14_NB-IRF_1	9759	0.000		54.8500	-1.9000	55.3000	-1.3000
FTDC00 to FOC24 IDE 4	0740	0.000	Ashington UK - Tweedmouth to	FF FF00	2 5000	F7 2100	1 0400
ETRS89_to_EOS21-IRF_1	9740	0.000	Aberdeen	55.5500	-3.5600	57.2100	-1.9400
ETRS89_to_EWR2-IRF_1	9764	0.000	UK - Oxford to Bedford	51.7000	-1.4300	52.2400	-0.3600
ETRS89_to_GBK19-IRF_1	9454			55.5500	-4.6500	55.9500	-4.0500
[1 V 202 TO GBK 13-IVL 1	3434	0.000	Kilmarnock	33.3300	-4.0300	33.3300	-4.0300
ETRS89 to MML07-IRF 1	9369	0.000		51.4600	-1.8900	53.4200	0.1600
ETRS89 to TPEN11-IRF_1	9365		UK - Liverpool to Leeds	53.3200	-3.1400	53.9000	-1.3400
EUREF_FIN_To_ETRS_1989	108226		Finland	58.8400	19.0800	70.0900	31.5900
EUREF FIN To WGS 1984	108227			58.8400	19.0800	70.0900	31.5900
European_1950_To_WGS_1984_33	1985		Portugal - mainland -	36.9500	-9.5600	42.1600	-6.1900
			onshore		0.000		0.200
European_1979_To_WGS_1984	15752	6.000	Europe - west	34.8800	-10.5600	84.7300	38.0100
Fahud_To_WGS_1984	1256		Oman - mainland	16.5900	51.9900	26.4200	59.9100
Fahud_To_WGS_1984_2	1438	25.000	Oman - mainland	16.5900	51.9900	26.4200	59.9100
Fahud_To_WGS_1984_3	6908	7.000	Oman - mainland	16.5900	51.9900	26.4200	59.9100
Fatu_lva_1972_To_RGPF_1	8835	2.000	French Polynesia -	-10.6000	-138.7500	-10.3600	-138.5400
			Marquesas Islands - Fatu				
			Hiva				
Fatu_lva_1972_To_WGS_1984_1	15772	2.000	French Polynesia -	-10.6000	-138.7500	-10.3600	-138.5400
			Marquesas Islands - Fatu				
			Hiva				
Fatu_Iva_1972_To_WGS_1984_2	8842	2.000	French Polynesia -	-10.6000	-138.7500	-10.3600	138.5400
			Marquesas Islands - Fatu				
			Hiva				
FD_1954_To_ED_1950_1	15866		Faroe Islands - onshore	61.3300	-7.4900	62.4100	-6.3300
FD_1958_To_WGS_1984	1513	+	Iran - Kangan district	27.3000	51.8000	28.2000	53.0100
FD_1958_To_WGS_1984_2	1854	0.500		26.2100	52.4900	26.8700	53.4300
			Balal field				
FD_1958_To_WGS_1984_3	1855		Iran - Kharg Island	29.1600	50.2200	29.3900	50.4200
FEH2010_To_WGS_1984_1	5599	1.000	Europe - Fehmarnbelt	54.3300	10.6600	54.8300	12.0100
			outer				

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Fiji_1956_To_WGS_1984_1	15875		Fiji - main islands	-19.2200	176.8100		-179.7700
Fiji_1986_To_WGS_1984_1	15876		Fiji - onshore	-20.8100			-178.1500
Fiji_1986_To_WGS_1984_2	15877		Fiji - main islands	-19.2200	176.8100	-16.1000	
Fort_Desaix_To_RGAF09_1	5491		Martinique - onshore	14.3500	-61.2900	14.9300	-60.7600
Fort_Desaix_To_WGS_1984_1	1909		Martinique - onshore	14.3500		14.9300	-60.7600
Fort_Desaix_To_WGS_1984_2	1910		Martinique - onshore	14.3500	-61.2900	14.9300	-60.7600
Fort_Marigot_To_RGAF09_1	5493		Guadeloupe - St Martin and St Barthelemy - onshore	17.8200	-63.2100	18.1700	-62.7300
Fort_Marigot_To_WGS_1984_1	1903	10.000	Guadeloupe - St Martin and St Barthelemy - onshore	17.8200	-63.2100	18.1700	-62.7300
Fort_Thomas_1955_To_WGS_1984	108262	44.000	St Kitts and Nevis	16.3400	-63.6300	17.6700	-62.2000
Gambia_To_WGS_1984_1	6913	43.000	Gambia - onshore	13.0500	-16.8800	13.8300	-13.7900
Gan_1970_To_WGS_1984_1	15713	44.000	Maldives - onshore	-0.6900	72.8100	7.0800	73.6900
Garoua_To_WGS_1972_BE_1	1805	5.000	Cameroon - Garoua area	8.9200	12.9000	9.8700	14.1900
GDA_1994_To_GDA2020_1	8048	0.010	Australia - GDA	-60.5500	93.4100	-8.4700	173.3400
GDA_1994_To_GDA2020_NTv2_2_Conformal_and_Distortion	8447	0.05	Australia - onshore	-43.7000	112.8500	-9.8600	153.6900
GDA_1994_To_GDA2020_NTv2_3_Conformal	8446	0.05	Australia - onshore	-43.7000	112.8500	-9.8600	153.6900
GDA_1994_To_GDA2020_NTv2_4_Christmas	8444	0.050	Christmas Island - onshore	-10.6300	105.4800	-10.3600	105.7700
GDA_1994_To_GDA2020_NTv2_5_Cocos_Keeling	8445	0.050	Cocos (Keeling) Islands - onshore	-12.2700	96.7600	-11.7600	96.9900
GDA_1994_To_GDA2020_NTv2_CPD_plus_Lord_Howe_Norfolk	108443	0.050	Australia - Lord Howe and Norfolk Islands onshore	-32.3333	158.8000	-28.6333	168.3333
GDA_1994_To_WGS_1984_NTv2_CPD_plus_Lord_Howe_Norfolk	108441	3.100	Australia - Lord Howe and Norfolk Islands onshore	-32.3333	158.8000	-28.6333	168.3333
GDA_1994_To_WGS_1984	1150	3.200	Australia - onshore	-43.7000	112.8500	-9.8600	153.6900
GDA_1994_To_WGS_1984_2	9688	3.000	Australia - GDA	-60.5500	93.4100	-8.4700	173.3400
GDA_1994_To_WGS_1984_3	9689	3.100	Australia - onshore	-43.7000	112.8500	-9.8600	153.6900
GDA2020_To_WGS_1984_2	8450	3.000	Australia - GDA	-60.5500	93.4100	-8.4700	173.3400
GDA2020_To_WGS_1984_Transit_1	8887	3.000	Australia - GDA	-60.5500	93.4100	-8.4700	173.3400
GDBD2009_To_WGS_1984_1	6701	1.000	Brunei	4.0100	112.3700	6.3100	115.3700
GGD_To_ITRF_1993	108368	0.030	Georgia - onshore	41.0100	39.9900	43.5900	46.7200

²⁶ Copyright @ 2012, 2015-2022 Esri

Geographic (datum) Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
GGD_To_Pulkovo_1942	108367	0.110	Georgia - onshore	41.0100	39.9900	43.5900	46.7200
GGRS_1987_To_WGS_1984	1272	1.000	Greece - onshore	34.8800	19.5700	41.7500	28.3000
Graciosa_1948_To_PTRA08_1_3par	108240	0.190	Portugal - Azores C - onshore	38.3200	-28.9000	39.1400	-26.9700
Graciosa_1948_To_PTRA08_1_7par	108184	0.180	Portugal - Azores C - onshore	38.3200	-28.9000	39.1400	-26.9700
Graciosa_1948_To_PTRA08_2_3par	108241	0.068	Portugal - Azores C - Faial onshore	38.4600	-28.9000	38.7000	-28.5400
Graciosa_1948_To_PTRA08_2_7par	108185	0.005	Portugal - Azores C - Faial onshore	38.4600	-28.9000	38.7000	-28.5400
Graciosa_1948_To_PTRA08_3_3par	108242	0.064	Azores - Graciosa Island	38.9700	-28.1300	39.1400	-27.8800
Graciosa_1948_To_PTRA08_3_7par	108186	0.004	Azores - Graciosa Island	38.9700	-28.1300	39.1400	-27.8800
Graciosa_1948_To_PTRA08_4_3par	108243	0.100	Portugal - Azores C - Pico onshore	38.3200	-28.6100	38.6100	-27.9800
Graciosa_1948_To_PTRA08_4_7par	108187	0.400	Portugal - Azores C - Pico onshore	38.3200	-28.6100	38.6100	-27.9800
Graciosa_1948_To_PTRA08_5_3par	108244	0.700	Portugal - Azores C - S Jorge onshore	38.4800	-28.3700	38.8000	-27.7100
Graciosa_1948_To_PTRA08_5_7par	108188	0.007	Portugal - Azores C - S Jorge onshore	38.4800	-28.3700	38.8000	-27.7100
Graciosa_1948_To_PTRA08_6_3par	108245	0.070	Portugal - Azores C - Terceira onshore	38.5700	-27.4400	38.8600	-26.9700
Graciosa_1948_To_PTRA08_6_7par	108189	0.005	Portugal - Azores C - Terceira onshore	38.5700	-27.4400	38.8600	-26.9700
Graciosa_1948_To_WGS_1984_1_3par	108292	0.300	Portugal - Azores C - onshore	38.3200	-28.9000	39.1400	-26.9700
Graciosa_1948_To_WGS_1984_1_7par	108246	0.500	Portugal - Azores C - onshore	38.3200	-28.9000	39.1400	-26.9700
Graciosa_1948_To_WGS_1984_2_3par	108293	0.200	Portugal - Azores C - Faial onshore	38.4600	-28.9000	38.7000	-28.5400
Graciosa_1948_To_WGS_1984_2_7par	108247	0.010	Portugal - Azores C - Faial onshore	38.4600	-28.9000	38.7000	-28.5400
Graciosa_1948_To_WGS_1984_3_3par	108294	0.100	Azores - Graciosa Island	38.9700	-28.1300	39.1400	-27.8800
Graciosa_1948_To_WGS_1984_3_7par	108248	0.010	Azores - Graciosa Island	38.9700	-28.1300	39.1400	-27.8800

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
	10000	(m)		Latitude	Longitude	Latitude	Longitude
Graciosa_1948_To_WGS_1984_4_3par	108295	0.300	Portugal - Azores C - Pico onshore	38.3200	-28.6100	38.6100	-27.9800
Graciosa_1948_To_WGS_1984_4_7par	108249	0.500	Portugal - Azores C - Pico onshore	38.3200	-28.6100	38.6100	-27.9800
Graciosa_1948_To_WGS_1984_5_3par	108296	0.900	Portugal - Azores C - S Jorge onshore	38.4800	-28.3700	38.8000	-27.7100
Graciosa_1948_To_WGS_1984_5_7par	108250	0.010	Portugal - Azores C - S Jorge onshore	38.4800	-28.3700	38.8000	-27.7100
Graciosa_1948_To_WGS_1984_6_3par	108297	0.200	Portugal - Azores C - Terceira onshore	38.5700	-27.4400	38.8600	-26.9700
Graciosa_1948_To_WGS_1984_6_7par	108251	0.010	Portugal - Azores C - Terceira onshore	38.5700	-27.4400	38.8600	-26.9700
Graciosa_Base_SW_1948_To_WGS_1984_1	108112	5.000	Portugal - Azores C - onshore	38.3200	-28.9000	39.1400	-26.9700
Graciosa_Base_SW_1948_To_WGS_1984_2	108122	1.000	Portugal - Azores C - onshore	38.3200	-28.9000	39.1400	-26.9700
Grand_Cayman_1959_To_CIGD11_1	6136	0.300	Cayman Islands - Grand Cayman	19.2100	-81.4600	19.4100	-81.0400
Grand_Cayman_1959_To_WGS_1984_1	15830	1.000	Cayman Islands - Grand Cayman	19.2100	-81.4600	19.4100	-81.0400
Grand_Cayman_1959_To_WGS_1984_2	6142	1.000	Cayman Islands - Grand Cayman	19.2100	-81.4600	19.4100	-81.0400
Grand_Comoros_To_WGS_1984_1	5521	Unknown	Comoros - Njazidja (Grande Comore)	-11.9900	43.1600	-11.3100	43.5500
Greek_Athens_To_Greek	1761	0.000	Greece - onshore	34.8800	19.5700	41.7500	28.3000
Greek_To_GGRS_1987	1891	5.000	Greece - onshore	34.8800	19.5700	41.7500	28.3000
Greenland_1996_To_WGS_1984_1	15879	1.000	Greenland	56.3800	-75.0000	87.0200	7.9900
Grenada_1953_To_WGS_1984	1443	10.000	Grenada - main island - onshore	11.9400	-61.8400	12.2900	-61.5400
GSK-2011_to_WGS_1984_1	9773	1.000	Russia	39.8700	18.9200	85.1900	-168.9700
Guam_1963_To_HARN_Guam	1068	5.000	Guam - onshore	13.1800	144.5800	13.7000	145.0100
Guam_1963_To_HARN_Marianas_Rota	108137	Unknown	Northern Marianas - Rota	14.0000	145.0000	14.7500	146.0000
Guam_1963_To_HARN_Marianas_Saipan	108138	Unknown	Northern Marianas - Saipan	14.7500	145.0000	15.5000	146.0000
Guam_1963_To_HARN_Marianas_Tinian_Aguijan	108139	Unknown	Northern Marianas - Tinian and Aguijan	14.7500	145.5000	15.1333	145.7500

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Guam_1963_To_NAD_1983_HARN_2	8665	5.000	Pacific - Guam and NMI -	13.1800	144.5800	20.6100	146.1200
			onshore				
Guam_1963_To_NAD_1983_HARN_Rota	108305	Unknown	Northern Marianas - Rota	14.0000	145.0000	14.7500	146.0000
Guam_1963_To_NAD_1983_HARN_Saipan	108304	Unknown	Northern Marianas -	14.7500	145.0000	15.5000	146.0000
			Saipan				
Guam_1963_To_WGS_1984_1	1070		Guam - onshore	13.1800	144.5800	13.7000	
Guam_1963_To_WGS_1984_2	1069		Guam - onshore	13.1800	144.5800	13.7000	145.0100
Guam_1963_To_WGS_1984_Saipan	108299	Unknown	Northern Marianas -	14.7500	145.0000	15.5000	146.0000
			Saipan				
Gulshan_303_To_WGS_1984_1	15779		Bangladesh	18.5600	88.0100	26.6400	92.6700
Gulshan_303_to_WGS_1984_2	9679		Bangladesh	18.5600	88.0100	26.6400	92.6700
Gunung_Segara_Jakarta_To_Gunung_Segara	1883	+	Indonesia - Kalimantan E	-4.2400	114.5500	4.2900	119.0600
Gunung_Segara_To_WGS_1984_1	1897	1		-4.2400	114.5500	4.2900	119.0600
Gunung_Segara_To_WGS_1984_2	1898	5.000		-4.2400	114.5500	0.0000	117.9900
	4000	10.000	SE	2 2 2 2 2	446.000		440.0000
Gunung_Segara_To_WGS_1984_3	1899	10.000		-0.0600	116.9600	4.2900	119.0600
Cunung Sagara To MCS 1004 4	1020	1.000	Kalimantan	1 2400	116.7200	0.0000	117 0000
Gunung_Segara_To_WGS_1984_4	1838	1.000	Indonesia - Kalimantan - Mahakam delta	-1.2400	116.7200	0.0000	117.9900
GUX 1_To_WGS_1984	108263	44.000	Solomon Islands -	-9.9800	159.5500	-9.2000	160.8800
dox_1_10_wd3_1984	100203	44.000	Guadalcanal Island	-3.3600	133.3300	-3.2000	100.8800
Hanoi 1972 To WGS 1984	1544	5,000	Vietnam - onshore Vung	9.0300	105.4900	11.0400	107.5800
	1544	3.000	Tau area	3.0300	103.4300	11.0400	107.5000
Hartebeesthoek94 To WGS 1984	1505	1.000	South Africa	-50.3200	13.3300	-22.1300	42.8500
HD1909_To_WGS_1984_1	3817		Hungary	45.7400	16.1100	48.5800	22.9000
Helle_1954_To_WGS_1984_1	1957		Jan Mayen - onshore	70.7500	-9.1700	71.2400	-7.8700
Herat_North_To_WGS_1984	1246		Afghanistan	29.4000	60.5000	38.4800	74.9200
Hermannskogel_To_WGS_1984	108264		Europe - former	40.8500	13.3800	46.8800	23.0400
			Yugoslavia onshore				
Hito_XVIII_1963_To_WGS_1984	1529	0.500	Argentina - Tierra del	-55.1100	-68.6400	-52.5900	-63.7300
			Fuego onshore				
Hito_XVIII_1963_To_WGS_1984_2	1892	44.000	Chile - Tierra del Fuego	-55.9600	-74.8300	-51.9900	-66.3300
Hito_XVIII_1963_To_WGS_1984_3	9263	2.500	Argentina - Tierra del	-55.1100	-68.6400	-52.5900	-63.7300
			Fuego onshore				
Hjorsey_1955_To_WGS_1984	1951	7.000	Iceland - mainland	63.3400	-24.6600	66.5900	-13.3800

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Hjorsey_1955_To_WGS_1984_2	6909		Iceland - mainland	63.3400	-24.6600	66.5900	
Hong_Kong_1963_67_To_WGS_1984	15842		China - Hong Kong	22.1300		22.5800	
Hong_Kong_1980_To_ITRF_1996	108337		China - Hong Kong	22.1300	113.7600	22.5800	114.5100
Hong_Kong_1980_To_WGS_1984_1	1825		China - Hong Kong	22.1300		22.5800	
HS2-IRF_to_ETRS89_1	9302	0.000	UK - London to Birmingham and Crewe	51.4500	-2.7500	53.3000	0.0000
HTRS96_To_ETRS_1989_1	15966	0.000	Croatia	41.6200	13.0000	46.5400	19.4300
HTRS96_To_WGS_1984_1	15967	1.000	Croatia	41.6200	13.0000	46.5400	19.4300
Hungarian_1972_To_ETRF_1989_1	108196	1.000	Hungary	45.7400	16.1100	48.5800	22.9000
Hungarian_1972_To_ETRS_1989_1	1829	0.500	Hungary	45.7400	16.1100	48.5800	22.9000
Hungarian_1972_To_ETRS_1989_2	1449	0.400	Hungary	45.7400	16.1100	48.5800	22.9000
Hungarian_1972_To_WGS_1984_1	1830	1.000	Hungary	45.7400	16.1100	48.5800	22.9000
Hungarian_1972_To_WGS_1984_2	1831	1.000	Hungary	45.7400	16.1100	48.5800	22.9000
Hungarian_1972_To_WGS_1984_3	1448	1.000	Hungary	45.7400	16.1100	48.5800	22.9000
Hungarian_1972_To_WGS_1984_4	1242	1.000	Hungary	45.7400	16.1100	48.5800	22.9000
Hu_Tzu_Shan_To_WGS_1984	1152	26.000	Taiwan – onshore - mainland and Penghu	21.8700	119.2500	25.3400	122.0600
IGCB_1955_To_WGS_1984_1	15787	5.000	Congo DR (Zaire) - Bas Congo	-6.0400	12.1700	-4.2800	16.2800
IGD05_To_IG05_Intermediate_CRS	7140	0.000	Asia - Middle East - Israel and Palestine Territory onshore	29.4500	34.1700	33.2800	35.6900
IGD05(2012)_To_IG05(2012)_Intermediate_CRS	6993	0.000	Asia - Middle East - Israel and Palestine Territory onshore	29.4500	34.1700	33.2800	35.6900
IGD05_To_IGD05(2012)	6992	0.050	Israel	29.4500	32.9900	33.5300	35.6900
IGM_1995_To_ETRS_1989_1	1098	0.000	Italy - including San Marino and Vatican	34.7600	5.9300	47.1000	18.9900
IGM_1995_To_WGS_1984_1	1099	1.000	Italy - including San Marino and Vatican	34.7600	5.9300	47.1000	18.9900
IGM95_to_RDN2008_1	9737	0.010	Italy - 6°22'E to 18°40'E and north of 35°16'N; San Marino, Vatican City State	35.2600	6.3600	47.1000	18.6700
IGN53_Mare_To_RGNC_1991-93_1	15884	2.000	New Caledonia - Mare	-21.7100	167.7500	-21.3200	168.1900
IGN53_Mare_To_RGNC_1991-93_2	15891	0.100	New Caledonia - Mare	-21.7100	167.7500	-21.3200	168.1900

Geographic (datum) Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
IGN53_Mare_To_WGS_1984_1	1928	1.000	New Caledonia - Mare	-21.7100	167.7500	-21.3200	168.1900
IGN53_Mare_To_WGS_1984_2	15783	5.000	New Caledonia - Mare	-21.7100	167.7500	-21.3200	168.1900
IGN53_Mare_To_WGS_1984_3	15901	2.000	New Caledonia - Mare	-21.7100	167.7500	-21.3200	168.1900
IGN56_Lifou_To_RGNC_1991-93_1	15883	1.000	New Caledonia - Lifou	-21.2400	166.9800	-20.6200	167.5200
IGN56_Lifou_To_RGNC_1991-93_2	15890	0.100	New Caledonia - Lifou	-21.2400	166.9800	-20.6200	167.5200
IGN56_Lifou_To_WGS_1984_1	1917	10.000	New Caledonia - Lifou	-21.2400	166.9800	-20.6200	167.5200
IGN56_Lifou_To_WGS_1984_2	1927	1.000	New Caledonia - Lifou	-21.2400	166.9800	-20.6200	167.5200
IGN56_Lifou_To_WGS_1984_3	15902	1.000	New Caledonia - Lifou	-21.2400	166.9800	-20.6200	167.5200
IGN63_Hiva_Oa_To_RGPF_1	8843	0.500	French Polynesia - Marquesas Islands - Hiva Oa	-9.8900	-139.2300	-9.6400	-138.7500
IGN63_Hiva_Oa_To_RGPF_2	8845	2.000	French Polynesia - Marquesas Islands - Tahuata	-10.0800	-139.1900	-9.8600	-138.9800
IGN63_Hiva_Oa_To_WGS_1984_1	15773	2.000	French Polynesia - Marquesas Islands - Hiva Oa	-9.8900	-139.2300	-9.6400	-138.7500
IGN63_Hiva_Oa_To_WGS_1984_2	15774	2.000	French Polynesia - Marquesas Islands - Tahuata	-10.0800	-139.1900	-9.8600	-138.9800
IGN63_Hiva_Oa_To_WGS_1984_3	8844	2.000	French Polynesia - Marquesas Islands - Hiva Oa	-9.8900	-139.2300	-9.6400	-138.7500
IGN63_Hiva_Oa_To_WGS_1984_4	8846	2.000	French Polynesia - Marquesas Islands - Tahuata	-10.0800	-139.1900	-9.8600	-138.9800
IGN72_Grande_Terre_To_RGNC_1991-93_1	15882	2.000	New Caledonia - Grande Terre	-22.4500	163.9200	-20.0300	167.0900
IGN72_Grande_Terre_To_RGNC_1991-93_2	15887	0.300	New Caledonia - Grande Terre	-22.4500	163.9200	-20.0300	167.0900
IGN72_Grande_Terre_To_RGNC_1991-93_3	15888	0.100	New Caledonia - Grande Terre - Noumea	-22.3700	166.3500	-22.1900	166.5400
IGN72_Grande_Terre_To_WGS_1984_1	1962	10.000	New Caledonia - Grande Terre	-22.4500	163.9200	-20.0300	167.0900

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
IGN72_Grande_Terre_To_WGS_1984_2	1963	1.000	New Caledonia - Grande	-22.4500	163.9200	-20.0300	167.0900
			Terre				
IGN72_Grande_Terre_To_WGS_1984_3	15903	2.000	New Caledonia - Grande	-22.4500	163.9200	-20.0300	167.0900
			Terre				
IGN72_Nuku_Hiva_To_RGPF_1	8847	0.500	French Polynesia -	-9.0100	-140.3100	-8.7200	-139.9600
			Marquesas Islands - Nuku				
ICAIZA Nobre Hire Te DCDE 3	0040	2.000	Hiva	0.0000	120,000	0.0100	120 1100
IGN72_Nuku_Hiva_To_RGPF_2	8849	2.000	French Polynesia -	-9.0000	-139.6600	-8.8100	-139.4400
			Marquesas Islands - Ua Huka				
IGN72_Nuku_Hiva_To_RGPF_3	8851	0.500	French Polynesia -	-9 5700	-140.2100	-9 2700	-139.9500
INGN/2_NURU_TIVU_TO_NGTT_5	0051	0.500	Marquesas Islands - Ua	3.3700	140.2100	3.2700	133.3300
			Pou				
IGN72_Nuku_Hiva_To_WGS_1984_1	1914	10.000	French Polynesia -	-9.5700	-140.3100	-8.7200	-139.4400
			Marquesas Islands - Nuku				
			Hiva, Ua Huka and Ua				
			Pou				
IGN72_Nuku_Hiva_To_WGS_1984_2	15775	1.000	French Polynesia -	-9.0100	-140.3100	-8.7200	-139.9600
			Marquesas Islands - Nuku				
			Hiva				
IGN72_Nuku_Hiva_To_WGS_1984_3	15776	2.000	French Polynesia -	-9.0000	-139.6600	-8.8100	-139.4400
			Marquesas Islands - Ua				
ICN72 Nuku Hivo To MCC 1094 4	15777	1 000	Huka	0.5700	140 2100	0.2700	120.0500
IGN72_Nuku_Hiva_To_WGS_1984_4	15777	1.000	French Polynesia - Marquesas Islands - Ua	-9.5700	-140.2100	-9.2700	-139.9500
			Pou				
IGN72_Nuku_Hiva_To_WGS_1984_5	8848	1.000	French Polynesia -	-9.0100	-140.3100	-8.7200	-139.9600
			Marquesas Islands - Nuku	0.0200		0	
			Hiva				
IGN72_Nuku_Hiva_To_WGS_1984_6	8850	2.000	French Polynesia -	-9.0000	-139.6600	-8.8100	-139.4400
			Marquesas Islands - Ua				
			Huka				
IGN72_Nuku_Hiva_To_WGS_1984_7	8852	1.000	French Polynesia -	-9.5700	-140.2100	-9.2700	-139.9500
			Marquesas Islands - Ua				
		_	Pou				
IGRS_To_WGS_1984_1	3894	0.000	Iraq	29.0600	38.7900	37.3900	48.7500

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
IKBD_1992_To_WGS_1984_1	1993	0.000	Asia - Middle East - Iraq-	29.0600	46.3600	30.3200	48.6100
			Kuwait boundary				
Indian_1954_To_WGS_1984	1153		Thailand - onshore	5.6300	97.3400	20.4600	
Indian_1960_To_WGS_1972_BE	1541	25.000	Vietnam - offshore Cuu	7.9900	106.5400	11.1500	110.0000
			Long basin				
Indian_1960_To_WGS_1984_1	108097	27.000	Vietnam - offshore Cuu	7.9900	106.5400	11.1500	110.0000
			Long basin				
Indian_1960_To_WGS_1984_2	1542	44.000	Vietnam - 14°N to 18°N	14.0000	105.6100	18.0100	109.3600
			onshore				
Indian_1960_To_WGS_1984_3	1543		Vietnam - Con Son Island	8.5700	106.4800	8.8300	
Indian_1975_To_WGS_1984	1154	5.000	Thailand - onshore and	5.6300	97.3400	20.4600	105.6400
			Gulf of Thailand				
Indian_1975_To_WGS_1984_2	1304	5.000	Thailand - onshore and	5.6300	97.3400	20.4600	105.6400
			Gulf of Thailand				
Indian_1975_To_WGS_1984_3	1537		Thailand - Bongkot field	6.7400	102.1600	8.1600	
Indian_1975_To_WGS_1984_4	1812		Thailand - onshore	5.6300	97.3400	20.4600	
Indonesian_1974_To_DGN_1995_1	15911		Indonesia - onshore	-10.9800	95.1600	5.9700	
Indonesian_1974_To_WGS_1984	1248	44.000	Indonesia - onshore	-10.9800	95.1600	5.9700	141.0100
Indonesian_1974_To_WGS_1984_2	1832		Indonesia - onshore	-10.9800	95.1600	5.9700	141.0100
Indonesian_1974_To_WGS_1984_3	1833	3.000	Indonesia - onshore	-10.9800	95.1600	5.9700	141.0100
IRENET95_To_ETRF_1989	108197	0.000	Europe - Ireland	51.3900	-10.5600	55.4300	-5.3400
			(Republic and Ulster) -				
			onshore				
IRENET95_To_ETRS_1989	1611	0.000	Europe - Ireland	51.3900	-10.5600	55.4300	-5.3400
			(Republic and Ulster) -				
			onshore				
IRENET95_To_WGS_1984_1	1678	1.000	Europe - Ireland	51.3900	-10.5600	55.4300	-5.3400
			(Republic and Ulster) -				
			onshore				
ISN_1993_To_ISN_2004	108214	0.050	Iceland - NADCON	63.2700	-24.6500	66.6600	-13.2500
ISN_1993_To_WGS_1984_1	1952	1.000	Iceland	59.9600	-30.8700	69.5900	-5.5500
ISN_2004_To_ISN_1993	108216	0.050	Iceland - NADCON	63.2700	-24.6500	66.6600	-13.2500
ISN_2004_To_WGS_1984_1	5327	1.000	Iceland	59.9600	-30.8700	69.5900	-5.5500
ISN2004_To_ISN2016_1	9233	0.050	Iceland	59.9600	-30.8700	69.5900	-5.5500
ISN2016_to_WGS_1984_1	9291	1.000	Iceland	59.9600	-30.8700	69.5900	-5.5500

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
ISN93_To_ISN2016_1	9232	0.050	Iceland	59.9600	-30.8700	69.5900	-5.5500
Israel_To_WGS_1984	1073	2.000	Israel, Palestine Territory,	29.1900	32.9900	33.5300	39.3000
			and Jordan				
Israel_1993_to_WGS_1984_2	9676	0.500	Asia - Middle East - Israel	29.4500	34.1700	33.2800	35.6900
			and Palestine Territory				
			onshore				
ISTS_061_1968_To_WGS_1984	15813		South Georgia - onshore	-54.9500	-38.0800	-53.9300	-35.7400
ISTS_073_1969_To_WGS_1984	15808	44.000	British Indian Ocean	-7.4900	72.3000	-7.1800	72.5500
			Territory - Diego Garcia				
ITRF_1988_To_ITRF_2000_1	108034		World		-180.0000	90.0000	
ITRF_1989_To_ITRF_2000_1	108033		World	-90.0000		90.0000	
ITRF_1990_To_ITRF_2000_1	108032		World	-90.0000	-180.0000	90.0000	180.0000
ITRF_1991_To_ITRF_2000_1	108031		World	-90.0000	-180.0000	90.0000	180.0000
ITRF_1992_To_ITRF_2000_1	108030	0.010	World	-90.0000	-180.0000	90.0000	180.0000
ITRF_1993_To_ITRF_2000_1	108029	0.010	World	-90.0000	-180.0000	90.0000	180.0000
ITRF_1994_To_ITRF_2000_1	108028	0.010	World	-90.0000	-180.0000	90.0000	180.0000
ITRF_1996_To_ITRF_2000_1	108027	0.010	World	-90.0000	-180.0000	90.0000	180.0000
ITRF_1997_To_ITRF_2000_1	108026	0.010	World	-90.0000	-180.0000	90.0000	180.0000
ITRF_2000_To_ITRF_2005_1	108036	0.010	World	-90.0000	-180.0000	90.0000	180.0000
ITRF_2000_To_NAD_1983_2011	108353	0.100	USA - CONUS and Alaska;	14.9200	167.6500	74.7100	-63.8800
			PRVI				
ITRF_2000_To_NAD_1983_CORS96	108150	0.100	USA - CONUS and Alaska;	14.9200	167.6500	74.7100	-63.8800
			PRVI				
ITRF_2000_To_NAD_1983_HARN	108281	0.100	USA (all states)	15.5600	167.6500	74.7100	-65.6900
ITRF_2000_To_WGS_1984	108280		World	-90.0000	-180.0000	90.0000	180.0000
ITRF_2005_To_ITRF_2008_2	108052	0.010	World	-90.0000	-180.0000	90.0000	180.0000
ITRF_2008_To_ITRF_2014_7par	108074	0.010	World	-90.0000	-180.0000	90.0000	180.0000
ITRF_2008_To_IG05(2012)_Intermediate_CRS	9186	0.050	Asia - Middle East - Israel	29.4500	34.1700	33.2800	35.6900
			and Palestine Territory				
			onshore				
ITRF_2008_To_NAD_1983_2011	108360	0.030	USA - CONUS and Alaska;	14.9200	167.6500	74.7100	-63.8800
			PRVI				
ITRF_2008_To_NAD_1983_MA11	108361	0.050	Pacific - US interests	1.6400	129.4800	23.9000	149.5500
			Mariana plate				
ITRF_2008_To_NAD_1983_PA11	108362	0.050	Pacific - US interests	-17.5600	157.4700	31.8000	-151.2700
			Pacific plate				

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
ITRF_2014_To_GDA2020_Null	108061		Australia - GDA	-60.5500	93.4100	-8.4700	
ITRF_2014_To_NAD_1983_CSRS_v7_7par	108075	0.000	Canada	38.2100	-141.0100	86.4600	-47.7300
JAD_2001_To_WGS_1984	15925		Jamaica	14.0800	-80.6000	19.3600	-74.5100
Jamaica_1969_To_JAD_2001_1	15926	0.500	Jamaica - onshore	17.6400	-78.4300	18.5800	-76.1700
Jamaica_1969_To_WGS_1972_1	10086	15.000	Jamaica - onshore	17.6400	-78.4300	18.5800	-76.1700
Jamaica_1969_To_WGS_1972_2	1083	10.000	Jamaica - onshore	17.6400	-78.4300	18.5800	-76.1700
Jamaica_1969_To_WGS_1984_1	1084	5.000	Jamaica - onshore	17.6400	-78.4300	18.5800	-76.1700
Jamaica_1969_To_WGS_1984_2	1085	2.000	Jamaica - onshore	17.6400	-78.4300	18.5800	-76.1700
Jamaica_1969_To_WGS_1984_3	15927	1.000	Jamaica - onshore	17.6400	-78.4300	18.5800	-76.1700
JGD_2000_To_JGD_2011_NTv2_1	6713	0.500	Japan - onshore	20.3700	122.8300	45.5400	154.0500
JGD_2000_To_JGD_2011_2_Null	6698	1.000	Japan excluding northern main province	17.0900	122.3800	46.0500	157.6500
JGD_2000_To_WGS_1984	108107	4.000	Korea, Republic of (South Korea)	28.6000	122.7100	40.2700	134.2800
JGD_2000_To_WGS_1984_1	1826	1.000	Japan	17.0900	122.3800	46.0500	157.6500
JGD2000_to_WGS_1984_2	9896	1.000	Japan - northern Honshu	34.8400	135.4200	41.5800	142.1400
JGD_2011_To_WGS_1984	108053	0.000	Japan - onshore	20.3700	122.8300	45.5400	154.0500
JGD2011_to_WGS_1984_1	9936	1.000	Japan	17.0900	122.3800	46.0500	157.6500
Johnston_Island_1961_To_WGS_1984	15809	44.000	Johnston Island	16.6700	-169.5900	16.7900	-169.4700
Jordan_To_WGS_1984	108233	Unknown	Jordan	29.1800	34.8800	33.3800	39.3100
Jouik_1961_To_WGS_1984_1	15870	1.000	Mauritania - north coast	19.3700	-17.0800	21.3400	-15.8800
Kalianpur_1937_To_WGS_1984_1	1155	18.000	Bangladesh - onshore	20.5200	88.0100	26.6400	92.6700
Kalianpur_1937_To_WGS_1984_2	1533	5.000	Myanmar (Burma) - Moattama area	9.4800	93.9400	17.8700	99.6600
Kalianpur_1962_To_WGS_1984_1	1247	Unknown	Pakistan - onshore	23.6400	60.8600	37.0700	77.8300
Kalianpur_1962_To_WGS_1984_2	15701	1.000	Pakistan - offshore Indus	21.0500	64.0000	25.3900	68.2400
Kalianpur_1962_To_WGS_1984_3	15702	3.000	Pakistan - Badin and Mehran	24.0000	67.7400	25.6400	69.8700
Kalianpur_1962_To_WGS_1984_4	15703	3.000	Pakistan - Karachi	24.6900	66.8300	25.7600	68.0000
Kalianpur_1962_To_WGS_1984_5	9234		Pakistan - East Sind	24.1600	68.2700	28.6100	71.1400
Kalianpur_1962_To_WGS_1984_6	15494	3.000	Pakistan - Gambat	25.8800	68.2400	27.6700	69.3000
Kalianpur_1975_To_WGS_1984_1	1156	22.000	Asia - India mainland and Nepal	8.0200	68.1300	35.5100	97.4200
Kandawala_To_WGS_1984	1157	35.000	Sri Lanka - onshore	5.8600	79.6400	9.8800	81.9500
Karbala_1979_Polservice_To_IGRS_1	5077	0.300	Iraq - onshore	29.0600	38.7900	37.3900	

Geographic (datum) Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
Karbala_1979_Polservice_To_WGS_1984_1	15872	5.000	Iraq - Basra area	29.8700	46.4600	31.0900	48.6100
Karbala_1979_Polservice_To_WGS_1984_2	5078	0.300	Iraq - onshore	29.0600	38.7900	37.3900	48.6100
Katanga_1955_To_RGRDC_2005_1	4065	1.500	Congo DR (Zaire) -	-12.0100	26.3800	-11.1300	27.7500
			Katanga - Lubumbashi				
			area				
Katanga_1955_To_RGRDC_2005_2	4067	0.500	Congo DR (Zaire) -	-12.0100	26.3800	-11.1300	27.7500
			Katanga - Lubumbashi				
			area				
Katanga_1955_To_WGS_1984_1 Katanga_1955_To_WGS_1984_2 Kerguelen_Island_1949_To_WGS_1984_1	4066	1.500	Congo DR (Zaire) -	-12.0100	26.3800	-11.1300	27.7500
			Katanga - Lubumbashi				
			area				
	4068	1.000	Congo DR (Zaire) -	-12.0100	26.3800	-11.1300	27.7500
			Katanga - Lubumbashi				
	45050	40.000	area	40.7000	60.6000	40.6000	70.6200
	15850	10.000	French Southern	-49.7800	68.6900	-48.6000	70.6200
			Territories - Kerguelen onshore				
Kertau_RSO_To_Kertau_1	15896	0.000	Asia - Malaysia (west)	1.1300	99.5900	6.7200	104.6000
Kertau_KSO_TO_Kertau_T	13690	0.000	and Singapore	1.1300	33.3300	0.7200	104.0000
Kertau_To_WGS_1984	1158	15,000	Asia - Malaysia (west	1.1300	99.5900	7.8100	105.8200
	1130	15.000	including SCS) and	1.1300	33.3300	7.0100	105.0200
			Singapore				
KKJ To ETRS 1989 1 Old	1638	1.500	Finland - onshore	59.7500	19.2400	70.0900	31.5900
KKJ_To_ETRS_1989_2	10098		Finland - onshore	59.7500	19.2400	70.0900	31.5900
KKJ_To_EUREF_FIN	108229		Finland - onshore	59.7500	19.2400	70.0900	31.5900
KKJ_To_WGS_1984_1_Old	1639	1.500	Finland - onshore	59.7500	19.2400	70.0900	31.5900
KKJ_To_WGS_1984_2_JHS153	10099	1.000	Finland - onshore	59.7500	19.2400	70.0900	31.5900
KOC_To_WGS_1984_1	1059	1.000	Kuwait - onshore	28.5300	46.5400	30.0900	48.4800
Korea_2000_To_WGS_1984_1	15831	1.000	Korea, Republic of (South	28.6000	122.7100	40.2700	134.2800
			Korea)				
Korean_1985_To_Korea_2000_1	5189	1.000	Korea, Republic of (South	33.1400	124.5300	38.6400	131.0100
			Korea) - onshore				
Korean_1985_To_WGS_1984_1	5191	1.000	Korea, Republic of (South	33.1400	124.5300	38.6400	131.0100
			Korea) - onshore				
Korean_1995_To_WGS_1984_1	1558	2.000	Korea, Republic of (South	33.1400	124.5300	38.6400	131.0100
			Korea) - onshore				

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
KOSOVAREF01_To_WGS_1984_1	9144	1.000	Kosovo	41.8500	19.9700	43.2500	21.8000
Kousseri_To_WGS_1972_BE_1	1806	5.000	Cameroon - N'Djamena	11.7000	14.1700	12.7700	15.0900
			area				
KSA-GRF17_To_WGS_1984_1	9383	1.000	Saudi Arabia	16.2900	34.4400	32.1600	55.6700
KUDAMS_To_WGS_1984_1	1061	1.000	Kuwait - Kuwait City	29.1700	47.7800	29.4500	48.1600
KUDAMS_To_WGS_1984_2	1062	1.000	Kuwait - Kuwait City	29.1700	47.7800	29.4500	48.1600
Kusaie_1951_To_WGS_1984	15810	44.000	Micronesia - Kosrae (Kusaie)	5.2100	162.8500	5.4300	163.1000
La_Canoa_To_PSAD56_1	8674	0.000	Venezuela - onshore	0.6400	-73.3800	12.2500	-59.8000
La_Canoa_To_REGVEN_1	1771	15.000	Venezuela - onshore	0.6400	-73.3800	12.2500	-59.8000
La_Canoa_To_SIRGAS	108217	15.000	Venezuela - onshore	0.6400	-73.3800	12.2500	-59.8000
La_Canoa_To_WGS_1984	1516	2.500	Venezuela - east	3.5600	-67.4900	10.8000	-59.8000
La_Canoa_To_WGS_1984_2	1096	15.000	Venezuela - onshore	0.6400	-73.3800	12.2500	-59.8000
Lao_1993_To_Lao_1997_1	1064	0.150	Laos	13.9200	100.0900	22.5000	107.6400
Lao_1997_To_WGS_1984_1	1065	5.000	Laos	13.9200	100.0900	22.5000	107.6400
Leigon_To_WGS_1984	1159	5.000	Ghana	1.4000	-3.7900	11.1600	2.1000
Le_Pouce_1934_To_WGS_1984_1	15784	2.000	Mauritius - mainland	-20.5700	57.2500	-19.9400	57.8500
LGD2006_To_WGS_1984_1	15908	0.100	Libya	19.4900	9.3100	35.2300	26.2100
Liberia_1964_To_WGS_1984	1160	26.000	Liberia - onshore	4.2900	-11.5200	8.5200	-7.3600
Lisbon_1890_Lisbon_To_Lisbon	1991	0.000	Portugal - mainland -	36.9500	-9.5600	42.1600	-6.1900
Liskan 1000 Ta FTDC 1000 1	5020	F 000	onshore	26.0500	0.5000	42.4600	C 1000
Lisbon_1890_To_ETRS_1989_1	5039	5.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Lisbon_1890_To_WGS_1984_1	1986	5.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Lisbon_1890_To_WGS_1984_2	1990	1.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Lisbon_Lisbon_To_Lisbon	1756	0.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Lisbon_Lisbon_To_WGS_1984_2	5838	2.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Lisbon_To_ETRS_1989_1	1655	3.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Lisbon_To_ETRS_1989_2	1997	2.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
1:1 T FTDS 1000 0	5000	(m)		Latitude	Longitude	Latitude	Longitude
Lisbon_To_ETRS_1989_3	5038	7.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Lisbon_To_ETRS_1989_4	6188	0.100	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Lisbon_To_WGS_1984_1	1656	3.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Lisbon_To_WGS_1984_2	1944	Unknown	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Lisbon_To_WGS_1984_3	1984	5.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Lisbon_To_WGS_1984_4	1988	2.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Lisbon_To_WGS_1984_5	6898	43.000	Portugal - mainland - onshore	36.9500	-9.5600	42.1600	-6.1900
Little_Cayman_1961_To_CIGD11_1	6137	0.150	Cayman Islands - Little Cayman and Cayman Brac	19.6300	-80.1400	19.7800	-79.6900
Little_Cayman_1961_To_WGS_1984_1	15814	44.000	Cayman Islands - Little Cayman and Cayman Brac	19.6300	-80.1400	19.7800	-79.6900
Little_Cayman_1961_To_WGS_1984_2	15829	1.000	Cayman Islands - Little Cayman and Cayman Brac	19.6300	-80.1400	19.7800	-79.6900
Little_Cayman_1961_To_WGS_1984_3	6143	1.000	Cayman Islands - Little Cayman and Cayman Brac	19.6300	-80.1400	19.7800	-79.6900
LKS_1992_To_ETRS_1989_1	8891	0.000	Latvia	55.6700	19.0600	58.0900	28.2400
LKS_1992_To_WGS_1984_1	1958	1.000	Latvia	55.6700	19.0600	58.0900	28.2400
LKS_1994_To_ETRS_1989_1	8892	0.000	Lithuania	53.8900	19.0200	56.4500	26.8200
LKS_1994_To_WGS_1984	1283	1.000	Lithuania	53.8900	19.0200	56.4500	26.8200
Locodjo_1965_To_WGS_1984	1469	15.000	Cote d'Ivoire (Ivory Coast) - Abidjan area	5.1500	-4.2200	5.5400	-3.8500
LUREF_1930_To_ETRS_1989_1	1642	1.010	Luxembourg	49.4400	5.7300	50.1900	6.5300
LUREF_1930_To_ETRS_1989_2	1078	0.110	Luxembourg	49.4400	5.7300	50.1900	6.5300
LUREF_1930_To_ETRS_1989_3	5485	1.000	Luxembourg	49.4400	5.7300	50.1900	6.5300
LUREF_1930_To_ETRS_1989_4	5483	0.100	Luxembourg	49.4400	5.7300	50.1900	6.5300

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
	1010	(m)		Latitude	Longitude	Latitude	Longitude
LUREF_1930_To_WGS_1984_1	1643		Luxembourg	49.4400	5.7300	50.1900	6.5300
LUREF_1930_To_WGS_1984_2	1079		Luxembourg	49.4400	5.7300	50.1900	6.5300
LUREF_1930_To_WGS_1984_3	5486		Luxembourg	49.4400	5.7300	50.1900	6.5300
LUREF_1930_To_WGS_1984_4	5484		Luxembourg	49.4400	5.7300	50.1900	6.5300
Luzon_1911_To_WGS_1984_1	1161	17.000	Philippines - onshore excluding Mindanao	7.7500	116.8900	19.4500	125.8800
Luzon_1911_To_WGS_1984_2	1162	44.000	Philippines - Mindanao onshore	4.9900	119.7600	10.5200	126.6500
Macao_2008_To_ITRF_2005	108038	1.000	Macao	22.1000	113.5200	22.2200	113.6000
Macao_2008_To_Observatorio_Meteorologico_1965_1	108039	3.000	Macao	22.1000	113.5200	22.2200	113.6000
Macao_2008_To_WGS_1984	108037	1.000	Macao	22.1000	113.5200	22.2200	113.6000
MAGNA_To_SIRGAS	108290	1.000	Colombia	-4.2300	-84.7700	15.5100	-66.8700
MAGNA_To_WGS_1984_1	15738	1.000	Colombia	-4.2300	-84.7700	15.5100	-66.8700
Mahe_1971_To_WGS_1984	1164	44.000	Seychelles - Mahe Island	-4.8600	55.3000	-4.5000	55.5900
Majuro_To_WGS_1984	108449	Unknown	Marshall Islands	1.7700	157.4700	17.8800	175.5200
Makassar_Jakarta_To_Makassar	1260	0.000	Indonesia - Sulawesi SW	-6.5400	118.7100	-1.8800	120.7800
Makassar_To_WGS_1984_1	1837	Unknown	Indonesia - Sulawesi SW	-6.5400	118.7100	-1.8800	120.7800
Malongo_1987_to_RSAO13_1	9906	5.000	Africa - Angola (Cabinda) and DR Congo (Zaire) - offshore	-6.0400	10.5300	-5.0500	12.3700
Malongo_1987_To_WGS_1984_1	1330	10.000	Africa - Angola (Cabinda) and DR Congo (Zaire) - offshore	-6.0400	10.5300	-5.0500	12.3700
Malongo_1987_To_WGS_1984_2	1557	5.000	Africa - Angola (Cabinda) and DR Congo (Zaire) - offshore	-6.0400	10.5300	-5.0500	12.3700
Malongo_1987_To_WGS_1984_3	15791	10.000	Africa - Angola (Cabinda) and DR Congo (Zaire) - offshore	-6.0400	10.5300	-5.0500	12.3700
Manoca_1962_To_WGS_1972_BE_1	1902		Cameroon - coastal area	2.1600	8.4500	4.9900	10.4000
Manoca_1962_To_WGS_1984_1	1796		Cameroon - coastal area	2.1600	8.4500	4.9900	10.4000
Manoca_To_WGS_1984_1	1316	Unknown	Cameroon	1.6500	8.3200	13.0900	16.2100
MARCARIO_SOLIS_To_WGS_1984_1	5377	1.000	Panama	5.0000	-84.3200	12.5100	-77.0400
MARGEN_To_WGS_1984_1	5374	1.000	Bolivia	-22.9100	-69.6600	-9.6700	-57.5200
Massawa_To_WGS_1984	1165	44.000	Eritrea	12.3600	36.4400	18.1000	43.3100

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Maupiti_1983_To_RGPF_1	15759	0.500	French Polynesia -	-16.5700	-152.3900	-16.3400	-152.1400
			Society Islands - Maupiti				
Maupiti_1983_To_WGS_1984_1	15771	1.000	French Polynesia -	-16.5700	-152.3900	-16.3400	-152.1400
			Society Islands - Maupiti				
Maupiti_1983_To_WGS_1984_2	8853	1.000	French Polynesia -	-16.5700	-152.3900	-16.3400	-152.1400
			Society Islands - Maupiti				
Mauritania_1999_To_WGS_1984_1	15860		Mauritania	14.7200	-20.0400	27.3000	-4.8000
Merchich_Degree_To_WGS_1984	108279		Morocco - onshore	27.6600		35.9700	-1.0100
Merchich_To_WGS_1984	1166		Morocco - onshore	27.6600		35.9700	-1.0100
Mexican_Datum_1993_To_WGS_1984_1	4832		Mexico	12.1000	-122.1900	32.7200	-84.6400
Mexico_ITRF2008_To_WGS_1984_1	6373		Mexico	12.1000		32.7200	-84.6400
MGI_1901_To_ETRS_1989_2	3963		Croatia - onshore	42.3400	13.4300	46.5400	19.4300
MGI_1901_To_ETRS_1989_3	3914		Slovenia	45.4200	13.3800	46.8800	16.6100
MGI_1901_To_ETRS_1989_5	6205	1.000	North Macedonia	40.8500	20.4500	42.3600	23.0400
MGI_1901_To_ETRS_1989_6	7675	0.500	Serbia and Kosovo	41.8500	18.81	46.1900	23.0100
MGI_1901_To_ETRS_1989_7	8680	1.000	Bosnia and Herzegovina	42.5600	15.7400	45.2700	19.6200
MGI_1901_To_KOSOVAREF01_1	9142	1.000	Kosovo	41.8500	19.9700	43.2500	21.8000
MGI_1901_To_Slovenia_1996_1	3916	1.000	Slovenia	45.4200	13.3800	46.8800	16.6100
MGI_1901_To_Slovenia_1996_10	3927	0.300	Slovenia - Primorska and	45.4400	13.4700	46.0800	14.5800
			Notranjska onshore				
MGI_1901_To_Slovenia_1996_11	3928	0.300	Slovenia - central	45.9100	14.2100	46.3100	15.2800
MGI_1901_To_Slovenia_1996_12	8689	1.070	Slovenia – onshore	45.4200	13.3800	46.8800	16.6100
MGI_1901_To_Slovenia_1996_2	3918	0.500	Slovenia - west of 14°30'E	45.4400	13.3800	46.5300	14.5800
			onshore				
MGI_1901_To_Slovenia_1996_3	3919	0.500	Slovenia - NE	46.1400	14.5400	46.8800	16.6100
MGI_1901_To_Slovenia_1996_4	3921	0.500	Slovenia - SE	45.4200	14.5500	46.2200	15.7300
MGI_1901_To_Slovenia_1996_5	3922	0.300	Slovenia - southeastern	45.4200	14.5300	45.7700	15.3600
MGI_1901_To_Slovenia_1996_6	3923	0.300	Slovenia - Dolenjska	45.7000	14.4700	46.1200	15.7300
MGI_1901_To_Slovenia_1996_7	3924	0.300	Slovenia - Stajerska	46.1000	14.7400	46.7600	16.2700
MGI_1901_To_Slovenia_1996_8	3925	0.300	Slovenia - Pomurje	46.4700	15.9600	46.8800	16.6100
MGI_1901_To_Slovenia_1996_9	3926	0.300	Slovenia - Gorenjska and	46.0500	13.3800	46.5300	14.8200
			N Primorsko				
MGI_1901_to_SRB-ETRS89_8	9495	0.460	Serbia	42.2300	18.8100	46.1900	23.0100
MGI_1901_to_SRB-ETRS89_9	9496	0.030	Serbia	42.2300	18.8100	46.1900	23.0100
MGI_1901_To_WGS_1984_1	3962	5.000	Europe - former	40.8500	13.3800	46.8800	23.0400
			Yugoslavia onshore				

⁴⁰ Copyright @ 2012, 2015-2022 Esri

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
100 100 7 100 100 100	5005	(m)		Latitude	Longitude	Latitude	Longitude
MGI_1901_To_WGS_1984_10	6206		North Macedonia	40.8500	20.4500	42.3600	23.0400
MGI_1901_To_WGS_1984_11	7676		Serbia and Kosovo	41.8500	18.8100	46.1900	23.0100
MGI_1901_To_WGS_1984_13	8823		Bosnia and Herzegovina	42.5600	15.7400	45.2700	19.6200
MGI_1901_To_WGS_1984_14	9143		Kosovo	41.8500	19.9700	43.2500	21.8000
MGI_1901_to_WGS_1984_15	9486		Serbia	42.2300	18.8100	46.1900	23.0100
MGI_1901_To_WGS_1984_16	8688		Slovenia – onshore	45.4200	13.3800	46.8800	16.6100
MGI_1901_To_WGS_1984_4	3964	1.000	Croatia - onshore	42.3400	13.4300	46.5400	19.4300
MGI_1901_To_WGS_1984_5	3915	1.000	Slovenia	45.4200	13.3800	46.8800	16.6100
MGI_1901_To_WGS_1984_6	3965	10.000	Montenegro - onshore	41.7900	18.4500	43.5600	20.3800
MGI_1901_To_WGS_1984_9	3917	1.000	Slovenia	45.4200	13.3800	46.8800	16.6100
MGI_Ferro_To_MGI	3895	0.000	Austria	46.4000	9.5300	49.0200	17.1700
MGI_Ferro_To_MGI_1901_1	3913	1.000	Europe - former	40.8500	13.3800	46.8800	23.0400
			Yugoslavia onshore				
MGI_Ferro_To_WGS_1984	108094	5.000	Europe - former	40.8500	13.3800	46.8800	23.0400
			Yugoslavia onshore				
MGI_Ferro_To_WGS_1984_1	3966	5.000	Europe - former	40.8500	13.3800	46.8800	23.0400
			Yugoslavia onshore				
MGI_Ferro_To_WGS_1984_2	3896	1.500	Austria	46.4000	9.5300	49.0200	17.1700
MGI_To_ETRS_1989_Serbia	108072	0.500	Serbia and Kosovo	41.8500	18.8100	46.1900	23.0100
MGI_To_ETRS_1989_1	1619	1.500	Austria	46.4000	9.5300	49.0200	17.1700
MGI_To_ETRS_1989_2	1620	1.000	Croatia	41.6200	13.0000	46.5400	19.4300
MGI_To_ETRS_1989_3	1785	1.000	Slovenia	45.4200	13.3800	46.8800	16.6100
MGI_To_ETRS_1989_4	1024	1.000	Austria - Styria	46.6400	13.5800	47.8400	16.1700
MGI_To_ETRS_1989_5	5891	0.150	Austria	46.4000	9.5300	49.0200	17.1700
MGI_To_ETRS_1989_8	9910	0.140	Austria	46.4000	9.5300	49.0200	17.1700
MGI_To_WGS_1984	1306	Unknown	Europe - former	40.8500	13.3800	46.8800	23.0400
			Yugoslavia onshore				
MGI_To_WGS_1984_Serbia	108073	1.000	Serbia and Kosovo	41.8500	18.8100	46.1900	23.0100
MGI_To_WGS_1984_2	108095	1.500	Austria	46.4000	9.5300	49.0200	17.1700
MGI_To_WGS_1984_3	1618		Austria	46.4000	9.5300	49.0200	17.1700
MGI_To_WGS_1984_4	1621		Croatia	41.6200	13.0000	46.5400	19.4300
MGI To WGS 1984 5	1786		Slovenia	45.4200	13.3800	46.8800	16.6100
MGI To WGS 1984 6	1794		Montenegro - onshore	41.7900	18.4500	43.5600	20.3800
MGI_To_WGS_1984_7	1795		Montenegro - onshore	41.7900	18.4500	43.5600	20.3800

Geographic (datum) Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
MGI_To_WGS_1984_8	1194		Austria - Styria	46.6400	13.5800	47.8400	16.1700
Mhast_offshore_To_WGS_1972_BE_1	15790	10.000	Africa - Angola (Cabinda) and DR Congo (Zaire) - offshore	-6.0400	10.5300	-5.0500	12.3700
Midway_1961_To_WGS_1984	15818	44.000	Midway Islands - Sand and Eastern Islands	28.1300	-177.4500	28.2800	-177.3100
Midway_1961_To_WGS_1984_Old	15817	45.000	Midway Islands - Sand and Eastern Islands	28.1300	-177.4500	28.2800	-177.3100
Minna_To_WGS_1984_1	1167	44.000	Cameroon - onshore	1.6500	8.4500	13.0900	16.2100
Minna_To_WGS_1984_10	1824	25.000	Nigeria - Gongola Basin	8.7800	9.4100	11.6300	12.1300
Minna_To_WGS_1984_11	1067	8.000	Nigeria - offshore blocks OPL 210, 213, 217 and 218	3.2400	4.4100	5.5400	6.2900
Minna_To_WGS_1984_12	15705	8.000	Nigeria - offshore blocks OPL 215 and 221	3.2500	5.0200	4.2300	7.3100
Minna_To_WGS_1984_13	15706	7.000	Nigeria - offshore deep water	1.9200	2.6600	6.1400	7.8200
Minna_To_WGS_1984_14	15755	7.000	Nigeria - OML 58	5.0500	6.5300	5.3600	6.8400
Minna_To_WGS_1984_15	15493	5.000	Nigeria - 4°N to 5°N, 6°E to 8°E	3.9900	5.9900	5.0100	8.0100
Minna_To_WGS_1984_16	6196	5.000	Nigeria - OML 124	5.5600	6.7200	5.7400	6.9700
Minna_To_WGS_1984_2	1168	15.000	Nigeria	1.9200	2.6600	13.9000	14.6500
Minna_To_WGS_1984_3	1754	5.000	Nigeria - south	4.2200	4.3500	6.9500	9.4500
Minna_To_WGS_1984_4	1818	12.000	Nigeria - offshore deep water	1.9200	2.6600	6.1400	7.8200
Minna_To_WGS_1984_6	1820	12.000	Nigeria - offshore blocks OPL 209, 219 and 220	3.2500	4.0100	5.5400	6.9600
Minna_To_WGS_1984_7	1821	6.000	Nigeria - offshore blocks OML 99-102 and OPL 222 and 223	3.2500	7.1600	4.5100	8.2500
Minna_To_WGS_1984_8	1822	10.000	Nigeria - offshore blocks OPL 209-213 and 316	4.2200	3.8300	6.3100	5.1700
Minna_To_WGS_1984_9	1823	8.000	Nigeria - offshore blocks OPL 217-223	3.2400	5.5800	3.8600	8.0000
MMN_To_WGS_1984_1	9261	2.500	Argentina - Tierra del Fuego onshore	-55.1100	-68.6400	-52.5900	-63.7300

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
MMS_To_WGS_1984_1	9262	2.500	Argentina - Tierra del	-55.1100	-68.6400	-52.5900	-63.7300
			Fuego onshore				
MOLDREF99_To_ETRS_1989_1	5584	0.100	Moldova	45.4400	26.6300	48.4700	30.1300
MOLDREF99_To_WGS_1984_1	5585	1.000	Moldova	45.4400	26.6300	48.4700	30.1300
MONREF_1997_To_MSK_1942_1	108286		Mongolia	41.5800	87.7600	52.1500	119.9400
MONREF_1997_To_MSK_1942_2	108287	Unknown	Mongolia	41.5800	87.7600	52.1500	119.9400
MONREF_1997_To_Pulkovo_1942_1	108288	Unknown	Mongolia	41.5800	87.7600	52.1500	119.9400
MONREF_1997_To_Pulkovo_1942_2	108289	Unknown	Mongolia	41.5800	87.7600	52.1500	119.9400
MONREF_1997_To_WGS_1984	108054		Mongolia	41.5800	87.7600	52.1500	119.9400
Monte_Mario_Rome_To_Monte_Mario	1262	0.000	Italy - including San	34.7600	5.9300	47.1000	18.9900
			Marino and Vatican				
Monte_Mario_Rome_To_WGS_1984	8175		Italy - Sardinia onshore	38.8200	8.0800	41.3100	9.8900
Monte_Mario_to_ED50_1	9732	0.100	Italy - 6°22'E to 18°40'E	35.2600	6.3600	47.1000	18.6700
			and north of 35°16'N;				
			San Marino, Vatican City				
			State				
Monte_Mario_To_ETRS_1989_1	1659		Italy - mainland	37.8600	6.6200	47.1000	18.5800
Monte_Mario_To_ETRS_1989_2	1661		Italy - Sardinia onshore	38.8200	8.0800	41.3100	9.8900
Monte_Mario_To_ETRS_1989_3	1663		Italy - Sicily onshore	36.5900	12.3600	38.3500	15.7100
Monte_Mario_to_IGM95_4	9733	0.100	Italy - 6°22'E to 18°40'E	35.2600	6.3600	47.1000	18.6700
			and north of 35°16'N;				
			San Marino, Vatican City				
	2724	0.400	State	27.2522	6.0500	47.4000	40.5700
Monte_Mario_to_RDN2008_5	9734	0.100	Italy - 6°22'E to 18°40'E	35.2600	6.3600	47.1000	18.6700
			and north of 35°16'N;				
			San Marino, Vatican City				
Monto Mario To MCC 1004	1160	44.000	State	20 0200	0.0000	41.3100	0.000
Monte_Mario_To_WGS_1984	1169		Italy - Sardinia onshore	38.8200	8.0800		9.8900
Monte_Mario_To_WGS_1984_10	1093	10.000	Italy - Sicily Strait east of 13°E	35.2200	13.0000	37.4800	15.1600
Monte_Mario_To_WGS_1984_11	1094	10.000	Italy - Sicily Strait west of	35.2800	10.6800	38.4500	13.0100
	<u> </u>		13°E				
Monte_Mario_To_WGS_1984_2	1662	4.000	Italy - Sardinia onshore	38.8200	8.0800	41.3100	9.8900
Monte_Mario_To_WGS_1984_3	1664	4.000	Italy - Sicily onshore	36.5900	12.3600	38.3500	15.7100
Monte_Mario_To_WGS_1984_4	1660	4.000	Italy - mainland	37.8600	6.6200	47.1000	18.5800

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Monte_Mario_To_WGS_1984_5	1088	10.000	Italy - Adriatic - North	43.6200	12.2200	45.7300	13.9600
14	4000	40.000	Ancona	44.0500	12 6100	44.0400	46.4400
Monte_Mario_To_WGS_1984_6	1089	10.000	Italy - Adriatic - South	41.9500	13.6100	44.0400	16.1400
NACHA NACIA TA NICC 4004 7	4000	40.000	Ancona / North Gargano	40.7200	45.0500	42 2000	40.6200
Monte_Mario_To_WGS_1984_7	1090	10.000	Italy - Adriatic - South Gargano	40.7200	15.9500	42.2800	18.6300
Monte_Mario_To_WGS_1984_8	1091	10.000	Italy - Otranto channel	39.7700	17.9500	41.0300	18.9900
Monte_Mario_To_WGS_1984_9	1092		Italy - north Ionian Sea	37.6700	16.5500	40.4700	18.9300
Montserrat_1958_To_WGS_1984	1444	44.000	Montserrat - onshore	16.6200	-62.2900	16.8700	-62.0800
Moorea_1987_To_RGPF_2	8831	0.500	French Polynesia -	-17.6300	-150.0000	-17.4100	-149.7300
			Society Islands - Moorea				
Moorea_1987_To_WGS_1984_2	8832	1.000	French Polynesia -	-17.6300	-150.0000	-17.4100	-149.7300
			Society Islands - Moorea				
MOP78_To_WGS_1984_1	1925	10.000	Wallis and Futuna -	-13.4100	-176.2500	-13.1600	-176.0700
			Wallis				
MOP78_To_WGS_1984_2	15847	10.000	Wallis and Futuna -	-13.4100	-176.2500	-13.1600	-176.0700
			Wallis				
Moznet_To_WGS_1984	1302		Mozambique	-27.7100	30.2100	-10.0900	
Mporaloko_To_WGS_1984	1163		Gabon	-6.3700	7.0300	2.3200	14.5200
Mporaloko_To_WGS_1984_2	1532		Gabon	-6.3700	7.0300	2.3200	14.5200
MTRF-2000_To_KSA-GRF17_1	9361		Saudi Arabia	16.2900	34.4400	32.1600	55.6700
MTRF-2000_To_WGS_1984_(G1150)	8822		Saudi Arabia	16.2900	34.4400	32.1600	55.6700
NAD_1927_CGQ77_To_NAD_1983_2	1575	1.500	Canada - Quebec	44.9900	-79.8500	62.6200	-57.1000
NAD_1927_CGQ77_To_NAD_1983_CSRS	1845		Canada - Quebec	44.9900	-79.8500	62.6200	
NAD_1927_CGQ77_To_NAD_1983_CSRS_v2_1	9240		Canada - Quebec	44.9900	-79.8500	62.6200	-57.1000
NAD_1927_CGQ77_To_WGS_1984_3	1691		Canada - Quebec	44.9900	-79.8500	62.6200	-57.1000
NAD_1927_Def76_To_NAD_1983_CSRS_v3_1_Ontario	9109	1.000	Canada - Ontario	41.6700	-95.1600	56.9000	-74.3500
NAD_1927_DEF_1976_To_NAD_1983_NTv2_Ontario	1463	1.000	Canada - Ontario	41.6700	-95.1600	56.9000	-74.3500
NAD_1927_DEF_1976_To_WGS_1984_1	1690	1.000	Canada - Ontario	41.6700	-95.1600	56.9000	-74.3500
NAD_1927_To_NAD_1983_6	1573	1.500	Canada - Quebec	44.9900	-79.8500	62.6200	-57.1000
NAD_1927_To_NAD_1983_7	8555	0.150	USA - CONUS onshore	24.4100	-124.7900		-66.9100
NAD_1927_To_NAD_1983_8	8549	0.500	USA - Alaska	51.3000	172.4200	71.4000	-129.9900
NAD_1927_To_NAD_1983_9_Saskatchewan	9111	1.500	Canada - Saskatchewan	49.0000	-110.0000	60.0100	-101.3400
NAD_1927_To_NAD_1983_Alaska	1243	0.500	USA - Alaska including EEZ	47.8800	167.6500	74.7100	-129.9900
NAD_1927_To_NAD_1983_CSRS_1	1844	1.500	Canada - Quebec	44.9900	-79.8500	62.6200	-57.1000

⁴⁴ Copyright @ 2012, 2015-2022 Esri

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
NAD_1927_To_NAD_1983_CSRS_2	1847	1	Canada - Saskatchewan	49.0000	-110.0000		-101.3400
NAD_1927_To_NAD_1983_CSRS_4	6209		Canada - New Brunswick	44.5600	-69.0500	48.0700	
NAD_1927_To_NAD_1983_CSRS_NTv2_New_Brunswick	108040	0.500	Canada - New Brunswick	44.5600	-69.0500	48.0700	-63.7000
NAD_1927_To_NAD_1983_CSRS_v2_1	9239	1.500	Canada - Quebec	44.9900	-79.8500	62.6200	-57.1000
NAD_1927_To_NAD_1983_CSRS_v2_4	9238	0.800	Canada - New Brunswick	44.5600	-69.0500	48.0700	-63.7000
NAD_1927_To_NAD_1983_CSRS_v2_7_British_Columbia	9112	1.500	Canada - British Columbia	48.2500	-139.0400	60.0100	-114.0800
NAD_1927_To_NAD_1983_CSRS_v3_2	9242	1.500	Canada - Saskatchewan	49.0000	-110.0000	60.0100	-101.3400
NAD_1927_To_NAD_1983_CSRS_v3_5_Ontario	9107	1.500		41.6700	-95.1600	56.9000	-74.3500
			Toronto				
NAD_1927_To_NAD_1983_CSRS_v3_6_Toronto	9108	1.000	Canada - Ontario - Toronto	43.5800	-79.6400	43.8600	-79.1100
NAD_1927_To_NAD_1983_CSRS_v3_8_BC_CRD	9113	1.500		48.2500	-124.5200	49.0600	-123.0000
			- CRD				
NAD_1927_To_NAD_1983_CSRS_v3_9_BC_NVI	9114	1.500	Canada - British Columbia - north Vancouver Is	48.4800	-128.5000	50.9300	-123.4900
NAD_1927_To_NAD_1983_CSRS_v4_10_BC_mainland	9115	1.500		48.9900	-139.0400	60.0100	-114.0800
			- mainland				
NAD_1927_to_NAD83(CSRS)v2_2	9886		Canada - Saskatchewan		-110.0000		-101.3400
NAD_1927_To_NAD_1983_NADCON	1241	0.150	USA - CONUS including EEZ	23.8100	-129.1700	49.3800	-65.6900
NAD_1927_To_NAD_1983_NTv2_Canada	1313	1.500	Canada - NAD27	40.0000	-141.0100	83.1700	-44.0000
NAD_1927_To_NAD_1983_PR_VI	108003	0.050	Caribbean - Puerto Rico	17.6200	-67.9700	18.7800	-64.2500
			and Virgin Islands - onshore				
NAD 1927 To SIRGAS 2000 7Par Panama	108062	1 000	Panama - onshore	7.1500	-83.0400	9.6800	-77.1900
NAD_1927_To_SINGAS_2000_7F81_F81181118 NAD_1927_To_WGS_1984_1	1170		Caribbean - central (DMA	13.0000	-85.0100	23.2500	-59.3700
NAD_1927_10_WG3_1964_1	1170	10.000	tfm)	13.0000	-83.0100	23.2300	-39.3700
NAD_1927_To_WGS_1984_10	1179	13.000	Canada - Alberta and	48.2500	-139.0400	60.0100	-109.9800
			British Columbia				
NAD_1927_To_WGS_1984_11	1180	12.000	Canada - Manitoba and Ontario	41.6700	-102.0000	60.0100	-74.3500
NAD_1927_To_WGS_1984_12	1181	9 000	Canada - eastern	43.4100	-79.8500	62.6200	-52.5400
10.05_1527_10_005_1504_12	1101	3.000	provinces	73.7100	75.0500	02.0200	32.3700
NAD_1927_To_WGS_1984_13	1182	8.000	Canada - NWT; Nunavut;	49.0000	-136.4600	83.1700	-60.7200
			Saskatchewan				

Geographic (datum) Transformation Name	WKID	•	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
NAD_1927_To_WGS_1984_14	1183		Canada - Yukon	59.9900	-141.0100		-123.9100
NAD_1927_To_WGS_1984_15	1184		Panama - Canal Zone	8.8200	-80.0700	9.4500	
NAD_1927_To_WGS_1984_16	1185		Cuba - onshore	19.7700	-85.0100	23.2500	-74.0700
NAD_1927_To_WGS_1984_17	1186	44.000	Greenland - Hayes	75.8600	-73.2900	79.2000	-60.9800
			Peninsula				
NAD_1927_To_WGS_1984_18	1187		Mexico - onshore		-118.4700	32.7200	
NAD_1927_To_WGS_1984_2	1171	10.000	Central America - Belize to Costa Rica	7.9800	-92.2900	18.4900	-82.5300
NAD_1927_To_WGS_1984_21	1249	15.000	USA - Alaska - Aleutian Islands east of 180°E	51.5400	-178.3000	54.3400	-164.8400
NAD_1927_To_WGS_1984_22	1250	18.000		51.3000	172.4200	53.0700	179.8600
NAD_1927_To_WGS_1984_3	1172	20.000	Canada - NAD27	40.0000	-141.0100	83.1700	-44.0000
NAD_1927_To_WGS_1984_30	1530	3.000	Cuba	18.8300	-87.0100	25.5100	-73.5700
NAD_1927_To_WGS_1984_32	1703	1.000	Canada - Saskatchewan	49.0000	-110.0000	60.0100	-101.3400
NAD_1927_To_WGS_1984_33	1693	1.000	Canada - NAD27	40.0000	-141.0100	83.1700	-44.0000
NAD_1927_To_WGS_1984_34	1692	1.000	Canada - Quebec	44.9900	-79.8500	62.6200	-57.1000
NAD_1927_To_WGS_1984_4	1173	10.000	USA - CONUS - onshore	24.4100	-124.7900	49.3800	-66.9100
NAD_1927_To_WGS_1984_5	1174	11.000	USA - CONUS east of Mississippi River -	24.4100	-97.2200	49.3800	-66.9100
			onshore				
NAD_1927_To_WGS_1984_6	1175	7.000	USA - CONUS west of Mississippi River -	25.8300	-124.7900	49.0500	-89.6400
			onshore				
NAD_1927_To_WGS_1984_7	1176		USA - Alaska mainland		-168.2600		-129.9900
NAD_1927_To_WGS_1984_79_CONUS	15851	5.000	USA - CONUS including EEZ	23.8100	-129.1700	49.3800	-65.6900
NAD_1927_To_WGS_1984_8	1177	8.000	Bahamas - main islands onshore	20.8600	-79.0400	27.2900	-72.6800
NAD_1927_To_WGS_1984_80	15852	5.000	USA - GoM - east of 87.25°W	23.8200	-87.2500	30.2500	-81.1700
NAD_1927_To_WGS_1984_81	15853	5.000	USA - GoM - 95°W to 87.25°W	25.6100	-95.0000	30.2300	-87.2500
NAD_1927_To_WGS_1984_82	15854	5.000	USA - GoM - west of 95°W	25.9700	-97.2200	28.9700	-95.0000

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
NAD 4027 T. WCC 4004 02	45055	(m)	NA . '		_		
NAD_1927_To_WGS_1984_83	15855	5.000	Mexico - offshore GoM -	21.5100	-98.1000	22.7500	-96.8900
NAD 4027 T- WCC 4004 04	15056	0.000	Tampico area USA - GoM OCS	22.0200	07.2200	20.2500	04 4700
NAD_1927_To_WGS_1984_84	15856			23.8200	-97.2200		
NAD_1927_To_WGS_1984_85	15864		USA - Alaska including EEZ	47.8800	167.6500	74.7100	-129.9900
NAD_1927_To_WGS_1984_86	15913	5.000	Mexico - offshore GoM - Campeche area N	20.8700	-94.3300	23.0100	-88.6700
NAD_1927_To_WGS_1984_87	15699	5.000	Mexico - offshore GoM - Campeche area S	17.8500	-94.7900	20.8900	-89.7500
NAD_1927_To_WGS_1984_88	15978	1.000	Cuba	18.8300	-87.0100	25.5100	-73.5700
NAD_1927_To_WGS_1984_89	7698	1.0	Panama - onshore	7.15	-83.0400	9.6800	-77.1900
NAD_1927_To_WGS_1984_9	1178	44.000	Bahamas (San Salvador Island) - onshore	23.9000	-74.6000	24.1900	-74.3700
NAD_1983_(2011)_to_WGS_1984_1	9774	2.000	USA - CONUS and Alaska; PRVI	14.9200	167.6500	74.7100	-63.8800
NAD_1983_CORS96_To_NAD_1983_2011	108357	0.100	USA (all states)	15.5600	167.6500	74.7100	-65.6900
NAD_1983_CORS96_To_NAD_1983_HARN	108148	0.100	USA (all states)	15.5600	167.6500	74.7100	-65.6900
NAD_1983_CORS96_To_NAD_1983_NSRS2007	108149	0.100	USA (all states)	15.5600	167.6500	74.7100	-65.6900
NAD_1983_CSRS_To_WGS_1984	1473	6.000	Canada - CSRS98	44.6100	-120.0000	62.5600	-57.1000
NAD_1983_CSRS_To_WGS_1984_1	1842	1.000	Canada	38.2100	-141.0100	86.4600	-40.7300
NAD_1983_CSRS_To_WGS_1984_2	1946	0.100	Canada	38.2100	-141.0100	86.4600	-40.7300
NAD_1983_CSRS_v2_To_NAD_1983_CSRS_v3_1_BC_CRD	9120	0.100	Canada - British Columbia - CRD	48.2500	-124.5200	49.0600	-123.0000
NAD_1983_CSRS_v2_To_NAD_1983_CSRS_v3_2_BC_NVI	9121	0.100	Canada - British Columbia - north Vancouver Is	48.4800	-128.5000	50.9300	-123.4900
NAD_1983_CSRS_v2_To_NAD_1983_CSRS_v4_1_BC_mainland	9122	0.100	Canada - British Columbia - mainland	48.9900	-139.0400	60.0100	-114.0800
NAD_1983_FBN_To_MA11_NADCON5_3D_Guam_CNMI_1	8866	0.050	Pacific - Guam and NMI - onshore	13.1800	144.5800	20.6100	146.1200
NAD_1983_FBN_To_NSRS2007_NADCON5_3D_CONUS_1	8862	0.050	USA - CONUS - onshore	24.4100	-124.7900	49.3800	-66.9100
NAD_1983_FBN_To_NSRS2007_NADCON5_3D_PRVI_2	8868	0.050	Caribbean - Puerto Rico and US Virgin Islands - onshore	17.6200	-67.9700	18.5700	-64.5100

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
NAD_1983_FBN_To_PA11_NADCON5_3D_American_Samoa_1	8864	0.050	American Samoa - 2 main	-14.5900	-170.8800	-14.1100	-168.0900
			island groups and Rose				
			Island				
NAD_1983_HARN_Corrected_To_FBN_NADCON5_3D_PRVI_1	8867	0.050	Caribbean - Puerto Rico	17.6200	-67.9700	18.5700	-64.5100
			and US Virgin Islands -				
			onshore				
NAD_1983_HARN_PACP00_MARP00_To_WGS_1984	108307	Unknown	Pacific - USA interests	-17.5600	129.4800	31.8000	-151.2700
			Pacific and Mariana				
NAD 1002 HADN To FDN NADCONE 2D American Course 2	0063	0.050	plates	14 5000	170 0000	14 1100	160,0000
NAD_1983_HARN_To_FBN_NADCON5_3D_American_Samoa_2	8863	0.050	American Samoa - 2 main island groups and Rose	-14.5900	-170.8800	-14.1100	-168.0900
			Island				
NAD_1983_HARN_To_FBN_NADCON5_3D_CONUS_1	8861	0.050		24.4100	-124.7900	49.3800	-66.9100
NAD_1983_HARN_TO_FBN_NADCON5_3D_Guam_CNMI_3	8865	+		13.1800	144.5800	20.6100	146.1200
	0003	0.050	onshore	13.1000	111.5000	20.0100	110.1200
NAD_1983_HARN_To_HARN_Adjusted_WCCS_Chippewa	108063	0.000		42.4800	-92.8900	47.3100	-86.2500
NAD_1983_HARN_To_HARN_Corrected_NADCON5_3D_PRVI_1	9181		Caribbean - Puerto Rico	17.6200	-67.9700	18.5700	-64.5100
			and US Virgin Islands -				
			onshore				
NAD_1983_HARN_To_NAD_1983_2011	108355	0.100	USA (all states)	15.5600	167.6500	74.7100	-65.6900
NAD_1983_HARN_To_NAD_1983_MA11	108377	1.000	Pacific - US interests	1.6400	129.4800	23.9000	149.5500
			Mariana plate				
NAD_1983_HARN_To_NAD_1983_NSRS2007_1	4461	+	USA - CONUS - onshore	24.4100		49.3800	-66.9100
NAD_1983_HARN_TO_NAD_1983_NSRS2007_2	8551	+		51.3000	172.4200		-129.9900
NAD_1983_HARN_To_NAD_1983_PA11_1	108450	1.000	Pacific - US interests	-17.5600	157.4700	31.8000	-151.2700
			Pacific plate				
NAD_1983_HARN_To_NSRS2007_GEOCON_Alaska	108045	+		51.3000	172.4200		-129.9900
NAD_1983_HARN_To_NSRS2007_GEOCON_CONUS	108044	+	USA - CONUS - onshore	24.4100		49.3800	-66.9100
NAD_1983_HARN_To_NSRS2007_GEOCON_Puerto_Rico_Virgin_	108046	0.050		17.6200	-67.9700	18.5700	-64.5100
Islands			and US Virgin Islands -				
NAD 4002 HARN T. RA44 NADCONE OD H	0001	0.050	onshore	40.0700	460 2002	22 2222	4547400
NAD_1983_HARN_To_PA11_NADCON5_3D_Hawaii_1	8661			18.8700			-154.7400
NAD_1983_HARN_To_WGS_1984	1580			-14.5900	144.5800	71.4000	-64.5100
NAD_1983_HARN_To_WGS_1984_2	1900			24.4100		49.3800	-66.9100
NAD_1983_HARN_To_WGS_1984_3	1901	0.100	USA - CONUS - onshore	24.4100	-124.7900	49.3800	-66.9100

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
NAD_1983_HARN_To_WGS_1984_Saipan	108300	Unknown	Northern Marianas -	14.7500	145.0000	15.5000	146.0000
			Saipan				
NAD_1983_MARP00_To_WGS_1984	108018	0.100	Pacific - US interests	1.6400	129.4800	23.9000	149.5500
			Mariana plate				
NAD_1983_NSRS2007_To_2011_GEOCON11_Alaska	108048		USA - Alaska	51.3000		71.4000	
NAD_1983_NSRS2007_To_2011_GEOCON11_CONUS	108047		USA - CONUS - onshore	24.4100		49.3800	-66.9100
NAD_1983_NSRS2007_To_2011_GEOCON11_Puerto_Rico_Virgin	108049	0.050	Caribbean - Puerto Rico	14.9200	-68.4900	21.8600	-63.8800
_Islands			and US Virgin Islands				
NAD_1983_NSRS2007_To_2011_NADCON5_3D_CONUS_1	8559		USA - CONUS - onshore		-124.7900	49.3800	-66.9100
NAD_1983_NSRS2007_To_2011_NADCON5_3D_PRVI_3	8673	0.050	Caribbean - Puerto Rico	17.6200	-67.9700	18.5700	-64.5100
			and US Virgin Islands -				
			onshore				
NAD_1983_NSRS2007_To_NAD_1983_2011	108356		USA (all states)	15.5600		74.7100	-65.6900
NAD_1983_NSRS2007_TO_NAD_1983_2011_2	8552		USA - Alaska	51.3000	172.4200	71.4000	
NAD_1983_NSRS2007_To_WGS_1984_1	15931	1.000	USA - CONUS and Alaska;	14.9200	167.6500	74.7100	-63.8800
			PRVI				
NAD_1983_PACP00_To_WGS_1984	108017	0.100	Pacific - US interests	-17.5600	157.4700	31.8000	-151.2700
			Pacific plate				
NAD_1983_To_HARN_Alabama	1474		USA - Alabama	30.1400	-88.4800	35.0200	-84.8900
NAD_1983_To_HARN_Arizona	1475		USA - Arizona		-114.8100		-109.0400
NAD_1983_To_HARN_Arkansas	1704		USA - Arkansas	33.0100		36.5000	
NAD_1983_To_HARN_CA_N	1476	0.050	USA - California - north of	36.5000	-124.4500	42.0100	-116.5400
			36.5°N				
NAD_1983_To_HARN_CA_S	1477	0.050	USA - California - south of	32.5300	-121.9800	36.5000	-114.1200
			36.5°N				
NAD_1983_To_HARN_Colorado	1478		USA - Colorado		-109.0600		-102.0400
NAD_1983_To_HARN_East_MT_ID	1481	0.050	USA - Idaho and Montana	41.9900	-113.0000	49.0100	-104.0400
	1 100	2 2 2 2	- east of 113°W	27.0000	400 0000	0.4.=000	22 - 222
NAD_1983_To_HARN_East_Texas	1498	0.050	USA - Texas east of	25.8300	-100.0000	34.5800	-93.5000
NAD 4002 To HADN Florida	4.00	0.050	100°W	24.4400	07.6300	24 2422	70.0700
NAD_1983_To_HARN_Florida	1480		USA - Florida	24.4100	-87.6300	31.0100	-79.9700
NAD_1983_To_HARN_Georgia	1479		USA - Georgia	30.3600	-85.6100	35.0100	-80.7700
NAD_1983_To_HARN_Hawaii	1520		USA - Hawaii - onshore	18.8700		22.2900	
NAD_1983_To_HARN_Illinois	1553		USA - Illinois	36.9800	-91.5200	42.5100	-87.0200
NAD_1983_To_HARN_Indiana	1521	0.050	USA - Indiana	37.7700	-88.0600	41.7700	-84.7800

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
NAD_1983_To_HARN_lowa	1705	0.050	USA - Iowa	40.3700	-96.6500	43.5100	-90.1400
NAD_1983_To_HARN_Kansas	1522	0.050	USA - Kansas	36.9900	-102.0600	40.0100	-94.5800
NAD_1983_To_HARN_Kentucky	1483	0.050	USA - Kentucky	36.4900	-89.5700	39.1500	-81.9500
NAD_1983_To_HARN_Louisiana	1484	0.050	USA - Louisiana	28.8500	-94.0500	33.0300	-88.7500
NAD_1983_To_HARN_Maine	1486	0.050	USA - Maine	43.0400	-71.0900	47.4700	-66.9100
NAD_1983_To_HARN_MD_DE	1485	0.050	USA - Delaware and	37.9700	-79.4900	39.8500	-74.9700
			Maryland				
NAD_1983_To_HARN_Michigan	1487		USA - Michigan	41.6900	-90.4200	48.3200	
NAD_1983_To_HARN_Minnesota	1706		USA - Minnesota	43.4900	-97.2200	49.3800	-89.4900
NAD_1983_To_HARN_Mississippi	1488		USA - Mississippi	30.0100	-91.6500	35.0100	
NAD_1983_To_HARN_Missouri	1707		USA - Missouri	35.9800	-95.7700	40.6100	-89.1000
NAD_1983_To_HARN_Montana_Idaho	108298	0.050	USA - Idaho and Montana	41.0000		49.3800	-104.0000
NAD_1983_To_HARN_Nebraska	1489	0.050	USA - Nebraska	39.9900		43.0100	-95.3000
NAD_1983_To_HARN_Nevada	1523	1	USA - Nevada		-120.0000	42.0000	-114.0300
NAD_1983_To_HARN_New_England	1490	0.050	_	40.9800	-73.7300	45.3100	-69.8600
			south (CT, MA, NH, RI,				
			VT)				
NAD_1983_To_HARN_New_Jersey	1554		USA - New Jersey	38.8700	-75.6000	41.3600	
NAD_1983_To_HARN_New_Mexico	1491		USA - New Mexico		-109.0600		-102.9900
NAD_1983_To_HARN_New_York	1492		USA - New York	40.4700	-79.7700	45.0200	
NAD_1983_To_HARN_North_Carolina	15834		USA - North Carolina	33.8300	-84.3300	36.5900	
NAD_1983_To_HARN_North_Dakota	1493		USA - North Dakota	45.9300		49.0100	
NAD_1983_To_HARN_Ohio	1524		USA - Ohio	38.4000	-84.8300	42.3300	
NAD_1983_To_HARN_Oklahoma	1494		USA - Oklahoma		-103.0000	37.0100	
NAD_1983_To_HARN_OR_WA	108291	0.050	•	41.9800	-124.7900	49.0500	-116.4700
			Washington				
NAD_1983_To_HARN_Pennsylvania	15838	1	USA - Pennsylvania	39.7100	-80.5300	42.5300	
NAD_1983_To_HARN_PR_VI	1495	0.050	Caribbean - Puerto Rico	17.6200	-67.9700	18.5700	-64.5100
			and US Virgin Islands -				
			onshore				
NAD_1983_To_HARN_South_Carolina	15836		USA - South Carolina	32.0500	-83.3600	35.2100	
NAD_1983_To_HARN_South_Dakota	1496	1	USA - South Dakota	42.4800		45.9500	
NAD_1983_To_HARN_Tennessee	1497	1	USA - Tennessee	34.9800	-90.3100	36.6800	
NAD_1983_To_HARN_Utah	1525		USA - Utah	36.9900	-114.0500		-109.0400
NAD_1983_To_HARN_Virginia	1500	0.050	USA - Virginia	36.5400	-83.6800	39.4600	-75.3100

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
NAD_1983_To_HARN_WA_OR	1501	0.050	USA - Oregon and	41.9800	-124.7900	49.0500	-116.4700
			Washington				
NAD_1983_To_HARN_West_MT_ID	1482	0.050	USA - Idaho and Montana	41.9900	-117.2400	49.0100	-113.0000
			- west of 113°W				
NAD_1983_To_HARN_West_Texas	1499	0.050	USA - Texas west of	28.0400	-106.6600	36.5000	-100.0000
			100°W				
NAD_1983_To_HARN_West_Virginia	1526		USA - West Virginia	37.2000	-82.6500	40.6400	
NAD_1983_To_HARN_Wisconsin	1502		USA - Wisconsin	42.4800	-92.8900	47.3100	
NAD_1983_To_HARN_Wyoming	1503		USA - Wyoming	40.9900			-104.0500
NAD_1983_to_NAD83(CSRS)v2_2	9887		Canada - Saskatchewan	49.0000			-101.3400
NAD_1983_To_NAD_1983_CSRS_1	1843		Canada - Quebec	44.9900	-79.8500	62.6200	
NAD_1983_To_NAD_1983_CSRS_2	1848		Canada - Saskatchewan	49.0000			-101.3400
NAD_1983_To_NAD_1983_CSRS_3	1849		Canada - Alberta	48.9900	-120.0000	60.0000	-109.9800
NAD_1983_To_NAD_1983_CSRS_4	1950	2.000	Canada - Atlantic	40.0400	-67.7500	64.2100	-43.9900
			offshore				
NAD_1983_To_NAD_1983_CSRS_v2_1	9241		Canada - Quebec	44.9900	-79.8500	62.6200	
NAD_1983_To_NAD_1983_CSRS_v2_6_BC	9116		Canada - British Columbia	48.2500		60.0100	-114.0800
NAD_1983_To_NAD_1983_CSRS_v3_2	9243		Canada - Saskatchewan	49.0000			-101.3400
NAD_1983_To_NAD_1983_CSRS_v3_5_Ontario	9110	0.100	Canada - Ontario	41.6700	-95.1600	56.9000	-74.3500
NAD_1983_To_NAD_1983_CSRS_v3_7_BC_CRD	9117	0.100		48.2500	-124.5200	49.0600	-123.0000
			- CRD				
NAD_1983_To_NAD_1983_CSRS_v3_8_BC_NVI	9118	0.100		48.4800	-128.5000	50.9300	-123.4900
			- north Vancouver Is				
NAD_1983_To_NAD_1983_CSRS_v4_3	9244	1.500	Canada - Alberta	48.9900	-120.0000	60.0000	-109.9800
NAD_1983_To_NAD_1983_CSRS_v4_9_BC_mainland	9119	0.100	Canada - British Columbia	48.9900	-139.0400	60.0100	-114.0800
			- mainland				
NAD_1983_To_NAD_1983_HARN_47	8556	0.050	USA - CONUS - onshore	24.4100	-124.7900	49.3800	-66.9100
NAD_1983_To_NAD_1983_HARN_48	8550	0.150	USA - Alaska	51.3000	172.4200	71.4000	-129.9900
NAD_1983_To_NAD_1983_HARN_49	8660	0.050	USA - Hawaii - onshore	18.8700	-160.3000	22.2900	-154.7400
NAD_1983_To_NAD_1983_HARN_50	8669	0.150	Caribbean - Puerto Rico	17.6200	-67.9700	18.5700	-64.5100
			and US Virgin Islands -				
			onshore				
NAD_1983_To_WGS_1984_1	1188	4.000		23.8100	-172.5400	86.4600	-47.7400
			and USA (CONUS, Alaska				
			mainland)				

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum Latitude	Minimum	Maximum Latitude	Maximum
NAD 1002 To WCC 1004 2	1251	(m)	USA - Alaska - Aleutian	51.3000	Longitude 172.4200		Longitude
NAD_1983_To_WGS_1984_2	1251	8.000	Islands	51.3000	172.4200	54.3400	-164.8400
NAD_1983_To_WGS_1984_3	1252	4.000	USA - Hawaii - main	15.5600	-163.7400	25.5800	-151.2700
			islands				
NAD_1983_To_WGS_1984_4	1308	2.000	USA - CONUS - onshore	24.4100	-124.7900	49.3800	-66.9100
NAD_1983_To_WGS_1984_5	1515	1.000	USA (all states)	15.5600	167.6500	74.7100	-65.6900
NAD_1983_To_WGS_1984_6	1696	1.000	Canada - Quebec	44.9900	-79.8500	62.6200	-57.1000
NAD_1983_To_WGS_1984_7	1697	1.000	Canada - Saskatchewan	49.0000	-110.0000	60.0100	-101.3400
NAD_1983_To_WGS_1984_8	1702	1.000	Canada - Alberta	48.9900	-120.0000	60.0000	-109.9800
NAD_1983_To_WGS_1984_Alabama_21	1717	1.000	USA - Alabama	30.1400	-88.4800	35.0200	-84.8900
NAD_1983_To_WGS_1984_Arizona_32	1728	1.000	USA - Arizona	31.3300	-114.8100	37.0100	-109.0400
NAD_1983_To_WGS_1984_Arkansas_12	1708	1.000	USA - Arkansas	33.0100	-94.6200	36.5000	-89.6400
NAD_1983_To_WGS_1984_Colorado_16	1712	1.000	USA - Colorado	36.9800	-109.0600	41.0100	-102.0400
NAD_1983_To_WGS_1984_CT_MA_NH_RI_VT_29	1725	1.000	USA - New England -	40.9800	-73.7300	45.3100	-69.8600
			south (CT, MA, NH, RI,				
			VT)				
NAD_1983_To_WGS_1984_DE_MD_24	1720	1.000	USA - Delaware and	37.9700	-79.4900	39.8500	-74.9700
			Maryland				
NAD_1983_To_WGS_1984_eastern_ID_MT_19	1715	1.000	USA - Idaho and Montana	41.9900	-113.0000	49.0100	-104.0400
			- east of 113°W				
NAD_1983_To_WGS_1984_east_Texas_38	1734	1.000	USA - Texas east of	25.8300	-100.0000	34.5800	-93.5000
			100°W				
NAD_1983_To_WGS_1984_Florida_18	1714		USA - Florida	24.4100	-87.6300	31.0100	-79.9700
NAD_1983_To_WGS_1984_Georgia_17	1713		USA - Georgia	30.3600		35.0100	-80.7700
NAD_1983_To_WGS_1984_Hawaii_onshore_45	1741		USA - Hawaii - onshore	18.8700	-160.3000		-154.7400
NAD_1983_To_WGS_1984_Illinois_52	1748	1	USA - Illinois	36.9800	-91.5200	42.5100	-87.0200
NAD_1983_To_WGS_1984_Indiana_46	1742		USA - Indiana	37.7700		41.7700	-84.7800
NAD_1983_To_WGS_1984_lowa_13	1709		USA - Iowa	40.3700		43.5100	-90.1400
NAD_1983_To_WGS_1984_Kansas_47	1743	1	USA - Kansas	36.9800		40.0100	-94.5800
NAD_1983_To_WGS_1984_Kentucky_22	1718		USA - Kentucky	36.4900		39.1500	-81.9500
NAD_1983_To_WGS_1984_Louisiana_23	1719		USA - Louisiana	28.8500		33.0300	
NAD_1983_To_WGS_1984_Maine_25	1721		USA - Maine	43.0400	-71.0900	47.4700	-66.9100
NAD_1983_To_WGS_1984_Michigan_26	1722		USA - Michigan	41.6900	-90.4200	48.3200	-82.1300
NAD_1983_To_WGS_1984_Minnesota_14	1710		USA - Minnesota	43.4900	-97.2200	49.3800	-89.4900
NAD_1983_To_WGS_1984_Mississippi_27	1723	1	USA - Mississippi	30.0100	-91.6500	35.0100	-88.0900
NAD_1983_To_WGS_1984_Missouri_15	1711	1.000	USA - Missouri	35.9800	-95.7700	40.6100	-89.1000

⁵² Copyright @ 2012, 2015-2022 Esri

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
NAD_1983_To_WGS_1984_Nebraska_28	1724	1.000	USA - Nebraska	39.9900	-104.0600	43.0100	-95.3000
NAD_1983_To_WGS_1984_Nevada_48	1744	1.000	USA - Nevada	34.9900	-120.0000	42.0000	-114.0300
NAD_1983_To_WGS_1984_New_Jersey_53	1749	1.000	USA - New Jersey	38.8700	-75.6000	41.3600	-73.8800
NAD_1983_To_WGS_1984_New_Mexico_30	1726	1.000	USA - New Mexico	31.3300	-109.0600	37.0000	-102.9900
NAD_1983_To_WGS_1984_New_York_31	1727	1.000	USA - New York	40.4700	-79.7700	45.0200	-71.8000
NAD_1983_To_WGS_1984_North_Carolina_55	15835	1.000	USA - North Carolina	33.8300	-84.3300	36.5900	-75.3800
NAD_1983_To_WGS_1984_North_Dakota_33	1729	1.000	USA - North Dakota	45.9300	-104.0700	49.0100	-96.5500
NAD_1983_To_WGS_1984_northern_California_43	1739	1.000	USA - California - north of 36.5°N	36.5000	-124.4500	42.0100	-116.5400
NAD_1983_To_WGS_1984_Ohio_49	1745	1.000	USA - Ohio	38.4000	-84.8300	42.3300	-80.5100
NAD_1983_To_WGS_1984_Oklahoma_34	1730	1.000	USA - Oklahoma	33.6200	-103.0000	37.0100	-94.4200
NAD_1983_To_WGS_1984_OR_WA_41	1737	1.000	USA - Oregon and Washington	41.9800	-124.7900	49.0500	-116.4700
NAD_1983_To_WGS_1984_Pennsylvania_57	15839	1.000	USA - Pennsylvania	39.7100	-80.5300	42.5300	-74.7000
NAD_1983_To_WGS_1984_PR_VI_onshore_35	1731	1.000	Caribbean - Puerto Rico and US Virgin Islands - onshore	17.6200	-67.9700	18.5700	-64.5100
NAD_1983_To_WGS_1984_South_Carolina_56	15837	1.000	USA - South Carolina	32.0500	-83.3600	35.2100	-78.5200
NAD_1983_To_WGS_1984_South_Dakota_36	1732	1.000	USA - South Dakota	42.4800	-104.0700	45.9500	-96.4300
NAD_1983_To_WGS_1984_southern_California_54	1750	1.000	USA - California - south of 36.5°N	32.5300	-121.9800	36.5000	-114.1200
NAD_1983_To_WGS_1984_Tennessee_37	1733	1.000	USA - Tennessee	34.9800	-90.3100	36.6800	-81.6500
NAD_1983_To_WGS_1984_Utah_50	1746	1.000	USA - Utah	36.9900	-114.0500	42.0100	-109.0400
NAD_1983_To_WGS_1984_Virginia_40	1736	1.000	USA - Virginia	36.5400	-83.6800	39.4600	-75.3100
NAD_1983_To_WGS_1984_western_ID_MT_20	1716	1.000	USA - Idaho and Montana - west of 113°W	41.9900	-117.2400	49.0100	-113.0000
NAD_1983_To_WGS_1984_west_Texas_39	1735	1.000	USA - Texas west of 100°W	28.0400	-106.6600	36.5000	-100.0000
NAD_1983_To_WGS_1984_West_Virginia_51	1747	1.000	USA - West Virginia	37.2000	-82.6500	40.6400	-77.7200
NAD_1983_To_WGS_1984_Wisconsin_42	1738	1.000	USA - Wisconsin	42.4800	-92.8900	47.3100	-86.2500
NAD_1983_To_WGS_1984_Wyoming_44	1740	1.000	USA - Wyoming	40.9900	-111.0600	45.0100	-104.0500
NAD83_to_NAD83(CSRS)v6_10	9550	0.100	Canada - Newfoundland	46.5600	-59.4800	51.6800	-52.5400
NAD83_to_NAD83(CSRS)v7_1	9795	0.100	Canada - Alberta	48.9900	-120.0000	60.0000	-109.9800
Nahrwan_1967_To_WGS_1984_1	1189	44.000	Oman - Masirah Island	20.1200	58.5800	20.7400	59.0100
Nahrwan_1967_To_WGS_1984_10	15953	5.000	UAE - Dubai municipality	24.8500	54.8400	25.3400	55.5500

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Nahrwan_1967_To_WGS_1984_11	6998		UAE - Abu Dhabi	22.6300	51.5000	25.6400	56.0300
Nahrwan_1967_To_WGS_1984_12	6999	0.150	UAE - Abu Dhabi -	22.6300	51.5600	24.9500	56.0300
			onshore				
Nahrwan_1967_To_WGS_1984_13	7002		UAE - Abu Dhabi island	24.2400	54.2000	24.6400	54.7100
Nahrwan_1967_To_WGS_1984_14	7003	1.000	UAE - Abu Dhabi - onshore west of 54°E	22.7600	51.5600	24.3200	54.0100
Nahrwan_1967_To_WGS_1984_15	7004	1.000	UAE - Abu Dhabi - onshore east of 54°E	22.6300	53.9900	24.9500	56.0300
Nahrwan_1967_To_WGS_1984_2	1190	35.000	Saudi Arabia - onshore Gulf coast	24.6300	47.9500	28.5700	50.8100
Nahrwan_1967_To_WGS_1984_3	1191	44.000	UAE	22.6300	51.5000	26.2700	57.1300
Nahrwan_1967_To_WGS_1984_4	1531	0.500	UAE - Abu al Bu Khoosh	25.3300	53.0300	25.5400	53.4000
Nahrwan_1967_To_WGS_1984_5	1536	1.000	Qatar - offshore	24.6400	50.5500	27.0500	53.0400
Nahrwan_1967_To_WGS_1984_7	15937	2.000	UAE - Abu Dhabi - offshore	24.0000	51.5000	25.6400	54.8500
Nahrwan_1967_To_WGS_1984_8	15938	5.000	UAE - Abu Dhabi - offshore	24.0000	51.5000	25.6400	54.8500
Nahrwan_1967_To_WGS_1984_9	15952	5.000	UAE - Dubai - offshore	24.9400	54.0600	25.8000	55.3000
Nahrwan_To_WGS_1984_6	7033	30.000	Iraq - onshore	29.0600	38.7900	37.3900	48.6100
Nakhl-e_Ghanem_To_WGS_1984_6	15746	0.200	Iran - Tombak LNG plant	27.6300	52.0900	27.8100	52.2600
Naparima_1955_To_WGS_1984_2	1555	1.000	Trinidad and Tobago - Trinidad - onshore	9.9900	-61.9800	10.9000	-60.8500
Naparima_1955_To_WGS_1984_3	1556	26.000	Trinidad and Tobago - Trinidad - onshore	9.9900	-61.9800	10.9000	-60.8500
Naparima_1972_To_WGS_1984	1192	33.000	Trinidad and Tobago - Tobago - onshore	11.0800	-60.9000	11.4100	-60.4400
Naparima_1972_To_WGS_1984_3	1307	26.000	Trinidad and Tobago - Tobago - onshore	11.0800	-60.9000	11.4100	-60.4400
NEA74_Noumea_To_RGNC_1991-93_1	15886	1.000	New Caledonia - Grande Terre - Noumea	-22.3700	166.3500	-22.1900	166.5400
NEA74_Noumea_To_RGNC_1991-93_2	15889	0.100	New Caledonia - Grande Terre - Noumea	-22.3700	166.3500	-22.1900	166.5400
NEA74_Noumea_To_WGS_1984_1	1932	1.000		-22.3700	166.3500	-22.1900	166.5400
NEA74_Noumea_To_WGS_1984_2	15904	1.000	New Caledonia - Grande Terre - Noumea	-22.3700	166.3500	-22.1900	166.5400

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Nepal_Nagarkot_TO_WGS_1984_1	108015			26.3400	80.0600	30.4300	88.2100
Nepal_Nagarkot_To_WGS_1984_1_EPSG	6208	ļ		26.3400	80.0600	30.4300	88.2100
Nepal_Nagarkot_To_WGS_1984_2	108016		Nepal	26.3400	80.0600	30.4300	88.2100
New_Zealand_1949_To_NZGD_2000_1_3PAR	1566	5.000	New Zealand - onshore	-47.6500	165.8700	-33.8900	179.2700
			and nearshore				
New_Zealand_1949_To_NZGD_2000_2_7PAR	1701	4.000	New Zealand - onshore	-47.6500	165.8700	-33.8900	179.2700
			and nearshore				
New_Zealand_1949_To_NZGD_2000_3_NTv2	1568	0.200	New Zealand - onshore	-47.6500	165.8700	-33.8900	179.2700
			and nearshore				
NGN_To_WGS_1984_1	1060		Kuwait - onshore	28.5300	46.5400	30.0900	48.4800
NGO_1948_Oslo_To_ETRS_1989_1	108146		Norway - onshore	57.9300	4.6800	71.2100	31.2200
NGO_1948_Oslo_To_NGO_1948	1762		Norway - onshore	57.9300	4.6800	71.2100	31.2200
NGO_1948_Oslo_To_WGS_1984	108145		Norway - onshore	57.9300	4.6800	71.2100	31.2200
NGO_1948_Oslo_To_WGS_1984_1	108147	3.000	Norway - onshore	57.9300	4.6800	71.2100	31.2200
NGO_1948_To_ETRS_1989_1	1653	3.000	Norway - onshore	57.9300	4.6800	71.2100	31.2200
NGO_1948_To_WGS_1984	108201	5.000	Norway - onshore	57.9300	4.6800	71.2100	31.2200
NGO_1948_To_WGS_1984_1	1654	3.000	Norway - onshore	57.9300	4.6800	71.2100	31.2200
Nord_Sahara_1959_To_WGS_1972_BE	1560	8.000	Algeria - Hassi Messaoud	31.4800	5.5900	32.0900	6.5000
Nord_Sahara_1959_To_WGS_1984	1253	44.000	Algeria - onshore	18.9700	-8.6700	37.1400	11.9900
Nord_Sahara_1959_To_WGS_1984_2	1255	44.000	Algeria - north of 32°N	31.9900	-2.9500	37.1400	9.0900
Nord_Sahara_1959_To_WGS_1984_3	108098	10.000	Algeria - Hassi Messaoud	31.4800	5.5900	32.0900	6.5000
Nord_Sahara_1959_To_WGS_1984_4	1815	5.000	Algeria - District 3	25.0000	1.0000	32.0000	3.3000
Nord_Sahara_1959_To_WGS_1984_5	1816	100.000	Algeria - In Amenas	27.5000	8.8300	28.3000	9.9200
Nord_Sahara_1959_To_WGS_1984_6	1817	100.000	Algeria - Hassi Bir Reikaz	31.7500	7.1600	32.4200	8.0000
Nord_Sahara_1959_To_WGS_1984_7	15874	5.000	Algeria - Hassi Mouina	29.2500	0.0000	31.0000	1.2500
			licence area				
Nord_Sahara_1959_To_WGS_1984_8	5630	5.000	Algeria - Ahnet licence	26.0600	1.2400	27.5100	2.9200
			area				
Nord_Sahara_1959_To_WGS_1984_9	5660	1.000	Algeria	18.9700	-8.6700	38.8000	11.9900
Nord_Sahara_1959_To_WGS_1984_10	7442	100.000	Algeria - Ain Tsila	27.4000	7.6600	28.1000	8.2700
Nouakchott_1965_To_WGS_1984_1	15709	5.000	Mauritania - Nouakchutt	17.8900	-16.1100	18.2500	-15.8300
NTF_Paris_To_ED_1950	8186	2.000	France - onshore -	41.3100	-4.8700	51.1400	9.6300
			mainland and Corsica				
NTF_Paris_To_NTF	1763	0.000	France - onshore -	41.3100	-4.8700	51.1400	9.6300
			mainland and Corsica				

Geographic (datum) Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
NTF_Paris_To_RGF_1993_1	108102		France - onshore - mainland and Corsica	41.3100	-4.8700	51.1400	9.6300
NTF_Paris_To_WGS_1972	8188	2.000	France - onshore - mainland and Corsica	41.3100	-4.8700	51.1400	9.6300
NTF_Paris_To_WGS_1984	8094	3.000	France - onshore - mainland and Corsica	41.3100	-4.8700	51.1400	9.6300
NTF_To_ED_1950	1276	2.000	France - onshore - mainland and Corsica	41.3100	-4.8700	51.1400	9.6300
NTF_To_ETRS_1989_1	1651	2.000	France - onshore - mainland and Corsica	41.3100	-4.8700	51.1400	9.6300
NTF_To_RGF_1993_1	108130	2.000	France - onshore - mainland and Corsica	41.3100	-4.8700	51.1400	9.6300
NTF_To_WGS_1972	1277	2.000	France - onshore - mainland and Corsica	41.3100	-4.8700	51.1400	9.6300
NTF_To_WGS_1984	1193	2.000	France - onshore - mainland and Corsica	41.3100	-4.8700	51.1400	9.6300
NZGD_1949_To_WGS_1984	1151	8.000	New Zealand - onshore and nearshore	-47.6500	165.8700	-33.8900	179.2700
NZGD_1949_To_WGS_1984_2	1564	4.000	New Zealand - onshore and nearshore	-47.6500	165.8700	-33.8900	179.2700
NZGD_1949_To_WGS_1984_3_NTv2	1670	1.000	New Zealand - onshore and nearshore	-47.6500	165.8700	-33.8900	179.2700
NZGD_1949_To_WGS_1984_4	15975	5.000	New Zealand - onshore and nearshore	-47.6500	165.8700	-33.8900	179.2700
NZGD_2000_To_WGS_1984_1	1565	1.000	New Zealand	-55.9500	160.6000	-25.8800	-171.2000
Observatario_To_WGS_1984_1	6900	17.000	Mozambique - south	-26.8700	31.2900	-19.8400	35.6500
Observatorio_Meteorologico_1939_To_PTRA08_1_3par	108344	0.060	Portugal - Azores W - onshore	39.3000	-31.3400	39.7700	-31.0200
Observatorio_Meteorologico_1939_To_PTRA08_1_7par	108341	0.030	Portugal - Azores W - onshore	39.3000	-31.3400	39.7700	-31.0200
Observatorio_Meteorologico_1939_To_PTRA08_2_3par	108345	0.056	Azores - Flores Island	39.3500	-31.3000	39.5000	-31.1000
Observatorio_Meteorologico_1939_To_PTRA08_2_7par	108342		Azores - Flores Island	39.3500	-31.3000	39.5000	-31.1000
Observatorio_Meteorologico_1939_To_PTRA08_3_3par	108346	0.064	Portugal - Azores W - Corvo onshore	39.6300	-31.1800	39.7700	-31.0200
Observatorio_Meteorologico_1939_To_PTRA08_3_7par	108343	0.070	Portugal - Azores W - Corvo onshore	39.6300	-31.1800	39.7700	-31.0200

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Observatorio_Meteorologico_1939_To_WGS_1984_1	108116	5.000	Portugal - Azores W -	39.3000	-31.3400	39.7700	-31.0200
			onshore				
Observatorio_Meteorologico_1939_To_WGS_1984_1_3par	108350	0.100	Portugal - Azores W -	39.3000	-31.3400	39.7700	-31.0200
			onshore				
Observatorio_Meteorologico_1939_To_WGS_1984_1_7par	108347	0.060	Portugal - Azores W -	39.3000	-31.3400	39.7700	-31.0200
			onshore				
Observatorio_Meteorologico_1939_To_WGS_1984_2_3par	108351		Azores - Flores Island	39.3500	-31.3000	39.5000	
Observatorio_Meteorologico_1939_To_WGS_1984_2_7par	108348		Azores - Flores Island	39.3500	-31.3000	39.5000	
Observatorio_Meteorologico_1939_To_WGS_1984_3_3par	108352	0.085	Portugal - Azores W -	39.6300	-31.1800	39.7700	-31.0200
			Corvo onshore				
Observatorio_Meteorologico_1939_To_WGS_1984_3_7par	108349	0.100	Portugal - Azores W -	39.6300	-31.1800	39.7700	-31.0200
			Corvo onshore				
Observatorio_Meteorologico_1965_To_WGS_1984_2	108234		China - Macao	22.0600	113.5200	22.2300	
Ocotepeque_1935_To_CR05	6890		Costa Rica - onshore	7.9800	-85.9700	11.2200	
Ocotepeque_1935_To_NAD_1927_1	6888	9.000	Central America -	7.9800	-92.2900	17.8300	-82.5300
			Guatemala to Costa Rica				
Ocotepeque_1935_To_WGS_1984_1	5470		Costa Rica - onshore	7.9800	-85.9700	11.2200	
Ocotepeque_1935_To_WGS_1984_2	5473		Costa Rica - onshore	7.9800	-85.9700	11.2200	
Ocotepeque_1935_To_WGS_1984_3PAR	6891	14.000	Central America -	7.9800	-92.2900	17.8300	-82.5300
			Guatemala to Costa Rica				
Ocotepeque_1935_To_WGS_1984_RN	108283		Costa Rica - onshore	7.9800		11.2200	
Old_Hawaiian_Intl_1924_To_WGS_1984_Hawaii	108331	44.000	USA - Hawaii - island of	18.8700	-156.1000	20.3300	-154.7400
			Hawaii - onshore				
Old_Hawaiian_Intl_1924_To_WGS_1984_Kauai	108332	35.000	USA - Hawaii - Kauai -	21.8100	-159.8500	22.2900	-159.2300
			onshore				
Old_Hawaiian_Intl_1924_To_WGS_1984_Maui	108333	44.000	USA - Hawaii - Maui;	20.4500	-157.3600	21.2600	-155.9300
			Kahoolawe; Lanai;				
	400000	22.222	Molokai - onshore	40.0700	460 0000	22 222	4545400
Old_Hawaiian_Intl_1924_To_WGS_1984_Mean	108330		USA - Hawaii - onshore		-160.3000		-154.7400
Old_Hawaiian_Intl_1924_To_WGS_1984_Oahu	108334	14.000	USA - Hawaii - Oahu -	21.2000	-158.3300	21.7500	-157.6100
			onshore	40.0700	460 0000	22 222	4545400
Old_Hawaiian_To_NAD_1983	1454		USA - Hawaii - onshore		-160.3000		-154.7400
Old_Hawaiian_To_NAD_1983_2	8561		USA - Hawaii - onshore		-160.3000		-154.7400
Old_Hawaiian_To_NAD_1983_HARN_Hawaii	108306		USA - Hawaii - onshore		-160.3000		-154.7400
Old_Hawaiian_To_WGS_1984_1	15824	38.000	USA - Hawaii - onshore	18.8700	-160.3000	22.2900	-154.7400

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Old_Hawaiian_To_WGS_1984_2	15825	44.000		18.8700	-156.1000	20.3300	-154.7400
	15000	27.222	Hawaii - onshore	24.2422	450.0500	22.222	150 0000
Old_Hawaiian_To_WGS_1984_3	15826	35.000	USA - Hawaii - Kauai -	21.8100	-159.8500	22.2900	-159.2300
Old the affect To MCC 4004 4	45027	44.000	onshore	20.4500	457.2600	24 2600	455.0200
Old_Hawaiian_To_WGS_1984_4	15827	44.000	1	20.4500	-157.3600	21.2600	-155.9300
			Kahoolawe; Lanai; Molokai - onshore				
Old_Hawaiian_To_WGS_1984_5	15828	14.000		21 2000	-158.3300	21 7500	-157.6100
Old_Hawalian_10_WG3_1984_3	13626	14.000	onshore	21.2000	-136.3300	21.7300	-137.0100
Old_Hawaiian_To_WGS_1984_8	15840	2 000	USA - Hawaii - onshore	18 8700	-160.3000	22 2900	-154.7400
ONGD14 To WGS 1984 1	7377	1	Oman	14.3300	51.9900	26.7400	63.3800
ONGD14 To WGS 1984 2	7433		Oman	14.3300	51.9900	26.7400	
ONGD17_To_ITRF_1989	108371		Oman	14.3300	51.9900	26.7400	63.3800
ONGD17_To_WGS_1984	108372		Oman	14.3300	51.9900	26.7400	63.3800
OSGB_1936_To_ED_1950_UKOOA	1315		UK - Great Britain; Isle of	49.7900	-8.8200	60.9400	1.9200
			Man				
OSGB_1936_To_ETRS_1989_1	5338	0.040	UK - Great Britain; Isle of	49.7900	-8.8200	60.9400	1.9200
			Man				
OSGB_1936_To_WGS_1984_1	1195	21.000	UK - Great Britain; Isle of	49.7900	-8.8200	60.9400	1.9200
			Man				
OSGB_1936_To_WGS_1984_2	1196	10.000	UK - England	49.8100	-6.5000	55.8500	1.8400
OSGB_1936_To_WGS_1984_3	1197	21.000	UK - England and Wales,	49.8100	-6.5000	55.8500	1.8400
			Isle of Man				
OSGB_1936_To_WGS_1984_4	1198	18.000	UK - Scotland	54.5700	-8.7400	60.9000	-0.6500
OSGB_1936_To_WGS_1984_5	1199	1	UK - Wales	51.2800	-5.3400	53.4800	-2.6500
OSGB_1936_To_WGS_1984_7	5339	1.000	UK - Great Britain; Isle of	49.7900	-8.8200	60.9400	1.9200
			Man				
OSGB_1936_To_WGS_1984_8	5622		UK - Wytch Farm	50.5300	-2.2000	50.8000	-1.6800
OSGB_1936_To_WGS_1984_8_BAD_DX	108089	1	UK - Wytch Farm	50.5300	-2.2000	50.8000	
OSGB_1936_To_WGS_1984_NGA_7PAR	108336	21.000	UK - Great Britain; Isle of	49.7900	-8.8200	60.9400	1.9200
			Man				
OSGB_1936_To_WGS_1984_Petroleum	1314	2.000		49.7900	-8.8200	60.9400	1.9200
OSCR 4036 T. VIII A NT 3	400050	0.500	Man	F4 2000	0.7000	F4 0000	0.5000
OSGB_1936_To_Xrail84_NTv2	108059	1	UK - London	51.2000	-0.7000	51.8000	0.6000
OSNI_1952_To_WGS_1984_1	1955	1.000	UK - Northern Ireland -	53.9600	-8.1800	55.3600	-5.3400
			onshore				

Geographic (datum) Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
Padang_1884_Jakarta_To_Padang_1884	1758	0.000	Indonesia - Sumatra	-5.9900	95.1600	5.9700	106.1300
Padang_To_WGS_1984_1	108452	6.00	Indonesia - Sumatra	-5.9900	95.1600	5.9700	106.1300
Palestine_1923_To_Israel_1	1071	1.500	Israel, Palestine Territory, and Jordan	29.1900	32.9900	33.5300	39.3000
Palestine_1923_To_WGS_1984_1	1074		Israel, Palestine Territory, and Jordan	29.1900	32.9900	33.5300	39.3000
Palestine_1923_To_WGS_1984_1X	108220			29.4500	32.9900	33.5300	35.6900
Palestine_1923_To_WGS_1984_2	108099		Asia - Middle East - Israel and Palestine Territory onshore	29.4500	34.1700	33.2800	35.6900
Palestine_1923_To_WGS_1984_2X	108232		Palestine Territory	31.2100	34.1700	32.5500	35.5800
Pampa_del_Castillo_To_WGS_1984_1	15845	25.000	Argentina - Comodoro Rivadavia	-46.7000	-69.5000	-45.1900	-67.1000
Pampa_del_Castillo_To_WGS_1984_2	9259		Argentina - 44°S to 47.5°S	-47.5000	-72.3600	-43.9900	-63.2400
PD/83_To_ETRS_1989_1	15867	0.100	Germany - Thuringen	50.2000	9.9200	51.6400	12.5600
PD/83_To_WGS_1984_1_NTv2	15955	1.000	Germany - East Germany all states	50.2000	9.9200	54.7400	15.0400
PD/83_To_WGS_1984_7PAR	108070	0.500	Germany - Thuringen	50.2000	9.9200	51.6400	12.5600
PDO_1993_To_WGS_1972	1616	1.200	Oman - onshore	16.5900	51.9900	26.5800	59.9100
PDO_1993_To_WGS_1984	1439	0.500	Oman - onshore	16.5900	51.9900	26.5800	59.9100
PDO_1993_To_WGS_1984_3	1617		Oman - block 4	19.5800	56.5000	21.1700	59.0200
Perroud_1950_To_RGTAAF07_1	7083	0.500	Antarctica - Adelie Land - Petrels island	-66.7800	139.4400	-66.1000	141.5000
Peru96_To_WGS_1984_1	5378	1.000	Peru	-21.0500	-84.6800	-0.0300	-68.6700
Petrels_1972_To_WGS_1984_1	1921	10.000	Antarctica - Adelie Land - Petrels island	-66.7800	139.4400	-66.1000	141.5000
Pico_de_Las_Nieves_To_WGS_1984	15815	44.000	Spain - Canary Islands onshore	27.5800	-18.2200	29.4700	-13.3700
Pitcairn_1967_To_WGS_1984	15819	44.000	Pitcairn - Pitcairn Island	-25.1400	-130.1600	-25.0000	-130.0100
Pitcairn_2006_To_WGS_1984_1	15972	1.000	Pitcairn - Pitcairn Island	-25.1400	-130.1600	-25.0000	-130.0100
PN68_to_WGS_1984_1	9743	44.000	Spain – Canary Islands onshore	27.5800	-18.2200	29.4700	-13.3700
PNG94_To_WGS_1984_1	5553	10.000	Papua New Guinea	-14.7500	139.2000	2.5800	162.8100
Pohnpei_To_WGS_1984	108303	Unknown	Micronesia	-1.1900	135.2700	13.4300	165.6800

Geographic (datum) Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
Point58_To_WGS_1984_1	1880		Africa – Burkina Faso and SW Niger	11.8300	-4.6400	14.2300	4.0000
Pointe_Geologie_Perroud_1950_To_WGS_1984_1	1922	10.000		-67.1300	136.0000	-65.6100	142.0000
Pointe_Noire_To_WGS_1984	1200	44.000	Congo	-6.9100	8.8400	3.7200	18.6500
Pointe_Noire_To_WGS_1984_2	1801	4.000	Congo – coastal area and offshore	-6.9100	8.8400	-3.5500	12.3400
Pointe_Noire_To_WGS_1984_3	1802	0.150	Congo – coastal area and offshore	-6.9100	8.8400	-3.5500	12.3400
Porto_Santo_1936_To_PTRA08_1_3par	108163	0.300	Portugal – Madeira archipelago onshore	32.3500	-17.3100	33.1500	-16.2300
Porto_Santo_1936_To_PTRA08_1_7par	108160	0.050	Portugal – Madeira archipelago onshore	32.3500	-17.3100	33.1500	-16.2300
Porto_Santo_1936_To_PTRA08_2_3par	108164	0.140	Madeira Archipelago – Madeira Island onshore	32.5800	-17.3100	32.9300	-16.6600
Porto_Santo_1936_To_PTRA08_2_7par	108161	0.050	Madeira Archipelago – Madeira Island onshore	32.5800	-17.3100	32.9300	-16.6600
Porto_Santo_1936_To_PTRA08_3_3par	108165	0.120	Madeira Archipelago – Porto Santo Island onshore	32.9600	-16.4400	33.1500	-16.2300
Porto_Santo_1936_To_PTRA08_3_7par	108162	0.002	Madeira Archipelago – Porto Santo Island onshore	32.9600	-16.4400	33.1500	-16.2300
Porto_Santo_1936_To_WGS_1984_1	1888	44.000	Portugal – Madeira archipelago onshore	32.3500	-17.3100	33.1500	-16.2300
Porto_Santo_1936_To_WGS_1984_1_3par	108169	0.500	Portugal – Madeira archipelago onshore	32.3500	-17.3100	33.1500	-16.2300
Porto_Santo_1936_To_WGS_1984_1_7par	108166	0.100	Portugal – Madeira archipelago onshore	32.3500	-17.3100	33.1500	-16.2300
Porto_Santo_1936_To_WGS_1984_1_IGP	108115	5.000	Portugal – Madeira and Porto Santo islands onshore	32.5800	-17.3100	33.1500	-16.2300
Porto_Santo_1936_To_WGS_1984_2	108125	1.000	Portugal – Madeira and Porto Santo islands onshore	32.5800	-17.3100	33.1500	-16.2300

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
D. J. C. J. 4005 T. WOS 4004 D. D.	100170	(m)		Latitude	Longitude	Latitude	Longitude
Porto_Santo_1936_To_WGS_1984_2_3par	108170	0.300	Madeira Archipelago –	32.5800	-17.3100	32.9300	-16.6600
D. J. C. J. 100C T. WCC 1001 0 7	100167	0.400	Madeira Island onshore	22 5000	47.0400	22.0200	46.6600
Porto_Santo_1936_To_WGS_1984_2_7par	108167	0.100	, ,	32.5800	-17.3100	32.9300	-16.6600
D. J. C. J. 1005 T. WGS 1001 D. D.	100171	0.000	Madeira Island onshore	22.0500	46.4400	22.4500	46 2222
Porto_Santo_1936_To_WGS_1984_3_3par	108171	0.300	Madeira Archipelago –	32.9600	-16.4400	33.1500	-16.2300
D. J. C. J. 100C T. WCC 1001 0.7	100150	0.010	Porto Santo Isl. Onshore	22.0500	46.4400	22.4500	46 2222
Porto_Santo_1936_To_WGS_1984_3_7par	108168	0.010	Madeira Archipelago –	32.9600	-16.4400	33.1500	-16.2300
D. J. C. J. 1005 T. DTD100 4	5004	2 222	Porto Santo Isl. Onshore	22.2500	47.0400	22.4500	46 2222
Porto_Santo_1995_To_PTRA08_1	5021	2.000	Portugal – Madeira	32.3500	-17.3100	33.1500	-16.2300
D. J. C. J. 1005 T. DTD100 0	5000	4 000	archipelago onshore	22 5000	47.0400	22.0200	46.6600
Porto_Santo_1995_To_PTRA08_2	5022	1.000	Portugal – Madeira island	32.5800	-17.3100	32.9300	-16.6600
D + C + 4005 T DTD400 0	5000	0.000	onshore	22.0500	46.4400	22.4500	46 2222
Porto_Santo_1995_To_PTRA08_3	5023	0.200		32.9600	-16.4400	33.1500	-16.2300
D. J. C. J. 1005 T. NICC 1001 2	1000	F 000	island onshore	22 5000	47.2400	22.4500	46 2200
Porto_Santo_1995_To_WGS_1984_2	1966	5.000		32.5800	-17.3100	33.1500	-16.2300
			Porto Santo islands				
Darta Carta 1005 Ta MCC 1004 2	1067	1 000	onshore	22 5000	17 2400	22.4500	16 2200
Porto_Santo_1995_To_WGS_1984_3	1967	1.000	Portugal – Madeira and	32.5800	-17.3100	33.1500	-16.2300
			Porto Santo islands onshore				
POSGAR 1994 To WGS 1984 1	1210	1 000	Argentina	-58.4100	-73.5900	-21.7800	-52.6300
POSGAR 1998 TO SIRGAS 1	1774		Argentina	-58.4100	-73.5900	-21.7800	-52.6300
	1774						-52.6300
POSGAR_1998_To_WGS_1984_1	5497		Argentina Argentina	-58.4100	-73.5900 -73.5900	-21.7800 -21.7800	-52.6300
POSGAR_2007_To_SIRGAS_2000_1	5351			-58.4100		-21.7800	
POSGAR_2007_To_WGS_1984_1 POSGAR_2007_To_WGS_1984_2	9264		Argentina Argentina	-58.4100 -58.4100	-73.5900 -73.5900	-21.7800	-52.6300 -52.6300
	1598			-58.4100	-73.5900	-21.7800	-52.6300
POSGAR_TO_WGS_1984_1			Argentina				
PRS_1992_To_WGS_1984_1	15708		Philippines	3.0000	116.0400	22.1800	129.9500
PSAD_1956_To_REGVEN	1769		Venezuela – onshore	0.6400	-73.3800	12.2500	-59.8000
PSAD_1956_To_SIRGAS_1	3971	5.000	Ecuador – mainland	-5.0100	-81.0300	1.4500	-75.2100
DOAD 4050 To CIDCAS Chile 4	60.10	F 000	onshore	26.0000	70 7000	47.5000	67.0000
PSAD_1956_To_SIRGAS-Chile_1	6949	5.000		-26.0000	-70.7900	-17.5000	-67.0000
DOAD AGES T. SIDOAS SHILL O	6673	5.000	26°S	26.0000	72.0722	26.0000	60.0060
PSAD_1956_To_SIRGAS-Chile_2	6950	5.000		-36.0000	-72.8700	-26.0000	-68.2800
			36°S				

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
PSAD56_to_SIRGAS-Chile_2010_1	9339	5.000	Chile - onshore north of 26°S	-26.0000	-70.7900	-17.5000	-67.0000
PSAD56_to_SIRGAS-Chile_2010_2	9340	5.000	Chile - onshore 26°S to 36°S	-36.0000	-72.8700	-26.0000	-68.2800
PSAD56_to_SIRGAS-Chile_2010_3	9341	5.000	Chile - onshore 36°S to 43.5°S	-43.5000	-74.4800	-35.9900	-70.3900
PSAD56_to_SIRGAS-Chile_2013_1	9342	5.000	Chile - onshore north of 26°S	-26.0000	-70.7900	-17.5000	-67.0000
PSAD56_to_SIRGAS-Chile_2013_2	9343	5.000	Chile - onshore 26°S to 36°S	-36.0000	-72.8700	-26.0000	-68.2800
PSAD56_to_SIRGAS-Chile_2013_3	9344	5.000	Chile - onshore 36°S to 43.5°S	-43.5000	-74.4800	-35.9900	-70.3900
PSAD56_to_SIRGAS-Chile_2016_1	9345	5.000	Chile - onshore north of 26~S	-26.0000	-70.7900	-17.5000	-67.0000
PSAD56_to_SIRGAS-Chile_2016_2	9346	5.000	Chile - onshore 26°S to 36°S	-36.0000	-72.8700	-26.0000	-68.2800
PSAD56_to_SIRGAS-Chile_2016_3	9347	5.000	Chile - onshore 36°S to 43.5°S	-43.5000	-74.4800	-35.9900	-70.3900
PSAD56_to_SIRGAS-Chile_2021_1	10135	5.000	Chile - onshore north of 26°S	-26.0000	-70.7900	-17.5000	-67.0000
PSAD56_to_SIRGAS-Chile_2021_2	10136	5.000	Chile - onshore 26°S to 36°S	-36.0000	-72.8700	-26.0000	-68.2800
PSAD56_to_SIRGAS-Chile_2021_3	10137	5.000	Chile - onshore 36°S to 43.5°S	-43.5000	-74.4800	-35.9900	-70.3900
PSAD_1956_To_SIRGAS-Chile_3	6951	5.000	Chile - onshore 36°S to 43.5°S	-43.5000	-74.4800	-35.9900	-70.3900
PSAD_1956_To_WGS_1984_1	1201	42.000	South America - Bolivia; Chile; Ecuador; Guyana; Peru; Venezuela	-43.5000	-81.4100	12.2500	-56.4700
PSAD_1956_To_WGS_1984_10	1582	3.000	Bolivia - Madidi	-14.4300	-68.9600	-13.5600	-67.7900
PSAD_1956_To_WGS_1984_11	1583	0.500	Bolivia - Block 20	-21.7100	-63.4400	-21.0900	-62.9500
PSAD_1956_To_WGS_1984_12	1811	10.000	Brazil - Amazon cone shelf	-1.0500	-51.6400	5.6000	-48.0000
PSAD_1956_To_WGS_1984_13	1095	15.000	Venezuela - onshore	0.6400	-73.3800	12.2500	-59.8000
PSAD_1956_To_WGS_1984_14	3990	5.000	Ecuador - mainland onshore	-5.0100	-81.0300	1.4500	-75.2100

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
PSAD_1956_To_WGS_1984_15	6971	5.000	Chile - onshore north of	-26.0000	-70.7900	-17.5000	-67.0000
			26°S				
PSAD_1956_To_WGS_1984_16	6972	5.000	Chile - onshore 26°S to	-36.0000	-72.8700	-26.0000	-68.2800
			36°S				
PSAD_1956_To_WGS_1984_17	6973	5.000	Chile - onshore 36°S to	-43.5000	-74.4800	-35.9900	-70.3900
			43.5°S				
PSAD_1956_To_WGS_1984_2	1202	19.000		-22.9100	-69.6600	-9.6700	
PSAD_1956_To_WGS_1984_3	1203	44.000	Chile - onshore north of	-21.5100	-70.4900	-17.5000	-68.1800
			21°30'S				
PSAD_1956_To_WGS_1984_4	1204	35.000		-43.5000	-74.4800	-38.9900	-71.3800
			43.5°S				
PSAD_1956_To_WGS_1984_5	1205		Colombia - mainland	-4.2300	-79.1000	12.5200	
PSAD_1956_To_WGS_1984_6	1206	7.000	Ecuador - mainland	-5.0100	-81.0300	1.4500	-75.2100
			onshore				
PSAD_1956_To_WGS_1984_7	1207		Guyana	1.1800	-61.3900	10.7000	-55.7700
PSAD_1956_To_WGS_1984_8	1208		Peru - onshore	-18.3500	-81.4100	-0.0300	-68.6700
PSAD_1956_To_WGS_1984_9	1209		Venezuela - onshore	0.6400	-73.3800	12.2500	-59.8000
PTRA08_To_WGS_1984_1	4905	1.000	Portugal - Azores and	29.2400	-35.5800	43.0700	-12.4800
			Madeira				
Puerto_Rico_To_NAD_1983	1461	0.050		17.6200	-67.9700	18.7800	-64.2500
			and Virgin Islands -				
			onshore				
Puerto_Rico_To_NAD_1983_2	8668	0.150		17.6200	-67.9700	18.5700	-64.5100
			and US Virgin Islands -				
			onshore				
Puerto_Rico_To_WGS_1984_3	1893	6.000		17.6200	-67.9700	18.7800	-64.2500
			and Virgin Islands -				
	15011	2.222	onshore	47.0700	c= c=c	10.5500	57.4000
Puerto_Rico_To_WGS_1984_4	15841		Puerto Rico - onshore	17.8700	-67.9700	18.5700	-65.1900
Pulkovo_1942_Adj_1958_To_Albanian_1987_1	7836		Albania	39.6300	18.4600	42.6700	21.0600
Pulkovo_1942_Adj_1958_To_ETRS_1989_1	1644		Poland - onshore	49.0000	14.1400	54.8900	24.1500
Pulkovo_1942_Adj_1958_To_ETRS_1989_3	15993		Romania	43.4400	20.2600	48.2700	31.4100
Pulkovo_1942_Adj_1958_To_ETRS_1989_4	15994		Romania	43.4400	20.2600	48.2700	31.4100
Pulkovo_1942_Adj_1958_To_WGS_1984_1	1645		Poland - onshore	49.0000	14.1400	54.8900	24.1500
Pulkovo_1942_Adj_1958_To_WGS_1984_18	15496	10.000	Romania	43.4400	20.2600	48.2700	31.4100

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
Pulkovo_1942_Adj_1958_To_WGS_1984_19	15995	(m)	Romania	43.4400	20.2600	48.2700	31.4100
Pulkovo 1942 Adj 1958 To WGS 1984 22	7835		Albania - north of	41.3000	19.1400	42.6700	20.6300
Talkovo_1342_Adj_1330_10_Wd3_1304_22	7033	2.000	41°18'N and east of	41.5000	13.1400	42.0700	20.0300
			19°09'E				
Pulkovo_1942_Adj_1958_To_WGS_1984_4	15997	6.000	Poland - onshore	49.0000	14.1400	54.8900	24.1500
Pulkovo_1942_Adj_1958_To_WGS_1984_8	15999	6.000	Albania - onshore	39.6400	19.2200	42.6700	21.0600
Pulkovo_1942_Adj_1958_To_WGS_1984_9	15497	7.000	Romania	43.4400	20.2600	48.2700	31.4100
Pulkovo_1942_Adj_1983_To_ETRS_1989_1	1674	2.000	Germany - East Germany all states	50.2000	9.9200	54.7400	15.0400
Pulkovo_1942_Adj_1983_To_ETRS_1989_2	1775	0.100	Germany - East Germany all states	50.2000	9.9200	54.7400	15.0400
Pulkovo_1942_Adj_1983_To_WGS_1984_1	1675	2.000	Germany - East Germany all states	50.2000	9.9200	54.7400	15.0400
Pulkovo_1942_Adj_1983_To_WGS_1984_3	15996	4.000	Hungary	45.7400	16.1100	48.5800	22.9000
Pulkovo_1942_Adj_1983_To_WGS_1984_5	15998	5.000	Europe - Czechoslovakia	47.7300	12.0900	51.0600	22.5600
Pulkovo_1942_To_Estonia_1992	1332	9.000	Estonia - onshore	57.5200	21.7400	59.7500	28.2000
Pulkovo_1942_To_ETRF_1989	108198	2.000	Germany - East Germany	50.2000	9.9200	54.7400	15.0400
			all states				
Pulkovo_1942_To_ETRS_1989	1310	2.000	Germany - East Germany all states	50.2000	9.9200	54.7400	15.0400
Pulkovo_1942_To_LKS_1994	1274	9.000	Lithuania - onshore	53.8900	20.8600	56.4500	26.8200
Pulkovo_1942_To_PZ_1990_1	15844	4.000	Europe - FSU onshore	35.1400	19.5700	81.9100	-168.9700
Pulkovo_1942_To_Ukraine_2000_1	5586	3.500	Ukraine	43.1800	22.1500	52.3800	40.1800
Pulkovo_1942_To_WGS_1984	1254	Unknown	Russia - onshore	41.1900	19.5800	85.2000	-168.9700
Pulkovo_1942_To_WGS_1984_10	1303	2.000	Kazakhstan - Caspian Sea	41.1500	48.9000	46.9700	53.1500
Pulkovo_1942_To_WGS_1984_12	1334	9.000	Estonia - onshore	57.5200	21.7400	59.7500	28.2000
Pulkovo_1942_To_WGS_1984_13	1807		Azerbaijan	37.8900	44.7700	42.5900	51.7300
Pulkovo_1942_To_WGS_1984_14	1808	5.000	Asia - FSU - Azerbaijan and Georgia	37.8900	39.9900	43.5900	51.7300
Pulkovo_1942_To_WGS_1984_15	1809	2.000	Azerbaijan - coastal area Baku to Astara	38.3100	48.9300	40.3300	50.4000
Pulkovo_1942_To_WGS_1984_16	15865	4.500	Europe - FSU onshore	35.1400	19.5700	81.9100	-168.9700
Pulkovo_1942_To_WGS_1984_17	1267	4.000	Russia - onshore	41.1900	19.5800	85.2000	-168.9700
Pulkovo_1942_To_WGS_1984_2	1679	9.000	Lithuania - onshore	53.8900	20.8600	56.4500	26.8200
Pulkovo_1942_To_WGS_1984_20	5044	3.000	Russia - onshore	41.1900	19.5800	85.2000	-168.9700
Pulkovo_1942_To_WGS_1984_21	6899	5.000	Estonia - onshore	57.5200	21.7400	59.7500	28.2000

⁶⁴ Copyright @ 2012, 2015-2022 Esri

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Pulkovo_1942_To_WGS_1984_6	1290	4.000	Latvia - onshore	55.6700	20.8700	58.0900	28.2400
Pulkovo_1942_To_WGS_1984_7	1291	44.000	Kazakhstan	40.5900	46.4900	55.4500	87.3500
Pulkovo_1942_To_WGS_1984_9	1293	7.000	Romania	43.4400	20.2600	48.2700	31.4100
Pulkovo_1995_To_PZ_1990_GOST	1257	1.000	Russia	39.8700	18.9200	85.1900	-168.9700
Pulkovo_1995_To_WGS_1984_1	1281	1.000	Russia	39.8700	18.9200	85.1900	-168.9700
Pulkovo_1995_To_WGS_1984_2	5043	1.000	Russia	39.8700	18.9200	85.1900	-168.9700
PZ_1990_To_WGS_1984_1	15843	1.500	World	-90.0000	-180.0000	90.0000	180.0000
PZ_1990_To_WGS_1984_GOST	1244	0.500	Russia	39.8700	18.9200	85.1900	-168.9700
Qatar_1974_To_WGS_1984_1	1561	35.000	Qatar - onshore	24.5500	50.6900	26.2000	51.6800
Qatar_1974_To_WGS_1984_2	1562	1.000	Qatar - offshore	24.6400	50.5500	27.0500	53.0400
Qatar_1974_To_WGS_1984_3	1563	1.000	Qatar - onshore	24.5500	50.6900	26.2000	51.6800
QND_1995_To_WGS_1984_1	1840	0.000	Qatar - onshore	24.5500	50.6900	26.2000	51.6800
Qornoq_1927_To_Greenland_1996_1	15957	1.000	Greenland - west coast	59.7400	-73.2900	79.0000	-42.5200
Qornoq_1927_To_WGS_1984_1	1797	48.000	Greenland - west coast	59.7400	-73.2900	79.0000	-42.5200
Qornoq_1927_To_WGS_1984_2	1798	1.000	Greenland - west coast	59.7400	-73.2900	79.0000	-42.5200
Rassadiran_To_WGS_1984	1512	0.500	Iran - Taheri refinery	27.3900	52.5000	27.6100	52.7100
RD/83_To_ETRS_1989_1	15868	0.100	Germany - East Germany	50.2000	9.9200	54.7400	15.0400
			all states				
RD/83_To_ETRS_1989_2_NTv2	6948	0.030	Germany - Saxony	50.2000	11.8900	51.6600	15.0400
RD/83_To_WGS_1984_1_NTv2	15954	1.000	Germany - East Germany	50.2000	9.9200	54.7400	15.0400
			all states				
RD/83_To_WGS_1984_7PAR	108071	0.500	Germany - Saxony	50.2000	11.8900	51.6600	15.0400
RDN2008_To_ETRS_1989_1	6710	0.000	•	34.7600	5.9300	47.1000	18.9900
RDN2008_To_WGS_1984_1	6711	1.000	Italy	34.7600	5.9300	47.1000	18.9900
REGCAN95_To_WGS_1984_1	4084	1.000	Spain - Canary Islands	24.6000	-21.9300	32.7600	-11.7500
REGVEN_To_SIRGAS_1	1767	0.020	Venezuela	0.6400	-73.3800	16.7500	-58.9500
REGVEN_To_WGS_1984_1	1768	1.000	Venezuela	0.6400	-73.3800	16.7500	-58.9500
Reunion_1947_To_RGR_1992_1	1926	0.100	Reunion - onshore	-21.4200	55.1600	-20.8100	55.9100
Reunion_1947_To_WGS_1984_2	15751	44.000	Reunion - onshore	-21.4200	55.1600	-20.8100	55.9100
Reykjavik_1900_To_WGS_1984_1	1994	10.000	Iceland - mainland	63.3400	-24.6600	66.5900	-13.3800
RGAF09_To_WGS_1984_1	5501	1.000	Caribbean - French	14.0800	-63.6600	18.5300	-57.5200
			Antilles				
RGF_1993_To_ETRF_1989_1	108199	0.000	France	41.1500	-9.8600	51.5600	10.3800
RGF_1993_To_ETRS_1989_1	1591	0.000	France	41.1500	-9.8600	51.5600	10.3800

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
RGF_1993_To_NTF_NTv2	15958	1.000	France - onshore -	41.3100	-4.8700	51.1400	9.6300
			mainland and Corsica				
RGF_1993_To_WGS_1984_1	1671		France	41.1500	-9.8600	51.5600	10.3800
RGF93_v1_to_RGF93_v2_1	9882		France	41.1500	-9.8600	51.5600	10.3800
RGF93_v2b_to_ETRS_1989_1	9790		France	41.1500	-9.8600	51.5600	10.3800
RGF93_v2b_to_NTF_2	9891	1.000	France - onshore -	41.3100	-4.8700	51.1400	9.6300
			mainland and Corsica				
RGF93_v2b_to_WGS_1984_1	9792		France	41.1500	-9.8600	51.5600	10.3800
RGF93_v2_to_ETRS_1989_1	9789		France	41.1500	-9.8600	51.5600	10.3800
RGF93_v2_to_NTF_2	9890	1.000	France - onshore -	41.3100	-4.8700	51.1400	9.6300
			mainland and Corsica				
RGF93_v2_to_RGF93_v2b	9788		France	41.1500	-9.8600	51.5600	10.3800
RGF93_v2_to_WGS_1984_1	9791		France	41.1500	-9.8600	51.5600	
RGFG_1995_To_WGS_1984_2	4840		French Guiana	2.1100		8.8800	
RGM_2004_To_WGS_1984_1	4476		Mayotte	-14.4900	43.6800	-11.3300	
RGNC_1991-93_To_IGN72_Grande_Terre_6_NTv2	15962	0.100	New Caledonia - Grande Terre	-22.4500	163.9200	-20.0300	167.0900
RGNC_1991-93_To_NEA74_Noumea_4_NTv2	1295	0.050		-22.3700	166.3500	-22.1900	166.5400
			Terre - Noumea				
RGNC_1991-93_To_WGS_1984_1	15880		New Caledonia		156.2500		
RGNC_1991_To_IGN72_Grande_Terre_NTv2	108471	0.100	New Caledonia - Grande Terre	-22.4500	163.9200	-20.0300	167.0900
RGNC_1991_To_NEA74_Noumea_NTv2	108472	Unknown	New Caledonia - Grande	-22.3700	166.3500	-22.1900	166.5400
			Terre - Noumea				
RGNC_1991_To_WGS_1984_1	1920	1.000	New Caledonia	-26.4500	156.2500	-14.8300	174.2800
RGPF_To_WGS_1984_1	8828	0.500	French Polynesia	-31.2400	-158.1300	-4.5200	-131.9700
RGPF_To_WGS_1984_2	15833	1.000	French Polynesia	-31.2400	-158.1300	-4.5200	-131.9700
RGR_1992_To_Reunion_1947_1	1964	0.100	Reunion - onshore	-21.4200	55.1600	-20.8100	55.9100
RGR_1992_To_WGS_1984_1	1912	1.000	Reunion	-24.7200	51.8300	-18.2800	58.2400
RGRDC_2005_To_WGS_1984_1	4064	1.000	Congo DR (Zaire) - south	-13.4600	11.7900	-3.4100	29.8100
RGSPM_2006_To_WGS_1984_1	4477	1.000	St Pierre and Miquelon	43.4100	-57.1000	47.3700	-55.9000
RGTAAF07_to_WGS_1984_1	9770	1.000	French Southern and	-67.1300	37.9800	-20.9100	142.0000
			Antarctic Territories				
RGWF96_To_WGS_1984_1	9769	1.000	Wallis and Futuna	-15.9400	179.4900	-9.8400	-174.2700
RRAF_1991_To_RGAF09_1	5494	0.100	Martinique	14.0800	-62.8200	16.3600	-57.5200

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
DDAE 1001 To DCAE00 2	5495	(m)	Guadeloupe - Grande-	15.8000	-61.8500		-60.9700
RRAF_1991_To_RGAF09_2	5495	0.100	Terre and surrounding	15.8000	-01.8500	16.5500	-60.9700
			islands - onshore				
RRAF_1991_To_RGAF09_3	5496	0.100		17.8200	-63.2100	18.1700	-62.7300
	3430	0.100	and St Barthelemy -	17.8200	-03.2100	18.1700	-02.7300
			onshore				
RRAF_1991_To_WGS_1984_1	4560	1.000	Caribbean - French	14.0800	-63.6600	18.5300	-57.5200
			Antilles		00.000	20.000	07.0200
RSAO13_To_WGS_1984_1	8819	1.000	Angola	-18.0200	8.2000	-4.3800	24.0900
RSRGD2000_To_WGS_1984_1	15974		Antarctica - Ross Sea	-90.0000	144.9900	-59.9900	-144.9900
			Region				
RT38_Stockholm_To_RT38	1760	0.000	Sweden - onshore	55.2800	10.9300	69.0700	24.1700
RT90_To_ETRS_1989_1	1437	0.500	Sweden	54.9600	10.0300	69.0700	24.1700
RT90_To_ETRS_1989_2	1787	Unknown	Sweden	54.9600	10.0300	69.0700	24.1700
RT90_To_SWEREF99_1	1895	0.100	Sweden	54.9600	10.0300	69.0700	24.1700
RT90_To_WGS_1984	1680	1.000	Sweden	54.9600	10.0300	69.0700	24.1700
RT90_To_WGS_1984_2	1896	1.000	Sweden	54.9600	10.0300	69.0700	24.1700
SAD69_to_SIRGAS-Chile_2010_4	9348		Chile - Tierra del Fuego	-55.9600	-74.8300	-51.9900	-66.3300
SAD69_to_SIRGAS-Chile_2013_4	9349	5.000	Chile - Tierra del Fuego	-55.9600	-74.8300	-51.9900	-66.3300
SAD69_to_SIRGAS-Chile_2016_4	9350	5.000	Chile - Tierra del Fuego	-55.9600	-74.8300	-51.9900	-66.3300
SAD69_to_SIRGAS-Chile_2021_(4)	10138		Chile - Tierra del Fuego	-55.9600	-74.8300	-51.9900	-66.3300
SAD_1969_96_To_SIRGAS_2000_1	5529	0.500	Brazil - onshore south of	-33.7800	-60.5800	4.4300	-34.7400
			14°S and east of 53°W				
SAD_1969_96_To_SIRGAS_2000_2	5881		Brazil	-35.7100	-74.0100	7.0400	-25.2800
SAD_1969_96_To_WGS_1984_1	5543	0.500	Brazil - onshore south of	-33.7800	-60.5800	4.4300	-34.7400
			14°S and east of 53°W				
SAD_1969_96_To_WGS_1984_2	6195		Brazil	-35.7100	-74.0100	7.0400	
SAD_1969_To_SIRGAS_2000_1	15485		Brazil	-35.7100	-74.0100	7.0400	-25.2800
SAD_1969_To_SIRGAS_2000_2	5528	1.000	Brazil - onshore south of	-33.7800	-60.5800	4.4300	-34.7400
			14°S and east of 53°W				
SAD_1969_To_SIRGAS-Chile_1	7448	5.000	Chile - onshore north of	-32.0000	-71.7700	-17.5000	-67.0000
			32°S				
SAD_1969_To_SIRGAS-Chile_2	6968	5.000	Chile - onshore 32°S to	-36.0000	-72.8700	-31.9900	-69.7700
			36°S				

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
SAD_1969_To_SIRGAS-Chile_3	7449	5.000	Chile - onshore 36°S to	-43.5000	-74.4800	-35.9900	-70.3900
			43.5°S				
SAD_1969_To_SIRGAS-Chile_4	6970		Chile - Tierra del Fuego	-55.9600	-74.8300		-66.3300
SAD_1969_To_WGS_1984_1	1864	19.000	South America - onshore	-45.0000	-81.4100	12.5200	-34.7400
			north of 45°S				
SAD_1969_To_WGS_1984_10	1873		Paraguay	-27.5900	-62.6500	-19.2900	-54.2400
SAD_1969_To_WGS_1984_11	1874		Peru - onshore	-18.3500	-81.4100	-0.0300	-68.6700
SAD_1969_To_WGS_1984_12	1875	44.000	Trinidad and Tobago -	9.9900	-61.9800	10.9000	-60.8500
			Trinidad - onshore				
SAD_1969_To_WGS_1984_13	1876	8.000	Venezuela - onshore	0.6400	-73.3800	12.2500	-59.8000
SAD_1969_To_WGS_1984_14	1877	5.000	Brazil	-35.7100	-74.0100	7.0400	-25.2800
SAD_1969_To_WGS_1984_15	5542	1.000	Brazil - onshore south of	-33.7800	-60.5800	4.4300	-34.7400
			14°S and east of 53°W				
SAD_1969_To_WGS_1984_16	5882	5.000	Brazil	-35.7100	-74.0100	7.0400	-25.2800
SAD_1969_To_WGS_1984_17	6974	5.000	Chile - onshore north of	-32.0000	-71.7700	-17.5000	-67.0000
			32°S				
SAD_1969_To_WGS_1984_18	6975	5.000	Chile - onshore 32°S to	-36.0000	-72.8700	-31.9900	-69.7700
			36°S				
SAD_1969_To_WGS_1984_19	6976	5.000	Chile - onshore 36°S to	-43.5000	-74.4800	-35.9900	-70.3900
			43.5°S				
SAD_1969_To_WGS_1984_2	1865	9.000	Argentina - mainland	-52.4300	-73.5900	-21.7800	-53.6500
			onshore				
SAD_1969_To_WGS_1984_20	6977	5.000	Chile - Tierra del Fuego	-55.9600	-74.8300	-51.9900	-66.3300
SAD_1969_To_WGS_1984_3	1866	26.000	Bolivia	-22.9100	-69.6600	-9.6700	-57.5200
SAD_1969_To_WGS_1984_4	1867	8.000	Brazil - onshore south of	-33.7800	-60.5800	4.4300	-34.7400
			14°S and east of 53°W				
SAD_1969_To_WGS_1984_5	1868	21.000	Chile - onshore north of	-45.0000	-75.2200	-17.5000	-67.0000
			45°S				
SAD_1969_To_WGS_1984_6	1869	10.000	Colombia - mainland	-4.2300	-79.1000	12.5200	-66.8700
SAD_1969_To_WGS_1984_7	1870	6.000	Ecuador - mainland	-5.0100	-81.0300	1.4500	-75.2100
			onshore				
SAD_1969_To_WGS_1984_8	1871	44.000	Ecuador - Galapagos	-1.4100	-91.7200	0.1800	-89.1900
			onshore				
SAD_1969_To_WGS_1984_9	1872	12.000	Guyana - onshore	1.1800	-61.3900	8.5800	-56.4700

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Sainte_Anne_To_RGAF09_1	5492	10.000	Guadeloupe - Grande-	15.8000	-61.8500	16.5500	-60.9700
			Terre and surrounding				
			islands - onshore				
Sainte_Anne_To_WGS_1984_1	1904	10.000	Guadeloupe - Grande-	15.8000	-61.8500	16.5500	-60.9700
			Terre and surrounding				
			islands - onshore				
Sainte_Anne_To_WGS_1984_2	1905	0.100	Guadeloupe - Grande-	15.8000	-61.8500	16.5500	-60.9700
			Terre and surrounding				
			islands - onshore				
Saint_Pierre_et_Miquelon_1950_To_RGSPM_2006	108088	1.000	St Pierre and Miquelon -	46.6900	-56.4800	47.1900	-56.0700
			onshore				
Saint_Pierre_et_Miquelon_1950_To_WGS_1984_(G1150)	8270	1.000	St Pierre and Miquelon -	46.6900	-56.4800	47.1900	-56.0700
			onshore				
Saint_Pierre_et_Miquelon_1950_To_WGS_1984_1	1923	10.000	St Pierre and Miquelon -	46.6900	-56.4800	47.1900	-56.0700
			onshore				
Santo_DOS_1965_To_WGS_1984	15820	44.000	Vanuatu - northern	-17.3200	166.4700	-14.5700	168.7100
			islands				
Sao_Braz_To_PTRA08_1_3par	108175	0.800	Portugal - Azores E -	36.8700	-25.9200	37.9600	-24.7200
			onshore				
Sao_Braz_To_PTRA08_1_7par	108172	0.025	Portugal - Azores E -	36.8700	-25.9200	37.9600	-24.7200
			onshore				
Sao_Braz_To_PTRA08_2_3par	108176	0.800	Portugal - Azores E - S	37.6500	-25.9200	37.9600	-25.0800
			Miguel onshore				
Sao_Braz_To_PTRA08_2_7par	108173	0.030	Portugal - Azores E - S	37.6500	-25.9200	37.9600	-25.0800
			Miguel onshore				
Sao_Braz_To_PTRA08_3_3par	108177	0.800	Azores - Santa Maria	36.9000	-25.2500	37.1000	-24.9500
			Island				
Sao_Braz_To_PTRA08_3_7par	108174	0.010	Azores - Santa Maria	36.9000	-25.2500	37.1000	-24.9500
			Island				
Sao_Braz_To_WGS_1984_1	108117	5.000	Portugal - Azores E -	36.8700	-25.9200	37.9600	-24.7200
			onshore				
Sao_Braz_To_WGS_1984_1_3par	108181	0.900	Portugal - Azores E -	36.8700	-25.9200	37.9600	-24.7200
			onshore				
Sao_Braz_To_WGS_1984_1_7par	108178	0.035	Portugal - Azores E -	36.8700	-25.9200	37.9600	-24.7200
			onshore				

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Sao_Braz_To_WGS_1984_2	108127	1.000	Portugal - Azores E -	36.8700	-25.9200	37.9600	-24.7200
			onshore				
Sao_Braz_To_WGS_1984_2_3par	108182	0.900	Portugal - Azores E - S	37.6500	-25.9200	37.9600	-25.0800
			Miguel onshore				
Sao_Braz_To_WGS_1984_2_7par	108179	0.040	Portugal - Azores E - S	37.6500	-25.9200	37.9600	-25.0800
			Miguel onshore				
Sao_Braz_To_WGS_1984_3_3par	108183	0.900	Azores - Santa Maria	36.9000	-25.2500	37.1000	-24.9500
			Island				
Sao_Braz_To_WGS_1984_3_7par	108180	0.030	Azores - Santa Maria	36.9000	-25.2500	37.1000	-24.9500
			Island				
Sapper_Hill_1943_To_WGS_1984	1225	2.000	Falkland Islands - East	-52.5100	-59.9800	-51.1600	-57.6000
	1000	27.222	Falkland Island	22.5122	0.0400	46.0500	25.2522
Schwarzeck_To_WGS_1984	1226	35.000	Namibia	-30.6400	8.2400	-16.9500	25.2700
Schwarzeck_To_WGS_1984_2	1271	Unknown	Namibia	-30.6400	8.2400	-16.9500	25.2700
Scoresbysund_1952_To_Greenland_1996_1	15899	1.000		68.6600	-29.6900	74.5800	-19.8900
Connection of 1052 To MCC 1004 1	1700	1 000	Scoresbysund area	60.6600	20,000	74 5000	10.0000
Scoresbysund_1952_To_WGS_1984_1	1799	1.000	Greenland - Scoresbysund area	68.6600	-29.6900	74.5800	-19.8900
Solverom Crando 1020 To MCC 1004 1	1065	44.000	•	29.9800	-16.1100	30.2100	15 7000
Selvagem_Grande_1938_To_WGS_1984_1	1965	44.000	Portugal - Selvagens onshore	29.9800	-16.1100	30.2100	-15.7900
SHGD2015_To_Astro_DOS_71-4_2	9226	0.100	St Helena - St Helena	-16.0800	-5.8500	-15.8500	-5.5900
3110D2013_10_A3t10_D03_71=4_2	3220	0.100	Island	-10.0000	-3.8300	-13.8300	-3.3300
SHGD2015_To_WGS_1984_1	7892	1.000		-16.0800	-5.8500	-15.8500	-5.5900
3/10D2013_10_Wd3_1304_1	7032	1.000	Island	10.0000	3.0300	13.0300	3.3300
Sierra Leone 1968 To WGS 1984	1614	26.000	Sierra Leone - onshore	6.8800	-13.3500	10.0000	-10.2600
SIRGAS_1995_to_SIRGAS_2000_1	9979		South America - SIRGAS		-113.2100	16.7500	-26.0000
			1995 by country				
SIRGAS_2000_to_SIRGAS-CON_SIR17P01_1	9980	0.020	Latin America - Central	-59.8700	-122.1900	32.7200	-25.2800
			America and South				
			America				
SIRGAS_2000_To_WGS_1984_1	15894	1.000	Latin America - SIRGAS	-59.8700	-122.1900	32.7200	-25.2800
_			2000 by country				
SIRGAS-Chile_To_WGS_1984_1	5375	1.000		-59.8700	-113.2100	-17.5000	-65.7200
SIRGAS-ES2007.8_To_WGS_1984_1	5395	1.000	El Salvador	9.9700	-91.4300	14.4400	-87.6500
SIRGAS-ROU98_To_WGS_1984_1	5384	1.000	Uruguay	-37.7700	-58.4900	-30.0900	-50.0100

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
SIRGAS_To_WGS_1984_1	1581	2.000	South America - SIRGAS	-59.8700	-113.2100	16.7500	-26.0000
			1995 by country				
S_JTSK/05_Ferro_To_S_JTSK/05_1	5238	1.000	Czechia	48.5800	12.0900	51.0600	18.8600
S_JTSK/05_Ferro_To_WGS_1984_1	5240	1.000	Czechia	48.5800	12.0900	51.0600	18.8600
S_JTSK/05_To_ETRS_1989_1	5226	0.000	Czechia	48.5800	12.0900	51.0600	18.8600
S_JTSK/05_To_WGS_1984_1	5227	1.000	Czechia	48.5800	12.0900	51.0600	18.8600
S-JTSK_[JTSK03]_To_ETRS_1989_1	8367	0.001	Slovakia	47.7300	16.8400	49.6100	22.5600
S-JTSK_[JTSK03]_To_S-JTSK_1	8364	0.050	Slovakia	47.7300	16.8400	49.6100	22.5600
S-JTSK_[JTSK03]_To_WGS_1984_1	8368	1.000	Slovakia	47.7300	16.8400	49.6100	22.5600
S_JTSK_Ferro_To_S_JTSK	1884	0.000	Europe - Czechoslovakia	47.7300	12.0900	51.0600	22.5600
S_JTSK_FERRO_To_WGS_1984_2	5230	1.100	Slovakia	47.7300	16.8400	49.6100	22.5600
S_JTSK_Ferro_To_WGS_1984_3	5242	1.000	Czechia	48.5800	12.0900	51.0600	18.8600
S_JTSK_To_ETRS_1989_1	1622	1.000	Czechia	48.5800	12.0900	51.0600	18.8600
S_JTSK_To_ETRS_1989_2	1624	1.000	Slovakia	47.7300	16.8400	49.6100	22.5600
S_JTSK_To_ETRS_1989_3	4829	0.500	Slovakia	47.7300	16.8400	49.6100	22.5600
S_JTSK_To_ETRS_1989_4	4827	1.000	Slovakia	47.7300	16.8400	49.6100	22.5600
S_JTSK_To_Pulkovo_1942	108202	1.000	Czechia	48.5800	12.0900	51.0600	18.8600
S_JTSK_To_S_JTSK/05_1	5241	0.000	Czechia	48.5800	12.0900	51.0600	18.8600
S_JTSK_To_WGS_1984_1	1623	1.000	Czechia	48.5800	12.0900	51.0600	18.8600
S_JTSK_To_WGS_1984_2	1625	1.000	Slovakia	47.7300	16.8400	49.6100	22.5600
S_JTSK_To_WGS_1984_4	4836	1.000	Slovakia	47.7300	16.8400	49.6100	22.5600
S_JTSK_To_WGS_1984_5	5239	1.000	Czechia	48.5800	12.0900	51.0600	18.8600
S_JTSK_To_WGS_1984_NGA	15965	6.000	Europe - Czechoslovakia	47.7300	12.0900	51.0600	22.5600
SLD99_To_WGS_1984_1	5236	14.000	Sri Lanka - onshore	5.8600	79.6400	9.8800	81.9500
Slovenia_1996_To_ETRS_1989_1	15977	0.000	Slovenia	45.4200	13.3800	46.8800	16.6100
Slovenia_1996_To_WGS_1984_1	15976	1.000	Slovenia	45.4200	13.3800	46.8800	16.6100
Solomon_1968_To_WGS_1984_1	15805	44.000	Solomon Islands - New	-8.8600	156.4400	-7.5200	158.2000
			Georgia - Ghizo (Gizo)				
Solomon_1968_To_WGS_1984_2	15807	44.000	Solomon Islands -	-9.9800	159.5500	-9.2000	160.8800
			Guadalcanal Island				
South_Asia_Singapore_To_WGS_1984	108269		Singapore	1.1300	103.5900	1.4700	104.0700
South_East_Island_1943_To_WGS_1984_1	6914	1.000	Seychelles - Seychelles	-4.8600	55.1500	-3.6600	56.0100
			Bank				
South_East_Island_1943_To_WGS_1984_2	6926	1.000	Seychelles - Seychelles	-4.8600	55.1500	-3.6600	56.0100
			Bank				

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
South_Yemen_To_WGS_1984_1	1682	5.000	Yemen - South Yemen -	12.5400	43.3700	19.0000	53.1400
			mainland				
South_Yemen_To_Yemen_NGN_1996	1539	5.000	Yemen - South Yemen -	12.5400	43.3700	19.0000	53.1400
			mainland				
SRB_ETRS89_To_ETRS_1989_1	8893	0.000	Serbia	42.2300	18.8100	46.1900	23.0100
SRB_ETRS89_To_WGS_1984_1	8894	1.000	Serbia	42.2300	18.8100	46.1900	23.0100
SREF98_To_ETRS_1989_1	4076	0.000	Serbia and Kosovo	41.8500	18.8100	46.1900	23.0100
SREF98_To_WGS_1984_1	4077	1.000	Serbia and Kosovo	41.8500	18.8100	46.1900	23.0100
ST71_Belep_To_WGS_1984_1	1931	1.000	New Caledonia - Belep	-19.8500	163.5400	-19.5000	163.7500
ST84_Ile_des_Pins_To_RGNC_1991-93_1	15893	0.100	New Caledonia - Ile des	-22.7300	167.3600	-22.4900	167.6100
			Pins				
ST84_Ile_des_Pins_To_WGS_1984_1	1930	1.000	New Caledonia - Ile des	-22.7300	167.3600	-22.4900	167.6100
			Pins				
ST84_Ile_des_Pins_To_WGS_1984_2	15848	10.000	New Caledonia - Ile des	-22.7300	167.3600	-22.4900	167.6100
			Pins				
ST87_Ouvea_To_RGNC_1991-93_1	15885	0.500	New Caledonia - Ouvea	-20.7700	166.4400	-20.3400	166.7100
ST87_Ouvea_To_RGNC_1991-93_2	15892	0.100	New Caledonia - Ouvea	-20.7700	166.4400	-20.3400	166.7100
ST87_Ouvea_To_WGS_1984_2	15881	1.000	New Caledonia - Ouvea	-20.7700	166.4400	-20.3400	166.7100
St_George_To_NAD_1983	1457	0.500	USA - Alaska - St. George	56.4900	-169.8800	56.6700	-169.3800
			Island				
St_George_Island_To_NAD_1983_2	8546	0.150	USA - Alaska - St. George	56.4900	-169.8800	56.6700	-169.3800
			Island				
St_George_To_WGS_1984_1	1698	1.500	USA - Alaska - St. George	56.4900	-169.8800	56.6700	-169.3800
			Island				
St_Helena_Tritan_To_SHGD2015_1	7897	0.050	St Helena - St Helena	-16.0800	-5.8500	-15.8500	-5.5900
			Island				
St_Helena_Tritan_To_WGS_1984_1	7898	1.000	St Helena - St Helena	-16.0800	-5.8500	-15.8500	-5.5900
			Island				
St_Kitts_1955_To_WGS_1984	1445	10.000	St Kitts and Nevis -	17.0600	-62.9200	17.4600	-62.5000
			onshore				
St_Kitts_1955_To_WGS_1984_2	15750	44.000	St Kitts and Nevis -	17.0600	-62.9200	17.4600	-62.5000
			onshore				
St_Lawrence_To_NAD_1983	1455	0.500	USA - Alaska - St.	62.8900	-171.9700	63.8400	-168.5900
			Lawrence Island				
St_Lawrence_Island_To_NAD_1983_2	8547	0.500		62.8900	-171.9700	63.8400	-168.5900
			Lawrence Island				

Geographic (datum) Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
St_Lawrence_To_WGS_1984_1	1699		USA - Alaska - St.	62.8900	-171.9700	63.8400	-168.5900
			Lawrence Island				
St_Lucia_1955_To_WGS_1984	1446	10.000	St Lucia - onshore	13.6600	-61.1300	14.1600	-60.8200
St_Lucia_1955_To_WGS_1984_2	6897	2.000	St Lucia - onshore	13.6600	-61.1300	14.1600	-60.8200
St_Paul_To_NAD_1983	1456	0.500	USA - Alaska - St. Paul Island	57.0600	-170.5100	57.2800	-170.0400
St_Paul_Island_To_NAD_1983_2	8548	0.500		57.0600	-170.5100	57.2800	-170.0400
St_Paul_To_WGS_1984_1	1700	1.500	USA - Alaska - St. Paul Island	57.0600	-170.5100	57.2800	-170.0400
S_TUREF_To_ETRS_1989_1	5260	0.100	Turkey	34.4200	25.6200	43.4500	44.8300
St_Vincent_1945_To_WGS_1984_1	1959	1.000	St Vincent and the Grenadines - onshore	12.5400	-61.5200	13.4400	-61.0700
SVY21_To_WGS_1984_1	8886	1.000	Singapore	1.1300	103.5900	1.4700	104.0700
SWEREF99_To_ETRS_1989_1	1878	0.000	Sweden	54.9600	10.0300	69.0700	24.1700
SWEREF99_To_RT90	108212	Unknown	Sweden	54.9600	10.0300	69.0700	24.1700
SWEREF99_To_WGS_1984_1	1879	1.000	Sweden	54.9600	10.0300	69.0700	24.1700
Tahaa_1954_To_RGPF_1	8833	0.500	French Polynesia - Society Islands - Bora Bora, Huahine, Raiatea, Tahaa	-16.9600	-151.9100	-16.1700	-150.8900
Tahaa_1954_To_WGS_1984_1	1913	10.000	French Polynesia - Society Islands - Bora Bora, Huahine, Raiatea, Tahaa	-16.9600	-151.9100	-16.1700	-150.8900
Tahaa_1954_To_WGS_1984_2	15770	1.000	French Polynesia - Society Islands - Bora Bora, Huahine, Raiatea, Tahaa	-16.9600	-151.9100	-16.1700	-150.8900
Tahaa_1954_To_WGS_1984_3	8834	1.000	French Polynesia - Society Islands - Bora Bora, Huahine, Raiatea, Tahaa	-16.9600	-151.9100	-16.1700	-150.8900

Geographic (datum) Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
Tahiti_1952_To_WGS_1984_1	1924		French Polynesia - Society Islands - Moorea and Tahiti	-17.9300		-17.4100	
Tahiti_1979_To_RGPF_1	8829	0.500	French Polynesia - Society Islands - Tahiti	-17.9300	-149.7000	-17.4400	-149.0900
Tahiti_1979_To_WGS_1984_1	4835	1.000	French Polynesia - Society Islands - Tahiti	-17.9300	-149.7000	-17.4400	-149.0900
Tahiti_1979_To_WGS_1984_2	8830	1.000	French Polynesia - Society Islands - Tahiti	-17.9300	-149.7000	-17.4400	-149.0900
Tananarive_1925_Paris_To_Tananarive_1925	1265	0.000	Madagascar - onshore	-25.6400	43.1800	-11.8900	50.5600
Tananarive_1925_Paris_To_WGS_1984	8176	100.000	Madagascar - onshore	-25.6400	43.1800	-11.8900	50.5600
Tananarive_1925_To_WGS_1984	1227	Unknown	Madagascar - onshore and nearshore	-26.5900	42.5300	-11.6900	51.0300
Tananarive_Paris_To_WGS_1984_2	6874	3.000	Madagascar - onshore	-25.6400	43.1800	-11.8900	50.5600
Tananarive_To_WGS_1984_2	6873	3.000	Madagascar - onshore and nearshore	-26.5900	42.5300	-11.6900	51.0300
Tapi_Aike_To_WGS_1984_1	9260	5.000	Argentina - south Santa Cruz	-52.4300	-73.2800	-50.3300	-68.3000
Tern_Island_1961_To_WGS_1984	15795	44.000	USA - Hawaii - Tern Island and Sorel Atoll	23.6900	-166.3600	23.9300	-166.0300
Tete_To_Moznet_1	1297	30.000	Mozambique - onshore	-26.8700	30.2100	-10.4200	40.9000
Tete_To_Moznet_2	1298	1.000	Mozambique - A	-26.8700	31.9100	-23.9100	34.5000
Tete_To_Moznet_3	1299	4.000	Mozambique - B	-24.9100	31.2900	-19.7400	35.6500
Tete_To_Moznet_4	1300	3.000	Mozambique - C	-19.9100	30.2100	-14.0100	39.1800
Tete_To_Moznet_5	1301	10.000	Mozambique - D	-16.9400	34.3600	-10.4200	40.9000
Tete_To_WGS_1984_1	1683	30.000	Mozambique - onshore	-26.8700	30.2100	-10.4200	40.9000
Tete_To_WGS_1984_2	1684	1.000	Mozambique - A	-26.8700	31.9100	-23.9100	34.5000
Tete_To_WGS_1984_3	1685	4.000	Mozambique - B	-24.9100	31.2900	-19.7400	35.6500
Tete_To_WGS_1984_4	1686	3.000	Mozambique - C	-19.9100	30.2100	-14.0100	39.1800
Tete_To_WGS_1984_5	1687	10.000	Mozambique - D	-16.9400	34.3600	-10.4200	40.9000
Tete_To_WGS_1984_6	6901	17.000	Mozambique - onshore	-26.8700	30.2100	-10.4200	40.9000
TGD2005_to_WGS_1984_1	9771	1.000	Tonga	-25.6800	-179.0800	-14.1400	-171.2800
Timbalai_1948_To_GDBD2009_1	5878	1.000	Brunei	4.0100	112.3700	6.3100	115.3700
Timbalai_1948_To_WGS_1984	1228	19.000	Asia - Brunei and East Malaysia	0.8500	109.3100	7.6700	119.6100
Timbalai_1948_To_WGS_1984_2	1592	5.000	Brunei	4.0100	112.3700	6.3100	115.3700

⁷⁴ Copyright @ 2012, 2015-2022 Esri

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
	1615	(m)	Brunei - onshore	4.0100	114.0900	5.1100	115.3700
Timbalai_1948_To_WGS_1984_4	1852		Malaysia - East Malaysia -	1.5600	109.3100	7.6700	
111115didi_1540_10_WG3_1504_4	1032	3.000	offshore SCS	1.5000	105.5100	7.0700	117.5100
Timbalai_1948_To_WGS_1984_5	5249	1.000	Brunei	4.0100	112.3700	6.3100	115.3700
Timbalai_1948_To_WGS_1984_6	6902	6.000	Brunei - onshore	4.0100	114.0900	5.1100	115.3700
TM65_To_ETRS_1989_1	1640	1.000	Europe - Ireland (Republic and Ulster) - onshore	51.3900	-10.5600	55.4300	-5.3400
TM65_To_WGS_1984	1229	Unknown	Europe - Ireland (Republic and Ulster) - onshore	51.3900	-10.5600	55.4300	-5.3400
TM65_To_WGS_1984_2	1641	1.000	Europe - Ireland (Republic and Ulster) - onshore	51.3900	-10.5600	55.4300	-5.3400
TM75_To_ETRS_1989_2	1953	1.000	Europe - Ireland (Republic and Ulster) - onshore	51.3900	-10.5600	55.4300	-5.3400
TM75_To_ETRS_1989_3_NTv2	6946	0.410	Europe - Ireland (Republic and Ulster) - onshore	51.3900	-10.5600	55.4300	-5.3400
TM75_To_WGS_1984_2	1954	1.000	Europe - Ireland (Republic and Ulster) - onshore	51.3900	-10.5600	55.4300	-5.3400
TM75_To_WGS_1984_3	1956	6.000	Europe - Ireland (Republic and Ulster) - onshore	51.3900	-10.5600	55.4300	-5.3400
TM75_To_WGS_1984_4_NTv2	6947	1.000	Europe - Ireland (Republic and Ulster) - onshore	51.3900	-10.5600	55.4300	-5.3400
Tokyo_To_JGD_2000_1	15483		Japan - onshore	20.3700		45.5400	
Tokyo_To_JGD_2000_NTv2	6712		Japan - NTv2	20.0000	121.0000	47.0000	154.0000
Tokyo_To_JGD_2011_2_NTv2	6740	0.200	Japan onshore excluding northern main province	20.3700	122.8300	45.5400	154.0500
Tokyo_To_WGS_1984_1	1230	29.000	Asia - Japan and South Korea	20.3700	122.8300	45.5400	145.8700

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
Tokyo_To_WGS_1984_108	15484		Japan - onshore	20.3700		45.5400	
Tokyo_To_WGS_1984_2	1231	13.000	Japan - onshore mainland	30.1800	128.3100	45.5400	145.8700
			and adjacent islands				
Tokyo_To_WGS_1984_2001	108106		Japan - onshore	20.3700		45.5400	
Tokyo_To_WGS_1984_3	1232	13.000	Korea, Republic of (South	33.1400	124.5300	38.6400	131.0100
			Korea) - onshore				
Tokyo_To_WGS_1984_4	1233		Japan - Okinawa	23.9800		26.9100	
Tokyo_To_WGS_1984_5	1305	4.000	Korea, Republic of (South	33.1400	124.5300	38.6400	131.0100
			Korea) - onshore				
Tokyo_To_WGS_1984_NTv2	108109		Japan - NTv2	20.0000	121.0000	47.0000	
Trinidad_1903_To_WGS_1984	1296	2.000	Trinidad and Tobago -	9.8300	-62.0900	11.5100	-60.0000
			Trinidad				
Trinidad_1903_To_WGS_1984_2	10085	3.000	Trinidad and Tobago -	9.8300	-62.0900	11.5100	-60.0000
			Trinidad				
Tristan_1968_To_WGS_1984	15816	44.000	St Helena - Tristan da	-40.4200	-12.7600	-37.0000	-9.8000
			Cunha				
TUREF_To_WGS_1984_1	5261		Turkey	34.4200	25.6200	43.4500	44.8300
TWD_1997_To_WGS_1984_1	3830		Taiwan	17.3600	114.3200	26.9600	
UCS-2000_to_ETRS_1989_1	9901		Ukraine	43.1800	22.1500	52.3800	40.1800
Ukraine_2000_To_ITRF_2005_1	108035		Ukraine	43.1800	22.1500	52.3800	40.1800
Ukraine_2000_To_WGS_1984_1	5590		Ukraine	43.1800	22.1500	52.3800	
Ukraine_2000_To_WGS_1984_2	5840		Ukraine	43.1800		52.3800	
Vanua_Levu_1915_To_WGS_1984_1	15878	50.000	Fiji - Vanua Levu and	-17.0700	178.4200	-16.1000	-179.7700
			Taveuni				
Vientiane_1982_To_Lao_1997_1	1063	2.000		13.9200		22.5000	
Viti_Levu_1912_To_WGS_1984_1	15897	44.000	Fiji - Viti Levu	-18.3200	177.1900	-17.2500	178.7500
Viti_Levu_1912_To_WGS_1984_2	6895	5.000	Fiji - Viti Levu	-18.3200	177.1900	-17.2500	178.7500
Viti_Levu_1916_To_WGS_1984	15821	44.000	Fiji - Viti Levu	-18.3200	177.1900	-17.2500	178.7500
VN_2000_To_WGS_1984_1	5194	1.000	Vietnam - DBSCL 02 and	9.3500	104.2400	11.0400	107.1100
			03				
VN_2000_To_WGS_1984_2	6960	1.000	Vietnam - onshore	8.3300	102.1400	23.4000	109.5300
Voirol_1875_Grad_To_Voirol_1875	108339	Unknown	Algeria - north of 32°N	31.9900	-2.9500	37.1400	9.0900
Voirol_1875_Grad_To_WGS_1984	108278	44.000	Algeria - north of 32°N	31.9900	-2.9500	37.1400	9.0900
Voirol_1875_Paris_To_Voirol_1875	1266	0.000	Algeria - north of 32°N	31.9900	-2.9500	37.1400	9.0900
Voirol_1875_Paris_To_WGS_1984	8211	100.000	Algeria - north of 32°N	31.9900	-2.9500	37.1400	9.0900
Voirol_1875_To_WGS_1984	1294	Unknown	Algeria - north of 32°N	31.9900	-2.9500	37.1400	9.0900

⁷⁶ Copyright @ 2012, 2015-2022 Esri

Geographic (datum) Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
Voirol_1879_Grad_To_Voirol_1879	108340	0.000	Algeria - north of 32°N	31.9900	-2.9500	37.1400	9.0900
Voirol_Unifie_1960_Grad_To_WGS_1984	108265	44.000	Algeria - north of 32°N	31.9900	-2.9500	37.1400	9.0900
Voirol_Unifie_1960_Paris_To_Voirol_Unifie_1960	108092	0.000	Algeria - north of 32°N	31.9900	-2.9500	37.1400	9.0900
Voirol_Unifie_1960_Paris_To_WGS_1984	108090	44.000	Algeria - north of 32°N	31.9900	-2.9500	37.1400	9.0900
Wake_Eniwetok_1960_To_WGS_1984	15822	6.000	Pacific - Marshall Islands, Wake - onshore	8.6600	162.2700	19.3800	167.8200
Wake_Island_1952_To_WGS_1984	15823	44.000	Wake - onshore	19.2200	166.5500	19.3800	166.7200
WGS_1972_BE_To_WGS_1972_1	1239	2.000	World	-90.0000	-180.0000	90.0000	180.0000
WGS_1972_BE_To_WGS_1984_1	1240	2.000	World - WGS72 BE to WGS 84 - by country	-90.0000	-180.0000	90.0000	180.0000
WGS_1972_To_WGS_1984_1	1237	2.000	World	-90.0000	-180.0000	90.0000	180.0000
WGS_1972_To_WGS_1984_2	1238	2.000	World	-90.0000	-180.0000	90.0000	180.0000
WGS_1984_(ITRF00)_To_NAD_1983	108190	0.100	USA - CONUS and Alaska; PRVI	14.9200	167.6500	74.7100	-63.8800
WGS_1984_(ITRF00)_To_NAD_1983_2011	108354	0.100	USA - CONUS and Alaska; PRVI	14.9200	167.6500	74.7100	-63.8800
WGS_1984_(ITRF00)_To_NAD_1983_CORS96	108151	0.100	USA - CONUS and Alaska; PRVI	14.9200	167.6500	74.7100	-63.8800
WGS_1984_(ITRF00)_To_NAD_1983_HARN	108282	0.100	USA (all states)	15.5600	167.6500	74.7100	-65.6900
WGS_1984_(ITRF08)_To_NAD_1983_2011	108363	0.030	USA - CONUS and Alaska; PRVI	14.9200	167.6500	74.7100	-63.8800
WGS_1984_(ITRF08)_To_NAD_1983_MA11	108364	0.050	Pacific - US interests Mariana plate	1.6400	129.4800	23.9000	149.5500
WGS_1984_(ITRF08)_To_NAD_1983_PA11	108365	0.050	Pacific - US interests Pacific plate	-17.5600	157.4700	31.8000	-151.2700
WGS_1984_To_Ain_El_Abd_1970_MB	108366	0.100	Bahrain	25.5300	50.2600	27.1700	51.1300
WGS_1984_To_GDA2020_3	9690	3.100	Australia - GDA	-60.5500	93.4100	-8.4700	173.3400
WGS_1984_To_GDA2020_4	9691	3.200	Australia - onshore	-43.7000	112.8500	-9.8600	153.6900
WGS_1984_To_GDA2020_NTv2_CPD_plus_Lord_Howe_Norfolk	108440	3.200	Australia - Lord Howe and Norfolk Islands onshore	-32.3333	158.8000	-28.6333	168.3333
WGS_1984_To_IG05(2012)_Intermediate_CRS	9189	0.100	Asia - Middle East - Israel and Palestine Territory onshore	29.4500	34.1700	33.2800	35.6900

Geographic (datum) Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
WGS_1984_To_Israel_CoordFrame	108021	1.000	Israel, Palestine Territory,	29.1900	32.9900	33.5300	39.300
			and Jordan				
WGS_1984_To_KUDAMS_KM_2019	108451	0.300	Kuwait	28.5300	46.5400	30.0900	49.5300
WGS_1984_To_MSK_1942	108055	999.0	Mongolia	41.5800	87.7600	52.1500	119.9400
WGS_1984_To_NTF_NTv2	15960	1.000	France - onshore -	41.3100	-4.8700	51.1400	9.6300
			mainland and Corsica				
WGS_1984_To_Observatorio_Meteorologico_1965_1	108211	Unknown	China - Macao	22.0600	113.5200	22.2300	113.6800
WGS_1984_To_Observatorio_Meteorologico_1965_2	108235	Unknown	China - Macao	22.0600	113.5200	22.2300	113.6800
WGS_1984_To_Ocotepeque_1935_MB	108014	0.500	Costa Rica - onshore	7.9800	-90.4500	11.2200	-82.5300
WGS_1984_To_OSGB_1936_OSTN15	108058	1.0	UK - Britain and UKCS	49.7500	-9.0000	61.0100	2.0100
			49~45'N to 61~N, 9~W to				
			2~E				
WGS_1984_To_Pulkovo_1942	108056	Unknown	Mongolia	41.5800	87.7600	52.1500	119.9400
WGS_1984_To_RT90	108213	Unknown	Sweden	54.9600	10.0300	69.0700	24.1700
WGS_1984_To_Xrail84_1	108051	0.500	UK - London	51.2000	-0.7000	51.8000	0.6000
Yacare_To_SIRGAS-ROU98_1	5385	1.500	Uruguay - onshore	-35.0000	-58.4900	-30.0900	-53.0900
Yacare_To_WGS_1984	1234	Unknown	Uruguay - onshore	-35.0000	-58.4900	-30.0900	-53.0900
Yacare_To_WGS_1984_2	5386	1.500	Uruguay - onshore	-35.0000	-58.4900	-30.0900	-53.0900
Yemen_NGN_1996_To_WGS_1984	1540	1.000	Yemen	8.9500	41.0800	19.0000	57.9600
Yoff_To_WGS_1972_1	1828	25.000	Senegal	10.6400	-20.2200	16.7000	-11.3600
Yoff_To_WGS_1984_2	6903	5.000	Senegal	10.6400	-20.2200	16.7000	-11.3600
Zanderij_To_WGS_1984	1235	11.000	Suriname	1.8300	-58.0800	9.3500	-52.6600

Table 2: Geographic (datum) transformations: Longitude rotation, null, and unit change methods

Geographic (datum) Transformation Name	WKID	Method
ATRF_2014_To_GDA2020_Null	108442	Null
Batavia_Jakarta_To_Batavia	1759	Longitude_Rotation
Belge_1950_Brussels_To_Belge_1950	1264	Longitude_Rotation
Bern_1898_Bern_To_CH1903	1765	Longitude_Rotation
Bogota_Bogota_To_Bogota	1755	Longitude_Rotation
Carthage_Grad_To_Carthage	108338	Unit_Change
Carthage_Paris_To_Carthage	1881	Longitude_Rotation
Greek_Athens_To_Greek	1761	Longitude_Rotation
Gunung_Segara_Jakarta_To_Gunung_Segara	1883	Longitude_Rotation
ITRF_2014_To_GDA2020_Null	108061	Null

⁷⁸ Copyright @ 2012, 2015-2022 Esri

Geographic (datum) Transformation Name	WKID	Method
JGD_2011_To_WGS_1984	108053	Null
Lisbon_1890_Lisbon_To_Lisbon	1991	Longitude_Rotation
Lisbon_Lisbon_To_Lisbon	1756	Longitude_Rotation
Makassar_Jakarta_To_Makassar	1260	Longitude_Rotation
MGI_Ferro_To_MGI	3895	Longitude_Rotation
MONREF_1997_To_WGS_1984	108054	Null
Monte_Mario_Rome_To_Monte_Mario	1262	Longitude_Rotation
NAD_1983_HARN_To_HARN_Adjusted_WCCS_Chippewa	108063	Null
NGO_1948_Oslo_To_NGO_1948	1762	Longitude_Rotation
NTF_Paris_To_NTF	1763	Longitude_Rotation
Padang_1884_Jakarta_To_Padang_1884	1758	Longitude_Rotation
RT38_Stockholm_To_RT38	1760	Longitude_Rotation
S_JTSK/05_Ferro_To_S_JTSK/05_1	5238	Longitude_Rotation
S_JTSK_Ferro_To_S_JTSK	1884	Longitude_Rotation
Tananarive_1925_Paris_To_Tananarive_1925	1265	Longitude_Rotation
Voirol_1875_Grad_To_Voirol_1875	108339	Unit_Change
Voirol_1875_Paris_To_Voirol_1875	1266	Longitude_Rotation
Voirol_1879_Grad_To_Voirol_1879	108340	Unit_Change
Voirol_Unifie_1960_Paris_To_Voirol_Unifie_1960	108092	Longitude_Rotation

Table 3: Geographic (datum) transformations: Geographic 2D offset method

Geographic (datum)	WKID	Method	dlon	dlat
Transformation Name			(seconds)	(seconds)
Anguilla_1957_To_WGS_1984_1	1447	Geographic_2D_Offset	4.4	-18.0
Greek_To_GGRS_1987	1891	Geographic_2D_Offset	0.28	-5.86
MGI_Ferro_To_MGI_1901_1	3913	Geographic_2D_Offset	-63586.02	0.0
S_JTSK_To_S_JTSK/05_1	5241	Geographic_2D_Offset	0.0	0.0

Table 4: Geographic (datum) transformations: Geocentric translation method

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
Abidjan_1987_To_WGS_1984	1470	Geocentric_Translation	-124.76	53.0	466.79
Abidjan_1987_To_WGS_1984_2	6872	Geocentric_Translation	-123.1	53.2	465.4
Accra_To_WGS_1972_BE	1570	Geocentric_Translation	-171.16	17.29	323.31
Accra_To_WGS_1984	1569	Geocentric_Translation	-199.0	32.0	322.0

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
Accra_To_WGS_1984_4	6896	Geocentric_Translation	-170.0	33.0	326.0
Aden_1925_To_WGS_1984_1	6910	Geocentric_Translation	-24.0	-203.0	268.0
Adindan_To_WGS_1984_1	1100	Geocentric_Translation	-166.0	-15.0	204.0
Adindan_To_WGS_1984_2	1101	Geocentric_Translation	-118.0	-14.0	218.0
Adindan_To_WGS_1984_3	1102	Geocentric_Translation	-134.0	-2.0	210.0
Adindan_To_WGS_1984_4	1103	Geocentric_Translation	-165.0	-11.0	206.0
Adindan_To_WGS_1984_5	1104	Geocentric_Translation	-123.0	-20.0	220.0
Adindan_To_WGS_1984_6	1105	Geocentric_Translation	-128.0	-18.0	224.0
Adindan_To_WGS_1984_7	1106	Geocentric_Translation	-161.0	-14.0	205.0
Afgooye_To_WGS_1984	1107	Geocentric_Translation	-43.0	-163.0	45.0
AGD_1966_To_GDA_1994	1278	Geocentric_Translation	-127.8	-52.3	152.9
AGD_1966_To_PNG_1994_1	5662	Geocentric_Translation	-124.0	-60.0	153.0
AGD_1966_To_PNG_1994_3	6938	Geocentric_Translation	-129.0	-58.0	152.0
AGD_1966_To_PNG_1994_5	6940	Geocentric_Translation	-131.3	-55.3	151.8
AGD_1966_To_PNG_1994_7	6942	Geocentric_Translation	-137.4	-58.9	150.4
AGD_1966_To_WGS_1984	1108	Geocentric_Translation	-133.0	-48.0	148.0
AGD_1966_To_WGS_1984_16	15788	Geocentric_Translation	-127.8	-52.3	152.9
AGD_1966_To_WGS_1984_19	5841	Geocentric_Translation	-124.0	-60.0	154.0
AGD_1966_To_WGS_1984_21	6943	Geocentric_Translation	-129.0	-58.0	152.0
AGD_1966_To_WGS_1984_22	6944	Geocentric_Translation	-131.3	-55.3	151.8
AGD_1966_To_WGS_1984_23	6945	Geocentric_Translation	-137.4	-58.9	150.4
AGD_1984_To_GDA_1994	1279	Geocentric_Translation	-128.5	-53.0	153.4
AGD_1984_To_WGS_1984_1	1109	Geocentric_Translation	-134.0	-48.0	149.0
AGD_1984_To_WGS_1984_8	15789	Geocentric_Translation	-128.5	-53.0	153.4
AGD66_To_WGS_1984_20	6905	Geocentric_Translation	-128.0	-52.0	153.0
Ain_el_Abd_To_KSA-GRF17_1	9362	Geocentric_Translation	13.8714	-83.9721	101.674
Ain_El_Abd_To_WGS_1984_1	1110	Geocentric_Translation	-150.0	-250.0	-1.0
Ain_El_Abd_To_WGS_1984_2	1111	Geocentric_Translation	-143.0	-236.0	7.0
Ain_el_Abd_To_WGS_1984_3	1055	Geocentric_Translation	-145.7	-249.1	1.5
American_Samoa_1962_To_WGS_1984	1577	Geocentric_Translation	-115.0	118.0	426.0
Anna_1_1965_To_WGS_1984	15794	Geocentric_Translation	-491.0	-22.0	435.0
Antigua_1943_To_WGS_1984	1441	Geocentric_Translation	-255.0	-15.0	71.0
Antigua_1943_To_WGS_1984_NGA	15811	Geocentric_Translation	-270.0	13.0	62.0
Aratu_To_SIRGAS_2000_1	5050	Geocentric_Translation	-157.84	308.54	-146.6
Aratu_To_SIRGAS_2000_2	5052	Geocentric_Translation	-160.31	314.82	-142.25
Aratu_To_SIRGAS_2000_3	5054	Geocentric_Translation	-161.11	310.25	-144.64

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
Aratu_To_SIRGAS_2000_4	5056	Geocentric_Translation	-160.4	302.29	-144.19
Aratu_To_SIRGAS_2000_5	5058	Geocentric_Translation	-153.54	302.33	-152.37
Aratu_To_SIRGAS_2000_6	5060	Geocentric_Translation	-151.5	300.09	-151.15
Aratu_To_SIRGAS_2000_7	5062	Geocentric_Translation	-156.8	298.41	-147.41
Aratu_To_SIRGAS_2000_8	5064	Geocentric_Translation	-157.4	295.05	-150.19
Aratu_To_SIRGAS_2000_9	5066	Geocentric_Translation	-151.99	287.04	-147.45
Aratu_To_WGS_1984_1	15754	Geocentric_Translation	-158.0	315.0	-148.0
Aratu_To_WGS_1984_10	15710	Geocentric_Translation	-160.0	315.0	-142.0
Aratu_To_WGS_1984_11	15711	Geocentric_Translation	-158.0	309.0	-147.0
Aratu_To_WGS_1984_12	15712	Geocentric_Translation	-161.0	310.0	-145.0
Aratu_To_WGS_1984_13	5051	Geocentric_Translation	-157.84	308.54	-146.6
Aratu_To_WGS_1984_14	5053	Geocentric_Translation	-160.31	314.82	-142.25
Aratu_To_WGS_1984_15	5055	Geocentric_Translation	-161.11	310.25	-144.64
Aratu_To_WGS_1984_16	5057	Geocentric_Translation	-160.4	302.29	-144.19
Aratu_To_WGS_1984_17	5059	Geocentric_Translation	-153.54	302.33	-152.37
Aratu_To_WGS_1984_18	5061	Geocentric_Translation	-151.5	300.09	-151.15
Aratu_To_WGS_1984_19	5063	Geocentric_Translation	-156.8	298.41	-147.41
Aratu_To_WGS_1984_2	1550	Geocentric_Translation	-139.62	290.53	-150.29
Aratu_To_WGS_1984_20	5065	Geocentric_Translation	-157.4	295.05	-150.19
Aratu_To_WGS_1984_21	5067	Geocentric_Translation	-151.99	287.04	-147.45
Aratu_To_WGS_1984_3	1551	Geocentric_Translation	-141.15	293.44	-150.56
Aratu_To_WGS_1984_4	1552	Geocentric_Translation	-142.48	296.03	-149.74
Aratu_To_WGS_1984_5	10089	Geocentric_Translation	-163.466	317.396	-147.538
Aratu_To_WGS_1984_6	10090	Geocentric_Translation	-170.0	305.0	-145.0
Aratu_To_WGS_1984_7	10091	Geocentric_Translation	-162.904	312.531	-137.109
Aratu_To_WGS_1984_8	10092	Geocentric_Translation	-158.0	309.0	-151.0
Aratu_To_WGS_1984_9	10093	Geocentric_Translation	-161.0	308.0	-142.0
Arc_1950_To_WGS_1984_1	1113	Geocentric_Translation	-143.0	-90.0	-294.0
Arc_1950_To_WGS_1984_10	6906	Geocentric_Translation	-145.0	-97.0	-292.0
Arc_1950_To_WGS_1984_11	6904	Geocentric_Translation	-179.0	-81.0	-314.0
Arc_1950_To_WGS_1984_2	1114	Geocentric_Translation	-138.0	-105.0	-289.0
Arc_1950_To_WGS_1984_3	1115	Geocentric_Translation	-153.0	-5.0	-292.0
Arc_1950_To_WGS_1984_4	1116	Geocentric_Translation	-125.0	-108.0	-295.0
Arc_1950_To_WGS_1984_5	1117	Geocentric_Translation	-161.0	-73.0	-317.0
Arc_1950_To_WGS_1984_6	1118	Geocentric_Translation	-134.0	-105.0	-295.0

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
Arc_1950_To_WGS_1984_7	1119	Geocentric_Translation	-169.0	-19.0	-278.0
Arc_1950_To_WGS_1984_8	1120	Geocentric_Translation	-147.0	-74.0	-283.0
Arc_1950_To_WGS_1984_9	1121	Geocentric_Translation	-142.0	-96.0	-293.0
Arc_1960_To_WGS_1984	1122	Geocentric_Translation	-160.0	-6.0	-302.0
Arc_1960_To_WGS_1984_2	1284	Geocentric_Translation	-157.0	-2.0	-299.0
Arc_1960_To_WGS_1984_3	1285	Geocentric_Translation	-175.0	-23.0	-303.0
Arc_1960_To_WGS_1984_4	3998	Geocentric_Translation	-153.0	-5.0	-292.0
Ascension_Island_1958_To_WGS_1984	15797	Geocentric_Translation	-205.0	107.0	53.0
Astro_1952_To_WGS_1984	15799	Geocentric_Translation	124.0	-234.0	-25.0
Astro_DOS_71-4_To_SHGD2015_1	7893	Geocentric_Translation	-323.65	551.39	-491.22
Astro_DOS_71-4_To_WGS_1984_2	7894	Geocentric_Translation	-323.65	551.39	-491.22
Australian_Antarctic_1998_To_WGS_1984_1	1890	Geocentric_Translation	0.0	0.0	0.0
Ayabelle_Lighthouse_To_WGS_1984_2	6907	Geocentric_Translation	-77.0	-128.0	142.0
Ayabelle_To_WGS_1984	15800	Geocentric_Translation	-79.0	-129.0	145.0
Azores_Central_1948_To_WGS_1984_1	1886	Geocentric_Translation	-104.0	167.0	-38.0
Azores_Central_1995_To_PTRA08_1	5027	Geocentric_Translation	-105.679	166.1	-37.322
Azores_Central_1995_To_PTRA08_2	5028	Geocentric_Translation	-105.377	165.769	-36.965
Azores_Central_1995_To_PTRA08_3	5029	Geocentric_Translation	-105.359	165.804	-37.05
Azores_Central_1995_To_PTRA08_4	5030	Geocentric_Translation	-105.531	166.39	-37.326
Azores_Central_1995_To_PTRA08_5	5031	Geocentric_Translation	-105.756	165.972	-37.313
Azores_Central_1995_To_PTRA08_6	5032	Geocentric_Translation	-106.235	166.236	-37.768
Azores_Central_1995_To_WGS_1984_10	1980	Geocentric_Translation	-106.226	166.366	-37.893
Azores_Central_1995_To_WGS_1984_2	1972	Geocentric_Translation	-106.301	166.27	-37.916
Azores_Central_1995_To_WGS_1984_4	1974	Geocentric_Translation	-106.248	166.244	-37.845
Azores_Central_1995_To_WGS_1984_6	1976	Geocentric_Translation	-106.044	166.655	-37.876
Azores_Central_1995_To_WGS_1984_8	1978	Geocentric_Translation	-106.253	166.239	-37.854
Azores_Occidental_1939_To_PTRA08_1	5033	Geocentric_Translation	-423.058	-172.868	83.772
Azores_Occidental_1939_To_PTRA08_2	5034	Geocentric_Translation	-423.053	-172.871	83.771
Azores_Occidental_1939_To_PTRA08_3	5035	Geocentric_Translation	-423.024	-172.923	83.83
Azores_Occidental_1939_To_WGS_1984_1	1887	Geocentric_Translation	-425.0	-169.0	81.0
Azores_Occidental_1939_To_WGS_1984_2	1982	Geocentric_Translation	-422.651	-172.995	84.02
Azores_Oriental_1940_To_WGS_1984_1	1885	Geocentric_Translation	-203.0	141.0	53.0
Azores_Oriental_1995_To_PTRA08_1	5024	Geocentric_Translation	-204.926	140.353	55.063
Azores_Oriental_1995_To_PTRA08_2	5025	Geocentric_Translation	-204.519	140.159	55.404
Azores_Oriental_1995_To_PTRA08_3	5026	Geocentric_Translation	-205.808	140.771	54.326
Azores_Oriental_1995_To_WGS_1984_2	1968	Geocentric_Translation	-204.633	140.216	55.199

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
Azores_Oriental_1995_To_WGS_1984_4	1970	Geocentric_Translation	-204.619	140.176	55.226
Bab_South_To_NAD_1983	108134	Geocentric_Translation	-185.583	-230.096	281.361
Barbados_1938_To_WGS_1984_1	15793	Geocentric_Translation	31.95	300.99	419.19
Batavia_Jakarta_To_WGS_1984	8178	Geocentric_Translation	-377.0	681.0	-50.0
Batavia_To_WGS_1984	1123	Geocentric_Translation	-377.0	681.0	-50.0
Batavia_To_WGS_1984_2	1813	Geocentric_Translation	-378.873	676.002	-46.255
Batavia_To_WGS_1984_3	1814	Geocentric_Translation	-377.7	675.1	-52.2
Beacon_E_1945_To_WGS_1984	15796	Geocentric_Translation	145.0	75.0	-272.0
Beduaram_To_WGS_1972_BE_1	1839	Geocentric_Translation	-101.0	-111.0	187.0
Beduaram_To_WGS_1984_2	15849	Geocentric_Translation	-106.0	-87.0	188.0
Beijing_1954_To_WGS_1984_1	15918	Geocentric_Translation	12.646	-155.176	-80.863
Beijing_1954_To_WGS_1984_4	15921	Geocentric_Translation	15.8	-154.4	-82.3
Beijing_1954_To_WGS_1984_6	15936	Geocentric_Translation	11.911	-154.833	-80.079
Bekaa_Valley_1920_To_WGS_1984_1	6911	Geocentric_Translation	-183.0	-15.0	273.0
Belge_1972_To_WGS_1984_2	1610	Geocentric_Translation	-125.8	79.9	-100.5
Bellevue_IGN_To_WGS_1984	15801	Geocentric_Translation	-127.0	-769.0	472.0
Bermuda_1957_To_WGS_1984	1124	Geocentric_Translation	-73.0	213.0	296.0
Bermuda_2000_To_WGS_1984_1	15971	Geocentric_Translation	0.0	0.0	0.0
BGS2005_To_ETRS_1989_1	8889	Geocentric_Translation	0.0	0.0	0.0
BGS2005_To_WGS_1984_1	8890	Geocentric_Translation	0.0	0.0	0.0
Bioko_To_WGS_1984_1	6912	Geocentric_Translation	-235.0	-110.0	393.0
Bissau_To_WGS_1984	1547	Geocentric_Translation	-173.0	253.0	27.0
Bogota_Bogota_To_WGS_1984	8174	Geocentric_Translation	307.0	304.0	-318.0
Bogota_To_WGS_1984	1125	Geocentric_Translation	307.0	304.0	-318.0
Bogota_To_WGS_1984_2	1597	Geocentric_Translation	304.5	306.5	-318.1
Bukit_Rimpah_To_WGS_1984	1126	Geocentric_Translation	-384.0	664.0	-48.0
Cadastre_1997_To_RGM_2004_1	4478	Geocentric_Translation	-381.788	-57.501	-256.673
Cadastre_1997_To_WGS_1984_1	4290	Geocentric_Translation	-381.788	-57.501	-256.673
Camacupa_To_RSAO13_1	8883	Geocentric_Translation	-48.0	-345.0	-231.0
Camacupa_To_RSAO13_2	8884	Geocentric_Translation	-50.9	-347.6	-231.0
Camacupa_1948_to_RSAO13_3	9904	Geocentric_Translation	-43.0	-337.0	-233.0
Camacupa_To_WGS_1972_BE_1	1317	Geocentric_Translation	-37.2	-370.6	-228.5
Camacupa_To_WGS_1984_1	1318	Geocentric_Translation	-42.01	-332.21	-229.75
Camacupa_To_WGS_1984_10	1327	Geocentric_Translation	-50.9	-347.6	-231.0
Camacupa_To_WGS_1984_2	1319	Geocentric_Translation	-40.0	-354.0	-224.0

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
Camacupa_To_WGS_1984_4	1321	Geocentric_Translation	-41.8	-342.2	-228.2
Camacupa_To_WGS_1984_5	1322	Geocentric_Translation	-55.5	-348.0	-229.2
Camacupa_To_WGS_1984_6	1323	Geocentric_Translation	-43.0	-337.0	-233.0
Camacupa_To_WGS_1984_7	1324	Geocentric_Translation	-48.0	-345.0	-231.0
Camacupa_To_WGS_1984_8	1325	Geocentric_Translation	-48.6	-345.1	-230.8
Camp_Area_To_WGS_1984	15802	Geocentric_Translation	-104.0	-129.0	239.0
Campo_Inchauspe_To_POSGAR_1994_1	15782	Geocentric_Translation	-148.0	136.0	90.0
Campo_Inchauspe_To_POSGAR_2007_1	5350	Geocentric_Translation	-148.0	136.0	90.0
Campo_Inchauspe_To_WGS_1984	1127	Geocentric_Translation	-148.0	136.0	90.0
Campo_Inchauspe_To_WGS_1984_2	1527	Geocentric_Translation	-154.5	150.7	100.4
Canton_1966_To_WGS_1984	15803	Geocentric_Translation	298.0	-304.0	-375.0
Cape_Canaveral_To_WGS_1984	15804	Geocentric_Translation	-2.0	151.0	181.0
Cape_To_Hartebeesthoek94	1504	Geocentric_Translation	-134.73	-110.92	-292.66
Cape_To_WGS_1984_1	1128	Geocentric_Translation	-136.0	-108.0	-292.0
Cape_To_WGS_1984_2	1129	Geocentric_Translation	-134.73	-110.92	-292.66
Carthage_To_WGS_1984	1130	Geocentric_Translation	-263.0	6.0	431.0
Carthage_To_WGS_1984_2	1538	Geocentric_Translation	-260.1	5.5	432.2
CH1903+_To_CHTRF_1995	1509	Geocentric_Translation	674.374	15.056	405.346
CH1903+_To_ETRS_1989_1	1647	Geocentric_Translation	674.374	15.056	405.346
CH1903+_To_WGS_1984_1	1676	Geocentric_Translation	674.374	15.056	405.346
CH1903_To_ETRS_1989_1	1646	Geocentric_Translation	674.4	15.1	405.3
CH1903_To_WGS_1984_2	1766	Geocentric_Translation	674.374	15.056	405.346
Chatham_Island_1971_To_WGS_1984	1080	Geocentric_Translation	175.0	-38.0	113.0
Chos_Malal_1914_To_Campo_Inchauspe	1528	Geocentric_Translation	160.0	26.0	41.0
Chos_Malal_1914_To_WGS_1984	108096	Geocentric_Translation	5.5	176.7	141.4
Chos_Malal_1914_To_WGS_1984_2	9257	Geocentric_Translation	8.88	184.86	106.69
Chos_Malal_1914_To_WGS_1984_3	9258	Geocentric_Translation	15.75	164.93	126.18
CHTRF95_To_ETRS_1989_1	8895	Geocentric_Translation	0.0	0.0	0.0
CHTRF_1995_To_WGS_1984	1511	Geocentric_Translation	0.0	0.0	0.0
Chua_To_SIRGAS_2000_1	4069	Geocentric_Translation	-144.35	242.88	-33.2
Chua_To_WGS_1984	1131	Geocentric_Translation	-134.0	229.0	-29.0
Chua_To_WGS_1984_2	3972	Geocentric_Translation	-143.87	243.37	-33.52
Chua_To_WGS_1984_3	4834	Geocentric_Translation	-144.35	242.88	-33.2
CIGD11_To_WGS_1984_1	6177	Geocentric_Translation	0.0	0.0	0.0
Combani_1950_To_WGS_1984_1	1916	Geocentric_Translation	-382.0	-59.0	-262.0
Conakry_1905_To_WGS_1984	1517	Geocentric_Translation	-23.0	259.0	-9.0

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
Corrego_Alegre_To_SAD_1969_1	6191	Geocentric_Translation	-138.7	164.4	34.4
Corrego_Alegre_To_SIRGAS_2000_2	6193	Geocentric_Translation	-206.05	168.28	-3.82
Corrego_Alegre_To_WGS_1984	1132	Geocentric_Translation	-206.0	172.0	-6.0
Corrego_Alegre_To_WGS_1984_3	6192	Geocentric_Translation	-205.57	168.77	-4.12
Corrego_Alegre_To_WGS_1984_4	6194	Geocentric_Translation	-206.05	168.28	-3.82
CR05_To_WGS_1984_1	5376	Geocentric_Translation	0.0	0.0	0.0
CSG_1967_To_WGS_1984_1	1906	Geocentric_Translation	-186.0	230.0	110.0
Dabola_To_WGS_1984	1518	Geocentric_Translation	-83.0	37.0	124.0
Datum_73_To_ETRS_1989_2009_3par	5036	Geocentric_Translation	-223.15	110.132	36.711
Datum_73_To_WGS_1984_1	108110	Geocentric_Translation	-223.237	110.193	36.649
Datum_73_To_WGS_1984_2009_3par	108155	Geocentric_Translation	-223.15	110.132	36.711
Datum_73_To_WGS_1984_3	1983	Geocentric_Translation	-223.237	110.193	36.649
Datum_Lisboa_Bessel_To_WGS_1984_1	108113	Geocentric_Translation	508.088	-191.042	565.223
Datum_Lisboa_Hayford_To_Datum_73_1	108222	Geocentric_Translation	-80.809	-170.77	66.991
Datum_Lisboa_Hayford_To_Datum_Lisboa_Bessel_1	108224	Geocentric_Translation	-812.134	130.465	-461.583
Datum_Lisboa_Hayford_To_ETRS_1989_2009_3par	108158	Geocentric_Translation	-303.861	-60.693	103.607
Datum_Lisboa_Hayford_To_WGS_1984_1	108114	Geocentric_Translation	-304.046	-60.576	103.64
Datum_Lisboa_Hayford_To_WGS_1984_2009_3par	108159	Geocentric_Translation	-303.861	-60.693	103.607
Dealul_Piscului_1933_To_WGS_1984_1	1995	Geocentric_Translation	103.25	-100.4	-307.19
Dealul_Piscului_1970_To_WGS_1984_1	1996	Geocentric_Translation	44.107	-116.147	-54.648
Dealul_Piscului_1970_To_WGS_1984_2	1097	Geocentric_Translation	28.0	-121.0	-77.0
Deception_Island_To_WGS_1984	15812	Geocentric_Translation	260.0	12.0	-147.0
Deir_ez_Zor_To_WGS_1972_BE	1584	Geocentric_Translation	-174.6	-3.1	236.2
Deir_ez_Zor_To_WGS_1984_2	15741	Geocentric_Translation	-187.5	14.1	237.6
Deir_ez_Zor_To_WGS_1984_4	1587	Geocentric_Translation	-191.77	15.01	235.07
Deir_ez_Zor_To_WGS_1984_5	15742	Geocentric_Translation	-190.421	8.532	238.69
DGN_1995_To_WGS_1984_1	15912	Geocentric_Translation	0.0	0.0	0.0
Dominica_1945_To_WGS_1984	1442	Geocentric_Translation	725.0	685.0	536.0
DOS_1968_To_WGS_1984	108259	Geocentric_Translation	230.0	-199.0	-752.0
DOS_71_4_To_WGS_1984	15798	Geocentric_Translation	-320.0	550.0	-494.0
Douala_1948_To_WGS_1984_1	15873	Geocentric_Translation	-206.1	-174.7	-87.7
DRUKREF_03_To_WGS_1984_1	5267	Geocentric_Translation	0.0	0.0	0.0
Easter_Island_1967_To_WGS_1984	15806	Geocentric_Translation	211.0	147.0	111.0
ED_1950_ED77_To_WGS_1984_2	1141	Geocentric_Translation	-117.0	-132.0	-164.0
ED_1950_ED77_To_WGS_1984_3	1856	Geocentric_Translation	-122.89	-159.08	-168.74

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
ED_1950_ED77_To_WGS_1984_4	1857	Geocentric_Translation	-84.78	-107.55	-137.25
ED_1950_ED77_To_WGS_1984_5	1858	Geocentric_Translation	-123.92	-155.515	-157.721
ED_1950_ED77_To_WGS_1984_6	15745	Geocentric_Translation	-123.02	-158.95	-168.47
ED_1950_To_ETRS_1989_10	1650	Geocentric_Translation	-84.0	-97.0	-117.0
ED_1950_To_ETRS_1989_13	5040	Geocentric_Translation	-87.987	-108.639	-121.593
ED_1950_To_ETRS_1989_5	1628	Geocentric_Translation	-116.8	-106.4	-154.4
ED_1950_To_WGS_1984_1	1133	Geocentric_Translation	-87.0	-98.0	-121.0
ED_1950_To_WGS_1984_10	1142	Geocentric_Translation	-97.0	-103.0	-120.0
ED_1950_To_WGS_1984_11	1143	Geocentric_Translation	-97.0	-88.0	-135.0
ED_1950_To_WGS_1984_12	1144	Geocentric_Translation	-107.0	-88.0	-149.0
ED_1950_To_WGS_1984_13	1145	Geocentric_Translation	-84.0	-107.0	-120.0
ED_1950_To_WGS_1984_16	1245	Geocentric_Translation	-112.0	-77.0	-145.0
ED_1950_To_WGS_1984_17	1275	Geocentric_Translation	-84.0	-97.0	-117.0
ED_1950_To_WGS_1984_19	1440	Geocentric_Translation	-86.0	-92.2	-127.5
ED_1950_To_WGS_1984_2	1134	Geocentric_Translation	-87.0	-96.0	-120.0
ED_1950_To_WGS_1984_26	1629	Geocentric_Translation	-116.8	-106.4	-154.4
ED_1950_To_WGS_1984_3	1135	Geocentric_Translation	-103.0	-106.0	-141.0
ED_1950_To_WGS_1984_37	1087	Geocentric_Translation	-112.0	-110.3	-140.2
ED_1950_To_WGS_1984_38	1075	Geocentric_Translation	-89.05	-87.03	-124.56
ED_1950_To_WGS_1984_39	1853	Geocentric_Translation	-82.31	-95.23	-114.96
ED_1950_To_WGS_1984_4	1136	Geocentric_Translation	-104.0	-101.0	-140.0
ED_1950_To_WGS_1984_42	15964	Geocentric_Translation	-86.277	-108.879	-120.181
ED_1950_To_WGS_1984_5	1137	Geocentric_Translation	-130.0	-117.0	-151.0
ED_1950_To_WGS_1984_6	1138	Geocentric_Translation	-86.0	-96.0	-120.0
ED_1950_To_WGS_1984_7	1139	Geocentric_Translation	-87.0	-95.0	-120.0
ED_1950_To_WGS_1984_8	1140	Geocentric_Translation	-84.0	-95.0	-130.0
ED_1950_To_WGS_1984_9	108275	Geocentric_Translation	-117.0	-132.0	-164.0
ED_1950_To_WGS_1984_PT3	108111	Geocentric_Translation	-86.277	-108.879	-120.181
Egypt_1907_To_WGS_1972	1545	Geocentric_Translation	-121.8	98.1	-15.2
Egypt_1907_To_WGS_1984	1148	Geocentric_Translation	-130.0	110.0	-13.0
Egypt_1907_To_WGS_1984_3	1546	Geocentric_Translation	-146.21	112.63	4.05
Egypt_Gulf_of_Suez_S-650_TL_To_WGS_1972_BE_1	15792	Geocentric_Translation	-123.0	98.0	2.0
Egypt_Gulf_of_Suez_S-650_TL_To_WGS_1984_2	15846	Geocentric_Translation	-146.21	112.63	4.05
ELD_1979_To_LGD2006_1	15924	Geocentric_Translation	92.5515	10.8194	-149.8852
ELD_1979_To_WGS_1984_1	1859	Geocentric_Translation	-69.06	-90.71	-142.56
ELD_1979_To_WGS_1984_2	1860	Geocentric_Translation	-113.997	-97.076	-152.312

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
ELD_1979_To_WGS_1984_3	1861	Geocentric_Translation	-114.5	-96.1	-151.9
ELD_1979_To_WGS_1984_6	15707	Geocentric_Translation	-118.996	-111.177	-198.687
ELD_1979_To_WGS_1984_7	15778	Geocentric_Translation	-114.7	-98.5	-150.7
ELD_1979_To_WGS_1984_8	15909	Geocentric_Translation	-115.8543	-99.0583	-152.4616
ELD_1979_To_WGS_1984_9	15923	Geocentric_Translation	-117.7	-100.3	-152.4
Estonia_1937_To_ETRS_1989	108272	Geocentric_Translation	372.87	149.23	585.29
Estonia_1937_To_WGS_1984_NGA	108261	Geocentric_Translation	374.0	150.0	588.0
Estonia_1997_To_ETRS_1989_1	1648	Geocentric_Translation	0.0	0.0	0.0
Estonia_1997_To_WGS_1984_1	1649	Geocentric_Translation	0.0	0.0	0.0
ETRF2000-PL_to_ETRS89_1	9703	Geocentric_Translation	0.0	0.0	0.0
ETRF2000-PL_to_WGS_1984_1	9772	Geocentric_Translation	0.0	0.0	0.0
European_1950_To_WGS_1984_33	1985	Geocentric_Translation	-87.987	-108.639	-121.593
European_1979_To_WGS_1984	15752	Geocentric_Translation	-86.0	-98.0	-119.0
Fahud_To_WGS_1984	1256	Geocentric_Translation	-346.0	-1.0	224.0
Fahud_To_WGS_1984_3	6908	Geocentric_Translation	-345.0	3.0	223.0
FD_1954_To_ED_1950_1	15866	Geocentric_Translation	-153.33	-169.41	86.39
FD_1958_To_WGS_1984	1513	Geocentric_Translation	-241.54	-163.64	396.06
FD_1958_To_WGS_1984_2	1854	Geocentric_Translation	-239.1	-170.02	397.5
FD_1958_To_WGS_1984_3	1855	Geocentric_Translation	-244.72	-162.773	400.75
FEH2010_To_WGS_1984_1	5599	Geocentric_Translation	0.0	0.0	0.0
Fiji_1956_To_WGS_1984_1	15875	Geocentric_Translation	265.025	384.929	-194.046
Fort_Desaix_To_WGS_1984_1	1909	Geocentric_Translation	186.0	482.0	151.0
Fort_Marigot_To_WGS_1984_1	1903	Geocentric_Translation	137.0	248.0	-430.0
Fort_Thomas_1955_To_WGS_1984	108262	Geocentric_Translation	-7.0	215.0	225.0
Gambia_To_WGS_1984_1	6913	Geocentric_Translation	-63.0	176.0	185.0
Gan_1970_To_WGS_1984_1	15713	Geocentric_Translation	-133.0	-321.0	50.0
Garoua_To_WGS_1972_BE_1	1805	Geocentric_Translation	-56.1	-167.8	13.1
GDA2020_To_WGS_1984_2	8450	Geocentric_Translation	0.0	0.0	0.0
GDA2020_To_WGS_1984_Transit_1	8887	Geocentric_Translation	0.0	0.0	0.0
GDBD2009_To_WGS_1984_1	6701	Geocentric_Translation	0.0	0.0	0.0
GGRS_1987_To_WGS_1984	1272	Geocentric_Translation	-199.87	74.79	246.62
Graciosa_1948_To_PTRA08_1_3par	108240	Geocentric_Translation	-105.679	166.1	-37.322
Graciosa_1948_To_PTRA08_2_3par	108241	Geocentric_Translation	-105.377	165.769	-36.965
Graciosa_1948_To_PTRA08_3_3par	108242	Geocentric_Translation	-105.359	165.804	-37.05
Graciosa_1948_To_PTRA08_4_3par	108243	Geocentric_Translation	-105.531	166.39	-37.326

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
Graciosa_1948_To_PTRA08_5_3par	108244	Geocentric_Translation	-105.756	165.972	-37.313
Graciosa_1948_To_PTRA08_6_3par	108245	Geocentric_Translation	-106.235	166.236	-37.768
Graciosa_1948_To_WGS_1984_1_3par	108292	Geocentric_Translation	-105.679	166.1	-37.322
Graciosa_1948_To_WGS_1984_2_3par	108293	Geocentric_Translation	-105.377	165.769	-36.965
Graciosa_1948_To_WGS_1984_3_3par	108294	Geocentric_Translation	-105.359	165.804	-37.05
Graciosa_1948_To_WGS_1984_4_3par	108295	Geocentric_Translation	-105.531	166.39	-37.326
Graciosa_1948_To_WGS_1984_5_3par	108296	Geocentric_Translation	-105.756	165.972	-37.313
Graciosa_1948_To_WGS_1984_6_3par	108297	Geocentric_Translation	-106.235	166.236	-37.768
Graciosa_Base_SW_1948_To_WGS_1984_1	108112	Geocentric_Translation	-106.226	166.366	-37.893
Grand_Cayman_1959_To_WGS_1984_1	15830	Geocentric_Translation	67.8	106.1	138.8
Grand_Comoros_To_WGS_1984_1	5521	Geocentric_Translation	-963.0	510.0	-359.0
Greenland_1996_To_WGS_1984_1	15879	Geocentric_Translation	0.0	0.0	0.0
Grenada_1953_To_WGS_1984	1443	Geocentric_Translation	72.0	213.7	93.0
GSK-2011_to_WGS_1984_1	9773	Geocentric_Translation	0.0	0.0	0.0
Guam_1963_To_HARN_Marianas_Rota	108137	Geocentric_Translation	-96.234	-252.601	258.222
Guam_1963_To_HARN_Marianas_Saipan	108138	Geocentric_Translation	-91.766	-255.817	255.702
Guam_1963_To_HARN_Marianas_Tinian_Aguijan	108139	Geocentric_Translation	-93.062	-255.309	256.696
Guam_1963_To_WGS_1984_1	1070	Geocentric_Translation	-100.0	-248.0	259.0
Guam_1963_To_WGS_1984_Saipan	108299	Geocentric_Translation	59.935	118.4	-10.871
Gulshan_303_To_WGS_1984_1	15779	Geocentric_Translation	283.7	735.9	261.1
Gulshan_303_to_WGS_1984_2	9679	Geocentric_Translation	283.729	735.942	261.143
Gunung_Segara_To_WGS_1984_1	1897	Geocentric_Translation	-403.0	684.0	41.0
Gunung_Segara_To_WGS_1984_2	1898	Geocentric_Translation	-387.06	636.53	46.29
Gunung_Segara_To_WGS_1984_3	1899	Geocentric_Translation	-403.4	681.12	46.56
Gunung_Segara_To_WGS_1984_4	1838	Geocentric_Translation	-404.78	685.68	45.47
GUX_1_To_WGS_1984	108263	Geocentric_Translation	252.0	-209.0	-751.0
Hanoi_1972_To_WGS_1984	1544	Geocentric_Translation	-17.51	-108.32	-62.39
Hartebeesthoek94_To_WGS_1984	1505	Geocentric_Translation	0.0	0.0	0.0
Herat_North_To_WGS_1984	1246	Geocentric_Translation	-333.0	-222.0	114.0
Hermannskogel_To_WGS_1984	108264	Geocentric_Translation	682.0	-203.0	480.0
Hito_XVIII_1963_To_WGS_1984_2	1892	Geocentric_Translation	16.0	196.0	93.0
Hito_XVIII_1963_To_WGS_1984_3	9263	Geocentric_Translation	18.2	190.7	100.9
Hjorsey_1955_To_WGS_1984	1951	Geocentric_Translation	-73.0	46.0	-86.0
Hjorsey_1955_To_WGS_1984_2	6909	Geocentric_Translation	-73.0	47.0	-83.0
Hong_Kong_1963_67_To_WGS_1984	15842	Geocentric_Translation	-156.0	-271.0	-189.0
HTRS96_To_ETRS_1989_1	15966	Geocentric_Translation	0.0	0.0	0.0

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
HTRS96_To_WGS_1984_1	15967	Geocentric_Translation	0.0	0.0	0.0
Hungarian_1972_To_WGS_1984_2	1831	Geocentric_Translation	57.01	-69.97	-9.29
Hungarian_1972_To_WGS_1984_4	1242	Geocentric_Translation	52.17	-71.82	-14.9
Hu_Tzu_Shan_To_WGS_1984	1152	Geocentric_Translation	-637.0	-549.0	-203.0
IGCB_1955_To_WGS_1984_1	15787	Geocentric_Translation	-79.9	-158.0	-168.9
IGM_1995_To_ETRS_1989_1	1098	Geocentric_Translation	0.0	0.0	0.0
IGM_1995_To_WGS_1984_1	1099	Geocentric_Translation	0.0	0.0	0.0
IGN53_Mare_To_RGNC_1991-93_1	15884	Geocentric_Translation	287.58	177.78	-135.41
IGN53_Mare_To_WGS_1984_2	15783	Geocentric_Translation	287.0	178.0	-136.0
IGN53_Mare_To_WGS_1984_3	15901	Geocentric_Translation	287.58	177.78	-135.41
IGN56_Lifou_To_RGNC_1991-93_1	15883	Geocentric_Translation	335.47	222.58	-230.94
IGN56_Lifou_To_WGS_1984_1	1917	Geocentric_Translation	336.0	223.0	-231.0
IGN56_Lifou_To_WGS_1984_3	15902	Geocentric_Translation	335.47	222.58	-230.94
IGN72_Grande_Terre_To_RGNC_1991-93_1	15882	Geocentric_Translation	-11.64	-348.6	291.98
IGN72_Grande_Terre_To_WGS_1984_1	1962	Geocentric_Translation	-13.0	-348.0	292.0
IGN72_Grande_Terre_To_WGS_1984_3	15903	Geocentric_Translation	-11.64	-348.6	291.98
IGN72_Nuku_Hiva_To_WGS_1984_1	1914	Geocentric_Translation	84.0	274.0	65.0
IGRS_To_WGS_1984_1	3894	Geocentric_Translation	0.0	0.0	0.0
IKBD_1992_To_WGS_1984_1	1993	Geocentric_Translation	0.0	0.0	0.0
Indian_1954_To_WGS_1984	1153	Geocentric_Translation	217.0	823.0	299.0
Indian_1960_To_WGS_1972_BE	1541	Geocentric_Translation	199.0	931.0	317.0
Indian_1960_To_WGS_1984_2	1542	Geocentric_Translation	198.0	881.0	317.0
Indian_1960_To_WGS_1984_3	1543	Geocentric_Translation	182.0	915.0	344.0
Indian_1975_To_WGS_1984	1154	Geocentric_Translation	209.0	818.0	290.0
Indian_1975_To_WGS_1984_2	1304	Geocentric_Translation	210.0	814.0	289.0
Indian_1975_To_WGS_1984_3	1537	Geocentric_Translation	204.64	834.74	293.8
Indonesian_1974_To_WGS_1984	1248	Geocentric_Translation	-24.0	-15.0	5.0
IRENET95_To_ETRF_1989	108197	Geocentric_Translation	0.0	0.0	0.0
IRENET95_To_ETRS_1989	1611	Geocentric_Translation	0.0	0.0	0.0
IRENET95_To_WGS_1984_1	1678	Geocentric_Translation	0.0	0.0	0.0
ISN_1993_To_WGS_1984_1	1952	Geocentric_Translation	0.0	0.0	0.0
ISN_2004_To_WGS_1984_1	5327	Geocentric_Translation	0.0	0.0	0.0
ISN2016_to_WGS_1984_1	9291	Geocentric_Translation	0.0	0.0	0.0
Israel_To_WGS_1984	1073	Geocentric_Translation	-48.0	55.0	52.0
ISTS_061_1968_To_WGS_1984	15813	Geocentric_Translation	-794.0	119.0	-298.0

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
ISTS_073_1969_To_WGS_1984	15808	Geocentric_Translation	208.0	-435.0	-229.0
ITRF_2000_To_WGS_1984	108280	Geocentric_Translation	0.0	0.0	0.0
JAD_2001_To_WGS_1984	15925	Geocentric_Translation	0.0	0.0	0.0
Jamaica_1969_To_WGS_1972_1	10086	Geocentric_Translation	48.0	208.0	382.0
Jamaica_1969_To_WGS_1972_2	1083	Geocentric_Translation	50.0	212.0	381.0
Jamaica_1969_To_WGS_1984_1	1084	Geocentric_Translation	70.0	207.0	389.5
Jamaica_1969_To_WGS_1984_2	1085	Geocentric_Translation	65.334	212.46	387.63
JGD_2000_To_JGD_2011_2_Null	6698	Geocentric_Translation	0.0	0.0	0.0
JGD_2000_To_WGS_1984	108107	Geocentric_Translation	-1.126	-0.077	-0.037
JGD_2000_To_WGS_1984_1	1826	Geocentric_Translation	0.0	0.0	0.0
JGD2011_to_WGS_1984_1	9936	Geocentric_Translation	0.0	0.0	0.0
Johnston_Island_1961_To_WGS_1984	15809	Geocentric_Translation	189.0	-79.0	-202.0
Jordan_To_WGS_1984	108233	Geocentric_Translation	-86.0	-98.0	-119.0
Jouik_1961_To_WGS_1984_1	15870	Geocentric_Translation	-80.01	253.26	291.19
Kalianpur_1937_To_WGS_1984_1	1155	Geocentric_Translation	282.0	726.0	254.0
Kalianpur_1937_To_WGS_1984_2	1533	Geocentric_Translation	214.0	804.0	268.0
Kalianpur_1962_To_WGS_1984_1	1247	Geocentric_Translation	283.0	682.0	231.0
Kalianpur_1962_To_WGS_1984_2	15701	Geocentric_Translation	275.57	676.78	229.6
Kalianpur_1962_To_WGS_1984_3	15702	Geocentric_Translation	278.9	684.39	226.05
Kalianpur_1962_To_WGS_1984_4	15703	Geocentric_Translation	271.905	669.593	231.495
Kalianpur_1962_To_WGS_1984_6	15494	Geocentric_Translation	274.164	677.282	226.704
Kalianpur_1975_To_WGS_1984_1	1156	Geocentric_Translation	295.0	736.0	257.0
Kandawala_To_WGS_1984	1157	Geocentric_Translation	-97.0	787.0	86.0
Karbala_1979_Polservice_To_IGRS_1	5077	Geocentric_Translation	70.995	-335.916	262.898
Karbala_1979_Polservice_To_WGS_1984_1	15872	Geocentric_Translation	84.1	-320.1	218.7
Karbala_1979_Polservice_To_WGS_1984_2	5078	Geocentric_Translation	70.995	-335.916	262.898
Katanga_1955_To_RGRDC_2005_1	4065	Geocentric_Translation	-103.746	-9.614	-255.95
Katanga_1955_To_WGS_1984_1	4066	Geocentric_Translation	-103.746	-9.614	-255.95
Kerguelen_Island_1949_To_WGS_1984_1	15850	Geocentric_Translation	145.0	-187.0	103.0
Kertau_RSO_To_Kertau_1	15896	Geocentric_Translation	0.0	0.0	0.0
Kertau_To_WGS_1984	1158	Geocentric_Translation	-11.0	851.0	5.0
KOC_To_WGS_1984_1	1059	Geocentric_Translation	-294.7	-200.1	525.5
Korea_2000_To_WGS_1984_1	15831	Geocentric_Translation	0.0	0.0	0.0
Korean_1995_To_WGS_1984_1	1558	Geocentric_Translation	0.0	0.0	0.0
KOSOVAREF01_To_WGS_1984_1	9144	Geocentric_Translation	0.0	0.0	0.0
Kousseri_To_WGS_1972_BE_1	1806	Geocentric_Translation	-104.4	-136.6	201.2

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
KUDAMS_To_WGS_1984_1	1061	Geocentric_Translation	-20.8	11.3	2.4
Kusaie_1951_To_WGS_1984	15810	Geocentric_Translation	647.0	1777.0	-1124.0
La_Canoa_To_PSAD56_1	8674	Geocentric_Translation	0.0	0.0	0.0
La_Canoa_To_WGS_1984	1516	Geocentric_Translation	-273.5	110.6	-357.9
Lao_1993_To_Lao_1997_1	1064	Geocentric_Translation	-0.652	1.619	0.213
Lao_1997_To_WGS_1984_1	1065	Geocentric_Translation	44.585	-131.212	-39.544
LC5_1961_To_WGS_1984	108268	Geocentric_Translation	42.0	124.0	147.0
Leigon_To_WGS_1984	1159	Geocentric_Translation	-130.0	29.0	364.0
Le_Pouce_1934_To_WGS_1984_1	15784	Geocentric_Translation	-770.1	158.4	-498.2
LGD2006_To_WGS_1984_1	15908	Geocentric_Translation	-208.4058	-109.8777	-2.5764
Liberia_1964_To_WGS_1984	1160	Geocentric_Translation	-90.0	40.0	88.0
Lisbon_1890_To_ETRS_1989_1	5039	Geocentric_Translation	508.088	-191.042	565.223
Lisbon_1890_To_WGS_1984_1	1986	Geocentric_Translation	508.088	-191.042	565.223
Lisbon_To_ETRS_1989_3	5038	Geocentric_Translation	-303.861	-60.693	103.607
Lisbon_To_WGS_1984_3	1984	Geocentric_Translation	-304.046	-60.576	103.64
Lisbon_To_WGS_1984_5	6898	Geocentric_Translation	-306.0	-62.0	105.0
Little_Cayman_1961_To_WGS_1984_1	15814	Geocentric_Translation	42.0	124.0	147.0
Little_Cayman_1961_To_WGS_1984_2	15829	Geocentric_Translation	44.4	109.0	151.7
LKS_1992_To_ETRS_1989_1	8891	Geocentric_Translation	0.0	0.0	0.0
LKS_1992_To_WGS_1984_1	1958	Geocentric_Translation	0.0	0.0	0.0
LKS_1994_To_ETRS_1989_1	8892	Geocentric_Translation	0.0	0.0	0.0
LKS_1994_To_WGS_1984	1283	Geocentric_Translation	0.0	0.0	0.0
Locodjo_1965_To_WGS_1984	1469	Geocentric_Translation	-125.0	53.0	467.0
Luzon_1911_To_WGS_1984_1	1161	Geocentric_Translation	-133.0	-77.0	-51.0
Luzon_1911_To_WGS_1984_2	1162	Geocentric_Translation	-133.0	-79.0	-72.0
Macao_2008_To_ITRF_2005	108038	Geocentric_Translation	0.0	0.0	0.0
Macao_2008_To_WGS_1984	108037	Geocentric_Translation	0.0	0.0	0.0
MAGNA_To_SIRGAS	108290	Geocentric_Translation	0.0	0.0	0.0
MAGNA_To_WGS_1984_1	15738	Geocentric_Translation	0.0	0.0	0.0
Mahe_1971_To_WGS_1984	1164	Geocentric_Translation	41.0	-220.0	-134.0
Majuro_To_NAD_1983	108135	Geocentric_Translation	25.1	-275.6	222.6
Makassar_To_WGS_1984_1	1837	Geocentric_Translation	-587.8	519.75	145.76
Malongo_1987_to_RSAO13_1	9906	Geocentric_Translation	-254.1	-5.36	-100.29
Malongo_1987_To_WGS_1984_1	1330	Geocentric_Translation	-252.95	-4.11	-96.38
Malongo_1987_To_WGS_1984_2	1557	Geocentric_Translation	-254.1	-5.36	-100.29

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
Malongo_1987_To_WGS_1984_3	15791	Geocentric_Translation	-259.99	-5.28	-97.09
Manoca_1962_To_WGS_1972_BE_1	1902	Geocentric_Translation	-56.7	-171.8	-40.6
Manoca_1962_To_WGS_1984_1	1796	Geocentric_Translation	-70.9	-151.8	-41.4
Manoca_To_WGS_1984_1	1316	Geocentric_Translation	-70.9	-151.8	-41.4
MARCARIO_SOLIS_To_WGS_1984_1	5377	Geocentric_Translation	0.0	0.0	0.0
MARGEN_To_WGS_1984_1	5374	Geocentric_Translation	0.0	0.0	0.0
Massawa_To_WGS_1984	1165	Geocentric_Translation	639.0	405.0	60.0
Maupiti_1983_To_RGPF_1	15759	Geocentric_Translation	217.037	86.959	23.956
Maupiti_1983_To_WGS_1984_1	15771	Geocentric_Translation	217.037	86.959	23.956
Mauritania_1999_To_WGS_1984_1	15860	Geocentric_Translation	0.0	0.0	0.0
Merchich_Degree_To_WGS_1984	108279	Geocentric_Translation	31.0	146.0	47.0
Merchich_To_WGS_1984	1166	Geocentric_Translation	31.0	146.0	47.0
Mexican_Datum_1993_To_WGS_1984_1	4832	Geocentric_Translation	0.0	0.0	0.0
Mexico_ITRF2008_To_WGS_1984_1	6373	Geocentric_Translation	0.0	0.0	0.0
MGI_1901_To_WGS_1984_1	3962	Geocentric_Translation	682.0	-203.0	480.0
MGI_1901_To_WGS_1984_6	3965	Geocentric_Translation	695.5	-216.6	491.1
MGI_Ferro_To_WGS_1984	108094	Geocentric_Translation	682.0	-203.0	480.0
MGI_Ferro_To_WGS_1984_1	3966	Geocentric_Translation	682.0	-203.0	480.0
MGI_To_WGS_1984	1306	Geocentric_Translation	682.0	-203.0	480.0
MGI_To_WGS_1984_6	1794	Geocentric_Translation	695.5	-216.6	491.1
Mhast_offshore_To_WGS_1972_BE_1	15790	Geocentric_Translation	-255.0	-29.0	-105.0
Midway_1961_To_WGS_1984	15818	Geocentric_Translation	403.0	-81.0	277.0
Midway_1961_To_WGS_1984_Old	15817	Geocentric_Translation	912.0	-58.0	1227.0
Minna_To_WGS_1984_1	1167	Geocentric_Translation	-81.0	-84.0	115.0
Minna_To_WGS_1984_10	1824	Geocentric_Translation	-93.0	-94.0	124.0
Minna_To_WGS_1984_11	1067	Geocentric_Translation	-92.1	-89.9	114.9
Minna_To_WGS_1984_13	15706	Geocentric_Translation	-93.6	-83.7	113.8
Minna_To_WGS_1984_14	15755	Geocentric_Translation	-90.2	-87.32	114.17
Minna_To_WGS_1984_15	15493	Geocentric_Translation	-94.031	-83.317	116.708
Minna_To_WGS_1984_16	6196	Geocentric_Translation	-93.179	-87.124	114.338
Minna_To_WGS_1984_2	1168	Geocentric_Translation	-92.0	-93.0	122.0
Minna_To_WGS_1984_6	1820	Geocentric_Translation	-93.2	-93.31	121.156
Minna_To_WGS_1984_7	1821	Geocentric_Translation	-88.98	-83.23	113.55
Minna_To_WGS_1984_8	1822	Geocentric_Translation	-92.726	-90.304	115.735
Minna_To_WGS_1984_9	1823	Geocentric_Translation	-93.134	-86.647	114.196
MMN_To_WGS_1984_1	9261	Geocentric_Translation	-9.5	122.9	138.2

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
MMS_To_WGS_1984_1	9262	Geocentric_Translation	-78.1	101.6	133.3
MOLDREF99_To_ETRS_1989_1	5584	Geocentric_Translation	0.0	0.0	0.0
MOLDREF99_To_WGS_1984_1	5585	Geocentric_Translation	0.0	0.0	0.0
MONREF_1997_To_MSK_1942_2	108287	Geocentric_Translation	-12.621213	138.667640	73.996139
MONREF_1997_To_Pulkovo_1942_2	108289	Geocentric_Translation	-12.621213	138.667640	73.996139
Monte_Mario_Rome_To_WGS_1984	8175	Geocentric_Translation	-225.0	-65.0	9.0
Monte_Mario_To_WGS_1984	1169	Geocentric_Translation	-225.0	-65.0	9.0
Monte_Mario_To_WGS_1984_10	1093	Geocentric_Translation	-229.08	-65.73	20.21
Monte_Mario_To_WGS_1984_11	1094	Geocentric_Translation	-230.47	-56.08	22.43
Monte_Mario_To_WGS_1984_5	1088	Geocentric_Translation	-223.7	-67.38	1.34
Monte_Mario_To_WGS_1984_6	1089	Geocentric_Translation	-225.4	-67.7	7.85
Monte_Mario_To_WGS_1984_7	1090	Geocentric_Translation	-227.1	-68.1	14.4
Monte_Mario_To_WGS_1984_8	1091	Geocentric_Translation	-231.61	-68.21	13.93
Monte_Mario_To_WGS_1984_9	1092	Geocentric_Translation	-225.06	-67.37	14.61
Montserrat_1958_To_WGS_1984	1444	Geocentric_Translation	174.0	359.0	365.0
MOP78_To_WGS_1984_1	1925	Geocentric_Translation	252.0	-132.0	-125.0
MOP78_To_WGS_1984_2	15847	Geocentric_Translation	253.0	-132.0	-127.0
Mporaloko_To_WGS_1984	1163	Geocentric_Translation	-74.0	-130.0	42.0
Mporaloko_To_WGS_1984_2	1532	Geocentric_Translation	-80.7	-132.5	41.1
MTRF-2000_To_WGS_1984_(G1150)	8822	Geocentric_Translation	0.0	0.0	0.0
NAD_1927_To_WGS_1984_1	1170	Geocentric_Translation	-3.0	142.0	183.0
NAD_1927_To_WGS_1984_10	1179	Geocentric_Translation	-7.0	162.0	188.0
NAD_1927_To_WGS_1984_11	1180	Geocentric_Translation	-9.0	157.0	184.0
NAD_1927_To_WGS_1984_12	1181	Geocentric_Translation	-22.0	160.0	190.0
NAD_1927_To_WGS_1984_13	1182	Geocentric_Translation	4.0	159.0	188.0
NAD_1927_To_WGS_1984_14	1183	Geocentric_Translation	-7.0	139.0	181.0
NAD_1927_To_WGS_1984_15	1184	Geocentric_Translation	0.0	125.0	201.0
NAD_1927_To_WGS_1984_16	1185	Geocentric_Translation	-9.0	152.0	178.0
NAD_1927_To_WGS_1984_17	1186	Geocentric_Translation	11.0	114.0	195.0
NAD_1927_To_WGS_1984_18	1187	Geocentric_Translation	-12.0	130.0	190.0
NAD_1927_To_WGS_1984_2	1171	Geocentric_Translation	0.0	125.0	194.0
NAD_1927_To_WGS_1984_21	1249	Geocentric_Translation	-2.0	152.0	149.0
NAD_1927_To_WGS_1984_22	1250	Geocentric_Translation	2.0	204.0	105.0
NAD_1927_To_WGS_1984_3	1172	Geocentric_Translation	-10.0	158.0	187.0
NAD_1927_To_WGS_1984_30	1530	Geocentric_Translation	-4.2	135.4	181.9

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
NAD_1927_To_WGS_1984_4	1173	Geocentric_Translation	-8.0	160.0	176.0
NAD_1927_To_WGS_1984_5	1174	Geocentric_Translation	-9.0	161.0	179.0
NAD_1927_To_WGS_1984_6	1175	Geocentric_Translation	-8.0	159.0	175.0
NAD_1927_To_WGS_1984_7	1176	Geocentric_Translation	-5.0	135.0	172.0
NAD_1927_To_WGS_1984_8	1177	Geocentric_Translation	-4.0	154.0	178.0
NAD_1927_To_WGS_1984_80	15852	Geocentric_Translation	-3.0	154.0	177.0
NAD_1927_To_WGS_1984_81	15853	Geocentric_Translation	-7.0	151.0	175.0
NAD_1927_To_WGS_1984_82	15854	Geocentric_Translation	-7.0	151.0	178.0
NAD_1927_To_WGS_1984_83	15855	Geocentric_Translation	-8.0	125.0	190.0
NAD_1927_To_WGS_1984_84	15856	Geocentric_Translation	-7.0	158.0	172.0
NAD_1927_To_WGS_1984_86	15913	Geocentric_Translation	0.0	125.0	196.0
NAD_1927_To_WGS_1984_87	15699	Geocentric_Translation	-2.0	124.7	196.0
NAD_1927_To_WGS_1984_9	1178	Geocentric_Translation	1.0	140.0	165.0
NAD_1983_(2011)_to_WGS_1984_1	9774	Geocentric_Translation	0.0	0.0	0.0
NAD_1983_CORS96_To_NAD_1983_2011	108357	Geocentric_Translation	0.0	0.0	0.0
NAD_1983_CORS96_To_NAD_1983_HARN	108148	Geocentric_Translation	0.0	0.0	0.0
NAD_1983_CORS96_To_NAD_1983_NSRS2007	108149	Geocentric_Translation	0.0	0.0	0.0
NAD_1983_CSRS_To_WGS_1984	1473	Geocentric_Translation	0.0	0.0	0.0
NAD_1983_CSRS_To_WGS_1984_1	1842	Geocentric_Translation	0.0	0.0	0.0
NAD_1983_HARN_To_NAD_1983_2011	108355	Geocentric_Translation	0.0	0.0	0.0
NAD_1983_HARN_To_NAD_1983_MA11	108377	Geocentric_Translation	0.0	0.0	0.0
NAD_1983_HARN_To_NAD_1983_NSRS2007_1	4461	Geocentric_Translation	0.0	0.0	0.0
NAD_1983_HARN_To_NAD_1983_PA11	108378	Geocentric_Translation	0.0	0.0	0.0
NAD_1983_HARN_To_WGS_1984	1580	Geocentric_Translation	0.0	0.0	0.0
NAD_1983_HARN_To_WGS_1984_Saipan	108300	Geocentric_Translation	1.2	0.4	0.55
NAD_1983_NSRS2007_To_NAD_1983_2011	108356	Geocentric_Translation	0.0	0.0	0.0
NAD_1983_NSRS2007_To_WGS_1984_1	15931	Geocentric_Translation	0.0	0.0	0.0
NAD_1983_To_NAD_1983_CSRS_4	1950	Geocentric_Translation	0.0	0.0	0.0
NAD_1983_To_WGS_1984_1	1188	Geocentric_Translation	0.0	0.0	0.0
NAD_1983_To_WGS_1984_2	1251	Geocentric_Translation	-2.0	0.0	4.0
NAD_1983_To_WGS_1984_3	1252	Geocentric_Translation	1.0	1.0	-1.0
Nahrwan_1967_To_WGS_1984_1	1189	Geocentric_Translation	-247.0	-148.0	369.0
Nahrwan_1967_To_WGS_1984_10	15953	Geocentric_Translation	-250.7	-157.9	380.4
Nahrwan_1967_To_WGS_1984_2	1190	Geocentric_Translation	-243.0	-192.0	477.0
Nahrwan_1967_To_WGS_1984_3	1191	Geocentric_Translation	-249.0	-156.0	381.0
Nahrwan_1967_To_WGS_1984_4	1531	Geocentric_Translation	-245.0	-153.9	382.8

Geographic (datum) Transformation Name	WKID	Method dx (m)		dy (m)	dz (m)
Nahrwan_1967_To_WGS_1984_5	1536	Geocentric_Translation	-250.2	-153.09	391.7
Nahrwan_1967_To_WGS_1984_6	15871	Geocentric_Translation	-242.2	-144.9	370.3
Nahrwan_1967_To_WGS_1984_7	15937	Geocentric_Translation	-245.8	-152.2	382.9
Nahrwan_1967_To_WGS_1984_9	15952	Geocentric_Translation	-244.2	-149.8	379.3
Nahrwan_To_WGS_1984_6	7033	Geocentric_Translation	-242.2	-144.9	370.3
Nakhl-e_Ghanem_To_WGS_1984_6	15746	Geocentric_Translation	0.0	-0.15	0.68
Naparima_1955_To_WGS_1984_2	1555	Geocentric_Translation	-0.465	372.095	171.736
Naparima_1955_To_WGS_1984_3	1556	Geocentric_Translation	-2.0	374.0	172.0
Naparima_1972_To_WGS_1984	1192	Geocentric_Translation	-10.0	375.0	165.0
Naparima_1972_To_WGS_1984_2	108093	Geocentric_Translation	-0.465	372.095	171.736
Naparima_1972_To_WGS_1984_3	1307	Geocentric_Translation	-2.0	374.0	172.0
NEA74_Noumea_To_RGNC_1991-93_1	15886	Geocentric_Translation	-10.18	-350.43	291.37
NEA74_Noumea_To_WGS_1984_2	15904	Geocentric_Translation	-10.18	-350.43	291.37
Nepal_Nagarkot_TO_WGS_1984_1	108015	Geocentric_Translation	296.0	732.0	273.0
Nepal_Nagarkot_To_WGS_1984_1_EPSG	6208	Geocentric_Translation	293.17	726.18	245.36
Nepal_Nagarkot_TO_WGS_1984_2	108016	Geocentric_Translation	296.207	731.545	273.001
New_Zealand_1949_To_NZGD_2000_1_3PAR	1566	Geocentric_Translation	54.4	-20.1	183.1
NGN_To_WGS_1984_1	1060	Geocentric_Translation	-3.2	-5.7	2.8
Nord_Sahara_1959_To_WGS_1972_BE	1560	Geocentric_Translation	-156.5	-87.2	285.9
Nord_Sahara_1959_To_WGS_1984	1253	Geocentric_Translation	-186.0	-93.0	310.0
Nord_Sahara_1959_To_WGS_1984_2	1255	Geocentric_Translation	-123.0	-206.0	219.0
Nord_Sahara_1959_To_WGS_1984_5	1816	Geocentric_Translation	-95.7	10.2	158.9
Nord_Sahara_1959_To_WGS_1984_6	1817	Geocentric_Translation	-165.914	-70.607	305.009
Nord_Sahara_1959_To_WGS_1984_7	15874	Geocentric_Translation	-169.559	-72.34	303.102
Nord_Sahara_1959_To_WGS_1984_8	5630	Geocentric_Translation	-168.52	-72.05	304.3
Nouakchott_1965_To_WGS_1984_1	15709	Geocentric_Translation	124.5	-63.5	-281.0
NTF_Paris_To_ED_1950	8186	Geocentric_Translation	-84.0	37.0	437.0
NTF_Paris_To_RGF_1993_1	108102	Geocentric_Translation	-168.0	-60.0	320.0
NTF_Paris_To_WGS_1972	8188	Geocentric_Translation	-168.0	-72.0	314.0
NTF_Paris_To_WGS_1984	8094	Geocentric_Translation	-168.0	-60.0	320.0
NTF_To_ED_1950	1276	Geocentric_Translation	-84.0	37.0	437.0
NTF_To_ETRS_1989_1	1651	Geocentric_Translation	-168.0	-60.0	320.0
NTF_To_RGF_1993_1	108130	Geocentric_Translation	-168.0	-60.0	320.0
NTF_To_WGS_1972	1277	Geocentric_Translation	-168.0	-72.0	314.0
NTF_To_WGS_1984	1193	Geocentric_Translation	-168.0	-60.0	320.0

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
NZGD_1949_To_WGS_1984	1151	Geocentric_Translation	84.0	-22.0	209.0
NZGD_1949_To_WGS_1984_4	15975	Geocentric_Translation	54.4	-20.1	183.1
NZGD_2000_To_WGS_1984_1	1565	Geocentric_Translation	0.0	0.0	0.0
Observatario_To_WGS_1984_1	6900	Geocentric_Translation	-132.0	-110.0	-335.0
Observatorio_Meteorologico_1939_To_PTRA08_1_3par	108344	Geocentric_Translation	-423.058	-172.868	83.772
Observatorio_Meteorologico_1939_To_PTRA08_2_3par	108345	Geocentric_Translation	-423.053	-172.871	83.771
Observatorio_Meteorologico_1939_To_PTRA08_3_3par	108346	Geocentric_Translation	-423.024	-172.923	83.83
Observatorio_Meteorologico_1939_To_WGS_1984_1	108116	Geocentric_Translation	-422.651	-172.995	84.02
Observatorio_Meteorologico_1939_To_WGS_1984_1_3par	108350	Geocentric_Translation	-423.058	-172.868	83.772
Observatorio_Meteorologico_1939_To_WGS_1984_2_3par	108351	Geocentric_Translation	-423.053	-172.871	83.771
Observatorio_Meteorologico_1939_To_WGS_1984_3_3par	108352	Geocentric_Translation	-423.024	-172.923	83.83
Ocotepeque_1935_To_CR05	6890	Geocentric_Translation	213.11	9.37	-74.95
Ocotepeque_1935_To_NAD_1927_1	6888	Geocentric_Translation	205.435	-29.099	-292.202
Ocotepeque_1935_To_WGS_1984_1	5470	Geocentric_Translation	213.11	9.37	-74.95
Ocotepeque_1935_To_WGS_1984_3PAR	6891	Geocentric_Translation	205.0	96.0	-98.0
Old_Hawaiian_Intl_1924_To_WGS_1984_Hawaii	108331	Geocentric_Translation	229.0	-222.0	-348.0
Old_Hawaiian_Intl_1924_To_WGS_1984_Kauai	108332	Geocentric_Translation	185.0	-233.0	-337.0
Old_Hawaiian_Intl_1924_To_WGS_1984_Maui	108333	Geocentric_Translation	205.0	-233.0	-355.0
Old_Hawaiian_Intl_1924_To_WGS_1984_Mean	108330	Geocentric_Translation	201.0	-228.0	-346.0
Old_Hawaiian_Intl_1924_To_WGS_1984_Oahu	108334	Geocentric_Translation	198.0	-226.0	-347.0
Old_Hawaiian_To_WGS_1984_1	15824	Geocentric_Translation	61.0	-285.0	-181.0
Old_Hawaiian_To_WGS_1984_2	15825	Geocentric_Translation	89.0	-279.0	-183.0
Old_Hawaiian_To_WGS_1984_3	15826	Geocentric_Translation	45.0	-290.0	-172.0
Old_Hawaiian_To_WGS_1984_4	15827	Geocentric_Translation	65.0	-290.0	-190.0
Old_Hawaiian_To_WGS_1984_5	15828	Geocentric_Translation	58.0	-283.0	-182.0
ONGD14_To_WGS_1984_2	7443	Geocentric_Translation	0.0	0.0	0.0
OSGB_1936_To_WGS_1984_1	1195	Geocentric_Translation	375.0	-111.0	431.0
OSGB_1936_To_WGS_1984_2	1196	Geocentric_Translation	371.0	-112.0	434.0
OSGB_1936_To_WGS_1984_3	1197	Geocentric_Translation	371.0	-111.0	434.0
OSGB_1936_To_WGS_1984_4	1198	Geocentric_Translation	384.0	-111.0	425.0
OSGB_1936_To_WGS_1984_5	1199	Geocentric_Translation	370.0	-108.0	434.0
OSGB_1936_To_WGS_1984_8	5622	Geocentric_Translation	370.936	-108.938	435.682
OSGB_1936_To_WGS_1984_8_BAD_DX	108089	Geocentric_Translation	370.396	-108.938	435.682
Palestine_1923_To_lsrael_1	1071	Geocentric_Translation	-181.0	-122.0	225.0
Palestine_1923_To_WGS_1984_1X	108220	Geocentric_Translation	-181.0	-122.0	225.0
Palestine_1923_To_WGS_1984_2	108099	Geocentric_Translation	-229.0	-67.0	277.0

Geographic (datum) Transformation Name	WKID	Method dx (m)		dy (m)	dz (m)
Palestine_1923_To_WGS_1984_2X	108232	Geocentric_Translation	-219.247	-73.802	269.529
Pampa_del_Castillo_To_WGS_1984_1	15845	Geocentric_Translation	27.5	14.0	186.4
Pampa_del_Castillo_To_WGS_1984_2	9259	Geocentric_Translation	-233.43	6.65	173.64
Perroud_1950_To_RGTAAF07_1	7083	Geocentric_Translation	324.912	153.282	172.026
Peru96_To_WGS_1984_1	5378	Geocentric_Translation	0.0	0.0	0.0
Petrels_1972_To_WGS_1984_1	1921	Geocentric_Translation	365.0	194.0	166.0
Pico_de_Las_Nieves_To_WGS_1984	15815	Geocentric_Translation	-307.0	-92.0	127.0
Pitcairn_1967_To_WGS_1984	15819	Geocentric_Translation	185.0	165.0	42.0
Pitcairn_2006_To_WGS_1984_1	15972	Geocentric_Translation	0.0	0.0	0.0
PN68_to_WGS_1984_1	9743	Geocentric_Translation	-307.0	-92.0	127.0
PNG94_To_WGS_1984_1	5553	Geocentric_Translation	0.0	0.0	0.0
Pohnpei_To_NAD_1983	108133	Geocentric_Translation	-89.121	-348.182	260.871
Pohnpei_To_WGS_1984	108303	Geocentric_Translation	-89.121	-348.182	260.871
Point58_To_WGS_1984_1	1880	Geocentric_Translation	-106.0	-129.0	165.0
Pointe_Geologie_Perroud_1950_To_WGS_1984_1	1922	Geocentric_Translation	325.0	154.0	172.0
Pointe_Noire_To_WGS_1984	1200	Geocentric_Translation	-148.0	51.0	-291.0
Pointe_Noire_To_WGS_1984_2	1801	Geocentric_Translation	-145.0	52.7	-291.6
Porto_Santo_1936_To_PTRA08_1_3par	108163	Geocentric_Translation	-503.229	-247.375	312.582
Porto_Santo_1936_To_PTRA08_2_3par	108164	Geocentric_Translation	-503.174	-247.255	312.316
Porto_Santo_1936_To_PTRA08_3_3par	108165	Geocentric_Translation	-503.3	-247.574	313.025
Porto_Santo_1936_To_WGS_1984_1	1888	Geocentric_Translation	-499.0	-249.0	314.0
Porto_Santo_1936_To_WGS_1984_1_3par	108169	Geocentric_Translation	-503.229	-247.375	312.582
Porto_Santo_1936_To_WGS_1984_1_IGP	108115	Geocentric_Translation	-502.862	-247.438	312.724
Porto_Santo_1936_To_WGS_1984_2_3par	108170	Geocentric_Translation	-503.174	-247.255	312.316
Porto_Santo_1936_To_WGS_1984_3_3par	108171	Geocentric_Translation	-503.3	-247.574	313.025
Porto_Santo_1995_To_PTRA08_1	5021	Geocentric_Translation	-503.229	-247.375	312.582
Porto_Santo_1995_To_PTRA08_3	5023	Geocentric_Translation	-503.3	-247.574	313.025
Porto_Santo_1995_To_WGS_1984_2	1966	Geocentric_Translation	-502.862	-247.438	312.724
POSGAR_1994_To_WGS_1984_1	1210	Geocentric_Translation	0.0	0.0	0.0
POSGAR_1998_To_SIRGAS_1	1774	Geocentric_Translation	0.0	0.0	0.0
POSGAR_1998_To_WGS_1984_1	1773	Geocentric_Translation	0.0	0.0	0.0
POSGAR_2007_To_SIRGAS_2000_1	5497	Geocentric_Translation	0.0	0.0	0.0
POSGAR_2007_To_WGS_1984_1	5351	Geocentric_Translation	0.0	0.0	0.0
POSGAR_2007_To_WGS_1984_2	9264	Geocentric_Translation	-0.41	0.46	-0.35
POSGAR_To_WGS_1984_1	1598	Geocentric_Translation	0.0	0.0	0.0

Geographic (datum) Transformation Name	WKID	WKID Method dx (m)		dy (m)	dz (m)
PSAD56_to_SIRGAS-Chile_2010_1	9339	Geocentric_Translation	-302.0	272.0	-360.0
PSAD56_to_SIRGAS-Chile_2010_2	9340	Geocentric_Translation	-328.0	340.0	-329.0
PSAD56_to_SIRGAS-Chile_2010_3	9341	Geocentric_Translation	-352.0	403.0	-287.0
PSAD56_to_SIRGAS-Chile_2013_1	9342	Geocentric_Translation	-302.0	272.0	-360.0
PSAD56_to_SIRGAS-Chile_2013_2	9343	Geocentric_Translation	-328.0	340.0	-329.0
PSAD56_to_SIRGAS-Chile_2013_3	9344	Geocentric_Translation	-352.0	403.0	-287.0
PSAD56_to_SIRGAS-Chile_2016_1	9345	Geocentric_Translation	-302.0	272.0	-360.0
PSAD56_to_SIRGAS-Chile_2016_2	9346	Geocentric_Translation	-328.0	340.0	-329.0
PSAD56_to_SIRGAS-Chile_2016_3	9347	Geocentric_Translation	-352.0	403.0	-287.0
PSAD56_to_SIRGAS-Chile_2021_1	10135	Geocentric_Translation	-302.0	272.0	-360.0
PSAD56_to_SIRGAS-Chile_2021_2	10136	Geocentric_Translation	-328.0	340.0	-329.0
PSAD56_to_SIRGAS-Chile_2021_3	10137	Geocentric_Translation	-352.0	403.0	-287.0
PSAD_1956_To_SIRGAS-Chile_1	6949	Geocentric_Translation	-302.0	272.0	-360.0
PSAD_1956_To_SIRGAS-Chile_2	6950	Geocentric_Translation	-328.0	340.0	-329.0
PSAD_1956_To_SIRGAS-Chile_3	6951	Geocentric_Translation	-352.0	403.0	-287.0
PSAD_1956_To_WGS_1984_1	1201	Geocentric_Translation	-288.0	175.0	-376.0
PSAD_1956_To_WGS_1984_10	1582	Geocentric_Translation	-259.73	173.12	-398.27
PSAD_1956_To_WGS_1984_11	1583	Geocentric_Translation	-307.7	265.3	-363.5
PSAD_1956_To_WGS_1984_12	1811	Geocentric_Translation	-291.87	106.37	-364.52
PSAD_1956_To_WGS_1984_15	6971	Geocentric_Translation	-302.0	272.0	-360.0
PSAD_1956_To_WGS_1984_16	6972	Geocentric_Translation	-328.0	340.0	-329.0
PSAD_1956_To_WGS_1984_17	6973	Geocentric_Translation	-352.0	403.0	-287.0
PSAD_1956_To_WGS_1984_2	1202	Geocentric_Translation	-270.0	188.0	-388.0
PSAD_1956_To_WGS_1984_3	1203	Geocentric_Translation	-270.0	183.0	-390.0
PSAD_1956_To_WGS_1984_4	1204	Geocentric_Translation	-305.0	243.0	-442.0
PSAD_1956_To_WGS_1984_5	1205	Geocentric_Translation	-282.0	169.0	-371.0
PSAD_1956_To_WGS_1984_6	1206	Geocentric_Translation	-278.0	171.0	-367.0
PSAD_1956_To_WGS_1984_7	1207	Geocentric_Translation	-298.0	159.0	-369.0
PSAD_1956_To_WGS_1984_8	1208	Geocentric_Translation	-279.0	175.0	-379.0
PSAD_1956_To_WGS_1984_9	1209	Geocentric_Translation	-295.0	173.0	-371.0
PTRA08_To_WGS_1984_1	4905	Geocentric_Translation	0.0	0.0	0.0
Puerto_Rico_To_WGS_1984_3	1893	Geocentric_Translation	11.0	72.0	-101.0
Pulkovo_1942_Adj_1958_To_Albanian_1987_1	7836	Geocentric_Translation	0.0	0.0	0.0
Pulkovo_1942_Adj_1958_To_WGS_1984_18	15496	Geocentric_Translation	44.107	-116.147	-54.648
Pulkovo_1942_Adj_1958_To_WGS_1984_22	7835	Geocentric_Translation	74.5	-112.5	-44.3
Pulkovo_1942_Adj_1958_To_WGS_1984_4	15997	Geocentric_Translation	23.0	-124.0	-82.0

Geographic (datum) Transformation Name	WKID	Method dx (m)		dy (m)	dz (m)
Pulkovo_1942_Adj_1958_To_WGS_1984_8	15999	Geocentric_Translation	24.0	-130.0	-92.0
Pulkovo_1942_Adj_1958_To_WGS_1984_9	15497	Geocentric_Translation	28.0	-121.0	-77.0
Pulkovo_1942_Adj_1983_To_WGS_1984_3	15996	Geocentric_Translation	28.0	-121.0	-77.0
Pulkovo_1942_Adj_1983_To_WGS_1984_5	15998	Geocentric_Translation	26.0	-121.0	-78.0
Pulkovo_1942_To_Ukraine_2000_1	5586	Geocentric_Translation	0.0	0.0	0.0
Pulkovo_1942_To_WGS_1984	1254	Geocentric_Translation	28.0	-130.0	-95.0
Pulkovo_1942_To_WGS_1984_21	6899	Geocentric_Translation	22.0	-126.0	-85.0
Pulkovo_1942_To_WGS_1984_3	1287	Geocentric_Translation	28.0	-121.0	-77.0
Pulkovo_1942_To_WGS_1984_4	1288	Geocentric_Translation	23.0	-124.0	-82.0
Pulkovo_1942_To_WGS_1984_5	1289	Geocentric_Translation	26.0	-121.0	-78.0
Pulkovo_1942_To_WGS_1984_6	1290	Geocentric_Translation	24.0	-124.0	-82.0
Pulkovo_1942_To_WGS_1984_7	1291	Geocentric_Translation	15.0	-130.0	-84.0
Pulkovo_1942_To_WGS_1984_8	1292	Geocentric_Translation	24.0	-130.0	-92.0
Pulkovo_1942_To_WGS_1984_9	1293	Geocentric_Translation	28.0	-121.0	-77.0
Pulkovo_1995_To_PZ_1990_GOST	1257	Geocentric_Translation	25.9	-130.94	-81.76
Qatar_1974_To_WGS_1984_1	1561	Geocentric_Translation	-128.0	-283.0	22.0
Qatar_1974_To_WGS_1984_2	1562	Geocentric_Translation	-128.16	-282.42	21.93
Qatar_1974_To_WGS_1984_3	1563	Geocentric_Translation	-128.033	-283.697	21.052
Qornoq_1927_To_WGS_1984_1	1797	Geocentric_Translation	164.0	138.0	-189.0
Rassadiran_To_WGS_1984	1512	Geocentric_Translation	-133.63	-157.5	-158.62
RDN2008_To_ETRS_1989_1	6710	Geocentric_Translation	0.0	0.0	0.0
RDN2008_To_WGS_1984_1	6711	Geocentric_Translation	0.0	0.0	0.0
REGCAN95_To_WGS_1984_1	4084	Geocentric_Translation	0.0	0.0	0.0
REGVEN_To_SIRGAS_1	1767	Geocentric_Translation	0.0	0.0	0.0
REGVEN_To_WGS_1984_1	1768	Geocentric_Translation	0.0	0.0	0.0
Reunion_1947_To_WGS_1984_2	15751	Geocentric_Translation	94.0	-948.0	-1262.0
Reykjavik_1900_To_WGS_1984_1	1994	Geocentric_Translation	-28.0	199.0	5.0
RGAF09_To_WGS_1984_1	5501	Geocentric_Translation	0.0	0.0	0.0
RGF_1993_To_ETRF_1989_1	108199	Geocentric_Translation	0.0	0.0	0.0
RGF_1993_To_ETRS_1989_1	1591	Geocentric_Translation	0.0	0.0	0.0
RGF_1993_To_WGS_1984_1	1671	Geocentric_Translation	0.0	0.0	0.0
RGF93_v1_to_RGF93_v2_1	9882	Geocentric_Translation	0.0	0.0	0.0
RGF93_v2b_to_ETRS_1989_1	9790	Geocentric_Translation	0.0	0.0	0.0
RGF93_v2b_to_WGS_1984_1	9792	Geocentric_Translation	0.0	0.0	0.0
RGF93_v2_to_ETRS_1989_1	9789	Geocentric_Translation	0.0	0.0	0.0

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
RGF93_v2_to_WGS_1984_1	9791	Geocentric_Translation	0.0	0.0	0.0
RGFG_1995_To_WGS_1984_2	4840	Geocentric_Translation	0.0	0.0	0.0
RGM_2004_To_WGS_1984_1	4476	Geocentric_Translation	0.0	0.0	0.0
RGNC_1991-93_To_WGS_1984_1	15880	Geocentric_Translation	0.0	0.0	0.0
RGNC_1991_To_WGS_1984_1	1920	Geocentric_Translation	0.0	0.0	0.0
RGPF_To_WGS_1984_2	15833	Geocentric_Translation	0.0	0.0	0.0
RGR_1992_To_WGS_1984_1	1912	Geocentric_Translation	0.0	0.0	0.0
RGRDC_2005_To_WGS_1984_1	4064	Geocentric_Translation	0.0	0.0	0.0
RGSPM_2006_To_WGS_1984_1	4477	Geocentric_Translation	0.0	0.0	0.0
RGTAAF07_to_WGS_1984_1	9770	Geocentric_Translation	0.0	0.0	0.0
RGWF96_To_WGS_1984_1	9769	Geocentric_Translation	0.0	0.0	0.0
RRAF_1991_To_WGS_1984_1	4560	Geocentric_Translation	0.0	0.0	0.0
RSAO13_To_WGS_1984_1	8819	Geocentric_Translation	0.0	0.0	0.0
RSRGD2000_To_WGS_1984_1	15974	Geocentric_Translation	0.0	0.0	0.0
SAD69_to_SIRGAS-Chile_2010_4	9348	Geocentric_Translation	-79.0	13.0	-14.0
SAD69_to_SIRGAS-Chile_2013_4	9349	Geocentric_Translation	-79.0	13.0	-14.0
SAD69_to_SIRGAS-Chile_2016_4	9350	Geocentric_Translation	-79.0	13.0	-14.0
SAD69_to_SIRGAS-Chile_2021_(4)	10138	Geocentric_Translation	-79.0	13.0	-14.0
SAD_1969_96_To_SIRGAS_2000_2	5881	Geocentric_Translation	-67.35	3.88	-38.22
SAD_1969_96_To_WGS_1984_2	6195	Geocentric_Translation	-67.35	3.88	-38.22
SAD_1969_To_SIRGAS_2000_1	15485	Geocentric_Translation	-67.35	3.88	-38.22
SAD_1969_To_SIRGAS-Chile_1	7448	Geocentric_Translation	-59.0	-11.0	-52.0
SAD_1969_To_SIRGAS-Chile_2	6968	Geocentric_Translation	-64.0	0.0	-32.0
SAD_1969_To_SIRGAS-Chile_3	7449	Geocentric_Translation	-72.0	10.0	-32.0
SAD_1969_To_SIRGAS-Chile_4	6970	Geocentric_Translation	-79.0	13.0	-14.0
SAD_1969_To_WGS_1984_1	1864	Geocentric_Translation	-57.0	1.0	-41.0
SAD_1969_To_WGS_1984_10	1873	Geocentric_Translation	-61.0	2.0	-33.0
SAD_1969_To_WGS_1984_11	1874	Geocentric_Translation	-58.0	0.0	-44.0
SAD_1969_To_WGS_1984_12	1875	Geocentric_Translation	-45.0	12.0	-33.0
SAD_1969_To_WGS_1984_13	1876	Geocentric_Translation	-45.0	8.0	-33.0
SAD_1969_To_WGS_1984_14	1877	Geocentric_Translation	-66.87	4.37	-38.52
SAD_1969_To_WGS_1984_16	5882	Geocentric_Translation	-67.35	3.88	-38.22
SAD_1969_To_WGS_1984_17	6974	Geocentric_Translation	-59.0	-11.0	-52.0
SAD_1969_To_WGS_1984_18	6975	Geocentric_Translation	-64.0	0.0	-32.0
SAD_1969_To_WGS_1984_19	6976	Geocentric_Translation	-72.0	10.0	-32.0
SAD_1969_To_WGS_1984_2	1865	Geocentric_Translation	-62.0	-1.0	-37.0

Geographic (datum) Transformation Name	WKID Method		dx (m)	dy (m)	dz (m)
SAD_1969_To_WGS_1984_20	6977	Geocentric_Translation	-79.0	13.0	-14.0
SAD_1969_To_WGS_1984_3	1866	Geocentric_Translation	-61.0	2.0	-48.0
SAD_1969_To_WGS_1984_4	1867	Geocentric_Translation	-60.0	-2.0	-41.0
SAD_1969_To_WGS_1984_5	1868	Geocentric_Translation	-75.0	-1.0	-44.0
SAD_1969_To_WGS_1984_6	1869	Geocentric_Translation	-44.0	6.0	-36.0
SAD_1969_To_WGS_1984_7	1870	Geocentric_Translation	-48.0	3.0	-44.0
SAD_1969_To_WGS_1984_8	1871	Geocentric_Translation	-47.0	26.0	-42.0
SAD_1969_To_WGS_1984_9	1872	Geocentric_Translation	-53.0	3.0	-47.0
Sainte_Anne_To_WGS_1984_1	1904	Geocentric_Translation	-467.0	-16.0	-300.0
Saint_Pierre_et_Miquelon_1950_To_WGS_1984_1	1923	Geocentric_Translation	30.0	430.0	368.0
Saint_Pierre_et_Miquelon_1950_To_WGS_1984_(G1150)	8270	Geocentric_Translation	11.363	424.148	373.13
Santo_DOS_1965_To_WGS_1984	15820	Geocentric_Translation	170.0	42.0	84.0
Sao_Braz_To_PTRA08_1_3par	108175	Geocentric_Translation	-204.926	140.353	55.063
Sao_Braz_To_PTRA08_2_3par	108176	Geocentric_Translation	-204.519	140.159	55.404
Sao_Braz_To_PTRA08_3_3par	108177	Geocentric_Translation	-205.808	140.771	54.326
Sao_Braz_To_WGS_1984_1	108117	Geocentric_Translation	-204.619	140.176	55.226
Sao_Braz_To_WGS_1984_1_3par	108181	Geocentric_Translation	-204.926	140.353	55.063
Sao_Braz_To_WGS_1984_2_3par	108182	Geocentric_Translation	-204.519	140.159	55.404
Sao_Braz_To_WGS_1984_3_3par	108183	Geocentric_Translation	-205.808	140.771	54.326
Sapper_Hill_1943_To_WGS_1984	1225	Geocentric_Translation	-355.0	21.0	72.0
Schwarzeck_To_WGS_1984	1226	Geocentric_Translation	616.0	97.0	-251.0
Schwarzeck_To_WGS_1984_2	1271	Geocentric_Translation	615.64	102.08	-255.81
Segora_To_WGS_1984	1286	Geocentric_Translation	-403.0	684.0	41.0
Selvagem_Grande_1938_To_WGS_1984_1	1965	Geocentric_Translation	-289.0	-124.0	60.0
SHGD2015_To_WGS_1984_1	7892	Geocentric_Translation	0.0	0.0	0.0
Sierra_Leone_1968_To_WGS_1984	1614	Geocentric_Translation	-88.0	4.0	101.0
SIRGAS_2000_To_WGS_1984_1	15894	Geocentric_Translation	0.0	0.0	0.0
SIRGAS-Chile_To_WGS_1984_1	5375	Geocentric_Translation	0.0	0.0	0.0
SIRGAS-ES2007.8_To_WGS_1984_1	5395	Geocentric_Translation	0.0	0.0	0.0
SIRGAS-ROU98_To_WGS_1984_1	5384	Geocentric_Translation	0.0	0.0	0.0
SIRGAS_To_WGS_1984_1	1581	Geocentric_Translation	0.0	0.0	0.0
S_JTSK_To_WGS_1984_NGA	15965	Geocentric_Translation	589.0	76.0	480.0
Slovenia_1996_To_ETRS_1989_1	15977	Geocentric_Translation	0.0	0.0	0.0
Slovenia_1996_To_WGS_1984_1	15976	Geocentric_Translation	0.0	0.0	0.0
Solomon_1968_To_WGS_1984_1	15805	Geocentric_Translation	230.0	-199.0	-752.0

Geographic (datum) Transformation Name	WKID Method dx (dx (m)	dy (m)	dz (m)
Solomon_1968_To_WGS_1984_2	15807	Geocentric_Translation	252.0	-209.0	-751.0
South_Asia_Singapore_To_WGS_1984	108269	Geocentric_Translation	7.0	-10.0	-26.0
South_East_Island_1943_To_WGS_1984_1	6914	Geocentric_Translation	-43.685	-179.785	-267.721
South_Yemen_To_WGS_1984_1	1682	Geocentric_Translation	-76.0	-138.0	67.0
South_Yemen_To_Yemen_NGN_1996	1539	Geocentric_Translation	-76.0	-138.0	67.0
SRB_ETRS89_To_ETRS_1989_1	8893	Geocentric_Translation	0.0	0.0	0.0
SRB_ETRS89_To_WGS_1984_1	8894	Geocentric_Translation	0.0	0.0	0.0
SREF98_To_ETRS_1989_1	4076	Geocentric_Translation	0.0	0.0	0.0
SREF98_To_WGS_1984_1	4077	Geocentric_Translation	0.0	0.0	0.0
ST84_Ile_des_Pins_To_WGS_1984_2	15848	Geocentric_Translation	-13.0	-348.0	292.0
ST87_Ouvea_To_RGNC_1991-93_1	15885	Geocentric_Translation	-56.263	16.136	-22.856
ST87_Ouvea_To_WGS_1984_2	15881	Geocentric_Translation	-56.263	16.136	-22.856
St_Helena_Tritan_To_SHGD2015_1	7897	Geocentric_Translation	-0.077	0.079	0.086
St_Helena_Tritan_To_WGS_1984_1	7898	Geocentric_Translation	-0.077	0.079	0.086
St_Kitts_1955_To_WGS_1984	1445	Geocentric_Translation	9.0	183.0	236.0
St_Kitts_1955_To_WGS_1984_2	15750	Geocentric_Translation	-7.0	215.0	225.0
St_Lucia_1955_To_WGS_1984	1446	Geocentric_Translation	-149.0	128.0	296.0
St_Lucia_1955_To_WGS_1984_2	6897	Geocentric_Translation	-153.0	153.0	307.0
St_Vincent_1945_To_WGS_1984_1	1959	Geocentric_Translation	195.671	332.517	274.607
SVY21_To_WGS_1984_1	8886	Geocentric_Translation	0.0	0.0	0.0
SWEREF99_To_ETRS_1989_1	1878	Geocentric_Translation	0.0	0.0	0.0
SWEREF99_To_WGS_1984_1	1879	Geocentric_Translation	0.0	0.0	0.0
Tahaa_1954_To_WGS_1984_1	1913	Geocentric_Translation	65.0	342.0	77.0
Tahiti_1952_To_WGS_1984_1	1924	Geocentric_Translation	162.0	117.0	154.0
Tananarive_1925_Paris_To_WGS_1984	8176	Geocentric_Translation	-189.0	-242.0	-91.0
Tananarive_1925_To_WGS_1984	1227	Geocentric_Translation	-189.0	-242.0	-91.0
Tananarive_Paris_To_WGS_1984_2	6874	Geocentric_Translation	-198.383	-240.517	-107.909
Tananarive_To_WGS_1984_2	6873	Geocentric_Translation	-198.383	-240.517	-107.909
Tapi_Aike_To_WGS_1984_1	9260	Geocentric_Translation	-192.26	65.72	132.08
Tern_Island_1961_To_WGS_1984	15795	Geocentric_Translation	114.0	-116.0	-333.0
Tete_To_WGS_1984_6	6901	Geocentric_Translation	-80.0	-100.0	-228.0
TGD2005_to_WGS_1984_1	9771	Geocentric_Translation	0.0	0.0	0.0
Timbalai_1948_To_WGS_1984	1228	Geocentric_Translation	-679.0	669.0	-48.0
Timbalai_1948_To_WGS_1984_2	1592	Geocentric_Translation	-678.0	670.0	-48.0
Timbalai_1948_To_WGS_1984_3	1615	Geocentric_Translation	-726.282	703.611	-48.999
Timbalai_1948_To_WGS_1984_6	6902	Geocentric_Translation	-679.0	667.0	-49.0

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
TM65_To_WGS_1984	1229	Geocentric_Translation	506.0	-122.0	611.0
TM75_To_WGS_1984_3	1956	Geocentric_Translation	506.0	-122.0	611.0
Tokyo_To_JGD_2000_1	15483	Geocentric_Translation	-146.414	507.337	680.507
Tokyo_To_WGS_1984_1	1230	Geocentric_Translation	-148.0	507.0	685.0
Tokyo_To_WGS_1984_108	15484	Geocentric_Translation	-146.414	507.337	680.507
Tokyo_To_WGS_1984_2	1231	Geocentric_Translation	-148.0	507.0	685.0
Tokyo_To_WGS_1984_2001	108106	Geocentric_Translation	-147.54	507.26	680.47
Tokyo_To_WGS_1984_3	1232	Geocentric_Translation	-146.0	507.0	687.0
Tokyo_To_WGS_1984_4	1233	Geocentric_Translation	-158.0	507.0	676.0
Tokyo_To_WGS_1984_5	1305	Geocentric_Translation	-147.0	506.0	687.0
Trinidad_1903_To_WGS_1984	1296	Geocentric_Translation	-61.702	284.488	472.052
Trinidad_1903_To_WGS_1984_2	10085	Geocentric_Translation	-61.0	285.2	471.6
Tristan_1968_To_WGS_1984	15816	Geocentric_Translation	-632.0	438.0	-609.0
TUREF_To_WGS_1984_1	5261	Geocentric_Translation	0.0	0.0	0.0
TWD_1997_To_WGS_1984_1	3830	Geocentric_Translation	0.0	0.0	0.0
UCS-2000_to_ETRS_1989_1	9901	Geocentric_Translation	24.0	-121.0	-76.0
Ukraine_2000_To_ITRF_2005_1	108035	Geocentric_Translation	24.0	-121.0	-76.0
Ukraine_2000_To_WGS_1984_2	5840	Geocentric_Translation	24.0	-121.0	-76.0
Vanua_Levu_1915_To_WGS_1984_1	15878	Geocentric_Translation	51.0	391.0	-36.0
Vientiane_1982_To_Lao_1997_1	1063	Geocentric_Translation	-2.227	6.524	2.178
Viti_Levu_1912_To_WGS_1984_1	15897	Geocentric_Translation	51.0	391.0	-36.0
Viti_Levu_1912_To_WGS_1984_2	6895	Geocentric_Translation	98.0	390.0	-22.0
Viti_Levu_1916_To_WGS_1984	15821	Geocentric_Translation	51.0	391.0	-36.0
Voirol_1875_Grad_To_WGS_1984	108278	Geocentric_Translation	-73.0	-247.0	227.0
Voirol_1875_Paris_To_WGS_1984	8211	Geocentric_Translation	-73.0	-247.0	227.0
Voirol_1875_To_WGS_1984	1294	Geocentric_Translation	-73.0	-247.0	227.0
Voirol_Unifie_1960_Grad_To_WGS_1984	108265	Geocentric_Translation	-123.0	-206.0	219.0
Voirol_Unifie_1960_Paris_To_WGS_1984	108090	Geocentric_Translation	-123.0	-206.0	219.0
Voirol_Unifie_1960_To_WGS_1984	108091	Geocentric_Translation	-123.0	-206.0	219.0
Wake_Eniwetok_1960_To_WGS_1984	15822	Geocentric_Translation	102.0	52.0	-38.0
Wake_Island_1952_To_WGS_1984	15823	Geocentric_Translation	276.0	-57.0	149.0
Yacare_To_WGS_1984	1234	Geocentric_Translation	-155.0	171.0	37.0
Yemen_NGN_1996_To_WGS_1984	1540	Geocentric_Translation	0.0	0.0	0.0
Yoff_To_WGS_1972_1	1828	Geocentric_Translation	-37.0	157.0	85.0
Yoff_To_WGS_1984_2	6903	Geocentric_Translation	-30.0	190.0	89.0

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)
Zanderij_To_WGS_1984	1235	Geocentric_Translation	-265.0	120.0	-358.0

Table 5: Geographic (datum) transformations: Coordinate frame (CF) and position vector (PV) methods

Geographic (datum) Transformation Name	WKID	Method	dx	dy	dz	rx	ry	rz	ds
			(m)	(m)	(m)	(arc-seconds)	(arc-seconds)	(arc-seconds)	(ppm)
Accra_To_WGS_1984_3	15495	Position_Vector	-171.16	17.29	325.21	0.0	0.0	0.814	-0.38
AGD_1966_To_GDA_1994_12	15979	Coordinate_Frame	-117.808	-51.536	137.784	-0.303	-0.446	-0.234	-0.29
AGD_1966_To_GDA_1994_19	5827	Coordinate_Frame	-129.164	-41.188	130.718	-0.246	-0.374	-0.329	-2.955
AGD_1966_To_GDA_1994_2	1458	Coordinate_Frame	-129.193	-41.212	130.73	-0.246	-0.374	-0.329	-2.955
AGD_1966_To_GDA_1994_3	1459	Coordinate_Frame	-120.695	-62.73	165.46	-0.109	0.141	0.116	2.733
AGD_1966_To_GDA_1994_4	1460	Coordinate_Frame	-119.353	-48.301	139.484	-0.415	-0.26	-0.437	-0.613
AGD_1966_To_GDA_1994_8	1594	Coordinate_Frame	-120.271	-64.543	161.632	-0.217	0.067	0.129	2.499
AGD_1966_To_GDA_1994_9	1595	Coordinate_Frame	-124.133	-42.003	137.4	0.008	-0.557	-0.178	-1.854
AGD_1966_To_GDA2020_1	9185	Coordinate_Frame	-136.9703	-37.5638	124.4242	-0.25676	-0.42966	-0.30077	-4.61966
AGD_1966_To_PNG_1994_2	6937	Position_Vector	-0.41	-2.37	2.0	3.592	3.698	3.989	8.843
AGD_1966_To_PNG_1994_4	6939	Position_Vector	-131.876	-54.554	453.346	-5.2155	-8.2042	0.09	5.02
AGD_1966_To_PNG_1994_6	6941	Position_Vector	45.928	-177.212	336.867	-4.6039	-3.0921	0.5729	36.796
AGD_1966_To_WGS_1984_12	1665	Coordinate_Frame	-129.193	-41.212	130.73	-0.246	-0.374	-0.329	-2.955
AGD_1966_To_WGS_1984_13	1666	Coordinate_Frame	-119.353	-48.301	139.484	-0.415	-0.26	-0.437	-0.613
AGD_1966_To_WGS_1984_14	1667	Coordinate_Frame	-120.271	-64.543	161.632	-0.217	0.067	0.129	2.499
AGD_1966_To_WGS_1984_15	1668	Coordinate_Frame	-124.133	-42.003	137.4	0.008	-0.557	-0.178	-1.854
AGD_1966_To_WGS_1984_18	15980	Coordinate_Frame	-117.808	-51.536	137.784	-0.303	-0.446	-0.234	-0.29
AGD_1984_To_GDA_1994_2	1280	Coordinate_Frame	-117.763	-51.51	139.061	-0.292	-0.443	-0.277	-0.191
AGD_1984_To_WGS_1984_2	1236	Coordinate_Frame	-116.0	-50.47	141.69	-0.23	-0.39	-0.344	0.0983
AGD_1984_To_WGS_1984_7	1669	Coordinate_Frame	-117.763	-51.51	139.061	-0.292	-0.443	-0.277	-0.191
Ain_el_Abd_1970_To_MTRF-2000_1	8824	Coordinate_Frame	-61.15	-315.86	-3.51	0.41	0.74	-3.52	1.36
Ain_El_Abd_To_WGS_1984_4	1056	Coordinate_Frame	-85.645	-273.077	-79.708	-2.289	1.421	-2.532	3.194
Ain_El_Abd_To_WGS_1984_5	1057	Coordinate_Frame	-202.234	-168.351	-63.51	-3.545	-0.659	1.945	2.1
Ain_El_Abd_To_WGS_1984_6	1058	Coordinate_Frame	-18.944	-379.364	-24.063	-0.04	0.764	-6.431	3.657
Albanian_1987_To_ETRS_1989_1	7833	Coordinate_Frame	-44.183	-0.58	-38.489	2.3867	2.7072	-3.5196	-8.2703
Albanian_1987_To_WGS_1984_1	7834	Coordinate_Frame	-44.183	-0.58	-38.489	2.3867	2.7072	-3.5196	-8.2703
Amersfoort_To_ETRS_1989	1751	Coordinate_Frame	565.036	49.914	465.839	0.40939439	-0.35970520	1.86849100	4.0772
Amersfoort_To_ETRS_1989_3	15739	Coordinate_Frame	565.2369	50.0087	465.658	0.40685733	-0.35073268	1.87034738	4.0812
Amersfoort_To_ETRS_1989_5	4830	Coordinate_Frame	565.4171	50.3319	465.5524	0.39895739	-0.34398782	1.87740164	4.0725
Amersfoort_To_ETRS_1989_8	9281	Coordinate_Frame	565.7381	50.4018	465.2904	0.39502598	-0.33077243	1.87607329	4.07244
Amersfoort_To_WGS_1984	1112	Position_Vector	593.16	26.15	478.54	-1.30439801	-0.10329745	-1.14450153	4.0775
Amersfoort_To_WGS_1984_2	1672	Coordinate_Frame	565.04	49.91	465.84	0.40939439	-0.35970520	1.86849100	4.0772
Amersfoort_To_WGS_1984_3	15934	Coordinate_Frame	565.2369	50.0087	465.658	0.40685733	-0.35073268	1.87034738	4.0812
Amersfoort_To_WGS_1984_4	4833	Coordinate_Frame	565.4171	50.3319	465.5524	0.39895739	-0.34398782	1.87740164	4.0725
Ammassalik_1958_To_Greenland_1996_1	15900	Position_Vector	-45.0	417.0	-3.5	0.0	0.0	0.814	-0.6

Geographic (datum) Transformation Name	WKID	Method	dx	dy	dz	rx	ry	rz	ds
			(m)	(m)	(m)	(arc-seconds)	(arc-seconds)	(arc-seconds)	(ppm)
Ammassalik_1958_To_WGS_1984_1	1800	Position_Vector	-45.0	417.0	-3.5	0.0	0.0	0.814	-0.6
Astro_DOS_71-4_To_SHGD2015_2	7895	Position_Vector	-112.854	12.27	-18.913	2.1692	16.8896	17.1961	-19.54517
Azores_Central_1995_To_WGS_1984_11	1981	Coordinate_Frame	-103.088	162.481	-28.276	-0.167	-0.082	-0.168	-1.504
Azores_Central_1995_To_WGS_1984_3	1973	Coordinate_Frame	-105.854	165.589	-38.312	0.003	0.026	-0.024	-0.048
Azores_Central_1995_To_WGS_1984_5	1975	Coordinate_Frame	-104.0	162.924	-38.882	0.075	0.071	-0.051	-0.338
Azores_Central_1995_To_WGS_1984_7	1977	Coordinate_Frame	-95.323	166.098	-69.942	0.215	1.031	-0.047	1.922
Azores_Central_1995_To_WGS_1984_9	1979	Coordinate_Frame	-100.306	161.246	-48.761	0.192	0.385	-0.076	0.131
Azores_Oriental_1995_To_WGS_1984_3	1969	Coordinate_Frame	-211.939	137.626	58.3	0.089	-0.251	-0.079	0.384
Azores_Oriental_1995_To_WGS_1984_5	1971	Coordinate_Frame	-208.719	129.685	52.092	0.195	0.014	-0.327	0.198
Barbados_1938_To_WGS_1984_2X	108376	Coordinate_Frame	-267.434	173.496	181.814	13.4704	-8.7154	-7.3926	14.7492
Beijing_1954_To_WGS_1984_2	15919	Position_Vector	15.53	-113.82	-41.38	0.0	0.0	0.814	-0.38
Beijing_1954_To_WGS_1984_3	15920	Position_Vector	31.4	-144.3	-74.8	0.0	0.0	0.814	-0.38
Beijing_1954_To_WGS_1984_5	15935	Position_Vector	18.0	-136.8	-73.7	0.0	0.0	0.814	-0.38
Belge_1972_To_ETRS_1989_1	1652	Position_Vector	-99.1	53.3	-112.5	0.419	-0.83	1.885	-1.0
Belge_1972_To_ETRS_1989_2	15928	Coordinate_Frame	-106.868628	52.297783	-103.723893	-0.33657	0.456955	-1.842183	-1.2747
Belge_1972_To_WGS_1984_1	1609	Coordinate_Frame	-99.059	53.322	-112.486	-0.419	0.83	-1.885	-1.0
Belge_1972_To_WGS_1984_3	15929	Coordinate_Frame	-106.868628	52.297783	-103.723893	-0.33657	0.456955	-1.842183	-1.2747
Bermuda_1957_To_Bermuda_2000_1	15969	Coordinate_Frame	-292.295	248.758	429.447	-4.9971	-2.99	-6.6906	1.0289
Bermuda_1957_To_WGS_1984_2	15970	Coordinate_Frame	-292.295	248.758	429.447	-4.9971	-2.99	-6.6906	1.0289
Bogota_To_MAGNA_Region_1_CF	15714	Coordinate_Frame	-806.413	-263.5	-622.671	12.41421856	-2.99084175	-39.03468639	-20.81616
Bogota_To_MAGNA_Region_2_CF	15716	Coordinate_Frame	100.783	187.382	-47.0	-9.22383005	2.42380330	-8.30827833	-13.56561
Bogota_To_MAGNA_Region_3_CF	15718	Coordinate_Frame	336.026	348.565	252.978	-17.24128944	-6.30649282	1.56204977	-5.771909
Bogota_To_MAGNA_Region_4_CF	15720	Coordinate_Frame	963.273	486.386	190.997	-16.48503603	-1.66882584	21.69284905	-13.89914
Bogota_To_MAGNA_Region_5_CF	15722	Coordinate_Frame	-90.29	247.559	-21.989	-8.69688535	-4.18803363	-12.80826685	2.181658
Bogota_To_MAGNA_Region_6_CF	15724	Coordinate_Frame	-0.562	244.299	-456.938	6.86687099	-8.25267346	-9.29677972	3.74656
Bogota_To_MAGNA_Region_7_CF	15726	Coordinate_Frame	-305.356	222.004	-30.023	-9.69049386	1.03196820	-19.75739418	6.325747
Bogota_To_MAGNA_Region_8_CF	15728	Coordinate_Frame	221.899	274.136	-397.554	2.80844591	-0.44850859	-2.81017235	-2.199943
Bogota_To_WGS_1984_Region_1_CF	15715	Coordinate_Frame	-806.413	-263.5	-622.671	12.41421856	-2.99084175	-39.03468639	-20.81616
Bogota_To_WGS_1984_Region_2_CF	15717	Coordinate_Frame	100.783	187.382	-47.0	-9.22383005	2.42380303	-8.30827833	-13.56561
Bogota_To_WGS_1984_Region_3_CF	15719	Coordinate_Frame	336.026	348.565	252.978	-17.24128944	-6.30649282	1.56204977	-5.771909
Bogota_To_WGS_1984_Region_4_CF	15721	Coordinate_Frame	963.273	486.386	190.997	-16.48503603	-1.66882584	21.69284905	-13.89914
Bogota_To_WGS_1984_Region_5_CF	15723	Coordinate_Frame	-90.29	247.559	-21.989	-8.69688535	-4.18803363	-12.80826685	2.181658
Bogota_To_WGS_1984_Region_6_CF	15725	Coordinate_Frame	-0.562	244.299	-456.938	6.86687099	-8.25267346	-9.29677972	3.74656
Bogota_To_WGS_1984_Region_7_CF	15727	Coordinate_Frame	-305.356	222.004	-30.023	-9.69049386	1.03196820	-19.75739418	6.325747
Bogota_To_WGS_1984_Region_8_CF	15729	Coordinate_Frame	221.899	274.136	-397.554	2.80844591	-0.44850859	-2.81017235	-2.199943
Camacupa_2015_To_RSAO13_1	8827	Coordinate_Frame	-93.799	-132.737	-219.073	1.844	-0.648	6.37	-0.169
Camacupa_2015_To_WGS_1984_11	8882	Coordinate_Frame	-93.799	-132.737	-219.073	1.844	-0.648	6.37	-0.169
Camacupa_To_Camacupa_2015_1	8695	Coordinate_Frame	42.899	-214.863	-11.927	-1.844	0.648	-6.37	0.169
Camacupa_To_Camacupa_2015_2	8696	Coordinate_Frame	45.799	-212.263	-11.927	-1.844	0.648	-6.37	0.169
Camacupa_1948_to_RSAO13_4	9905	Position_Vector	-41.057	-374.564	-226.287	0.0	0.0	0.554	0.219
Camacupa_To_WGS_1984_3	1320	Position_Vector	-37.2	-370.6	-224.0	0.0	0.0	0.554	0.219
Camacupa_To_WGS_1984_9	1326	Position_Vector	-41.057	-374.564	-226.287	0.0	0.0	0.554	0.219

Geographic (datum) Transformation Name	WKID	Method	dx	dy	dz	rx	ry	rz	ds
			(m)	(m)	(m)	(arc-seconds)	(arc-seconds)	(arc-seconds)	(ppm)
CGRS_1993_To_ETRS_1989	108128	Position_Vector	8.846	-4.394	-1.122	-0.00237	-0.146528	0.130428	0.783926
CGRS93_To_ETRS_1989_1	7720	Coordinate_Frame	8.846	-4.394	-1.122	0.00237	0.146528	-0.130428	0.783926
CGRS_1993_To_WGS_1984	108129	Position_Vector	8.846	-4.394	-1.122	-0.00237	-0.146528	0.130428	0.783926
CGRS93_To_WGS_1984_1	7721	Coordinate_Frame	8.846	-4.394	-1.122	0.00237	0.146528	-0.130428	0.783926
CH1903_To_WGS_1984_1	1753	Coordinate_Frame	660.077	13.551	369.344	0.804816	0.577692	0.952236	5.66
Chatham_Islands_1979_To_NZGD_2000_1	1082	Coordinate_Frame	174.05	-25.49	112.57	0.0	0.0	-0.554	0.2263
Chatham_Islands_1979_To_WGS_1984_1	1081	Coordinate_Frame	174.05	-25.49	112.57	0.0	0.0	-0.554	0.2263
Combani_1950_To_RGM_2004_1	5888	Position_Vector	-599.928	-275.552	-195.665	-0.0835	-0.4715	0.0602	49.2814
CR05_To_CR-SIRGAS_1	8968	Coordinate_Frame	-0.16959	0.35312	0.51846	-0.03385	0.16325	-0.03446	0.03693
CR05_To_WGS_1984_2	8969	Coordinate_Frame	-0.16959	0.35312	0.51846	-0.03385	0.16325	-0.03446	0.03693
CSG_1967_To_RGFG_1995_1	1908	Position_Vector	-193.066	236.993	105.447	0.4814	-0.8074	0.1276	1.5649
D48_To_D96_2010_GI	108076	Coordinate_Frame	476.08	125.947	417.81	-4.610862	-2.388137	11.942335	9.896638
D48_To_ETRS_1989	108276	Position_Vector	426.62	142.62	460.09	4.98	4.49	-12.42	-17.1
D48_To_WGS_1984	108277	Position_Vector	426.62	142.62	460.09	4.98	4.49	-12.42	-17.1
D96_To_D48_Dolenjska	108081	Coordinate_Frame	-481.871	-129.173	-420.608	5.096868	2.423927	-11.524756	-8.872387
D96_To_D48_Gorenjska	108084	Coordinate_Frame	-438.775	-109.403	-377.696	4.933923	2.503267	-11.26993	-18.814763
D96_To_D48_Jugovzhodna_Slovenija	108079	Coordinate_Frame	-485.018	-129.747	-423.199	4.880531	2.348721	-11.745346	-8.231637
D96_To_D48_Juzna_Slovenija	108080	Coordinate_Frame	-502.101	-131.516	-433.704	6.054862	2.498236	-10.429331	-5.188197
D96_To_D48_Osrednja_Slovenija	108086	Coordinate_Frame	-465.328	-122.305	-403.609	4.387757	2.265582	-12.157415	-12.73019
D96_To_D48_Pomurje	108083	Coordinate_Frame	-523.882	-151.289	-480.592	3.706371	2.315828	-13.400341	2.972511
D96_To_D48_Primorska	108085	Coordinate_Frame	-465.715	-115.127	-397.622	5.743906	2.510737	-10.415817	-13.558204
D96_To_D48_Severovzhodna_Slovenija	108078	Coordinate_Frame	-491.556	-135.972	-440.4	3.683681	2.232141	-13.171698	-5.421926
D96_To_D48_Stajerska	108082	Coordinate_Frame	-477.73	-130.719	-424.46	3.790572	2.246488	-12.99207	-8.828735
D96_To_D48_Zahodna_Slovenija	108077	Coordinate_Frame	-453.674	-112.561	-388.287	5.343297	2.485394	-10.836743	-15.958238
Datum_73_To_ETRS_1989_1	1657	Position_Vector	-238.2	85.2	29.9	0.166	0.046	1.248	2.03
Datum_73_To_ETRS_1989_2009_7par	5037	Position_Vector	-230.994	102.591	25.199	0.633	-0.239	0.9	1.95
Datum_73_To_ETRS_1989_3	1992	Coordinate_Frame	-231.034	102.615	26.836	-0.615	0.198	-0.881	1.786
Datum_73_To_WGS_1984_1_Prt2000	1658	Position_Vector	-238.2	85.2	29.9	0.166	0.046	1.248	2.03
Datum_73_To_WGS_1984_2	108120	Coordinate_Frame	-239.749	88.181	30.488	-0.26	-0.08	-1.21	2.23
Datum_73_To_WGS_1984_2009_7par	108153	Position_Vector	-230.994	102.591	25.199	0.633	-0.239	0.9	1.95
Datum_73_To_WGS_1984_4	1987	Coordinate_Frame	-239.749	88.181	30.488	-0.263	-0.082	-1.211	2.229
Datum_Lisboa_Bessel_To_WGS_1984_2	108123	Coordinate_Frame	631.392	-66.551	481.442	-1.09	4.445	4.487	-4.43
Datum_Lisboa_Hayford_To_Datum_73_2	108223	Coordinate_Frame	-49.137	-179.924	95.757	1.955	-0.328	1.423	-6.827
Datum_Lisboa_Hayford_To_Datum_Lisboa_	108225	Coordinate_Frame	-920.281	-25.191	-355.2	2.781	-4.855	-4.276	-0.168
Bessel_2									
Datum_Lisboa_Hayford_To_ETRS_1989_2009	108156	Position_Vector	-283.088	-70.693	117.445	-1.157	0.059	-0.652	-4.058
_7par									
Datum_Lisboa_Hayford_To_WGS_1984_2	108124	Coordinate_Frame	-288.885	-91.744	126.244	1.69	-0.41	0.21	-4.6
Datum_Lisboa_Hayford_To_WGS_1984_2009	108157	Position_Vector	-283.088	-70.693	117.445	-1.157	0.059	-0.652	-4.058
_7par									
DB_REF_To_ETRS_1989_1	5826	Coordinate_Frame	584.9636	107.7175	413.8067	-1.11552146	-0.28243399	3.13844906	7.992235
Dealul_Piscului_1970_To_ETRS_1989_1X	108375	Coordinate_Frame	2.3287	-147.0425	-92.0802	0.3092483	-0.32482185	-0.49729934	5.68906266
Dealul_Piscului_1970_To_WGS_1984_3X	108374	Coordinate_Frame	2.3287	-147.0425	-92.0802	0.3092483	-0.32482185	-0.49729934	5.68906266

Geographic (datum) Transformation Name	WKID	Method	dx	dy	dz	rx	ry	rz	ds
			(m)	(m)	(m)	(arc-seconds)	(arc-seconds)	(arc-seconds)	(ppm)
Deir_ez_Zor_To_WGS_1984_3	1586	Position_Vector	-175.09	1.218	238.831	-0.047	0.019	0.808	0.1698
Deir_ez_Zor_To_WGS_1984_6	15743	Position_Vector	-83.58	-397.54	458.78	-17.595	-2.847	4.256	3.225
DGN95_to_SRGI2013_1	9472	Coordinate_Frame	-0.2773	0.0534	0.4819	0.019285759	-0.005899173	0.001998706	-0.028
DHDN_To_ETRF_1989	108192	Coordinate_Frame	582.0	105.0	414.0	-1.04	-0.35	3.08	8.3
DHDN_To_ETRS_1989	1309	Coordinate_Frame	582.0	105.0	414.0	-1.04	-0.35	3.08	8.3
DHDN_To_ETRS_1989_2	1776	Position_Vector	598.1	73.7	418.2	0.202	0.045	-2.455	6.7
DHDN_To_ETRS_1989_3	1778	Position_Vector	597.1	71.4	412.1	0.894	0.068	-1.563	7.58
DHDN_To_ETRS_1989_4	1779	Position_Vector	584.8	67.0	400.3	0.105	0.013	-2.378	10.29
DHDN_To_ETRS_1989_5	1780	Position_Vector	590.5	69.5	411.6	-0.796	-0.052	-3.601	8.3
DHDN_To_ETRS_1989_6	1781	Position_Vector	599.4	72.4	419.2	-0.062	-0.022	-2.723	6.46
DHDN_To_ETRS_1989_7	1782	Position_Vector	612.4	77.0	440.2	-0.054	0.057	-2.797	2.55
DHDN_To_WGS_1984_1	1673	Coordinate_Frame	582.0	105.0	414.0	-1.04	-0.35	3.08	8.3
DHDN_To_WGS_1984_2	1777	Position_Vector	598.1	73.7	418.2	0.202	0.045	-2.455	6.7
DHDN_To_WGS_1984_3	15869	Position_Vector	612.4	77.0	440.2	-0.054	0.057	-2.797	2.55
DHDN_To_WGS_1984_3x	108206	Position_Vector	597.1	71.4	412.1	0.894	0.068	-1.563	7.58
DHDN_To_WGS_1984_4x	108207	Position_Vector	584.8	67.0	400.3	0.105	0.013	-2.378	10.29
DHDN_To_WGS_1984_5x	108208	Position_Vector	590.5	69.5	411.6	-0.796	-0.052	-3.601	8.3
DHDN_To_WGS_1984_6x	108209	Position_Vector	599.4	72.4	419.2	-0.062	-0.022	-2.723	6.46
DHDN_To_WGS_1984_7x	108210	Position_Vector	612.4	77.0	440.2	-0.054	0.057	-2.797	2.55
ED_1950_ED77_To_WGS_1984	1514	Position_Vector	-110.33	-97.73	-119.85	0.3423	1.1634	0.2715	0.063
ED_1950_To_ED_1987_2	1147	Position_Vector	-1.51	-0.84	-3.5	-0.39045928	-0.14170392	-0.57011592	0.609
ED_1950_To_ETRF_1989_1	108193	Position_Vector	-116.641	-56.931	-110.559	0.893	0.921	-0.917	-3.52
ED_1950_To_ETRS_1989_1	1588	Position_Vector	-116.641	-56.931	-110.559	0.89250782	0.92076610	-0.91664080	-3.52
ED_1950_To_ETRS_1989_15	9224	Position_Vector	-157.89	-17.16	-78.41	2.118	2.697	-1.434	-5.38
ED_1950_To_ETRS_1989_4	1626	Position_Vector	-81.1	-89.4	-115.8	0.485	0.024	0.413	-0.54
ED_1950_To_ETRS_1989_6	1630	Position_Vector	-181.5	-90.3	-187.2	0.144	0.492	-0.394	17.57
ED_1950_To_ETRS_1989_7	1632	Position_Vector	-131.0	-100.3	-163.4	-1.244	-0.02	-1.144	9.39
ED_1950_To_ETRS_1989_8	1634	Position_Vector	-178.4	-83.2	-221.3	0.54	-0.532	-0.126	21.2
ED_1950_To_ETRS_1989_9	1783	Position_Vector	-84.1	-101.8	-129.7	0.0	0.0	0.468	1.05
ED_1950_To_WGS_1984_18	1311	Position_Vector	-89.5	-93.8	-123.1	0.0	0.0	-0.156	1.2
ED_1950_To_WGS_1984_23	1612	Position_Vector	-116.641	-56.931	-110.559	0.893	0.921	-0.917	-3.52
ED_1950_To_WGS_1984_24	1613	Position_Vector	-90.365	-101.13	-123.384	0.333	0.077	0.894	1.994
ED_1950_To_WGS_1984_25	1627	Position_Vector	-81.1	-89.4	-115.8	0.485	0.024	0.413	-0.54
ED_1950_To_WGS_1984_27	1631	Position_Vector	-181.5	-90.3	-187.2	0.144	0.492	-0.394	17.57
ED_1950_To_WGS_1984_28	1633	Position_Vector	-131.0	-100.3	-163.4	-1.244	-0.02	-1.144	9.39
ED_1950_To_WGS_1984_29	1635	Position_Vector	-178.4	-83.2	-221.3	0.54	-0.532	-0.126	21.2
ED_1950_To_WGS_1984_30	1784	Position_Vector	-84.1	-101.8	-129.7	0.0	0.0	0.468	1.05
ED_1950_To_WGS_1984_31	1810	Position_Vector	-84.0	-103.0	-122.5	0.0	0.0	0.554	0.2263
ED_1950_To_WGS_1984_32	3904	Position_Vector	-83.11	-97.38	-117.22	0.00569291	-0.04469758	0.04428505	0.1218
ED_1950_To_WGS_1984_34	1989	Coordinate_Frame	-74.292	-135.889	-104.967	0.524	0.136	-0.61	-3.761
ED_1950_To_WGS_1984_36	1998	Position_Vector	-157.89	-17.16	-78.41	2.118	2.697	-1.434	-5.38
ED_1950_To_WGS_1984_NGA_7PAR	108335	Coordinate_Frame	-102.0	-102.0	-129.0	0.413	-0.184	0.385	2.4664

Geographic (datum) Transformation Name	WKID	Method	dx	dy	dz	rx	ry	rz	ds
			(m)	(m)	(m)	(arc-seconds)	(arc-seconds)	(arc-seconds)	(ppm)
ED_1950_To_WGS_1984_PT7	108121	Coordinate_Frame	-68.863	-134.888	-111.49	0.53	0.14	-0.57	-3.4
ED_1987_To_ETRS_1989_1	4078	Position_Vector	-83.11	-97.38	-117.22	0.00569291	-0.04469758	0.04428505	0.1218
ED_1987_To_WGS_1984_1	1146	Position_Vector	-82.981	-99.719	-110.709	-0.10470002	0.03100160	0.08040202	-0.3143
ED_1987_To_WGS_1984_2	3905	Position_Vector	-83.11	-97.38	-117.22	0.00569291	-0.04469758	0.04428505	0.1218
Egypt_1907_To_WGS_1984_2	108043	Position_Vector	-121.8	98.1	-10.7	0.0	0.0	0.554	0.2263
ELD_1979_To_WGS_1984_4	1862	Position_Vector	-194.513	-63.978	-25.759	-3.4027	3.756	-3.352	-0.9175
ELD_1979_To_WGS_1984_5	1863	Coordinate_Frame	-389.691	64.502	210.209	-0.086	-14.314	6.39	0.9264
Estonia_1992_To_ETRF_1989	108194	Coordinate_Frame	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Estonia_1992_To_ETRS_1989	1331	Coordinate_Frame	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Estonia_1992_To_WGS_1984	1333	Coordinate_Frame	0.055	-0.541	-0.185	-0.0183	0.0003	0.007	-0.014
ETRF_1989_To_WGS_1984	108195	Position_Vector	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ETRS_1989_To_S-JTSK_[JTSK03]_1	8365	Coordinate_Frame	-485.014055	-169.473618	-483.842943	7.78625453	4.39770887	4.10248899	0.0
ETRS_1989_To_WGS_1984	1149	Position_Vector	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ETRS_1989_To_Xrail84_1	108050	Position_Vector	19.019	115.122	-97.287	3.577824	-3.484437	-2.767646	18.6084754
EUREF_FIN_To_ETRS_1989	108226	Coordinate_Frame	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EUREF_FIN_To_WGS_1984	108227	Coordinate_Frame	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fahud_To_WGS_1984_2	1438	Position_Vector	-333.102	-11.02	230.69	0.0	0.0	0.554	0.219
Fatu_Iva_1972_To_RGPF_1	8835	Position_Vector	347.103	1078.125	2623.922	33.8875	-70.6773	9.3943	186.074
Fatu_lva_1972_To_WGS_1984_1	15772	Coordinate_Frame	347.103	1078.125	2623.922	33.8875	-70.6773	9.3943	186.074
Fatu_Iva_1972_To_WGS_1984_2	8842	Position_Vector	347.175	1077.618	2623.677	33.9058	-70.6776	9.4013	186.0647
Fiji_1986_To_WGS_1984_1	15876	Position_Vector	0.0	0.0	4.5	0.0	0.0	0.554	0.2263
Fiji_1986_To_WGS_1984_2	15877	Coordinate_Frame	-35.173	136.571	-36.964	1.37	-0.842	-4.718	-1.537
Fort_Desaix_To_RGAF09_1	5491	Position_Vector	127.744	547.069	118.359	-3.1116	4.9509	-0.8837	14.1012
Fort_Desaix_To_WGS_1984_2	1910	Position_Vector	126.93	547.94	130.41	-2.7867	5.1612	-0.8584	13.8227
Fort_Marigot_To_RGAF09_1	5493	Position_Vector	151.613	253.832	-429.084	-0.0506	0.0958	-0.5974	-0.3971
GDA_1994_To_GDA2020_1	8048	Coordinate_Frame	0.06155	-0.01087	-0.04019	-0.0394924	-0.0327221	-0.0328979	-0.009994
GDA_1994_To_WGS_1984	1150	Position_Vector	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GDA_1994_To_WGS_1984_2	9688	Coordinate_Frame	0.06155	-0.01087	-0.04019	-0.0394924	-0.0327221	-0.0328979	-0.009994
Graciosa_1948_To_PTRA08_1_7par	108184	Position_Vector	-185.391	122.266	35.989	0.12	3.18	2.046	-1.053
Graciosa_1948_To_PTRA08_2_7par	108185	Position_Vector	-76.822	257.457	-12.817	2.136	-0.033	-2.392	-0.031
Graciosa_1948_To_PTRA08_3_7par	108186	Position_Vector	-210.371	49.768	0.808	-2.036	3.046	3.709	0.934
Graciosa_1948_To_PTRA08_4_7par	108187	Position_Vector	-364.422	243.651	274.822	5.477	12.092	1.538	2.243
Graciosa_1948_To_PTRA08_5_7par	108188	Position_Vector	-201.545	109.048	32.218	-0.286	3.471	2.443	0.309
Graciosa_1948_To_PTRA08_6_7par	108189	Position_Vector	-216.355	107.044	48.015	-0.204	4.158	2.605	0.297
Graciosa_1948_To_WGS_1984_1_7par	108246	Position_Vector	-185.391	122.266	35.989	0.12	3.18	2.046	-1.053
Graciosa_1948_To_WGS_1984_2_7par	108247	Position_Vector	-76.822	257.457	-12.817	2.136	-0.033	-2.392	-0.031
Graciosa_1948_To_WGS_1984_3_7par	108248	Position_Vector	-210.371	49.768	0.808	-2.036	3.046	3.709	0.934
Graciosa_1948_To_WGS_1984_4_7par	108249	Position_Vector	-364.422	243.651	274.822	5.477	12.092	1.538	2.243
Graciosa_1948_To_WGS_1984_5_7par	108250	Position_Vector	-201.545	109.048	32.218	-0.286	3.471	2.443	0.309
Graciosa_1948_To_WGS_1984_6_7par	108251	Position_Vector	-216.355	107.044	48.015	-0.204	4.158	2.605	0.297
Graciosa_Base_SW_1948_To_WGS_1984_2	108122	Coordinate_Frame	-103.088	162.481	-28.276	-0.17	-0.08	-0.17	-1.5
Grand_Cayman_1959_To_CIGD11_1	6136	Coordinate_Frame	-179.483	-69.379	-27.584	7.862	-8.163	-6.042	-13.925
Grand_Cayman_1959_To_WGS_1984_2	6142	Coordinate_Frame	-179.483	-69.379	-27.584	7.862	-8.163	-6.042	-13.925

Geographic (datum) Transformation Name	WKID	Method	dx	dy	dz	rx	ry	rz	ds
			(m)	(m)	(m)	(arc-seconds)	(arc-seconds)	(arc-seconds)	(ppm)
HD1909_To_WGS_1984_1	3817	Coordinate_Frame	595.48	121.69	515.35	-4.115	2.9383	-0.853	-3.408
Helle_1954_To_WGS_1984_1	1957	Position_Vector	982.6087	552.753	-540.873	6.68162663	-31.61149241	-19.84816100	16.805
Hito_XVIII_1963_To_WGS_1984	1529	Position_Vector	18.38	192.45	96.82	0.056	-0.142	-0.2	-0.0013
Hong_Kong_1980_To_ITRF_1996	108337	Coordinate_Frame	-162.619	-276.959	-161.764	-0.067753	2.243648	1.158828	-1.094246
Hong_Kong_1980_To_WGS_1984_1	1825	Coordinate_Frame	-162.619	-276.959	-161.764	0.067753	-2.243649	-1.158827	-1.094246
Hungarian_1972_To_ETRF_1989_1	108196	Coordinate_Frame	56.0	-75.77	-15.31	0.37	0.2	0.21	1.01
Hungarian_1972_To_ETRS_1989_1	1829	Coordinate_Frame	56.0	-75.77	-15.31	0.37	0.2	0.21	1.01
Hungarian_1972_To_ETRS_1989_2	1449	Coordinate_Frame	52.684	-71.194	-13.975	0.312	0.1063	0.3729	1.0191
Hungarian_1972_To_WGS_1984_1	1830	Coordinate_Frame	56.0	-75.77	-15.31	0.37	0.2	0.21	1.01
Hungarian_1972_To_WGS_1984_3	1448	Coordinate_Frame	52.684	-71.194	-13.975	0.312	0.1063	0.3729	1.0191
IGD05_To_IG05_Intermediate_CRS	7140	Coordinate_Frame	-23.8085	-17.5937	-17.801	-0.3306	-1.85706	1.64828	5.4374
IGD05(2012)_To_IG05(2012)_Intermediate_	6993	Coordinate_Frame	-24.0024	-17.1032	-17.8444	-0.33009	-1.85269	1.66969	5.4248
CRS									
IGD05_To_IGD05(2012)	6992	Coordinate_Frame	0.2255	-0.3709	-0.1171	-0.00388	0.00063	-0.0182	0.013443
IGN53_Mare_To_RGNC_1991-93_2	15891	Coordinate_Frame	-408.809	366.857	-412.987	-1.8843	0.5308	-2.1657	-121.0994
IGN53_Mare_To_WGS_1984_1	1928	Position_Vector	-408.809	366.856	-412.987	1.8842	-0.5308	2.1655	-121.0993
IGN56_Lifou_To_RGNC_1991-93_2	15890	Coordinate_Frame	137.092	131.675	91.478	1.9435	11.5995	4.3316	-7.4801
IGN56_Lifou_To_WGS_1984_2	1927	Position_Vector	137.092	131.66	91.475	-1.9436	-11.5993	-4.3321	-7.4824
IGN63_Hiva_Oa_To_RGPF_1	8843	Position_Vector	410.721	55.049	80.746	-2.5779	-2.3514	-0.6664	17.3311
IGN63_Hiva_Oa_To_RGPF_2	8845	Position_Vector	374.715	-58.407	-0.957	-16.2111	-11.4626	-5.5357	-0.5409
IGN63_Hiva_Oa_To_WGS_1984_1	15773	Coordinate_Frame	410.721	55.049	80.746	-2.5779	-2.3514	-0.6664	17.3311
IGN63_Hiva_Oa_To_WGS_1984_2	15774	Coordinate_Frame	374.716	-58.407	-0.957	-16.2111	-11.4626	-5.5357	-0.5409
IGN63_Hiva_Oa_To_WGS_1984_3	8844	Position_Vector	410.793	54.542	80.501	-2.5596	-2.3517	-0.6594	17.3218
IGN63_Hiva_Oa_To_WGS_1984_4	8846	Position_Vector	374.787	-58.914	-1.202	-16.1928	-11.4629	-5.5287	-0.5502
IGN72_Grande_Terre_To_RGNC_1991-93_2	15887	Coordinate_Frame	97.297	-263.243	310.879	1.5999	-0.8387	-3.1409	13.326
IGN72_Grande_Terre_To_RGNC_1991-93_3	15888	Coordinate_Frame	48.812	-205.932	343.993	3.442742	0.499871	-4.087799	6.521525
IGN72_Grande_Terre_To_WGS_1984_2	1963	Position_Vector	97.295	-263.247	310.882	-1.5999	0.8386	3.1409	13.3259
IGN72_Nuku_Hiva_To_RGPF_1	8847	Coordinate_Frame	165.732	216.72	180.505	-0.6434	-0.4512	-0.0791	7.4204
IGN72_Nuku_Hiva_To_RGPF_2	8849	Coordinate_Frame	1363.785	1362.687	398.811	-4.5322	-6.7579	-1.0574	268.361
IGN72_Nuku_Hiva_To_RGPF_3	8851	Coordinate_Frame	259.551	297.612	197.833	1.4866	2.1224	0.4612	27.0249
IGN72_Nuku_Hiva_To_WGS_1984_2	15775	Coordinate_Frame	165.732	216.72	180.505	-0.6434	-0.4512	-0.0791	7.4204
IGN72_Nuku_Hiva_To_WGS_1984_3	15776	Coordinate_Frame	1363.785	1362.687	398.811	-4.5322	-6.7579	-1.0574	268.361
IGN72_Nuku_Hiva_To_WGS_1984_4	15777	Coordinate_Frame	259.551	297.612	197.833	1.4866	2.1224	0.4612	27.0249
IGN72_Nuku_Hiva_To_WGS_1984_5	8848	Position_Vector	165.804	216.213	180.26	-0.6251	-0.4515	-0.0721	7.4111
IGN72_Nuku_Hiva_To_WGS_1984_6	8850	Position_Vector	1363.857	1362.18	398.566	-4.5139	-6.7582	-1.0504	268.3517
IGN72_Nuku_Hiva_To_WGS_1984_7	8852	Position_Vector	259.623	297.105	197.588	1.5049	2.1221	0.4682	27.0156
Indian_1960_To_WGS_1984_1	108097	Position_Vector	199.0	931.0	318.9	0.0	0.0	0.814	-0.38
Indian_1975_To_WGS_1984_4	1812	Position_Vector	293.0	836.0	318.0	0.5	1.6	-2.8	2.1
Indonesian_1974_To_DGN_1995_1	15911	Coordinate_Frame	-1.977	-13.06	-9.993	-0.364	-0.254	-0.689	-1.037
Indonesian_1974_To_WGS_1984_2	1832	Position_Vector	2.691	-14.757	4.724	0.0	0.0	0.774	-0.6
Indonesian_1974_To_WGS_1984_3	1833	Coordinate_Frame	-1.977	-13.06	-9.993	-0.364	-0.254	-0.689	-1.037
Israel_1993_to_WGS_1984_2	9676	Coordinate_Frame	23.772	17.49	17.859	0.3132	1.85274	-1.67299	-5.4262

Geographic (datum) Transformation Name	WKID	Method	dx	dy	dz	rx	ry	rz	ds
			(m)	(m)	(m)	(arc-seconds)	(arc-seconds)	(arc-seconds)	(ppm)
ITRF_1988_To_ITRF_2000_1	108034	Position_Vector	-0.0247	-0.0115	0.0979	-0.0001	0.0	0.00018	-0.00895
ITRF_1989_To_ITRF_2000_1	108033	Position_Vector	-0.0297	-0.0475	0.0739	0.0	0.0	0.00018	0.00585
ITRF_1990_To_ITRF_2000_1	108032	Position_Vector	-0.0247	-0.0235	0.0359	0.0	0.0	0.00018	-0.00245
ITRF_1991_To_ITRF_2000_1	108031	Position_Vector	-0.0267	-0.0275	0.0199	0.0	0.0	0.00018	-0.00215
ITRF_1992_To_ITRF_2000_1	108030	Position_Vector	-0.0147	-0.0135	0.0139	0.0	0.0	0.00018	-0.00075
ITRF_1993_To_ITRF_2000_1	108029	Position_Vector	-0.0127	-0.0065	0.0209	0.00039	-0.0008	0.00114	-0.00195
ITRF_1994_To_ITRF_2000_1	108028	Position_Vector	-0.0067	-0.0061	0.0185	0.0	0.0	0.0	-0.00155
ITRF_1996_To_ITRF_2000_1	108027	Position_Vector	-0.0067	-0.0061	0.0185	0.0	0.0	0.0	-0.00155
ITRF_1997_To_ITRF_2000_1	108026	Position_Vector	-0.0067	-0.0061	0.0185	0.0	0.0	0.0	-0.00155
ITRF_2000_To_ITRF_2005_1	108036	Position_Vector	-0.0001	0.0008	0.0058	0.0	0.0	0.0	-0.0004
ITRF_2000_To_NAD_1983_2011	108353	Coordinate_Frame	0.9956	-1.9013	-0.5215	0.025915	0.009426	0.011599	0.00062
ITRF_2000_To_NAD_1983_CORS96	108150	Coordinate_Frame	0.9956	-1.9013	-0.5215	0.025915	0.009426	0.011599	0.00062
ITRF_2000_To_NAD_1983_HARN	108281	Coordinate_Frame	0.9956	-1.9013	-0.5215	0.025915	0.009426	0.011599	0.00062
ITRF_2005_To_ITRF_2008_2	108052	Position_Vector	0.002	0.0009	0.0047	0.0	0.0	0.0	-0.00094
ITRF_2008_To_IG05(2012)_Intermediate_CRS	9186	Coordinate_Frame	-23.772	-17.49	-17.859	-0.3132	-1.85274	1.67299	5.4262
ITRF_2008_To_ITRF_2014_7par	108074	Position_Vector	-0.0016	-0.0019	-0.0024	0.0	0.0	0.0	0.00002
ITRF_2008_To_NAD_1983_2011	108360	Coordinate_Frame	0.99343	-1.90331	-0.52655	0.02591467	0.00942645	0.01159935	0.00171504
ITRF_2008_To_NAD_1983_MA11	108361	Coordinate_Frame	0.908	-2.0161	-0.5653	0.028971	0.01042	0.008928	0.0011
ITRF_2008_To_NAD_1983_PA11	108362	Coordinate_Frame	0.908	-2.0161	-0.5653	0.027741	0.013469	0.002712	0.0011
ITRF_2014_To_NAD_1983_CSRS_v7_7par	108075	Position_Vector	1.0053	-1.9092	-0.5416	-0.0267814	0.0004203	-0.0109321	0.00037
Jamaica_1969_To_JAD_2001_1	15926	Coordinate_Frame	-33.722	153.789	94.959	8.581	4.478	-4.54	8.95
Jamaica_1969_To_WGS_1984_3	15927	Coordinate_Frame	-33.722	153.789	94.959	8.581	4.478	-4.54	8.95
Kalianpur_1962_To_WGS_1984_5	9234	Position_Vector	230.25	632.76	161.03	-1.114	1.115	1.212	12.584
KKJ_To_ETRS_1989_1_Old	1638	Position_Vector	-90.7	-106.1	-119.2	4.09	0.218	-1.05	1.37
KKJ_To_ETRS_1989_2	10098	Coordinate_Frame	-96.0617	-82.4278	-121.7535	-4.80107	-0.34543	1.37646	1.4964
KKJ_To_EUREF_FIN	108229	Coordinate_Frame	-96.0617	-82.4278	-121.7535	-4.80107	-0.34543	1.37646	1.4964
KKJ To WGS 1984 1 Old	1639	Position Vector	-90.7	-106.1	-119.2	4.09	0.218	-1.05	1.37
KKJ_To_WGS_1984_2_JHS153	10099	Coordinate_Frame	-96.0617	-82.4278	-121.7535	-4.80107	-0.34543	1.37646	1.4964
KSA-GRF17 To WGS 1984 1	9383	Position Vector	0.0	0.0	0.0	-0.008393	0.000749	-0.010276	0.0
KUDAMS To WGS 1984 2	1062	Coordinate Frame	226.702	-193.337	-35.371	2.229	4.391	-9.238	0.9798
Lisbon 1890 To WGS 1984 2	1990	Coordinate Frame	631.392	-66.551	481.442	-1.09	4.445	4.487	-4.43
Lisbon Lisbon To WGS 1984 2	5838	Coordinate Frame	-288.885	-91.744	126.244	1.691	-0.41	0.211	-4.598
Lisbon To ETRS 1989 1	1655	Position Vector	-280.9	-89.8	130.2	-1.721	0.355	-0.371	-5.92
Lisbon To ETRS 1989 2	1997	Position Vector	-282.1	-72.2	120.0	-1.529	0.145	-0.89	-4.46
Lisbon To WGS 1984 1	1656	Position Vector	-280.9	-89.8	130.2	-1.721	0.355	-0.371	-5.92
Lisbon To WGS 1984 2	1944	Position Vector	-282.1	-72.2	120.0	-1.592	0.145	-0.89	-4.46
Lisbon_To_WGS_1984_4	1988	Coordinate_Frame	-288.885	-91.744	126.244	1.691	-0.41	0.211	-4.598
Little Cayman 1961 To CIGD11 1	6137	Coordinate Frame	8.853	-52.644	180.304	0.393	2.323	-2.96	-24.081
Little Cayman 1961 To WGS 1984 3	6143	Coordinate Frame	8.853	-52.644	180.304	0.393	2.323	-2.96	-24.081
LUREF 1930 To ETRS 1989 1	1642	Position Vector	-192.986	13.673	-39.309	-0.4099	-2.9332	2.6881	0.43
LUREF 1930 To ETRS 1989 3	5485	Coordinate Frame	-189.6806	18.3463	-42.7695	0.33746	3.09264	-2.53861	0.4598
LUREF 1930 To WGS 1984 1	1643	Position Vector	-192.986	13.673	-39.309	-0.4099	-2.9332	2.6881	0.43
LUREF 1930 To WGS 1984 3	5486	Coordinate Frame	-189.6806	18.3463	-42.7695	0.33746	3.09264	-2.53861	0.4598

Geographic (datum) Transformation Name	WKID	Method	dx	dy	dz	rx	ry	rz	ds
			(m)	(m)	(m)	(arc-seconds)	(arc-seconds)	(arc-seconds)	(ppm)
Maupiti_1983_To_WGS_1984_2	8853	Position_Vector	217.109	86.452	23.711	0.0183	-0.0003	0.007	-0.0093
MGI_1901_To_ETRS_1989_2	3963	Position_Vector	551.7	162.9	467.9	6.04	1.96	-11.38	-4.82
MGI_1901_To_ETRS_1989_3	3914	Position_Vector	426.9	142.6	460.1	4.91	4.49	-12.42	17.1
MGI_1901_To_ETRS_1989_5	6205	Coordinate_Frame	517.4399	228.7318	579.7954	-4.045	-4.304	15.612	-8.312
MGI_1901_To_ETRS_1989_6	7675	Coordinate_Frame	577.88891	165.22205	391.18289	-4.9145	0.94729	13.05098	7.78664
MGI_1901_To_ETRS_1989_7	8680	Position_Vector	489.88	183.912	533.711	5.76545	4.69994	-12.58211	1.00646
MGI_1901_To_KOSOVAREF01_1	9142	Position_Vector	628.54052	192.2538	498.43507	-13.79189	-0.81467	41.21533	-17.40368
MGI_1901_To_Slovenia_1996_1	3916	Coordinate_Frame	409.545	72.164	486.872	-3.085957	-5.46911	11.020289	17.919665
MGI_1901_To_Slovenia_1996_10	3927	Coordinate_Frame	355.845	274.282	462.979	-9.086933	-6.491055	14.502181	20.888647
MGI_1901_To_Slovenia_1996_11	3928	Coordinate_Frame	400.629	90.651	472.249	-3.261138	-5.263404	11.83739	20.022676
MGI_1901_To_Slovenia_1996_12	8689	Coordinate_Frame	476.080	125.947	417.810	-4.610862	-2.388137	11.942335	9.896638
MGI_1901_To_Slovenia_1996_2	3918	Coordinate_Frame	315.393	186.223	499.609	-6.445954	-8.131631	13.208641	23.449046
MGI_1901_To_Slovenia_1996_3	3919	Coordinate_Frame	464.939	-21.478	504.497	0.403	-4.228747	9.954942	12.795378
MGI_1901_To_Slovenia_1996_4	3921	Coordinate_Frame	459.968	82.193	458.756	-3.565234	-3.700593	10.860523	15.507563
MGI_1901_To_Slovenia_1996_5	3922	Coordinate_Frame	427.914	105.528	510.908	-4.992523	-5.898813	10.306673	12.431493
MGI_1901_To_Slovenia_1996_6	3923	Coordinate_Frame	468.63	81.389	445.221	-3.839242	-3.262525	10.566866	16.132726
MGI_1901_To_Slovenia_1996_7	3924	Coordinate_Frame	439.5	-11.77	494.976	-0.026585	-4.65641	10.155824	16.270002
MGI_1901_To_Slovenia_1996_8	3925	Coordinate_Frame	524.442	3.275	519.002	0.013287	-3.119714	10.232693	4.184981
MGI_1901_To_Slovenia_1996_9	3926	Coordinate_Frame	281.529	45.963	537.515	-2.570437	-9.648271	10.759507	26.465548
MGI_1901_to_SRB-ETRS89_8	9495	Coordinate_Frame	577.84843	165.45019	390.43652	-4.93131	0.96052	13.05072	7.86546
MGI_1901_To_WGS_1984_10	6206	Coordinate_Frame	521.748	229.489	590.921	-4.029	-4.488	15.521	-9.78
MGI_1901_To_WGS_1984_11	7676	Coordinate_Frame	577.88891	165.22205	391.18289	-4.9145	0.94729	13.05098	7.78664
MGI_1901_To_WGS_1984_13	8823	Position_Vector	489.88	183.912	533.711	5.76545	4.69994	-12.58211	1.00646
MGI_1901_To_WGS_1984_14	9143	Position_Vector	628.54052	192.2538	498.43507	-13.79189	-0.81467	41.21533	-17.40368
MGI_1901_to_WGS_1984_15	9486	Coordinate_Frame	577.84843	165.45019	390.43652	-4.93131	0.96052	13.05072	7.86546
MGI_1901_To_WGS_1984_16	8688	Coordinate_Frame	476.080	125.947	417.810	-4.610862	-2.388137	11.942335	9.896638
MGI_1901_To_WGS_1984_4	3964	Position_Vector	551.7	162.9	467.9	6.04	1.96	-11.38	-4.82
MGI_1901_To_WGS_1984_5	3915	Position_Vector	426.9	142.6	460.1	4.91	4.49	-12.42	17.1
MGI_1901_To_WGS_1984_9	3917	Coordinate_Frame	409.545	72.164	486.872	-3.085957	-5.46911	11.020289	17.919665
MGI_Ferro_To_WGS_1984_2	3896	Position_Vector	577.326	90.129	463.919	5.137	1.474	5.297	2.4232
MGI_To_ETRS_1989_Serbia	108072	Coordinate_Frame	577.88891	165.22205	391.18289	-4.9145	0.94729	13.05098	7.78664
MGI_To_ETRS_1989_1	1619	Position_Vector	577.326	90.129	463.919	5.137	1.474	5.297	2.4232
MGI_To_ETRS_1989_2	1620	Position_Vector	551.7	162.9	467.9	6.04	1.96	-11.38	-4.82
MGI_To_ETRS_1989_3	1785	Position_Vector	426.9	142.6	460.1	4.91	4.49	-12.42	17.1
MGI_To_ETRS_1989_4	1024	Coordinate_Frame	601.705	84.263	485.227	-4.7354	-1.3145	-5.393	-2.3887
MGI_To_WGS_1984_Serbia	108073	Coordinate_Frame	577.88891	165.22205	391.18289	-4.9145	0.94729	13.05098	7.78664
MGI_To_WGS_1984_2	108095	Position_Vector	577.326	90.129	463.919	5.1365988	1.4742	5.2970436	2.4232
MGI_To_WGS_1984_3	1618	Position_Vector	577.326	90.129	463.919	5.137	1.474	5.297	2.4232
MGI_To_WGS_1984_4	1621	Position_Vector	551.7	162.9	467.9	6.04	1.96	-11.38	-4.82
MGI_To_WGS_1984_5	1786	Position_Vector	426.9	142.6	460.1	4.91	4.49	-12.42	17.1
MGI_To_WGS_1984_8	1194	Coordinate_Frame	601.705	84.263	485.227	-4.7354	-1.3145	-5.393	-2.3887
Minna_To_WGS_1984_12	15705	Position_Vector	-83.13	-104.95	114.63	0.0	0.0	0.554	0.0

Geographic (datum) Transformation Name	WKID	Method	dx	dy	dz	rx	ry	rz	ds
Minns To MCC 1004 2	1754	Daeitian Vastan	(m)	(m)	(m)	(arc-seconds)	(arc-seconds)	(arc-seconds)	(ppm)
Minna_To_WGS_1984_3	1754	Position_Vector	-111.92	-87.85	114.5	1.875	0.202	0.219	0.032
Minna_To_WGS_1984_4	1818	Position_Vector	-89.0	-112.0	125.9	0.0	0.0	0.814	-0.38
MONREF_1997_To_MSK_1942_1	108286	Coordinate_Frame	78.042178	204.518613	77.4498615	-1.77367097	3.31979173	-1.04260771	-4.9510577
MONREF_1997_To_Pulkovo_1942_1	108288	Coordinate_Frame	78.042178	204.518613	77.4498615	-1.77367097	3.31979173	-1.04260771	-4.9510577
Monte_Mario_To_ETRS_1989_1	1659	Position_Vector	-104.1	-49.1	-9.9	0.971	-2.917	0.714	-11.68
Monte_Mario_To_ETRS_1989_2	1661	Position_Vector	-168.6	-34.0	38.6	-0.374	-0.679	-1.379	-9.48
Monte_Mario_To_ETRS_1989_3	1663	Position_Vector	-50.2	-50.4	84.8	-0.69	-2.012	0.459	-28.08
Monte_Mario_To_WGS_1984_2	1662	Position_Vector	-168.6	-34.0	38.6	-0.374	-0.679	-1.379	-9.48
Monte_Mario_To_WGS_1984_3	1664	Position_Vector	-50.2	-50.4	84.8	-0.69	-2.012	0.459	-28.08
Monte_Mario_To_WGS_1984_4	1660	Position_Vector	-104.1	-49.1	-9.9	0.971	-2.917	0.714	-11.68
Moorea_1987_To_RGPF_1	15757	Coordinate_Frame	215.525	149.593	176.229	3.2624	1.692	1.1571	10.4773
Moorea_1987_To_RGPF_2	8831	Position_Vector	218.697	151.257	176.995	3.5048	2.004	1.281	10.991
Moorea_1987_To_WGS_1984_1	15769	Coordinate_Frame	215.525	149.593	176.229	3.2624	1.692	1.1571	10.4773
Moorea_1987_To_WGS_1984_2	8832	Position_Vector	218.769	150.75	176.75	3.5231	2.0037	1.288	10.9817
Moznet_To_WGS_1984	1302	Coordinate_Frame	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MTRF-2000_To_KSA-GRF17_1	9361	Position_Vector	0.0469	-0.2827	0.0866	0.00559	-0.004981	0.023108	-0.008051
NAD_1927_To_SIRGAS_2000_7Par_Panama	108062	Coordinate_Frame	-32.3841359	180.409046	120.844258	2.1545854	0.1498782	-0.5742915	8.1049164
NAD_1927_To_WGS_1984_88	15978	Coordinate_Frame	2.478	149.752	197.726	-0.526	-0.498	0.501	0.685
NAD_1927_To_WGS_1984_89	7698	Coordinate_Frame	-32.3841359	180.409046	120.844258	2.1545854	0.1498782	-0.5742915	8.1049164
NAD_1983_CSRS_To_WGS_1984_2	1946	Coordinate_Frame	-0.991	1.9072	0.5129	-0.02578991	-0.00965010	-0.01165994	0.0
NAD_1983_HARN_PACP00_MARP00_To_	108307	Coordinate_Frame	-0.9102	2.0141	0.5602	-0.029039	-0.010065	-0.010101	0.0
WGS_1984									
NAD_1983_HARN_To_WGS_1984_2	1900	Coordinate_Frame	-0.9738	1.9453	0.5486	-0.02755079	-0.01004922	-0.01135900	0.0
NAD_1983_HARN_To_WGS_1984_3	1901	Coordinate_Frame	-0.991	1.9072	0.5129	-0.02578991	-0.00965010	-0.01165994	0.0
NAD_1983_MARP00_To_WGS_1984	108018	Coordinate_Frame	-0.9102	2.0141	0.5602	-0.029039	-0.010065	-0.010101	0.0
NAD_1983_PACP00_To_WGS_1984	108017	Coordinate_Frame	-0.9102	2.0141	0.5602	-0.029039	-0.010065	-0.010101	0.0
NAD_1983_To_WGS_1984_4	1308	Coordinate_Frame	-0.9738	1.9453	0.5486	-0.02755079	-0.01004922	-0.011359	0.0
NAD_1983_To_WGS_1984_5	1515	Coordinate_Frame	-0.991	1.9072	0.5129	-0.02578991	-0.00965010	-0.01165994	0.0
Nahrwan_1967_To_WGS_1984_8	15938	Position_Vector	-225.4	-158.7	380.8	0.0	0.0	0.814	-0.38
Nahrwan_1967_To_WGS_1984_11	6998	Coordinate_Frame	-233.4	-160.7	381.5	0.0	0.0	-0.554	0.2263
Nahrwan_1967_To_WGS_1984_12	6999	Coordinate_Frame	-253.4392	-148.452	386.5267	-0.15605	-0.43	0.1013	-0.0424
Nahrwan_1967_To_WGS_1984_13	7002	Coordinate_Frame	-246.1633	-152.9047	382.6047	-0.0989	-0.1382	-0.0768	0.0000021
Nahrwan_1967_To_WGS_1984_14	7003	Coordinate_Frame	-242.8907	-149.0671	384.416	-0.19044	-0.24987	-0.13925	0.0001746
Nahrwan_1967_To_WGS_1984_15	7004	Coordinate_Frame	-246.734	-153.4345	382.1477	0.116617	0.165167	0.091327	0.0000194
NEA74_Noumea_To_RGNC_1991-93_2	15889	Coordinate_Frame	-166.0684	-154.7826	254.8282	37.545982	-7.7018261	10.2029182	-30.84
NEA74_Noumea_To_WGS_1984_1	1932	Position_Vector	-166.207	-154.777	254.831	-37.5444	7.7011	-10.2025	-30.8598
New_Zealand_1949_To_NZGD_2000_2_7PAR	1701	Coordinate_Frame	59.47	-5.04	187.44	-0.47	0.1	-1.024	-4.5993
NGO_1948_Oslo_To_ETRS_1989_1	108146	Position_Vector	278.3	93.0	474.5	7.889	0.05	-6.61	6.21
NGO_1948_Oslo_To_WGS_1984	108145	Coordinate_Frame	319.08	37.81	463.57	-6.2970588	1.2903926	5.71291634	10.819
NGO_1948_Oslo_To_WGS_1984_1	108147	Position_Vector	278.3	93.0	474.5	7.889	0.05	-6.61	6.21
NGO_1948_To_ETRS_1989_1	1653	Position_Vector	278.3	93.0	474.5	7.889	0.05	-6.61	6.21
NGO 1948 To WGS 1984	108201	Coordinate Frame	319.08	37.81	463.57	-6.2970588	1.2903926	5.71291634	10.819
NGO 1948 To WGS 1984 1	1654	Position Vector	278.3	93.0	474.5	7.889	0.05	-6.61	6.21

Geographic (datum) Transformation Name	WKID	Method	dx	dy	dz	rx	ry	rz	ds
			(m)	(m)	(m)	(arc-seconds)	(arc-seconds)	(arc-seconds)	(ppm)
Nord_Sahara_1959_To_WGS_1984_3	108098	Position_Vector	-156.0	-87.2	287.8	0.0	0.0	0.814	-0.38
Nord_Sahara_1959_To_WGS_1984_4	1815	Position_Vector	-152.9	43.8	358.3	2.714	1.386	-2.788	-6.743
Nord_Sahara_1959_To_WGS_1984_9	5660	Position_Vector	-209.3622	-87.8162	404.6198	0.0046	3.4784	0.5805	-1.4547
NZGD_1949_To_WGS_1984_2	1564	Coordinate_Frame	59.47	-5.04	187.44	-0.47	0.1	-1.024	-4.5993
Observatorio_Meteorologico_1939_To_	108341	Position_Vector	-487.978	-226.275	102.787	-0.743	1.677	2.087	1.485
PTRA08_1_7par									
Observatorio_Meteorologico_1939_To_	108342	Position_Vector	-511.151	-181.269	139.609	1.05	2.703	1.798	3.071
PTRA08_2_7par									
Observatorio_Meteorologico_1939_To_	108343	Position_Vector	-1333.976	-487.235	945.031	6.674	35.963	20.438	-11.187
PTRA08_3_7par									
Observatorio_Meteorologico_1939_To_WGS	108347	Position_Vector	-487.978	-226.275	102.787	-0.743	1.677	2.087	1.485
_1984_1_7par									
Observatorio_Meteorologico_1939_To_WGS	108348	Position_Vector	-511.151	-181.269	139.609	1.05	2.703	1.798	3.071
_1984_2_7par									
Observatorio_Meteorologico_1939_To_WGS	108349	Position_Vector	-1333.976	-487.235	945.031	6.674	35.963	20.438	-11.187
1984_3_7par									
Ocotepeque_1935_To_WGS_1984_2	5473	Coordinate_Frame	213.116	9.358	-74.946	2.35141879	-0.06146691	6.39420899	-5.22
Ocotepeque_1935_To_WGS_1984_RN	108283	Position_Vector	6.41	-49.05	-11.28	1.5657	0.5242	6.9718	-5.7649
ONGD14_To_WGS_1984_1	7377	Coordinate_Frame	0.819	-0.5762	-1.6446	0.00378	0.03317	-0.00318	0.0693
ONGD17_To_ITRF_1989	108371	Coordinate_Frame	1.16835	-1.42001	-2.24431	0.00822	0.05508	-0.01818	0.23388
ONGD17_To_WGS_1984	108372	Coordinate_Frame	1.16835	-1.42001	-2.24431	0.00822	0.05508	-0.01818	0.23388
OSGB_1936_To_ED_1950_UKOOA	1315	Position_Vector	535.948	-31.357	665.16	0.15	0.247	0.998	-21.689
OSGB_1936_To_WGS_1984_NGA_7PAR	108336	Coordinate_Frame	446.0	-99.0	544.0	-0.945	-0.261	-0.435	-20.8927
OSGB_1936_To_WGS_1984_Petroleum	1314	Position_Vector	446.448	-125.157	542.06	0.15	0.247	0.842	-20.489
OSNI_1952_To_WGS_1984_1	1955	Position_Vector	482.5	-130.6	564.6	-1.042	-0.214	-0.631	8.15
Palestine_1923_To_WGS_1984_1	1074	Position_Vector	-275.7224	94.7824	340.8944	-8.001	-4.42	-11.821	1.0
PD/83_To_ETRS_1989_1	15867	Position_Vector	599.4	72.4	419.2	-0.062	-0.022	-2.723	6.46
PD/83_To_WGS_1984_7PAR	108070	Position_Vector	599.4	72.4	419.2	-0.062	-0.022	-2.723	6.46
PDO_1993_To_WGS_1972	1616	Position_Vector	-182.046	-225.604	168.884	-0.616	-1.655	7.824	16.641
PDO_1993_To_WGS_1984	1439	Position_Vector	-180.624	-225.516	173.919	-0.81	-1.898	8.336	16.71006
PDO_1993_To_WGS_1984_3	1617	Position_Vector	-191.808	-250.512	167.861	-0.792	-1.653	8.558	20.703
Pointe_Noire_To_WGS_1984_3	1802	Position_Vector	-178.3	-316.7	-131.5	5.278	6.077	10.979	19.166
Porto_Santo_1936_To_PTRA08_1_7par	108160	Position_Vector	-160.41	-21.066	-99.282	2.437	-17.25	-7.446	0.168
Porto_Santo_1936_To_PTRA08_2_7par	108161	Position_Vector	-303.956	224.556	214.306	9.405	-6.626	-12.583	1.327
Porto_Santo_1936_To_PTRA08_3_7par	108162	Position_Vector	-494.088	-312.129	279.877	-1.423	-1.013	1.59	-0.748
Porto_Santo_1936_To_WGS_1984_1_7par	108166	Position_Vector	-160.41	-21.066	-99.282	2.437	-17.25	-7.446	0.168
Porto_Santo_1936_To_WGS_1984_2	108125	Coordinate_Frame	-210.502	-66.902	-48.476	-2.094	15.067	5.817	0.485
Porto_Santo_1936_To_WGS_1984_2_7par	108167	Position_Vector	-303.956	224.556	214.306	9.405	-6.626	-12.583	1.327
Porto_Santo_1936_To_WGS_1984_3_7par	108168	Position_Vector	-494.088	-312.129	279.877	-1.423	-1.013	1.59	-0.748
Porto_Santo_1995_To_PTRA08_2	5022	Position_Vector	-303.956	224.556	214.306	9.405	-6.626	-12.583	1.327
Porto_Santo_1995_To_WGS_1984_3	1967	Coordinate_Frame	-210.502	-66.902	-48.476	-2.094	15.067	5.817	0.485
PRS_1992_To_WGS_1984_1	15708	Coordinate_Frame	-127.62	-67.24	-47.04	3.068	-4.903	-1.578	-1.06

Geographic (datum) Transformation Name	WKID	Method	dx (***)	dy (m)	dz	rx	ry	rz	ds (mmm)
DCAD 10F6 To SIDCAS 1	2071	Coordinate Frame	(m)	(m)	(m)	(arc-seconds)	(arc-seconds)	(arc-seconds)	(ppm)
PSAD_1956_To_SIRGAS_1	3971 3990		-60.31 -60.31	245.935 245.935	31.008 31.008	-12.324	-3.755	7.37	0.447
PSAD_1956_To_WGS_1984_14 Pulkovo_1942_Adj_1958_To_ETRS_1989_1	1644	Coordinate_Frame	33.4297	-146.5746	-76.2865	-12.324 -0.35867	-3.755 -0.05283	7.37 0.84354	-0.8407728
		Position_Vector							
Pulkovo 1942 Adj 1958 To ETRS 1989 3	15993	Coordinate_Frame	68.1564	32.7756	80.2249	2.20333014	2.19256447	-2.54166911	-0.1415533
Pulkovo_1942_Adj_1958_To_ETRS_1989_4	15994	Coordinate_Frame	2.3287	-147.0425	-92.0802	0.3092483	-0.32482185	-0.49729934	5.68906266
Pulkovo_1942_Adj_1958_To_WGS_1984_1	1645	Position_Vector	33.4	-146.6	-76.3	-0.359	-0.053	0.844	-0.84
Pulkovo_1942_Adj_1958_To_WGS_1984_19	15995	Coordinate_Frame	2.329	-147.042	-92.08	0.309	-0.325	-0.497	5.69
Pulkovo_1942_Adj_1983_To_ETRS_1989_1	1674	Coordinate_Frame	24.0	-123.0	-94.0	-0.02	0.25	0.13	1.1
Pulkovo_1942_Adj_1983_To_ETRS_1989_2	1775	Position_Vector	24.9	-126.4	-93.2	-0.063	-0.247	-0.041	1.01
Pulkovo_1942_Adj_1983_To_WGS_1984_1	1675	Coordinate_Frame	24.0	-123.0	-94.0	-0.02	0.25	0.13	1.1
Pulkovo_1942_To_Estonia_1992	1332	Coordinate_Frame	21.53219	-97.00027	-60.74046	-0.99548	-0.58147	-0.2418	-4.5981
Pulkovo_1942_To_ETRF_1989	108198	Coordinate_Frame	24.0	-123.0	-94.0	-0.02	0.25	0.13	1.1
Pulkovo_1942_To_ETRS_1989	1310	Coordinate_Frame	24.0	-123.0	-94.0	-0.02	0.25	0.13	1.1
Pulkovo_1942_To_LKS_1994	1274	Coordinate_Frame	-40.595	-18.55	-69.339	-2.508	-1.832	2.611	-4.299
Pulkovo_1942_To_PZ_1990_1	15844	Coordinate_Frame	25.0	-141.0	-80.0	0.0	-0.35	-0.66	0.0
Pulkovo_1942_To_WGS_1984_10	1303	Position_Vector	43.822	-108.842	-119.585	1.455	-0.761	0.737	0.549
Pulkovo_1942_To_WGS_1984_12	1334	Coordinate_Frame	21.58719	-97.54127	-60.92546	-1.01378	-0.58117	-0.2348	-4.6121
Pulkovo_1942_To_WGS_1984_13	1807	Position_Vector	27.0	-135.0	-84.5	0.0	0.0	0.554	0.2263
Pulkovo_1942_To_WGS_1984_14	1808	Position_Vector	686.1	-123.5	-574.4	8.045	-23.366	10.791	-2.926
Pulkovo_1942_To_WGS_1984_15	1809	Position_Vector	926.4	-715.9	-186.4	-10.364	-20.78	26.452	-7.224
Pulkovo_1942_To_WGS_1984_16	15865	Coordinate_Frame	25.0	-141.0	-78.5	0.0	-0.35	-0.736	0.0
Pulkovo_1942_To_WGS_1984_17	1267	Coordinate_Frame	23.92	-141.27	-80.9	0.0	-0.35	-0.82	-0.12
Pulkovo_1942_To_WGS_1984_2	1679	Coordinate_Frame	-40.595	-18.55	-69.339	-2.508	-1.832	2.611	-4.299
Pulkovo_1942_To_WGS_1984_20	5044	Coordinate_Frame	23.57	-140.95	-79.8	0.0	-0.35	-0.79	-0.22
Pulkovo_1995_To_WGS_1984_1	1281	Coordinate_Frame	24.82	-131.21	-82.66	0.0	0.0	-0.16	-0.12
Pulkovo_1995_To_WGS_1984_2	5043	Coordinate_Frame	24.47	-130.89	-81.56	0.0	0.0	-0.13	-0.22
PZ_1990_To_WGS_1984_1	15843	Coordinate_Frame	0.0	0.0	1.5	0.0	0.0	-0.076	0.0
PZ_1990_To_WGS_1984_GOST	1244	Coordinate_Frame	-1.08	-0.27	-0.9	0.0	0.0	-0.16	-0.12
QND_1995_To_WGS_1984_1	1840	Position_Vector	-119.4248	-303.65872	-11.00061	1.164298	0.174458	1.096259	3.657065
Qornoq_1927_To_Greenland_1996_1	15957	Position_Vector	163.511	127.533	-159.789	0.0	0.0	0.814	-0.6
Qornoq_1927_To_WGS_1984_2	1798	Position_Vector	163.511	127.533	-159.789	0.0	0.0	0.814	-0.6
RD/83_To_ETRS_1989_1	15868	Position_Vector	612.4	77.0	440.2	-0.054	0.057	-2.797	2.55
RD/83_To_WGS_1984_7PAR	108071	Position_Vector	612.4	77.0	440.2	-0.054	0.057	-2.797	2.55
Reunion_1947_To_RGR_1992_1	1926	Position_Vector	789.524	-626.486	-89.904	0.6006	76.7946	-10.5788	-32.3241
RGF93_v2_to_RGF93_v2b	9788	Position_Vector	-0.017	0.058	0.009	0.001305	0.00068	-0.001467	-0.00072
RGPF_To_WGS_1984_1	8828	Position_Vector	0.072	-0.507	-0.245	0.0183	-0.0003	0.007	-0.0093
RGR_1992_To_Reunion_1947_1	1964	Position_Vector	-789.99	627.333	89.685	-0.6072	-76.8019	10.568	32.2083
RRAF_1991_To_RGAF09_1	5494	Position_Vector	0.7696	-0.8692	-12.0631	-0.32511	-0.21041	-0.0239	0.2829
RRAF_1991_To_RGAF09_2	5495	Position_Vector	1.2239	2.4156	-1.7598	0.038	-0.16101	-0.04925	0.2387
RRAF 1991 To RGAF09 3	5496	Position Vector	14.6642	5.2493	0.1981	-0.06838	0.09141	-0.58131	-0.4067
RT90 To ETRS 1989 1	1437	Coordinate Frame	419.3836	99.3335	591.3451	-0.850389	-1.817277	7.862238	-0.99496
RT90 To ETRS 1989 2	1787	Coordinate Frame	414.1	41.3	603.1	0.855	-2.141	7.023	0.0
RT90 To SWEREF99 1	1895	Coordinate Frame	414.097857	41.338149	603.062718	0.85504343	-2.14134652	7.02272095	0.0

Geographic (datum) Transformation Name	WKID	Method	dx	dy	dz	rx	ry	rz	ds
			(m)	(m)	(m)	(arc-seconds)	(arc-seconds)	(arc-seconds)	(ppm)
RT90_To_WGS_1984	1680	Coordinate_Frame	419.3836	99.3335	591.3451	-0.850389	-1.817277	7.862238	-0.99496
RT90_To_WGS_1984_2	1896	Coordinate_Frame	414.097857	41.338149	603.062718	0.85504343	-2.14134652	7.02272095	0.0
Saint_Pierre_et_Miquelon_1950_To_RGSPM_	108088	Position_Vector	-95.593	573.763	173.442	-0.9602	1.251	-1.3918	42.6265
2006									
Sainte_Anne_To_RGAF09_1	5492	Position_Vector	-471.06	-3.212	-305.843	0.4752	-0.9978	0.2068	2.1353
Sainte_Anne_To_WGS_1984_2	1905	Position_Vector	-472.29	-5.63	-304.12	0.4362	-0.8374	0.2563	1.8984
Sao_Braz_To_PTRA08_1_7par	108172	Position_Vector	-269.089	186.247	155.667	2.005	3.606	-0.366	0.097
Sao_Braz_To_PTRA08_2_7par	108173	Position_Vector	-249.507	179.302	119.92	1.406	2.423	-0.479	0.952
Sao_Braz_To_PTRA08_3_7par	108174	Position_Vector	-440.296	58.548	296.265	1.128	10.202	4.559	-0.438
Sao_Braz_To_WGS_1984_1_7par	108178	Position_Vector	-269.089	186.247	155.667	2.005	3.606	-0.366	0.097
Sao_Braz_To_WGS_1984_2	108127	Coordinate_Frame	-208.719	129.685	52.092	0.2	0.01	-0.33	0.2
Sao_Braz_To_WGS_1984_2_7par	108179	Position_Vector	-249.507	179.302	119.92	1.406	2.423	-0.479	0.952
Sao_Braz_To_WGS_1984_3_7par	108180	Position_Vector	-440.296	58.548	296.265	1.128	10.202	4.559	-0.438
Scoresbysund_1952_To_Greenland_1996_1	15899	Position_Vector	105.0	326.0	-102.5	0.0	0.0	0.814	-0.6
Scoresbysund_1952_To_WGS_1984_1	1799	Position_Vector	105.0	326.0	-102.5	0.0	0.0	0.814	-0.6
SHGD2015_To_Astro_DOS_71-4_2	9226	Position_Vector	112.771	-12.282	18.935	-2.1692	-16.8896	-17.1961	19.54517
S_JTSK/05_Ferro_To_WGS_1984_1	5240	Coordinate_Frame	572.213	85.334	461.94	-4.9732	-1.529	-5.2484	3.5378
S_JTSK/05_To_ETRS_1989_1	5226	Coordinate_Frame	572.213	85.334	461.94	-4.9732	-1.529	-5.2484	3.5378
S_JTSK/05_To_WGS_1984_1	5227	Coordinate_Frame	572.213	85.334	461.94	-4.9732	-1.529	-5.2484	3.5378
S-JTSK_[JTSK03]_To_ETRS_1989_1	8367	Coordinate_Frame	485.021	169.465	483.839	-7.786342	-4.397554	-4.102655	0.0
S-JTSK_[JTSK03]_To_WGS_1984_1	8368	Coordinate_Frame	485.021	169.465	483.839	-7.786342	-4.397554	-4.102655	0.0
S_JTSK_FERRO_To_WGS_1984_2	5230	Position_Vector	485.0	169.5	483.8	7.786	4.398	4.103	0.0
S_JTSK_Ferro_To_WGS_1984_3	5242	Coordinate_Frame	572.213	85.334	461.94	-4.9732	-1.529	-5.2484	3.5378
S_JTSK_To_ETRS_1989_1	1622	Position_Vector	570.8	85.7	462.8	4.998	1.587	5.261	3.56
S_JTSK_To_ETRS_1989_2	1624	Position_Vector	559.0	68.7	451.5	7.92	4.073	4.251	5.71
S_JTSK_To_ETRS_1989_4	4827	Position_Vector	485.0	169.5	483.8	7.786	4.398	4.103	0.0
S_JTSK_To_Pulkovo_1942	108202	Position_Vector	544.8	206.7	540.8	4.998	1.587	5.261	3.56
S_JTSK_To_WGS_1984_1	1623	Position_Vector	570.8	85.7	462.8	4.998	1.587	5.261	3.56
S_JTSK_To_WGS_1984_2	1625	Position_Vector	559.0	68.7	451.5	7.92	4.073	4.251	5.71
S_JTSK_To_WGS_1984_4	4836	Position_Vector	485.0	169.5	483.8	7.786	4.398	4.103	0.0
S_JTSK_To_WGS_1984_5	5239	Coordinate_Frame	572.213	85.334	461.94	-4.9732	-1.529	-5.2484	3.5378
SLD99_To_WGS_1984_1	5236	Coordinate_Frame	-0.293	766.95	87.713	-0.195704	-1.695068	-3.473016	-0.039338
South_East_Island_1943_To_WGS_1984_2	6926	Position_Vector	-76.269	-16.683	68.562	-6.275	10.536	-4.286	-13.686
ST71_Belep_To_WGS_1984_1	1931	Position_Vector	-480.26	-438.32	-643.429	16.3119	20.1721	-4.0349	-111.7002
ST84_Ile_des_Pins_To_RGNC_1991-93_1	15893	Coordinate_Frame	244.42	85.352	168.129	8.936	-7.752	-12.5952	14.2723
ST84_Ile_des_Pins_To_WGS_1984_1	1930	Position_Vector	244.416	85.339	168.114	-8.9353	7.7523	12.5953	14.268
ST87_Ouvea_To_RGNC_1991-93_2	15892	Coordinate_Frame	-122.386	-188.707	103.334	-3.511	4.9665	5.7048	4.4799
S_TUREF_To_ETRS_1989_1	5260	Position_Vector	0.023	0.036	-0.068	0.00176	0.00912	-0.01136	0.00439
SWEREF99_To_RT90	108212	Coordinate_Frame	-414.105526	-41.326550	-603.058247	-0.85511634	2.14131741	-7.02272983	0.0
Tahaa_1954_To_RGPF_1	8833	Position_Vector	72.438	345.918	79.486	-1.6045	-0.8823	-0.5565	1.3746
Tahaa_1954_To_WGS_1984_2	15770	Coordinate_Frame	72.438	345.918	79.486	-1.6045	-0.8823	-0.5565	1.3746
Tahaa_1954_To_WGS_1984_3	8834	Position_Vector	72.51	345.411	79.241	-1.5862	-0.8826	-0.5495	1.3653

Geographic (datum) Transformation Name	WKID	Method	dx	dy	dz	rx	ry	rz	ds
			(m)	(m)	(m)	(arc-seconds)	(arc-seconds)	(arc-seconds)	(ppm)
Tahiti_1979_To_RGPF_1	8829	Position_Vector	221.525	152.948	176.768	2.3847	1.3896	0.877	11.4741
Tahiti_1979_To_WGS_1984_1	4835	Coordinate_Frame	221.525	152.948	176.768	2.3847	1.3896	0.877	11.4741
Tahiti_1979_To_WGS_1984_2	8830	Position_Vector	221.597	152.441	176.523	2.403	1.3893	0.884	11.4648
Tete_To_Moznet_1	1297	Coordinate_Frame	-115.064	-87.39	-101.716	0.058	-4.001	2.062	9.366
Tete_To_Moznet_2	1298	Coordinate_Frame	-82.875	-57.097	-156.768	2.158	-1.524	0.982	-0.359
Tete_To_Moznet_3	1299	Coordinate_Frame	-138.527	-91.999	-114.591	0.14	-3.363	2.217	11.748
Tete_To_Moznet_4	1300	Coordinate_Frame	-73.472	-51.66	-112.482	-0.953	-4.6	2.368	0.586
Tete_To_Moznet_5	1301	Coordinate_Frame	219.315	168.975	-166.145	-0.198	-5.926	2.356	-57.104
Tete_To_WGS_1984_1	1683	Coordinate_Frame	-115.064	-87.39	-101.716	0.058	-4.001	2.062	9.366
Tete_To_WGS_1984_2	1684	Coordinate_Frame	-82.875	-57.097	-156.768	2.158	-1.524	0.982	-0.359
Tete_To_WGS_1984_3	1685	Coordinate_Frame	-138.527	-91.999	-114.591	0.14	-3.363	2.217	11.748
Tete_To_WGS_1984_4	1686	Coordinate_Frame	-73.472	-51.66	-112.482	-0.953	-4.6	2.368	0.586
Tete_To_WGS_1984_5	1687	Coordinate_Frame	219.315	168.975	-166.145	-0.198	-5.926	2.356	-57.104
Timbalai_1948_To_GDBD2009_1	5878	Coordinate_Frame	-689.5937	623.84046	-65.93566	0.02331	-1.17094	0.80054	5.88536
Timbalai_1948_To_WGS_1984_4	1852	Position_Vector	-533.4	669.2	-52.5	0.0	0.0	4.28	9.4
Timbalai_1948_To_WGS_1984_5	5249	Coordinate_Frame	-689.5937	623.84046	-65.93566	0.02331	-1.17094	0.80054	5.88536
TM65_To_ETRS_1989_1	1640	Position_Vector	482.53	-130.596	564.557	-1.042	-0.214	-0.631	8.15
TM65_To_WGS_1984_2	1641	Position_Vector	482.53	-130.596	564.557	-1.042	-0.214	-0.631	8.15
TM75 To ETRS 1989 2	1953	Position Vector	482.53	-130.596	564.557	-1.042	-0.214	-0.631	8.15
TM75 To WGS 1984 2	1954	Position Vector	482.53	-130.596	564.557	-1.042	-0.214	-0.631	8.15
Ukraine 2000 To WGS 1984 1	5590	Coordinate Frame	25.0	-141.0	-78.5	0.0	-0.35	-0.736	0.0
VN_2000_To_WGS_1984_1	5194	Coordinate_Frame	-192.873	-39.382	-111.202	0.00205	0.0005	-0.00335	0.0188
VN 2000 To WGS 1984 2	6960	Coordinate Frame	-191.904414	-39.303183	-111.450328	-0.00928836	0.01975479	-0.00427372	0.25290628
WGS 1972 BE To WGS 1972 1	1239	Position Vector	0.0	0.0	-2.6	0.0	0.0	0.26	-0.6063
WGS_1972_BE_To_WGS_1984_1	1240	Position Vector	0.0	0.0	1.9	0.0	0.0	0.814	-0.38
WGS 1972 To WGS 1984 1	1237	Position Vector	0.0	0.0	4.5	0.0	0.0	0.554	0.2263
WGS 1972 To WGS 1984 2	1238	Position Vector	0.0	0.0	4.5	0.0	0.0	0.554	0.219
WGS 1984 (ITRF00) To NAD 1983	108190	Coordinate_Frame	0.9956	-1.9013	-0.5215	0.025915	0.009426	0.011599	0.00062
WGS 1984 (ITRF00) To NAD 1983 2011	108354	Coordinate Frame	0.9956	-1.9013	-0.5215	0.025915	0.009426	0.011599	0.00062
WGS 1984 (ITRF00) To NAD 1983 CORS96	108151	Coordinate Frame	0.9956	-1.9013	-0.5215	0.025915	0.009426	0.011599	0.00062
WGS 1984 (ITRF00) To NAD 1983 HARN	108282	Coordinate Frame	0.9956	-1.9013	-0.5215	0.025915	0.009426	0.011599	0.00062
WGS 1984 (ITRF08) To NAD 1983 2011	108363	Coordinate Frame	0.99343	-1.90331	-0.52655	0.02591467	0.00942645	0.01159935	0.00171504
WGS 1984 (ITRF08) To NAD 1983 MA11	108364	Coordinate Frame	0.908	-2.0161	-0.5653	0.028971	0.01042	0.008928	0.0011
WGS_1984_(ITRF08)_To_NAD_1983_PA11	108365	Coordinate Frame	0.908	-2.0161	-0.5653	0.027741	0.013469	0.002712	0.0011
WGS 1984 To GDA2020 3	9690	Coordinate Frame	0.06155	-0.01087	-0.04019	-0.0394924	-0.0327221	-0.0328979	-0.009994
WGS_1984_To_IG05(2012)_Intermediate_CRS	9189	Coordinate Frame	-23.772	-17.49	-17.859	-0.3132	-1.85274	1.67299	5.4262
WGS_1984_To_Israel_CoordFrame	108021	Coordinate_Frame	-24.0024	-17.1032	-17.8444	-0.33009	-1.85269	1.66969	5.4248
WGS_1984_To_KUDAMS_KM_2019	108451	Coordinate Frame	-6.1075	-6.4151	-4.9032	1.16158	1.29682	1.91627	0.0
WGS 1984 To MSK 1942	108055	Coordinate_Frame	78.0421780	204.518613	77.4498615	-1.773670970	3.319791732	-1.042607713	-4.9510577
WGS_1984_To_Observatorio_Meteorologico	108211	Coordinate_Frame	148.635396	339.470115	157.265381	32.87685	-76.963371	-32.622853	-8.204889
WGS_1984_To_Pulkovo_1942	108056	Coordinate_Frame	78.0421780	204.518613	77.4498615	-1.773670970	3.319791732	-1.042607713	-4.9510577
WGS 1984 TO RT90	108213	Coordinate Frame	-414.097857	-41.338149	-603.062718	-0.85504343	2.14134652	-7.02272095	0.0

Geographic (datum) Transformation Name	WKID	Method	dx	dy	dz	rx	ry	rz	ds
			(m)	(m)	(m)	(arc-seconds)	(arc-seconds)	(arc-seconds)	(ppm)
WGS_1984_To_Xrail84_1	108051	Position_Vector	19.019	115.122	-97.287	3.577824	-3.484437	-2.767646	18.6084754
Yacare_To_SIRGAS_1	15963	Position_Vector	-124.45	183.74	44.64	-0.4384	0.5446	-0.9706	-2.1365
Yacare_To_SIRGAS-ROU98_1	5385	Position_Vector	-124.45	183.74	44.64	-0.4384	0.5446	-0.9706	-2.1365
Yacare_To_WGS_1984_2	5386	Position_Vector	-124.45	183.74	44.64	-0.4384	0.5446	-0.9706	-2.1365

Table 6: Geographic (datum) transformations: Molodensky-Badekas method

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)	rx (seconds)	ry (seconds)	rz (seconds)	ds (ppm)
			X0 (m)	Y0 (m)	Z0 (m)				
Amersfoort_To_ETRS_1989_4	15740	Molodensky_ Badekas	593.0297	26.0038	478.7534	0.40685733	-0.35073268	1.87034738	4.0812
			3903453.1482	368135.3134	5012970.3051				
	· ·			<u>'</u>					I
Amersfoort_To_ETRS_1989_6	4831	Molodensky_ Badekas	593.0248	25.9984	478.7459	0.39895739	-0.34398782	1.87740164	4.0725
			3903453.1482	368135.3134	5012970.3051				
Amersfoort_To_ETRS_1989_MB	1066	Molodensky_ Badekas	593.032	26.0	478.741	0.40939439	-0.35970520	1.86849100	4.0772
			3903453.148	368135.313	5012970.306				
Amersfoort_To_WGS_1984_2008_MB	108457	Molodensky_ Badekas	593.0248	25.9984	478.7459	0.39895739	-0.34398782	1.87740164	4.0725
			3903453.1482	368135.3134	5012970.3051				
Amersfoort_To_WGS_1984_4X	108237	Molodensky_ Badekas	593.0297	26.0038	478.7534	0.40685733	-0.35073268	1.87034738	4.0812
			3903453.1482	368135.3134	5012970.3051				
Bogota_To_MAGNA_Region_1_MB	15730	Molodensky_ Badekas	300.449	293.757	-317.306	12.41421444	-2.99084382	-39.03468639	-20.81615
			1891881.173	-5961263.267	1248403.057				
Bogota_To_MAGNA_Region_2_MB	15731	Molodensky_ Badekas	308.833	282.519	-314.571	-9.22384242	2.42379092	-8.30830721	-13.56561
			1625036.59	-6054644.061	1172969.151				
		•	•						
Bogota_To_MAGNA_Region_3_MB	15732	Molodensky_ Badekas	311.118	289.167	-310.641	-17.24129356	-6.30649282	1.56205225	-5.771882
			1555622.801	-6105353.313	991255.656				

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)	rx (seconds)	ry (seconds)	rz (seconds)	ds (ppm)
			X0 (m)	Y0 (m)	Z0 (m)				
Bogota_To_MAGNA_Region_4_MB	15733	Molodensky_ Badekas	306.666	315.063	-318.837	-16.48504015	-1.66882626	21.69284905	-13.89912
			1845222.398	-6058604.495	769132.398				
Bogota_To_MAGNA_Region_5_MB	15734	Molodensky_ Badekas	307.871	305.803	-311.992	-8.69688329	-4.18803363	-12.80826891	2.181655
			1594396.206	-6143812.398	648855.829				
		1							
Bogota_To_MAGNA_Region_6_MB	15735	Molodensky_ Badekas	302.934	307.805	-312.121	6.86687099	-8.25267346	-9.29677766	3.746562
			1558280.49	-6167355.092	491954.2193				
		,				1			
Bogota_To_MAGNA_Region_7_MB	15736	Molodensky_ Badekas	295.282	321.293	-311.001	-9.69049386	1.03196902	-19.75739005	6.325744
			1564000.62	-6180004.879	243257.9554				
<u> </u>		1				ı			
Bogota_To_MAGNA_Region_8_MB	15737	Molodensky_ Badekas	302.529	317.979	-319.08	2.80843147	-0.44851375	-2.81018885	-2.199976
			1738580.767	-6120500.388	491473.3064				
		,				1			
CR05_To_Ocotepeque_1935_MB	108013	Molodensky_ Badekas	-213.116	-9.358	74.946	2.3514188	-0.0614669	6.394209	5.22
			617749.7118	-6250547.7336	1102063.6099				
		1							
Egypt_1907_To_WGS_1984_4	7697	Molodensky_ Badekas	-127.535	113.495	-12.7	1.603747	-0.153612	-5.364408	5.33745
			4854969.728	2945552.013	2868447.61				
		1							
GGD_To_ITRF93	108368	Molodensky_ Badekas	-15.6260	126.0343	79.3775	-1.27530	-1.42112	2.69445	4.5284
			3445619.6689	3275369.7555	4236015.9558				
		1							
GGD_To_Pulkovo_1942	108368	Molodensky_ Badekas	-15.6260	126.0343	79.3775	-1.27530	-1.42112	2.69445	4.5284
			3445619.6689	3275369.7555	4236015.9558				
Katanga_1955_To_RGRDC_2005_2	4067	Molodensky_ Badekas	-102.283	-10.277	-257.396	-3.976	-0.002	-6.203	12.315
			5580868.818	2826402.46	-1243557.996				
Katanga_1955_To_WGS_1984_2	4068	Molodensky_ Badekas	-102.283	-10.277	-257.396	-3.976	-0.002	-6.203	12.315
			5580868.818	2826402.46	-1243557.996				
	•		<u>'</u>	1	'				

Badekas 3-3159521.31 4068151.32 3748113.85	Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)	rx (seconds)	ry (seconds)	rz (seconds)	ds (ppm)
Badekas Sadekas Sade				X0 (m)	Y0 (m)	Z0 (m)				
Korean_1985_To_WGS_1984_1	Korean_1985_To_Korea_2000_1	5189		-145.907	505.034	685.756	-1.162	2.347	1.592	6.342
Badekas -3159521.31 4068151.32 3748113.85 -				-3159521.31	4068151.32	3748113.85				
Badekas -3159521.31 4068151.32 3748113.85 -										
1771 Molodensky_Badekas 2464351.594 -5783466.613 974809.808 -1.238 2.381 -5.109	Korean_1985_To_WGS_1984_1	5191	. —		505.034		-1.162	2.347	1.592	6.342
Badekas 2464351.594 5783466.613 974809.808				-3159521.31	4068151.32	3748113.85				
Badekas 2464351.594 5783466.613 974809.808										
La_Canoa_To_SIRGAS 108217 Molodensky_ Badekas 2464351.594 -5783466.613 974809.808	La_Canoa_To_REGVEN_1	1771	. —				-5.266	-1.238	2.381	-5.109
Badekas 2464351.594 -5783466.613 974809.808				2464351.594	-5783466.613	974809.808				
Badekas 2464351.594 -5783466.613 974809.808										
LUREF_1930_To_ETRS_1989_2	La_Canoa_To_SIRGAS	108217		-270.933	115.599		-5.266	-1.238	2.381	-5.109
Badekas 2464351.594 -5783466.613 974809.808				2464351.594	-5783466.613	974809.808				
Badekas 2464351.594 -5783466.613 974809.808										
LUREF_1930_To_ETRS_1989_2 1078 Molodensky_ -265.983 76.918 20.182 0.4099 2.9332 -2.6881 0.43	La_Canoa_To_WGS_1984_2	1096		-270.933	115.599	-360.226	-5.266	-1.238	2.381	-5.109
Badekas 4098647.674 442843.139 4851251.093				2464351.594	-5783466.613	974809.808				
Badekas 4098647.674 442843.139 4851251.093										
LUREF_1930_To_ETRS_1989_4 5483 Molodensky_ Badekas 4103620.3943 440486.4235 4846923.4558 LUREF_1930_To_WGS_1984_2 1079 Molodensky_ Badekas 4098647.674 442843.139 4851251.093 LUREF_1930_To_WGS_1984_4 5484 Molodensky_ Badekas 4103620.3943 440486.4235 4846923.4558 LUREF_1930_To_WGS_1984_4 5484 Molodensky_ Badekas 4103620.3943 440486.4235 4846923.4558 Macao_2008_To_Observatorio_Meteorologico_ 1965_1 MGI_To_WGS_1984_7 1795 Molodensky_ Badekas 1795 Molodensky_ A08.0895 -288.9616 791.5498 -4.078662 0.022669 9.825424 94.06062 6	LUREF_1930_To_ETRS_1989_2	1078		-265.983	76.918	20.182	0.4099	2.9332	-2.6881	0.43
Badekas 4103620.3943 440486.4235 4846923.4558				4098647.674	442843.139	4851251.093				
Badekas 4103620.3943 440486.4235 4846923.4558										
LUREF_1930_To_WGS_1984_2	LUREF_1930_To_ETRS_1989_4	5483		-265.8867	76.9851	20.2667	0.33746	3.09264	-2.53861	0.4598
Badekas 4098647.674 442843.139 4851251.093				4103620.3943	440486.4235	4846923.4558				
Badekas 4098647.674 442843.139 4851251.093										
LUREF_1930_To_WGS_1984_4 5484 Molodensky_ Badekas -265.8867 76.9851 20.2667 0.33746 3.09264 -2.53861 0.4598 Macao_2008_To_Observatorio_Meteorologico_ 1965_1 108039 Molodensky_ Badekas 202.865 303.99 155.873 34.067 -76.126 -32.647 -6.096 MGI_To_WGS_1984_7 1795 Molodensky_ Badekas 408.0895 -288.9616 791.5498 -4.078662 0.022669 9.825424 94.06062 6	LUREF_1930_To_WGS_1984_2	1079	. —	-265.983	76.918	20.182	0.4099	2.9332	-2.6881	0.43
Badekas 4103620.3943 440486.4235 4846923.4558 Macao_2008_To_Observatorio_Meteorologico_ 1965_1 108039 Molodensky_ Badekas 202.865 303.99 155.873 34.067 -76.126 -32.647 -6.096 MGI_To_WGS_1984_7 1795 Molodensky_ Badekas 408.0895 -288.9616 791.5498 -4.078662 0.022669 9.825424 94.06062 Badekas 6				4098647.674	442843.139	4851251.093				
Badekas 4103620.3943 440486.4235 4846923.4558 Macao_2008_To_Observatorio_Meteorologico_ 1965_1 108039 Molodensky_ Badekas 202.865 303.99 155.873 34.067 -76.126 -32.647 -6.096 MGI_To_WGS_1984_7 1795 Molodensky_ Badekas 408.0895 -288.9616 791.5498 -4.078662 0.022669 9.825424 94.06062 Badekas 6										
Macao_2008_To_Observatorio_Meteorologico_ 1965_1 108039 Badekas Molodensky_ Badekas 202.865 Badekas 303.99 5417232.187 155.873 2391453.053 34.067 2391453.053 -76.126 -76.126 -32.647 -32.647 -6.096 -6.096 MGI_To_WGS_1984_7 1795 Badekas Molodensky_ Badekas 408.0895 Badekas -288.9616 Foundation of the control of the c	LUREF_1930_To_WGS_1984_4	5484	. —	-265.8867	76.9851	20.2667	0.33746	3.09264	-2.53861	0.4598
1965_1 Badekas 2391453.053 2391453.053 2391453.053 MGI_To_WGS_1984_7 1795 Molodensky_ Badekas 408.0895 -288.9616 791.5498 -4.078662 0.022669 9.825424 94.06062 6				4103620.3943	440486.4235	4846923.4558				
1965_1 Badekas 2391453.053 2391453.053 2391453.053 MGI_To_WGS_1984_7 1795 Molodensky_ Badekas 408.0895 -288.9616 791.5498 -4.078662 0.022669 9.825424 94.06062 6		•								
MGI_To_WGS_1984_7 1795 Molodensky_ 408.0895 -288.9616 791.5498 -4.078662 0.022669 9.825424 94.06062 6		108039		202.865	303.99	155.873	34.067	-76.126	-32.647	-6.096
Badekas 6				-2361757.652	5417232.187	2391453.053				
Badekas 6				<u>.</u>						
	MGI_To_WGS_1984_7	1795		408.0895	-288.9616	791.5498	-4.078662	0.022669	9.825424	
				4444943.0248	1518098.4827	4302370.0765				

Geographic (datum) Transformation Name	WKID	Method	dx (m)	dy (m)	dz (m)	rx (seconds)	ry (seconds)	rz (seconds)	ds (ppm)
			X0 (m)	Y0 (m)	Z0 (m)				
Observatorio_Meteorologico_1965_To_WGS_ 1984_2	108234	Molodensky_ Badekas	-203.35	-302.66	-155.23	-33.338	76.825	32.412	7.926
			-2361564.77	5417538.39	2391581.09				
	_								
PSAD_1956_To_REGVEN	1769	Molodensky_ Badekas	-270.933	115.599	-360.226	-5.266	-1.238	2.381	-5.109
			2464351.594	-5783466.613	974809.808				
	_	1							
PSAD_1956_To_WGS_1984_13	1095	Molodensky_ Badekas	-270.933	115.599	-360.226	-5.266	-1.238	2.381	-5.109
			2464351.594	-5783466.613	974809.808				
S_JTSK_To_ETRS_1989_3	4829	Molodensky_ Badekas	558.7	68.8	452.2	-8.025	-4.105	-4.295	5.74
			3977358.114	1407223.203	4765441.589				
	_								
WGS_1984_To_Ain_El_Abd_1970_MB	108366	Molodensky_ Badekas	151.9082	251.0907	-0.2276	-0.91646	-1.0469	3.21042	-5.2723
			3641909.2287	4425312.2897	2789434.9636				
WGS_1984_To_Observatorio_Meteorologico_19 65_2	108235	Molodensky_ Badekas	203.35	302.66	155.23	33.326	-76.831	-32.4	-7.926
			-2361768.11	5417235.73	2391425.86				
WGS_1984_To_Ocotepeque_1935_MB	108014	Molodensky_ Badekas	-213.116	-9.358	74.946	2.3514188	-0.0614669	6.394209	5.22
			617749.7118	-6250547.7336	1102063.6099				

Table 7: Geographic (datum) transformations: HARN, NADCON, NADCON5, and NTv2 methods

Geographic (datum) Transformation Name	WKID	Method	File name
AGD_1966_To_GDA_1994_10_NTv2_New_South_Wales_and_	1596	NTv2	Dataset_australia/SEAust_21_06_00
Victoria			
AGD_1966_To_GDA_1994_11_NTv2	1803	NTv2	Dataset_australia/A66_National_13_09_01
AGD_1966_To_GDA_1994_NTv2_Northern_Territory	1507	NTv2	Dataset_australia/nt_0599
AGD_1966_To_GDA_1994_NTv2_Tasmania	1506	NTv2	Dataset_australia/Tas_1098
AGD_1966_To_GDA_1994_NTv2_Victoria	1464	NTv2	Dataset_australia/Vic_0799
AGD_1966_To_WGS_1984_17_NTv2	15786	NTv2	Dataset_australia/A66_National_13_09_01

Geographic (datum) Transformation Name	WKID	Method	File name
AGD_1984_To_GDA_1994_3	1559	NTv2	Dataset_australia/wa_0400
AGD_1984_To_GDA_1994_4_NTv2_Western_Australia	1593	NTv2	Dataset_australia/WA_0700
AGD_1984_To_GDA_1994_5_NTv2	1804	NTv2	Dataset_australia/National_84_02_07_01
AGD_1984_To_GDA_1994_NTv2_Queensland	108453	NTv2	Dataset_australia/QLD_0900
AGD_1984_To_WGS_1984_9_NTv2	15785	NTv2	Dataset_australia/National_84_02_07_01
American_Samoa_1962_To_HARN_American_Samoa_East	1579	HARN	Dataset_eshpgn
American_Samoa_1962_To_HARN_American_Samoa_West	1578	HARN	Dataset_wshpgn
American_Samoa_1962_To_NAD_1983_HARN_3	8662	NADCON5	Dataset_nadcon5.as62.nad83_1993.as.lat.trn.20160901
American_Samoa_1962_To_WGS_1984_2	1694	HARN	Dataset_wshpgn
American_Samoa_1962_To_WGS_1984_3	1695	HARN	Dataset_eshpgn
Amersfoort_To_ETRS_1989_NTv2	7000	NTv2	Dataset_netherlands/rdtrans2008
Amersfoort_To_ETRS_1989_9	9282	NTv2	Dataset_netherlands/rdtrans2018
Amersfoort_To_WGS_1984_NTv2	108042	NTv2	Dataset_netherlands/rdtrans2008
ATS_1977_To_NAD_1983_CSRS_2_NTv2_Prince_Edward_Is	1846	NTv2	Dataset_canada/PE7783v2
ATS_1977_To_NAD_1983_CSRS_NTv2_Maritimes	108302	NTv2	Dataset_canada/GS7783
ATS_1977_To_NAD_1983_CSRS_NTv2_New_Brunswick	1841	NTv2	Dataset_canada/NB7783v2
ATS_1977_To_NAD_1983_CSRS_NTv2_Nova_Scotia	1850	NTv2	Dataset_canada/NS778301
ATS_1977_To_NAD_1983_CSRS_v2_1	9237	NTv2	Dataset_canada/NB7783v2
ATS_1977_To_NAD_1983_CSRS_v2_2	9236	NTv2	Dataset_canada/PE7783V2
ATS_1977_To_NAD_1983_CSRS_v3_3	9235	NTv2	Dataset_canada/NS778301
ATS_1977_To_NAD_1983_CSRS_v6_4_Nova_Scotia	9106	NTv2	Dataset_canada/NS778302
ATS_1977_To_NAD_1983_1_Nova_Scotia	9105	NTv2	Dataset_canada/GS7783
ATS_1977_To_WGS_1984_1	1688	NTv2	Dataset_canada/NB7783v2
ATS_1977_To_WGS_1984_2	1689	NTv2	Dataset_canada/PE7783v2
ATS_1977_To_WGS_1984_3	1851	NTv2	Dataset_canada/NS778301
Belge_1972_To_ETRS_1989_3	8369	NTv2	Dataset_belgium/BD72LB72_ETRS89LB08
CH1903_To_CH1903+_1_NTv2	15486	NTv2	Dataset_switzerland/CHENYX06
CH1903_To_CHTRF95_1_NTv2	7673	NTv2	Dataset_switzerland/CHENyx06_ETRS
CH1903_To_ETRS_1989_2_NTv2	7674	NTv2	Dataset_switzerland/CHENyx06_ETRS
CH1903_To_WGS_1984_3_NTv2	7788	NTv2	Dataset_switzerland/CHENyx06_ETRS
CH1903+_To_CHTRF95_NTv2	108370	NTv2	Dataset_switzerland/ntv2-ch03p-etrs
CH1903+_To_ETRS_1989_NTv2	108369	NTv2	Dataset_switzerland/ntv2-ch03p-etrs
Corrego_Alegre_1961_To_SIRGAS_2000_1	5525	NTv2	Dataset_brazil/CA61_003
Corrego_Alegre_1961_To_WGS_1984_1	5540	NTv2	Dataset_brazil/CA61_003
Corrego_Alegre_To_SIRGAS_2000_1	5526	NTv2	Dataset_brazil/CA7072_003

Geographic (datum) Transformation Name	WKID	Method	File name
Corrego_Alegre_To_WGS_1984_2	5541	NTv2	Dataset_brazil/CA7072_003
Datum_73_To_ETRS_1989_6	6189	NTv2	Dataset_portugal/D73_ETRS89_geo
Datum_73_To_WGS_1984_NTv2	108025	NTv2	Dataset_portugal/D73_ETRS89_geo
Datum_Lisboa_Hayford_To_ETRS_1989_NTv2	108024	NTv2	Dataset_portugal/DLX_ETRS89_geo
Datum_Lisboa_Hayford_To_WGS_1984_NTv2	108023	NTv2	Dataset_portugal/DLX_ETRS89_geo
DHDN_to_ETRS89_(10)	9310	NTv2	
DHDN_to_ETRS89_11	9940	NTv2	Dataset_germany/HeTa2010
DHDN_To_ETRS_1989_8_NTv2	15948	NTv2	Dataset_germany/BETA2007
DHDN_to_ETRS89_9	9338	NTv2	Dataset_germany/BWTA2017
DHDN_To_WGS_1984_4_NTv2	15949	NTv2	Dataset_germany/BETA2007
ED50_to_ETRS89_16	9408	NTv2	Dataset_spain/PENR2009
ED50_to_ETRS89_17	9409	NTv2	Dataset_spain/BALR2009
ED50_to_IGM95_1	9735	NTv2	Dataset_italy/35160622_47161840_E50_F89
ED50_to_RDN2008_1	9736	NTv2	Dataset_italy/35160622_47161840_E50_F00
ED_1950_To_ETRS_1989_12_NTv2_Spain_v2	15932	NTv2	Dataset_spain/SPED2ETV2
ED_1950_To_ETRS_1989_NTv2_Baleares	108118	NTv2	Dataset_spain/baleares
ED_1950_To_ETRS_1989_NTv2_BALR2009	108067	NTv2	Dataset_spain/BALR2009
ED_1950_To_ETRS_1989_NTv2_Catalonia	5661	NTv2	Dataset_spain/100800401
ED_1950_To_ETRS_1989_NTv2_Peninsula	108126	NTv2	Dataset_spain/peninsula
ED_1950_To_ETRS_1989_NTv2_PENR2009	108066	NTv2	Dataset_spain/PENR2009
ED_1950_To_WGS_1984_41_NTv2_Spain_v2	15933	NTv2	Dataset_spain/SPED2ETV2
ED_1950_To_WGS_1984_NTv2_Baleares	108119	NTv2	Dataset_spain/baleares
ED_1950_To_WGS_1984_NTv2_BALR2009	108069	NTv2	Dataset_spain/BALR2009
ED_1950_To_WGS_1984_NTv2_Catalonia	108359	NTv2	Dataset_spain/100800401
ED_1950_To_WGS_1984_NTv2_Peninsula	108136	NTv2	Dataset_spain/peninsula
ED_1950_To_WGS_1984_NTv2_PENR2009	108068	NTv2	Dataset_spain/PENR2009
ETRS89_to_AbInvA96_2020-IRF_1	9386	NTv2	Dataset_uk/TN15-ETRS89-to-AbInvA96_2020-IRF
ETRS89_to_ECML14_NB-IRF_1	9759	NTv2	Dataset_uk/TN15-ETRS89-to-ECML14_NB-IRF
ETRS89_to_EOS21-IRF_1	9740	NTv2	Dataset_uk/TN15-ETRS89-to-EOS21-IRF
ETRS89_to_EWR2-IRF_1	9764	NTv2	Dataset_uk/TN15-ETRS89-to-EWR2-IRF
ETRS89_to_GBK19-IRF_1	9454	NTv2	Dataset_uk/TN15-ETRS89-to-GBK19-IRF
ETRS89_to_MML07-IRF_1	9369	NTv2	Dataset_uk/TN15-ETRS89-to-MML07-IRF
ETRS89_to_TPEN11-IRF_1	9365	NTv2	Dataset_uk/TN15-ETRS89-to-TPEN11-IRF
ETRS_1989_to_EBBWV14-IRF_1	9941	NTv2	Dataset_uk/TN15-ETRS89-to-EBBWV14-IRF
ETRS_1989_to_FNL22-IRF_1	9975	NTv2	Dataset_uk/TN15-ETRS89-to-FNL22-IRF
ETRS_1989_to_HULLEE13-IRF_(1)	9965	NTv2	Dataset_uk/TN15-ETRS89-to-HULLEE13-IRF

Geographic (datum) Transformation Name	WKID	Method	File name
ETRS_1989_to_MOLDOR11-IRF_1	9878	NTv2	Dataset_uk/TN15-ETRS89-to-MOLDOR11-IRF
ETRS_1989_to_MRH21-IRF_1	9867	NTv2	Dataset_uk/TN15-ETRS89-to-MRH21-IRF
ETRS_1989_to_MWC18-IRF_1	10108	NTv2	Dataset_uk/TN15-ETRS89-to-MWC18-IRF
ETRS_1989_To_NTF_3_NTv2	15959	NTv2	Dataset_france/rgf93_ntf
ETRS_1989_To_OSGB_1936_OSTN15	108057	NTv2	Dataset_uk/OSTN15_NTv2
ETRS_1989_to_SCM22-IRF_1	9970	NTv2	Dataset_uk/TN15-ETRS89-to-SCM22-IRF
GDA_1994_To_GDA2020_NTv2_2_Conformal_and_Distortion	8447	NTv2	Dataset_australia/GDA94_GDA2020_conformal_and_distortion
GDA_1994_To_GDA2020_NTv2_3_Conformal	8446	NTv2	Dataset_australia/GDA94_GDA2020_conformal
GDA_1994_To_GDA2020_NTv2_4_Christmas	8444	NTv2	Dataset_australia/GDA94_GDA2020_conformal_christmas_island
GDA_1994_To_GDA2020_NTv2_5_Cocos_Keeling	8445	NTv2	Dataset_australia/GDA94_GDA2020_conformal_cocos_island
GDA_1994_To_GDA2020_NTv2_CPD_plus_Lord_Howe_Norfolk	108443	NTv2	Dataset_australia/gda94_gda2020_CPD_plus_lordhowe_norfolk
GDA_1994_To_WGS_1984_NTv2_CPD_plus_Lord_Howe_Norfolk	108441	NTv2	Dataset_australia/gda94_gda2020_CPD_plus_lordhowe_norfolk
GDA_1994_To_WGS_1984_3	9689	NTv2	Dataset_australia/GDA94_GDA2020_conformal_and_distortion
Guam_1963_To_HARN_Guam	1068	HARN	Dataset_guhpgn
Guam_1963_To_NAD_1983_HARN_Rota	108305	HARN	Dataset_c2hpgn
Guam_1963_To_NAD_1983_HARN_Saipan	108304	HARN	Dataset_c1hpgn
Guam_1963_To_NAD_1983_HARN_2	8665	NADCON5	Dataset_nadcon5.gu63.nad83_1993.guamcnmi.lat.trn.20160901
Guam_1963_To_WGS_1984_2	1069	HARN	Dataset_guhpgn
HS2-IRF_to_ETRS89_1	9302	NTv2	Dataset_uk/HS2TN15_NTv2
ISN_1993_To_ISN_2004	108214	NADCON	Dataset_icegrid2004
IGM95_to_RDN2008_1	9737	NTv2	Dataset_italy/35160622_47161840_F89_F00
ISN_2004_To_ISN_1993	108216	NADCON	Dataset_ICEGRID93
ISN2004_To_ISN2016_1	9233	NTv2	Dataset_iceland/ISN2004_ISN2016
ISN93_To_ISN2016_1	9232	NTv2	Dataset_iceland/ISN93_ISN2016
JGD_2000_To_JGD_2011_NTv2_1	6713	NTv2	Dataset_japan/touhokutaiheiyouoki2011
JGD2000_to_WGS_1984_2	9896	NTv2	Dataset_japan/touhokutaiheiyouoki2011
Lisbon_To_ETRS_1989_4	6188	NTv2	Dataset_portugal/DLX_ETRS89_geo
MGI_To_ETRS_1989_5	5891	NTv2	Dataset_austria/AT_GIS_GRID
MGI_To_ETRS_1989_8	9910	NTv2	Dataset_austria/AT_GIS_GRID_2021_09_28
MGI_1901_to_SRB-ETRS89_9	9496	NTv2	Dataset_serbia/MGI1901_TO_SRBETRS89_NTv2
Monte_Mario_to_ED50_1	9732	NTv2	Dataset_italy/35160622_47161840_R40_E50
Monte_Mario_to_IGM95_4	9733	NTv2	Dataset_italy/35160622_47161840_R40_F89
Monte_Mario_to_RDN2008_5	9734	NTv2	Dataset_italy/35160622_47161840_R40_F00
NAD_1927_CGQ77_To_NAD_1983_2	1575	NTv2	Dataset_canada/CGQ77-83

Geographic (datum) Transformation Name	WKID	Method	File name
NAD_1927_CGQ77_To_NAD_1983_CSRS	1845	NTv2	Dataset_canada/CGQ77-98
NAD_1927_CGQ77_To_NAD_1983_CSRS_v2_1	9240	NTv2	Dataset_canada/CGQ77-98
NAD_1927_CGQ77_To_WGS_1984_3	1691	NTv2	Dataset_canada/CGQ77-98
NAD_1927_Def76_To_NAD_1983_CSRS_v3_1_Ontario	9109	NTv2	Dataset_canada/ON76CSv1
NAD_1927_DEF_1976_To_NAD_1983_NTv2_Ontario	1463	NTv2	Dataset_canada/May76v20
NAD_1927_DEF_1976_To_WGS_1984_1	1690	NTv2	Dataset_canada/May76v20
NAD_1927_To_NAD_1983_6	1573	NTv2	Dataset_canada/QUE27-83
NAD_1927_To_NAD_1983_7	8555	NADCON5	Dataset_nadcon5.nad27.nad83_1986.conus.lat.trn.20160901
NAD_1927_To_NAD_1983_8	8549	NADCON5	Dataset_nadcon5.nad27.nad83_1986.alaska.lat.trn.20160901
NAD_1927_To_NAD_1983_9_Saskatchewan	9111	NTv2	Dataset_SK27-83
NAD_1927_To_NAD_1983_Alaska	1243	NADCON	Dataset_alaska
NAD_1927_to_NAD83(CSRS)v2_2	9886	NTv2	Dataset_canada/SK27-98
NAD_1927_To_NAD_1983_CSRS_1	1844	NTv2	Dataset_canada/QUE27-98
NAD_1927_To_NAD_1983_CSRS_2	1847	NTv2	Dataset_canada/SK27-98
NAD_1927_To_NAD_1983_CSRS_4	6209	NTv2	Dataset_canada/NB2783v2
NAD_1927_To_NAD_1983_CSRS_NTv2_New_Brunswick	108040	NTv2	Dataset_canada/NB2783v2
NAD_1927_To_NAD_1983_CSRS_v2_1	9239	NTv2	Dataset_canada/QUE27-98
NAD_1927_To_NAD_1983_CSRS_v2_4	9238	NTv2	Dataset_canada/NB2783v2
NAD_1927_To_NAD_1983_CSRS_v2_7_British_Columbia	9112	NTv2	Dataset_canada/BC_27_98
NAD_1927_To_NAD_1983_CSRS_v3_2	9242	NTv2	Dataset_canada/SK27-98
NAD_1927_To_NAD_1983_CSRS_v3_5_Ontario	9107	NTv2	Dataset_canada/ON27CSv1
NAD_1927_To_NAD_1983_CSRS_v3_6_Toronto	9108	NTv2	Dataset_canada/TOR27CSv1
NAD_1927_To_NAD_1983_CSRS_v3_8_BC_CRD	9113	NTv2	Dataset_canada/CRD27_00
NAD_1927_To_NAD_1983_CSRS_v3_9_BC_NVI	9114	NTv2	Dataset_canada/NVI27_05
NAD_1983_To_NAD_1983_CSRS_v4_9_BC_mainland	9119	NTv2	Dataset_canada/BC_93_05
NAD_1927_To_NAD_1983_CSRS_v4_10_BC_mainland	9115	NTv2	Dataset_BC_27_05
NAD_1927_To_NAD_1983_NADCON	1241	NADCON	Dataset_conus
NAD_1927_To_NAD_1983_NTv2_Canada	1313	NTv2	Dataset_canada/Ntv2_0
NAD_1927_To_NAD_1983_PR_VI	108003	NADCON	Dataset_prvi
NAD_1927_To_WGS_1984_32	1703	NTv2	Dataset_canada/SK27-98
NAD_1927_To_WGS_1984_33	1693	NTv2	Dataset_canada/Ntv2_0
NAD_1927_To_WGS_1984_34	1692	NTv2	Dataset_canada/QUE27-98
NAD_1927_To_WGS_1984_79_CONUS	15851	NADCON	Dataset_conus
NAD_1927_To_WGS_1984_85	15864	NADCON	Dataset_alaska
NAD_1983_CSRS_v2_To_NAD_1983_CSRS_v3_1_BC_CRD	9120	NTv2	Dataset_CRD98_00
NAD_1983_CSRS_v2_To_NAD_1983_CSRS_v3_2_BC_NVI	9121	NTv2	Dataset_NVI98_05

Geographic (datum) Transformation Name	WKID	Method	File name
NAD_1983_CSRS_v2_To_NAD_1983_CSRS_v4_1_BC_mainland	9122	NTv2	Dataset_BC_98_05
NAD_1983_FBN_To_MA11_NADCON5_3D_Guam_CNMI_1	8866	NADCON5	Dataset_nadcon5.nad83_2002.nad83_ma11.guamcnmi.lat.trn.20160901
NAD_1983_FBN_To_NSRS2007_NADCON5_3D_CONUS_1	8862	NADCON5	Dataset_nadcon5.nad83_fbn.nad83_2007.conus.lat.trn.20160901
NAD_1983_FBN_To_NSRS2007_NADCON5_3D_PRVI_2	8868	NADCON5	Dataset_nadcon5.nad83_2002.nad83_2007.prvi.lat.trn.20160901
NAD_1983_FBN_To_PA11_NADCON5_3D_American_Samoa_1	8864	NADCON5	Dataset_nadcon5.nad83_2002.nad83_pa11.as.lat.trn.20160901
NAD_1983_HARN_Corrected_To_FBN_NADCON5_3D_PRVI_1	8867	NADCON5	Dataset_nadcon5.nad83_1997.nad83_2002.prvi.lat.trn.20160901
NAD_1983_HARN_To_FBN_NADCON5_3D_American_Samoa_2	8863	NADCON5	Dataset_nadcon5.nad83_1993.nad83_2002.as.lat.trn.20160901
NAD_1983_HARN_To_FBN_NADCON5_3D_CONUS_1	8861	NADCON5	Dataset_nadcon5.nad83_harn.nad83_fbn.conus.lat.trn.20160901
NAD_1983_HARN_To_FBN_NADCON5_3D_Guam_CNMI_3	8865	NADCON5	Dataset_nadcon5.nad83_1993.nad83_2002.guamcnmi.lat.trn.20160901
NAD_1983_HARN_To_HARN_Corrected_NADCON5_3D_PRVI_1	9181	NADCON5	Dataset_nadcon5.nad83_1993.nad83_1997.prvi.lat.trn.20160901
NAD_1983_HARN_TO_NAD_1983_NSRS2007_2	8551	NADCON5	Dataset_nadcon5.nad83_1992.nad83_2007.alaska.lat.trn.20160901
NAD_1983_HARN_To_PA11_NADCON5_3D_Hawaii_1	8661	NADCON5	Dataset_nadcon5.nad83_1993.nad83_pa11.hawaii.lat.trn.20160901
NAD_1983_NSRS2007_To_2011_NADCON5_3D_CONUS_1	8559	NADCON5	Dataset_nadcon5.nad83_2007.nad83_2011.conus.lat.trn.20160901
NAD_1983_NSRS2007_To_2011_NADCON5_3D_PRVI_3	8673	NADCON5	Dataset_nadcon5.nad83_2007.nad83_2011.prvi.lat.trn.20160901
NAD_1983_NSRS2007_TO_NAD_1983_2011_2	8552	NADCON5	Dataset_nadcon5.nad83_2007.nad83_2011.alaska.lat.trn.20160901
NAD_1983_To_HARN_Alabama	1474	HARN	Dataset_alhpgn
NAD_1983_To_HARN_Arizona	1475	HARN	Dataset_azhpgn
NAD_1983_To_HARN_Arkansas	1704	HARN	Dataset_arhpgn
NAD_1983_To_HARN_CA_N	1476	HARN	Dataset_cnhpgn
NAD_1983_To_HARN_CA_S	1477	HARN	Dataset_cshpgn
NAD_1983_To_HARN_Colorado	1478	HARN	Dataset_cohpgn
NAD_1983_To_HARN_East_MT_ID	1481	HARN	Dataset_emhpgn
NAD_1983_To_HARN_East_Texas	1498	HARN	Dataset_ethpgn
NAD_1983_To_HARN_Florida	1480	HARN	Dataset_flhpgn
NAD_1983_To_HARN_Georgia	1479	HARN	Dataset_gahpgn
NAD_1983_To_HARN_Hawaii	1520	HARN	Dataset_hihpgn
NAD_1983_To_HARN_Illinois	1553	HARN	Dataset_ilhpgn
NAD_1983_To_HARN_Indiana	1521	HARN	Dataset_inhpgn
NAD_1983_To_HARN_lowa	1705	HARN	Dataset_iahpgn
NAD_1983_To_HARN_Kansas	1522	HARN	Dataset_kshpgn
NAD_1983_To_HARN_Kentucky	1483	HARN	Dataset_kyhpgn
NAD_1983_To_HARN_Louisiana	1484	HARN	Dataset_lahpgn
NAD_1983_To_HARN_Maine	1486	HARN	Dataset_mehpgn
NAD_1983_To_HARN_MD_DE	1485	HARN	Dataset_mdhpgn
NAD_1983_To_HARN_Michigan	1487	HARN	Dataset_mihpgn

Geographic (datum) Transformation Name	WKID	Method	File name
NAD_1983_To_HARN_Minnesota	1706	HARN	Dataset_mnhpgn
NAD_1983_To_HARN_Mississippi	1488	HARN	Dataset_mshpgn
NAD_1983_To_HARN_Missouri	1707	HARN	Dataset_mohpgn
NAD_1983_To_HARN_Montana_Idaho	108298	HARN	Dataset_imhpgn
NAD_1983_To_HARN_Nebraska	1489	HARN	Dataset_nbhpgn
NAD_1983_To_HARN_Nevada	1523	HARN	Dataset_nvhpgn
NAD_1983_To_HARN_New_England	1490	HARN	Dataset_nehpgn
NAD_1983_To_HARN_New_Jersey	1554	HARN	Dataset_njhpgn
NAD_1983_To_HARN_New_Mexico	1491	HARN	Dataset_nmhpgn
NAD_1983_To_HARN_New_York	1492	HARN	Dataset_nyhpgn
NAD_1983_To_HARN_North_Carolina	15834	HARN	Dataset_nchpgn
NAD_1983_To_HARN_North_Dakota	1493	HARN	Dataset_ndhpgn
NAD_1983_To_HARN_Ohio	1524	HARN	Dataset_ohhpgn
NAD_1983_To_HARN_Oklahoma	1494	HARN	Dataset_okhpgn
NAD_1983_To_HARN_OR_WA	108291	HARN	Dataset_wohpgn
NAD_1983_To_HARN_Pennsylvania	15838	HARN	Dataset_pahpgn
NAD_1983_To_HARN_PR_VI	1495	HARN	Dataset_pvhpgn
NAD_1983_To_HARN_South_Carolina	15836	HARN	Dataset_schpgn
NAD_1983_To_HARN_South_Dakota	1496	HARN	Dataset_sdhpgn
NAD_1983_To_HARN_Tennessee	1497	HARN	Dataset_tnhpgn
NAD_1983_To_HARN_Utah	1525	HARN	Dataset_uthpgn
NAD_1983_To_HARN_Virginia	1500	HARN	Dataset_vahpgn
NAD_1983_To_HARN_WA_OR	1501	HARN	Dataset_wohpgn
NAD_1983_To_HARN_West_MT_ID	1482	HARN	Dataset_wmhpgn
NAD_1983_To_HARN_West_Texas	1499	HARN	Dataset_wthpgn
NAD_1983_To_HARN_West_Virginia	1526	HARN	Dataset_wvhpgn
NAD_1983_To_HARN_Wisconsin	1502	HARN	Dataset_wihpgn
NAD_1983_To_HARN_Wyoming	1503	HARN	Dataset_wyhpgn
NAD_1983_To_NAD_1983_CSRS_1	1843	NTv2	Dataset_canada/NAD83-98
NAD_1983_To_NAD_1983_CSRS_2	1848	NTv2	Dataset_canada/SK83-98
NAD_1983_To_NAD_1983_CSRS_3	1849	NTv2	Dataset_canada/AB_CSRS
NAD_1983_To_NAD_1983_CSRS_v2_1	9241	NTv2	Dataset_canada/NAD83-98
NAD_1983_to_NAD83(CSRS)v2_2	9887	NTv2	Dataset_canada/SK83-98
NAD_1983_To_NAD_1983_CSRS_v2_6_BC	9116	NTv2	Dataset_BC_93_98
NAD_1983_To_NAD_1983_CSRS_v3_2	9243	NTv2	Dataset_canada/SK83-98
NAD_1983_To_NAD_1983_CSRS_v3_5_Ontario	9110	NTv2	Dataset_ON83CSv1

Geographic (datum) Transformation Name	WKID	Method	File name
NAD_1983_To_NAD_1983_CSRS_v3_7_BC_CRD	9117	NTv2	Dataset_CRD93_00
NAD_1983_To_NAD_1983_CSRS_v3_8_BC_NVI	9118	NTv2	Dataset_NVI93_05
NAD_1983_To_NAD_1983_CSRS_v4_3	9244	NTv2	Dataset_canada/AB_CSRS
NAD_1983_To_NAD_1983_CSRS_v4_9_BC_mainland	9119	NTv2	Dataset_canada/BC_93_05
NAD_1983_To_NAD_1983_HARN_47	8556	NADCON5	Dataset_nadcon5.nad83_1986.nad83_harn.conus.lat.trn.20160901
NAD_1983_To_NAD_1983_HARN_48	8550	NADCON5	Dataset_nadcon5.nad83_1986.nad83_1992.alaska.lat.trn.20160901
NAD_1983_To_NAD_1983_HARN_49	8660	NADCON5	Dataset_nadcon5.nad83_1986.nad83_1993.hawaii.lat.trn.20160901
NAD_1983_To_NAD_1983_HARN_50	8669	NADCON5	Dataset_nadcon5.nad83_1986.nad83_1993.prvi.lat.trn.20160901
NAD_1983_To_WGS_1984_6	1696	NTv2	Dataset_canada/NAD83-98
NAD_1983_To_WGS_1984_7	1697	NTv2	Dataset_canada/SK83-98
NAD_1983_To_WGS_1984_8	1702	NTv2	Dataset_canada/AB_CSRS
NAD_1983_To_WGS_1984_Alabama_21	1717	HARN	Dataset_alhpgn
NAD_1983_To_WGS_1984_Arizona_32	1728	HARN	Dataset_azhpgn
NAD_1983_To_WGS_1984_Arkansas_12	1708	HARN	Dataset_arhpgn
NAD_1983_To_WGS_1984_Colorado_16	1712	HARN	Dataset_cohpgn
NAD_1983_To_WGS_1984_CT_MA_NH_RI_VT_29	1725	HARN	Dataset_nehpgn
NAD_1983_To_WGS_1984_DE_MD_24	1720	HARN	Dataset_mdhpgn
NAD_1983_To_WGS_1984_eastern_ID_MT_19	1715	HARN	Dataset_emhpgn
NAD_1983_To_WGS_1984_east_Texas_38	1734	HARN	Dataset_ethpgn
NAD_1983_To_WGS_1984_Florida_18	1714	HARN	Dataset_flhpgn
NAD_1983_To_WGS_1984_Georgia_17	1713	HARN	Dataset_gahpgn
NAD_1983_To_WGS_1984_Hawaii_onshore_45	1741	HARN	Dataset_hihpgn
NAD_1983_To_WGS_1984_Illinois_52	1748	HARN	Dataset_ilhpgn
NAD_1983_To_WGS_1984_Indiana_46	1742	HARN	Dataset_inhpgn
NAD_1983_To_WGS_1984_lowa_13	1709	HARN	Dataset_iahpgn
NAD_1983_To_WGS_1984_Kansas_47	1743	HARN	Dataset_kshpgn
NAD_1983_To_WGS_1984_Kentucky_22	1718	HARN	Dataset_kyhpgn
NAD_1983_To_WGS_1984_Louisiana_23	1719	HARN	Dataset_lahpgn
NAD_1983_To_WGS_1984_Maine_25	1721	HARN	Dataset_mehpgn
NAD_1983_To_WGS_1984_Michigan_26	1722	HARN	Dataset_mihpgn
NAD_1983_To_WGS_1984_Minnesota_14	1710	HARN	Dataset_mnhpgn
NAD_1983_To_WGS_1984_Mississippi_27	1723	HARN	Dataset_mshpgn
NAD_1983_To_WGS_1984_Missouri_15	1711	HARN	Dataset_mohpgn
NAD_1983_To_WGS_1984_Nebraska_28	1724	HARN	Dataset_nbhpgn
NAD_1983_To_WGS_1984_Nevada_48	1744	HARN	Dataset_nvhpgn

Geographic (datum) Transformation Name	WKID	Method	File name
NAD_1983_To_WGS_1984_New_Jersey_53	1749	HARN	Dataset_njhpgn
NAD_1983_To_WGS_1984_New_Mexico_30	1726	HARN	Dataset_nmhpgn
NAD_1983_To_WGS_1984_New_York_31	1727	HARN	Dataset_nyhpgn
NAD_1983_To_WGS_1984_North_Carolina_55	15835	HARN	Dataset_nchpgn
NAD_1983_To_WGS_1984_North_Dakota_33	1729	HARN	Dataset_ndhpgn
NAD_1983_To_WGS_1984_northern_California_43	1739	HARN	Dataset_cnhpgn
NAD_1983_To_WGS_1984_Ohio_49	1745	HARN	Dataset_ohhpgn
NAD_1983_To_WGS_1984_Oklahoma_34	1730	HARN	Dataset_okhpgn
NAD_1983_To_WGS_1984_OR_WA_41	1737	HARN	Dataset_wohpgn
NAD_1983_To_WGS_1984_Pennsylvania_57	15839	HARN	Dataset_pahpgn
NAD_1983_To_WGS_1984_PR_VI_onshore_35	1731	HARN	Dataset_pvhpgn
NAD_1983_To_WGS_1984_South_Carolina_56	15837	HARN	Dataset_schpgn
NAD_1983_To_WGS_1984_South_Dakota_36	1732	HARN	Dataset_sdhpgn
NAD_1983_To_WGS_1984_southern_California_54	1750	HARN	Dataset_cshpgn
NAD_1983_To_WGS_1984_Tennessee_37	1733	HARN	Dataset_tnhpgn
NAD_1983_To_WGS_1984_Utah_50	1746	HARN	Dataset_uthpgn
NAD_1983_To_WGS_1984_Virginia_40	1736	HARN	Dataset_vahpgn
NAD_1983_To_WGS_1984_western_ID_MT_20	1716	HARN	Dataset_wmhpgn
NAD_1983_To_WGS_1984_west_Texas_39	1735	HARN	Dataset_wthpgn
NAD_1983_To_WGS_1984_West_Virginia_51	1747	HARN	Dataset_wvhpgn
NAD_1983_To_WGS_1984_Wisconsin_42	1738	HARN	Dataset_wihpgn
NAD_1983_To_WGS_1984_Wyoming_44	1740	HARN	Dataset_wyhpgn
NAD83_to_NAD83(CSRS)v6_10	9550	NTv2	Dataset_canada/NLCSRSV4A
NAD83_to_NAD83(CSRS)v7_1	9795	NTv2	Dataset_canada/ABCSRSV7
New_Zealand_1949_To_NZGD_2000_3_NTv2	1568	NTv2	Dataset_newzealand/nzgd2kgrid0005
NZGD_1949_To_WGS_1984_3_NTv2	1670	NTv2	Dataset_newzealand/nzgd2kgrid0005
Old_Hawaiian_To_NAD_1983	1454	NADCON	Dataset_hawaii
Old_Hawaiian_To_NAD_1983_2	8561	NADCON5	Dataset_nadcon5.ohd.nad83_1986.hawaii.lat.trn.20160901
Old_Hawaiian_To_NAD_1983_HARN_Hawaii	108306	HARN	Dataset_ohdhihpgn
Old_Hawaiian_To_WGS_1984_8	15840	NADCON	Dataset_hawaii
OSGB_1936_To_ETRS_1989_1	5338	NTv2	Dataset_uk/OSTN02_NTv2
OSGB_1936_To_WGS_1984_7	5339	NTv2	Dataset_uk/OSTN02_NTv2
OSGB_1936_To_Xrail84_NTv2	108059	NTv2	Dataset_uk/osgb36_xrail84
PD/83_To_WGS_1984_1_NTv2	15955	NTv2	Dataset_germany/BETA2007
Puerto_Rico_To_NAD_1983	1461	NADCON	Dataset_prvi
Puerto_Rico_To_NAD_1983_2	8668	NADCON5	Dataset_nadcon5.pr40.nad83_1986.prvi.lat.trn.20160901

Geographic (datum) Transformation Name	WKID	Method	File name
Puerto_Rico_To_WGS_1984_4	15841	NADCON	Dataset_prvi
RD/83_To_ETRS_1989_2_NTv2	6948	NTv2	Dataset_germany/NTv2_SN
RD/83_To_WGS_1984_1_NTv2	15954	NTv2	Dataset_germany/BETA2007
RGF_1993_To_NTF_NTv2	15958	NTv2	Dataset_france/rgf93_ntf
RGF93_v2b_to_NTF_2	9891	NTv2	Dataset_france/rgf93_ntf
RGF93_v2_to_NTF_2	9890	NTv2	Dataset_france/rgf93_ntf
RGNC_1991-93_To_IGN72_Grande_Terre_6_NTv2	15962	NTv2	Dataset_france/RGNC1991_IGN72GrandeTerre
RGNC_1991-93_To_NEA74_Noumea_4_NTv2	1295	NTv2	Dataset_france/RGNC1991_NEA74Noumea
RGNC_1991_To_IGN72_Grande_Terre_NTv2	108471	NTv2	Dataset_france/RGNC1991_IGN72GrandeTerre
RGNC_1991_To_NEA74_Noumea_NTv2	108472	NTv2	Dataset_france/RGNC1991_NEA74Noumea
SAD_1969_96_To_SIRGAS_2000_1	5529	NTv2	Dataset_brazil/SAD96_003
SAD_1969_96_To_WGS_1984_1	5543	NTv2	Dataset_brazil/SAD96_003
SAD_1969_To_SIRGAS_2000_2	5528	NTv2	Dataset_brazil/SAD69_003
SAD_1969_To_WGS_1984_15	5542	NTv2	Dataset_brazil/SAD69_003
S-JTSK_[JTSK03]_To_S-JTSK_1	8364	NADCON	Dataset_Slovakia_JTSK03_to_JTSK
SIRGAS_1995_to_SIRGAS_2000_1	9979	NTv2	Dataset_chile/SIRGAS1995-to-SIRGAS2000
SIRGAS_2000_to_SIRGAS-CON_SIR17P01_1	9980	NTv2	Dataset_chile/SIRGAS2000-to-SIRGAS-CONSIR17P01
St_George_To_NAD_1983	1457	NADCON	Dataset_stgeorge
St_George_Island_To_NAD_1983_2	8546	NADCON5	Dataset_nadcon5.sg1952.nad83_1986.stgeorge.lat.trn.20160901
St_George_To_WGS_1984_1	1698	NADCON	Dataset_stgeorge
St_Lawrence_To_NAD_1983	1455	NADCON	Dataset_stlrnc
St_Lawrence_Island_To_NAD_1983_2	8547	NADCON5	Dataset_nadcon5.sl1952.nad83_1986.stlawrence.lat.trn.20160901
St_Lawrence_To_WGS_1984_1	1699	NADCON	Dataset_stlrnc
St_Paul_To_NAD_1983	1456	NADCON	Dataset_stpaul
St_Paul_Island_To_NAD_1983_2	8548	NADCON5	Dataset_nadcon5.sp1952.nad83_1986.stpaul.lat.trn.20160901
St_Paul_To_WGS_1984_1	1700	NADCON	Dataset_stpaul
TM75_To_ETRS_1989_3_NTv2	6946	NTv2	Dataset_ireland/tm75_etrs89
TM75_To_WGS_1984_4_NTv2	6947	NTv2	Dataset_ireland/tm75_etrs89
Tokyo_To_JGD_2000_NTv2	6712	NTv2	Dataset_japan/tky2jgd
Tokyo_To_JGD_2011_2_NTv2	6740	NTv2	Dataset_japan/tky2jgd
Tokyo_To_WGS_1984_NTv2	108109	NTv2	Dataset_japan/tky2jgd
WGS_1984_To_GDA2020_4	9691	NTv2	Dataset_australia/GDA94_GDA2020_conformal_and_distortion
WGS_1984_To_GDA2020_NTv2_CPD_plus_Lord_Howe_Norfolk	108440	NTv2	Dataset_australia/gda94_gda2020_CPD_plus_lordhowe_norfolk
WGS_1984_To_NTF_NTv2	15960	NTv2	Dataset_france/rgf93_ntf
WGS_1984_To_OSGB_1936_OSTN15	108058	NTv2	Dataset_uk/OSTN15_NTv2

Table 8: Geographic transformation methods: well-known IDs

Geographic Transformation Method Name	WKID
Bursa_Wolf	109607
Coordinate_Frame	9607
Geocentric_Translation	9603
GEOCON	109614
Geographic_2D_Offset	9619
HARN	109613
Longitude_Rotation	9601
Molodensky	9604
Molodensky_Abridged	9605
Molodensky_Badekas	9636
NADCON	9613
NADCON5	109615
NTv2	9615
Null	109600
Position_Vector	9606
Unit_Change	109601

Table 9: Geographic transformation methods: parameters

Geographic Transformation Method Name	Parameter Name	Default Value	Array Position
Bursa_Wolf	X_Axis_Translation	0	0
	Y_Axis_Translation	0	1
	Z_Axis_Translation	0	2
	X_Axis_Rotation	0	3
	Y_Axis_Rotation	0	4
	Z_Axis_Rotation	0	5
	Scale_Difference	0	6
Coordinate_Frame	X_Axis_Translation	0	0
	Y_Axis_Translation	0	1
	Z_Axis_Translation	0	2
	X_Axis_Rotation	0	3
	Y_Axis_Rotation	0	4

Geographic Transformation	Parameter Name	Default	Array
Method Name		Value	Position
	Z_Axis_Rotation	0	5
	Scale_Difference	0	6
	T		
Geocentric_Translation	X_Axis_Translation	0	0
	Y_Axis_Translation	0	1
	Z_Axis_Translation	0	2
		1	
GEOCON	Dataset_	0	15
Geographic_2D_Offset	Longitude_Offset	0	10
	Latitude_Offset	0	11
HARN	Dataset_	0	15
Longitude_Rotation			
Molodensky	X_Axis_Translation	0	0
	Y_Axis_Translation	0	1
	Z_Axis_Translation	0	2
Molodensky_Abridged	X_Axis_Translation	0	0
	Y_Axis_Translation	0	1
	Z_Axis_Translation	0	2
Molodensky_Badekas	X_Axis_Translation	0	0
	Y_Axis_Translation	0	1
	Z_Axis_Translation	0	2
	X_Axis_Rotation	0	3
	Y_Axis_Rotation	0	4
	Z_Axis_Rotation	0	5
	Scale Difference	0	6
	X_Coordinate_of_Rotation_Origin	0	7
	Y_Coordinate_of_Rotation_Origin	0	8
	Z_Coordinate_of_Rotation_Origin	0	9

Geographic Transformation Method Name	Parameter Name	Default Value	Array Position
NADCON	Dataset_	0	15
NADCON5	Dataset_	0	15
NTv2	Dataset_	0	15
Null			
Position_Vector	X_Axis_Translation	0	0
	Y_Axis_Translation	0	1
	Z_Axis_Translation	0	2
	X_Axis_Rotation	0	3
	Y_Axis_Rotation	0	4
	Z_Axis_Rotation	0	5
	Scale_Difference	0	6
Unit_Change			

Table 10: Vertical transformations: well-known IDs, accuracies, and areas of use

Vertical Transformation Name	WKID	Accuracy	Area of Use	Minimum	Minimum	Maximum	Maximum
		(m)		Latitude	Longitude	Latitude	Longitude
AIOC95_Depth_To_Caspian_1	5403	0	Azerbaijan - offshore and	37.89	48.66	42.59	51.73
			Sangachal				
Alicante_Height_To_EVRF2019_Height_1	9646	0.082	Spain - mainland onshore	35.95	-9.37	43.82	3.39
Alicante_Height_To_EVRF2019_Mean-	9647	0.078	Spain - mainland onshore	35.95	-9.37	43.82	3.39
Tide_Height_1							
Alicante_To_EVRS_2000_1	5429	0.1	Spain and Gibraltar - onshore	35.95	-9.37	43.82	3.39
Antalya_Height_To_EVRF2019_Height_2	9551	0.02	Turkey - onshore	35.81	25.62	42.15	44.83
Antalya_Height_To_EVRF2019_Mean-	9552	0.02	Turkey - onshore	35.81	25.62	42.15	44.83
Tide_Height_2							
Auckland_1946_Height_To_NZGD2000_Height_1	110063	0.12	New Zealand - North Island -	-37.67	174	-36.12	176.17
			Auckland vcrs				
Baltic_1957_Height_To_EVRF2019_Height_1	9745	0.01	Czechia	48.58	12.09	51.06	18.86

Vertical Transformation Name	WKID	Accuracy	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
Baltic_1957_Height_To_EVRF2019_Mean-	9744	(m) 0.01	Czechia	48.58	12.09	51.06	18.86
Tide Height 1	3744	0.01	CZECIIIa	48.38	12.09	31.00	18.80
Baltic_1977_Height_To_EVRF2019_Height_1	9902	0.068	Ukraine - onshore	44.32	22.15	52.38	40.18
Baltic_1977_Height_To_EVRF2019_Mean-	9903	0.064	Ukraine - onshore	44.32	22.15	52.38	40.18
Tide Height 1	3303	0.004	Oktaine - Offshore	44.52	22.13	32.38	40.18
Baltic 1982 Height To EVRF 2007 Height 1	5200	0.1	Bulgaria - onshore	41.24	22.36	44.23	28.68
Baltic 1982 Height To EVRF2019 Height 1	9571	0.048	Bulgaria - onshore	41.24	22.36	44.23	28.68
Baltic_1982_Height_To_EVRF2019_Mean-	9572	0.042	Bulgaria - onshore	41.24	22.36	44.23	28.68
Tide_Height_1	3372	0.042	Bulguria Orishore	71.27	22.50	44.23	20.00
Baltic 1982 To EVRS 2000 1	5416	0.1	Bulgaria - onshore	41.24	22.36	44.23	28.68
Baltic_1986_Height_To_EVRF2019_Height_1	9652	0.02	Poland - onshore	49	14.14	54.89	24.15
Baltic_1986_Height_To_EVRF2019_Mean-	9653	0.02	Poland - onshore	49	14.14	54.89	24.15
Tide_Height_1	3033	0.02	Tolana onshore	.5	11.11	31.03	21.13
Baltic_Depth_To_AIOC95_Depth_1	5445	0	Azerbaijan - offshore and	37.89	48.66	42.59	51.73
Baltio_Beptii_10_x	3113	Ū	Sangachal	37.03	10.00	12.33	32.73
Baltic_Depth_To_AIOC95_Height_1	5446	0	Azerbaijan - offshore and	37.89	48.66	42.59	51.73
		-	Sangachal				
Baltic_Depth_To_Caspian_Depth_1	5440	0	Asia - FSU - Caspian Sea	37.35	46.95	46.97	53.93
Baltic_Depth_To_Caspian_Height_1	5441	0	Asia - FSU - Caspian Sea	37.35	46.95	46.97	53.93
Baltic_Height_To_AIOC95_Height_1	5443	0	Azerbaijan - offshore and	37.89	48.66	42.59	51.73
			Sangachal				
Baltic_Height_To_Baltic_Depth_1	5442	0	Europe - FSU, Czechoslovakia -	35.14	12.09	77.79	-169.57
			onshore				
Baltic_Height_To_Black_Sea_Height_1	5447	0	Georgia - onshore	41.04	39.99	43.59	46.72
Baltic_Height_To_Caspian_Height_1	5438	0	Asia - FSU - Caspian Sea	37.35	46.95	46.97	53.93
Baltic_Height_To_EVRF_2007_Height_1	5202	0.1	Czechia	48.58	12.09	51.06	18.86
Baltic_Height_To_EVRF_2007_Height_2	5203	0.1	Estonia - onshore	57.52	21.74	59.75	28.2
Baltic_Height_To_EVRF_2007_Height_3	5204	0.1	Lithuania - onshore	53.89	20.86	56.45	26.82
Baltic_Height_To_EVRF_2007_Height_4	5210	0.1	Latvia - onshore	55.67	20.87	58.09	28.24
Baltic_Height_To_EVRS_2000_Height_1	5436	0.1	Estonia - onshore	57.52	21.74	59.75	28.2
Baltic_Height_To_EVRS_2000_Height_4	5201	0.1	Czechia	48.58	12.09	51.06	18.86
Baltic_Height_To_EVRS_2000_Height_5	5209	0.1	Latvia - onshore	55.67	20.87	58.09	28.24
Baltic_height_To_LAS07_height	110058	999.0	Lithuania - onshore	53.89	20.86	56.45	26.82
Baltic_To_AIOC95_Depth_1	5402	0	Azerbaijan - offshore and	37.89	48.66	42.59	51.73
			Sangachal				

Vertical Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
Baltic_To Caspian_1	5400	0	Asia - FSU - Caspian Sea	37.35	46.95	46.97	53.93
Baltic To EVRS 2000 2	5437	0.1	Lithuania - onshore	53.89	20.86	56.45	26.82
Baltic To EVRS 2000 3	5435	0.1	Slovakia	47.73	16.84	49.61	22.56
Belfast_Height_To_Malin_Head_Height_1	5452	0.01	UK - Northern Ireland - onshore	53.96	-8.18	55.36	-5.34
BGS2005_Height_To_EVRF2019_Height_1	9670	0.036	Bulgaria - onshore	41.24	22.36	44.23	28.68
BGS2005_Height_To_EVRF2019_Mean-	9671	0.032	Bulgaria - onshore	41.24	22.36	44.23	28.68
Tide_Height_1							
Bluff_1955_Height_To_NZGD2000_Height_1	110064	0.12	New Zealand - South Island - Bluff vcrs	-46.71	168.01	-46.26	168.86
Cascais_Height_To_EVRF2019_Height_2	9553	0.028	Portugal - mainland - onshore	36.95	-9.56	42.16	-6.19
Cascais_Height_To_EVRF2019_Mean-	9554	0.024	Portugal - mainland - onshore	36.95	-9.56	42.16	-6.19
Tide_Height_2							
Cascais_To_EVRS_2000_1	5427	0.1	Portugal - mainland - onshore	36.95	-9.56	42.16	-6.19
CGVD2013(CGG2013a)_epoch1997_Height_To_CG	110121	0.062	Canada - CGVD28	41.67	-141.01	69.8	-59.73
VD28_Height_NAD83(CSRS)							
CGVD2013(CGG2013a)_epoch2002_Height_To_CG VD28_Height_NAD83(CSRS)	110120	0.061	Canada - CGVD28	41.67	-141.01	69.8	-59.73
CGVD2013(CGG2013a)_epoch2010_Height_To_CG	110119	0.06	Canada - CGVD28	41.67	-141.01	69.8	-59.73
VD28_Height_NAD83(CSRS)							
CGVD2013(CGG2013a)_epoch2010_Height_To_CG VD28_Height_NAD83(CSRS)v6	110118	0.06	Canada - CGVD28	41.67	-141.01	69.8	-59.73
CH1903+ To LHN95 Height CHGeo2004	110160	0.03	Europe - Liechtenstein and	45.82	5.96	47.81	10.49
			Switzerland				
CH1903+_To_LN02_Height_CHGeo2004_Htrans	110159	0.1	Europe - Liechtenstein and Switzerland	45.82	5.96	47.81	10.49
CHTRF95_To_LHN95_Height	110076	0.05	Europe - Liechtenstein and Switzerland	45.82	5.96	47.81	10.49
CHTRF95_To_LN02_Height_CHGeo2004_Htrans_2	110155	0.1	Europe - Liechtenstein and Switzerland	45.82	5.96	47.81	10.49
Constanta_Height_To_EVRF_2007_Height_1	5206	0.1	Romania - onshore	43.62	20.26	48.27	29.74
Constanta_Height_To_EVRF2019_Height_1	9583		Romania - onshore	43.62	20.26	48.27	29.74
Constanta_Height_To_EVRF2019_Mean-	9645	0.02	Romania - onshore	43.62	20.26	48.27	29.74
Tide_Height_1							
Constanta_Height_To_EVRS_2000_Height_1	5205	0.1	Romania - onshore	43.62	20.26	48.27	29.74
D96_to_SVS2000_ht_SLO_AMG2000E_Trst	110023	0.2	Slovenia - onshore	45.42	13.38	46.88	16.61
D96_to_SVS2010_ht_SLO_VRP2016_Koper	110022	0.1	Slovenia - onshore	45.42	13.38	46.88	16.61

¹³⁴ Copyright @ 2012, 2015-2022 Esri

Vertical Transformation Name	WKID	Accuracy	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
DUUN 2046 (h. d. h.) T. 5) (DE 2007 (h. d. h.) 4	7020	(m)	Comment		_		
DHHN2016_(height)_To_EVRF_2007_(height)_1	7838	0.1	Germany - onshore	47.27	5.86	55.09	15.04
DHHN2016_Height_To_EVRF2019_Height_2	9555	0.02	Germany - onshore	47.27	5.86	55.09	15.04
DHHN2016_Height_To_EVRF2019_Mean-	9556	0.008	Germany - onshore	47.27	5.86	55.09	15.04
Tide_Height_2							
DHHN85_Height_To_EVRF_2007_Height_1	5212	0.1	Germany - West Germany all states	47.27	5.86	55.09	13.84
DHHN85_To_EVRS_2000_1	5421	0.1	Germany - West Germany all states	47.27	5.86	55.09	13.84
DHHN92_Height_To_EVRF_2007_Height_1	5211	0.1	Germany - onshore	47.27	5.86	55.09	15.04
DHHN92_To_EVRS_2000_1	5420	0.1	Germany - onshore	47.27	5.86	55.09	15.04
DNN_To_EVRS_2000_1	5417	0.1	Denmark - onshore	54.51	8.00	57.8	15.25
Dunedin_1958_Height_To_NZGD2000_Height_1	110065	0.12	New Zealand - South Island - Dunedin vcrs	-46.4	167.73	-43.82	171.28
Dunedin- Bluff 1960 Height To NZGD2000 Height 1	110066	0.12	New Zealand - South Island - Dunedin-Bluff vcrs	-46.73	166.37	-44.52	169.95
	7654	0.0		0.35	140.05	-5	144.01
EGM2008_height_To_Kiunga_height_1	7654	0.0	Papua New Guinea - onshore south of 5°S and west of 144°E	-9.35	140.85		144.01
EGM2008_height_to_POM08_height_1	7874	0	Papua New Guinea - onshore - Central province and Gulf province east of 144°E	-10.42	144.4	-6.67	149.67
EGM96_height_To_Kumul_34_height_1	7653	0.0	Papua New Guinea - PFTB	-8.28	142.24	-5.59	144.75
EGM96_height_to_POM96_height_1	7873	0	Papua New Guinea - onshore - Central province and Gulf province east of 144°E	-10.42	144.4	-6.67	149.67
EH2000_Height_To_EVRF2019_Height_1	9664	0.002	Estonia - onshore	57.52	21.74	59.75	28.2
EH2000_Height_To_EVRF2019_Mean- Tide_Height_1	9665	0.004	Estonia - onshore	57.52	21.74	59.75	28.2
EOMA_1980_To_EVRS_2000_1	5424	0.1	Hungary	45.74	16.11	48.58	22.9
EOMA_1980_Height_To_EVRF2019_Height_1	9577	0.006	Hungary	45.74	16.11	48.58	22.9
EOMA_1980_Height_To_EVRF2019_Mean-	9578	0.01	Hungary	45.74	16.11	48.58	22.9
Tide_Height_1 Estonia_1997_height_To_EVRF2007_height_EGM2008	110140	4	Fatania anakar-	F7 F2	24.74	F0.7F	20.2
	110140	1	Estonia - onshore	57.52	21.74	59.75	28.2
Estonia_1997_height_To_EVRF2007_height_EGM96	110139	1.5	Estonia - onshore	57.52	21.74	59.75	28.2
Estonia_1997_To_EH2000_Height_EST-GEOID2017	110154	0.005	Estonia - onshore	57.52	21.74	59.75	28.2
ETRS89_Height_To_Alicante_Height_1	9410	0.05	Spain - mainland onshore	35.95	-9.37	43.82	3.39

Vertical Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
ETRS89_To_HS2-VRF_height_HS2GM15_1	9304	0.001	UK - London to Birmingham and Crewe	51.45	-2.75	53.3	0
ETRF93_To_LN02_Height_CHGeo2004_Htrans_2	110157	0.1	Europe – Liechtenstein and Switzerland	45.82	5.96	47.81	10.49
ETRS89_Height_To_Cascais_Height_GeodPT08	110141	0.04	Portugal – mainland – onshore	36.95	-9.56	42.16	-6.19
ETRS89_Height_To_Ceuta_2_Height_1	9414	0.05	Spain – Ceuta	35.82	-5.4	35.97	-5.24
ETRS89_Height_To_EVRF2000_Austria_Height_1	9276	0.05	Austria	46.4	9.53	49.02	17.17
ETRS89_Height_To_lbiza_Height_1	9413	0.05	Spain – Balearic Islands – Ibiza and Formentera	38.59	1.12	39.17	1.68
ETRS89_To_LN02_Height_CHGeo2004_Htrans_2	110156	0.1	Europe – Liechtenstein and Switzerland	45.82	5.96	47.81	10.49
ETRS89_Height_To_Mallorca_Height_1	9411	0.05	Spain – Balearic Islands – Mallorca	39.07	2.23	40.02	3.55
ETRS89_Height_To_Menorca_Height_1	9412	0.05	Spain – Balearic Islands – Menorca	39.75	3.73	40.15	4.39
ETRS89_Height_To_NAP_Height_nlgeo2018	9283	0.001	Netherlands – onshore	50.75	3.2	53.7	7.22
ETRS89_Height_To_Oostende_Height_hBG18	110021	0.02	Belgium – onshore	49.5	2.5	51.51	6.4
ETRS89_to_Baltic_1957_Height_1_SK	110129	0.03	Slovakia	47.73	16.84	49.61	22.56
ETRS89_To_Belfast_Height_2_OSGM15	7958	0.014	UK – Northern Ireland – onshore	53.96	-8.18	55.36	-5.34
ETRS89_To_British_Isles_Height_OSGM15_Belfast	110150	0.014	UK – Northern Ireland – onshore	53.96	-8.18	55.36	-5.34
ETRS89_To_British_Isles_Height_OSGM15_GB	110149	0.03	UK – offshore 49°45′N to 61°N, 9°W to 2°E	49.75	-9	61.01	2.01
ETRS89_To_Douglas_Height_2_OSGM15	7717	0.03	Isle of Man – onshore	54.02	-4.87	54.44	-4.27
ETRS89_to_EVRF2007_Height_1_SK	110130	0.03	Slovakia	47.73	16.84	49.61	22.5
ETRS89_To_Lerwick_Height_2_OSGM15	7714	0.018	UK – Shetland Islands onshore	59.83	-1.78	60.87	-0.67
ETRS89_To_Malin_Head_Height_2_OSGM15	7959	0.023	Europe – Ireland (Republic and Ulster) – onshore	51.39	-10.56	55.43	-5.34
ETRS89_To_Newlyn_Height_2_OSGM15	7711	0.008	UK – Great Britain mainland onshore	49.93	-7.06	58.71	1.8
ETRS89_To_ODN_Offhore_Height_1_OSGM15	7713	0.02	UK – offshore 49°45'N to 61°N, 9°W to 2°E	49.75	-9	61.01	2.01
ETRS89_To_ODN_Orkney_Height_2_OSGM15	7712	0.017	UK – Orkney Islands onshore	58.72	-3.48	59.41	-2.34
ETRS89_To_St_Marys_Height_2_OSGM15	7716	0.01	UK – Scilly Isles onshore	49.86	-6.41	49.99	-6.23
ETRS89_To_Stornoway_Height_2_OSGM15	7715	0.011	UK – Outer Hebrides onshore	56.76	-7.72	58.54	-6.1
EVRF2007-PL_Height_To_EVRF2019_Height_1	9654	0.006	Poland – onshore	49	14.14	54.89	24.15

Vertical Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
EVRF2007-PL_Height_To_EVRF2019_Mean-	9655	0.012	Poland – onshore	49	14.14	54.89	24.15
Tide_Height_1	3033	0.012	Foland – onsnore	43	14.14	34.03	24.13
EVRF2019 Height To EVRF2019 Mean-	9710	0	Europe – EVRF2019	35.95	-9.56	77.07	69.15
Tide_Height	3710	O .	Lurope LVIII 2013	33.33	3.30	77.07	05.15
GDA2020_Height_To_AHD_Height_AUSGeoid2020_1	8451	0.03	Australia Christmas and Cocos – onshore	-43.7	96.76	-9.86	153.69
GDA2020_To_AVWS_Height_2	9692	0.1	Australia – GDA	-60.55	93.41	-8.47	173.34
GDA94_Height_To_AHD_Height_AUSGeoid09_49	5656	0.03	Australia – mainland	-39.2	112.85	-10.65	153.69
GDA94_Height_To_AHD_Tasmania_Height_	5657	0.03	Australia - Tasmania mainland	-43.7	144.55	-40.24	148.44
AUSGeoid09_2			onshore				
Genoa_Height_To_EVRF_2007_Height_1	5215	0.1	Italy - mainland	37.86	6.62	47.1	18.58
Genoa_Height_To_EVRF_2007_Height_2	5217	0.1	Italy - Sicily onshore	36.59	12.36	38.35	15.71
Genoa_Height_To_EVRS_2000_Height_1	5213	0.1	Italy - mainland	37.86	6.62	47.1	18.58
Genoa_Height_To_EVRS_2000_Height_2	5216	0.1	Italy - Sicily onshore	36.59	12.36	38.35	15.71
Genoa_1942_Height_to_Catania_1965_height_1	9726	0.01	Italy - Sicily onshore	36.59	12.36	38.35	15.71
Genoa_1942_Height_To_EVRF2019_Height_1	9900	0.124	Italy - mainland west of 16°E	39.65	6.62	47.10	16.53
Genoa_1942_Height_To_EVRF2019_Mean-	9921	0.108	Italy - mainland west of 16°E	39.65	6.62	47.10	16.53
Tide_Height_1							
GHA_Height_To_EVRF2000_Austria_Height_1	9275	0.05	Austria	46.4	9.53	49.02	17.17
GHA_Height_To_EVRF2019_Height_2	9557	0.136	Austria	46.4	9.53	49.02	17.17
GHA_Height_To_EVRF2019_Mean-Tide_Height_2	9558	0.13	Austria	46.4	9.53	49.02	17.17
GHA_To_EVRF_2007_height_1	5557	0.1	Austria	46.4	9.53	49.02	17.17
GHA_To_EVRS_2000_1	5415	0.1	Austria	46.4	9.53	49.02	17.17
Gisborne_1926_Height_To_NZGD2000_Height_1	110067	0.12	New Zealand - North Island -	-39.04	176.41	-37.49	178.63
			Gisborne vcrs				
HKPD_depth_To_HKCD_depth_1	7977	0	China - Hong Kong - offshore	22.13	113.76	22.58	114.51
HVRS_1971_Height_To_EVRF_2007_Height_1	5197	0.1	Croatia - onshore	42.34	13.43	46.54	19.43
HVRS_1971_Height_To_EVRS_2000_Height_1	5196	0.1	Croatia - onshore	42.34	13.43	46.54	19.43
ITRF_2008_Height_To_CGVD2013(CGG2013a)_	9125	0.03	Canada	38.21	-141.01	86.46	-40.73
Height_2							
ITRF_2008_Height_To_CGVD2013(CGG2013)_	9124	0.03	Canada	38.21	-141.01	86.46	-40.73
Height_1							
JGD_2000_To_JGD_2000_Vertical_Height_1	110059	10	Japan – onshore mainland	30.94	129.30	45.54	145.87
JGD_2011_To_JGD_2011_Vertical_Height_1	110060	2	Japan – onshore mainland	30.94	129.30	45.54	145.87

Vertical Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
JGD2000_vertical_(height)_to_JGD2011_(vertical)_	6699	0.01	Japan - onshore mainland	30.94	129.3	45.54	145.87
height_1			excluding eastern main province				
KOC_CD_Height_To_Kuwait_PWD_Height_1	5450	0.1	Kuwait - onshore	28.53	46.54	30.09	48.48
KOC_CD_Height_To_Kuwait_WD_Depth_Ft_Intl_1	5453	0.1	Kuwait - onshore	28.53	46.54	30.09	48.48
KOC_CD_To_KOC_WD_1	5413	0.1	Kuwait - onshore	28.53	46.54	30.09	48.48
KOC_CD_height_To_KOC_WD_height_1	7980	0.1	Kuwait - onshore	28.53	46.54	30.09	48.48
KOC_WD_Depth_To_Kuwait_PWD_Height_1	5455	0.1	Kuwait - onshore	28.53	46.54	30.09	48.48
Kuwait_PWD_height_To_KOC_WD_height_1	7981	0.1	Kuwait - onshore	28.53	46.54	30.09	48.48
LAS07_Height_To_EVRF2019_Height_1	9667	0.01	Lithuania - onshore	53.89	20.86	56.45	26.82
LAS07_Height_To_EVRF2019_Mean-Tide_Height_2	9668	0.014	Lithuania - onshore	53.89	20.86	56.45	26.82
Latvia_2000_height_To_EVRF2007_height_1	7701	0.1	Latvia - onshore	55.67	20.87	58.09	28.24
Latvia_2000_Height_To_EVRF2019_Height_1	9579	0.006	Latvia - onshore	55.67	20.87	58.09	28.24
Latvia_2000_Height_To_EVRF2019_Mean- Tide_Height_1	9580	0.008	Latvia - onshore	55.67	20.87	58.09	28.24
LHN95_Height_To_EVRF2019_Height_2	9559	0.146	Europe - Liechtenstein and Switzerland	45.82	5.96	47.81	10.49
LHN95_Height_To_EVRF2019_Mean-Tide_Height_2	9560	0.142	Europe - Liechtenstein and Switzerland	45.82	5.96	47.81	10.49
LKS_1992_To_Latvia_2000_Height_LV14	110152	0.065	Latvia - onshore	55.67	20.87	58.09	28.24
LKS_1992_To_Latvia_2000_Height_RIGA20	110151	0.025	Riga City - Latvia	56.8573	23.9336	57.0862	24.3245
LKS_1994_To_LAS07_Height_LIT20G	110153	0.03	Lithuania - onshore	53.89	20.86	56.45	26.82
LN02_To_EVRS_2000_1	5431	0.1	Europe - Liechtenstein and Switzerland	45.82	5.96	47.81	10.49
LN_1902_Height_To_EVRF_2007_Height_1	5207	0.1	Europe - Liechtenstein and Switzerland	45.82	5.96	47.81	10.49
Lyttelton_1937_Height_To_NZGD2000_Height_1	110068	0.11	New Zealand - South Island - Lyttelton vcrs	-44.92	168.95	-41.6	173.77
Moturiki_1953_Height_To_NZGD2000_Height_1	110069	0.12	New Zealand - North Island - Moturiki vcrs	-40.59	174.57	-37.52	177.26
N2000_Height_To_EVRF2019_Height_1	9573	0.004	Finland - onshore	59.75	19.24	70.09	31.59
N2000_Height_To_EVRF2019_Mean-Tide_Height_1	9574	0.024	Finland - onshore	59.75	19.24	70.09	31.59
N60_To_EVRS_2000_1	5432	0.1	Finland - onshore	59.75	19.24	70.09	31.59
NAD_1983_2011_Height_To_NAVD88_CONUS_ GEOID18_Height_3	9229	0.015	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NAD_1983_2011_Height_To_NAVD88_Depth_ Alaska_GEOID12B	110101	4.0	USA - Alaska	51.3	172.42	71.40	-129.99

¹³⁸ Copyright @ 2012, 2015-2022 Esri

Vertical Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
NAD_1983_2011_Height_To_NAVD88_Depth_ CONUS_GEOID12B	110100	0.05	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NAD_1983_2011_Height_To_NAVD88_Depth_ CONUS_GEOID18	110108	0.015	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NAD_1983_2011_Height_To_NAVD88_Depth_USFTCONUS_GEOID12B	110105	0.05	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NAD_1983_2011_Height_To_NAVD88_Depth_USFTCONUS_GEOID18	110110	0.015	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NAD_1983_2011_Height_To_NAVD88_Height_IFT_ CONUS_GEOID12B	110107	0.05	USA - onshore - AZ MI MT ND OR SC	31.33	-124.6		
NAD_1983_2011_Height_To_NAVD88_Height_IFT_ CONUS_GEOID18	110111	0.015	USA - onshore - AZ MI MT ND OR SC	31.33	-124.6	49.01	-78.52
NAD_1983_2011_Height_To_NAVD88_Height_ USFT_Alaska_GEOID12B	110104	4.0	USA - Alaska mainland	54.34	-168.26	71.40	-129.99
NAD_1983_2011_Height_To_NAVD88_Height_ USFT_CONUS_GEOID12B	110103	0.05	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NAD_1983_2011_Height_To_NAVD88_Height_ USFT_CONUS_GEOID18	110109	0.015	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NAD_1983_2011_Height_To_PRVD02_GEOID18_ Height_2	9230	0.015	Puerto Rico - onshore	17.87	-67.97	18.57	-65.19
NAD_1983_2011_To_NAVD88_Alaska_GEOID12B_ Height	110001	4.0	USA - Alaska	51.3	172.42	71.40	-129.99
NAD_1983_2011_To_NAVD88_CONUS_GEOID12B_ Height	110000	0.05	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NAD_1983_2011_To_PRVD02_GEOID12B_Height	110003	2.0	Puerto Rico - onshore	17.87	-67.97	18.57	-65.19
NAD_1983_2011_To_VIVD09_GEOID12B_Height	110035	2.0	Virgin Islands, US - onshore	17.62	-65.09	18.44	-64.51
NAD83(CSRS)_epoch2010_Height_To_ CGVD2013(CGG2013a)_Height	110112	0.03	Canada	38.21	-141.01	86.46	-40.73
NAD83(CSRS)_epoch2010_Height_To_ CGVD2013(CGG2013)_Height	110113	0.03	Canada	38.21	-141.01	86.46	-40.73
NAD83(CSRS)v6_Height_To_CGVD2013(CGG2013a) _Height_1	9247	0.03	Canada	38.21	-141.01	86.46	-40.73
NAD83(CSRS)v6_Height_To_CGVD2013(CGG2013)_ Height_1	9246	0.03	Canada	38.21	-141.01	86.46	-40.73

Vertical Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
NAD_1983_Height_To_NAVD88_Depth_Alaska_ GEOID12B_Height	110132	4.0	USA - Alaska	51.3	172.42	71.40	-129.99
NAD_1983_Height_To_NAVD88_Depth_CONUS_ GEOID12B	110131	0.05	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NAD_1983_Height_To_NAVD88_Depth_Hawaii_ GEOID12B_Height	110133	2.0	USA - Hawaii - onshore	18.87	-160.3	22.29	-154.74
NAD_1983_Height_To_NAVD88_Depth_USFT_ Alaska_GEOID12B_Height	110137	4.0	USA - Alaska mainland	54.34	-168.26	71.40	-129.99
NAD_1983_Height_To_NAVD88_Depth_USFT_ CONUS_GEOID12B	110136	0.05	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NAD_1983_Height_To_NAVD88_Height_IFT_ CONUS_GEOID12B	110138	0.05	USA - onshore - AZ MI MT ND OR SC	31.33	-124.6	49.01	-78.52
NAD_1983_Height_To_NAVD88_Height_USFT_ Alaska_GEOID12B_Height	110135	4.0	USA - Alaska mainland	54.34	-168.26	71.40	-129.99
NAD_1983_Height_To_NAVD88_Height_USFT_ CONUS_GEOID12B	110134	0.05	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NAD_1983_MA11_To_GUVD04_GEOID12B_Height	110005	1.6	Guam - onshore	13.18	144.58	13.70	145.01
NAD_1983_MA11_To_NMVD03_GEOID12B_Height	110036	1.6	Northern Mariana Islands - Rota, Saipan, and Tinian	14.06	145.06	15.35	145.89
NAD_1983_PA11_Height_To_NAVD88_Depth_ Hawaii_GEOID12B	110102	2.0	USA - Hawaii - onshore	18.87	-160.3	22.29	-154.74
NAD_1983_PA11_To_ASVD02_GEOID12B_Height	110004	1.6	American Samoa - Tutuila Island	-14.43	-170.88	-14.20	-170.51
NAD_1983_PA11_To_NAVD88_Hawaii_GEOID12B_ Height	110002	2.0	USA - Hawaii - onshore	18.87	-160.3	22.29	-154.74
NAD_1983_To_NAVD88_Alaska_GEOID12B_Height	110032	4.0	USA - Alaska	51.3	172.42	71.40	-129.99
NAD_1983_To_NAVD88_CONUS_GEOID12B_ Height	110031	0.05	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NAD_1983_To_NAVD88_Hawaii_GEOID12B_Height	110033	2.0	USA - Hawaii - onshore	18.87	-160.3	22.29	-154.74
NAD_1983_To_PRVD02_GEOID12B_Height	110034	2.0	Puerto Rico - onshore	17.87	-67.97	18.57	-65.19
NAD_1983_To_VIVD09_GEOID12B_Height	110006	2.0	Virgin Islands, US - onshore	17.62	-65.09	18.44	-64.51
NAP_Height_To_EVRF2019_Height_1	9581	0.016	Netherlands - onshore	50.75	3.2	53.7	7.22
NAP_Height_To_EVRF2019_Mean-Tide_Height_1	9582	0.012	Netherlands - onshore	50.75	3.2	53.7	7.22
NAP_To_EVRS_2000_1	5425	0.1	Netherlands - onshore	50.75	3.2	53.7	7.22
Napier_1962_Height_To_NZGD2000_Height_1	110070	0.12	New Zealand - North Island -	-40.57	175.8	-38.87	178.07
			Hawkes Bay mc Napier vcrs				

Vertical Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
Nelson_1955_Height_To_NZGD2000_Height_1	110071	0.12	New Zealand - South Island -	-42.44	171.82	-40.44	174.46
Nelson_1935_Height_To_N2GD2000_Height_1	1100/1	0.12	Nelson vcrs	-42.44	1/1.02	-40.44	174.40
Newlyn_(height)_to_EVRF2000_(height)_(1)	4651	0.1	UK - Great Britain mainland	49.93	-7.06	58.71	1.8
Newlyn_(neight)_to_tvit/2000_(neight)_(1)	4031	0.1	onshore	45.55	-7.00	30.71	1.0
Newlyn_To_EVRS_2000_1	110083	0.1	UK - Great Britain mainland	49.93	-7.06	58.71	1.8
Newlyn_10_27110_2000_2	110000	0.1	onshore	13.30	7.00	30.71	1.0
NGF_IGN69_Height_To_EVRF2019_Height_1	9575	0.108	France - mainland onshore	42.33	-4.87	51.14	8.23
NGF_IGN69_Height_To_EVRF2019_Mean-	9576	0.086	France - mainland onshore	42.33	-4.87	51.14	8.23
Tide_Height_1							
NGF_IGN69_To_EVRS_2000_1	5419	0.1	France - mainland onshore	42.33	-4.87	51.14	8.23
NAVD88_Depth_(m)_To_USFT	110029	0	USA - CONUS and Alaska -	24.41	-168.26	71.40	-66.91
			onshore				
NAVD88_Height_(m)_To_Depth_USFT	110030	0	USA - CONUS and Alaska -	24.41	-168.26	71.40	-66.91
			onshore				
NAVD88_Height_(m)_To_IFT	110027	0	USA - onshore - AZ MI MT ND OR	31.33	-124.6	49.01	-78.52
			SC				
NAVD88_Height_(m)_To_USFT	110026	0	USA - CONUS and Alaska -	24.41	-168.26	71.40	-66.91
			onshore				
NAVD88_Height_To_Depth	110024	0	North America - Mexico and USA	14.51	172.42	71.40	-66.91
NAVEQUE II STATE LIGHT	110000	•	- onshore	24.22	124.6	40.04	70.53
NAVD88_Height_USFT_To_IFT	110028	0	USA - onshore - AZ MI MT ND OR	31.33	-124.6	49.01	-78.52
NAVDOO LICET Height To Donth	110025	0	SC USA - CONUS and Alaska -	24.41	-168.26	71.40	-66.91
NAVD88_USFT_Height_To_Depth	110025	U	onshore	24.41	-108.20	71.40	-00.91
NGVD29 ht (m) To NAVD88 ht 2011 ECW	110078	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29 ht (m) To NAVD88 ht NAD83 ECW	110073	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29 ht (m) To NAVD88 ht USFT 2011 ECW	110077	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_ht_To_NAVD88_ht_IntlFt_2011_ECW	110073	0.02	USA - onshore - AZ MI MT ND OR	31.33	-124.6	49.01	-78.52
NOVD25_NC_10_N/VD05_NC_NCN C_2011_E6VV	110001	0.02	SC SC	31.33	121.0	15.01	70.32
NGVD29_ht_To_NAVD88_ht_IntlFt_NAD83_ECW	110080	0.02	USA - onshore - AZ MI MT ND OR	31.33	-124.6	49.01	-78.52
			SC				
NGVD29_To_NAVD88_CORS96_ECW	110045	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_Depth_CORS96_ECW	110046	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_Depth_HARN_ECW	110042	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_Depth_NAD27_ECW	110057	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91

Vertical Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
NGVD29_To_NAVD88_Depth_NAD83_2011_ECW	110054	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_Depth_NAD83_ECW	110039	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_Depth_NSRS2007_ECW	110050	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_Depth_USFT_CORS96_ECW	110048	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_Depth_USFT_HARN_ECW	110044	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_Depth_USFT_NAD27_ECW	110038	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_Depth_USFT_NAD83_2011_ ECW	110056	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_Depth_USFT_NAD83_ECW	110041	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_Depth_USFT_NSRS2007_EC	110052	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_HARN_Central	110016	0.02	USA - CONUS 89°W-107°W - onshore	25.83	-107	49.38	-89
NGVD29_To_NAVD88_HARN_East	110014	0.02	USA - CONUS east of 89°W - onshore	24.41	-89	48.32	-66.91
NGVD29_To_NAVD88_HARN_ECW	110015	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_HARN_West	110017	0.02	USA - CONUS west of 107°W - onshore	31.33	-124.79	49.05	-107
NGVD29_To_NAVD88_NAD27_1_West	5409	0.02	USA - CONUS west of 107°W - onshore	31.33	-124.79	49.05	-107
NGVD29_To_NAVD88_NAD27_2_Central	5410	0.02	USA - CONUS 89°W-107°W - onshore	25.83	-107	49.38	-89
NGVD29_To_NAVD88_NAD27_3_East	5411	0.02	USA - CONUS east of 89°W - onshore	24.41	-89	48.32	-66.91
NGVD29_To_NAVD88_NAD27_ECW	110009	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_NAD83_2011_ECW	110053	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_NAD83_Central	110012	0.02	USA - CONUS 89°W-107°W - onshore	25.83	-107	49.38	-89
NGVD29_To_NAVD88_NAD83_East	110010	0.02	USA - CONUS east of 89°W - onshore	24.41	-89	48.32	-66.91
NGVD29_To_NAVD88_NAD83_ECW	110011	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_NAD83_West	110013	0.02	USA - CONUS west of 107°W - onshore	31.33	-124.79	49.05	-107
NGVD29_To_NAVD88_NSRS2007_ECW	110049	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_USFT_CORS96_ECW	110047	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_USFT_HARN_ECW	110043	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91

¹⁴² Copyright @ 2012, 2015-2022 Esri

Vertical Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
NGVD29 To NAVD88 USFT NAD27 ECW	110037	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29 To NAVD88 USFT NAD83 2011 ECW	110055	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29 To NAVD88 USFT NAD83 ECW	110040	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NGVD29_To_NAVD88_USFT_NSRS2007_ECW	110051	0.02	USA - CONUS - onshore	24.41	-124.79	49.38	-66.91
NN54 To EVRS 2000 1	5426	0.1	Norway - onshore	57.93	4.68	71.21	31.22
NVN99_To_EVRS_2000_1	5428	0.1	Slovenia - onshore	45.42	13.38	46.88	16.61
NZGD2000_To_NZGD2016_Height_1	110062	0.1	New Zealand	-55.95	160.6	-25.88	-171.2
NZVD2009_To_Auckland_1	4442	0.05	New Zealand - North Island - Auckland vcrs	-37.67	174	-36.12	176.17
NZVD2009_To_Bluff_1	4451	0.05	New Zealand - South Island - Bluff vcrs	-46.71	168.01	-46.26	168.86
NZVD2009_To_Dunedin_1	4450	0.070000 0000000 0001	New Zealand - South Island - Dunedin vcrs	-46.4	167.73	-43.82	171.28
NZVD2009_To_Dunedin_Bluff_1960_1	4453	0.04	New Zealand - South Island - Dunedin-Bluff vcrs	-46.73	166.37	-44.52	169.95
NZVD2009_To_Gisborne_1	4445	0.02	New Zealand - North Island - Gisborne vcrs	-39.04	176.41	-37.49	178.63
NZVD2009_To_Lyttelton_1	4449	0.09	New Zealand - South Island - Lyttelton vcrs	-44.92	168.95	-41.6	173.77
NZVD2009_To_Moturiki_1	4443	0.06	New Zealand - North Island - Moturiki vcrs	-40.59	174.57	-37.52	177.26
NZVD2009_To_Napier_1	4446	0.05	New Zealand - North Island - Hawkes Bay mc Napier vcrs	-40.57	175.8	-38.87	178.07
NZVD2009_To_Nelson_1	4444	0.070000 0000000 0001	New Zealand - South Island - Nelson vcrs	-42.44	171.82	-40.44	174.46
NZVD2009_To_One_Tree_Point_1	4441	0.03	New Zealand - North Island - One Tree vcrs	-36.41	172.61	-34.36	174.83
NZVD2009_To_Stewart_Island_1	4452	0.15	New Zealand - Stewart Island	-47.33	167.29	-46.63	168.34
NZVD2009_To_Taranaki_1	4447	0.05	New Zealand - North Island - Taranaki vcrs	-39.92	173.68	-38.41	174.95
NZVD2009_To_Wellington_1	4448	0.04	New Zealand - North Island - Wellington vcrs	-41.67	174.52	-40.12	176.55

Vertical Transformation Name	WKID	Accuracy	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
NZVD204C Height To Avaddaged 404C Height 4	7000	(m)	Nav. Zaalard Navida Island				
NZVD2016_Height_To_Auckland_1946_Height_1	7860	0.02	New Zealand - North Island - Auckland vcrs	-37.67	174	-36.12	176.17
NZVD2016_Height_To_Bluff_1955_Height_1	7861	0.02	New Zealand - South Island -	-46.71	168.01	-46.26	168.86
NZVDZ010_Neight_10_Blun_1955_Neight_1	7801	0.02	Bluff vcrs	-40.71	100.01	-40.20	100.00
NZVD2016 Height To Dunedin 1958 Height 1	7862	0.02	New Zealand - South Island -	-46.4	167.73	-43.82	171.28
NEVBEOTO_NEIGHT_TO_BUILDUNI_1555_NEIGHT_1	7002	0.02	Dunedin vcrs	10.1	107.75	13.02	171.20
NZVD2016_Height_To_Dunedin-	7863	0.02	New Zealand - South Island -	-46.73	166.37	-44.52	169.95
Bluff_1960_Height_1			Dunedin-Bluff vcrs				
NZVD2016_Height_To_Gisborne_1926_Height_1	7864	0.02	New Zealand - North Island -	-39.04	176.41	-37.49	178.63
			Gisborne vcrs				
NZVD2016_Height_To_Lyttelton_1937_Height_1	7865	0.01	New Zealand - South Island -	-44.92	168.95	-41.6	173.77
			Lyttleton vcrs				
NZVD2016_Height_To_Moturiki_1953_Height_1	7866	0.02	New Zealand - North Island -	-40.59	174.57	-37.52	177.26
			Moturiki vcrs				
NZVD2016_Height_To_Napier_1962_Height_1	7867	0.02	New Zealand - North Island -	-40.57	175.8	-38.87	178.07
			Hawkes Bay mc Napier vcrs				
NZVD2016_Height_To_Nelson_1955_Height_1	7868	0.02	New Zealand - South Island -	-42.44	171.82	-40.44	174.46
NTVP2046 H : L · T · O · T · D · · · · · · · · · · · ·	70.00	0.04	Nelson vcrs	26.44	470.64	24.25	474.00
NZVD2016_Height_To_One_Tree_Point_1964_	7869	0.01	New Zealand - North Island -	-36.41	172.61	-34.36	174.83
Height_1	7070	0.10	One Tree vcrs	47.22	167.20	46.62	100.24
NZVD2016_Height_To_Stewart_Island_1977_ Height_1	7870	0.18	New Zealand - Stewart Island	-47.33	167.29	-46.63	168.34
NZVD2016_Height_To_Taranaki_1970_Height_1	7871	0.02	New Zealand - North Island -	-39.92	173.68	-38.41	174.95
			Taranaki vcrs				
NZVD2016_Height_To_Wellington_1953_Height_1	7872	0.02	New Zealand - North Island - Wellington vcrs	-41.67	174.52	-40.12	176.55
ODN_Height_To_EVRF2019_Height_2	9561	0.024	UK - Great Britain mainland	49.93	-7.06	58.71	1.8
			onshore				
ODN_Height_To_EVRF2019_Mean-Tide_Height_2	9562	0.02	UK - Great Britain mainland	49.93	-7.06	58.71	1.8
			onshore				
One_Tree_Point_1964_Height_To_NZGD2000_	110072	0.11	New Zealand - North Island -	-36.41	172.61	-34.36	174.83
Height_1			One Tree vcrs				
Oostende_Height_To_EVRF_2007_Height_1	5199		Belgium - onshore	49.5	2.5	51.51	6.4
Oostende_Height_To_EVRF2019_Height_2	9563		Belgium - onshore	49.5	2.5	51.51	6.4
Oostende_Height_To_EVRF2019_Mean-	9564	0.04	Belgium - onshore	49.5	2.5	51.51	6.4
Tide_Height_2							

Vertical Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
Oostende_Height_To_EVRS_2000_Height_1	5198	0.1	Belgium - onshore	49.5	2.5	51.51	6.4
Poolbeg_height_(m)_To_Belfast_height_1	7966	0.1	Europe - Ireland (Republic and Ulster) - onshore	51.39	-10.56	55.43	-5.34
Poolbeg_height_(m)_To_Malin_Head_height_1	7964	0.1	Europe - Ireland (Republic and Ulster) - onshore	51.39	-10.56	55.43	-5.34
Poolbeg_Height_To_Belfast_Height_1	5449	0.1	UK - Northern Ireland - onshore	53.96	-8.18	55.36	-5.34
Poolbeg_Height_To_Malin_Head_Height_1	5448	0.1	Ulster) - onshore	51.39	-10.56	55.43	-5.34
POSGAR_2007_To_SRVN16_Height_1	9256	0.05	Argentina - onshore	-55.11	-73.59	-21.78	-53.65
PTRA08_Height_To_Cais_da_Figueirinha- Angra_do_Heroismo_Height_GeodAz2014	110146	0.1	Portugal - Azores C - Terceira onshore	38.57	-27.44	38.86	-26.97
PTRA08_Height_To_Cais_da_Madalena_Height_Ge odAz2014	110144	0.1	Portugal - Azores C - Pico onshore	38.32	-28.61	38.61	-27.98
PTRA08_Height_To_Cais_das_Velas_Height_GeodA z2014	110142	0.1	Portugal - Azores C - S Jorge onshore	38.48	-28.37	38.8	-27.71
PTRA08_Height_To_Cais_da_Vila_do_Porto_Height _GeodAz2014	110147	0.1	Portugal - Azores E onshore - Santa Maria and Formigas	36.87	-25.26	37.34	-24.72
PTRA08_Height_To_Horta_Height_GeodAz2014	110143	0.1	Portugal - Azores C - Faial onshore	38.46	-28.9	38.7	-28.54
PTRA08_Height_To_Ponta_Delgada_Height_GeodA z2014	110148	0.1	Portugal - Azores E - S Miguel onshore	37.65	-25.92	37.96	-25.08
PTRA08_Height_To_Santa_Cruz_da_Graciosa_Heig ht_GeodAz2014	110145	0.1	Portugal - Azores C - Graciosa onshore	38.97	-28.13	39.14	-27.88
REGCAN95_Height_To_El_Hierro_Height_1	9421	0.05	Spain - Canary Islands - El Hierro	27.58	-18.22	27.9	-17.83
REGCAN95_Height_To_Fuerteventura_Height_1	9416	0.05	Spain - Canary Islands - Fuerteventura	27.99	-14.58	28.81	-13.75
REGCAN95_Height_To_Gran_Canaria_Height_1	9417	0.05	Spain - Canary Islands - Gran Canaria	27.68	-15.88	28.23	-15.31
REGCAN95_Height_To_La_Gomera_Height_1	9419	0.05	Spain - Canary Islands - La Gomera	27.95	-17.39	28.26	-17.03
REGCAN95_Height_To_Lanzarote_Height_1	9415	0.05	Spain - Canary Islands - Lanzarote	28.78	-13.95	29.47	-13.37
REGCAN95_Height_To_La_Palma_Height_1	9420	0.05	Spain - Canary Islands - La Palma	28.4	-18.06	28.9	-17.66
REGCAN95_Height_To_Tenerife_Height_1	9418	0.05	Spain - Canary Islands - Tenerife	27.93	-16.96	28.63	-16.08

Vertical Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
RGF_1993_Height_To_NGF-IGN69_Height_	110061	0.01	France – mainland onshore	42.33	-4.87	51.14	8.23
RAF18 3	110001	0.01	Trance – mamand onshore	42.33	-4.07	31.14	0.23
RGF93_v2b_To_NGF-IGN69_Height_RAF20_5	9876	0.01	France - mainland onshore	42.33	-4.87	51.14	8.23
RGF93_v2_To_NGF-IGN69_Height_RAF18_3	8885	0.01	France - mainland onshore	42.33	-4.87	51.14	8.23
RGF93_v2_To_NGF-IGN78_Height_RAC09_2	8372	0.05	France - Corsica onshore	41.31	8.5	43.07	9.63
RH2000_Height_To_EVRF_2007_Height_1	5208	0.1	Sweden – onshore	55.28	10.93	69.07	24.17
RH2000_Height_To_EVRF2019_Height_1	9648	0.006	Sweden – onshore	55.28	10.93	69.07	24.17
RH2000_Height_To_EVRF2019_Mean-	9649	0.032	Sweden – onshore	55.28	10.93	69.07	24.17
Tide_Height_1							
RH70_To_EVRS_2000_1	5430	0.1	Sweden – onshore	55.28	10.93	69.07	24.17
SNN76_To_EVRS_2000_1	5422	0.1	Germany – East Germany all	50.2	9.92	54.74	15.04
			states				
Stewart_Island_1977_Height_To_NZGD2000_	110073	0.28	New Zealand – Stewart Island	-47.33	167.29	-46.63	168.34
Height_1							
SVS2010_Height_To_EVRF2019_Height_2	9565	0.006	Slovenia – onshore	45.42	13.38	46.88	16.61
SVS2010_Height_To_EVRF2019_Mean-	9566	0.008	Slovenia – onshore	45.42	13.38	46.88	16.61
Tide_Height_2							
Taranaki_1970_Height_To_NZGD2000_Height_1	110074	0.12	New Zealand – North Island –	-39.92	173.68	-38.41	174.95
			Taranaki vcrs				
Trieste_Height_To_EVRF2019_Height_2	9567	0.042	North Macedonia	40.85	20.45	42.36	23.04
Trieste_Height_To_EVRF2019_Height_3	9569	0.012	Bosnia and Herzegovina	42.56	15.74	45.27	19.62
Trieste_Height_To_EVRF2019_Mean-	9568	0.044	North Macedonia	40.85	20.45	42.36	23.04
Tide_Height_2							
Trieste_Height_To_EVRF2019_Mean-	9570	0.01	Bosnia and Herzegovina	42.56	15.74	45.27	19.62
Tide_Height_3							
Vienna_height_To_GHA_height_1	9371	0	Austria – Vienna	48.12	16.18	48.34	16.59
Wellington_1953_Height_To_NZGD2000_Height_1	110075	0.12	New Zealand – North Island –	-41.67	174.52	-40.12	176.55
			Wellington vcrs				
WGS_1984_To_EGM_1984_Geoid_1	110008	1	World	-90	-180	90	180
WGS_1984_To_EGM_1984_Geoid_2	110085	1	World	-90	-180	90	180
WGS_1984_To_EGM_1996_Geoid_1	110007	1	World	-90	-180	90	180
WGS_1984_To_EGM_1996_Geoid_2	110084	1.05	World	-90	-180	90	180
WGS_1984_To_LN02_Height_CHGeo2004_	110158	0.12	Europe - Liechtenstein and	45.82	5.96	47.81	10.49
Htrans_2			Switzerland				
WGS_1984_To_WGS_1984_EGM2008_1x1_Height	110018	0.5	World	-90	-180	90	180

Vertical Transformation Name	WKID	Accuracy (m)	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
WGS_1984_To_WGS_1984_EGM2008_2.5x2.5_ Height	110019	0.5	World	-90	-180	90	180

Table 11: Vertical transformations: Vertical offset method

Vertical Transformation Name	WKID	Method	Z Shift
AIOC95_Depth_To_Caspian_1	5403	Vertical_Offset	-1.7
Antalya_Height_To_EVRF2019_Height_2	9551	Vertical_Offset	-0.394
Antalya_Height_To_EVRF2019_Mean-Tide_Height_2	9552	Vertical_Offset	-0.448
Baltic_Depth_To_AIOC95_Depth_1	5445	Vertical_Offset	-26.3
Baltic_Depth_To_AIOC95_Height_1	5446	Vertical_Offset	26.3
Baltic_Depth_To_Caspian_Depth_1	5440	Vertical_Offset	-28
Baltic_Depth_To_Caspian_Height_1	5441	Vertical_Offset	28
Baltic_Height_To_AIOC95_Height_1	5443	Vertical_Offset	26.3
Baltic_Height_To_Baltic_Depth_1	5442	Vertical_Offset	0
Baltic_Height_To_Black_Sea_Height_1	5447	Vertical_Offset	0.4
Baltic_Height_To_Caspian_Height_1	5438	Vertical_Offset	28
Baltic_To_AIOC95_Depth_1	5402	Vertical_Offset	-26.3
Baltic_To_Caspian_1	5400	Vertical_Offset	-28
Belfast_Height_To_Malin_Head_Height_1	5452	Vertical_Offset	-0.037
Cascais_To_EVRS_2000_1	5427	Vertical_Offset	-0.315
EGM2008_height_To_Kiunga_height_1	7654	Vertical_Offset	-3.0
EGM2008_height_to_POM08_height_1	7874	Vertical_Offset	-0.93
EGM96_height_To_Kumul_34_height_1	7653	Vertical_Offset	-0.87
EGM96_height_to_POM96_height_1	7873	Vertical_Offset	-1.58
Genoa_1942_Height_to_Catania_1965_height_1	9726	Vertical_Offset	0.141
HKPD_depth_To_HKCD_depth_1	7977	Vertical_Offset	-0.146
JGD2000_vertical_(height)_to_JGD2011_(vertical)_height_1	6699	Vertical_Offset	0.0
KOC_CD_Height_To_Kuwait_PWD_Height_1	5450	Vertical_Offset	-0.49
KOC_CD_Height_To_Kuwait_WD_Depth_Ft_Intl_1	5453	Vertical_Offset	15.55
KOC_CD_height_To_KOC_WD_height_1	7980	Vertical_Offset	-4.74
KOC_CD_To_KOC_WD_1	5413	Vertical_Offset	4.74
KOC_WD_Depth_To_Kuwait_PWD_Height_1	5455	Vertical_Offset	4.25
Kuwait_PWD_height_To_KOC_WD_height_1	7981	Vertical_Offset	-4.25

Vertical Transformation Name	WKID	Method	Z Shift
N60_To_EVRS_2000_1	5432	Vertical_Offset	0.213
NAP_To_EVRS_2000_1	5425	Vertical_Offset	-0.005
NGF_IGN69_To_EVRS_2000_1	5419	Vertical_Offset	-0.486
NZVD2009_To_Auckland_1	4442	Vertical_Offset	0.34
NZVD2009_To_Bluff_1	4451	Vertical_Offset	0.36
NZVD2009_To_Dunedin_1	4450	Vertical_Offset	0.49
NZVD2009_To_Dunedin_Bluff_1960_1	4453	Vertical_Offset	0.38
NZVD2009_To_Gisborne_1	4445	Vertical_Offset	0.34
NZVD2009_To_Lyttelton_1	4449	Vertical_Offset	0.47
NZVD2009_To_Moturiki_1	4443	Vertical_Offset	0.24
NZVD2009_To_Napier_1	4446	Vertical_Offset	0.2
NZVD2009_To_Nelson_1	4444	Vertical_Offset	0.29
NZVD2009_To_One_Tree_Point_1	4441	Vertical_Offset	0.06
NZVD2009_To_Stewart_Island_1	4452	Vertical_Offset	0.39
NZVD2009_To_Taranaki_1	4447	Vertical_Offset	0.32
NZVD2009_To_Wellington_1	4448	Vertical_Offset	0.44
ODN_Height_To_EVRF2019_Mean-Tide_Height_2	9562	Vertical_Offset	-0.17
Poolbeg_Height_To_Belfast_Height_1	5449	Vertical_Offset	-2.7
Poolbeg_Height_To_Malin_Head_Height_1	5448	Vertical_Offset	-2.7
Poolbeg_height_(m)_To_Belfast_height_1	7966	Vertical_Offset	-2.7
Poolbeg_height_(m)_To_Malin_Head_height_1	7964	Vertical_Offset	-2.7
Vienna_height_To_GHA_height_1	9371	Vertical_Offset	156.68

Table 12: Vertical transformations: Vertical offset and slope method

Vertical Transformation Name	WKID	Method	Z shift	Difference in latitude	Difference in	Inclina-	Inclina-
					longitude	tion North	tion East
Alicante_To_EVRS_2000_1	5429	Vertical_Offset_and_Slope	-0.486	40.772222222222	-3.65972222222222	-0.003	0.006
Baltic_1957_Height_To_EVRF2019_	9745	Vertical_Offset_and_Slope	0.142	49.9166666666666	15.25	0.026	0.006
Height_1							
Baltic_1957_Height_To_EVRF2019_	9744	Vertical_Offset_and_Slope	0.13	49.9166666666666	15.25	0.036	0.006
Mean-Tide_Height_1							
Baltic_1982_Height_To_EVRF_2007_	5200	Vertical_Offset_and_Slope	0.228	42.625	25.37666666666667	-0.009	-0.003
Height_1							
Baltic_1982_To_EVRS_2000_1	5416	Vertical_Offset_and_Slope	0.182	42.625	25.37666666666667	0.001	-0.004
Baltic_Height_To_EVRF_2007_Height	5202	Vertical_Offset_and_Slope	0.13	49.9166666666666	15.25	0.026	0
_1							

¹⁴⁸ Copyright @ 2012, 2015-2022 Esri

Vertical Transformation Name	WKID	Method	Z shift	Difference in latitude	Difference in	Inclina- tion North	Inclina- tion East
					longitude		
Baltic_Height_To_EVRF_2007_Height _2	5203	Vertical_Offset_and_Slope	0.195	58.7	25.86666666666667	0.009	-0.013
Baltic_Height_To_EVRF_2007_Height _3	5204	Vertical_Offset_and_Slope	0.121	55.3	24.01666666666667	0.053	0
Baltic_Height_To_EVRF_2007_Height 4	5210	Vertical_Offset_and_Slope	0.154	56.9666666666667	24.88333333333333	0.016	-0.012
Baltic_Height_To_EVRS_2000_Height _1	5436	Vertical_Offset_and_Slope	0.133	58.7	25.86666666666667	-0.014	0.005
Baltic_Height_To_EVRS_2000_Height _4	5201	Vertical_Offset_and_Slope	0.116	49.91666666666666	15.25	0.036	0
Baltic_Height_To_EVRS_2000_Height _5	5209	Vertical_Offset_and_Slope	0.105	56.9666666666667	24.88333333333333	0	0.004
Baltic_height_To_LAS07_height	110058	Vertical_Offset_and_Slope	0.1425	55.3	24.0166666666667	0.06076	0.03375
Baltic_To_EVRS_2000_2	5437	Vertical_Offset_and_Slope	0.102	55.3	24.0166666666667	0	0.002
Baltic_To_EVRS_2000_3	5435	Vertical_Offset_and_Slope	0.122	48.63333333333333	19.25	0.02	0
Constanta_Height_To_EVRF_2007_ Height_1	5206	Vertical_Offset_and_Slope	0.062	46.01666666666667	24.81666666666667	-0.005	0.008
Constanta_Height_To_EVRS_2000_ Height_1	5205	Vertical_Offset_and_Slope	0.028	46.01666666666667	24.81666666666667	0.002	0.002
DHHN2016_(height)_To_EVRF_2007_ (height)_1	7838	Vertical_Offset_and_Slope	0.014	51.05	10.21666666666667	-0.01	0
DHHN85_Height_To_EVRF_2007_ Height_1	5212	Vertical_Offset_and_Slope	0.017	51.05	8.666666666666666	-0.011	0.005
DHHN85_To_EVRS_2000_1	5421	Vertical_Offset_and_Slope	0.017	51.05	8.66666666666666	-0.002	0.003
DHHN92_Height_To_EVRF_2007_ Height_1	5211	Vertical_Offset_and_Slope	0.015	51.05	10.21666666666667	-0.01	0.002
DHHN92_To_EVRS_2000_1	5420	Vertical_Offset_and_Slope	0.014	51.05	10.21666666666667	-0.001	0
DNN_To_EVRS_2000_1	5417	Vertical_Offset_and_Slope	0.011	56.03333333333333	9.233333333333333	0.003	0.011
EOMA_1980_To_EVRS_2000_1	5424	Vertical_Offset_and_Slope	0.14	46.98333333333333	19.58333333333333	0.008	-0.002
Genoa_Height_To_EVRF_2007_ Height_1	5215	Vertical_Offset_and_Slope	-0.259	42.58333333333334	12.96666666666667	-0.036	0
Genoa_Height_To_EVRF_2007_ Height_2	5217	Vertical_Offset_and_Slope	-0.333	37.5	14.3	-0.051	0
Genoa_Height_To_EVRS_2000_ Height_1	5213	Vertical_Offset_and_Slope	-0.309	42.583333333333334	12.96666666666667	-0.03	0

Vertical Transformation Name	WKID	Method	Z shift	Difference in latitude	Difference in longitude	Inclina- tion North	Inclina- tion East
Genoa_Height_To_EVRS_2000_	5216	Vertical_Offset_and_Slope	-0.402	37.5	14.3	-0.079	0
Height_2							
GHA_To_EVRF_2007_height_1	5557	Vertical_Offset_and_Slope	-0.335	47.53333333333333	14.45	-0.065	-0.06
GHA_To_EVRS_2000_1	5415	Vertical_Offset_and_Slope	-0.356	47.53333333333333	14.45	-0.057	-0.058
HVRS_1971_Height_To_EVRF_2007_	5197	Vertical_Offset_and_Slope	-0.313	45.35	16.3666666666667	-0.016	-0.018
Height_1							
HVRS_1971_Height_To_EVRS_2000_	5196	Vertical_Offset_and_Slope	-0.343	45.35	16.3666666666667	-0.007	-0.016
Height_1							
Latvia_2000_height_To_EVRF2007_	7701	Vertical_Offset_and_Slope	0.003	56.9666666666667	24.88333333333333	0	0.0074
height_1							
LN02_To_EVRS_2000_1	5431	Vertical_Offset_and_Slope	-0.245	46.9166666666666	8.183333333333334	-0.21	-0.032
LN_1902_Height_To_EVRF_2007_	5207	Vertical_Offset_and_Slope	-0.225	46.9166666666666	8.183333333333334	-0.221	-0.033
Height_1							
Newlyn_(height)_to_EVRF2000_	4651	Vertical_Offset_and_Slope	0.070	54.58333333333334	-2.25	0.044	0
(height)_(1)							
Newlyn_To_EVRS_2000_1	110083	Vertical_Offset_and_Slope	0.070	54.58333333333334	-2.25	0.044	0
NN54_To_EVRS_2000_1	5426	Vertical_Offset_and_Slope	-0.001	62.93333333333333	11.16666666666667	-0.01	0.034
NVN99_To_EVRS_2000_1	5428	Vertical_Offset_and_Slope	-0.411	46	15	-0.033	0.008
Oostende_Height_To_EVRF_2007_	5199	Vertical_Offset_and_Slope	-2.317	50.71666666666667	4.76666666666667	-0.031	0
Height_1							
Oostende_Height_To_EVRS_2000_	5198	Vertical_Offset_and_Slope	-2.311	50.71666666666667	4.76666666666667	-0.016	0
Height_1							
RH2000_Height_To_EVRF_2007_	5208	Vertical_Offset_and_Slope	-0.008	61.9	15.8	-0.0006	-0.0003
Height_1							
RH70_To_EVRS_2000_1	5430	Vertical_Offset_and_Slope	0.005	64	16.23333333333333	-0.012	0
SNN76_To_EVRS_2000_1	5422	Vertical_Offset_and_Slope	0.157	52.53333333333333	13.16666666666667	0.007	0.005

Table 13: Vertical transformations: file-based methods

Vertical Transformation Name	WKID	Method	File Name
Alicante_Height_To_EVRF2019_Height_1	9646	Vertical_Offset_	Dataset_es_2019z
		with_Grid	
Alicante_Height_To_EVRF2019_Mean-Tide_Height_1	9647	Vertical_Offset_	Dataset_es_2019m
		with_Grid	
Auckland_1946_Height_To_NZGD2000_Height_1	110063	GEOID	Dataset_auckland_1946_to_nzgd2000

Vertical Transformation Name	WKID	Method	File Name
Baltic_1977_Height_To_EVRF2019_Height_1	9902	Vertical_Offset_	Dataset_ua_2019z
		with_Grid	
Baltic_1977_Height_To_EVRF2019_Mean-Tide_Height_1	9903	Vertical_Offset_	Dataset_ua_2019m
		with_Grid	
Baltic_1982_Height_To_EVRF2019_Height_1	9571	Vertical_Offset_	Dataset_bgalt_2019z
		with_Grid	
Baltic_1982_Height_To_EVRF2019_Mean-Tide_Height_1	9572	Vertical_Offset_	Dataset_bgalt_2019m
		with_Grid	
Baltic_1986_Height_To_EVRF2019_Height_1	9652	Vertical_Offset_	Dataset_pl86_2019z
		with_Grid	
Baltic_1986_Height_To_EVRF2019_Mean-Tide_Height_1	9653	Vertical_Offset_	Dataset_pl86_2019m
		with_Grid	
BGS2005_Height_To_EVRF2019_Height_1	9670	Vertical_Offset_	Dataset_bgneu_2019z
		with_Grid	
BGS2005_Height_To_EVRF2019_Mean-Tide_Height_1	9671	Vertical_Offset_	Dataset_bgneu_2019m
		with_Grid	
Bluff_1955_Height_To_NZGD2000_Height_1	110064	GEOID	Dataset_bluff_1955_to_nzgd2000
Cascais_Height_To_EVRF2019_Height_2	9553	Vertical_Offset_	Dataset_pt_2019z
	0==4	with_Grid	2
Cascais_Height_To_EVRF2019_Mean-Tide_Height_2	9554	Vertical_Offset_	Dataset_pt_2019m
COVERNA (COCORDA)	440404	with_Grid	D
CGVD2013(CGG2013a)_epoch1997_Height_To_CGVD28_Heig	110121	Vertical_Offset_	Dataset_HT2_1997_CGG2013a
ht_NAD83(CSRS)	110120	with_Grid	Debase UT2 2002.70 CCC2012-
CGVD2013(CGG2013a)_epoch2002_Height_To_CGVD28_Heig	110120	Vertical_Offset_	Dataset_HT2_2002v70_CGG2013a
ht_NAD83(CSRS)	110110	with_Grid	Detect UT2 2010-70 CCC2012c
CGVD2013(CGG2013a)_epoch2010_Height_To_CGVD28_Heig ht NAD83(CSRS)	110119	Vertical_Offset_ with Grid	Dataset_HT2_2010v70_CGG2013a
CGVD2013(CGG2013a) epoch2010 Height_To CGVD28_Heig	110118	Vertical_Offset_	Dataset UT2 2010v70 CCC2012a
ht_NAD83(CSRS)v6	110119	with_Grid	Dataset_HT2_2010v70_CGG2013a
CH1903+_To_LHN95_Height_CHGeo2004	110160	GEOID	Dataset CHGeo2004 Bessel
CH1903+_To_LN02_Height_CHGeo2004_Htrans	110150	GEOID	Dataset CHGeo2004_Bessel
CHTRF95_To_LHN95_Height	110139	GEOID	Dataset_cngeo2004_ntrails_besser Dataset_chgeo2004_ETRS
CHTRF95_To_LN02_Height_CHGeo2004_Htrans_2	110076	GEOID	Dataset_chgeo2004_ETRS Dataset_chgeo2004_htrans_ETRS_corr
Constanta_Height_To_EVRF2019_Height_1	9583	Vertical_Offset_	Dataset_crige02004_fitralis_ETRS_corr Dataset_ro_2019z
COUSTAINTA LIGIBLIT 10 EAVES 013 LIGIBLIT 1	3303	with_Grid	Dataset_10_20132
		witii_Grid	

Vertical Transformation Name	WKID	Method	File Name
Constanta_Height_To_EVRF2019_Mean-Tide_Height_1	9645	Vertical_Offset_	Dataset_ro_2019m
		with_Grid	
D96_to_SVS2000_ht_SLO_AMG2000E_Trst	110023	GEOID	Dataset_SLO_AMG2000E-Trst
D96_to_SVS2010_ht_SLO_VRP2016_Koper	110022	GEOID	Dataset_SLO_VRP2016-Koper
DHHN2016_Height_To_EVRF2019_Height_2	9555	Vertical_Offset_	Dataset_de_2019z
		with_Grid	
DHHN2016_Height_To_EVRF2019_Mean-Tide_Height_2	9556	Vertical_Offset_	Dataset_de_2019m
		with_Grid	
Dunedin_1958_Height_To_NZGD2000_Height_1	110065	GEOID	Dataset_dunedin_1958_to_nzgd2000
Dunedin-Bluff_1960_Height_To_NZGD2000_Height_1	110066	GEOID	Dataset_Dunedin-Bluff_1960_to_nzgd2000
EH2000_Height_To_EVRF2019_Height_1	9664	Vertical_Offset_	Dataset_ee_2019z
		with_Grid	
EH2000_Height_To_EVRF2019_Mean-Tide_Height_1	9665	Vertical_Offset_	Dataset_ee_2019m
		with_Grid	
EOMA_1980_Height_To_EVRF2019_Height_1	9577	Vertical_Offset_	Dataset_hu_2019z
		with_Grid	
EOMA_1980_Height_To_EVRF2019_Mean-Tide_Height_1	9578	Vertical_Offset_	Dataset_hu_2019m
		with_Grid	
Estonia_1997_To_EH2000_Height_EST-GEOID2017	110154	GEOID	Dataset_EST-GEOID2017
Estonia_1997_height_To_EVRF2007_height_EGM2008	110140	EGM96	_ *
Estonia_1997_height_To_EVRF2007_height_EGM96	110139	EGM96	Dataset_egm96.grd
ETRF93_To_LHN95_Height_CHGeo2004	110127	GEOID	Dataset_chgeo2004_ETRS
ETRF93_To_LN02_Height_CHGeo2004_Htrans_2	110157	GEOID	Dataset_chgeo2004_htrans_ETRS_corr
ETRS89_Height_To_Alicante_Height_1	9410	GEOID	Dataset_EGM08_REDNAP
ETRS89_Height_To_Cascais_Height_GeodPT08	110141	GEOID	Dataset_GeodPT08
ETRS89_Height_To_Ceuta_2_Height_1	9414	GEOID	Dataset_EGM08_REDNAP
ETRS89_Height_To_EVRF2000_Austria_Height_1	9276	GEOID	Dataset_GEOID_GRS80_Oesterreich
ETRS89_Height_To_lbiza_Height_1	9413	GEOID	Dataset_EGM08_REDNAP
ETRS89_Height_To_Mallorca_Height_1	9411	GEOID	Dataset_EGM08_REDNAP
ETRS89_Height_To_Menorca_Height_1	9412	GEOID	Dataset_EGM08_REDNAP
ETRS89_Height_To_NAP_Height_nlgeo2018	9283	GEOID	Dataset_nlgeo2018
ETRS89_Height_To_Oostende_Height_hBG18	110021	GEOID	Dataset_hBG18
ETRS89_To_HS2-VRF_height_HS2GM15_1	9304	GEOID	Dataset_HS2GM15
ETRS89_to_Baltic_1957_Height_1_SK	110129	GEOID	Dataset_Slovakia_ETRS89h_to_Baltic1957
ETRS89_To_Belfast_Height_2_OSGM15	7958	GEOID	Dataset_OSGM15_Belfast
ETRS89_To_British_Isles_Height_OSGM15_Belfast	110150	GEOID	Dataset_OSGM15_Belfast
ETRS89_To_British_Isles_Height_OSGM15_GB	110149	GEOID	Dataset_OSGM15_Great_Britain

¹⁵² Copyright @ 2012, 2015-2022 Esri

Vertical Transformation Name	WKID	Method	File Name
ETRS89_To_Douglas_Height_2_OSGM15	7717	GEOID	Dataset_OSGM15_Great_Britain
ETRS89_to_EVRF2007_Height_1_SK	110130	GEOID	Dataset_Slovakia_ETRS89h_to_EVRF2007
ETRS89_To_EVRF2007_Height_EGG2015	110082	GEOID	Dataset_EGG2015-qg_g10m15m
ETRS89_To_Lerwick_Height_2_OSGM15	7714	GEOID	Dataset_OSGM15_Great_Britain
ETRS89_To_LHN95_Height_CHGeo2004	110126	GEOID	Dataset_chgeo2004_ETRS
ETRS89_To_LN02_Height_CHGeo2004_Htrans_2	110156	GEOID	Dataset_chgeo2004_htrans_ETRS_corr
ETRS89_To_Malin_Head_Height_2_OSGM15	7959	GEOID	Dataset_OSGM15_Malin
ETRS89_To_Newlyn_Height_2_OSGM15	7711	GEOID	Dataset_OSGM15_Great_Britain
ETRS89_To_ODN_Offhore_Height_1_OSGM15	7713	GEOID	Dataset_OSGM15_Great_Britain
ETRS89_To_ODN_Orkney_Height_2_OSGM15	7712	GEOID	Dataset_OSGM15_Great_Britain
ETRS89_To_St_Marys_Height_2_OSGM15	7716	GEOID	Dataset_OSGM15_Great_Britain
ETRS89_To_Stornoway_Height_2_OSGM15	7715	GEOID	Dataset_OSGM15_Great_Britain
EVRF2007-PL_Height_To_EVRF2019_Height_1	9654	Vertical_Offset_	Dataset_pl07_2019z
		with_Grid	
EVRF2007-PL_Height_To_EVRF2019_Mean-Tide_Height_1	9655	Vertical_Offset_	Dataset_pl07_2019m
		with_Grid	
GDA2020_Height_To_AHD_Height_AUSGeoid2020_1	8451	GEOID	Dataset_AUSGeoid2020_windows_binary
GDA2020_To_AVWS_Height_2	9692	GEOID	Dataset_AGQG_20201120
GDA94_Height_To_AHD_Height_AUSGeoid09_49	5656	GEOID	Dataset_AUSGeoid09_GDA94_V1.01_DOV_windows
GDA94_Height_To_AHD_Tasmania_Height_AUSGeoid09_2	5657	GEOID	Dataset_AUSGeoid09_GDA94_V1.01_DOV_windows
Genoa_1942_Height_To_EVRF2019_Height_1	9900	Vertical_Offset_	Dataset_it_2019z
		with_Grid	
Genoa_1942_Height_To_EVRF2019_Mean-Tide_Height_1	9921	Vertical_Offset_	Dataset_it_2019m
		with_Grid	
GHA_Height_To_EVRF2000_Austria_Height_1	9275	Vertical_Offset_	Dataset_GV_HoehenGrid_V1
		with_Grid	
GHA_Height_To_EVRF2019_Height_2	9557	Vertical_Offset_	Dataset_at_2019z
		with_Grid	
GHA_Height_To_EVRF2019_Mean-Tide_Height_2	9558	Vertical_Offset_	Dataset_at_2019m
		with_Grid	
Gisborne_1926_Height_To_NZGD2000_Height_1	110067	GEOID	Dataset_gisborne_1926_to_nzgd2000
ITRF_2008_Height_To_CGVD2013(CGG2013a)_Height_2	9125	GEOID	Dataset_CGG2013ai08
ITRF_2008_Height_To_CGVD2013(CGG2013)_Height_1	9124	GEOID	Dataset_CGG2013i08
JGD_2000_To_JGD_2000_Vertical_Height_1	110059	GEOID	Dataset_JGEOID2008
JGD_2011_To_JGD_2011_Vertical_Height_1	110060	GEOID	Dataset_GSIGEOID2011

Vertical Transformation Name	WKID	Method	File Name
LAS07_Height_To_EVRF2019_Height_1	9667	Vertical_Offset_	Dataset_lt_2019z
		with_Grid	
LAS07_Height_To_EVRF2019_Mean-Tide_Height_2	9668	Vertical_Offset_	Dataset_lt_2019m
		with_Grid	
Latvia_2000_Height_To_EVRF2019_Height_1	9579	Vertical_Offset_	Dataset_lv_2019z
		with_Grid	
Latvia_2000_Height_To_EVRF2019_Mean-Tide_Height_1	9580	Vertical_Offset_	Dataset_lv_2019m
		with_Grid	
LHN95_Height_To_EVRF2019_Height_2	9559	Vertical_Offset_	Dataset_ch_2019z
		with_Grid	
LHN95_Height_To_EVRF2019_Mean-Tide_Height_2	9560	Vertical_Offset_	Dataset_ch_2019m
		with_Grid	
LKS_1992_To_Latvia_2000_Height_LV14	110152	GEOID	Dataset_LV14
LKS_1992_To_Latvia_2000_Height_RIGA20	110151	GEOID	Dataset_RIGA2
LKS_1994_To_LAS07_Height_LIT20G	110153	GEOID	Dataset_LIT20G
Lyttelton_1937_Height_To_NZGD2000_Height_1	110068	GEOID	Dataset_lyttelton_1937_to_nzgd2000
Moturiki_1953_Height_To_NZGD2000_Height_1	110069	GEOID	Dataset_moturiki_1953_to_nzgd2000
N2000_Height_To_EVRF2019_Height_1	9573	Vertical_Offset_	Dataset_fi_2019z
		with_Grid	
N2000_Height_To_EVRF2019_Mean-Tide_Height_1	9574	Vertical_Offset_	Dataset_fi_2019m
		with_Grid	
NAD_1983_2011_Height_To_NAVD88_CONUS_GEOID18_	9229	GEOID	Dataset_g2018u0
Height_3			
NAD_1983_2011_Height_To_NAVD88_Depth_Alaska_GEOID12B	110101	GEOID	Dataset_g2012ba0
NAD_1983_2011_Height_To_NAVD88_Depth_CONUS_GEOID12B	110100	GEOID	Dataset_g2012bu0
NAD_1983_2011_Height_To_NAVD88_Depth_CONUS_GEOID18	110108	GEOID	Dataset_g2018u0
NAD_1983_2011_Height_To_NAVD88_Depth_USFT_Alaska_	110106	GEOID	Dataset_g2012ba0
GEOID12B			
NAD_1983_2011_Height_To_NAVD88_Depth_USFT_CONUS_	110105	GEOID	Dataset_g2012bu0
GEOID12B NAD_1983_2011_Height_To_NAVD88_Depth_USFT_CONUS_	110110	GEOID	Dataset_g2018u0
GEOID18	110110	GEOID	Dataset_g201800
NAD_1983_2011_Height_To_NAVD88_Height_IFT_CONUS_G	110107	GEOID	Dataset_g2012bu0
EOID12B			
NAD_1983_2011_Height_To_NAVD88_Height_IFT_CONUS_G	110111	GEOID	Dataset_g2018u0
EOID18			
NAD_1983_2011_Height_To_NAVD88_Height_USFT_Alaska_	110104	GEOID	Dataset_g2012ba0
GEOID12B			

¹⁵⁴ Copyright @ 2012, 2015-2022 Esri

Vertical Transformation Name	WKID	Method	File Name
NAD_1983_2011_Height_To_NAVD88_Height_USFT_	110103	GEOID	Dataset_g2012bu0
CONUS_GEOID12B			
NAD_1983_2011_Height_To_NAVD88_Height_USFT_	110109	GEOID	Dataset_g2018u0
CONUS_GEOID18			
NAD_1983_2011_Height_To_PRVD02_GEOID18_Height_2	9230	GEOID	Dataset_g2018p0
NAD_1983_2011_To_NAVD88_Alaska_GEOID12B_Height	110001	GEOID	Dataset_g2012ba0
NAD_1983_2011_To_NAVD88_CONUS_GEOID12B_Height	110000	GEOID	Dataset_g2012bu0
NAD_1983_2011_To_PRVD02_GEOID12B_Height	110003	GEOID	Dataset_g2012bp0
NAD_1983_2011_To_VIVD09_GEOID12B_Height	110035	GEOID	Dataset_g2012bp0
NAD_1983_Height_To_NAVD88_Depth_Alaska_GEOID12B_H	110132	GEOID	Dataset_g2012ba0
eight			
NAD_1983_Height_To_NAVD88_Depth_CONUS_GEOID12B	110131	GEOID	Dataset_g2012bu0
NAD_1983_Height_To_NAVD88_Depth_Hawaii_GEOID12B_H	110133	GEOID	Dataset_g2012bh0
eight			
NAD_1983_Height_To_NAVD88_Depth_USFT_Alaska_	110137	GEOID	Dataset_g2012ba0
GEOID12B_Height			
NAD_1983_Height_To_NAVD88_Depth_USFT_CONUS_	110136	GEOID	Dataset_g2012bu0
GEOID12B			
NAD_1983_Height_To_NAVD88_Height_IFT_CONUS_	110138	GEOID	Dataset_g2012bu0
GEOID12B			
NAD_1983_Height_To_NAVD88_Height_USFT_Alaska_	110135	GEOID	Dataset_g2012ba0
GEOID12B_Height			
NAD_1983_Height_To_NAVD88_Height_USFT_CONUS_	110134	GEOID	Dataset_g2012bu0
GEOID12B	44000=	0=01=	
NAD_1983_MA11_To_GUVD04_GEOID12B_Height	110005	GEOID	Dataset_g2012bg0
NAD_1983_MA11_To_NMVD03_GEOID12B_Height	110036	GEOID	Dataset_g2012bg0
NAD_1983_PA11_Height_To_NAVD88_Depth_Hawaii_	110102	GEOID	Dataset_g2012bh0
GEOID12B	440004	OF OLD	D
NAD_1983_PA11_To_ASVD02_GEOID12B_Height	110004	GEOID	Dataset_g2012bs0
NAD_1983_PA11_To_NAVD88_Hawaii_GEOID12B_Height	110002	GEOID	Dataset_g2012bh0
NAD_1983_To_NAVD88_Alaska_GEOID12B_Height	110032	GEOID	Dataset_g2012ba0
NAD_1983_To_NAVD88_CONUS_GEOID12B_Height	110031	GEOID	Dataset_g2012bu0
NAD_1983_To_NAVD88_Hawaii_GEOID12B_Height	110033	GEOID	Dataset_g2012bh0
NAD_1983_To_PRVD02_GEOID12B_Height	110034	GEOID	Dataset_g2012bp0
NAD_1983_To_VIVD09_GEOID12B_Height	110006	GEOID	Dataset_g2012bp0
NAD83(CSRS)_epoch1997_Height_To_CGVD28_Height_HT2	110117	GEOID	Dataset_HT2_1997

Vertical Transformation Name	WKID	Method	File Name
NAD83(CSRS)_epoch2002_Height_To_CGVD28_Height_HT2	110116	GEOID	Dataset_HT2_2002v70
NAD83(CSRS)_epoch2010_Height_To_CGVD2013(CGG2013a)	110112	GEOID	Dataset_CGG2013an83
_Height			
NAD83(CSRS)_epoch2010_Height_To_CGVD2013(CGG2013)_	110113	GEOID	Dataset_CGG2013n83
Height			
NAD83(CSRS)_epoch2010_Height_To_CGVD28_Height_HT2	110115	GEOID	Dataset_HT2_2010v70
NAD83(CSRS)v6_Height_To_CGVD2013(CGG2013a)_Height_1	9247	GEOID	Dataset_CGG2013an83
NAD83(CSRS)v6_Height_To_CGVD2013(CGG2013)_Height_1	9246	GEOID	Dataset_CGG2013n83
NAD83(CSRS)v6_Height_To_CGVD28_Height_HT2	110114	GEOID	Dataset_HT2_2010v70
NAP_Height_To_EVRF2019_Height_1	9581	Vertical_Offset_	Dataset_nl_2019z
		with_Grid	
NAP_Height_To_EVRF2019_Mean-Tide_Height_1	9582	Vertical_Offset_	Dataset_nl_2019m
		with_Grid	
Napier_1962_Height_To_NZGD2000_Height_1	110070	GEOID	Dataset_napier_1962_to_nzgd2000
Nelson_1955_Height_To_NZGD2000_Height_1	110071	GEOID	Dataset_nelson_1955_to_nzgd2000
NGF_IGN69_Height_To_EVRF2019_Height_1	9575	Vertical_Offset_	Dataset_fr_2019z
		with_Grid	
NGF_IGN69_Height_To_EVRF2019_Mean-Tide_Height_1	9576	Vertical_Offset_	Dataset_fr_2019m
		with_Grid	
NGVD29_ht_(m)_To_NAVD88_ht_2011_ECW	110078	VERTCON	Dataset_vertconecw.94
NGVD29_ht_(m)_To_NAVD88_ht_NAD83_ECW	110077	VERTCON	Dataset_vertconecw.94
NGVD29_ht_(m)_To_NAVD88_ht_USFT_2011_ECW	110079	VERTCON	Dataset_vertconecw.94
NGVD29_ht_To_NAVD88_ht_IntlFt_2011_ECW	110081	VERTCON	Dataset_vertconecw.94
NGVD29_ht_To_NAVD88_ht_IntlFt_NAD83_ECW	110080	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_CORS96_ECW	110045	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_Depth_CORS96_ECW	110046	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_Depth_HARN_ECW	110042	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_Depth_NAD27_ECW	110057	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_Depth_NAD83_2011_ECW	110054	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_Depth_NAD83_ECW	110039	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_Depth_NSRS2007_ECW	110050	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_Depth_USFT_CORS96_ECW	110048	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_Depth_USFT_HARN_ECW	110044	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_Depth_USFT_NAD27_ECW	110038	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_Depth_USFT_NAD83_2011_ECW	110056	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_Depth_USFT_NAD83_ECW	110041	VERTCON	Dataset_vertconecw.94

Vertical Transformation Name	WKID	Method	File Name
NGVD29_To_NAVD88_Depth_USFT_NSRS2007_ECW	110052	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_HARN_Central	110016	VERTCON	Dataset_vertconc.94
NGVD29_To_NAVD88_HARN_East	110014	VERTCON	Dataset_vertcone.94
NGVD29_To_NAVD88_HARN_ECW	110015	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_HARN_West	110017	VERTCON	Dataset_vertconw.94
NGVD29_To_NAVD88_NAD27_1_West	5409	VERTCON	Dataset_vertconw.94
NGVD29_To_NAVD88_NAD27_2_Central	5410	VERTCON	Dataset_vertconc.94
NGVD29_To_NAVD88_NAD27_3_East	5411	VERTCON	Dataset_vertcone.94
NGVD29_To_NAVD88_NAD27_ECW	110009	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_NAD83_2011_ECW	110053	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_NAD83_Central	110012	VERTCON	Dataset_vertconc.94
NGVD29_To_NAVD88_NAD83_East	110010	VERTCON	Dataset_vertcone.94
NGVD29_To_NAVD88_NAD83_ECW	110011	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_NAD83_West	110013	VERTCON	Dataset_vertconw.94
NGVD29_To_NAVD88_NSRS2007_ECW	110049	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_USFT_CORS96_ECW	110047	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_USFT_HARN_ECW	110043	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_USFT_NAD27_ECW	110037	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_USFT_NAD83_2011_ECW	110055	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_USFT_NAD83_ECW	110040	VERTCON	Dataset_vertconecw.94
NGVD29_To_NAVD88_USFT_NSRS2007_ECW	110051	VERTCON	Dataset_vertconecw.94
NZGD2000_To_NZGD2016_Height_1	110062	GEOID	Dataset_New_Zealand_Quasigeoid_2016
NZVD2016_Height_To_Auckland_1946_Height_1	7860	GEOID	Dataset_auckland_1946_to_nzvd2016
NZVD2016_Height_To_Bluff_1955_Height_1	7861	GEOID	Dataset_bluff_1955_to_nzvd2016
NZVD2016_Height_To_Dunedin_1958_Height_1	7862	GEOID	Dataset_dunedin_1958_to_nzvd2016
NZVD2016_Height_To_Dunedin-Bluff_1960_Height_1	7863	GEOID	Dataset_Dunedin-Bluff_1960_to_nzvd2016
NZVD2016_Height_To_Gisborne_1926_Height_1	7864	GEOID	Dataset_gisborne_1926_to_nzvd2016
NZVD2016_Height_To_Lyttelton_1937_Height_1	7865	GEOID	Dataset_lyttelton_1937_to_nzvd2016
NZVD2016_Height_To_Moturiki_1953_Height_1	7866	GEOID	Dataset_moturiki_1953_to_nzvd2016
NZVD2016_Height_To_Napier_1962_Height_1	7867	GEOID	Dataset_napier_1962_to_nzvd2016
NZVD2016_Height_To_Nelson_1955_Height_1	7868	GEOID	Dataset_nelson_1955_to_nzvd2016
NZVD2016_Height_To_One_Tree_Point_1964_Height_1	7869	GEOID	Dataset_one_tree_point_1964_to_nzvd2016
NZVD2016_Height_To_Stewart_Island_1977_Height_1	7870	GEOID	Dataset_stewart_island_1977_to_nzvd2016
NZVD2016_Height_To_Taranaki_1970_Height_1	7871	GEOID	Dataset_taranaki_1970_to_nzvd2016
NZVD2016_Height_To_Wellington_1953_Height_1	7872	GEOID	Dataset_wellington_1953_to_nzvd2016

Vertical Transformation Name	WKID	Method	File Name
ODN_Height_To_EVRF2019_Height_2	9561	Vertical_Offset_	Dataset_gb_2019z
		with_Grid	
One_Tree_Point_1964_Height_To_NZGD2000_Height_1	110072	GEOID	Dataset_one_tree_point_1964_to_nzgd2000
Oostende_Height_To_EVRF2019_Height_2	9563	Vertical_Offset_	Dataset_be_2019z
		with_Grid	
Oostende_Height_To_EVRF2019_Mean-Tide_Height_2	9564	Vertical_Offset_	Dataset_be_2019m
		with_Grid	
POSGAR_2007_To_SRVN16_Height_1	9256	GEOID	Dataset_GEOIDE-Ar16
PTRA08_Height_To_Cais_da_Figueirinha-	110146	GEOID	Dataset_GeodAz2014
Angra_do_Heroismo_Height_GeodAz2014			
PTRA08_Height_To_Cais_da_Madalena_Height_GeodAz2014	110144	GEOID	Dataset_GeodAz2014
PTRA08_Height_To_Cais_das_Velas_Height_GeodAz2014	110142	GEOID	Dataset_GeodAz2014
PTRA08_Height_To_Cais_da_Vila_do_Porto_Height_	110147	GEOID	Dataset_GeodAz2014
GeodAz2014			
PTRA08_Height_To_Horta_Height_GeodAz2014	110143	GEOID	Dataset_GeodAz2014
PTRA08_Height_To_Ponta_Delgada_Height_GeodAz2014	110148	GEOID	Dataset_GeodAz2014
PTRA08_Height_To_Santa_Cruz_da_Graciosa_Height_	110145	GEOID	Dataset_GeodAz2014
GeodAz2014			
REGCAN95_Height_To_El_Hierro_Height_1	9421	GEOID	Dataset_EGM08_REDNAP_Canarias
REGCAN95_Height_To_Fuerteventura_Height_1	9416	GEOID	Dataset_EGM08_REDNAP_Canarias
REGCAN95_Height_To_Gran_Canaria_Height_1	9417	GEOID	Dataset_EGM08_REDNAP_Canarias
REGCAN95_Height_To_La_Gomera_Height_1	9419	GEOID	Dataset_EGM08_REDNAP_Canarias
REGCAN95_Height_To_Lanzarote_Height_1	9415	GEOID	Dataset_EGM08_REDNAP_Canarias
REGCAN95_Height_To_La_Palma_Height_1	9420	GEOID	Dataset_EGM08_REDNAP_Canarias
REGCAN95_Height_To_Tenerife_Height_1	9418	GEOID	Dataset_EGM08_REDNAP_Canarias
RGF_1993_Height_To_NGF-IGN69_Height_RAF18_3	110061	GEOID	Dataset_RAF18
RGF93_v2b_To_NGF-IGN69_Height_RAF20_5	9876	GEOID	Dataset_RAF20
RGF93_v2_To_NGF-IGN69_Height_RAF18_3	8885	GEOID	Dataset_RAF18
RGF93_v2_To_NGF-IGN78_Height_RAC09_2	8372	GEOID	Dataset_RAC09
RH2000_Height_To_EVRF2019_Height_1	9648	Vertical_Offset_	Dataset_se_2019z
		with_Grid	
RH2000_Height_To_EVRF2019_Mean-Tide_Height_1	9649	Vertical_Offset_	Dataset_se_2019m
		with_Grid	
Stewart_Island_1977_Height_To_NZGD2000_Height_1	110073	GEOID	Dataset_stewart_island_1977_to_nzgd2000
SVS2010_Height_To_EVRF2019_Height_2	9565	Vertical_Offset_	Dataset_si_2019z
		with_Grid	

Vertical Transformation Name	WKID	Method	File Name
SVS2010_Height_To_EVRF2019_Mean-Tide_Height_2	9566	Vertical_Offset_	Dataset_si_2019m
		with_Grid	
Taranaki_1970_Height_To_NZGD2000_Height_1	110074	GEOID	Dataset_taranaki_1970_to_nzgd2000
Trieste_Height_To_EVRF2019_Height_2	9567	Vertical_Offset_	Dataset_mk_2019z
		with_Grid	
Trieste_Height_To_EVRF2019_Height_3	9569	Vertical_Offset_	Dataset_ba_2019z
		with_Grid	
Trieste_Height_To_EVRF2019_Mean-Tide_Height_2	9568	Vertical_Offset_	Dataset_mk_2019m
		with_Grid	
Trieste_Height_To_EVRF2019_Mean-Tide_Height_3	9570	Vertical_Offset_	Dataset_ba_2019m
		with_Grid	
Wellington_1953_Height_To_NZGD2000_Height_1	110075	GEOID	Dataset_wellington_1953_to_nzgd2000
WGS_1984_To_EGM_1984_Geoid_1	110008	EGM84	Dataset_egm84.grd
WGS_1984_To_EGM_1984_Geoid_2	110085	EGM84_Natural_	Dataset_egm84.grd
		Spline	
WGS_1984_To_EGM_1996_Geoid_1	110007	EGM96	Dataset_egm96.grd
WGS_1984_To_EGM_1996_Geoid_2	110084	EGM96_Natural_	Dataset_egm96.grd
		Spline	
WGS_1984_To_LHN95_Height_CHGeo2004	110128	GEOID	Dataset_chgeo2004_ETRS
WGS_1984_To_LN02_Height_CHGeo2004_Htrans_2	110158	GEOID	Dataset_chgeo2004_htrans_ETRS_corr
WGS_1984_To_WGS_1984_EGM2008_1x1_Height	110018	EGM96	Dataset_egm2008-1.grd
WGS_1984_To_WGS_1984_EGM2008_2.5x2.5_Height	110019	EGM96	Dataset_egm2008-25.grd

Table 14: Vertical transformation methods

Vertical Method Name	WKID
EGM84	129861
EGM84_Natural_Spline	129961
EGM96	129661
EGM96_Natural_Spline	129761
GEOID	129665
VDATUM	129601
VERTCON	129658
Vertical_Offset	129616
Vertical_Offset_and_Slope	129657
Vertical_Offset_with_Grid	129617

Vertical Method Name	WKID
VTGridFile	129600
Zero_Tide_to_Mean_Tide_EVRF2019	129605

Table 15: Vertical transformations: parameters

Vertical Method Name	Parameter Name	Default Value	Array Position			
EGM84	Dataset_	0	15			
EGM84_Natural_Spline	Dataset_	0	15			
EGM96	Dataset_	0	15			
EGM96_Natural_Spline	Dataset_	0	15			
GEOID	Dataset_	0	15			
VDATUM	Dataset_	0	15			
VERTCON	Dataset_	0	15			
Vertical_Offset	Vertical_Offset	0	0			
Vertical_Offset_and_Slope	Vertical_Offset	0	0			
	Longitude_Of_Evaluation	0	2			
	Latitude_Of_Evaluation	0	6			
	Inclination_North	0	13			
	Inclination_East	0	14			
Vertical_Offset_with_Grid	Dataset_	0	15			
	T	T				
VTGridFile	Interpolation_Type	0	12			
	Dataset_	0	15			
		1				
Zero_Tide_to_Mean_Tide_EVRF2019						