

## DATA SET DESCRIPTION

### Historical monthly cooling degree hours for Germany, quality control not completed yet

#### Version v19.3

**Cite data set as:** DWD Climate Data Center (CDC): Historical monthly cooling degree hours for Germany, quality control not completed yet, version v19.3, last accessed: <date>.

#### INTENT OF THE DATASET

This document describes the freely available monthly cooling degree hours referring to the reserved accumulated temperature differences of ISO 15927, patr 6; calculated from station data (hourly air temperature) of the DWD Climate Data Center(CDC). Only hours with positive temperature differences between the air temperature and the reference temperature are counted. Only stations with the complete set of hourly air temperature data are taken into account. The reference temperatures 13, 16, and 18 degree Celsius are considered (separated directories). The used data to calculate the cooling degree hours in the "historical" directory have the complete quality control.

#### POINT OF CONTACT

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#### DATA DESCRIPTION

<b>Spatial coverage</b>	stations in Germany		
<b>Temporal coverage</b>	2010-01-01 until - 2018-12-31		
<b>Temporal resolution</b>	monthly		
<b>Format(s)</b>	Three file per month (different Reference temperature: 13°C, 16°C,18°C), each row corresponds to one station.		
<b>Units</b>	The parameters of the degree day list:		
	ID	Station ID	
	geogr. Breite	latitude	degree
	geogr. Laenge	longitude	degree
	Station	name of the station	
	Datum	Year and month	yyyymm
	Anzahl Stunden	number or hours in the month of question	hour
	Anzahl Kühlstunden	number of hours with positive temperatur differences between air temperature and reference temperature, cooling hour	hour
	Kühlgradstunden	accumulated hourly temperature differences between air temperature and reference temperature	Kelvin * day

Anzahl Kühltag                                number of days with at least one day  
  cooling hour

**Uncertainties**                           The stations are established and operated according to WMO guidelines.

## DATA ORIGIN

This climate data are from the station network of DWD, operationally collected in the central MIRAKEL data base and archived, see Behrendt et al., 2011, and Kaspar et al., 2013. For details on current measurement and observation procedures see VuB 3 Beobachterhandbuch (DWD, 2014a), VuB 3 Technikerhandbuch (DWD, 2014b) and VuB 2 Wetterschlüsselhandbuch (DWD, 2013).

## VALIDATION AND UNCERTAINTY ESTIMATE

The quality of the monthly degree hours depends on the quality of hourly values of air temperature.

## CONSIDERATIONS FOR APPLICATIONS

Monthly cooling degree hours are provided for reference temperatures of 13, 16 and 18 degree Celsius.

## REFERENCES

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Spengler, R.: The new Quality Control- and Monitoring System of the Deutscher Wetterdienst. Proceedings of the WMO Technical Conference on Meteorological and Environmental Instruments and Methods of Observation, Bratislava, 2002.

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## **REVISION HISTORY**

The data in this directory are updated monthly. This document is maintained by DWD Regional Climate Office Essen, last edited on 2020-04-17.