

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

KOMATSU AB (JAPAN)

Altitude: 9 m.

Latitude: 36°23'N Longitude: 136°25'E

Temperature observation period.: 1957-1994 (38)

Rainfall observation period....: 1964-1994 (31)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	2.78	6.11	-0.56	21.11	-10.00	263.2	4.37
Feb.	3.06	6.67	-0.56	22.78	-8.89	193.0	4.91
Mar.	5.56	10.00	1.11	25.00	-6.11	169.7	14.23
Apr.	11.11	16.11	6.11	30.00	-1.67	155.7	41.74
May.	15.56	20.56	10.56	31.67	1.67	142.8	75.07
Jun.	20.00	24.44	15.56	33.33	6.67	185.7	108.29
Jul.	24.17	28.33	20.00	35.56	11.11	215.1	146.32
Aug.	25.84	30.56	21.11	36.67	14.44	160.3	150.90
Sep.	21.95	26.11	17.78	38.33	7.78	268.2	105.59
Oct.	16.11	20.56	11.67	31.67	2.22	215.1	63.31
Nov.	10.56	15.00	6.11	27.78	-0.56	276.1	30.30
Dec.	5.28	8.89	1.67	23.33	-6.11	341.6	10.76
Year	13.50	17.78	9.21	29.77	0.88	2587	755.79

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	190
Compensated thermicity index.....(Itc):	236
Simple continentality index.....(Ic):	23.1
Diurnality index.....(Id):	10.0
Annual ombrothermic index.....(Io):	15.97
Monthly estival ombrothermic index.....(Ios1):	6.20
Bimonthly estival ombrothermic index.....(Ios2):	7.51
Threemonthly estival ombrothermic index.....(Ios3):	8.01
Fourmonthly estival ombrothermic index.....(Ios4):	8.23
Annual ombro-evaporation index.....(Ioe):	0.85
Annual positive temperature.....(Tp):	1620
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	700
Positive precipitation.....(Pp):	2587

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	12	0	0	0	0

Latitudinal Belt...: Low eutemperate

Continentalty.....: Continental - Low Subcontinental

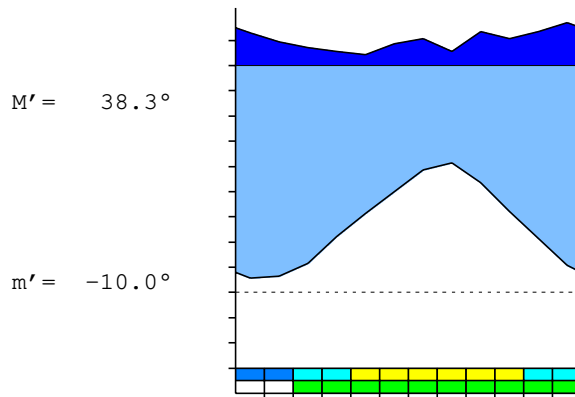
Bioclimate.....: TEMPERATE CONTINENTAL

Bioclimatic Belt...: UPPER MESOTEMPERATE LOW HYPERHUMID

KOMATSU AB (JAPAN)

9 m

P= 2587 36° 23'N 136° 25'E 38/31 y.
 T= 13.5° Ic= 23.1 Tp= 1620 Tn= 0
 m= -0.6° M= 6.1° Itc= 236 Io= 16.0



TEMPERATE CONTINENTAL
 UPPER MESOTEMPERATE LOW HYPERHUMID

WATER INDEX CARD

KOMATSU AB (JAPAN)

Altitude: 9 m.

Latitude: 36° 23'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	2.8	4	263	0	100	4	0	259	259	59.2
Feb.	3.1	5	193	0	100	5	0	188	223	38.3
Mar.	5.6	14	170	0	100	14	0	155	189	10.9
Apr.	11.1	42	156	0	100	42	0	114	152	2.7
May.	15.6	75	143	0	100	75	0	68	110	0.9
Jun.	20.0	108	186	0	100	108	0	77	94	0.7
Jul.	24.2	146	215	0	100	146	0	69	81	0.4
Aug.	25.8	151	160	0	100	151	0	9	45	0.0
Sep.	22.0	106	268	0	100	106	0	163	104	1.5
Oct.	16.1	63	215	0	100	63	0	152	128	2.3
Nov.	10.6	30	276	0	100	30	0	246	187	8.1
Dec.	5.3	11	342	0	100	11	0	331	259	30.7
Year	13.5	756	2587	*	*	756	0	1831	1831	*

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

KOMATSU AB (JAPAN)

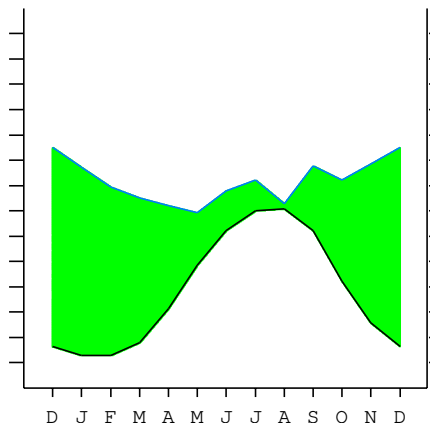
36°23'N 136°25'E

9 m 38/31 y.

T= 13.5 Ic= 23.1 TEMPERATE CONTINENTAL
 m= -0.6 Tp= 1620 UPPER MESOTEMPERATE
 M= 6.1 Tn= 0 LOW HYPERHUMID
 M' = 38.3 Itc= 236
 m' = -10.0 Io= 16.0
 P= 2587 mm ———
 PE= 756 mm ———

Imbibing	
Saturation	
Reserve Use	
Deficit	

All over the year,
 there is no hydric deficit



KOMATSU AB (JAPAN)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [C2a]
 + Type: C. Continental
 + Subtype: 2. Subcontinental
 + Variant: a. Low

Thermic types [B1.B4]
 + Latitudinal zone: B. Temperate
 + Latitudinal belt: 1. Low eutemperate
 + Thermic type: B. Temperate
 + Thermic subtype: 4. Temperate

Bioclimatic types [C2.3a.8b]
 + Macrobioclimate: C. TEMPERATE
 + Bioclimate: 2. CONTINENTAL
 + Bioclimatic variant .:
 + Thermic type.....: 3. MESOTEMPERATE
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 8. HYPERHUMID
 + Ombrothermic subtype : b. LOW

Bioclimatic Classification: Teoc.Mte.Hhu

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 1187
 Coldest semester of the year.....(Psw): 1399
 Warmest four months period of the year.....(Pcm1): 829
 Following warmest four months period.....(Pcm2): 1096
 Positive precipitation dryest 3 months.....(Ppd): 468
 Positive precipitation dryest 2 months.....(Ppd2): 299
 Positive precipitation dryest 1 month.....(Ppd1): 143
 Positive precipitation warmest 3 months.....(Pps): 644
 Positive precipitation warmest 2 months.....(Pps2): 375
 Positive precipitation warmest 1 month.....(Pps1): 160
 Positive precipitation coldest 3 months.....(Ppw): 798
 Positive precipitation coldest 2 months.....(Ppw2): 456
 Positive precipitation coldest 1 month.....(Ppw1): 263

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	797	468	561	759

Seasonal rainfall rhythms: W > F > S > P

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 25.8
 Average coldest month [T].....(Tmin): 2.8
 Maximum temp. warmest month [M].....(Tmmax): 30.6
 Minimum temp. coldest month [m].....(Tmmin): -0.6
 Absolute Max.temp. warmest month [M'].....(Tamax): 38.3
 Absolute Min.temp. coldest month [m'].....(Tamin): -10.0
 First warmest contrasted month [M].....(Tcmax): 16.1 (4)
 First coldest contrasted month [m].....(Tcmin): 6.1 (4)
 Estival temperature.....(Ts): 700
 Positive temperature dryest 3 months.....(Tpd): 322
 Positive temperature dryest 2 months.....(Tpd2): 267
 Positive temperature dryest 1 month.....(Tpd1): 156
 Positive temperature warmest 3 months.....(Tps): 720
 Positive temperature warmest 2 months.....(Tps2): 500
 Positive temperature warmest 1 month.....(Tps1): 258
 Positive temperature coldest 3 months.....(Tpw): 111
 Positive temperature coldest 2 months.....(Tpw2): 58
 Positive temperature coldest 1 month.....(Tpw1): 28

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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)			o	o	o	o	o	o	o	o	o	o
Ultragelid...[M' <=0] (Pf)												
Hypergelid...[M <=0] (Pf)												
Gelid.....[T <=0] (Pf)												
Subgelid.....[m <=0] (Pf)	o	o										
Pregelid.....[m' <=0] (Pf)	o	o	o	o							o	o
Agelid.....[m' > 0] (Pf)					o	o	o	o	o	o		
HiperAgelid..[all>0] (Pf)					o	o	o	o	o	o		

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.29
 Mediterranean index of July.[PE/P].....(Im1): 0.68
 Mediterranean index of July & August.....(Im2): 0.79
 Mediterranean index of June, July & August....(Im3): 0.72

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	3416	2632	1930	1697	1557	1428	1857	2151	1603	2682	2151	2761
Tp	53	28	31	56	111	156	200	242	258	220	161	106
Io (Iom)	64.7	94.7	63.1	30.5	14.0	9.18	9.28	8.90	6.20	12.2	13.4	26.1
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	7978 / 111			4682 / 322			5611 / 700			7594 / 486		
Io (Iot)	71.74			14.53			8.015			15.62		
Semesters	December-May						June-November					
Pp(x10)/Tp	12660 / 434						13205 / 1186					
Io (Iosm)	29.20						11.13					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 25865/1620=15.97 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	3416	2632	1930	1697	1557	1428	1857	2151	1603	2682	2151	2761
Tp [T*10]	53	28	31	56	111	156	200	242	258	220	161	106
Iom [Pp/Tp]	\$\$	\$\$	\$\$	\$\$	\$\$	918	928	890	620	\$\$	\$\$	\$\$
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	7978 / 111			4682 / 322			5611 / 700			7594 / 486		
Iot [Pp/Tp]	\$\$			1453			801			1562		
Avs E[Avm<200]	***			***			***			***		

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 23.06
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 45.69
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 40.15
 + Subcontinental (40<CI<60)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 1.76
 + Continental (1.7<CI<2.3)
 Rainfall Index of Lang (1925) [R=P/T]: 191.62
 + Humid (R>160)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 110.07
 + Perhumid (Ia>60)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 277.05
 + Humid (Q>90)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 0.52
 + Humid (2>DR>0)
 Aridity Index of UNEP [I=P/PE]: 3.42
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 45.12
 + Very low (K<60)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate: A. Warm and temperate warm
 + Region: 7. Mesoaxeric (Axic temperate)
 + Thermic type: 4. Mesothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	2.14	1.50	1.18	0.88	0.70	0.83	0.88	0.61	1.19	1.08	1.69	2.59
T-E ratio	1.25	1.38	2.50	5.00	7.00	9.00	10.88	11.63	9.88	7.25	4.75	2.38
Precipitation-effectiveness: 152.66						Temperature-efficiency: 72.89						
Moisture Index [MI=100*(P-PE)/PE]: 242.22 + A.Extremely humid (MI>100)												
Index of dryness [DI=100*d/PE]: 0.00 + No deficit (0<DI<16.7)												
Index of humidity [HI=100*s/PE]: 242.22 + Strong surplus (20<HI)												
Potential Evapotranspiration PE: 755.79 + Second mesothermic (712<PE<855)												

