

Components of center pivot.

RAINFINE[®]
Irrigation Solution.



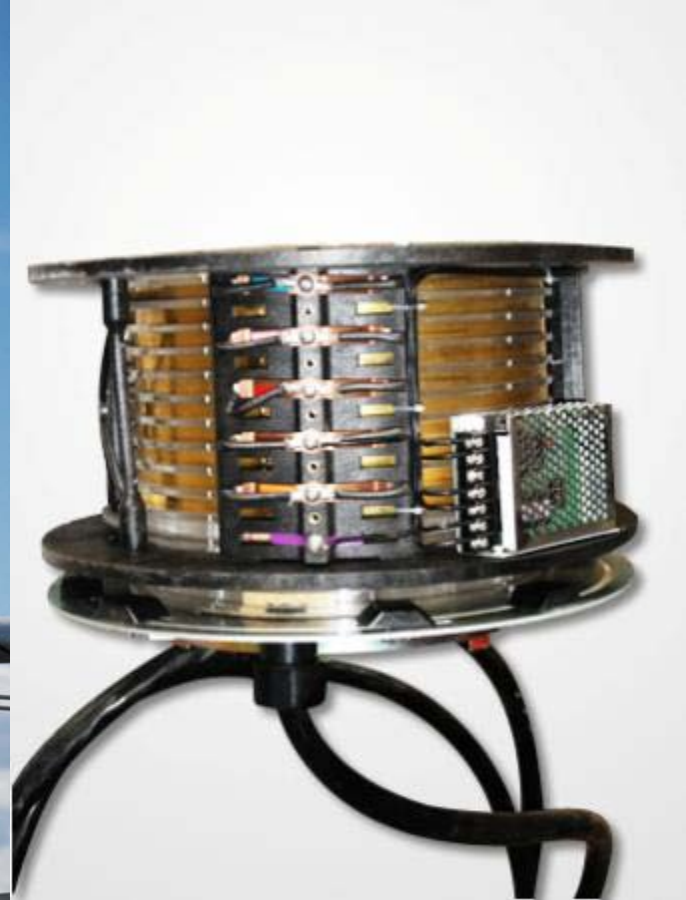
BEST QUALITY PRODUCTS FOR IRRIGATION

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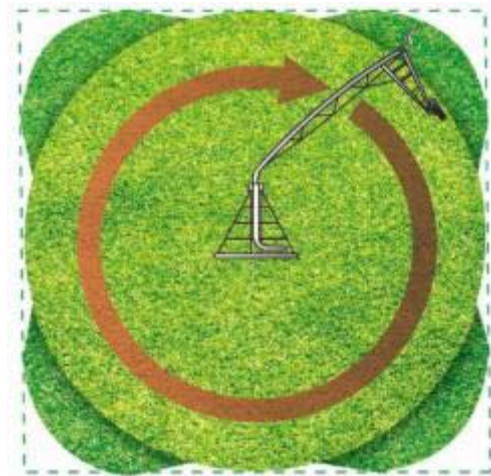
Devises



Auto stop reverse system



Endgun corner control

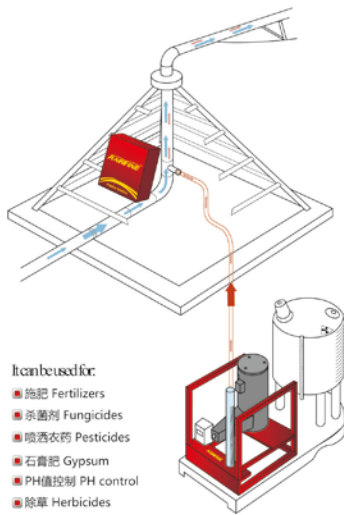


10 [注射计量泵-打药机] Chemical injector



Chemigator Injector 1 [打药机]

打药机 Basic Inject	NPD200
最大流量 Maximum Injection Rate (L/hr)	200
最小流量 Minimum Injection Rate (L/hr)	20
工作压力 Working Pressure (bar)	5-6
泵头材料 Valve Head Material	ABS 1Cr18Ni9Ti 316L
功率 Power (kw)	0.18
电压 Voltage	220v single phase 380v 3phase 50 hz



1 [打药机] Chemical Injector

作为本项灌溉的最大优势之一，每台设备配置了新型高效的打药泵，以执行化肥、农药、杀虫剂的喷洒任务，均匀系数可达90%以上，安全节能、稳定高效。

液体经搅拌均匀后，打药泵的计量装置可有效控制药液注入速度，保证药液浓度，避免浪费，最大限度的提高农药的使用效率。

此外，该装置还可以用于改良土壤、改善土壤PH值，只需将相应药液打入灌溉机，就可在圆形面积的自动喷洒作业的同时，轻松达到理想效果。

Chemigator :

Apply a wide range of agricultural chemicals through your irrigation system. Uniform application of precisely measured amount eliminates waste and saves cost. Ready to install and operate.

Fertigator :

Apply fertilizer through your irrigation system. Achieve even application with no waste. Minimize labor and fuel costs and increase crop yields. Built for long life of worry free operation.

Insectigator :

Injects exact small amount of insecticides and fungicides into your irrigation system. Timely and precise application stops insect or fungus problems exactly where and when needed to avoid crop loss. Easy to install and simple to operate.

2 [储药罐] Tank

● 容积 Capacity: 1000L / 3000L

罐体自带的比例尺使客户在稀释药物时更加方便快捷，当客户将等比例药液注入储药罐后搅拌机开始搅拌，使得药物浓度达到最佳点。

由玻璃钢制成的罐体具有高度的耐腐蚀、韧性以及可靠的强度保障。

罐体通身一体化设计，无缝隙。注药口大小设计适宜，密封程度高，可有效防止儿童及牲畜所引起的意外。

The scale on the tank makes it more convenient and quicker for the users to apply chemicals. After applying the chemicals into the tank according to the ratio, the mixer starts to work on them at the desired value and gain the best concentration.

The tank made from fiber glass is highly corrosion-resistant, tough, reliable and strong.

The tank body is integratively designed and seamless. The inlet is appropriate in size, tightly sealed and effectively prevents accidents resulting in children and livestock.

Electric parts



Collector ring



tower box

9 [中心支轴] Pivot point



1. 柴油发电机 (10kW-15kW) 可安装在中心支轴上随机移动, 在没有电力供应的地块可以为喷灌机提供电能, 解决了各地块的电力差异问题。
2. 独特的喷枪角度控制系统允许用户自行设定喷洒角度, 针对不同地形设计旋转角度, 为每一个灌圈设计最精准的覆盖方案。

1. Diesel generator (10kW-15kW) is assembled on the center cart of the towable pivot for the place where electric power is not available.
2. The unique end gun conner control system can switch on/off the end gun at any angle. This is a good solution for the square conner.



1 [主控箱] Main panel

- 无水状态开机/停机 No water start/stop
- 正反转 Forward/Reverse
- 速度设定 Percentage timer for speed adjustment
- 低电压保护 Low voltage relay
- 紧急停车 Emergency stop
- 失压保护 Low water pressure shut off
- 避雷器 Lightning arrestor



2 [功能] Touch panel

- 电源 Control power
- 水压 Water pressure
- 最末端塔架 Last tower movement
- 控制 电源 Control circuit power
- 安全电路 Safety control circuit
- 反转 Reverse control circuit
- 正转 Forward control circuit
- 加压泵及喷枪 Booster pump & End gun
- 时间百分比表 Percentage timer



3 [时间百分比表] Percentage timer

- 一台机可灌溉4种作物, 用户可根据各作物的需水量设定时间百分比表, 每当喷淋机行走至设定角度时 (默认为: 90°, 180°, 270°以及360°), 喷淋机会按照设定好的百分数调整降雨量。

One single pivot can irrigate 4 kinds of crops: The user can set the percentage timer according to the water demand of each crop. The pivot will adjust the water drops according to the set percentage when it runs to the set angles (90°, 180°, 270° and 360°).



Percentage timer

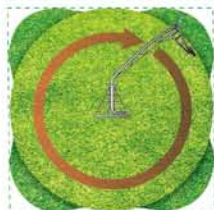




喷枪及加压泵

komet

sime

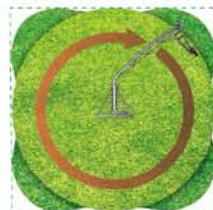
针对方形地块
采用喷枪填补

■ 喷枪灌溉范围 Extra area covered by end gun.
■ 跨体灌溉范围 Area covered by pivot.

End gun 1 [Twin101/PLUS喷枪]

压力 Pressure (bar)	喷嘴 Nozzle 12mm-0.61"	喷嘴 Nozzle 14mm-0.55"	喷嘴 Nozzle 16mm-0.63"	喷嘴 Nozzle 18mm-0.71"	喷嘴 Nozzle 20mm-0.79"	喷嘴 Nozzle 22mm-0.87"	喷嘴 Nozzle 24mm-0.94"
	Flow m ³ /h...l/s	Flow m ³ /h...l/s	Flow m ³ /h...l/s	Flow m ³ /h...l/s	Flow m ³ /h...l/s	Flow m ³ /h...l/s	Flow m ³ /h...l/s
2.0							
2.5		11.9 3.31	28.3 7.86	30.4 8.44	32.4 9.02	34.3 9.60	36.1 10.18
3.0	9.6 2.66	27.9 7.75	30.3 8.41	32.6 9.08	34.7 9.66	36.7 10.24	38.7 10.82
3.5	10.4 2.87	29.5 8.20	32.1 8.93	34.5 9.60	36.8 10.27	38.9 10.85	41.1 11.51
4.0	11.1 3.07	31.1 8.64	33.8 9.39	36.3 10.08	38.7 10.75	41.1 11.51	43.4 12.28
4.5	11.7 3.26	32.5 9.03	35.3 9.80	37.8 10.49	40.1 11.16	42.4 11.83	44.7 12.50
5.0	12.4 3.44	33.8 9.39	36.8 10.27	39.5 10.95	42.1 11.73	44.6 12.50	46.9 13.04
5.5	13 3.6	35.1 9.75	38.1 10.60	41.1 11.49	43.7 12.11	46.2 12.81	48.7 13.54
6.0	13.6 3.76	36.3 10.08	39.4 10.95	42.4 11.73	45.1 12.47	47.8 13.24	50.2 14.02
6.5	14.1 3.92	37.4 10.39	40.6 11.28	43.6 12.11	46.5 12.81	49.3 13.71	51.9 14.42

大喷枪 24" 仰角锥形喷嘴 Taper bore nozzle 24" Trajectory

针对方形地块
采用喷枪填补

■ 喷枪灌溉范围 Extra area covered by end gun.
■ 跨体灌溉范围 Area covered by pivot.

End gun 2 [SIME-10307喷枪]

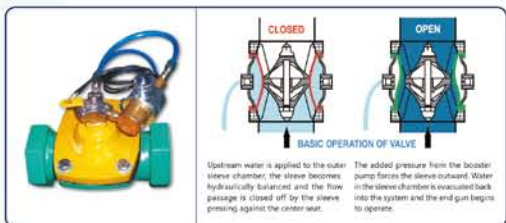
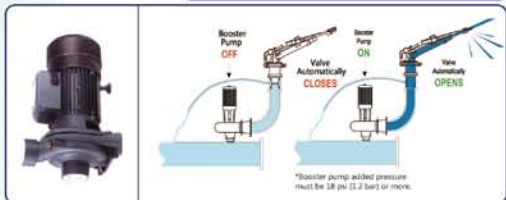
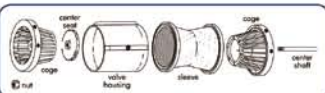
压力 Pressure (bar)	喷嘴 Nozzle 12mm-0.61"	喷嘴 Nozzle 14mm-0.55"	喷嘴 Nozzle 16mm-0.63"	喷嘴 Nozzle 18mm-0.71"	喷嘴 Nozzle 20mm-0.79"
	Flow m ³ /h...l/s	Flow m ³ /h...l/s	Flow m ³ /h...l/s	Flow m ³ /h...l/s	Flow m ³ /h...l/s
1.5	7.8 2.16	19			
2.0	9.1 2.53	22	11.7 3.25	23	14.8 4.12
2.5	10.9 3.03	24	14.3 3.98	28	18.2 5.05
3.0	12.6 3.52	27	16.6 4.61	31	21.0 5.85
3.5			18.5 5.15	34	23.4 6.52
4.0					
4.5					
5.0					

大喷枪 24" 仰角锥形喷嘴 Taper bore nozzle 24" Trajectory



Booster Pump

of RAINPOT®



RFB30



RFB72

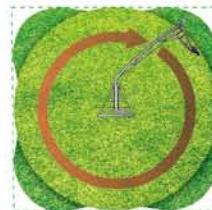


Booster pump 3 [RFB30/72加压泵]

型号 Model		电力	入口	出口	最大流量	最大扬程	最大吸入	尺寸	G.W (kg)		20' Loading Qty (pcs)
单相电	三相电	Power	Inlet	Outlet	Max Flow	Max Head	Max Suction	Dim	G(G)	G(T)	
Single-Phase	Three-Phase	KW HP	(inch)	(inch)	(m³/h)	(m)	(m)	(mm)			
RFB30		1.5 2.0	2.0	2.0	30	22.5	7.0	425x250x295	25	24.5	800
RFB72		2.2 3.0	3.0	3.0	72	18.5	7.0	520x295x355	37	37	540

14 [喷枪] Endgun

innovation in irrigation™
NELSON



针对方形地块
采用喷枪填补

■ 喷枪灌溉范围 Extra area covered by end gun.
■ 跨体灌溉范围 Area covered by pivot.

End gun 4 [Nelson-SR喷枪]

No. 2 Pressure (Bar)	喷嘴 Nozzle 11.4mm-0.45"			喷嘴 Nozzle 12.7mm-0.5"			喷嘴 Nozzle 14.3mm-0.56"			喷嘴 Nozzle 15.2mm-0.6"			喷嘴 Nozzle 16.5mm-0.65"			喷嘴 Nozzle 17.8mm-0.7"			喷嘴 Nozzle 19.1mm-0.75"			喷嘴 Nozzle 20.3mm-0.8"		
	Flow m³/h	l/s	Radius m	Flow m³/h	l/s	Radius m	Flow m³/h	l/s	Radius m	Flow m³/h	l/s	Radius m	Flow m³/h	l/s	Radius m	Flow m³/h	l/s	Radius m	Flow m³/h	l/s	Radius m	Flow m³/h	l/s	Radius m
1.75																								
2				8.4	2.33	48	10.2	2.82	48	12.2	3.39	51	14.3	3.98	52	16.5	4.59	56	18.9	5.25	58	21.5	5.97	59
2.5	7.6	2.11	47	9.4	2.61	50	11.4	3.16	53	13.6	3.79	55	16	4.45	58	18.5	5.14	60	21.1	5.87	62	24	6.68	64
3	8.3	2.32	50	10.3	2.86	53	12.4	3.46	57	15.9	4.35	59	17.8	4.88	61	20.3	5.63	63	23.1	6.43	66	26.3	7.32	69
3.5	9	2.5	52	11.1	3.09	57	13.4	3.74	60	16	4.48	62	19	5.27	64	21.9	6.08	67	25	6.95	70	28.4	7.9	73
4	9.6	2.67	54	11.9	3.3	59	14.4	3.99	62	17.2	4.79	65	20.3	5.63	67	23.4	6.5	71	26.7	7.43	73	30.4	8.45	76
4.5	10.2	2.84	57	12.6	3.5	62	15.2	4.24	66	18.3	5.08	68	21.5	5.97	71	24.8	6.89	75	28.4	7.88	78	32.3	8.96	80
5	10.8	2.99	60	13.3	3.69	64	16.1	4.46	68	19.3	5.35	70	22.7	6.3	74	26.1	7.26	78	29.9	8.3	80	34	9.45	84
5.5	11.3	3.13	62	13.9	3.87	66	16.9	4.68	70	20.2	5.61	73	23.8	6.6	77	27.4	7.62	81	31.3	8.71	83	35.7	9.9	86
6	11.8	3.27	63	14.6	4.04	68	17.6	4.89	72	21.1	5.86	74	24.8	6.9	79	28.6	7.96	84	32.7	9.09	85	37.2	10.3	87

大口径 24" 锥形喷嘴 Trajectory

Drive parts



U-joint





Tire option **1** [轮胎选择]

轮胎尺寸 Tire type	轮胎特性 Tire features
11.2×24	用于沙壤地。For sandy soils
11.2×38	良好的自洁性能和通过性能。 Good clearance and flotation
14.9×24	无内胎四层级，用于大载重、长跨距。 Tubeless tire 4ply, for heavier and longer spans
16.9×24	用于特大载重及更长跨距，有更好的通过性。 For longer spans more flotation

2 [喷灌机行走速度(380v 50hz)] Machine speed chart

型号 Centerdrive Type (60hz 480v)	速比 Ratio	驱动速度 Drive Speed (RPM)(50hz)	轮胎速度 Wheel Speed(RPM)	轮胎尺寸 Tire Size	轮胎周长 Distance Per Wheel Rev.	最末端塔架最快速度(米/小时) Last Tower Speed@100% (m/hr)
30RPM	40:1	25	0.5	11.2×24	3.23	97
				11.2×38	4.42	133
				14.9×24	3.60	108
				16.9×24	3.81	114
43RPM	40:1	33	0.66	11.2×24	3.23	128
				11.2×38	4.42	175
				14.9×24	3.60	142
				16.9×24	3.81	150
99RPM	29:1	49	0.98	11.2×24	3.23	190
				14.9×24	3.60	212
				16.9×24	3.81	224

tire/rim

water application



goosneck



drop and sprinklers

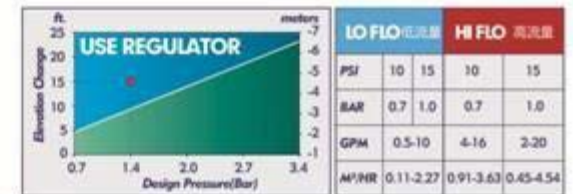




这种喷头用在轮胎两侧，可防止轮胎陷入湿地。
This dry track sprinklers can be used in both side of tire to prevent it being sink into wet soil.



Regulator **6** [压力调节阀]



由于喷灌机轮轴之间的不同或水泵水压变化等造成管道内水压变化，压力调节阀可以有效调节出水压力，使水珠大小及喷射距离相同，保持灌溉深度一致。

The function of a pressure regulator in center pivot sprinkler design is to fix a varying inlet pressure to a set outlet pressure regardless of changes in the system pressure due to hydraulic condition, elevation changes, pump scenarios, etc. It can uniform depth of water application and control sprinkler performance (droplet size and throw distance).

Drop hoses and sprinkler



sprinklers and drip

Pressure guage



Pressure guage



pressure guage



Pressure guage



seals



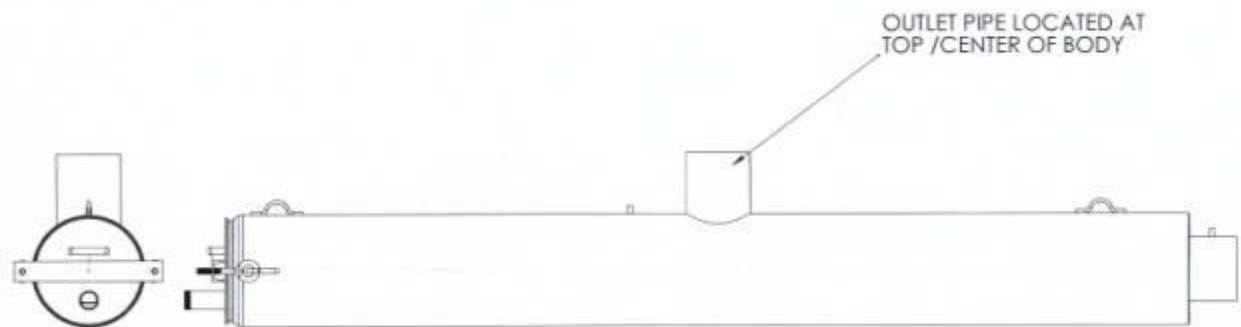
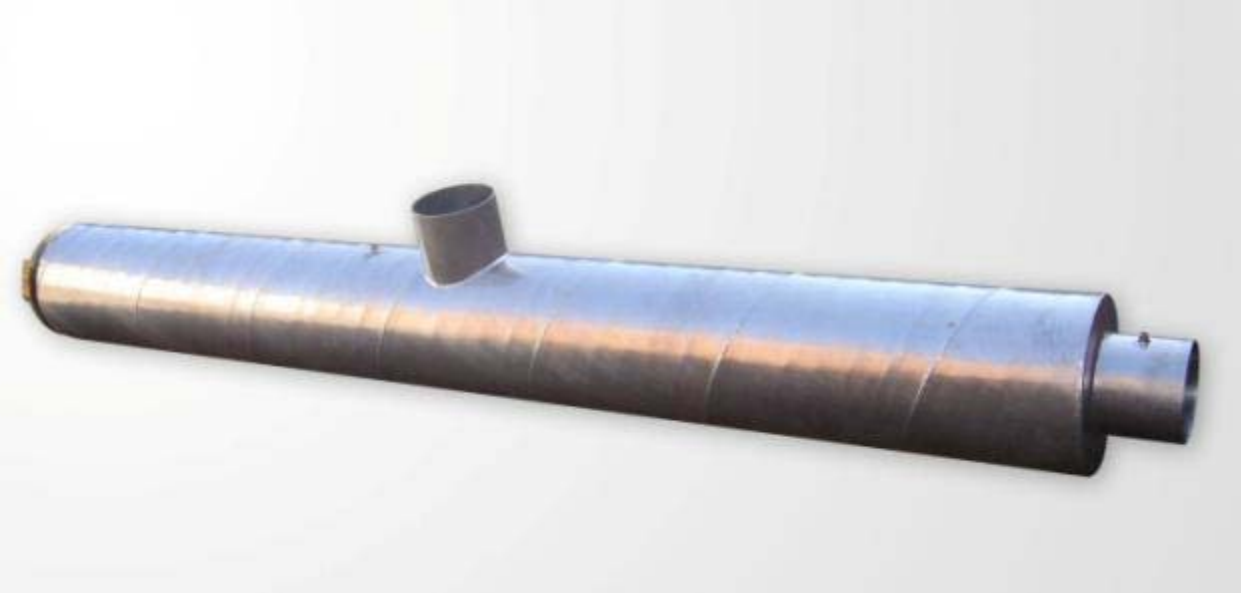


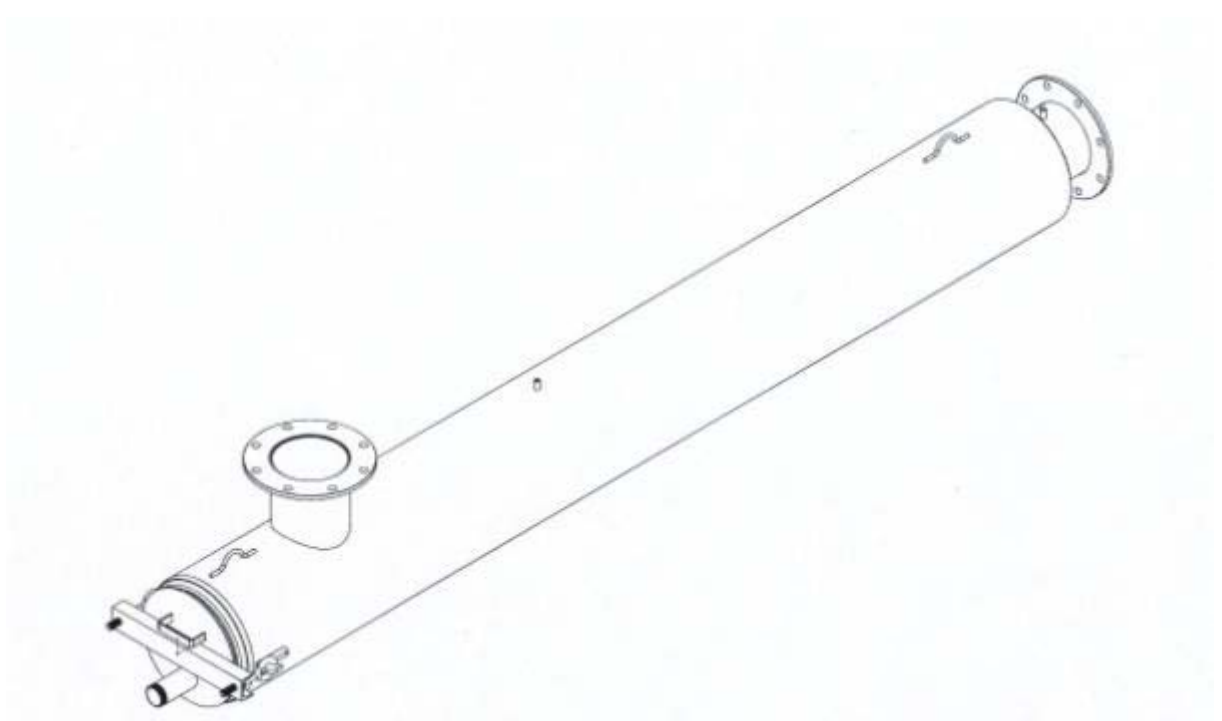
Aluminium coupler
and rubber boot





filter





Towing cable for
towable pivot



Steel structure



1 [桁架拉杆]

Truss rods

■ 尺寸 Size:21mm×6636mm ■ 尺寸 Size:19mm×6636mm



2 [镀锌角钢]

Angle stabilizer galvanized



3 [拉杆固定板]

Truss anchor

■ 所有金属部件均采用热镀锌工艺
All steel structures are hot dip zinc galvanized.

■ 镀锌执行标准
Zinc galvanization standard.
1. ASTM A 123/A 123M-02
2. GB/T 13912-2002

■ 所有部件可保证20年不锈蚀
Galvanized parts can keep corrosion free for 20 years.

11 [桁架]
Truss

「桁架·设计」 Design of truss

桁架整体模仿桥梁设计，抗拉强度高且运行时无抖动现象，最佳“V”形负荷角，每6.7米一个，跨体主管微拱，跨体两端设计自动泄水阀门，保护管内无积水，化制剂无残留，减少腐蚀及锈蚀增加设备使用寿命。所有主管长度都相同（6.7米/根）设计灵活性强，与农田匹配程度高，可增大灌溉覆盖率。

输水管的焊缝设计在受力最小的地方，每根管子由两条固定支撑点将相同的负载分配到所有桁架上。管法兰厚10mm，6根高强度螺丝固定两侧法兰，中间的法兰垫片为耐老橡胶制造，不仅密封性级高而且不宜磨损，可随设备使用多年无需更换。负荷角钢支撑杆，横撑角钢及拉杆通过一个厚度为9.5mm的夹板来连接，各部件互为最佳负荷角度，保证喷灌机运行稳定。喷灌机上所有金属部件都经过热浸镀锌处理，可使架体在风雨环境中正常工作20年无需更换。



The truss is designed like the structure of a bridge, with high tensile strength. V-shaped load angle, 6.7m long per span and without shaking during operation. The span of the main pipes is slightly bowed. An auto drain valve is designed at both ends of the spans to secure no residue water and chemicals, reduce corrosion and rusting, prolong the longevity of the pivot. All the main pipes are of the same length with flexibility and match the field in order to cover larger irrigation area.

The welding seam of the pipe is designed at the position with lowest stress. The two fixed points on each pipe distribute the same load evenly to the truss.

The flanges on the pipes are 10mm thick with 6 high strength screws to fix the pipes. The gaskets between the flanges are made of durable rubber. They are closely sealed and can be used for many years together with the pivot. The truss brace angles and the truss rods are joined together by a 9.5mm thick anchor. All the parts are joined at their best load angles to make sure the machine works stably. All the steel parts are hot-dip galvanized and will last at least 20 years.



Pipe Size 1 [管道选择]

管道 Pipe	直径 Diameter	壁厚 Thickness	长度 Length
A	254mm	3mm	13.41/6.70m
B	203mm	3mm	13.41/6.70m
C	168mm	3mm	13.41/6.70m
D	141mm	4mm	13.41/6.70m

Thank you

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