

Summer Maintenance Tips for Chiller

Dear user:

Due to entering the high temperature period of summer now , the temperature is continuously increasing, the chiller faces harsh weather conditions during use. Therefore, daily maintenance and upkeep of the chiller is very necessary. During the process of maintenance and upkeep, it is necessary to pay attention to the following prompt requirements:

1. There should be sufficient spacing around the placement of the chiller to maintain smooth ventilation and avoid poor heat dissipation during operation.
2. The chiller should be placed indoors in a well ventilated area as much as possible. If the outdoor ambient temperature is too high, it will cause the decrease in cooling capacity.
3. Please be sure to regularly clean the dust-proof net as required, because dirty and blocked of dust-proof net will cause abnormalities in the cooling system of the chiller.
4. Please replace the filter element device regularly, in order to avoid water pollution, blockage, flow attenuation, and other situations.
5. Please routinely inspect the electrical and power supply, and other safety hazards of the equipment. (Very important)
6. If there is any abnormality in the chiller, please do not disassemble and repair it blindly, be sure to contact the supplier for consultation and guidance before proceeding. (Very important)
7. It is necessary to cut off the power supply before maintenance. There are electrical components inside the machine, and rotating parts of the fan blades. Do to avoid accidents of electric shock and injury. (Very important)

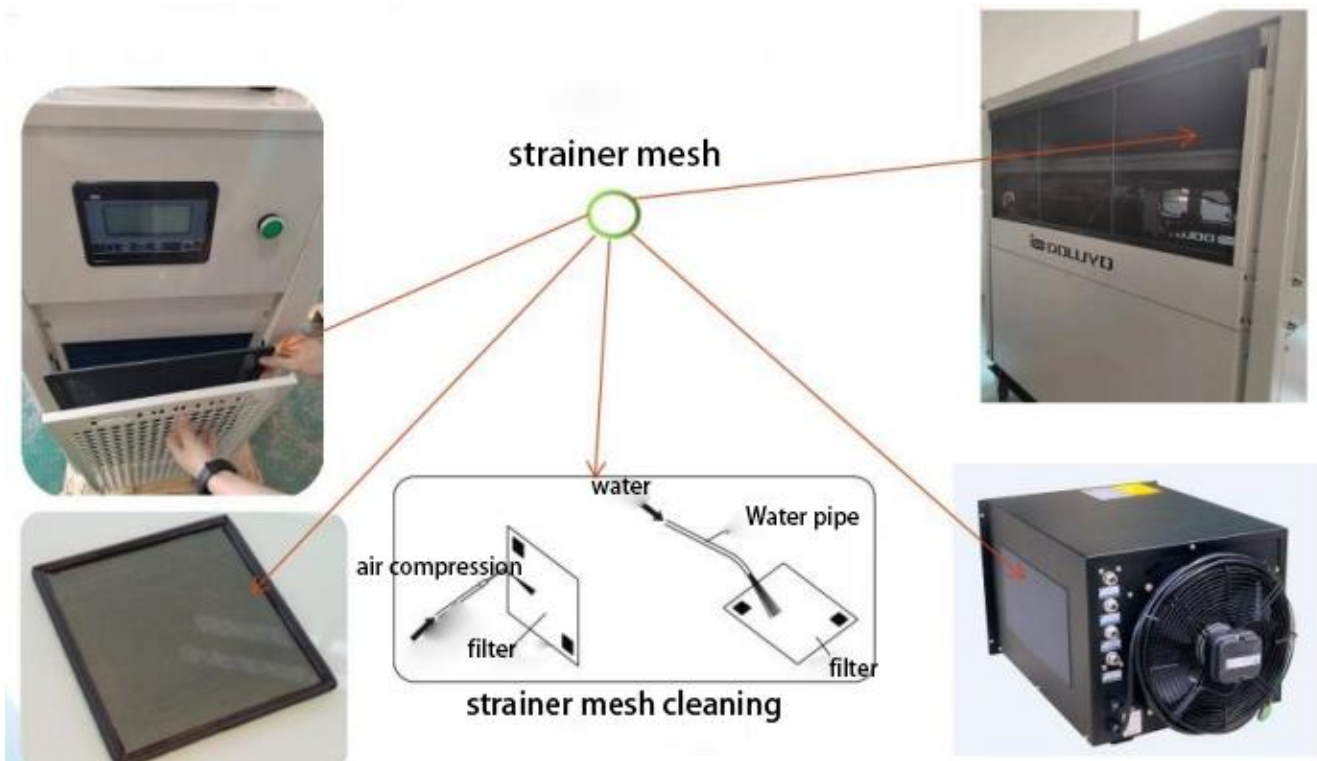
——Thank you very much for your trust and attention in welding machine and automation welding equipment of PDKJ.

» Routine Maintenance

01/A Regularly clean the dust-proof net

Cleaning method for dust-proof net:

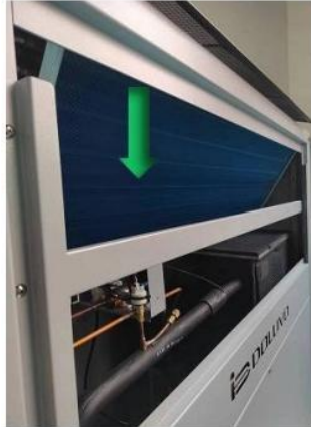
- ① Please turn off the power supply of the chiller before cleaning the dust-proof net.
- ② Remove the dust-proof net, use the high-pressure air gun to blow off the dust in it , and then clean with clean water and dry.
- ③ After cleaning, install the dust-proof net in its original position according to the factory status, it restore its dust-proof function.



Dust-proof net is used to prevent dust in the air adsorbed onto the condenser fins of the laser chiller, thereby affecting the heat exchange of the chiller. During use, in order to ensure good heat dissipation of the chiller, please regularly clean the dust-proof net, with the recommended cleaning frequency of 7 days /1 time.

01/B Regularly clean the radiator

Cleaning method: After removing the filter, use a high-pressure air gun to blow the dust and attachments on the radiator from top to bottom. During cleaning, do not touch the surface of the radiator with your hands to avoid scratches, and do not use metal parts to handle the radiator to prevent damage to the radiator fins.

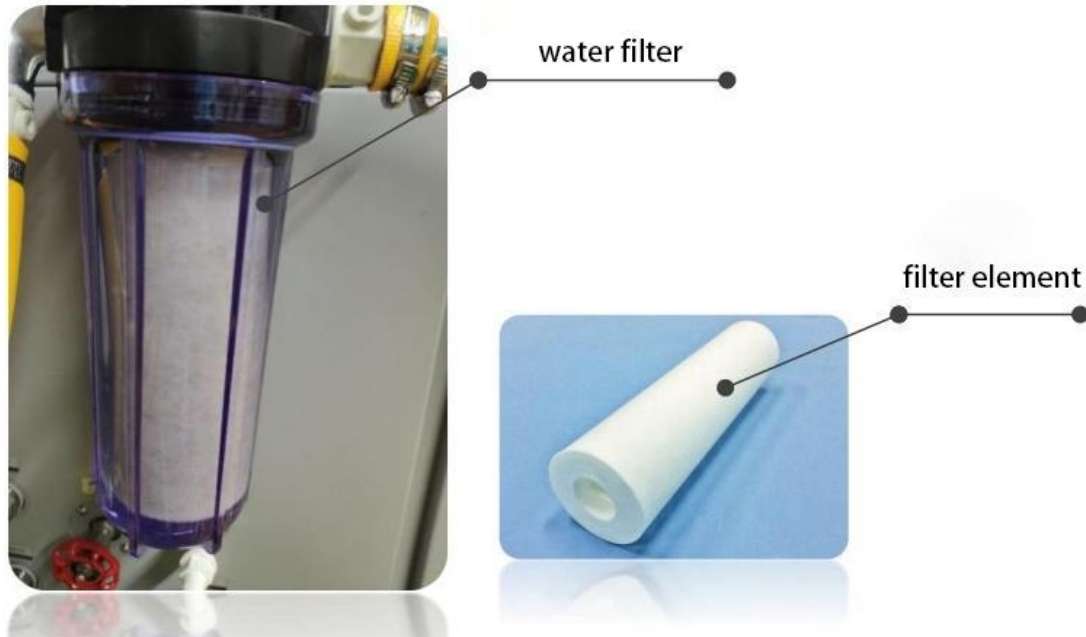
			
Micro-channel Radiator	Finned Radiator	Double Finned Radiator	Micro-channel Radiator

Dust-proof net is used to prevent dust in the air from adsorbing onto the condenser fins of the chiller, thereby affecting the heat exchange of the chiller, during use, to ensure good heat dissipation and cooling effect of the chiller, and to prevent high-pressure alarms, it is recommended to clean the radiator while regularly cleaning the dust-proof net. The cleaning frequency is recommended to be 15 days / 1 time.

02/A Regularly replace the filter element of the water filter/ circulating water

- ① The recommended replacement cycle for the filter element is every three months, or the replacement frequency can be determined based on the quality of the circulating water.
- ② Replacing the filter element is to maintain the normal velocity and volume of flow of the chiller. Because after using cooling water for a long time, scale will gradually increase, which not only affects the normal use of the equipment, but also affects the heat exchange effect of the chiller.
- ③ According to the water quality, it is recommended to replace the circulating water once a month. It's better to use purified water, or distilled water, or deionized water.
- ④ PH requirement of solution: 6.5-7.5.

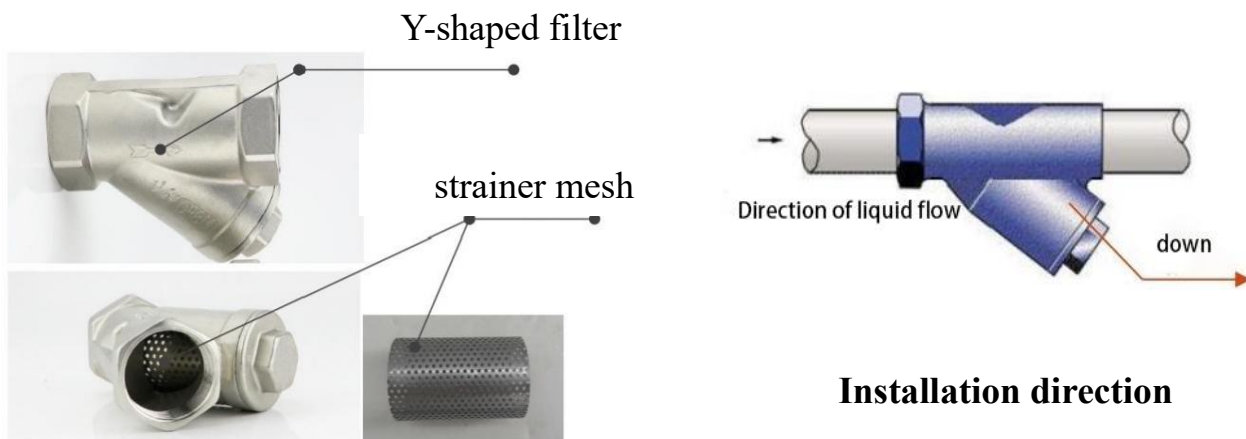
- ⑤ On the premise of no impact on the laser welding machine, to prevent the growth of bacteria and algae in the waterways, it can add the algacide to the waterways.



Reminder: The chiller has no special requirements for water quality, and can be used as long as it is not corrosive.

02/B Installation and maintenance of stainless steel Y-shaped filter

- ① When installing the Y-shaped filter, it should be installed according to the direction of the arrow on it, with the filter cartridge facing downwards, in order to better filter impurities.
- ② Regularly clean according to the water quality situation, and it is recommended to clean the filter screen every other month; When cleaning is required, simply remove the detachable filter cartridge. After removing the filtered impurities, just reload it.



Installation direction

02/C Clean the interior of the water tank and the electric heating tube

Cleaning method: Drain the original pure water from the water tank and clean the water tank. Use the towel to wipe the barrel wall, coil pipe and heating pipe, and then rinse with clean water 1-2 times.

Type of heating pipe:



Single-head heat pipe



double-head heat pipe

Cleaning supplies:



Clean towels

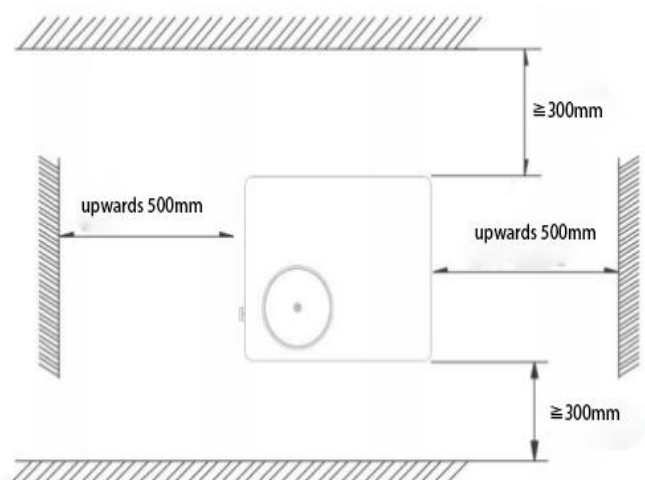


Wipe with a towel

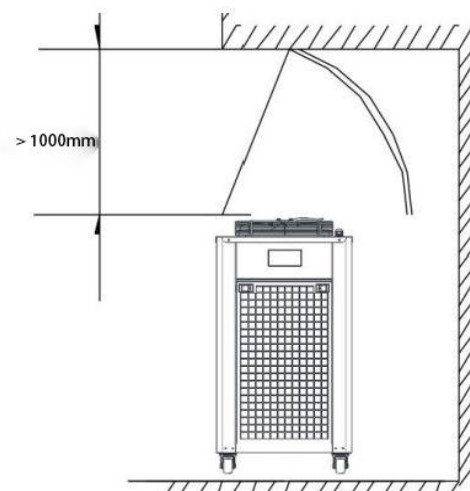
Note: The frequency of cleaning the water tank should be carried out simultaneously with the replacement of pure water and filter element.

Reminder: Please wear gloves during the cleaning process to avoid scratches.

03 Installation distance requirements



Side air outlet chiller



Top air outlet chiller

To ensure normal heat dissipation of the chiller, please install it as required.

>> Summer: Anti condensation

If the water temperature setting of the chiller is lower than the dew point temperature of the corresponding atmospheric pressure water vapor, then the water vapor will condense on the water pipe wall, thereby damaging the heating equipment components. So the setting value of the water temperature of the chiller in summer is not as low as possible. To ensure the normal operation of the equipment, the circulating water temperature of the chiller can be set according to the following table:

Ambient temperature \ Relative humidity	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%
16				0	2	4	5	7	8	9	10	11	12	13	14	15
18			1	3	4	6	8	9	11	12	13	14	15	16	17	18
21		1	3	5	7	9	11	12	13	14	16	17	18	18	19	21
24		3	6	8	9	11	13	14	16	17	18	19	20	21	22	23
27	2	5	8	10	12	14	16	17	18	19	21	22	23	24	25	26
29	4	7	10	12	14	16	18	19	21	22	23	24	26	27	28	28
32	7	10	12	15	17	19	21	22	23	25	26	27	28	29	31	31
35	9	12	15	17	19	21	23	24	26	27	29	30	31	32	33	34
38	11	14	17	20	22	24	26	27	29	30	31	33	34	35	36	37

For example: When the ambient temperature is 32 °C and the relative humidity is 65%, to ensure that condensation occurs in the equipment, the set value of the circulating water temperature of the chiller should be greater than 25 °C.

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