

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

BELLINGSHAUSEN (ANTARCTICA TERR.) Altitude: 16 m.

Latitude: 62°12'S Longitude: 58°56'W
 Temperature observation period.: 1968-1988 (21)
 Rainfall observation period....: 1968-1990 (23)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	1.25	3.15	-0.75	0.00	0.00	89.8	170.13
Feb.	1.33	4.38	-1.48	0.00	0.00	97.4	137.32
Mar.	0.12	3.18	-2.68	0.00	0.00	95.9	37.22
Apr.	-1.82	4.93	-8.73	0.00	0.00	121.0	0.00
May.	-4.36	4.19	-13.04	0.00	0.00	97.8	0.00
Jun.	-6.00	2.45	-14.45	0.00	0.00	51.9	0.00
Jul.	-7.23	9.03	-22.83	0.00	0.00	50.6	0.00
Aug.	-6.95	3.70	-17.10	0.00	0.00	65.8	0.00
Sep.	-4.50	3.71	-12.86	0.00	0.00	76.5	0.00
Oct.	-2.65	1.81	-6.96	0.00	0.00	50.2	0.00
Nov.	-1.19	2.94	-5.19	0.00	0.00	109.5	0.00
Dec.	0.38	2.54	-1.69	0.00	0.00	68.0	98.77
Year	-2.63	3.83	-8.98	0.00	0.00	974	443.45

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	-164
Compensated thermicity index.....(Itc):	-164
Simple continentality index.....(Ic):	8.6
Diurnality index.....(Id):	31.9
Annual ombrothermic index.....(Io):	113.98
Monthly estival ombrothermic index.....(Ios1):	73.20
Bimonthly estival ombrothermic index.....(Ios2):	72.53
Threemonthly estival ombrothermic index.....(Ios3):	86.19
Fourmonthly estival ombrothermic index.....(Ios4):	206.03
Annual ombro-evaporation index.....(Ioe):	1.48
Annual positive temperature.....(Tp):	31
Annual negative temperature.....(Tn):	347
Estival temperature.....(Ts):	30
Positive precipitation.....(Pp):	351

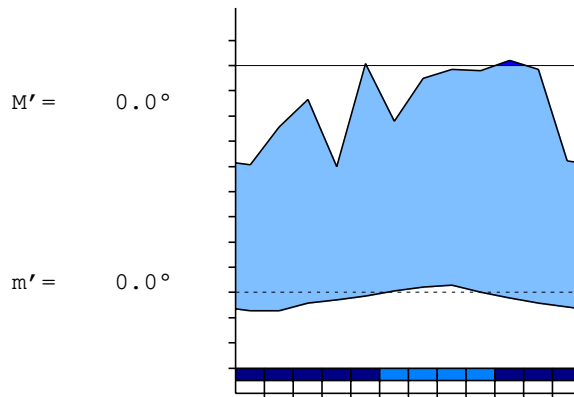
N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	4	0	0	0	8

Latitudinal Belt...: High subtemperate
 Continentality.....: Hyperoceanic - High Subhyperoceanic
 Bioclimate.....: Polar Suprapolar
 Bioclimatic Belt...: Upper Suprapolar High-Snowy

BELLINGSHAUSEN (ANTARCTICA TERR.)

16 m

P= 974 62° 12' S 58° 56' W 21/23 y.
 T= -2.6° Ic= 8.6 Tp= 31 Tn= 347
 m= -22.8° M= 9.0° Itc= -164 Io= 114.0



Polar Suprapolar
 Upper Suprapolar High-Snowy

WATER INDEX CARD BELLINGSHAUSEN (ANTARCTICA TERR.)

Altitude: 16 m. Latitude: 62° 12' S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	-7.2	0	51	0	100	0	0	51	56	*
Aug.	-6.9	0	66	0	100	0	0	66	61	*
Sep.	-4.5	0	76	0	100	0	0	76	69	*
Oct.	-2.7	0	50	0	100	0	0	50	59	*
Nov.	-1.2	0	110	0	100	0	0	110	84	*
Dec.	0.4	99	68	-31	69	99	0	0	42	-0.3
Jan.	1.3	170	90	-69	0	159	11	0	21	-0.4
Feb.	1.3	137	97	0	0	97	40	0	11	-0.2
Mar.	0.1	37	96	59	59	37	0	0	5	1.5
Apr.	-1.8	0	121	41	100	0	0	80	42	*
May.	-4.4	0	98	0	100	0	0	98	70	*
Jun.	-6.0	0	52	0	100	0	0	52	61	*
Year	-2.6	443	974	*	*	392	51	582	582	*

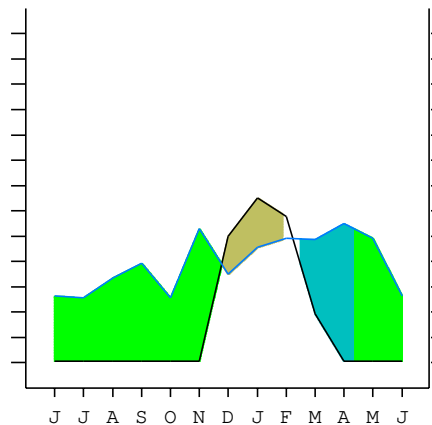
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

BELLINGSHAUSEN (ANTARCTICA TERR.)

62°12' S 58°56' W 16 m 21/23 y.

T= -2.6 Ic= 8.6 Polar Suprapolar
 m= -22.8 Tp= 31 Upper Suprapolar
 M= 9.0 Tn= 347 High-Snowy
 M' = 0.0 Itc= -164
 m' = 0.0 Io= 114.0
 P= 974 mm ———
 PE= 443 mm ———

Imbibing	13 Feb.
Saturation	11 Apr.
Reserve Use	24 Nov.
Deficit	26 Jan.



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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [A3a]
 + Type: A. Hyperoceanic
 + Subtype: 3. Subhyperoceanic
 + Variant: a. High
 Thermic types [C2.D11]
 + Latitudinal zone: C. Cold
 + Latitudinal belt: 2. High subtemperate
 + Thermic type: D. Gelid
 + Thermic subtype: 11. Ultragelid
 Bioclimatic types [E2.4.5]
 + Macrobioclimate: E. Polar
 + Bioclimate: 2. Suprapolar
 + Bioclimatic variant ..:
 + Thermic type.....: 4. Upper Suprapolar
 + Thermic subtype.....:
 + Ombrothermic type ...: 5. High-Snowy
 + Ombrothermic subtype :
 Bioclimatic Classification

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 582
 Coldest semester of the year.....(Psw): 393
 Warmest four months period of the year.....(Pcm1): 351
 Following warmest four months period.....(Pcm2): 321
 Positive precipitation dryest 3 months.....(Ppd): 0
 Positive precipitation dryest 2 months.....(Ppd2): 0
 Positive precipitation dryest 1 month.....(Ppd1): 0
 Positive precipitation warmest 3 months.....(Pps): 255
 Positive precipitation warmest 2 months.....(Pps2): 187
 Positive precipitation warmest 1 month.....(Pps1): 97
 Positive precipitation coldest 3 months.....(Ppw): 0
 Positive precipitation coldest 2 months.....(Ppw2): 0
 Positive precipitation coldest 1 month.....(Ppw1): 0

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	168	236	255	314

Seasonal rainfall rhythms: F > S > P > W

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 1.3
 Average coldest month [T].....(Tmin): -7.2
 Maximum temp. warmest month [M].....(Tmmax): 9.0
 Minimum temp. coldest month [m].....(Tmmin): -22.8
 Absolute Max.temp. warmest month [M'].....(Tamax): 0.0
 Absolute Min.temp. coldest month [m'].....(Tamin): 0.0
 First warmest contrasted month [M].....(Tcmax): 9.0 (7)
 First coldest contrasted month [m].....(Tcmin): -22.8 (7)
 Estival temperature.....(Ts): 30
 Positive temperature dryest 3 months.....(Tpd): 0
 Positive temperature dryest 2 months.....(Tpd2): 0
 Positive temperature dryest 1 month.....(Tpd1): 0
 Positive temperature warmest 3 months.....(Tps): 30
 Positive temperature warmest 2 months.....(Tps2): 26
 Positive temperature warmest 1 month.....(Tps1): 13
 Positive temperature coldest 3 months.....(Tpw): 0
 Positive temperature coldest 2 months.....(Tpw2): 0
 Positive temperature coldest 1 month.....(Tpw1): 0

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SEASONAL PARAMETERS

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Warmest semester...(Sms)	o	o	o	o							o	o
Dryest semester....(Smd)					o	o	o	o	o	o		
Warmest 4 months...(Cm1)	o	o	o									o
Dryest 4 months....(Cmd)							o	o	o	o		
Vegetation Activity(Pav)												
Ultragelid...[M' <=0] (Pf)												
Hypergelid...[M <=0] (Pf)												
Gelid.....[T <=0] (Pf)				o	o	o	o	o	o	o	o	
Subgelid.....[m <=0] (Pf)	o	o	o	o	o	o	o	o	o	o	o	o
Pregelid.....[m' <=0] (Pf)												
Agelid.....[m' > 0] (Pf)												
HiperAgelid..[all>0] (Pf)												

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.46
 Mediterranean index of January.....(Im1): 1.90
 Mediterranean index of January & February.....(Im2): 1.64
 Mediterranean index of December to February...(Im3): 1.59

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	680	898	974	959	*	*	*	*	*	*	*	*
Tp	4	13	13	1	*	*	*	*	*	*	*	*
Io (Iom)	179	71.8	73.2	799	*	*	*	*	*	*	*	*
Seasons	Summer			Autumn			Winter			Spring		
Pp(x10)/Tp	2551 / 30			*/*			*/*			*/*		
Io (Iot)	86.19			*			*			*		
Semesters	December-May						June-November					
Pp(x10)/Tp	*/*						*/*					
Io (Iosm)	*						*					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 3511/31=113.98 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	680	898	974	959	*	*	*	*	*	*	*	*
Tp [T*10]	4	13	13	1	*	*	*	*	*	*	*	*
Iom [Pp/Tp]	\$\$	\$\$	\$\$	\$\$!!	!!	!!	!!	!!	!!	!!	!!
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Summer			Autumn			Winter			Spring		
Pp / Tp	2551 / 30			* / *			* / *			* / *		
Iot [Pp/Tp]	\$\$			**			**			**		
Avs E[Avm<200]	***			***			***			***		

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 8.56
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: -3.95
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 1.28
 + Hyperoceanic (-20<CI<20)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 0.39
 + Hyperoceanic (0<CI<0.6)
 Rainfall Index of Lang (1925) [R=P/T]:-369.80
 +
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 132.30
 + Perhumid (Ia>60)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]:-221.62
 +
 I of Dantin & Revenga (1940) [DR=100*T/P]: -0.27
 +
 Aridity Index of UNEP [I=P/PE]: 2.20
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 15.03
 + Very low (K<60)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate: B. Cold and temperate cold
 + Region: 11. Psicroaxeric (Axeric cold)
 + Thermic type: 11. Ultragelid

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.69	0.76	0.79	1.12	0.89	0.44	0.43	0.58	0.68	0.43	0.97	0.53
T-E ratio	0.56	0.60	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
Precipitation-effectiveness: 83.04						Temperature-efficiency: 1.39						
Moisture Index [MI=100*(P-PE)/PE]: 119.74 + A.Extremely humid (MI>100) Index of dryness [DI=100*d/PE]: 11.50 + No deficit (0<DI<16.7) Index of humidity [HI=100*s/PE]: 131.24 + Strong surplus (20<HI) Potential Evapotranspiration PE: 443.45 + Second microthermic (427<PE<570)												

