

LAYOUT GUIDELINES

For stainless steel
evaporative condenser



- *Single unit type*
- *Multiple units type*
- *Foundation*

Single unit Installation

Effective operation of Evaporative Condenser deals with installation. The appropriate are of installation should be considered in terms of air ventilation. Therefore, this guideline provides the recommendations for the consideration of area installation in order to gain the most effective operation.

The priority of area consideration is the distance between machine and wind barrier or surrounded constructions. Top or fan funnel of Evaporative Condenser should be installed higher than or equal to the surrounded constructions such as wall, building, or any other constructions. If the top or fan funnel of Evaporative Condenser was installed below such the constructions (as depicted in figure 1), air ventilation of heat transfer was not work properly. This incorrect installation may cause flow back of hot air or discharge air into the machine and reduces the effectiveness of the operation. Furthermore, both machine and surrounded construction will be damaged.

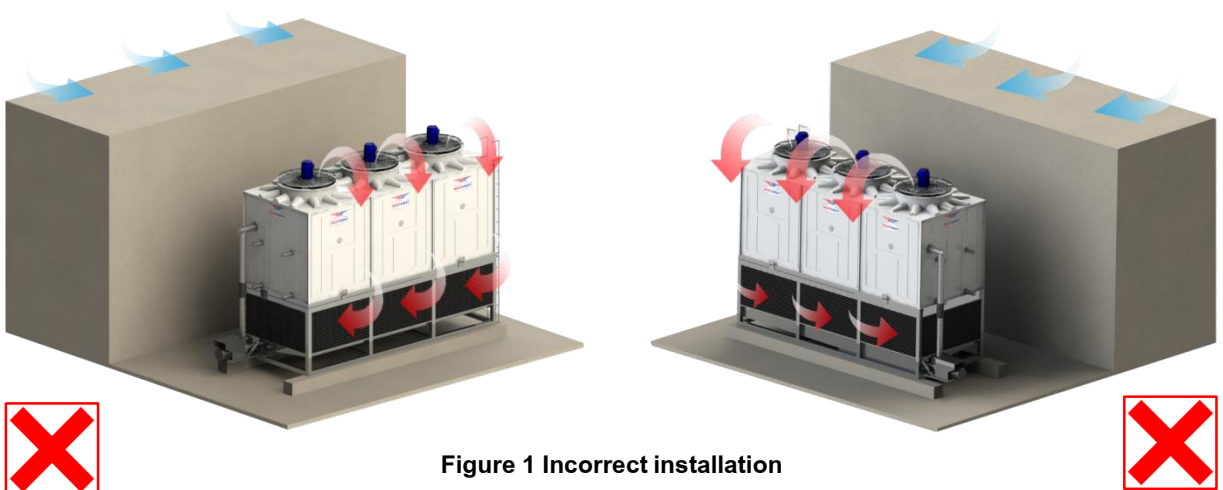


Figure 1 Incorrect installation

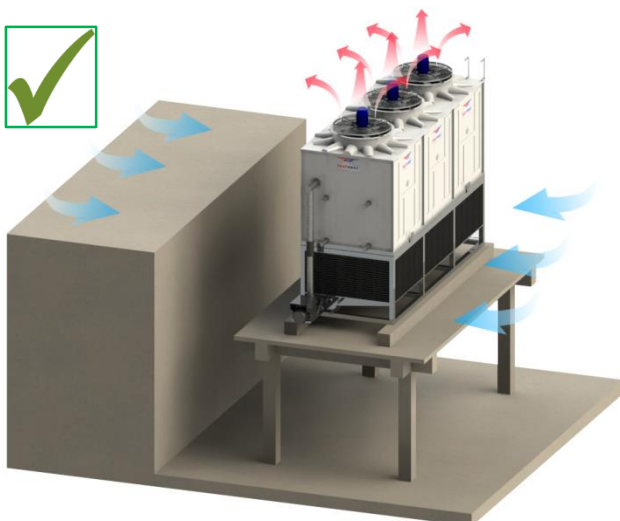


Figure 2 Correct installation

All of those problems can be solved by building concrete base for installation in order to lift the location of fan funnel higher than surrounded constructions as depicted in figure 2.

This guideline provides the recommended distance between the machine and barrier that will be advantaged for the design of installation area and layout for users.

Single unit Installation

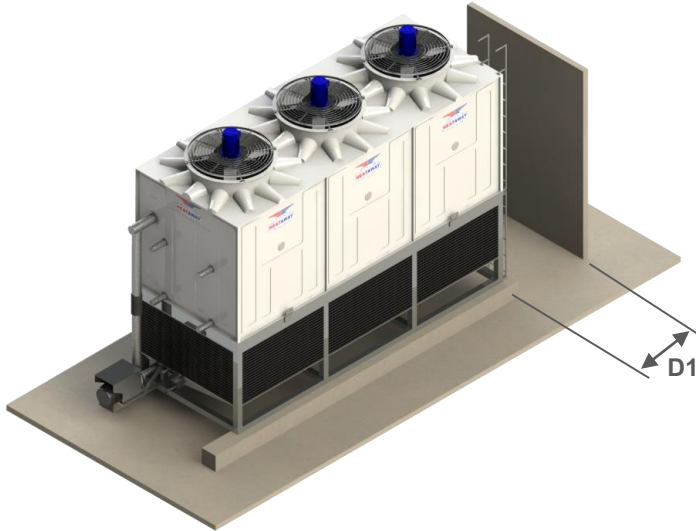


Figure 3

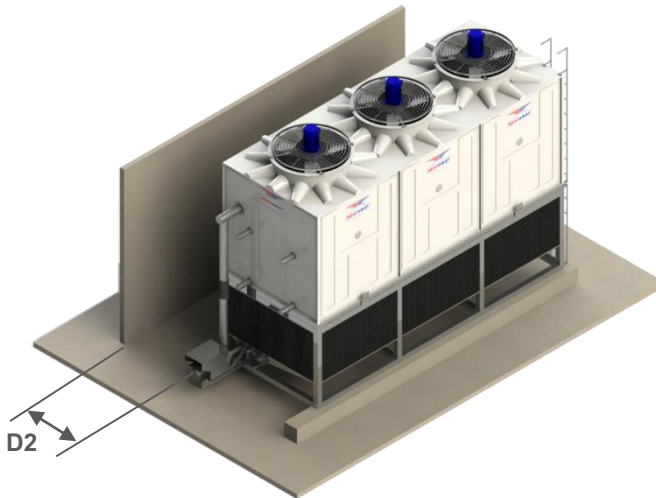


Figure 4

Table 1 Distance between the barrier and the machine

Model ECS and ECF	Distance between the barrier and the machine	
	D1	D2
0175 N to 1500 R	1.0 m	1.0 m
1700 W to 3900 W	1.2 m	1.2 m

Recommendations for installation manner

Single unit Installation

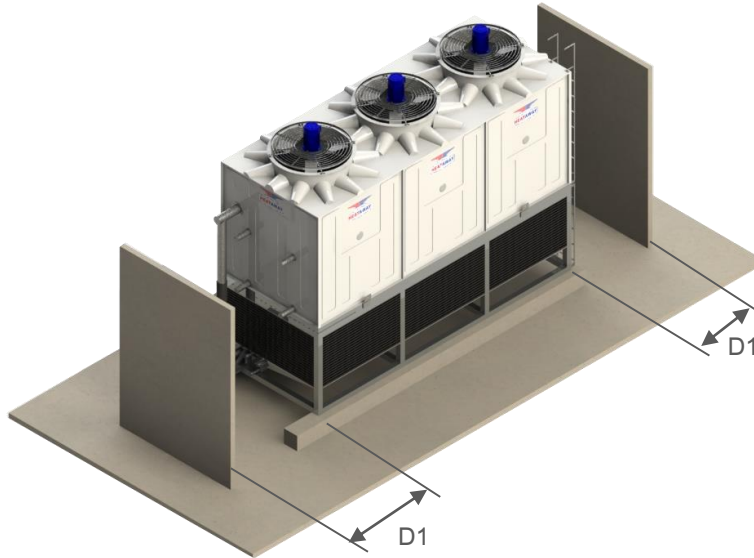


Figure 5

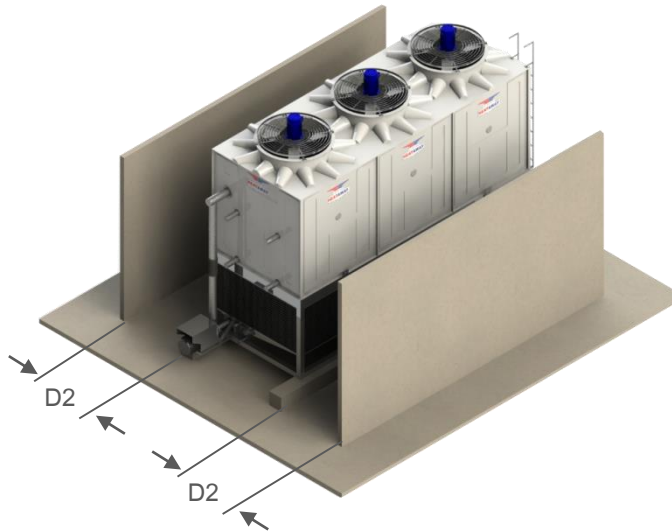


Figure 6

Table 2 Distance between the barrier and the machine

Model ECS and ECF	Distance between the barrier and the machine	
	D1	D2
0175 N to 1500 R	1.0 m	1.0 m
1700 W to 3900 W	1.2 m	1.2 m

Multiple units Installation

HEATAWAY evaporative condenser is Induced Draft type which was designed for air flowing in order to transfer heat from all sides. If the machine was installed or placed close to the wall or any constructions, the air ventilation will not work properly in order to transfer the heat. Therefore, the space of installation is necessary for air flowing into the machine. Moreover, the important factor which should be considered is hot air that discharged from the machine would not flow back to the machine.

If there are more than one Evaporative Condensers on the same area, the priority is air ventilation because there is various size of installation area.

HEATAWAY CO., LTD. issues the recommendations in each case of installation area design for users. The recommendations for space or distance between the machine in each case in order to gain the most effective of air ventilation and protect the waste air flowing back into the machine are provided. Furthermore, the recommended space or distance is considered with tube system installation and future maintenance cost as well.

The recommendations for space or distance will be considered based on number of surrounded constructions and number of installed machine. Therefore, the information from Table 3 to Table 5 exhibits the details of distance. The company also designs installation layouts for the users to benefit the design of installation area.

Multiple units Installation

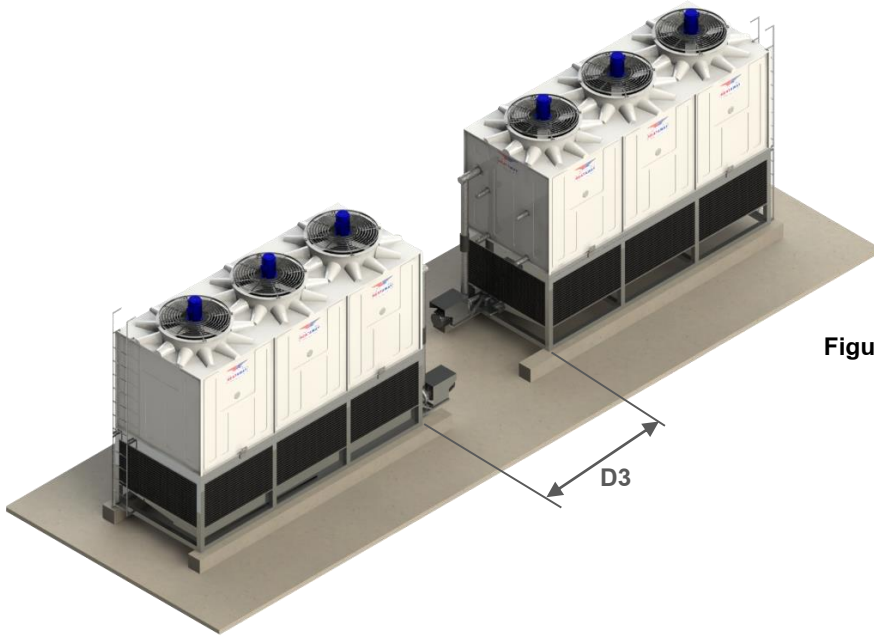


Figure 7

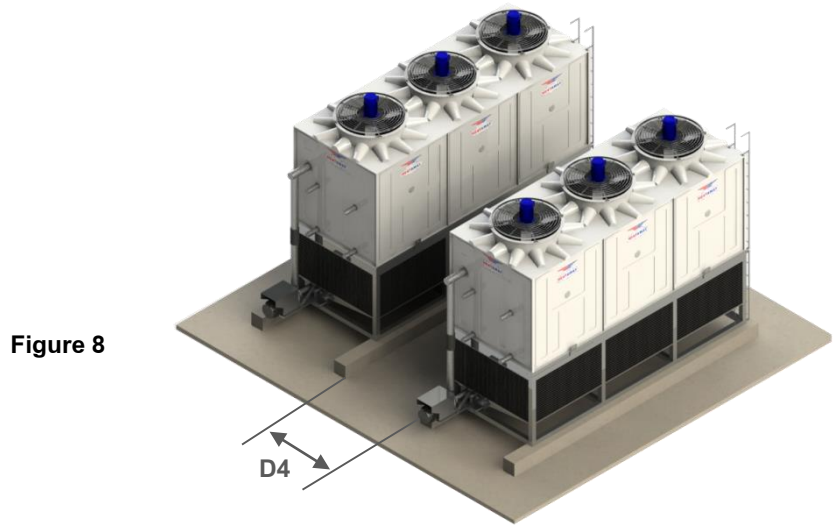


Figure 8

Table 3 Distance between the barrier and the machine

Model ECS and ECF	Distance between the barrier and the machine	
	D3 (series type)	D4 (parallel type)
0175 N to 0680 R	1.8 m	1.8 m
0700 N to 1500 R	2.0 m	2.0 m
1700 W to 3900 W	2.2 m	2.2 m

Multiple units Installation

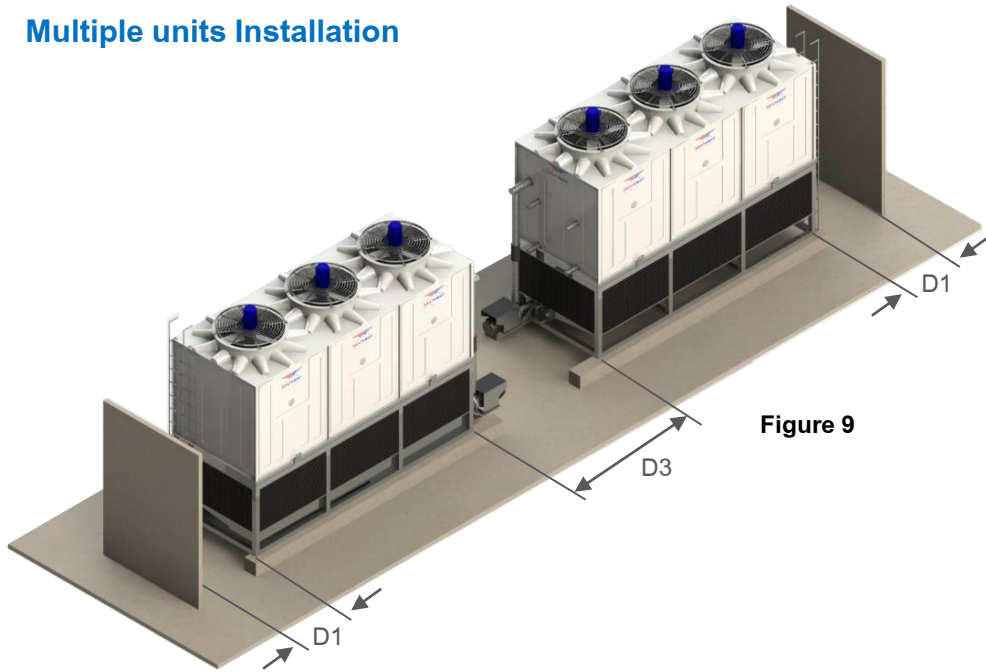


Figure 9

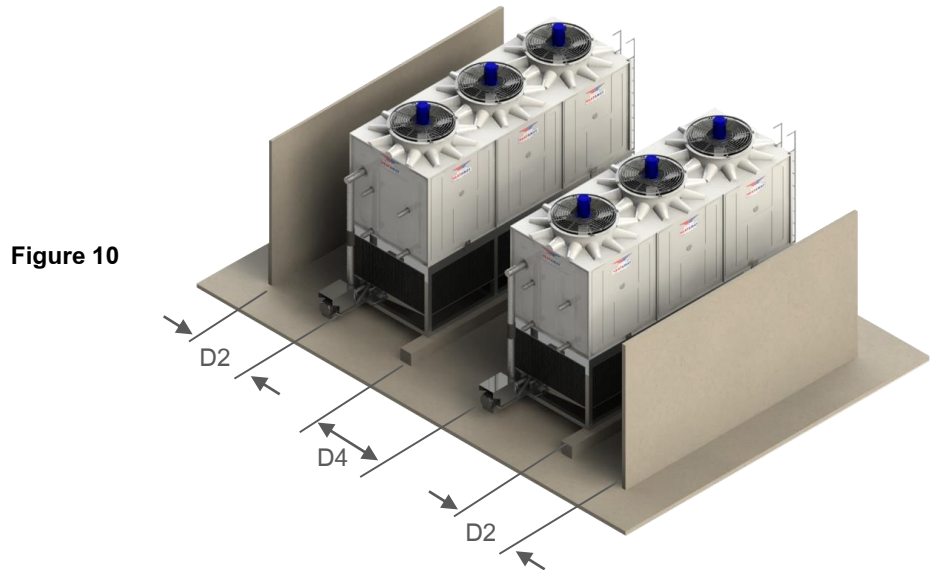


Figure 10

Table 4 Distance between the barrier and the machine

Model ECS and ECF	Distance between the barrier and the machine			
	D1	D2	D3	D4
0175 N to 0680 R	1.0 m	1.0 m	1.8 m	1.8 m
0700 N to 1500 R	1.0 m	1.0 m	2.0 m	2.0 m
1700 W to 3900 W	1.2 m	1.2 m	2.2 m	2.2 m

Recommendations for installation manner

Multiple units Installation

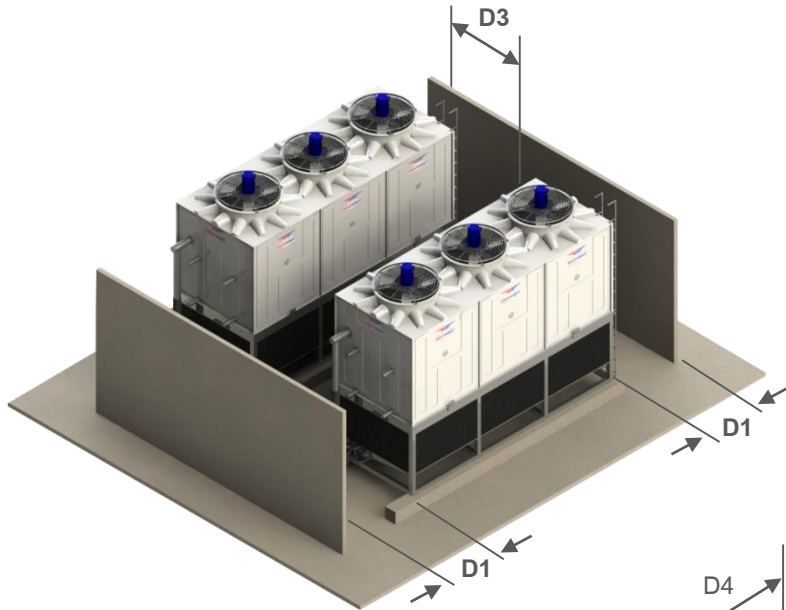


Figure 11

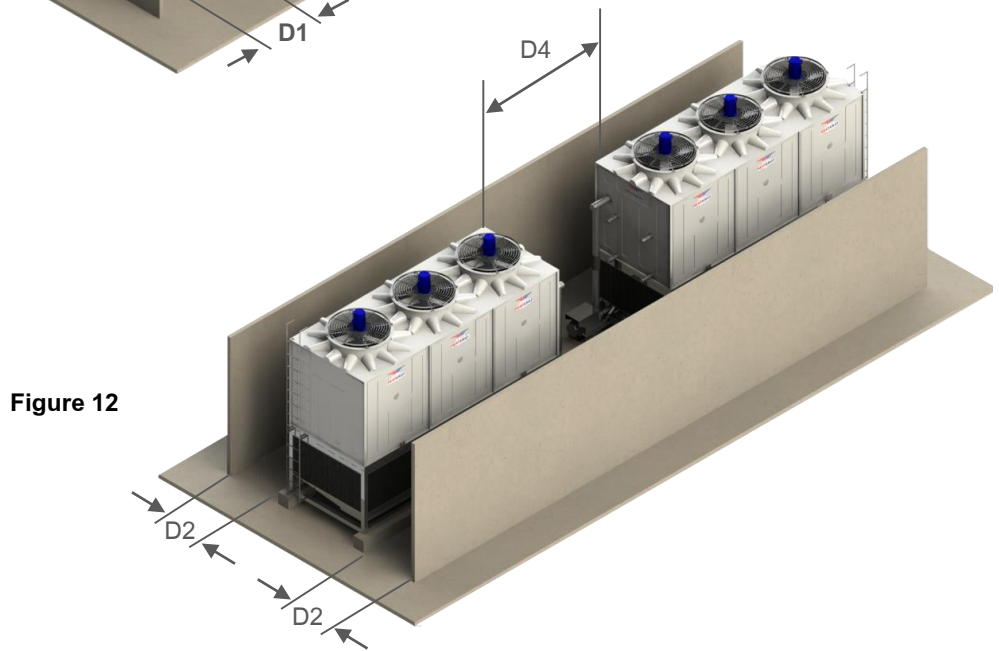


Figure 12

Table 5 Distance between the barrier and the machine

Model ECS and ECF	Distance between the barrier and the machine			
	D1	D2	D3	D4
0175 N to 0680 R	1.0 m	1.0 m	1.8 m	1.8 m
0700 N to 1500 R	1.0 m	1.0 m	2.0 m	2.0 m
1700 W to 3900 W	1.2 m	1.2 m	2.2 m	2.2 m

Foundation preparation prior to installation

A good area preparation is not only involve with good air ventilation and space for completely air flow, but water flow of Evaporative condenser installation is also necessary in case of machine washing or water logged because they may damage the machine from moss accumulation. Once the moss is dead, it will leave dirt below the tub, in addition, dust or other particles which flow into the tub may contain metal components. When metal contact with water, the oxidation reaction occurred and causes the rust. This effect leads to tub damage; therefore, this problem should be protected by installing on platform or making slope of the floor in order to circulate the clogged water.

Recommendations for installation manner

Foundation parallel along with unit

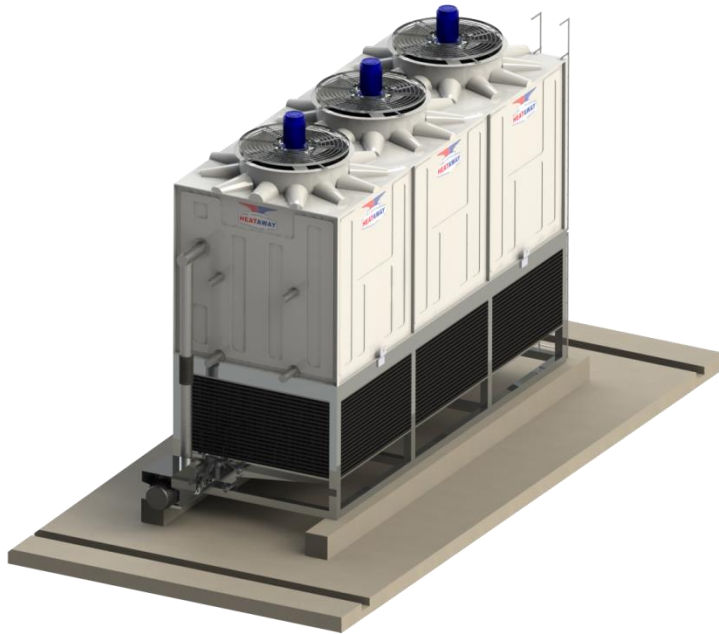


Figure 13 The example of appropriate installation area



Figure 14 The example of floor slope direction

Recommendations for installation manner

Foundation cross along with unit

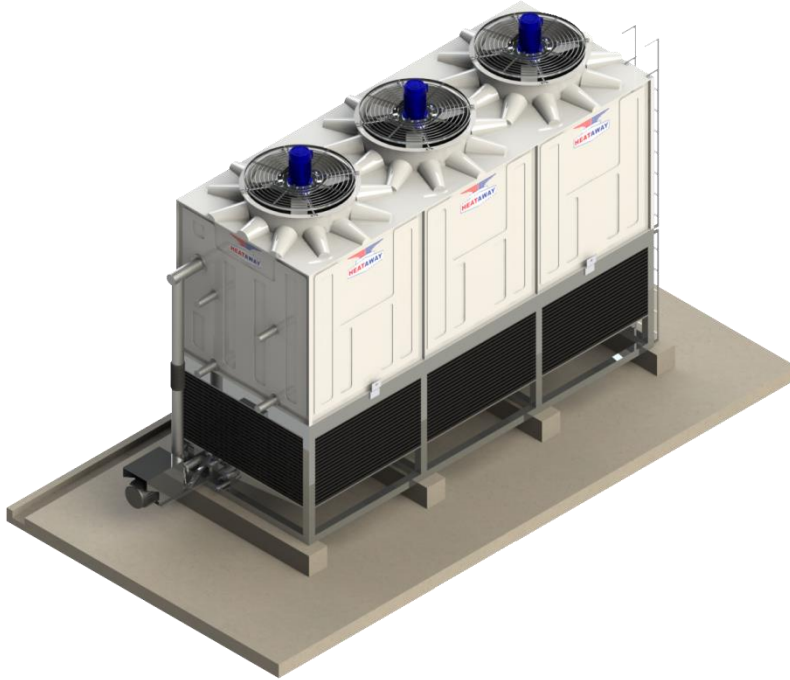


Figure 15 The example of appropriate installation area

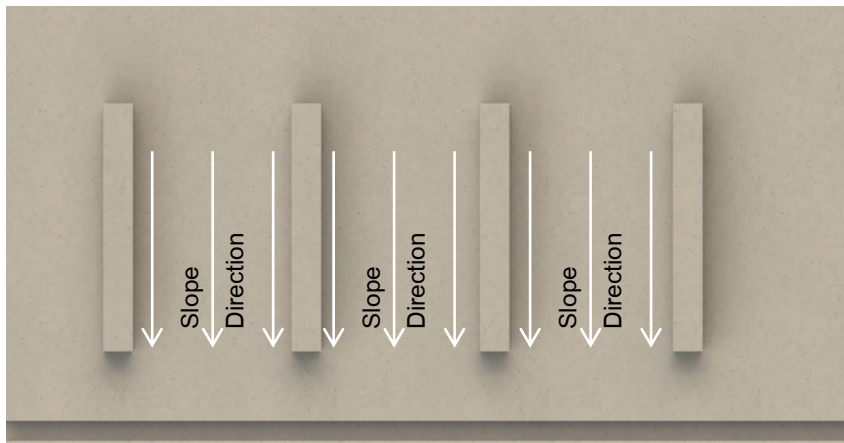


Figure 16 The example of floor slope direction

Foundation preparation prior to installation

In case of existence of water using in area of machine installation, area preparation of Evaporative Condenser installation should be equal to the level of the installed machine in order to protect the machine form the mist of that installed machine.

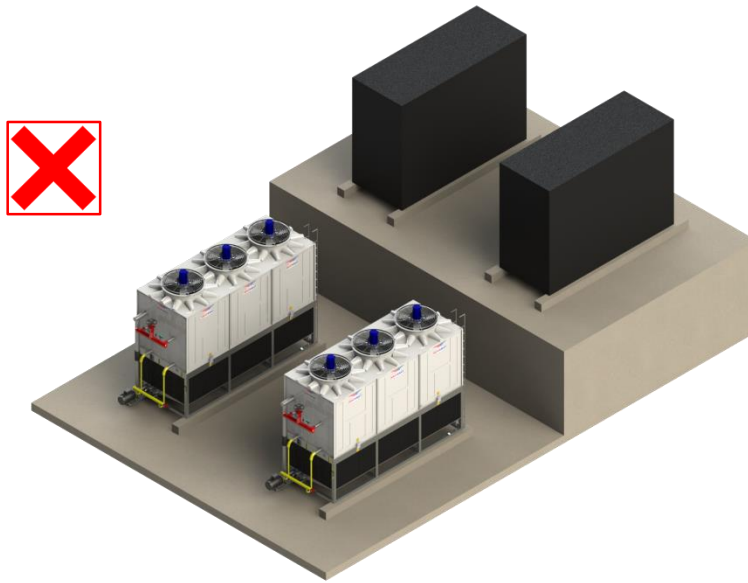


Figure 17 The example of incorrect area level adjustment

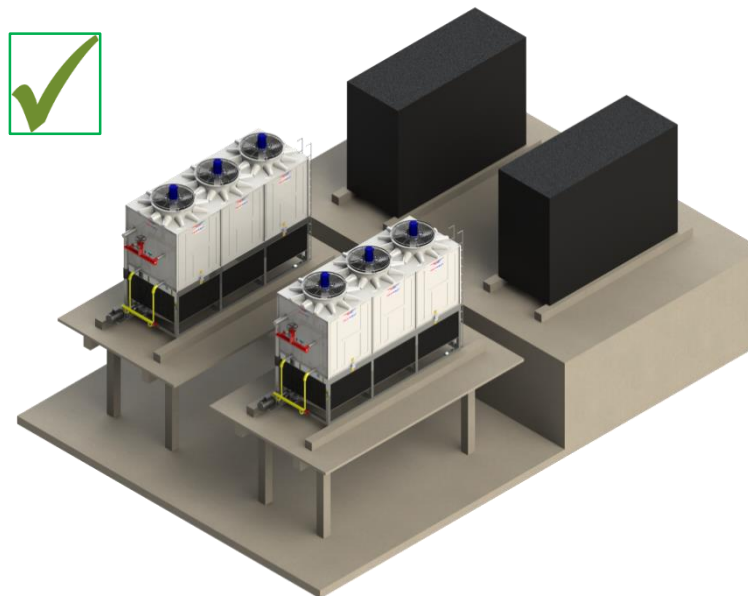


Figure 18 The example of correct area level adjustment

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