DRY COOLERS

TECHNICAL DESCRIPTION

Dry coolers are used to cool down the cycling fluid by using the ambient air conditions. They are designed according to the vertical & horizantal air flow
Standard production of GEMAK; Ø5/8" copper tubes aluminium fins (staggered), galvanized steel (corrugated) steel collector.
Upon to the customer request,they have been produced by epoxy coated fins, casing structure from stainless steel or from electrostatic dry powder and from copper collector.
Ø630 mm - Ø800 mm fans are recommended for our standard production.
All models are produced suitable for the fixation of the vertical (horizontal type, Y)& horizontal (vertical type, D) air flow.

Catalog Capacities
30°C air flow inlet
45°C/40°C flow inlet - outlet temperature
%35 ethylene glycolled water
0 m altitude
under the conditions of.

Selection of the dry cooler; even if the conditions are matching directly with the capacity standards of the catalog then directly select the dry cooler from the catalog.
Even if it isn't matching then use the formule; $Q_n = Q x f_1 x f_2 x f_3$

Nominal Capacity	Q_n
Requested Capacity	Q
Heat Factor	f_1
Flow mix. Factor	f_2
Altitude Factor	f_3

TABLE - 1 HEAT FACTOR (f_1)

Flow inlet-outlet temperature(°C)	Air flow inlet (°C)				
	20	25	30	35	40
40,0 - 35,0	0,70	1,0	1,76	–	–
42,5 - 37,5	0,62	0,83	1,26	2,85	–
45,0 - 40,0	0,55	0,70	1,0	1,76	–
47,5 - 42,5	0,51	0,62	0,83	1,26	2,85
50,0 - 45,0	–	0,55	0,70	1,0	1,76

TABLE - 2 Flow Mix. Factor

Ethylene Glycolled Mixture Propartion	%0 (Su)	%15	%25	%35	%50
f_2	0,955	0,970	0,985	1,00	1,045

TABLE - 3 Altitude Factor

$h_{(m)}$	0	500	1000	1500	2000	2500
f_3	1,00	1,04	1,07	1,11	1,16	1,21

Sample Selection
Requested Cap. :110 Kw
Air Flow Inlet Temp. :35°C
Flow Inlet / Outlet Temp. :45°/40°C
Altitude :1000 m
Flow :%35 ethylene glycolled water

$Q_n = Q x f_1 x f_2 x f_3$
Q_n=110x1,76x1,0x1,07 =207,1 kw
Selected Dry Coolers GKS Y/D 80.4.1-1621