

Mic-drain

电子定时排水阀

Timer Controlled Drain Valve

产品简介 Brief Introduction

压缩空气系统在工作过程中会产生冷凝水，含有油污及颗粒杂质的冷凝水若不能及时排放，会严重影响气体品质。

乔克念承 Mic-drain 电子定时排水阀以电子定时器与电磁阀相匹配，实现空压系统冷凝水的定时自动排放。广泛应用于空压机、储气罐、过滤器、分离器、干燥机等空压系统设备中。

乔克念承 Mic-drain 是一款标准型电子定时排水阀，规格齐全，在接口尺寸、工作压力、适用电压和材质等方面可提供多种选择。

Mic-drain 注重细节，选材适中，工作可靠，性价比高。

Condensed water will be produced in the process of compressed air system. Quality of compressed air will be seriously affected if the condensate containing oil and particle impurities can not be discharged in time.

Mic-drain from NIANCHENG is a combination of an electronic timer and a solenoid valve designed to automatically discharge condensate from compressed air systems. It is widely used in air compressor, air storage tank, filter, separator, dryer and other air pressure systems.

Mic-drain is a kind of standard type of timer controlled drain valve with a wide range of specifications and multiple choices in terms of connecting port, working pressure, applicable voltage and materials.

Mic-drain is paid attention in details, selected moderate materials, which is reliable and cost-effective.

产品特性 Features

CE 认证

IP65 防护

排放和间隔时间可调

手动测试功能

阻燃定时器

高可靠性

配有球阀过滤器

滤网清洗方便

多种电压、多种接口可选

高压型、全不锈钢型可选

寒冷地区可选加热型

CE certification

Protective class IP65

Discharge and interval time can be adjusted

Manual test

Flame retardant timer

High reliability

Equipped with ball valve strainer

Easy to clean strainer

Multiple voltages and connecting ports available

High pressure and all stainless steel model available

Optional heating valve to prevent freezing in cold area

工作原理 Operating Principle

设定好排放时间 ON 和间隔时间 OFF;

通电后, 立即进入 ON 状态, 线圈通电, 电磁阀打开, 排放冷凝水;

ON 时间结束, OFF 时间开始, 线圈断电, 电磁阀关闭, 停止排放;

电磁阀依此定时通断, 循环往复, 实现冷凝水定时自动排放;

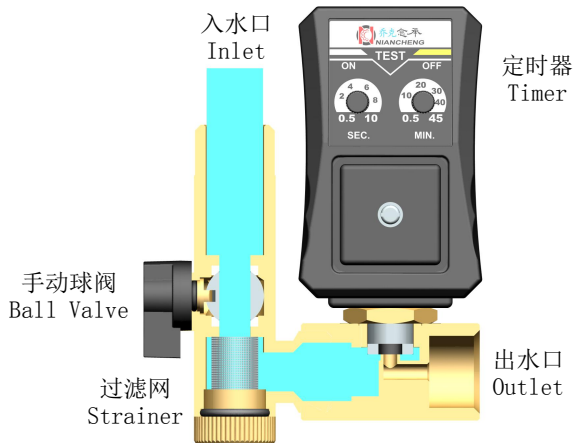
Set the discharge time ON and interval time OFF;

After power on, immediately enter the on state, the coil is powered on, the solenoid valve is opened, and the condensate is discharged;

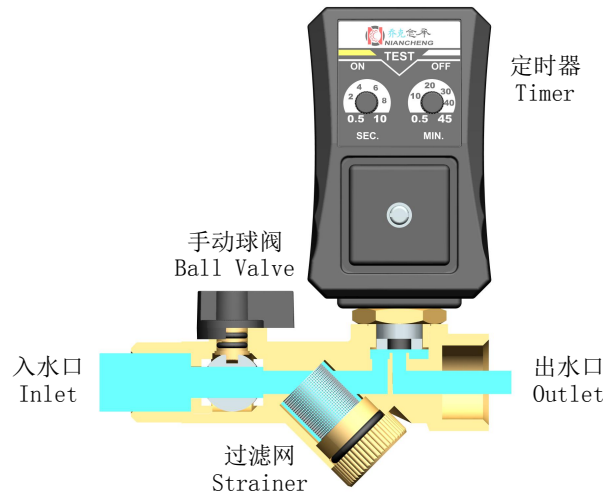
When the ON time ends and the OFF time starts, the coil is powered off, the solenoid valve is closed, and the discharge is stopped;

The solenoid valve is switched on and off regularly and circularly to realize the regular and automatic discharge of condensate.

分体式电子排水阀 (MIC-A)
Split type (MIC-A)



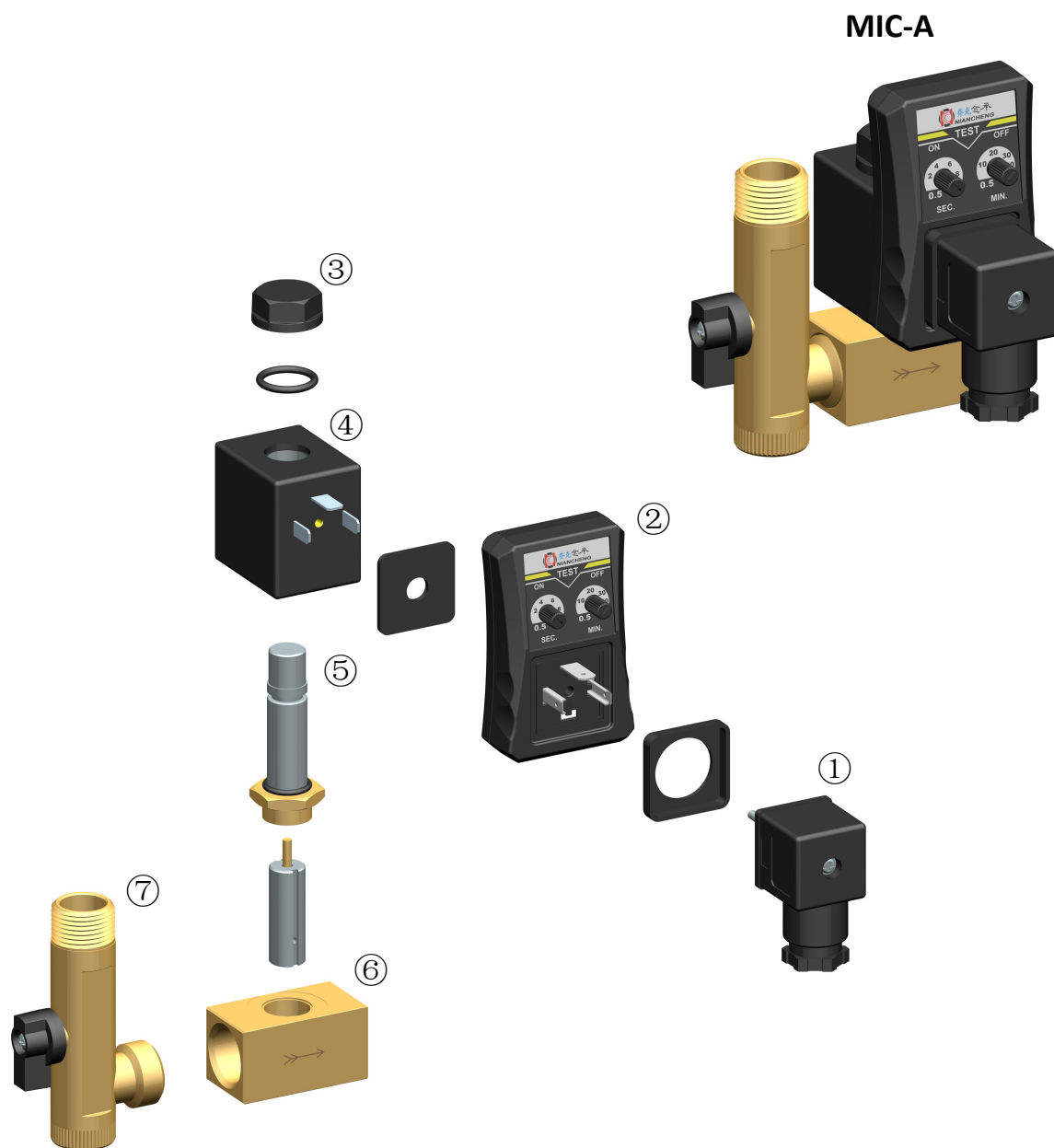
一体式电子排水阀 (MIC-B)
Integrated type (MIC-B)



乔克念承 Mic-drain 工作原理
Operating Principle of Mic-drain

乔克念承 Mic-drain 电子排水阀基本结构

Basic structure of Mic-drain



- | | |
|---------|---------------------|
| ①接线盒 | Connector |
| ②定时器 | Timer |
| ③线圈防水套件 | Coil waterproof kit |
| ④电磁线圈 | Solenoid coil |
| ⑤阀芯 | Valve kit assembly |
| ⑥阀体 | Valve body |
| ⑦过滤球阀 | Ball valve strainer |

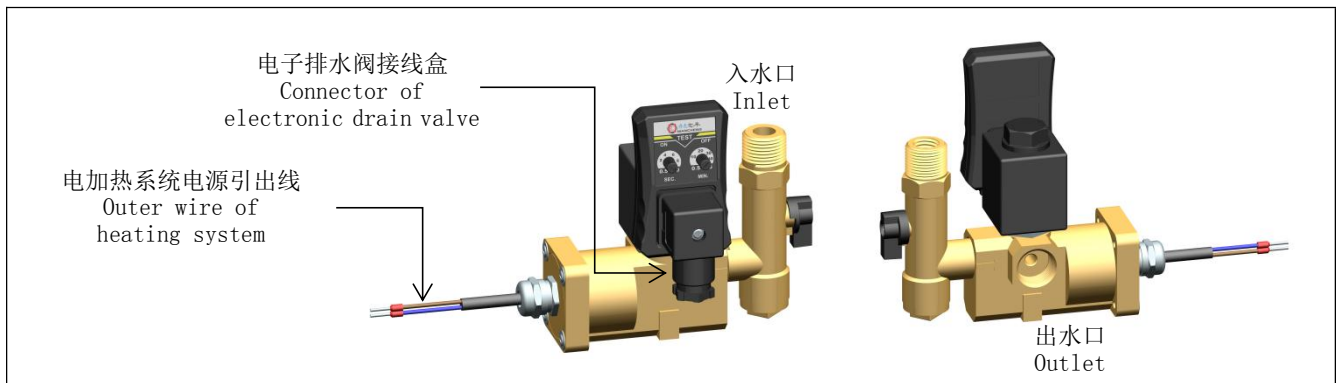
Mic-drain 标准型 Standard model

		
产品型号 Product model	MIC-A	MIC-B
产品特点 Product features	分体式 (L型) Split type (L-type)	一体式 (直线型) Integrated type (line-type)
定时时间调节范围 Timer cycle range (ON/OFF)	ON: 0.5 - 10 Sec. OFF: 0.5 - 45 Min.	
工作压力 Rated working pressure	0-1.6 Mpa	
0.8Mpa 时电磁阀排水能力 Discharge capacity at 0.8Mpa	大约 160 ml/s About 160 ml/s	
适用介质 Applicable media	水、含油冷凝水 Water、Oil-containing condensate	
介质温度 Temperature of medium	1-60℃	
环境温度 Temperature of ambient	1-60℃ (零下温度可选用加热型) 1-60℃ (Heating model is optional for sub-zero temperature)	
过滤器入口/出口尺寸 Inlet/Outlet of ball valve strainer	入口: 外螺纹 R1/2"、内螺纹 Rc1/4" 可选 出口: 外螺纹 R1/2"、R1/4" 可选 Inlet: Male R1/2"、Female Rc1/4" Outlet: Male R1/2"、Rc1/4" Optional	/
电磁阀入口/出口尺寸 Inlet/Outlet of solenoid valve	入口: 内螺纹 Rc1/2"、Rc1/4" 可选 出口: 内螺纹 Rc1/2"、Rc1/4" 可选 Inlet: Female Rc1/2"、Rc1/4" Optional Outlet: Female Rc1/2"、Rc1/4" Optional	入口: 外螺纹 R1/2" 出口: 内螺纹 Rc1/2" Inlet: Male R1/2" Outlet: Female Rc1/2"
排放阀类型 Type of discharge valve	直动型电磁阀 Direct acting solenoid valve	
排水流量孔径 Valve orifice	3.2 mm	
排放阀前置过滤网 Front mesh strainer of discharge valve	有 (外置) Yes (Outer set)	
阀体材质 Material of valve body	黄铜 Brass	
手动排水功能 Manual function	有 Yes	
防护等级 Protective class	IP65 (正确装配后) IP65 (After correct assembling)	
标准电压 Supply voltage options	24-380 VAC/DC 50/60Hz 可选 Optional	
外形尺寸 长*宽*高 (mm) Overall dimensions L* W * H	86 * 90 * 111	92 * 90 * 122
产品净重 N. W.	575 g	515 g

Mic-drain 高压型 High pressure model

				
产品型号 Product model	MIC-HP40	MIC-HP80	MIC-HP100	MIC-HP250/350/400
产品特点 Product feature	高压型, 配有球阀过滤器 High pressure with ball valve strainer	高压型 High pressure		
定时时间调节范围 Timer cycle range (ON/OFF)	ON: 0.5 - 10 Sec. OFF: 0.5 - 45 Min.			
工作压力 Rated working pressure	0-4.0 Mpa	0-8.0 Mpa	0-10.0 Mpa	0-25/30/40 Mpa
适用介质 Applicable media	水、含油冷凝水 Water、Oil-containing condensate			
介质温度 Temperature of medium	1-60℃			
环境温度 Temperature of ambient	1-60℃			
过滤器入口/出口尺寸 Inlet/Outlet of ball valve strainer	入口: 外螺纹 R1/2" + 内螺纹 G1/4" 出口: 外螺纹 R1/2" Inlet: Male R1/2" + Female G1/4" Outlet: Male R1/2" /			
电磁阀入口尺寸 Inlet	Rc1/2"	Rc1/4"、Rc1/2"	Rc1/4"	G1/4"、NPT1/4"
电磁阀出口尺寸 Outlet	Rc1/2"	Rc1/4"、Rc1/2"	Rc1/4"	G1/4"、NPT1/4"
排水阀门类型 Type of discharge valve	直动型电磁阀 Direct acting solenoid valve			
排水流量孔径 Valve orifice	2.0 mm	1.7 mm	1.5 mm	0.9 mm
球阀过滤器 Ball valve strainer	有 Yes	无 No		
阀体材质 Material of valve body	黄铜 Brass	黄铜 Brass	黄铜 Brass	304 不锈钢 Stainless steel
手动排水功能 Manual function	有 Yes			
防护等级 Protective class	IP65 (正确装配后) IP65 (After correct assembling)			
标准电压 Supply voltage options	24-380 VAC/DC 50/60Hz 可选 Optional			
外形尺寸 长*宽*高 (mm) Overall dimensions L*W*H	94 * 94 * 130	46 * 94 * 110	50 * 98 * 110	50 * 98 * 108
产品净重 N.W.	830 g	550 g	560 g	565 g

Mic-drain 加热型 Heating model



产品型号 Product model	MIC-H
产品特点 Product feature	加热阀寒冷地区可防止冰冻 Heating valve can prevent freezing in cold area
定时时间调节范围 Timer cycle range (ON/OFF)	ON: 0.5 - 10 Sec. OFF: 0.5 - 45 Min.
工作压力 Rated working pressure	0-1.6 Mpa
适用介质 Applicable media	水、含油冷凝水 Water、Oil-containing condensate
介质温度 Temperature of medium	1-60℃
环境温度 Temperature of ambient	-40~60℃
过滤器入口/出口尺寸 Inlet/Outlet of ball valve strainer	入口：外螺纹 R1/2" + 内螺纹 G1/4" 出口：外螺纹 R1/2" Inlet: Male R1/2" + Female G1/4" Outlet: Male R1/2"
电磁阀入口/出口尺寸 Inlet/Outlet of solenoid valve	入口：内螺纹 Rc1/2" 出口：内螺纹 Rc1/2" Inlet: Female Rc1/2" Outlet: Female Rc1/2"
排水阀门类型 Type of discharge valve	直动型电磁阀 Direct acting solenoid valve
排水流量孔径 Valve orifice	3.0 mm
阀体材质 Material of valve body	黄铜 Brass
球阀过滤器 Ball valve strainer	有 Yes
手动排水功能 Manual function	有 Yes
防护等级 Protective class	IP65 (正确装配后) IP65 (After correct assembling)
电磁阀供电电压 Supply voltage of solenoid valve	24-380 VAC/DC 50/60Hz 可选 Optional
加热系统供电电压及相应加热功率 Power supply voltage and corresponding heating power of heating system	24VDC (100W) / 110VAC (45W) / 220VAC (80W)
加热系统温控器参数 Parameter of temperature switch	7℃ ≤ 控制温度 ≤ 30℃ (±5℃) 7℃ ≤ Controlled temperature ≤ 30℃ (±5℃)
电加热系统电源引出线长度 Length of outer wire of heating system	0.7 m
外形尺寸 长*宽*高 (mm) Overall dimensions L* W * H	150 * 94 * 132
产品净重 N. W.	1390 g

Mic-drain 配件 Accessories

1、定时器 Timer

这是一款电磁阀专用定时器，可实现电磁阀的定时通断。

This is a special timer for solenoid valve, which can realize the timing on-off of solenoid valve.

定时器参数 Parameters of timer



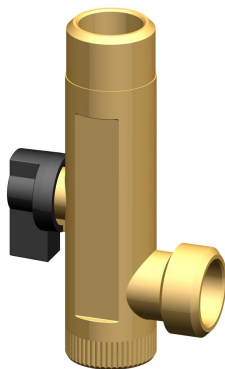
标准电压 Supply voltage options	10-30VAC/DC, 24-240VAC/DC, 380VAC 50/60Hz
定时时间调节范围 Timer cycle range (ON/OFF)	ON: 0.5 - 10 Sec. OFF: 0.5 - 45 Min.
环境温度 Ambient temperature	-40~60°C
壳体材质 Material of housing	阻燃 ABS Flame retardant ABS
手动测试功能 Manual function	有 Yes
防护等级 Protective class	IP65 (正确装配后) IP65 (After correct assembling)

2、球阀过滤器 (GL01) Ball Valve Strainer (GL01)

球阀过滤器 GL01 集手动球阀和过滤器于一体，既可隔离气源，又可以过滤冷凝水中的杂质。

GL01 combines ball valve and filter together. It can not only cut off air source, but also filter impurities in condensate water.

球阀过滤器参数 Parameters of GL01



工作压力 Rated working pressure	0-1.6 Mpa
入口尺寸 Inlet	R1/2"、R1/4" 可选 Optional
出口尺寸 Outlet	R1/2"、R1/4" 可选 Optional
主体材质 Material of body	黄铜 Brass
外形尺寸 (mm) Overall dimensions	82 * 48.5 * 21
产品净重 N.W.	150 g

Mic-drain 使用说明

User's Instruction

在安装和运行之前，请仔细阅读本说明。严格按照说明书的建议进行操作，方可确保您的排水阀正常工作。

Please read this instruction carefully before installation and operation. Strictly follow the instructions to ensure normal and effective operation of your drain valve.

1、安全说明 Safety Instruction

- 1.1 不能在危险的环境中使用 Mic-drain 电子定时排水阀（如易燃、易爆环境）；
- 1.2 不能安装在户外没有任何防水措施的地方；
- 1.3 不能连接标贴上规定以外的其他电压；
- 1.4 只能在标贴上规定的工作压力范围内使用，不能超过或低于该工作压力；
- 1.5 不能超过所允许的温度范围（+1 到+60℃），若使用在寒冷地区可选用加热型；
- 1.6 只能使用耐压材料进行安装；
- 1.7 进水管和排水管安装必须牢固！并保证不要将冷凝水排到人身或物体上；
- 1.8 按照现行安全规范进行电气连接；
- 1.9 不能用测试按钮连续排放冷凝水；
- 1.10 安装或维护之前需确保 Mic-drain 电子定时排水阀处于无气压、断电状态；
- 1.11 只能使用原厂配件，否则不能得到质量保证。

- 1.1 Do not use Mic-drain in dangerous environment (such as flammable or explosive environment);
- 1.2 Can not be installed outdoors without any waterproof;
- 1.3 Do not connect voltage other than specified on the label;
- 1.4 It can only be used within the working pressure range specified on the label, and cannot be higher or lower than the working pressure;
- 1.5 The allowable temperature range (+ 1 to + 60 °C) should not be exceeded. Heating valve can be used for anti-freezing in cold areas;
- 1.6 Only pressure resistant materials can be used for installation;
- 1.7 The inlet and outlet pipes must be installed firmly! And ensure that condensate water is not discharged to persons or objects;
- 1.8 Electrical connection in accordance with current safety specifications;
- 1.9 The test button cannot be used to continuously discharge condensed water;
- 1.10 Before installation or maintenance, ensure that Mic-drain is in a state of no pressure and power off;
- 1.11 Only the accessories provided by the original factory can be used, otherwise the quality cannot be guaranteed.

如果本型号排水阀另作他用或客户未遵守本说明书的规定，那么将不能得到质量保证。

If this type of drain valve is used for other purposes or customer does not comply with the provisions of this manual, then the quality will not be guaranteed.

2、安装说明 Installation Instruction

2.1 开箱检验 Open-box inspection

包装内含：

- ①电子排水阀
- ②产品合格证

Package includes:

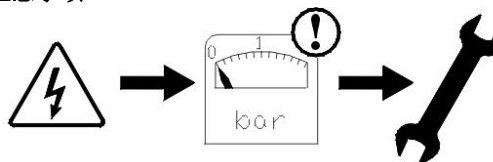
- ①Mic-drain
- ②Qualification certificate



安装排水阀前请确保它符合您的要求，适合您的应用。

Make sure the drain valve meets your requirements and is suitable for your application.

2.2 注意事项 Attention



建议：先清除空压系统中的污垢、铁锈等杂质，再安装电子排水阀。

警告：安装排水阀之前，排水阀必需处于断电、无气压状态！

Suggestion: First remove the dirt, rust and other impurities in the air compressor system, and then install Mic-drain.

Warning: The drain valve must be in a state of power off and no pressure before installing it!

2.3 入水口连接 Inlet connection



安装如图所示，确保阀体上的箭头与冷凝水的流向一致。

Install as shown in the figure, and ensure that the arrow on valve body is consistent with the flow direction of condensate.

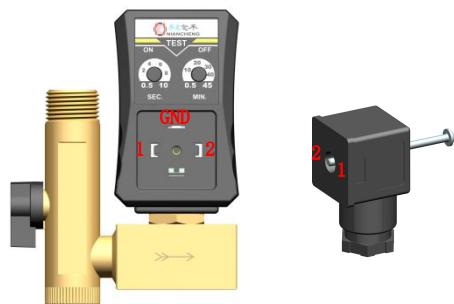
2.4 出水口连接 Outlet connection



请将出口连接至污水管道或冷凝水清洁器中（我司有售），排水管安装必须牢固。

Please connect the outlet to the sewage pipe or condensate cleaner (available at our company). The drain pipe must be installed firmly.

2.5 电源接线 Wiring of power supply



拆开接线盒接电源线，建议使用外径 6mm 的电缆线，剥线长度 6mm。

直流电：1 号插口接正极+，2 号插口接负极-。

交流电：1 号插口接火线 L，2 号插口接零线 N，地线口接地。

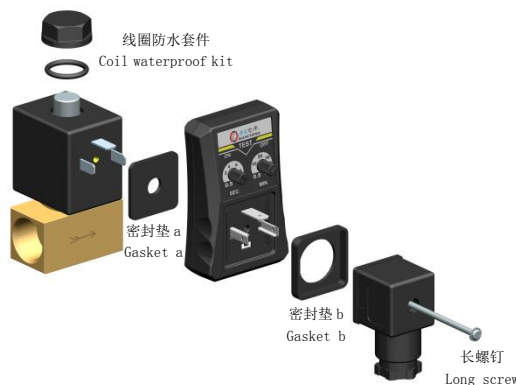
Open the connector to connect power supply. It is recommended to use a cable with an outer diameter of 6mm and a stripping length of 6mm.

Direct current: Terminal 1 is connected to positive (+), terminal 2 is connected to negative (-).

Alternating current: Terminal 1 is connected to live line (L), terminal 2 is connected to nought line (N), and ground terminal is grounded.

2.6 为确保 IP65 防护等级的正确装配

Correct assembly to ensure protective class IP65



1、确保密封垫 a、密封垫 b 都在位，长螺钉要拧紧。

2、线圈防水套件螺母要拧紧。

以上两个拧紧非常重要，可确保 IP65 防护等级。如果不拧紧，定时器和线圈会进水烧毁，切记！

1. Ensure that gasket a and b are in place, and tighten the long screw.

2. Nut of coil waterproof kit to be tightened.

The above two tightening are very important to ensure the protective class IP65. The timer and coil will be burnt out by water if you don't tighten them. Remember please!

3、维修保养 Maintenance

3.1 定期按下 TEST，检测排水阀。

Push TEST regularly to test Mic-drain.

根据排水量设定合适的时间，左旋钮设定排放时间，右旋钮设定间隔时间，可手拧或使用小一字起旋转。

Set the appropriate time according to the water displacement, left knob set discharge time, right knob set interval time. It can be rotated by hand or by using a small flat screwdriver.



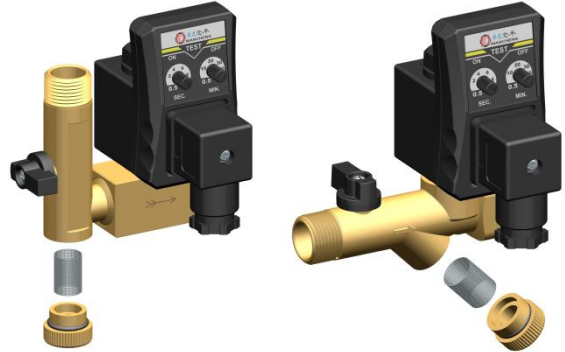
3.2 过滤网清洗 Strainer cleaning

电子排水阀排放时，只有少量水或无水排出，很可能是滤网堵塞，这时需清洗滤网。滤网应每月清洗一次。

关闭手动球阀，按 TEST 按键排空压力，拧开过滤网堵头，取出过滤网进行清洗。

When Mic-drain is ON, only a small amount of water or no water is discharged. The reason is of blocked strainer which needs to be cleaned. Strainer should be cleaned once a month.

Close manual ball valve, press TEST to release pressure in the valve, screw off strainer plug, take out the strainer and clean it.



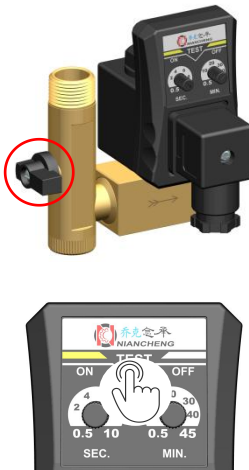
3.3 阀芯清理 Valve plunger cleaning

在部件无损坏的情况下，电磁阀打不开（不排水）或关不住（漏气），其原因可能是冷凝水中大量粉末状物钻过滤网，进入阀芯与护套之间的间隙，将阀芯卡住，这个时候需要清洗阀芯。

When the parts are not damaged, solenoid valve cannot be opened (no drainage) or closed (air leakage), the reason may be that a large amount of powder in the condensed water drills into the strainer, enters the gap between the valve core and the shaft, and blocks the valve core. At this time, the valve core needs to be cleaned.

(a) 关闭手动球阀，按 TEST 按键排空压力。

Close the manual ball valve and press TEST to depressurise the valve.



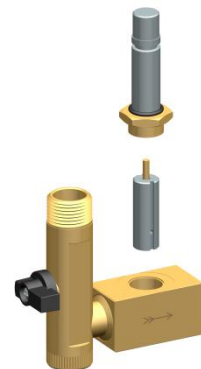
(b) 切断电源，取下电气总成。线圈只要离开阀杆，必须断电，否则空通电的线圈会烧毁。

Cut off the power supply and remove the coil. As long as the coil leaves valve shaft, it must be powered off, otherwise the empty energized coil will be burned.



(c) 拆开阀芯，清理干净，并查看密封胶头是否有磨损。

Screw off the valve shaft, take out valve plunger and clean it, check whether the valve seal is worn or not.



我们的产品 Our products



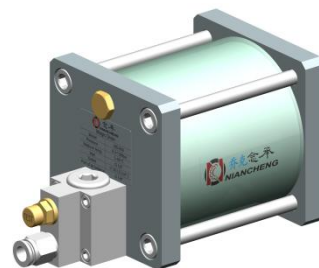
Smart Drain

智能零气耗排水器
Zero Air-loss Drain



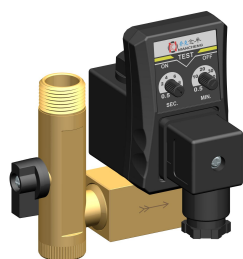
X-drain

智能零气耗排水器
Zero Air-loss Drain



Mag-drain

气动零气耗排水器
Pneumatic Drain



Mic-drain

电子定时排水阀
Timer Drain Valve



Power Drain

电子定时排水阀
Timer Drain Valve



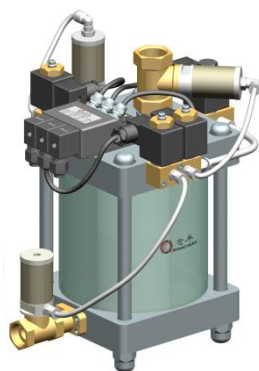
Digital Drain

电子定时排水阀
Timer Drain Valve



Sepremium

冷凝水清洁剂
Oil/Water Separators



Vac-drain

真空排水器
Vacuum Drain



扫码获取电子样本
Scan for brochures



V. 01-0123