

2016 Power Dissipated by the Cooling Towers

The cooling circuits at CERN use evaporative open cooling towers to discharge into the atmosphere the heat removed from equipment in the accelerators and in the experiments.

The Cooling Networks

Cooling networks at CERN are generally dedicated to one specific accelerator complex; the size and the number of cooling towers per complex depend on the amount of cooling power required.

The cooling towers at CERN are:

LHC	one cooling tower for each of the LHC Points 2,6, and 8, one in Point 1 for ATLAS, one in Point 5 for CMS and an additional tower in Point 18
SPS	one cooling tower in the proximity of BA6
North Area	one cooling tower on the Prévessin site
PS and the Meyrin Site	14 cooling towers are installed on the Meyrin site: they are dedicated to the PS complex and some specific equipment (e.g. POPS).

The following tables list the thermal power emissions via the cooling towers during 2016. The values have been calculated from data recorded using on-line monitoring systems as well as from manually recorded data.

1. TOTAL LHC	532
LHC Point 1	62
LHC Point 18	6
LHC Point 2	97
LHC Point 4	117
LHC Point 5	35
LHC Point 6	75
LHC Point 8	140
2. SPS	176
3. North Area	121
4. TOTAL PS – Meyrin site	73.35
Building 378	2.4
Building 201	4.3
AD	5.9
LEIR (only FQSTR-00018)	3.5
PSB (demineralized water)	15
PSB (chilled water)	7
PS complex (main magnet and central building)	12.5
PS complex (chilled water)	6.75
POPS	1.3
EAST Area	1.3
Isolde	3.2
CTF3 (LPI General)	7.1
CTF3 (LIL ventilation)	3.1
Total CERN	902.35