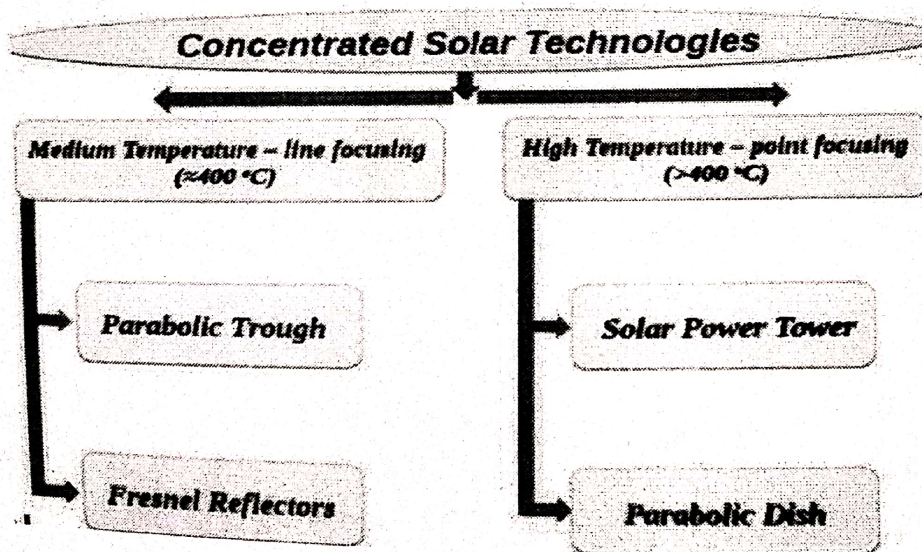
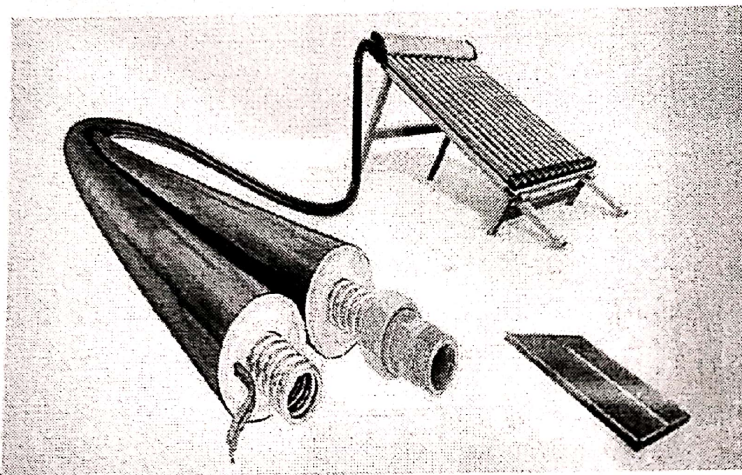


Non-Concentrated :

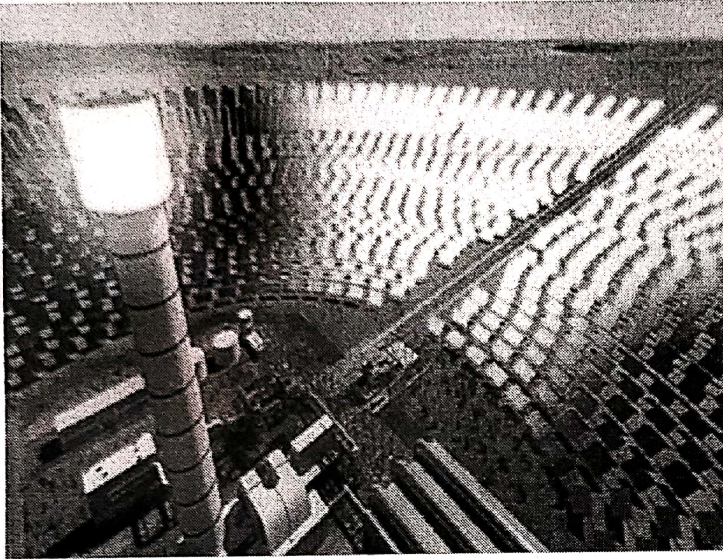
A solar thermal collector collects heat by absorbing sunlight. The term "solar collector" commonly refers to a device for solar hot water heating. In non-concentrating collectors, the aperture area (i.e., the area that receives the solar radiation) is roughly the same as the absorber area (i.e., the area absorbing the radiation). This type has no extra parts except the collector itself.

They are typically used in residential and commercial buildings for space heating

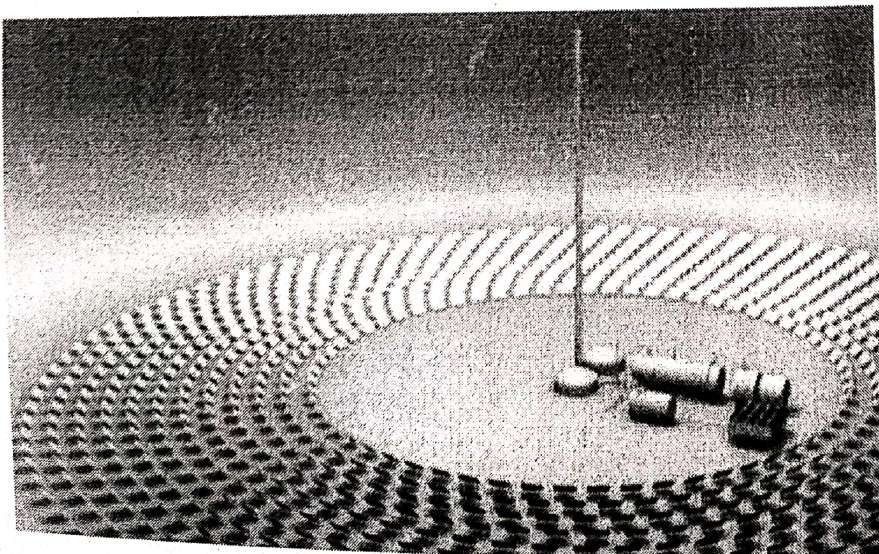


Solar Power Tower :

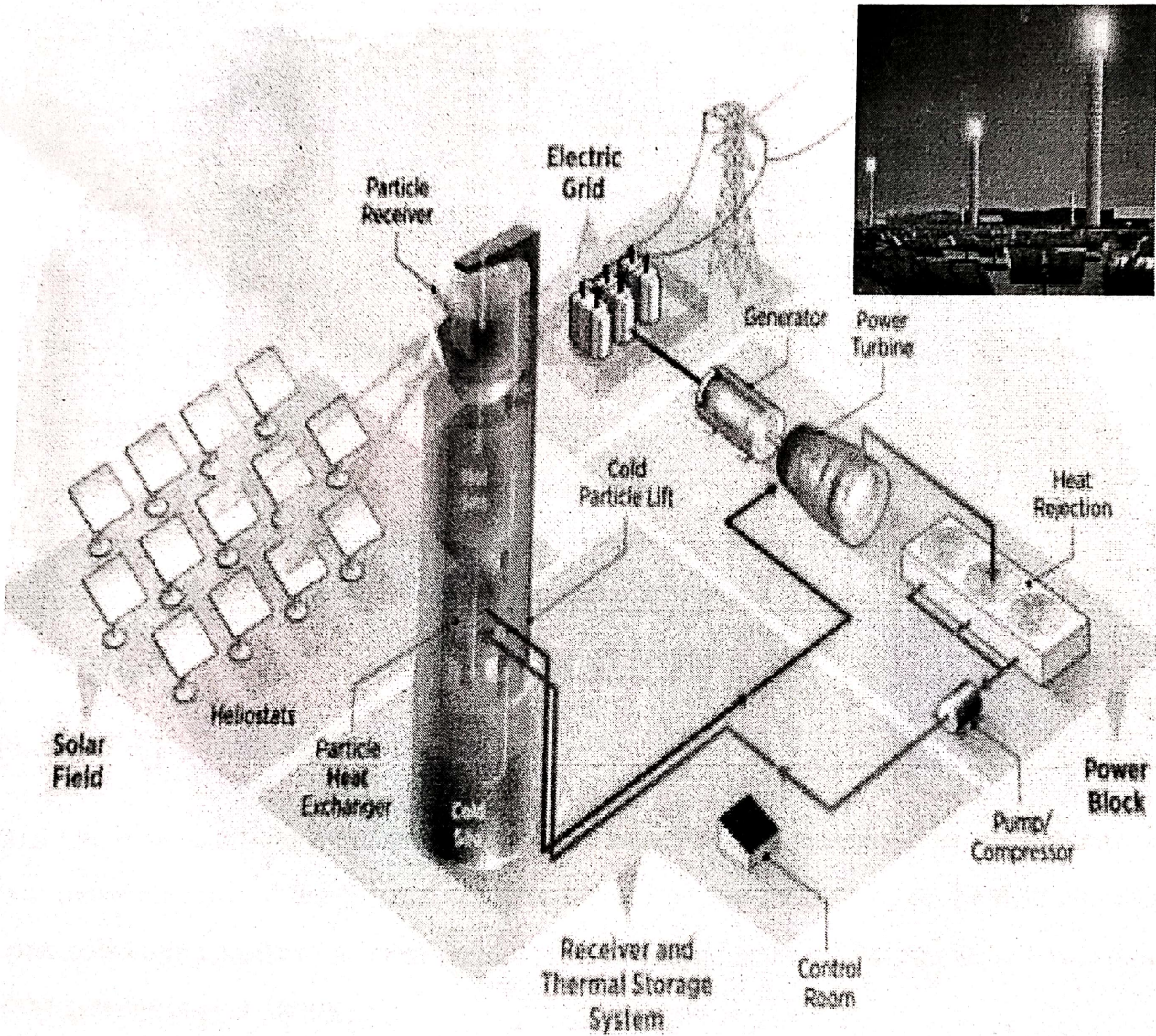
The solar power tower, also known as 'central tower' power plants or 'heliostat' power plants or power towers. It is a type of solar furnace using a tower to receive the focused sunlight. It uses an array of flat, movable mirrors to focus the sun's rays upon a collector tower (the target). Concentrated solar thermal is seen as one viable solution for renewable, pollution free energy. Early designs used these focused rays to heat water.



And used the resulting steam to power a turbine. Never designs using liquid sodium have been demonstrated, and systems using molten salts. These working fluids have high heat capacity. can be used to store the energy before using it to boil water to drive turbines. These designs also allow power to be generated when the sun is not shining. Generally, installations use from 150 hectares .



Solar Power Tower Unit:



Solar Power Tower:

Examples of solar power towers :

Power plants	Installed maximum capacity (MW)	Yearly total energy production (GWh)	Country	Developer/Owner	Completed
Crescent Dunes Solar Energy Project	110	500	United States	Solar Reserve	2015
Gemasolar	17	100	Spain	Sener	2011
Greenway CSP Mersin Solar Tower Plant	5		Turkey	Greenway CSP	2013
Ivanpah Solar Power Facility	392	650	United States	Bright Source Energy	2013
Jülich Solar Tower	1.5		Germany	DLR (German Aerospace Center)	2008
Khi Solar One	50	180	South Africa	Abengoa	2016
National Solar Thermal Test Facility	1 (5 - 6 MWt)		United States	U.S. Department of Energy	1978
PS10 solar power tower	11	24	Spain	Abengoa	2006
PS20 solar power tower	20	44	Spain	Abengoa	2009
Sierra Sun Tower	5		United States	eSolar	2009

Parabolic Dish Solar Concentrated :

Parabolic-dish solar concentrators are two-axis solar tracking systems .That concentrate the solar radiations toward the thermal receiver located on the focal point of the dish collector. These collectors consist of a set of parabolic dish-shaped mirrors.The operating temperature of the systems is over 1800K.