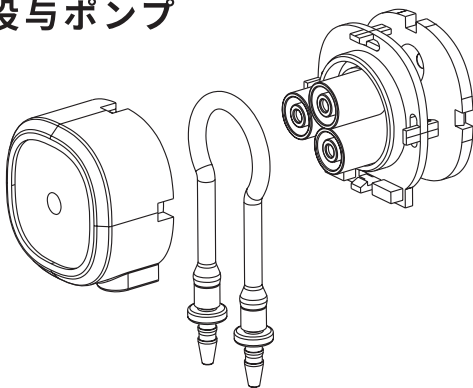




**Chihiros**  
Aquatic Studio

# 千尋滴定泵 Chihiros Dosing Pump Chihiros Dosierpumpe ちひろ投与ポンプ



用户手册 / USER MANUAL / BENUTZERHANDBUCH / ユーザーマニュアル



感谢您购买千寻的产品，使用前请详细阅读本说明书。

本设备需要手机上安装 App 才能使用，请按以下方式下载安装。



安卓用户

请扫描上方二维码进行下载安装。（如二维码失效，请前往官网的用户指南进行下载）。



My Chihiros

苹果用户

请前往 AppStore，搜索“My Chihiros”进行下载安装。

**安全提示：**为避免触电，在对已经放入水的水族箱实施操作时，需小心注意。设备出现故障时请勿自己尝试维修，应听从售后人员指导或将故障设备送至授权维修处或者丢弃故障设备。为防止受伤，应遵守以下基本的安全预防措施：

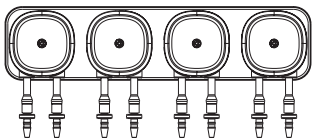
- 如果连接电缆或电源适配器的任何部分损坏，设备发生故障或掉落，请勿使用本产品。在再次使用之前必须更换损坏的部件，请使用千寻原装部件，使用第三方的配件可能会导致不安全的情况产生。
- 电源插头应始终处于触手可及的范围内，以便在安装后发生紧急故障时可立即关闭电源。
- 避免设备的插头或插座弄湿，应将水族箱放置在墙壁插座的一侧，以防止水滴到插座或插头上。为了您的安全，我们建议使用连接电缆形成一个滴水环，以防止沿着电缆流动的水进入插座。如果不知道插头或者插座是否弄湿，请不要拔出电源线。断开保险丝或电路后，再拔出插头从而检查插座内是否有水。
- 儿童或身体、精神、感官能力下降或缺乏经验或知识的个人请在成年人监督和指导下使用该产品；在没有监督的情况下，不要让儿童接触本产品，不要让儿童清洁或进行维护。当儿童使用或有儿童可能接触设备时需要密切监督。
- 为避免受伤，请勿接触活动部件。在取出设备或放入设备时，请先拔掉插头。设备停用时或在清洁前也请拔出电源插头。切勿使用拽拉电源线方式拔出插头。正确的操作方式是握住插头并拔出，以断开连接。
- 请勿将本产品用于其用途以外的任何用途。
- 此设备仅限室内使用，切勿在露天环境或者温度低于 0℃ 的环境下使用设备。
- 在操作之前，确保设备已安装牢固。
- 请勿将本产品作为普通生活垃圾处理，应把它带到当地的垃圾收集站。
- 阅读并遵守对设备的所有重要事项。

**注意：请放置好电源线，防止被电源线绊倒或牵拉电源线导致的事故。**

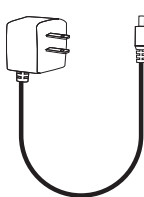
### 设备参数

滴定头个数	4 个
滴定流量	> 50ml/min
BPT 寿命	≥1000H
尺寸	17.7x5.4x4.2cm (7.0"x2.2"x1.7")
工作温度	5~45° C
相对湿度	15~85%RH
电源电压	100-240V 50/60Hz
工作电压	DC 12V

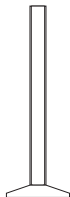
### 包装内容



泵



电源适配器



量筒



转接线

### 命名

输入需要添加的名称

### 灌注

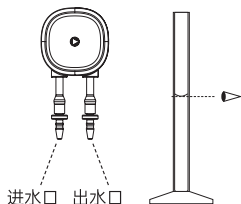
灌注就是用滴定管将添加剂从容器往滴定管末端充满。在进行较准之前，确保滴定管已灌满。滴定头可以通过应用程序按“长按灌注”/“停止”灌注按钮。

### 较准

应用程序中的说明将指导你使用设备随附的实验室级量筒进行简单的校准过程。

每次测量之前，请确保量筒是干净干燥的，因为里面残留的任何水滴都会影响读数的准确性。由于液体的物理特性，量筒内部的液体表面在中间是平坦的，但在侧面略微升高。正确的测量应在表面的最下沿而不是侧面。

量筒每 0.1 毫升印有一个刻度，但是你应该估计 0.2



到是接近的 0.05 毫升的量，它是印刷刻度之间的一半。

始终将滴定管的末端对准量筒的中心位置，这样滴剂就不会粘到量筒壁上。

在较准过程中，滴定泵的滴定头预设好的旋转次数，剂量应该在 3 到 4ml 之间。一旦你把准确的剂量输入应用程序，它会再次灌注 4ml 的剂量，待你确认，这样你就可以证实校准是正确的。确认的剂量应该在 3.95 和 4.05ml 之间。如果不是，会要求你重复较准过程。

## 排程

### 自动运行排程

可以设置的自动运行排程，以便每天定期或在每周的选定几天为每个滴定头运行。额外手动操控可以随时添加，而不会打乱到自动程序。该程序也可以根据需要开启和关闭，且不会丢失你的设置。

单次剂量，每小时剂量和自定义时段的剂量是基于每个滴定头所需的每日总剂量（每天应运行的添加剂总量）得出的。该程序会把每天的总剂量（1-24）平均分配，以便你随时更新你的每日剂量，每天的剂量变化可达 1 滴，以确保整个日剂量运行的单次量的运行准确性。每个滴定头每日总剂量可以从 0.2ml 到 999.9ml，以 0.1ml 为增量，但是最小的单个剂量限制为 0.2ml。

你可以随时更改所需要的每日总剂量或剂量次数。滴定泵将自动重新计算当天剩余时间的运行程序，如果有必要，会向你提供要如何进行的选项。例如，如果你在一天中午增加每日剂量，但这时已经运行了一些剂量，但还有一些剂量需要运行，My Chihiros 应用程序会提示你在今天剩余的计量加上新增的剂量，进行一次性补偿。并在第二天开始运行你的新排程。

所有自动排程设置的生效时间，当天设置好的，如之前没有运行过剂量，所有排程当天立即执行，如设置的排程已经运行过，又重新设置的，分 2 种情况，设置后的排程比之前的排程量少，今天不在运行，第二天执行新的排程，如设置后的排程比之前的多，会提醒客户是否把当天设置的新排程的量减去已经投放的量一次性投放完，或者不投放，第二天开始执行新的排程。

### 运行延迟

为了防止个别添加剂之间产生互相反应，如果你打开运行延迟功能，各通道会在一定间隔时间 30 秒后进行添加，如果两个滴定头的设置安排在完全相同的时间，位于左边的滴定头将优先。运行延迟功能只用于自动排程，手动是无效的。

### 单次

你的每日剂量将分为一份，一天滴一次。

1. 选择“单次”选项。
2. 按住“单次”设置每日总剂量，你想要的特定时间。

3. 按“保存”并执行新设置的排程，然后返回滴定头设置页面。

### 每小时

你的日剂量可以平均分成 24 次，每小时滴一次。

1. 选择“每小时”选项。
2. 按“每小时”设置日总剂量，每小时内的特定时间点（间隔为 1 分钟）。每小时剂量的默认设置是“准点的”。
3. 按“保存”并执行新设置的排程，然后返回滴定头设置页面。

### 自定义时段

你每日的总剂量可分成 4 个时段，每个时段的开始和结束时间、次数（每日最多 24 次）。根据在该时段内选择的滴定次数，将每个时段分为相等的时隙，并在每个时隙开始运行。

例如：你可以在 07:00-08:00 时段滴两次，12:00-13:00 时段滴 4 次，20:00-22:00 时段滴 12 次。在 12:00-13:00 这个时段的 4 次的分配时间将是：(1)@12:00, (2)@12:15, (3)@12:30, (4)@12:45。

由于滴定的运行日计是午夜开始和结束，如果你想在夜间 20:00 到 04:00 运行，你将需要设置两个单独的运行时段，一个设置从 00:00 到 04:00，第二个设置从 20:00 到 23:59。

1. 选择“自定义”选项，创建第一个运行时段。
2. 按“每日剂量”设置日总剂量。
3. 按“+”图标打开新的时段，你可以设置开始和结束时间，你想在该时间段内的剂量。
4. 如果你想添加另外的运行时段，按“增加”并重复这个过程。
5. 按“保存”并执行新设置的排程，然后返回滴定头设置页面。

### 定时排程

你的每日剂量最多分 24 次，每一次都可设置其独立的运行时间和剂量。

1. 选择“定时”选项。
2. 按“增加”添加设置。
3. 设置运行开始时间和剂量，然后按“添加”。
4. 如果你想增加运行次数，按“增加”并重复这个过程。
5. 按“保存”并执行新设置的排程，然后返回滴定头设置页面。

### 重复（每周特定日）

如果你想排程是一周运行 7 天，选择“每日”，这是默认的设置。

如果你想排程是在每周的特定日运行，请选择“星期几”。选定后可以随时更新。

## 手动操控

手动操控能让你在任何时间按照需求操作，而不会影响到自动运行排程。尽管在排程关闭时也是能操作。

今天内手动操控的剂量和自动运行排程的剂量分别在主页和设置面板显示。

## 添加剂存量监测

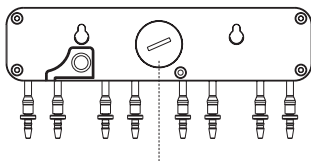
"添加剂存量监测"自动从容器中添加剂的初始容量中扣除已用掉的量（自动排程和手动操控）。My Chihiros 应用程序会根据当前排程的日用剂量显示出容器中剩余的添加剂能够使用的天数。默认情况下，添加剂存量监测会在你的添加剂即将耗尽的 3 天前发出预警通知。

## 错过补偿

自动排程可能会因为外界因素比如断电而错过预定运行时间，启用 "错过剂量补偿功能"后，一旦滴定泵恢复正常运作模式，就会补偿当天（午夜 0 点后）错过的所有剂量。如果你禁用了这个功能，滴定在没有按时运行错过时将不会被重新安排（此功能需要在安装电池后才能生效）。

## 断电记忆

在安装一颗 CR2032 钮扣电池后，可实现在断电情况下，保证时钟准确，程序正常，设置不会丢失（电池需要另行购买）。



电池安装处

**FCC Warning Statement**

Changes or modifications not expressly approved by the party responsible for compliance could

void the user's authority to operate the equipment. This equipment has been tested and found to

comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These

limits are designed to provide reasonable protection against harmful interference in a residential

installation. This equipment generates uses and can radiate radio frequency energy and, if not

installed and used in accordance with the instructions, may cause harmful interference to radio

communications. However, there is no guarantee that interference will not occur in a particular

installation. If this equipment does cause harmful interference to radio or television reception,

which can be determined by turning the equipment off and on, the user is encouraged to try to

correct the interference by one or more of the following measures:

- - Reorient or relocate the receiving antenna.
- - Increase the separation between the equipment and receiver.
- - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- - Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following

two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The device has been evaluated to meet general RF exposure requirement.

**Thanks for purchasing Chihiro's products, please read this manual carefully before use.**

This device requires an App to be used on your phone. Please download and install it as follows.



For Android

Please GET IT ON Google Play and search for "MyChihiros" to install.



My Chihiros

For iOS

Please Download on the App Store and search for "My Chihiros" to install.

**Safety Tip: To avoid electric shock, be careful when working with an aquarium already in water. When the equipment fails, please do not attempt to repair it yourself. You should follow the instructions of the after-sales personnel or send the faulty equipment to an authorized repair place or discard the faulty equipment. To prevent injury, the following basic safety precautions should be followed:**

--Do not use this product if any part of the connecting cable or power adapter is damaged, the device malfunctions or is dropped. Damaged parts must be replaced before reuse. Please use original Chihiro parts. Using third-party accessories may lead to unsafe conditions.

--The power plug should always be within easy reach so that the power can be turned off immediately in the event of an emergency failure after installation.

--Avoid getting the plug or socket of the device wet, the aquarium should be placed on one side of the wall socket to prevent water from dripping onto the socket or plug. For your safety, we recommend using the connecting cable to form a drip ring to prevent water running along the cable from entering the socket. Do not unplug the power cord if you do not know if the plug or socket is wet. After disconnecting the fuse or circuit, check the outlet for water by unplugging it.



--Children or individuals with reduced physical, mental, sensory abilities or lack of experience or knowledge, please use this product under the supervision and guidance of adults; do not let children touch this product without supervision, and do not allow children to clean or carry out maintain. Close supervision is required when children use or have children that may come into contact with the device.

--To avoid injury, do not touch moving parts. When removing or placing the device, please unplug it first. Also unplug the device when it is not in use or before cleaning. Do not pull out the plug by pulling on the power cord. The correct way to do this is to hold the plug and pull it out to disconnect.

--Do not use this product for any purpose other than its purpose.

--This device is only for indoor use, do not use the device in the open air or in an environment where the temperature is below 0° C.

--Before operating, make sure the device is securely installed.

--Do not dispose of this product as ordinary household garbage, but take it to the local garbage collection station.

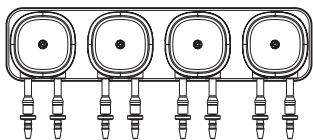
-- Read and follow all important notes about the device.

**Note: Care should be taken to arrange the cord so that it cannot be tripped over or pulled accidentally.**

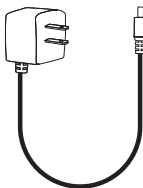
### **Specifications**

Number of dosing heads	4
Dose flow	> 50ml/min
BPT lifetime	≥1000H
Dimensions	17.7 x 5.4 x 4.2cm(7.0" x 2.2" x 1.7")
Operating Temperature	5 to 45° C
Relative Humidity	15~85%RH
Supply voltage	100-240V 50/60Hz
Operating Voltage	DC 12V

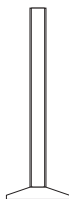
## Package Contents



Dose



Power adapter

Measuring  
cylinder

Cable

## Naming

Enter the name of supplements.

## Priming

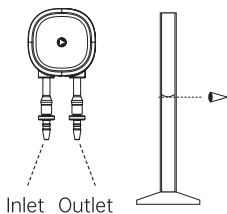
Priming fills the dosing tube with the supplement from the container to the tip of the dosing tube. Make sure that the supplement is at the end of the outlet dosing tube before proceeding to the calibration. The head can be primed by pressing "Long press to priming" / "Stop" priming buttons in the App.

## Calibration

The instructions in the App will guide you through a simple calibration process using the laboratory grade measuring cylinder provided with the unit.

Make sure that the measuring cylinder is clean and dry before each measurement as any drops left inside will affect the accuracy of the reading. Due to the physical properties of liquids the surface of the liquid inside a measuring cylinder is flat in the middle but rise slightly at the sides. The correct measurement is at the center (lower part) of the surface and not the sides.

The measuring cylinder has printed graduations every 0.1ml however you should estimate the volume to the nearest 0.05ml which is half way between the printed graduations.



Always hold the tip of the dosing tube at the center of the cylinder so that the drops do not stick to the cylinder walls.

During the calibration process the doses a predetermined number of rotations of the dosing head

that should give a volume of between 3 and 4ml. Once you enter the exact volume into the App it will give a confirmation dose of exactly 4ml so that you can confirm that the calibration was done correctly. The confirmation dose should be between 3.95 and 4.05ml. If not, you will be guided to repeat the calibration process again.

## **Scheduling**

### **Automatic Dosing Schedule**

A selection dosing schedules can be set to run for each head on a regular daily basis, or on selected days of the week. Additional manual doses can be added at any time and without disrupting an automated schedule. The schedule can also be switched on and off as required, without losing your settings.

Single dose, Hourly dose and Custom Periods dose schedules are based on a desired total daily dose (total amount of supplement that should be dosed per day) for each head. The schedule will divide the total daily dose volume equally between the total number (1-24) doses per day, so that you can easily update your daily dose volume anytime. Individual doses may vary by up to 1 drop throughout the day to ensure the single drop accuracy for the complete daily dose. The total daily dose per head can be from 0.2ml up to 999.9ml in increments of 0.1ml, however the smallest individual dose is limited to 0.2ml.

You can change the total daily dose or the number of doses whenever desired. Dose will automatically recalculate the dosing schedule for the rest of the day and if necessary will present you with options regarding how to proceed. For example, if you increase your daily dose in the middle of the day, but have already run some doses at that point, but still have some doses to run, the My Chihiros app will prompt you to make a one-off compensation by adding the added dose to the remaining doses for the day and start running your new schedule the next day.

The effective time of all automatic scheduling settings, set up on the same day, if dose has not been run today, all schedules are executed

immediately on this day, if the set up schedule has been run, and reset the setting, there are 2 cases, the update schedule is less than the previous schedule dose amount, will not running today, and the new schedule is executed the next day; if the update schedule dose volume is more than the previous one, App will be reminded whether the amount of the new schedule setting on the same day minus the amount already dosed in this day, dose the left in all at once, or you can cancel dose today, new schedule is executed starting the next day.

## Run Delay

To prevent individual additives reacting with each other, if you switch on the run delay function, each channel will be added after a certain interval of 30 seconds and if two heads are scheduled to be set at exactly the same time, the head on the left will take precedence. The run delay function is only used for automatic scheduling and is not available manual mode.

## Single dose

Your daily dose will be given in one portion, once a day.

1. Select the "Single dose" option.
2. Press on "Single dose" to set the total daily dose, the specific time that you wish the dose to be given, and your dosing rate.
3. Press "Save" to implement the new schedule settings and return to the Head Settings page.

## Hourly dose

Your daily dose will be given in 24 equal hourly doses.

1. Select the "Hourly dose" option.
2. Press on "Hourly dose" to set the total daily dose, the specific time within the hour (in 1 minute steps) that you wish the dose to be given, and your dosing rate. The default setting for the Hourly dose is "on the hour".
3. Press "Save" to implement the new schedule settings and return to the Head Settings page.

## Custom Periods

Your total daily dose can be given in up to four dosing periods, with

the Start & End time, number of doses and dosing rate of your choice for each dosing period (maximum of 24 doses per day). Each dosing period is divided into equal time slots according to the number of doses selected for that period, and each individual dose is given at the beginning of each time slot.

For example, you may choose to dose your supplement twice during 07:00-08:00 , then 4 times during 12:00-13:00 (whisper dosing rate), then 12 times during 20:00-22:00 . The 4 doses during 12:00-13:00 will be given as follows: (1)@12:00, (2)@12:15, (3)@12:30, (4)@12:45.

Since the dosing day starts and ends at midnight, if you want a dosing period to be overnight from 20:00pm to 04:00am you will need to set 2 separate dosing periods, one set from 00:00 to 04:00 and the second set from 20:00 to 23:59.

1. Select the "Custom" option to create the first dosing period.
2. Press "Dose per day" to set the total daily dose.
3. Press on the "Add" icon to open a new period where you can set the Start & End time, the number of doses that you wish to be given within the period, and your dosing rate.
4. If you wish to add another dosing period, press "+" and repeat the process.
5. Press "Save" to implement the new schedule settings and return to the Head Settings page.

### **Timer schedule**

Your daily dose can be given in up to 24 individual doses, each set with its unique time and volume . The sum of all the individual doses will be displayed as your total daily dose.

1. Select the "Timer" option.
2. Press on "Add" to set up the first dose.
3. Set the start time, dose quantity and dosing rate for this specific dose, then press "add".
4. If you wish to add another dose, press "Add" and repeat the process.
5. Press "Save" to implement the new schedule settings and return to the Head Settings page.

### **Recurrence (days of week)**

Select "Daily" if you want your schedule to run seven days a week. This

is the default setting.

Select "Select days" if you wish your schedule to run on specific days of the week. The selection can be updated at any time.

## Manual Dosing

Manual Dosing enables you to dose a specific volume on-demand at any time without affecting the automatic dosing schedule and is available even when the schedule is turned Off.

The volume of Manual Doses given today is displayed separately from the automatically scheduled doses in both the Homepage and the Dashboard.

## Supplement Volume Monitor

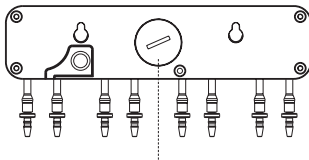
The "Supplement Volume Monitor" automatically deducts the amount of supplement dosed (scheduled and manual) from the last updated volume of supplement in the container. MY CHIHIROS app shows the number of days left in the container that can be used for dosing based on the current schedule. By default, the Supplement Volume Monitor will notify you three days before your supplement runs out.

## Missed dose compensation

Automated doses may miss their scheduled times due to external circumstances such as a power outage. When the 'missed dose compensation function' is enabled, all missed doses for the day (after 0:00 midnight) will be compensated once the device is back in normal operation mode. If you disable this function, doses will not be rescheduled if they are not run on time (This feature will not take effect until the battery is installed).

## Power-off memory

After installing a CR2032 button battery, it can ensure that the clock is accurate, the program is normal, and the settings will not be lost in the event of a power failure (the battery needs to be purchased separately).



Battery installation place