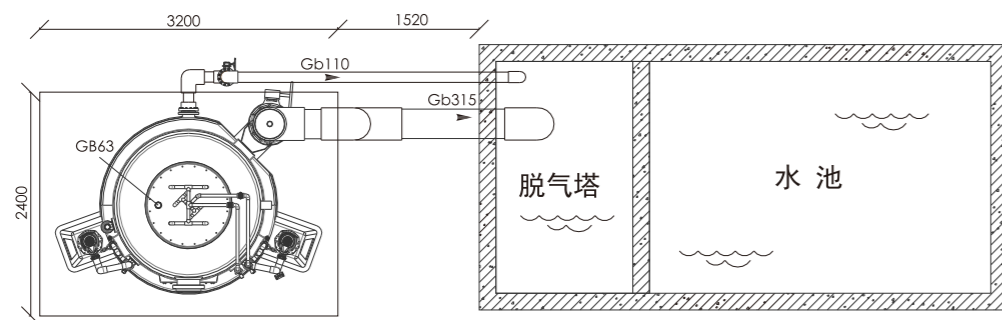
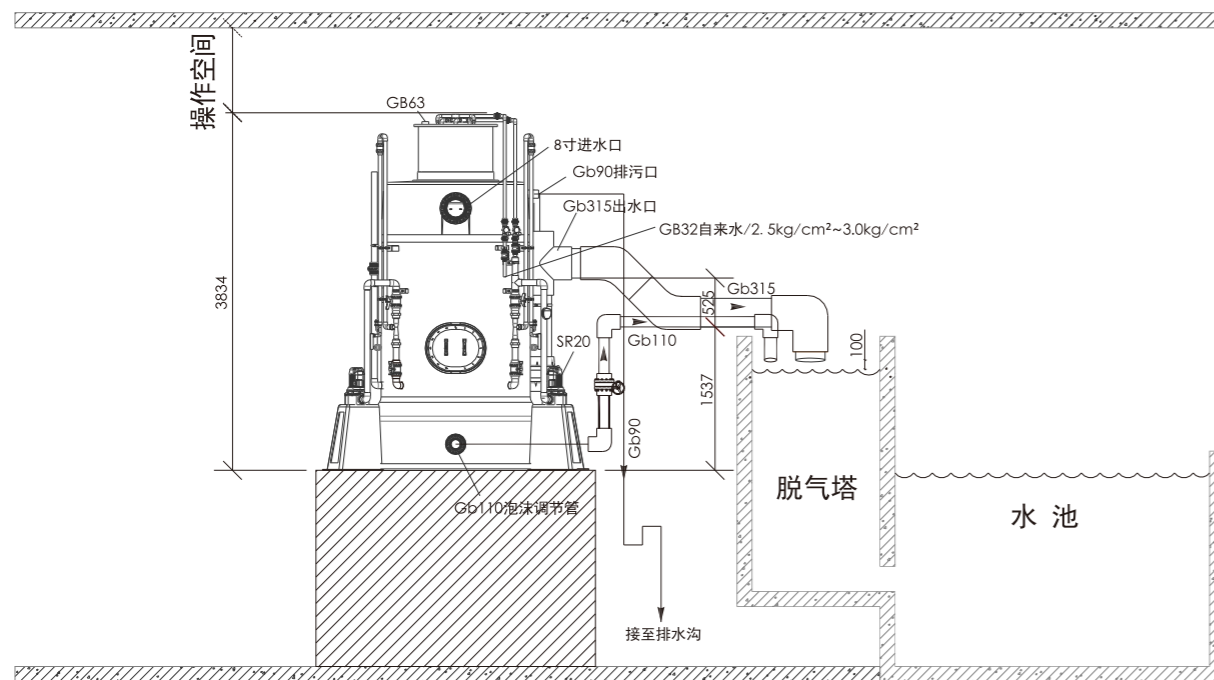


* NPS1600



Foam Fractionator Installation and Commissioning Manual 蛋白分离器安装及调试手册

Models (型号): NPS410 \ NPS600 \ NPS800 \ NPS1000 \ NPS1200 \ NPS1400 \ NPS1600 \ NPS2000

The Emaux Foam Fractionator is manufactured from the finest materials and built to a proven design. The Fractionator will be delivered with the body fully assembled but with the scum bucket, venturi manifold and discharge plumbing supplied but not connected to the Fractionator to prevent damage during transportation. The Fractionator body and sub components should be unpacked and inspected before assembly to check that there has been no damage during transport, the Fractionator will be supplied with its own serial number, hydro test certificate and warranty document. These documents should be stored in a safe place in case they are needed in the future.

Assembling the Fractionator

- 1) Stand the Fractionator on flat level ground.
- 2) Locate the scum bucket on top of the Fractionator, Put the cone on the top of the body, apply grease to seal in complete circle inside of the circle of bolt holes as shown, After that put the top cover on (no need grease).
- 3) Install the Fractionator manifold onto the body, make sure all "O" rings are in place, tighten the barrel union connections progressively to make sure the manifold is correctly attached.
- 4) Connect the scum bucket wash down plumbing between the venturi manifold solenoid valve and the connection point on the Fractionator.
Note: the wash down can be done with process water from the pressurised supply from the venturi manifold or can be done using a pressurised alternative water source either salt or fresh water.
- 5) Install the main discharge pipe by solvent welding the pipe into the elbow socket at the bottom of the Fractionator (do not solvent weld the discharge "T" at the top of the main discharge pipe).
- 6) Install the small discharge pipe and ball valve on the small elbow socket at the bottom of the Fractionator.



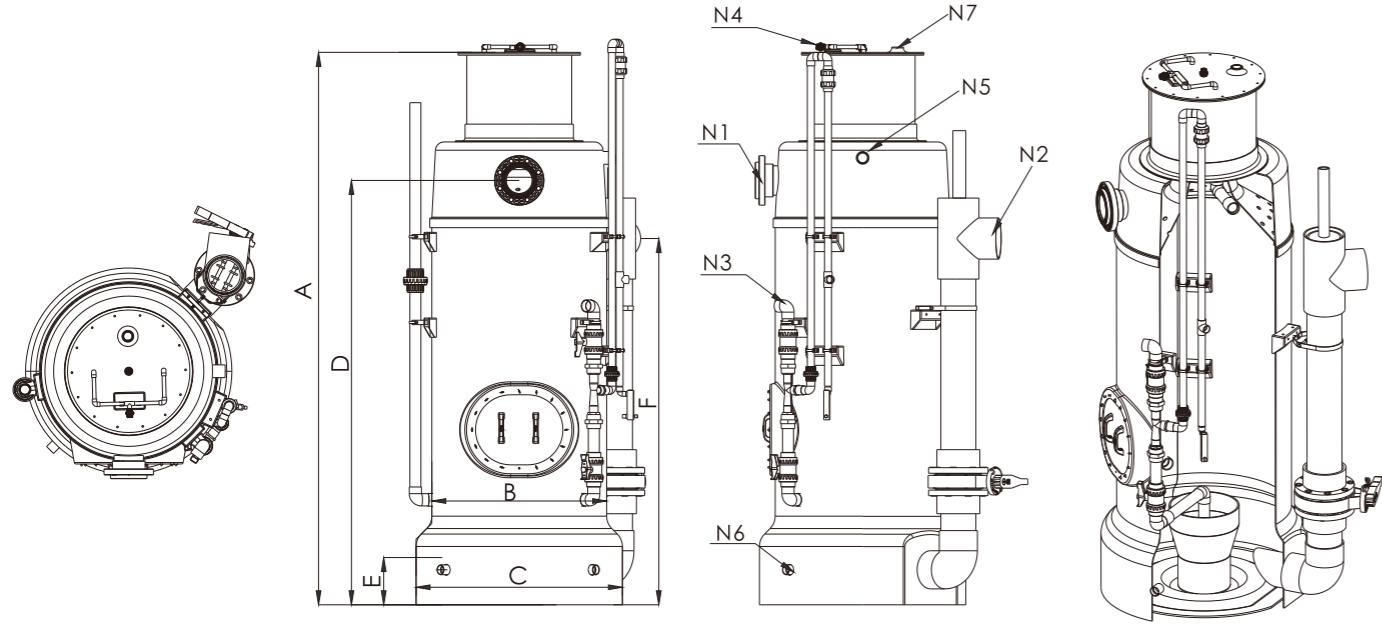
意万仕蛋白分离器采用最好的材料和成熟的设计制造而成。

运输时分离器主体是组装完整的,但是为了避免运输过程中造成损坏,所提供的泡沫桶、文丘里管道和排水管是没有连接到分离器的。

安装前打开分离器主体和子组件的包装,检查设备在运输过程中是否有损伤。随机提供分离器的系列号、水利测试证书和保修文件。应妥善存放这些文件以备不时之需。

安装分离器

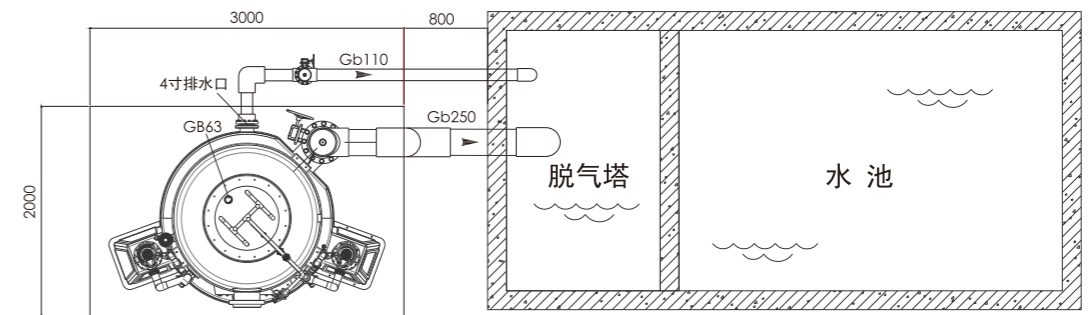
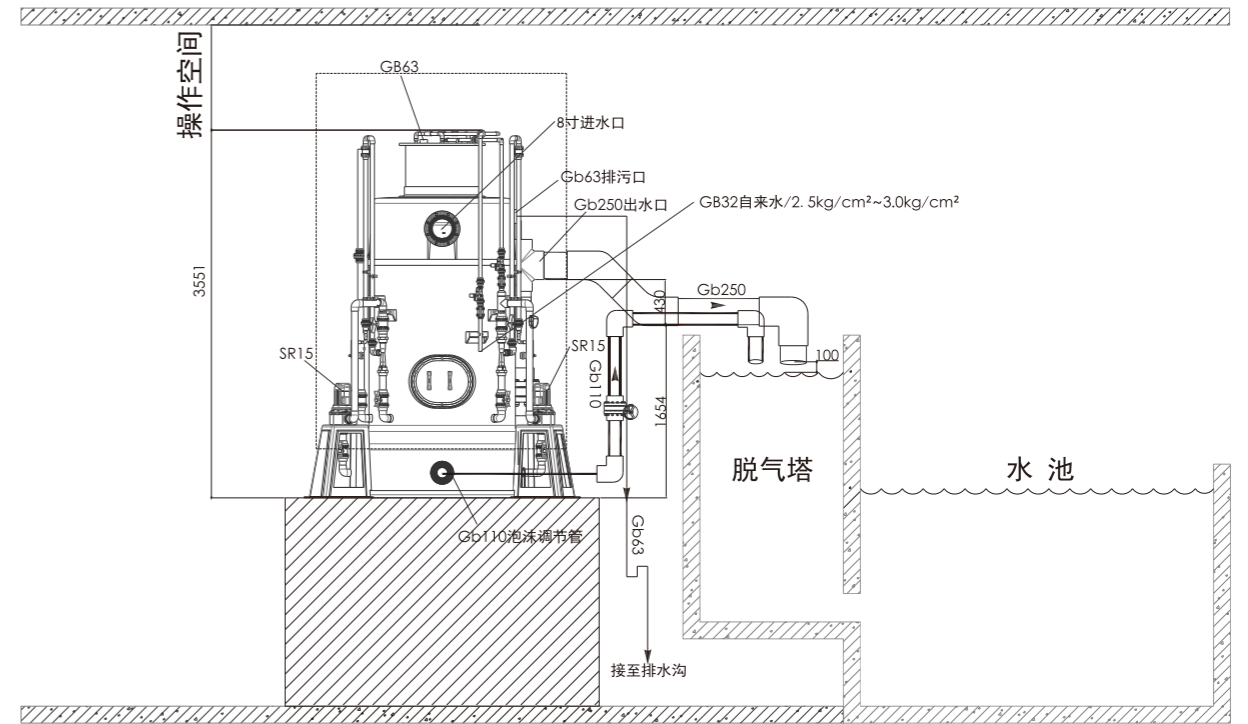
- 1) 把分离器放置在平坦的地面。
- 2) 把泡沫桶放到分离器顶端,并打玻璃胶密封,盖上冲洗管盖(冲洗管盖与泡沫桶之间不打胶)。
- 3) 把分离器管道安装在机体上,确保所有密封圈都已到位,逐步上紧接管接头,确保管道连接正确。
- 4) 把泡沫桶冲洗管道连接在文丘里管道电磁阀和分离器上的连接点之间。
注意:可用文丘里管道流出的加压的生产用水或加压的替代水源,盐水或淡水来冲洗。
- 5) 把总排水管通过熔焊安装到分离器底部的弯头插口里的(不要熔焊总排水管顶部的排水"T"管)
- 6) 把小排水管和球阀安装到分离器底部的小弯头插口里。



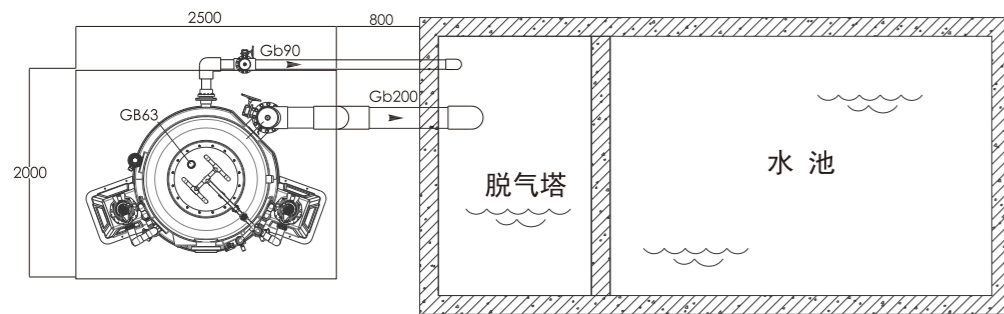
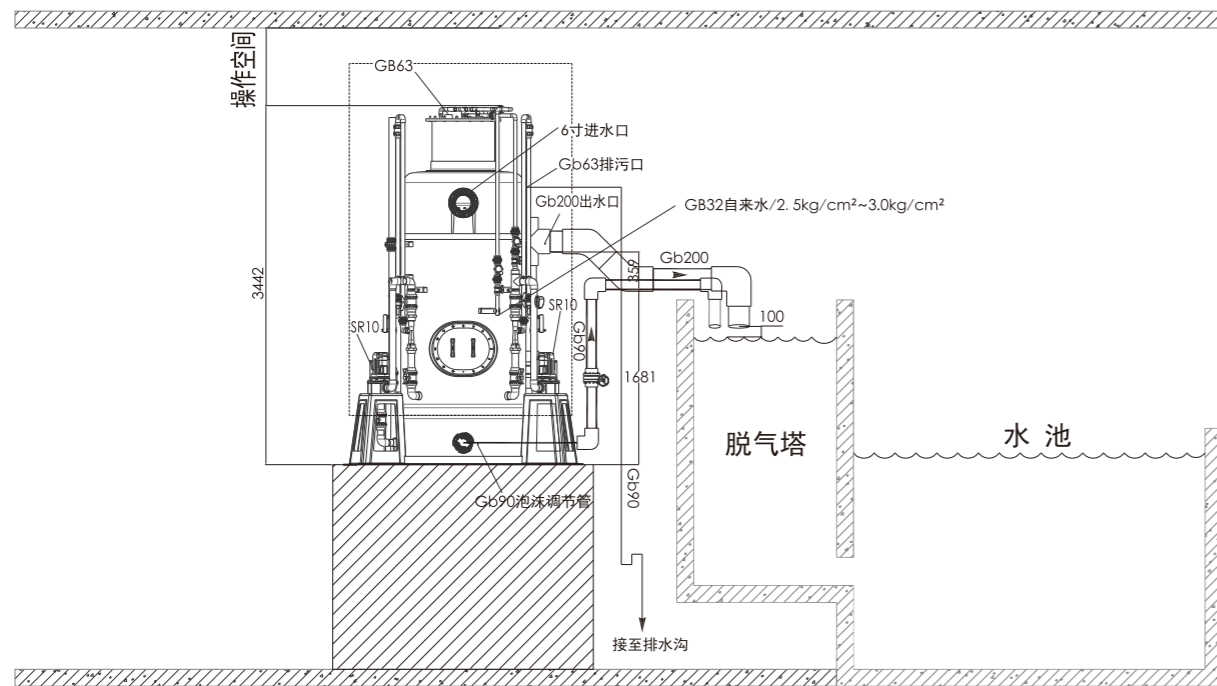
型号 Model	尺寸 DIM A (mm)	尺寸 DIM B (mm)	尺寸 DIM C (mm)	尺寸 DIM D (mm)	尺寸 DIM E (mm)	出水口 参考高度 F (mm)	进水口 Inlet N1 (mm)	出水口 Outlet N2 (mm)
NPS410	2140	410	500	1770	160	1280	63	90
NPS600	2620	600	720	2100	150	1760	90	110
NPS800	2933	800	940	2290	180	1990	110	160
NPS1000	3157	1000	1180	2425	200	2120	160	200
NPS1200	3303	1200	1380	2500	200	2140	160	200
NPS1400	3372	1400	1640	2475	230	2220	200	250
NPS1600	3700	1600	1870	2800	270	2220	200	315
NPS2000	4832	2000	2300	3780	285	3150	200*2	250*2

型号 Model	射流泵出水口 Venturi Pump Outlet N3 (mm)	射流泵进水口 Venturi Pump Inlet N6 (mm)	冲洗进水口 Backwash Inlet N4 (mm)	排污口 Waste N5 (mm)	冲洗管盖排气孔 Air Vent N7 (mm)
NPS410	50	63	20	50	50
NPS600	50	63	32	63	50
NPS800	63	63	32	63	63
NPS1000	63	63	32	63	63
NPS1200	63	63	32	63	63
NPS1400	63	63	32	63	63
NPS1600	63	63	32	90	63
NPS2000	63	63	32	90	63

*** NPS1400**



* NPS1200



型号 Model	1.5min滞留时间 流量(m³/h)	2min滞留时间 流量 (m³/h)	文丘里工作压力 Venturi Process pressure (m)	射流泵型号 Venturi Pump Model	射流泵型号 Venturi Pump Model
NPS410	9.6	7.2	16.5	1585*1	SR10*1
NPS600	24	18	15.5	1584*1	SR10*1
NPS800	45.6	34.2	13.5	2081*1	SR10*1
NPS1000	74	55.5	16.5	2081*1	SR15*1
NPS1200	107.6	80.7	13.5	2081*2	SR10*2
NPS1400	152.4	114.3	16.5	2081*2	SR15*2
NPS1600	220	165	18.5	2081*2	SR20*2
NPS2000	503.2	377.4	16.5	2081*3	SR15*3

Locating and Installing the Fractionator

- 1) The Fractionator should be located on a flat and level concrete floor.
- 2) Locate a 10 mm thick polystyrene pad on top of the concrete slab.
- 3) Lift the Fractionator on top of the polystyrene pad.
- 4) If the Fractionator is to be used with ozone the ozone venturi (Kynar material) should be connected to the ozone generator via a water trap to prevent water backflow to the ozone generator should the venturi become blocked.
- 5) Connect the venturi supply pump plumbing to the flange at the top of the venturi manifold. The venturi pump suction can be connected to the flange at the bottom of the Fractionator or to an alternative water supply point (check LSS designers detail). Note: do not use soiled water to supply the venturi pump as this may result in detritus blocking the venturi.
- 6) Connect the foam Fractionator supply pump discharge plumbing to the Fractionator water supply flange. Note: if multiple Fractionators are connected to a single pump care should be taken to balance the plumbing to insure uniform flow is achieved.
- 7) Adjust the invert level of the main discharge Tee to the dimensions "Outlet reference height (D)" shown in the data sheet appropriate to your model, adjust to the correct direction, but do not solvent weld until flow rates and performance have been tested (minor height adjustments may be required during commissioning to provide optimum performance)
- 8) Set the invert level of the small discharge pipe to about 150 mm below the level of the large discharge pipe.
- 9) Install in scum bucket discharge plumbing to the Fractionator and to the waste water collection point.

定位和安装分离器

- 1) 分离器应该安置在平坦的混凝土地面。
- 2) 在混凝土地板上放上10mm厚的聚苯乙烯板。
- 3) 把分离器抬到聚苯乙烯板上。
- 4) 如果分离器与臭氧一起使用, 应把臭氧文丘里(聚偏氟乙烯材料)通过一个聚水器连接到臭氧发生器上, 以免文丘里发生堵塞时水回流到臭氧发生器。
- 5) 把文丘里供水泵的管道连接到文丘里管道顶部的凸缘上。文丘里水泵吸水管可连接到分离器底部的凸缘上或一个替代供水点上(参阅LSS设计者详情)。
- 6) 把蛋白分离器供水泵的排水管连接到分离器供水凸缘。注意: 如果多个分离器连接到单个泵上, 应该注意平衡管道以实现均匀流。
- 7) 调整主排水T管到正确的方向, 参考数据表“出水口参考高度(D)”所示的高度尺寸为基准, 进行上下微调。在此阶段不要进行溶剂焊接, 直到流量和性能调试完成(可能调试过程中需要高度的轻微调整以提供最佳性能)。
- 8) 小排水管的反转水位要设置为低于大排水管水位约200mm。
- 9) 把泡沫桶排水管安装到分离器里和废水收集点。

Commissioning the Fractionator

- 1) Start the Fractionator supply pump and leave running until the Fractionator is full of water, stop the pump and check for any water leaks in the installation.
- 2) Set the small discharge pipe control valve to the fully open position.
- 3) Start the supply pump and venturi pump and allow water levels in the Fractionator to settle, note the water/scum level interface at the top of the Fractionator. If the water level is too high it will be seen in the stand pipe at the top of the scum cone, if this is the case the level of the main discharge pipe "T" should be lowered a little until the water/scum interface is correct. If the water level in the Fractionator is too low progressively close the control valve on the small discharge pipe until the correct level is reached. If the correct level cannot be achieved by closing this valve, open this valve to the 50% open position and raise the main discharge pipe "T" the main discharge pipe "T" until the correct water level is achieved.

Note: When the Fractionator flow has been tuned as described above the main discharge pipe "T" level should be noted and marked, it should then be removed and re-installed using a low bond silicone sealant to the marked level.

Note: the amount of scum being discharged from the scum cone and into the scum bucket will vary depending on the amount of surfactant matter in the water.

- 4) Set the timer on the scum cone solenoid wash down valve to operate for about 10 seconds every 10 minutes, this can be adjusted to suit actual operating conditions.

调试分离器

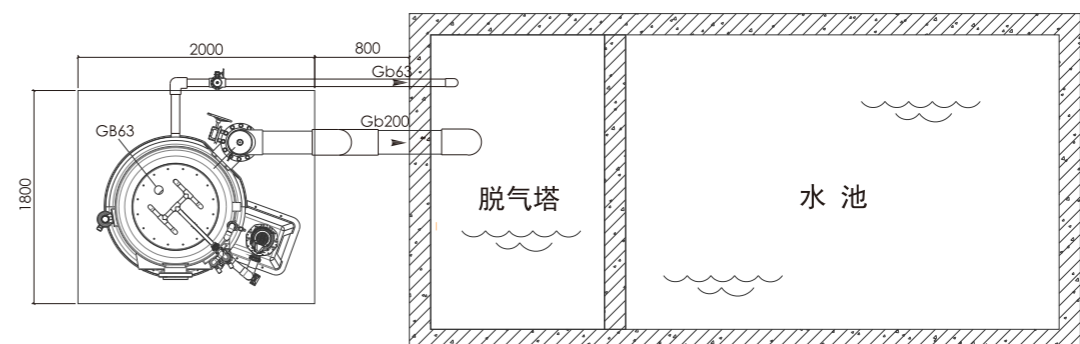
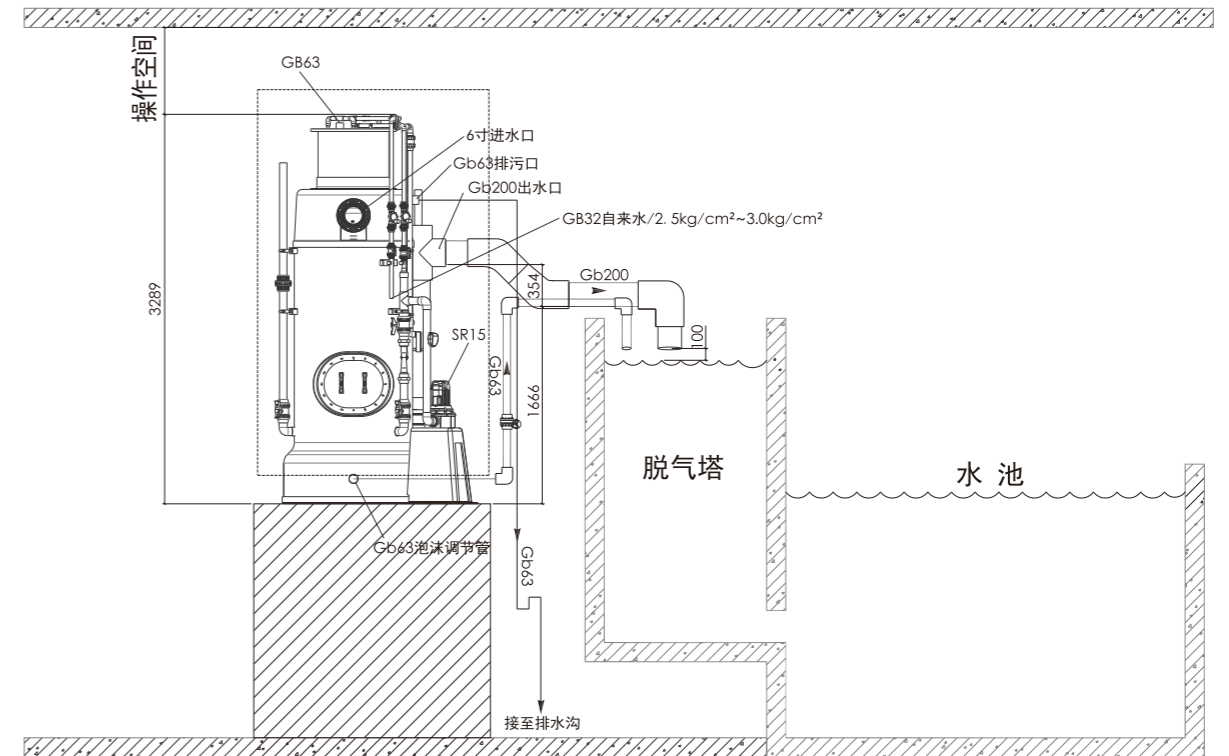
- 1) 启动分离器供水泵, 让水泵运转, 直到分离器内充满水, 关停水泵, 检查装置内是否有漏水现象。
- 2) 把小排水管控制阀调到全开位置。
- 3) 启动供水泵和文丘里泵, 使分离器里的水位下陷, 注意分离器顶部水/泡沫的水平交界面。如果水位太高, 可在泡沫锥斗顶部的竖管里观察到, 在这种情况下总排水“T”管的水位应该少量降低, 直到水/泡沫交界面处于正确状态。如果分离器里的水位太低, 逐步关闭小排水管上的控制阀, 直到达到正确水位。如果通过关闭阀门无法达到正确的水位, 把阀门开到50%的位置, 提高总排水“T”管, 直到达到正确水位。

注意: 如果按上述方法调整了分离器的水量, 应记录和标注总排水“T”管的水位, 然后卸下排水管, 用低粘合硅密封胶重新安装到标记的水位。

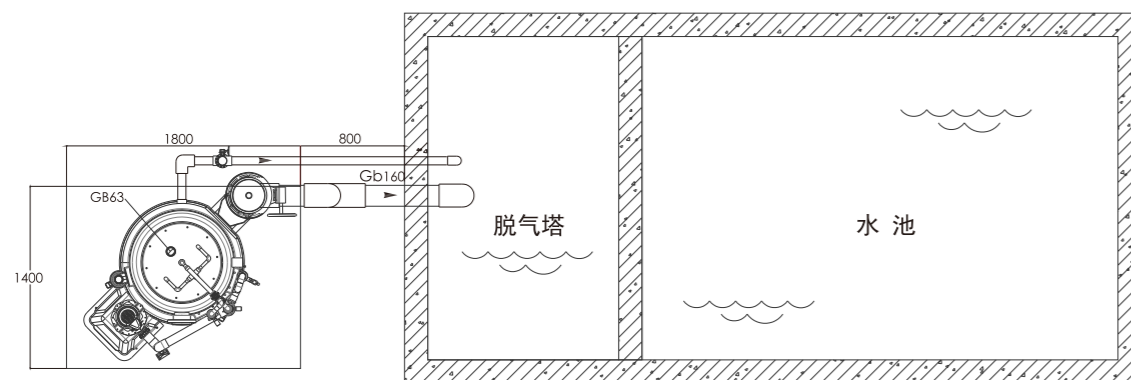
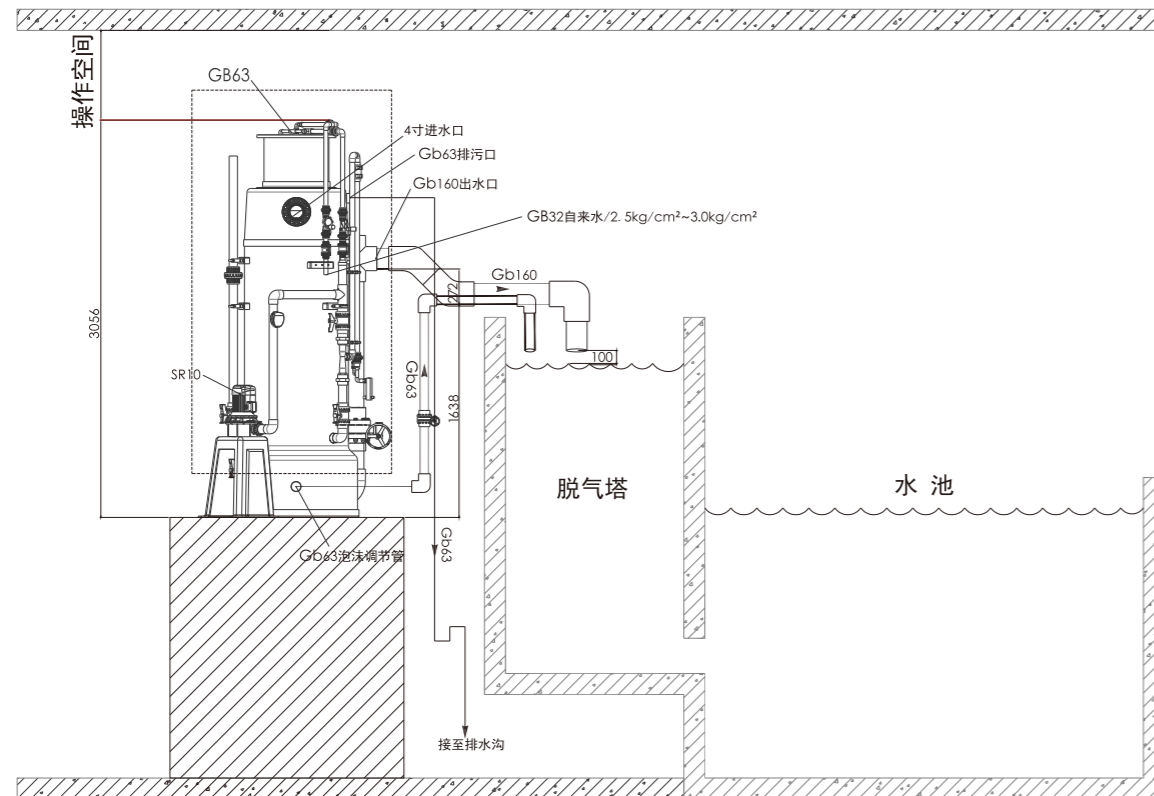
注意: 从泡沫锥斗里排出的和排到泡沫桶里的泡沫量的多少取决于水中表面活性物质的数量。

- 4) 把泡沫桶电磁冲洗阀上的定时器设定成每10分钟运转10秒, 可调整此设定以适应实际的操作条件。

* NPS1000



* NPS800

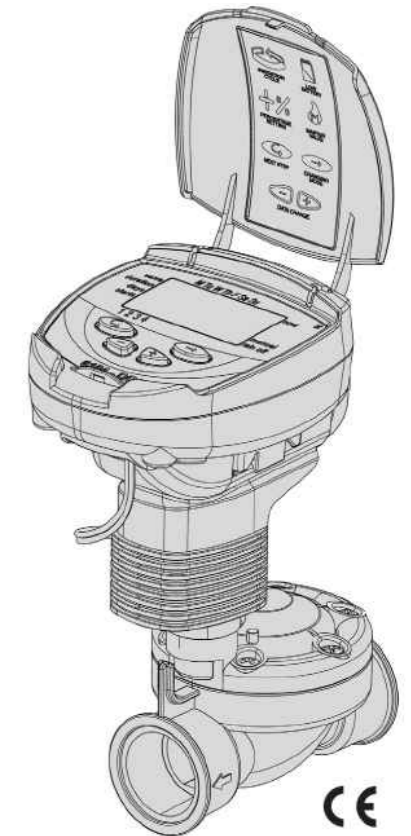


Battery Operated Advanced Computerized Irrigation Controller Installation and Operating Instructions

This handbook provides the installation and operating instructions for the DC-1, DC-2 and DC-4 controllers and S series DC-1S, DC-4S, DC-6S

Main Features:

- Independent programming of each individual valve
- Weekly or cyclical programming
- Up to 4 operations per day in weekly program mode
- Irrigation duration one minute to 12 hours
- Irrigation frequency once a day to once every thirty days in a cyclical program
- Waterproof when immersed in water (Ip68)
- Rain off sensor option
- Weather resistant
- Irrigation duration modifiable as a function of percentage entered
- Operation of one to 4 valves and a master valve
- Computerized "manual" operation of individual valves
- Sequential "manual" operation - optional
- Batteries: DC-1-4: two 9V alkaline batteries
- Use only alkaline batteries
- Operation temperature -10° to 70°



电池驱动的高级计算机化喷淋控制器的安装与操作说明

此手册提供DC-1, DC-2和DC-4控制器以及S系列的DC-1S, DC-4S, DC-6S的安装及操作说明。

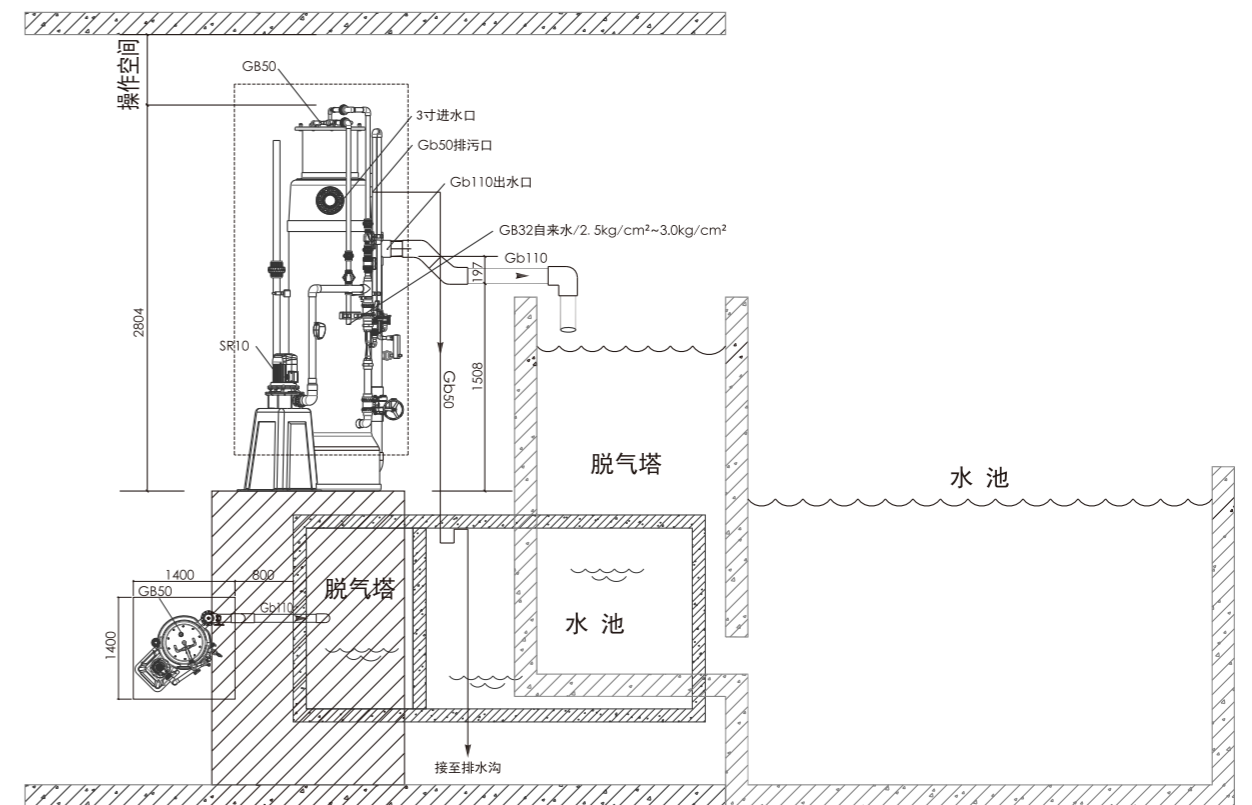
主要特点:

- 每个单独的阀门都有独立的程序
- 每周或周期性地编程。
- 在每周编程模式中, 每天操作次数多达4次。
- 喷淋期间从一分钟到12小时。
- 被浸入水中时可以防水 (IP68)
- 挡雨传感器选项
- 能抵御恶劣天气
- 键入百分比函数时, 喷淋周期可更改
- 可以操作1到4个阀门并主阀门
- 每一个单独阀门都设有计算机化的“手工”操作
- 顺序“手工”操作——可选
- 电池: DC-1-4: 两节9V锂电池
- 只能使用锂电池
- 操作温度从-10° 到70°

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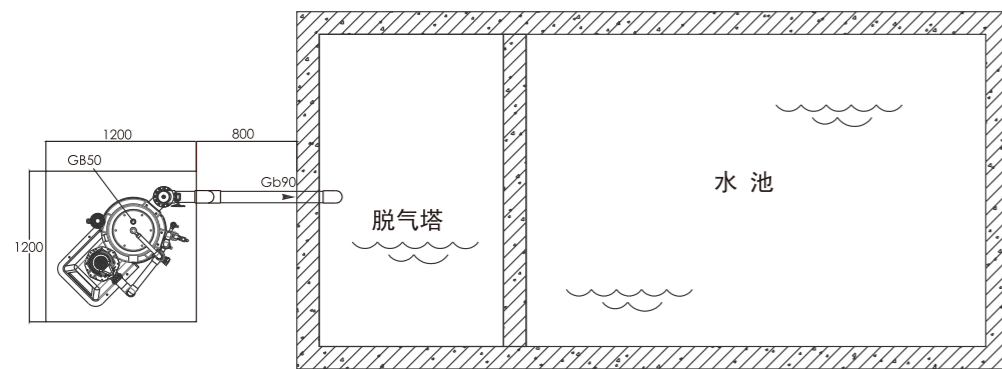
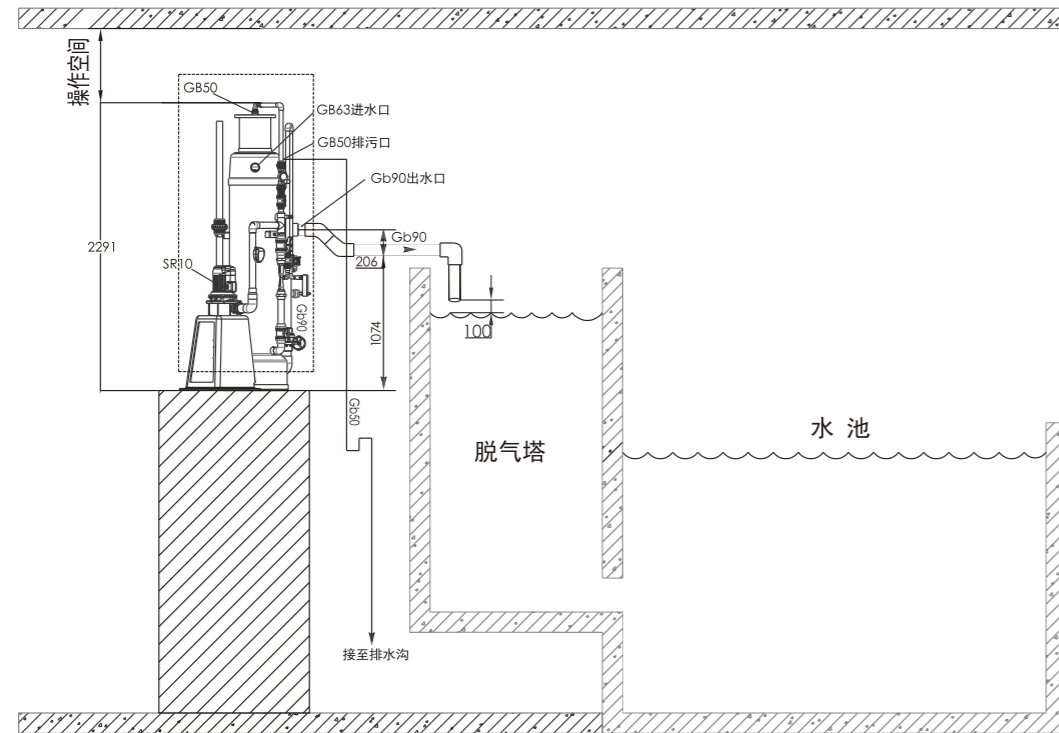
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* NPS600



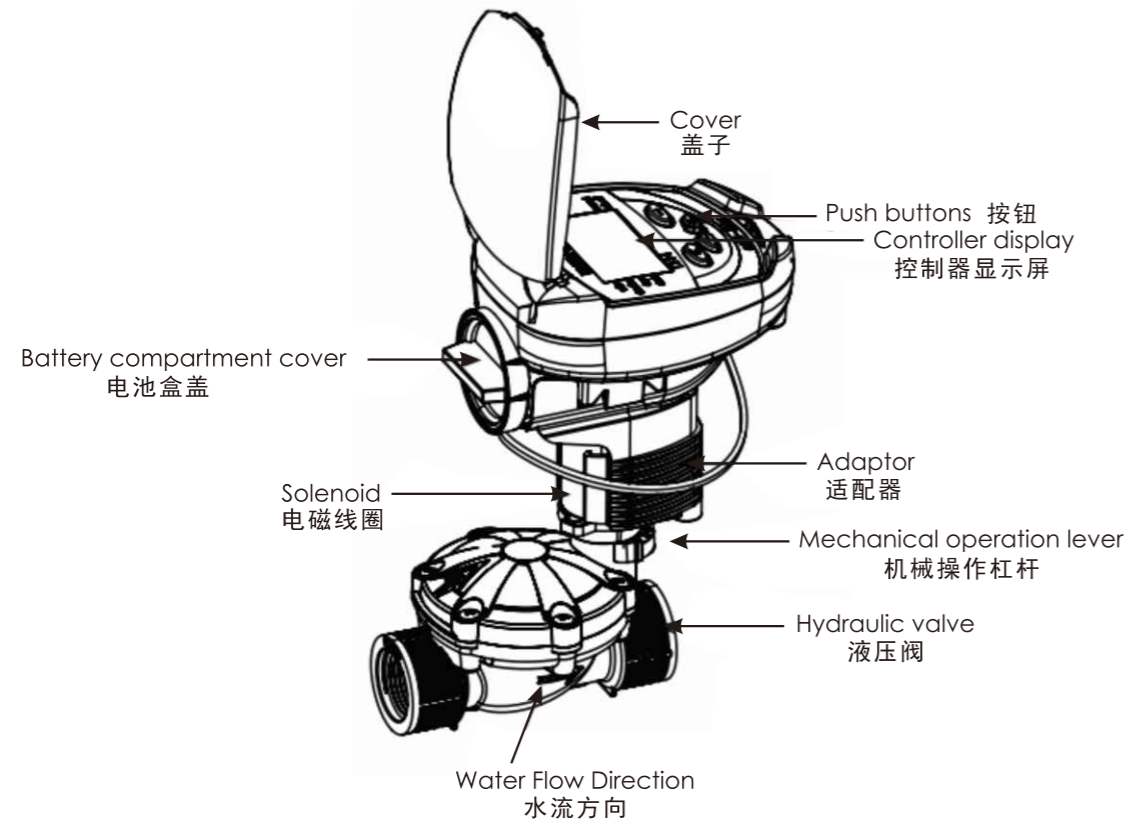
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* NPS410



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1. Parts Identification 零件识别



Important!
Assembly of a filter upstream of the valve is mandatory. (See list of accessories page 20).

重要提示!
必须安装阀门的过滤上游组装 (参见第20页的配件列表)

2. Setting up the Irrigation Controller 设置喷淋控制器

2.1 Valve and Solenoid Assembly

The mechanical opening lever is black. The lever has 3 positions:

1. AUTO - mid position
2. CLOSE - rotating clockwise, in any position
3. OPEN - rotating counter clockwise. In normal working conditions, the lever should be in the middle, position AUTO.

* If it is necessary to replace the solenoid, do not disassemble the blue ring underneath.

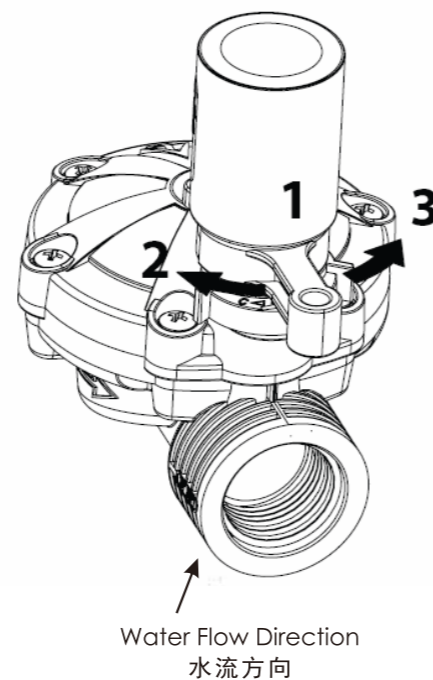
2.1 阀门及电磁线圈总成

机械开杆为黑色, 有以下三个位置:

1. 自动---中间位置
2. 关闭---在任意位置顺时针旋转
3. 打开---逆时针旋转

在通常工作条件下, 杠杆应位于中间位置, 即自动。

* 如果需要更换电磁线圈, 请勿拆卸下方的蓝环



带限制条件的质保书

1. 应当在首个购买者购买产品36个月的期限内(保修期), 按照此带限制条件的质保书中所列条款和限制, 为产品提供带限制条件的保修。
2. 产品保修只能延伸至产品的首个购买者(顾客), 在其要求保修服务时, 必须出示有效的购买收据。如果无法提供所要求的文件的话, 会导致保修服务无效。
3. 向顾客担保, 从材料上来讲, 产品符合文件上的描述, 在材料和制作工艺上不存在缺陷。因此, 在此质保书条件下, 顾客唯一可能要求的纠正措施就是修理, 或者根据EMAUX自行判断, 按照此质保书的条款, 要求更换产品或任何部件, 除此之外, 不提供任何其他纠正措施。因此, 在保修期内, 如果产品缺陷被证明是因为EMAUX的工艺错误或产品缺陷造成的, EMAUX会及时承担对有缺陷的产品(或其部件)的修理工作, 或根据EMAUX的自行判断对其进行更换; 所有这些都必须遵照此带限制条件的质保书中所列的条款和条件。
4. EMAUX对产品的保修或者其他做法不适用于以下情况:
 - (i) 不是EMAUX的所作所为(行动或疏忽), 包括对产品(或其部件)的误用/滥用, 和/或未完全按照EMAUX的指导进行安装和/或使用该产品;
 - (ii) 其他系统/组成部分/设备/技术和/或任何产品的整合/界面;
 - (iii) 未经EMAUX的批准, 任何产品中所包括/安装的任何部件/组件, 和/或不同于EMAUX的东西。
 - (iv) 除了EMAUX之外, 对任何产品进行的任何实际或想要进行的更改/修理/干预(包括对任何产品中包含/使用的软件代码进行的任何使用/操作, 和/或干预/处理)。
 - (v) 产品中所插入/包含的任何数据/信息/内容;
 - (vi) 因在转移和/或操作时发生的事故导致的故障或损害, 和/或因为火灾、地震、洪水、闪电和/或任何其他外部灾难导致的故障或损害。
 - (vii) 无法预见事故、折损或不受EMAUX控制的任何其他外在因素, 或由除了EMAUX以外的任何人(包括顾客)对产品所进行的安装、修理、调整、重建、修改、更改或转变。
5. 除了质保单上的规定外, EMAUX的保修条件只有在所有下列情况都满足时才能实现:
 - (i) 顾客按照EMAUX的指导对产品进行操作和维护;
 - (ii) 顾客履行了对EMAUX(或其授权的中间商, 视情况而定)的付款义务。
6. 无论什么时候, EMAUX都不会对非本公司制造并分销的任何产品(或其任何部件)给予任何保修或担保, 也不会对并非购自EMAUX或其授权的中间商的任何产品(或其任何部件)给予任何保修或担保, 不管这些产品是否带有与EMAUX所属或使用的商标相类似的商标。
7. 在更换或修理产品之后, 对于新产品或修理过的产品, 其保修单只有在原有保修期未过期的情况才生效。任何更换过的有缺陷的产品或部件都是EMAUX的财产。
8. 如果顾客请求了任何保修服务, 并且也进行了保修, 但产品却未发现任何缺陷, 或如果这种缺陷不在EMAUX的保修条件下, 则EMAUX保留起诉顾客的权利。
9. 如无另行说明, EMAUX在任何情况下, 都不会以任何方式对丢失、损坏、成本、花费、支出、责任和/或债务负责(包括顾客的和/或任何第三方的)——包括(但不限于)直接的和/或间接的(包括偶然发生的和/或特殊的和/或顺序性的), 但是由于损坏所引起的, 包括关于财产和/或设备损失, 利润损失、收入损失、税源损失或对业务或名誉造成的损害, 不管是否以违反合同、侵权(包括过失)、产品责任或与之相反为基础——由于履行或不履行产品或其部件的任何方面所引起的; 上述所有这些情况, 不管EMAUX和/或顾客是否明白这些损失的可能性。
10. 在任何情况下, 任何EMAUX可能会负的与产品和/或此质保书有关的责任, 包括(但不限于)与产品相关或由产品(或其任何部件)及其使用所引起的责任, 应(对归结在一起的所有损失、索赔和案由)限制一个总数量, 这个量需等同于EMAUX从顾客处实际收到的关于产品的考虑。不管此责任是否以合同、民事侵权行为、严格赔偿责任或任何其他理论为基础, 都应应用此限量。
11. 质保书和此处所解释的纠正方法是专有的, 可以代替所有其他的质保书、纠正方法和条件, 不管是口头的、书面的、法定的、表达的或暗示的。EMAUX特别声明, 对任何或所有法定的或暗示的担保不承担责任, 包括但不限于出于某种特殊意图对适销性和适用性所做的担保, 以及对隐藏或潜在缺陷的担保。
12. 顾客需对产品的选择、使用、效率和适用性全权负责。
13. 此带限制条件的质保书中所列的条款, 其解释和管辖全部并且必须依照以色列国的法律, 不适用其他法律。任何及全部法律行为的诉讼受以色列法院管辖, 不适用其他管辖权。

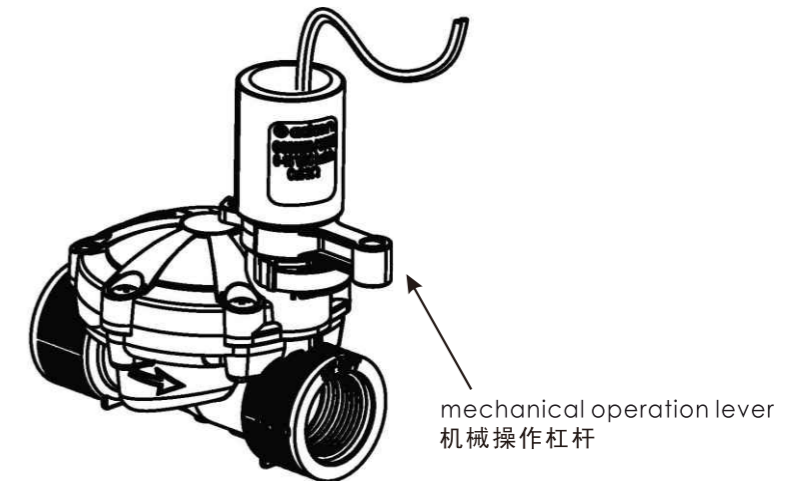
LIMITED WARRANTY CERTIFICATE

1. EMAUX shall, for a limited period of 36 months from the retail purchase date of the original (first) purchaser ("the Warranty Period"), provide limited warranty for the Products, as provided for and subject to the provisions and limitations of this Limited Warranty Certificate.
2. EMAUX's Warranty for the Product only extends to the original purchaser of the Product ("the Customer") who, upon requesting warranty service, must present EMAUX with a valid purchase receipt. Failure to produce the said documentation will result in the request for warranty being null and void.
3. EMAUX warrants to the Customer that the Product shall materially conform to the description in EMAUX's documentation and shall be free from defects in material and workmanship. Accordingly, Customer's sole and exclusive remedy under this warranty is the repair or - to EMAUX's sole discretion - the replacement of the Product or any part/s according to the terms of this Warranty, and no other remedy shall be available. Therefore, if -within the Warranty Period - the Product is proven to be defective by reason of faulty workmanship or materials by EMAUX, EMAUX undertakes, with reasonable promptness, to have the defective Product (or any part/s thereof) repaired, or at EMAUX's discretion, replaced; All subject to the terms and conditions of this Limited Warranty Certificate.
4. EMAUX's warranty for the Product or otherwise shall not apply to any of the following:
 - (i) any conduct (by act or omission) not by EMAUX, including any misuse/abuse of any Product (or part/s thereof), and/or any failure to install and/or use any Product in full compliance with EMAUX's instructions;
 - (ii) other systems/components/devices/technologies and/or the integration/interface thereof with any Product;
 - (iii) any part/component which has been included/installed in any Product not at EMAUX's approval and/or other than by EMAUX;
 - (iv) any actual or attempted change/repair/interference of/with any Product (including any use/handling of, and/or interference/dealing with, any code of any software included/used in the Product) other than by EMAUX;
 - (v) any data/information/content which has been inserted/included in a Product;
 - (vi) malfunction or damage resulting from accidents, which occur during transit and/or handling, and/or malfunction or damage due to fire, earthquake, flood, lightning and/or any other external disaster; systems /components/devices/technologies and/or the integration/interface thereof with any Product;
 - (vii) any part/component which has been included/installed in any Product not at EMAUX's approval and/or other than by EMAUX;
 - (viii) any actual or attempted change/repair/interference of/with any Product (including any use/handling of, and/or interference/dealing with, any code of any software included/used in the Product) other than by EMAUX;
 - (ix) any data/information/content which has been inserted/included in a Product;
 - (x) malfunction or damage resulting from accidents, which occur during transit and/or handling, and/or malfunction or damage due to fire, earthquake, flood, lightning and/or any other external disaster;
 - (xi) unforeseen accidents, wear and tear, or any other external factors beyond EMAUX's reasonable control, or to any Product installed, repaired, adjusted, rebuilt, modified, changed or converted by any person (including the Customer) other than EMAUX;
5. In addition and without derogating from the provisions of this Warranty, EMAUX's warranty is conditioned upon the all of the following taking place:
 - (i) Customer's operating and maintaining the Product in accordance with EMAUX's instructions;
 - (ii) Customer's not being in default of any payment obligation to the EMAUX (or its authorized dealer, as relevant).
6. EMAUX does not give any warranty or guarantee whatsoever in respect of any Product (or any part/s thereof) which has not been manufactured and distributed by the EMAUX and which has not been purchased from the EMAUX or any of its authorized dealers, whether such products are branded with any trademarks similar to any trademark belonging to or used by EMAUX.
7. After replacement or repair of the Product, the Warranty for the new or repaired Product shall be valid only for the non-expired period of the original Warranty Period. Any defective Products or part/s, which has been replaced, shall become EMAUX's property.
8. EMAUX reserves the right to charge the Customer if any warranty service is requested and carried out but no fault is found in the Product or if such defect/fault is not under EMAUX's Warranty.
9. Notwithstanding anything to the contrary, EMAUX shall not be responsible and/or liable, under any circumstances and in any way, for any loss, damage, costs, expenses, expenditures, responsibility and/or liability (including of Customer and/or any third party)-including (without limitation) direct and/or indirect (including incidental and/or special and/or consequential), however arising, including in respect of damages to or loss of property and/or equipment, loss of profit, loss of use, loss of revenue or damages to business or reputation, whether or not based on breach of contract, tort (including negligence), product liability or otherwise-arising from the performance or non- performance of any aspect of the Product or any part thereof; All of the above, whether or not EMAUX and/or the Customer shall have been made aware of the possibility of such loss.
10. In any event, any liability which EMAUX may have in connection with the Product and/or this Warranty, including (without limitation) in connection with and/or resulting from the Product (or any part thereof) and the use thereof, shall be limited to a total amount (for all damages, claims and causes of action in the aggregate) equal to the consideration actually received by EMAUX from the Customer for the Product. The limitations shall apply whether the liability is based on contract, tort, strict liability or any other theory.
11. This Warranty and the remedies set forth herein are exclusive and in lieu of all other warranties, remedies and conditions, whether oral, written, statutory, express or implied. EMAUX specifically disclaims any and all statutory or implied warranties, including, without limitation, warranties of merchantability and fitness for a particular purpose and warranties against hidden or latent defects.
12. The Customer shall be solely responsible for the selection, use, efficiency and suitability of the Product(s).
13. The provisions of this Limited Warranty Certificate shall be interpreted and governed, solely and exclusively, pursuant to the laws of the State of Israel, and no other law shall apply. Any and all legal actions shall be litigated within the jurisdiction of the courts of Israel, and no other jurisdiction shall apply.

2.2 Manual-Mechanical Operation 手动---机械操作

Manual-Mechanical Operation. The irrigation valve can be opened and closed independent of the controller's operation. Manual operation is useful when immediate irrigation is required, and the controller is not assembled yet.

喷淋阀门的开关可独立于控制器的操作。当需要立即进行喷淋而控制器尚未安装时,手动操作会非常有效。



2.3 Battery Installation 电池安装

Open the battery compartment cover. Insert 9V batteries (see illustration). All the controller display elements appear briefly on the display, followed by a blinking time of 12:00. The controller is now ready to be programmed.

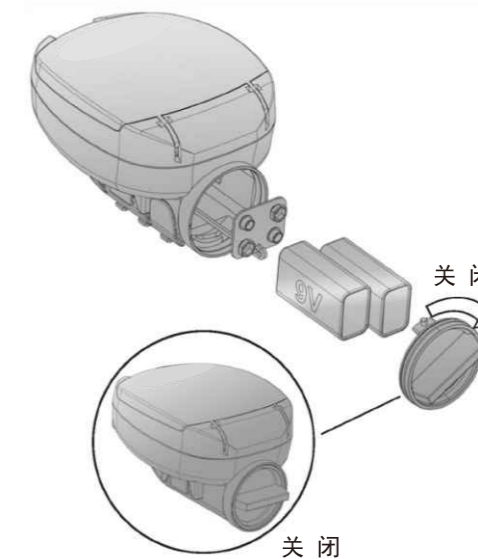
Important !

Make sure to replace the battery compartment cover with the grip (see drawing) and then rotate the cover 1/8 of a turn to the right. Be sure to do so otherwise the battery cover pins might break.

打开电池盒盖。装入9V电池(如图所示)。显示屏上会简要显示所有的控制器显示要素,并伴有12:00的闪烁时间。这样控制器就准备好可以编程了。

重要提示!

请确保使用电池手柄更换电池盒盖(如图所示)然后将盖子向右旋转1/8圈。必须要这样做,否则电池盒盖的扣针可能会折断。



2.4 Installing the controller in the irrigation system 安装喷淋系统中的控制器

The controller can be installed on the solenoid or on the wall.

Installing on the solenoid:

- a. Put the solenoid adaptor on the solenoid. The controller will be assembled to the adaptor with a small click.

Installing on the wall:

- a. Place the mounting plate (5) on the wall using 3 screws(not included).
- b. Remove bracket (2) from controller and slide onto the mounting plate.
- c. Connect the controller to the bracket (2) by pressing.

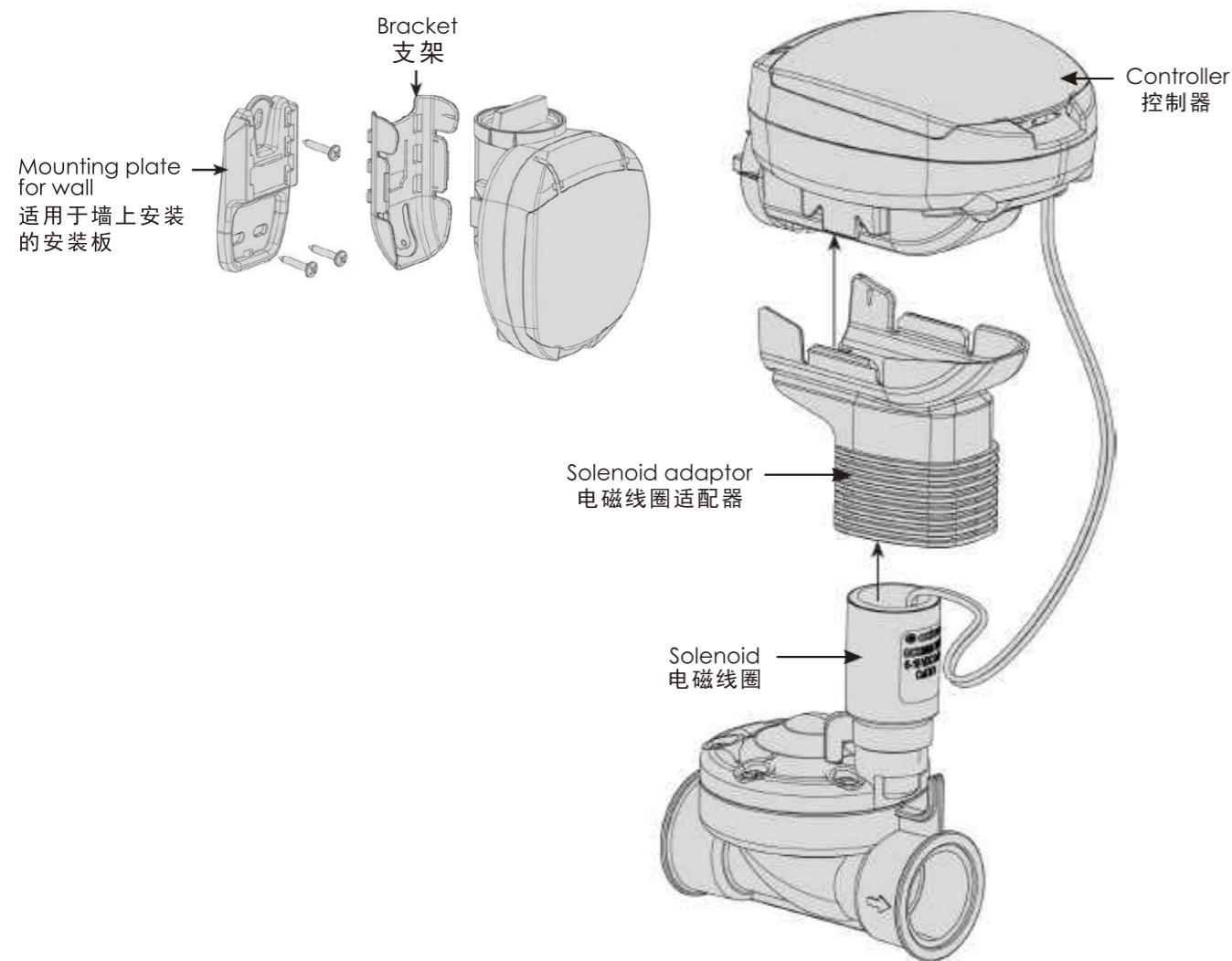
控制器可以安装在电磁线圈上或墙上。

安装在电磁线圈上:

- a. 将电磁线圈适配器放置在电磁线圈上。只需轻轻一点, 控制器就能安装到适配器上。

安装在墙上:

- a. 用3个螺丝(不包括在内)将安装板(5)安在墙上。
- b. 将支架(2)从控制器上去除, 并滑动到安装板上。
- c. 通过按压的方式将控制器与支架(2)相连。



Valve No. 阀门代码	Irrigation Program 喷淋程序		Irrigation Duration (minutes, hours) 喷淋持续时间 (分钟, 小时)	Daily start times 每日开始时间			
	Weekly 每周	Cyclical 循环		1	2	3	4

The irrigation/vegetation area
(window box, porch balcony, lawn)
喷淋/绿化面积
(窗栏花箱、阳台、草坪)

Date: _____



8. Additional Accessories and Products 额外配件及产品

8.1 General 通用

Lockable protective box
Line Filter, BSP 3/4"
Line Filter, BSP 1"
Waterproof connector
Extension cable for solenoid cables

可以上锁的保护箱
精密过滤器, BSP 3/4"
精密过滤器, BSP 1"
防水接头
为电磁线圈电缆提供的延伸电缆

8.2 Two-way (2W) Controllers 双向 (2W) 控制器

Valve + DC solenoid from EMAUX:

2W 3/4" (valve + solenoid)
2W 1" (valve + solenoid)
2W 1 1/2" (valve + solenoid)
2W 2" (valve + solenoid)
2W DC Solenoid Only
3/4" (Valve + 2W adaptor)
1" (Valve + 2W adaptor)
1 1/2" (Valve + 2W adaptor)
2" (Valve + 2W adaptor)

来自EMAUX的阀门及DC电磁线圈:

2W 3/4" (阀门及电磁线圈)
2W 1" (阀门及电磁线圈)
2W 1 1/2" (阀门及电磁线圈)
2W 2" (阀门及电磁线圈)
只适用于2W DC电磁线圈
3/4" (阀门及2W适配器)
1" (阀门及2W适配器)
1 1/2" (阀门及2W适配器)
2" (阀门及2W适配器)

2.5 Wiring the solenoids 电磁线圈布线

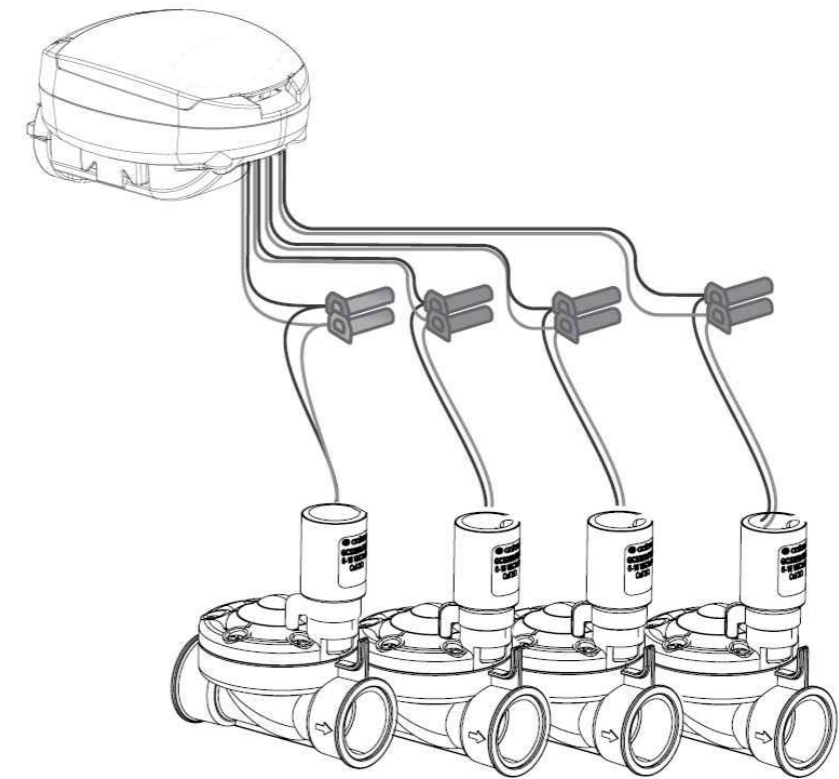
NOTE: Each zone requires a dedicated pair of wires from the controller.

The four and six station controllers have red and black pairs of wires numbered for each valve. Notice there are 2 extra sets of wires. One set of wires (black and red) is stamped with the letter M representing the master valve, and one set of wires (yellow) with the letter S representing the rain sensor connection. Connect each of the controller wire sets (each with red and black) to each solenoid wire (red and black). Connect the red wire from the controller to the red wire on the solenoids and each of the black wires from the controller to each black wire on the solenoids using waterproof connectors.

注：每一圈都需要来自控制器的专用电线组。

四站和六站控制器分别有红色和黑色的电线组为每一个阀门进行编号。注意有两条额外的电线组。一组电线(黑色和红色)印有字母M,表示主阀门,另一组电线(黄色)印有字母S,表示雨水传感器连接。将每一个控制器电线组(每一组都有红线和黑线)与每一个电磁线圈电线(红线和黑线)相连。

使用防水性连接器将源自控制器的红色电线与电磁线圈上的红色电线相连,每一组源自控制器的黑色电线与每一根电磁线圈上的黑色电线相连。



NOTE:

- If you install a master valve, it will open automatically with each valve. No special programming needed.
- Do not strip the master valve or sensor wires unless using master valve or rain sensor.
- The solenoid operates only with standard 2-way normally closed valves.

注意:

- 如果你安装的是主阀门,它会自动打开每一个阀门,不需要单独编程。
- 请勿去除主阀门或传感器的电线,除非使用的是主阀门或雨水传感器。
- 电磁线圈只能用标准的通常处于关闭状态的两通阀进行操作。

3. Programming the Irrigation Controller 喷淋控制器的程序编制

This section describes the programming steps for a simple irrigation schedule. It is followed by a section dealing with more advanced irrigation controller operations.

The irrigation controller is programmed with the aid of 4 buttons:

- ⏪ Programming Step Selector - used to select the desired programming mode (e.g., clock setting mode).
- ⏩ Parameter Selection Button - used to select the parameter to be changed (e.g., hour, minute, etc.). The selected parameter can only be changed when its entry is blinking on the display.
- ⊕ Increment Button - increases the value of the selected parameter (e.g., when hour is selected, from 06:00 to 07:00).
- ⊖ Decrement Button - decreases the value of the selected parameter (e.g., when hour is selected, from 06:00 to 05:00).

在这一节内,对一项简单的喷淋进度的程序编制步骤进行了描述。其后的一节则涉及更加先进的喷淋控制器的操作。

通过以下四个按钮,可以完成对喷淋控制器的程序编制:

- ⏪ 程序编制步骤选择器——用以选择期望的程序编制模式(如时钟设置模式)
- ⏩ 参数选项按钮——用以选择需要更改的参数(如小时、分钟等)。只有当输入项在显示屏上呈闪烁状态时才能选择参数。
- ⊕ 增加按钮——增加所选参数的量(例如,如果选择小时,可以从06:00调到07:00)
- ⊖ 减少按钮——减少所选参数的量(例如,如果选择小时,可以从06:00调到05:00)

3.1 Setting the Current Time and Day of the Week 设置当前时间及日期

To enable the irrigation controller to operate the irrigation system at the correct times, the current time and current day of the week must first be set.

1. Press ⏪ several times until the 🕒 appears.
2. Press ⏩ The hour digits blink. Set the current hour using ⊕ or ⊖ (Note the AM and PM designations).
3. Press ⏩ The minute digits blink. Set the current minute using ⊕ or ⊖.
4. Press ⏩ A blinking arrow appears at the top of the display. Move the arrow to the current day of the week using the ⊕ or ⊖ button.

If the most recent data item stops blinking before you finish programming it, press ⊕ to continue the programming process.

为了让喷淋控制器在正确的时间操作喷淋系统,必须首先设置当前的时间和日期。

1. 多次点按 ⏪ 直到出现 🕒 的图标。
2. 点按 ⏩ 图标,则显示小时的数字开始闪烁。用 ⊕ 或 ⊖ 设置当前的小时(注意AM和PM的选定)。
3. 点按 ⏩ 图标,则显示分钟的数字开始闪烁。用 ⊕ 或 ⊖ 设置当前的分钟。
4. 点按 ⏩ 图标,一个呈闪烁状态的箭头会出现在显示屏的顶部。使用 ⊕ 或 ⊖ 将箭头移动至目前的日期。



如果在完成程序编制之前,最近的数据项目停止闪烁了,则需按 ⊕ 继续程序编制过程。




7. Maintenance, Troubleshooting and Repairs 维护、故障排除及修理

- Batteries should be removed if the irrigation controller is not going to be used for a lengthy period. The programs will disappear when removing batteries. Again reprogram the controller.
- A filter must be installed upstream of the valve or system of valves and cleaned every few months. Operation without a filter is liable to lead to malfunctions.
- Under normal usage, batteries (Alkaline) last at least a year.
- Do not run water through an irrigation line unless a solenoid is fitted on the hydraulic valve.
- Recommended water pressure: 1-8 ATM (bar).
- 如果喷淋控制器长时间不用,需要将电池取出。取出电池时,程序会消失。再次为控制器编制程序。
- 阀门或阀门系统的上游必须安装有过滤器,每隔几个月清理一次。如果在没有过滤器的情况下进行操作,可能会导致故障。
- 如正常使用,(锂)电池能持续至少一年时间。
- 请勿让水通过喷淋线路,除非液压阀上安装有电磁线圈。
- 建议水压力为: 1-8ATM (bar)

Problem / Event 问题 / 事件	Cause 原因	Solution 解决方案
Valve does not open during Automatic operation or during "Manual" operation via irrigation controller 通过喷淋控制器进行自动操作或手动操作期间,阀门无法打开	The connection between the controller and the solenoid is not good 控制器和电磁线圈之间的连接未接好	Disconnect the solenoid from the controller and reassemble 断开电磁线圈和控制器之间的连接,并重新安装
No display 没有显示	Batteries not working 电池不工作	Replace batteries 更换电池
Valve stays open even though the lever is in AUTO position 阀门一直处于打开状态,即使杠杆处于自动位置	The solenoid is open 电磁线圈打开了	Connect the controller to the valve, insert batteries, close and open manually via the controller 将控制器与阀门相连,插入电池,通过控制器做手动开关
Valve does not close, despite click heard during activation 阀门无法关闭,即使在激活期间能听到咔嗒声	Valve lever not in AUTO position. 阀门杠杆未处于自动位置	Move valve lever to AUTO position 将阀门杠杆移到自动位置
	Dirt and scale in valve mechanism 阀门机制内有灰尘及沉积物	Clean or replace valve 清洁或更换阀门




6.2 Opening an Irrigation Window after Start Time has passed 开始时间过去后如何打开喷淋窗口

Example: You are setting an irrigation program specifying 5 minutes of irrigation every 30 minutes, from 9:00 AM to 5:00 PM. However, you have entered the settings at 9:20 AM. As a result, the program will not commence today, but only from 9:00 AM tomorrow. To force the program to begin today, perform the following steps:

1. Press  until START I is displayed.
2. Press  and  to set any time after the current time: e.g. 9:30 AM. This time will constitute the first start time for today.

From tomorrow, the schedule will operate according to the program you set. The Start I display will display the next start time taking into account the window you have set.



例如: 你正在设定的喷淋程序为每30分钟喷淋5分钟, 从9:00AM到5:00PM。但你在9:20AM时已经输入了设定值。因此程序就不会在今天开始, 只能从明天的9:20AM开始。要使程序从今天开始, 需要做以下几步:

1. 点按  直到START I出现在显示屏上。
2. 点按  和  设置目前时间以后的任何时间: 例如9:30AM。此时间将构成今天的第一个开始时间。



从明天开始, 喷淋计划就将按照你所设定的程序来进行操作。顾及您已经设置过的窗口, START I 将显示下一个开始时间。

6.3 Sensor 传感器

In the "S" series each valve must be associated to the sensor, as needed.

1. Select the valve to which you want to associate the sensor.
2. Press  until  appears alongside the word SENSOR.
3. Press  to activate the sensor in the irrigation program for the selected valve.


The word On is displayed.

As long as the sensor closes the circuit (i.e., the sensor detects the existence of a defined program lockout condition) the symbol  blinks on the display and irrigation will not take place through any valves associated with the sensor. Press  to disable the sensor. The word "OFF" appears on the display.

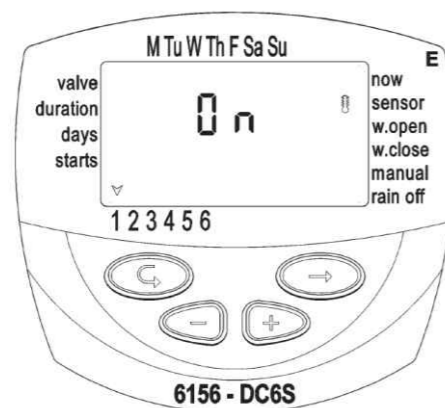
在S系列中, 根据需要, 每个阀门都必须与传感器相连。

1. 选择你想要与传感器相连的阀门。
2. 点按 , 直到在SENSOR一词旁边出现  图标。
3. 点按  为所选阀门激活喷淋程序中的传感器。

显示屏上会出现ON一词。






只要传感器关闭了电路(即, 传感器检测到有被定义的程序锁定条件存在), 符号  就会在显示屏上闪烁, 喷淋就不能通过任何与传感器相连的阀门来进行。

点按  取消传感器功能。显示屏上会显示OFF一词。








3.2 Switching between AM/PM and 24 Hour Time Format 在AM/PM以及24小时制之间的转换

The default time format is AM/PM. There is also a 24 hour time format. To switch between the two formats:

1. Press  until the  appears.
2. Press . The hour digits blink.
3. Press  and  simultaneously. The clock reading switches from AM/PM to a 24 hour time display or vice versa.

You can switch the time display format at any step in the programming process.

默认的时间格式为AM/PM。除此之外, 还有24小时制。这两种格式之间的切换方法如下:







1. 连续点按  直到出现  图标。
2. 点按  表现小时的数字开始闪烁。
3. 同时点按  和 , 则时钟读数由AM/PM转换为24小时时间显示模式, 反之亦然。

在程序编制过程中, 任何步骤都可以转换时间显示模式。

3.3 Valve Selection 阀的选择







This section does not apply to the DC-1 model.

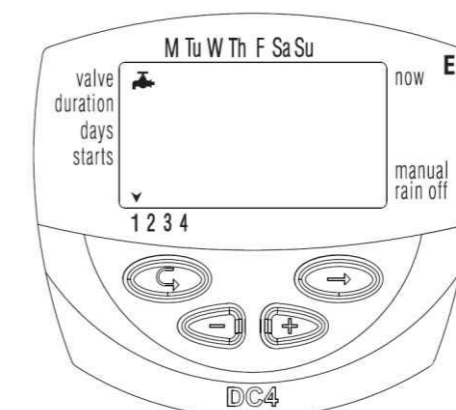
Program an irrigation schedule for each valve individually. First select the desired valve, and then program a schedule as follows:

1. Press  until  appears
2. Press . A blinking arrow appears at the bottom of the display.
3. Move the arrow to the desired valve number by pressing  or .
4. Press  to proceed to the next step.

此项选择不适用于DC-1型号。

为每一个阀门单独编制喷淋进度的程序。首先选择想要的阀门, 然后按照下列步骤编制进度程序:

1. 点按  直到出现  图标。
2. 点按 , 显示屏底部会出现一个闪烁的箭头。
3. 点按  或 , 将箭头移到你想要的阀门编号处。
4. 点按  进行下一步。



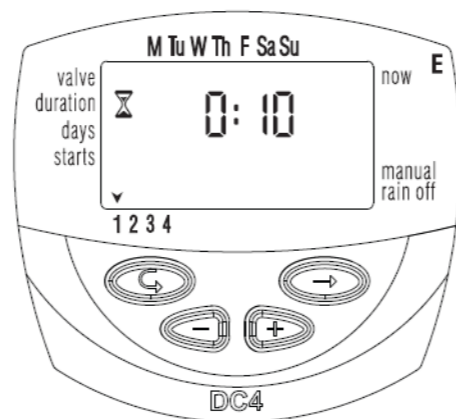
3.4 Setting the Irrigation Duration 设置喷淋周期

This setting determines how long the irrigation lasts.

1. Press until appears.
2. Press . The hour digits blink. Set the desired number of hours by pressing or . Press again - the minute digits blink. Set the desired number of minutes by pressing or .
3. Press to proceed to the next step.

此项设置设定的是喷淋延续时间。

1. 点按 直到出现 图标。
2. 点按 则显示小时的数字开始闪烁。通过点按 或 设置需要的代表小时的数字。再次点按 , 则显示分钟的数字开始闪烁。通过点按 或 设置需要的代表分钟的数字。
3. 点按 进行下一步。



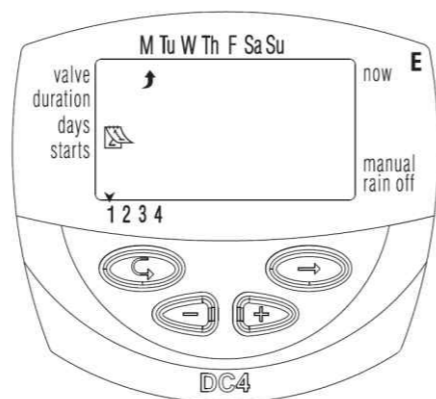
3.5 Selecting Days of the Week for Irrigation 选择喷淋日期

This setting determines which days of the week the irrigation controller will operate the specified valve.

1. Press until appears.
 2. Press . A blinking arrow appears at the top of the display, under Monday.
 3. Move the blinking arrow to the desired day of the week by pressing .
 4. Selecting/adding irrigation days Press . The arrow under the selected day stops blinking, moves one position to the right, and blinks under the next day of the week. You can select additional days of the week in the same manner.
 5. Canceling Scheduled Irrigation Days: Have the arrow blink under the day you want to cancel. Press . The arrow under the selected day will disappear. The blinking arrow will move one position to the right, under the next day of the week. Cancel additional scheduled irrigation days in the same manner.
 6. Press to proceed to the next step.
- * When the blinking arrow reaches Sunday, pressing again displays Once in the center of the display, and at the top right of the display. To return to the "Selecting/Adding Irrigation Days" mode, press once or twice.

此项设置会设定喷淋控制器会在一周里的哪一天操作特定阀门。

1. 点按 直到出现 的图标。
 2. 点按 。显示屏顶部会出现一个闪烁的箭头, 位于周一下方。
 3. 通过点按 , 将此闪烁的箭头移至需要的日期。
 4. 选择/添加喷淋日期: 点按 。所选日期下方的箭头停止闪烁。一直往右移, 使其在下一天的下方闪烁。用这种方法你可以在一周内多选择几天。
 5. 取消已经设定的喷淋日期: 让箭头在你想要取消的日期下方闪烁。按 所选日期下方的箭头会消失。闪烁的箭头会向右方一个方向移动, 位于下一天的下方。用同样的方法取消额外添加的计划喷淋日期。
 6. 点按 进行下一步。
- * 闪烁的箭头到达周日下方时, 再次点按位于显示屏中心的 , 以及位于显示屏右上方的 图标。若要返回"选择/添加喷淋日期"模式, 可点按一次或两次。



6.1 Irrigation Window In the Cyclical Program Mode 周期程序模式中的喷淋窗口

The irrigation window function is incorporated in the "S" series of professional controllers. The irrigation window is an advanced feature which enables you to define that the operations in a cyclical irrigation program (see Section 4.2) be performed during a specified part of the day only (window). An irrigation window can only be defined for an irrigation cycle that is shorter than a full day (up to 23.59 hours), and only in the cyclical irrigation mode. If the irrigation cycle exceeds 24 hours, the window function is disabled.

This function is useful, for example, when irrigation is only required during the hot hours of the day.

1. Press until appears on the display next to W. OPEN. The word OFF or the last OPEN WINDOW time setting entered is displayed.
 2. Press . The word OFF blinks on the display.
 3. Press and to set the desired OPEN WINDOW time (pay attention to the AM/PM designation).
 4. Press until appears, with 12:00 AM or the last CLOSE WINDOW time setting displayed.
 5. Press and to set the desired CLOSE WINDOW time (pay attention to the AM/PM designation).
- * If an irrigation cycle exceeding 24 hours has been programmed, the irrigation window function is disabled.

To cancel the irrigation window

1. Press until appears next to OPEN WINDOW, along with the display of the last OPEN WINDOW time setting entered.
2. Press . The irrigation window open time blinks on the display.
3. Press until Off appears next to . The irrigation window is now cancelled.

喷淋窗口功能是S系列专业控制器的一部分。喷淋窗口是一项高级功能, 使您可以定义只在一天中的某个特定时段(窗口)操作周期喷淋程序(见4.2节)。只有当喷淋周期低于一整天(最多23.59小时)并且处于周期喷淋模式时, 才能定义喷淋窗口。如果喷淋周期超过24小时, 就无法使用此窗口功能。

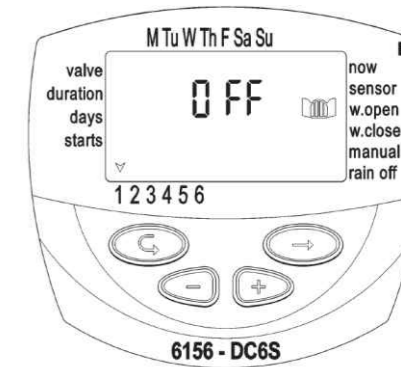
这项功能很有用, 例如, 当只有一天中最热的几个小时需要喷淋时, 就可以使用此功能。

1. 点按 , 直到显示器上, 在W.OPEN旁边, 出现 的图标。会显示OFF一词或键入的上一次设定的开窗时间。
2. 点按 显示屏上OFF一词开始闪烁。
3. 点按 和 设置想要的开窗时间(注意指定AM/PM)。
4. 点按 直到出现 图标, 显示12:00AM或上次设置的关窗时间。
5. 点按 和 设置想要的关窗时间(注意指定AM/PM)。

*如果已经为超过24小时的喷淋周期编制了程序, 将无法使用喷淋串钩功能。

取消喷淋窗口

1. 点按 直到 图标出现在OPEN WINDOW(开窗口)一词的旁边, 同时显示上次键入的开窗时间设定。
2. 点按 喷淋窗口开窗时间会在显示屏上呈闪烁状态。
3. 点按 直到OFF一词出现在 旁边。这样喷淋窗口就取消掉了。



6. Additional Instructions for "S" Series DC-1S, DC-4S, DC-6S S系列中的DC-1S, DC-4S, DC-6S的更多说明

Main Features:

- Irrigation duration in professional controllers of the "S" series: one second to 12 hours
- Irrigation frequency in professional controllers of the "S" series: once every minute to once every 30 days in the cyclical program
- Irrigation window in cyclical program mode in the professional controllers of the "S" series.

Setting the Irrigation Duration

In professional controllers "S" series, the duration of the irrigation can also be programmed in seconds. The method of programming is the same.

Cyclical Irrigation

In the "S" series of professional controllers, the irrigation cycle can be programmed from one minute up. The settings are performed in the same manner.

主要特点:

- S系列专业控制器内的喷淋持续时间: 从1秒钟到12个小时
- S系列专业控制器内的喷淋频率: 循环程序从每分钟一次到每30天一次的
- S系列专业控制器内的循环程序模式中的喷淋窗口

设置喷淋持续时间

在S系列专业控制器中, 喷淋持续时间同样可以设置为秒。程序编制的方法相同。

周期性喷淋

在S系列专业控制器中, 喷淋周期的程序编制最短为1分钟。设置方法相同。

3.6 Setting Irrigation Start Times 设置喷淋开始时间

In this step, up to 4 separate irrigation start times can be programmed for a selected day for the valve being programmed. The selected valve will open at each of the start times set, for the irrigation duration set as described in Section 3.4.

1. Press until the START I appears. The word OFF or the last start time set will appear on the display.
2. Press . The displayed item blinks (OFF or last start time entered).
3. Set the desired start time by pressing or . (Take note of the AM and PM designations). Repeat actions 2 and 3 to set start times I, III and IV, as needed.
4. To cancel a specific start time, select it by pressing . Next, press . The hour digits blink. Press or until the word OFF appears on the display.
5. To program another valve, select it, and repeat the above steps, starting from section 3.3 above.



在这一步骤中, 可以为正在接受编程的阀门所选定的喷淋日期编制多达4个喷淋开始时间。所选阀门会在每一个设置的开始时间开启, 以便进行3.4节中所描述的喷淋期间设置。

1. 点按 直到出现 START 的字样。显示屏上会出现 OFF 一词或上次设置的开始时间。
2. 点按 。正在显示的项目开始闪烁(即键入的OFF或上次设置的开始时间)。
3. 通过点按 或 设置需要的开始时间。(注意AM和PM的设定)如有需要, 重复2和3的动作以便设置开始时间II, III及IV。
4. 如取消特定的开始时间, 先通过点按 将其选中。然后点按 , 则显示小时的数字开始闪烁。点按 或 直到显示屏上出现OFF的字样。
5. 若要为另一个阀门编制程序, 则选中它, 然后重复上述步骤, 从上述3.3节开始。

3.7 Example: Programming a Weekly Irrigation Schedule 举例:每周喷淋进度的程序编制

Let's assume you want to program the irrigation controller to water three times a day using the 24 hour time display format: at 08:00 AM, 13:00 PM and 19:00 PM, for 21/2 hours at a time, on Tuesday and Friday. To switch to an AM/PM time display format, see section 3.2. (If you are using a DC-1 model irrigation controller, start from step 4 below.)

1. Press until appears.
2. Press . A blinking arrow appears at the bottom of the display
3. Press or to move the arrow to the valve number to be programmed.
4. Press until appears.
5. Press . The hour digits blink. Press or until the hour displays 2. Press . The minute digits blink. Press or until the minute displays - 30.
6. Press . appears.
7. Press . A blinking appears at the top of the display, under Monday. Press until the blinking arrow appears under Tuesday, and then press . The arrow under Tuesday will stop blinking and advance one position to the right, to Wednesday. Press twice to move the arrow to Friday, and then press .
8. Press . START I time appears. Press . The hour digits blink.
9. Set the start time to 08:00 by pressing or . Repeat this step to set START II time [2] to 13:00 and START III time [3] to 19:00.
10. Press . START IV time [4] appears. Press . The hour digits blink.
11. Press or until OFF appears. The fourth opening of the valve is canceled.

假如你需要喷淋控制器一天浇三次水, 使用24小时时间显示格式, 即8:00AM, 13:00PM和19:00PM, 每次21/2小时, 喷淋日期为周二和周五。

变更为AM/PM时间显示格式请参见3.2节。(如你使用的是DC-1型号的喷淋控制器, 则需从下面的第4步开始)。






1. 点按 直到出现 图标。
2. 点按 电视屏底部会出现一个闪烁的箭头。
3. 点按 或 , 将箭头移至需要编制程序的阀门号码处。
4. 点按 直到出现 图标。
5. 点按 , 显示小时的数字开始闪烁。点按 或 直到小时显示为2. 点按 , 显示分钟的数字开始闪烁。点按 或 直到分钟显示为-30。
6. 点按 , 会出现 图标。
7. 点按 , 显示屏顶部会出现一个闪烁的 , 位于周一下方。点按 , 直到闪烁的箭头出现在周二下方, 然后点按 。周二下方的箭头会停止闪烁, 向右方一个方向前进至周三。点按 两次, 将箭头移至周五, 然后点按 。
8. 点按 会出现 START I 的时间。点按 , 则表示小时的数字开始闪烁。
9. 通过点按 或 将开始时间设为08:00。重复这一步骤, 将START II的时间【2】设置为13:00, 将START III的时间【3】设置为19:00。
10. 点按 会出现START IV的时间【4】。点按 , 显示小时的数字开始闪烁。
11. 点按 或 直到出现OFF字样。阀门的第四次开启被取消。

4. Additional Functions 额外功能






4.1 One-Time Irrigation 一次性喷淋

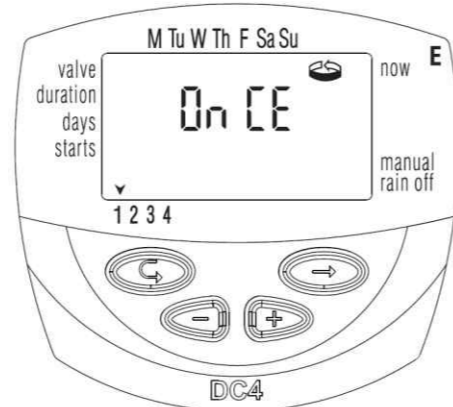
This function is used to program the irrigation controller to operate the irrigation system once only, for the set irrigation duration, at the set time.

(Duration set as described in Section 3.4)

1. Press  until  appears.
2. Press  several times (for all the days of the week) until  appears, and **On**  blinks on the display.
3. Go to Section 4.3 to set the day and time.

这一功能用作作为喷淋控制器编程,使其在设定的喷淋周期内只在设定时间操作一次喷淋系统。(周期设定参见3.4节)








1. 点按  直到出现  图标。
2. 数次点按  (适用于一周之内的每一天)直到出现  图标, **On**  开始在显示屏上闪烁。
3. 跳到4.3节,设置日期和时间。



4.2 Cyclical Irrigation 循环喷淋








This option is used to program the irrigation controller to operate the irrigation system in a cyclical manner, once every x days, for the irrigation duration.

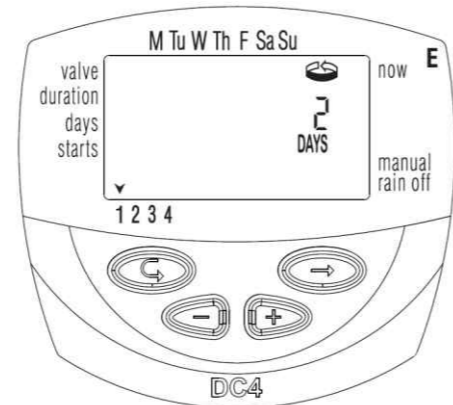
(Note: Duration for which valve stays open set as described in Section 3.4)

1. Press  until  appears.
2. Press  several times (for all the days of the week) until  appears, and **On**  blinks on the display.
3. With the display blinking, press  or . The interval between irrigation sessions (irrigation cycle) in days, hours or minutes is displayed. For example, if you set 2 days, the irrigation will be performed every two days for the defined duration.

此选项用来为喷淋控制器编程,使其以循环的方式操作喷淋系统,在整个喷淋期间每隔几天进行一此。

(注: 阀门开启持续时间的设定参见3.4节)

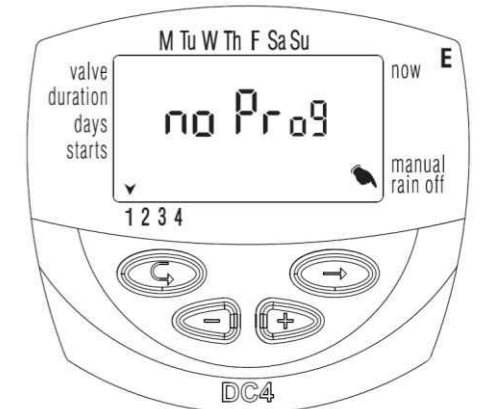
1. 点按  ,直到出现  图标。
2. 多次点按  (适用于一周中的每一天)直到出现  图标,同时, **On**  开始在显示屏上闪烁。
3. 显示屏闪烁的同时按  或  ,会显示喷淋周期之间的间隔,包括天数、小时或时间。例如,如果你设置2天,在设定的持续时间内,喷淋会每两天进行一此。



5.4 Missing Program Data 编程数据缺失

During "manual" operation via the irrigation controller no **Prog** appears on the display (see Section 4.6: "Manual Irrigation System Operation"), indicating that no irrigation duration has been set for the specified valve. In this case, opening of the valve is disabled.

在通过喷淋控制器进行“手动”操作期间,显示屏上会出现 **no Prog** (参见4.6节:“喷淋系统手动操作”),表示未为某个特定阀门设定喷淋持续时间。在此情况下,将无法打开该阀门。

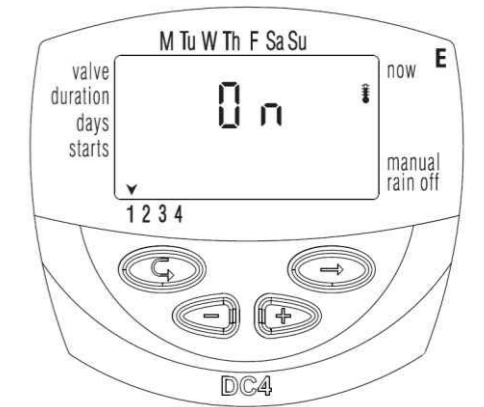


5.5 Sensor 传感器


The irrigation controller offers advanced irrigation control using a rain off sensor. That is, as long as the conditions defined for activation of the sensor are not met, the irrigation schedule will not be implemented. (The rain off sensor contact remains closed).

For example, if a rain sensor is connected to the irrigation controller, irrigation takes place as long as the sensor remains dry. In the event of rainfall, the sensor prevents the opening of all the valves associated with it.


喷淋控制器应用雨水传感器提供先进的喷淋控制。只要达不到传感器的激活条件,喷淋计划就不会进行。(雨水传感器的触点保持关闭状态)。例如,如果雨水传感器连在喷淋控制器上,只要传感器保持干燥,喷淋就能进行。在下雨的情况下,传感器会避免所有与其相连的阀门打开。

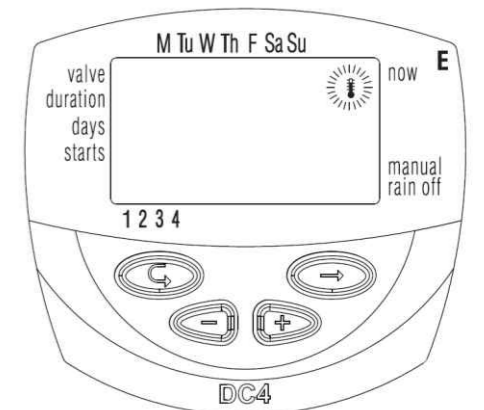


There is also the option of using any type of dry contact sensor N.O. When the sensor contact is closed all valves will close and no irrigation will take place (diagram page 6)

As long as the sensor closes the circuit (i.e., the sensor detects the existence of a defined program lockout condition) the symbol  blinks on the display and irrigation will not take place through any valves associated with the sensor. The display will show "S OFF" when the controller is in manual operation. This means the sensor is activated and prevents the irrigation.

还可以选择使用任何类型的干燥接触传感器常开触点。传感器触点关闭时,所有阀门都会关闭,喷淋将不会发生(第6页上的图)


只要传感器关闭了电路(即传感器探测到所定义的程序锁定条件),图标  就会在显示屏上闪烁,不能通过任何与传感器相连的阀门进行喷淋。当控制器为手动操作时,显示屏上会显示"S OFF",表示传感器已激活,避免喷淋的发生。




5. Additional Displays 额外显示

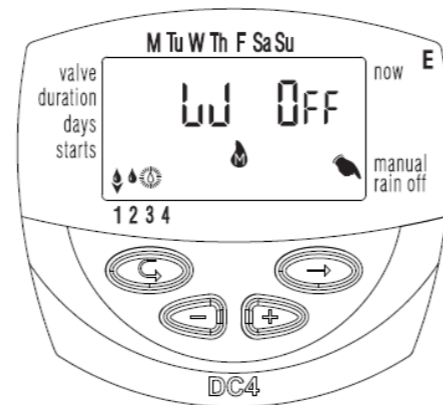
5.1 Valve in Wait Mode 等待模式下的阀门

This section does not apply to the DC-1 Model.

When two valves are currently open, and a third valve is scheduled to open, the third valve enters into wait mode. A blinking  appears above the number of the waiting valve. When one of the first two valves closes, the waiting valve opens. During "manual" operation of a waiting valve via the irrigation controller, the letter "W" (Wait) appears on the display. The valve opens when another valve closes.

此项选择不适用于DC-1型号。

如果当前打开了两个阀门，而第三个阀门计划打开，则第三个阀门就会进入等候模式。闪烁图标  会出现在代表正在等候的阀门的代码数字上方。当最初的两个阀门中的一个关闭时，处于等候状态的阀门打开。当通过喷淋控制器“手动”操作处于等候状态的阀门时，字母W（即等候）会出现在现在显示屏上。另一个阀门关闭时，此阀门会打开。



5.2 Blinking Low Battery Warning 电池电量低时的闪烁警告

When the batteries are low, a blinking battery icon appears on the display. In this state, the batteries still enable valve operation, but must be promptly replaced.

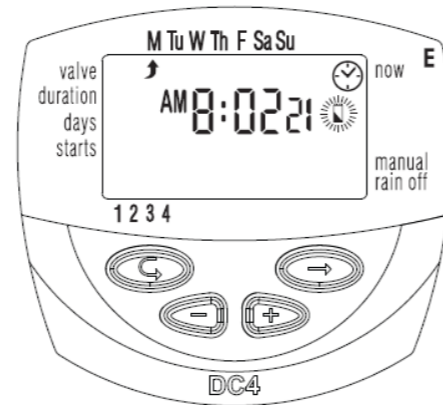
After replacing the batteries, press any button to resume irrigation controller operation.

Programmed data are retained if batteries are replaced within 30 seconds.

电池电量低时，显示屏上会出现闪烁的电池图标。在这种状态下，电池仍然可以支持阀门操作，但必须立即更换。

更换电池后，点按任一按钮，恢复喷淋控制器的操作。

如果在30秒之内完成电池更换，编程数据仍然可以保留。



5.3 Permanent low battery warning 电池电量低时的永久性警告

When the batteries are low and not replaced in a timely manner, the battery icon is permanently displayed. All other display elements disappear, all valves will close and all programs will disappear.

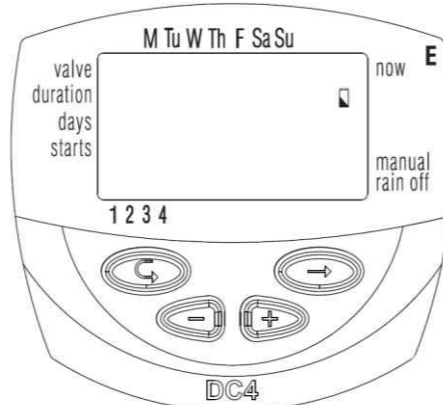
Replace batteries promptly and reprogram the controller.

Programmed data are retained if batteries are replaced within 30 seconds.

如果电池电量低且并未及时更换电池，电池图标会永久性地显示在显示屏上，而所有其他的显示元素都会消失，所有阀门都会关闭，所有程序都会消失。

立即更换电池，然后重新编制控制器的程序。








如果在30秒之内完成电池更换，则变成数据可以保留。



4.3 Setting the Day of the Week and Time For Cyclical and One-Time Irrigation Programs








周期性喷淋程序和一次性喷淋程序日期和时间设置

These programs enable you to pre-set the time of valve opening. The number of days until the valve opening appears on the display, to the right of the irrigation start time (above the word "days"). 0 days = program starts today; 1 day = program starts tomorrow, etc. (up to 30 days).

1. Press  until START I appears. The last opening time entered appears on the display.
 2. Press . The hour digits blink.
 3. Set the desired opening time by pressing  or  (Take note of AM and PM designations)
 4. Press  until the digit to the right of the opening time blinks (The digit above the word "days").
 5. Set the number of days until the opening of the valve by pressing  or .
- Valve openings 2, 3 and 4 are canceled in this mode.

















这些程序可以让你预设阀门打开的时间。点按天数，直到显示屏上显示阀门开启，其位置在喷淋开始时间的右边（在“days”一词的上方）。0天=程序于今天开始；1天=程序于明天开始，以此类推。（最多为30天）。















1. 点按 ，直到出现START I的字样。上次键入的开启时间将出现在显示屏上。
 2. 点按 。显示小时的数字开始闪烁。
 3. 通过点按  或  设置想要的开启时间（注意AM和PM的问题）
 4. 点按  直到开启时间右侧的数字开始闪烁（即位于days一词上方的数字）。
 5. 通过点按  或  设置到阀门开启之前的天数。
- 在此模式中，取消了阀门开启2、3和4。

4.4 Example: Programming a Cyclical Irrigation Schedule 例如：周期性喷淋进度的程序编制

Let's assume you want to program the irrigation controller to open the valve at 12:45 PM, for a period of one hour, every 5 days.

1. Set the irrigation duration as described in Section 3.4: Setting the Irrigation Duration. (Press  until  appears, then set the desired irrigation duration by pressing  or .
2. Press  until  appears.
3. Press  a number of times (for all the days of the week) until  appears blinking on the display.
4. While the display is still blinking, press  or  until "5 days" appears on the display, representing the irrigation frequency.
5. Press . START I is displayed.
6. Press . The hour digits blink.
7. Press  until the hour digits change to 12 (PM)
8. Press  until the minute digits change to 45.

假设你对喷淋控制器的程序编制要使其在12:45PM开启阀门，每次持续一小时时间，每5天一次。

1. 按照3.4节：设置喷淋持续时间所示，对喷淋持续时间进行设置。（点按  直到出现  的图标，然后通过点按  或  设置想要的喷淋持续时间。）
2. 点按  直到出现  图标。
3. 多次点按 （适用于一周之内的每一天）直到  在显示屏上开始闪烁。
4. 显示屏仍在闪烁时，点按  或 ，直到显示屏上出现“5天”字样，代表喷淋频率。
5. 点按 。START I会出现在显示屏上。
6. 点按 。代表小时的数字开始闪烁。
7. 点按  直到代表小时的数字变为12（PM）。
8. 点按  直到表示分钟的数字变为45。

4.5 "Manual" Irrigation System Operation via the Irrigation Controller 通过喷淋控制器进行“手动”喷淋系统操作

This function operates the selected valve to for the irrigation duration defined in the program The valve will close automatically at the end of the irrigation duration.

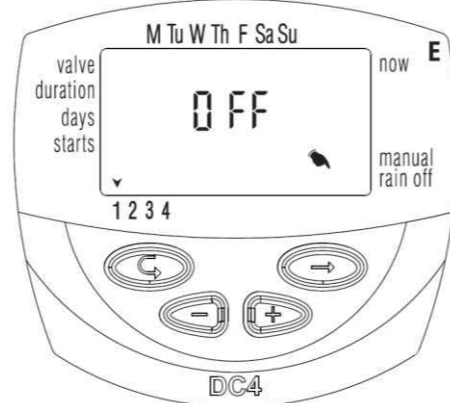
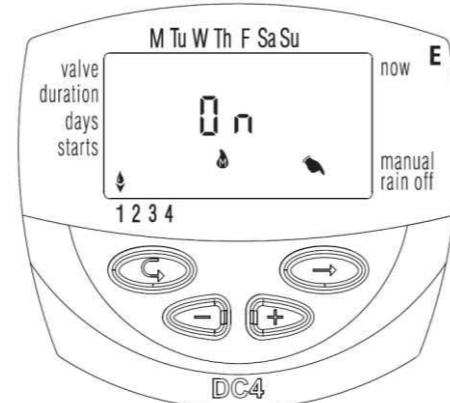
Note that the originally programmed irrigation schedule continues to operate at the set times.

1. Press until appears. Select one or more valves as described in Section 3.3. "Valve Selection".
2. Press until appears.
3. Press to open the valve. The word "On" is displayed. After an interval of 5 seconds, a count down of the remaining irrigation duration appears on the display. To close the valve manually, press . appears on the display.
4. To close the valve manually before the end of the irrigation duration, press until ON appears again on the display. Press to close the valve. Up to two valves can be operated simultaneously in this manner. Simply repeat the above steps for the second valve.

此项功能将在程序所定义的喷淋持续时间内, 对所选的阀门进行操作。喷淋持续时间结束时, 阀门会自动关闭。

注意, 原先编制的喷淋计划会在设定的时间内继续操作。

1. 点按 直到出现 的图标。按照3.3节: 即“阀门选择”来选择一个或多个阀门。
2. 点按 直到出现 的图标。
3. 点按 打开阀门。“On”一词会出现在显示屏上。间隔5秒之后, 剩余喷淋持续时间的倒计时会出现在显示屏上。如要手动关闭阀门, 则需点按 显示屏上会出现 的字样。
4. 如果要在喷淋持续时间结束之前手动关闭阀门, 则需点按 , 直到ON再一次出现在显示屏上。点按 关闭阀门。用此种方法可以同时操作最多两个阀门。简单地重复上述步骤为第二个阀门进行设置。



4.6 Sequential "Manual" Operation of all the Valves 所有阀门的顺序“手动”操作

The valves can be operated sequentially, one after the other.

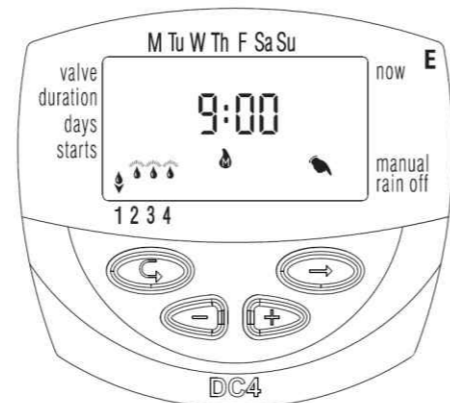
1. Press until the appears.
2. When nothing is blinking on the display, press and hold down for 5 seconds. Valve 1 will open and operate for the programmed irrigation duration. When valve 1 closes, valve 2 opens, and so forth until the last valve has opened. All the valves designated to open blink.
3. You can control the process. Pressing closes the current valve and opens the next one.

Important: You can only exit this screen after all the valves have opened.

可以按顺序一个接着一个地操作阀门。

1. 点按 直到出现 图标。
2. 显示屏上没有任何闪烁项的时候, 点按 并维持5秒钟的时间。阀门1将被打开, 在程序所设定的喷淋持续时间内进行操作。阀门1关闭时, 阀门2打开, 以此类推, 直到最后一个阀门打开。所有阀门都被设计为开启闪烁。
3. 你可以控制整个过程。点按 关闭目前的阀门, 打开下一个阀门。

重要提示: 只有当所有阀门都打开之后才能退出此屏幕。



4.7 Suspension 暂停

This option is used to temporarily suspend the irrigation controller's control of the valves, for example, while it is raining. The irrigation schedule remains stored in the controller, but is not implemented. The suspension option disables ALL valves connected to the irrigation controller.

1. Press until the appears.
2. Press and hold down for 5 seconds. appears blinking alongside the word "rain off". The controller is now suspended.
3. To restore control to the controller, press until the appears, and then press and hold down until the disappears.
4. Suspension can also be implemented while a valve has been activated.
5. If an attempt is made to operate a valve manually while the irrigation controller has been suspended, or when a valve is meant to open sequentially, the word "rAin" appears on the display, and the valve will not open.

此选项用来暂停喷淋控制器对阀门的控制, 比如下雨的时候。喷淋预定计划仍然存储在控制器中, 只是不予运。暂停选项可以使所有与喷淋控制器连接的阀门暂停操作。

1. 点按 直到出现 图标。
2. 点按 并持续5秒。 的图标会出现在"rain off"一词的旁边, 并呈闪烁状态。现在, 控制器就处于暂停状态了。
3. 若想要控制器重新恢复控制, 点按 直到出现 的图标, 然后点按 并持续5秒, 直到 的图标消失。
4. 某个阀门被激活时, 暂停功能仍然可以进行。
5. 如果喷淋控制器暂停时试图手动操作某个阀门, 或者意欲按顺序打开一个阀门, 显示屏上会出现"rAin"的字样, 阀门将不会打开。

4.8 Irrigation Duration Extended or Shortened by a Specified Percentage 通过特定百分比延长或缩短喷淋周期

You can extend / shorten the irrigation duration for all the valves simultaneously by specifying a percentage for the duration.

Example: if the irrigation duration has been set to one hour, adding 10% extends the duration by 6 minutes (to 66 minutes).

1. Press until the appears.
2. Wait until no digit is blinking.
3. Press and simultaneously. 00+% is displayed
4. Press . The 00 blinks. Press or to increase or decrease the percentage as necessary (in increments of 5%). +% or -% is permanently displayed on the main display, accordingly.

Important! The percentage cannot be changed for an individual valve.

通过为喷淋持续时间指定百分比的方式, 你可以同时为所有阀门延长/缩短喷淋持续时间。

例如: 如果喷淋持续时间设定为一小时, 增加10%就会使持续时间延长6分钟(到66分钟)。

1. 点按 直到出现 图标。
 2. 等到无任何数字闪烁。
 3. 同时按 和 。显示屏上会显示 00+% 的内容。
 4. 点按 。00开始闪烁。根据自己的需要, 点按 或 增加或减少百分比(增加5%)。在 主显示屏上, 会分别永久显示 +% 或 -%。
- 重要提示: 为单独阀门设定的百分比不可更改。

