

## = To whom considering installation of Oil Mixer UX =

[ Notes of installation and using ]

Oil Mixer UX generates vacuum pressure inside by running forcefully straight through the body. It is the equipment that sucks up stock liquid and mix with water to make dilute solution.

Oil Mixer requires only the power of water pressure and its quantity! Therefore, it is essential to have enough water pressure and its quantity to generate vacuum pressure, otherwise diluted solution cannot be obtained.

It is a relatively simple structure, so that the usage is limited. As the following instructions are based on various examples of the past, please read them through if you are under consideration of setting up the Oil Mixer.

1. Please do not replace any of the parts in place of the original ones. The most popular example was that the discharge nozzle figured bamboo shoot, which dilute solution is coming out, was replaced by customer's convenience. It caused the result of not enough vacuum pressure was generated.

We cannot guarantee any function troubles if any of the original parts are replaced.

2. The hose length of dilute solution side must be shortest 1m, up to 10m. The diluted solution side of hose is to be supplied by the user. Recommendation of the hose size and length: inner diameter of  $\phi$  19, shortest 1m. If hose length is shorter than 1m, the vacuum pressure fails to sucks up stock liquid. The longer the hose is, the less water pressure becomes, so that please set the length of up to 10m. Although it depends upon the water pressure and the coefficient of viscosity are used, we can guarantee only if the hose is placed flat at the same level of the Oils Mixer setting height with less than 10m long.

3. The ideal height of setting the Oil Mixer would be 1.5m from the floor face! Much bigger suck up power is needed if the setting height is over 1.8m from the floor level that the stock solution is located. If the water pressure is low or high viscosity of stock solution is used, the solution might not be sucked up to the Mixer. Please do not set it up on the higher position. If the setting height is lower than 1m, please shorten the hose attached.

4. The liquid would not come up to the upper place from the setting position of the Oil Mixer! If the hose is set up higher position of the Mixer, substantial amount of water pressure is lessened and the solution cannot be sucked up. The water pressure will be lessened when the hose is once hanged down on the

floor and then set up again on the higher position, even though the position is lower than the setting position of Oil Mixer.

Please note when using a longer dilute solution hose, even if it is lower than the Oil Mixer setting position.

Also, the water pressure will be lessened if the water hose is trained more than 10m long over the floor from water tap to the Oil Mixer.

5. Please handle the hose not to be twisted or turned!

Please place the hoses with no stress is applied as much as possible when setting the water supply from the water tap to the Oil Mixer and also a matter of course when setting of the dilute solution hose.

If the hose is twisted or turned, the pressure and amount of water are lessened when running through it.

And also, when the hose is attached by such as a metal tube for the purpose of fixing the dilute solution hose to the tank, the pressure and amount of water will be reduced if the inner diameter of metal tube is considerably less than  $\phi 19$ .

It will cause the water pressure down when providing plural cranks of the metal tube.

6. Please do not attach the check valve or the like to the tip of the dilute solution hose!

There was a case when using longer dilute solution hose with a check valve attached and the Oil Mixer's opening and closing valve was left opened.

In this case, it caused a trouble of the failure because the oil mixer was kept receiving pressure.

Since it is the same thing in a float-typed liquid level meter, please install a mechanism of a solenoid valve attached on the primary side of the oil mixer when managing the liquid amount on the level gauge.

7. Please note that when making a dilute solution by the oil mixer, water pressure of at least 0.1MPa is required!

The oil mixer is operated only by water pressure as mentioned at the beginning.

The dilute solution cannot be made if the water pressure is low.

Please set up the connection port, PT1/2, of oil mixer with a water pipe of more than 0.1MPa and the recommended water pressure is 0.2MPa.

And also, the upper limit of the stock solution viscosity is 100cSt (40 °C).

8. Do not connect with the water supply for domestic use!

Not only limited to our oil mixer, it is prohibited by the law that equipments mixing different liquid in the water, cannot be connected to the water supply.

Be sure to connect the hose to your own company use.

9. There is a limit of dilution density!

As it is designed for the use of water-soluble cutting oil, it is not adapted to too much higher density.

For instance, it is not adapted to such ratios of 1:1 or 1:2.

It is also not adapted to thinner dilution rate of ppm.

10. Acidic liquid cannot be used!

As it is designed for the liquid of Alkaline value of approx. 8 to 10, acidic and highly alkaline liquid cannot be used.

11. Indication of the control dial is just a simple guide!

Every one of the customers uses different water pressure and viscosity of cutting liquid and undiluted solution, so that the dial scale of the oil mixer is just a guide and doesn't indicate its concentration.

As there might be a great difference of the stock solution viscosity in the summer and winter, we suggest you to manage the dial as ○○ for summer, ○○ for winter in order to get a stable dilute solution.

The above eleven items are described as the notes based on the actual examples which caused the troubles in the past.

Many of the customers have taken a unique way of using the instrument but it is difficult to get a necessary dilute solution if it is used in the way of low water pressure and volume as noted at the beginning.

This instrument is designed to produce a vacuum pressure of -0.09MPa by 0.2MPa water pressure, and every one of them is delivered after receiving strict inspection.

If you are under consideration of purchasing the oil mixer, please refer to the above notes whether it will fit to your facilities to be used as you desire. Please reconfirm the above notes.